Objectives of the project

Family Technology Showcase, Baitun, Panamá

The project seeks through its general objective to contribute to improving climate resilience and food security of highly vulnerable households of small producers in Central America, through two routes of action linked to its specific objectives. The first seeks to promote the adoption of technologies in agroforestry systems adapted to Central American small producers to improve climate resilience and strengthen their food security in agricultural and livestock production systems. The second seeks to strengthen the capacities of national and regional partners in agricultural research, transfer and extension in agroforestry systems, as a way to favor an increase in productivity and food availability for small Central American producers.

Background

The Central American Dry Corridor (El Corredor Seco Centroamericano, CSC) comprises an area of dry tropical forests and degraded lands in the Pacific basin, running from Chiapas in Mexico through the dry provinces on the Pacific coast of Panama. It is a zone highly vulnerable to natural phenomena and climate change, with low rainfall and difficult scenarios for agricultural production; it has two well-defined dry and rainy seasons.

The decrease in rainfall and climate variability, often with the presence of El Niño Southern Oscillation phenomena, shown in recent years, presents a more complicated scenario that threatens the Food and Nutritional Security of the population, which often lives under a subsistence economy.

The use of unsustainable agricultural practices with low productivity and profitability for basic crops such as corn and beans, widespread poverty among small producers, the abandonment of agricultural production by new generations, the lack of innovation in systems and limited technology transfer, economic factors such as high production costs, the absence of stable marketing and value chains lead to the loss of farms and migration in search of new opportunities.

Based on the above, it is considered that any initiative that seeks to contribute to food and nutritional security in the CSC should be based on the following aspects: repositioning agriculture as an agent of development and a source of food at the local and national levels, processes with a focus on sustainability that guarantee the availability and access to food in variety, quantity and quality, and the incorporation of technologies and good practices for the generation of agricultural innovation experiences under agroforestry models adapted to the CSC; to increase resilience and reduce vulnerability to the impacts of climate change.

The theory of change to achieve the objectives

AgroInnova promotes the use of innovations among small producers to improve their resilience to climate variability. The innovations adapted for the Central American Dry Corridor are based on the wealth of previous experiences in the region. However, field validation and adaptation of various technologies is required for them to become farmer-developed innovations.

AgroInnova promotes multi-layered agroforestry systems and crop diversification to increase the productivity, income and resilience of small producers in the face of climate change. Selected and validated technologies are tested and implemented with the participation of producer associations

and cooperatives, including water management, improved drought-resistant seeds, new crops associated with agroforestry systems, space management for optimal plot design, tree placement among others. To support improvements in agroforestry systems, the project develops at least 90 demonstration plots in six countries in the region, which are used as field schools to reach more than 3,000 smallholders in the extension of improved and innovative agricultural technologies.

Small producers are reached through associations and cooperatives that serve as the main counterpart of the project, for planning, design, validation and application of improved production technologies and for marketing the products. Previous experiences with small producers in the coffee sector have proven to be successful.

AgroInnova has created an "Innovation Hub" as a public good based at IICA, to bring together previous experiences and innovative solutions developed in the region and elsewhere for use by academic and research institutions, producers and producer associations, and as part of the incorporation of Digital Agriculture, has developed a real-time "Tracking and Monitoring System" for project indicators and a space for interaction with potential uses of the European Union's Copernicus satellite tool.

Agroinnova is executed from the "Inter-American Institute for Cooperation on Agriculture". IICA is a key link with the ministers of agriculture and decision-makers in the region, and drives policy and strategy proposals for the agricultural sector. The link with the ministries will be used to include the results of the projects in agricultural policies. Likewise, CATIE, as a sub-delegated partner, is generating research and modeling proposals for the Agroforestry Systems implemented in each country. The main challenge faced by the project is to bridge the gap between academic and research work, on the one hand, and the productive practice of small producers, on the other. Research needs to improve its practice to work better with farmers and farmer organizations taking into account their needs and local knowledge. Farmers need support to change their behavior and entrenched practices, as well as to increase their capacity to absorb new technologies.

Main activities

- ✓ Establish a regional network of Technical Committees, with the participation of partner organizations and specialists from relevant national institutions.
- ✓ Manage the elaboration of recommendation domain studies in the intervention territories, in order to have a context of the social, productive and environmental characteristics and generate guidelines for modeling.
- ✓ Develop a selection of key actors in the territories, to establish demonstration plots, generate development actions with organizations and linkage strategies with national partners.
- ✓ Develop adapted models of Agroforestry Systems (Sistemas AgroForestales or SAF), in a participatory manner with the rural family.
- ✓ Implement innovations, technologies and good practices that dynamize the selected SAF models, achieving an improvement in productivity, protection of water and soil resources and increasing the diversity and quantity of food linked to food security.
- ✓ Develop a baseline in year 0 and a baseline in the last year of the project to compare the benefits of the SAF models in the region.
- ✓ Develop capacity building tools to encourage participants to scale up innovations in their fields.
- ✓ Register through a Follow-up and Monitoring System the 3000 families that benefited from capacity building and innovation learned in the demonstration plots that function as technological showcases.
- ✓ Generate applications and web tools such as the Innovation Hub and Copernicus Exibith to transmit information to farmers, national partners and organizations to improve decision making and enhance climate resilience.
- ✓ Develop capacity building for women and youth to innovate on-farm management.

Results achieved to date (April 2023)

For the last cut of results obtained by the project, in the month of April 2023; by the Regional Executing Unit, we have:

- Design of 13 agroforestry models and implementation of 23 agroforestry models adapted to the Central American Dry Corridor.
- Management of 6 technical and administrative teams in the Region.
- Management of the reforestation of 50,056 units of forest, fruit and woody species on the project's producer farms.
- Development of a proposal to demonstrate the potential of the services and digital tools of the Earth Observatory and the Copernicus and Galileo programs focused on agriculture.
- Development of a tool for tracking and monitoring the adoption of innovations and impact of the project in the Region.
- Development of an Innovation Hub tool to manage all the information generated in the Region.

At the country level, the following figures have been achieved to date (global indicators below):

Organization

The highest authority of the project is the Comité Tecnico Asesor (Technical Advisory Committee) with the participation of IICA, Centro Agronómico Tropical de Investigación y Enseñanza (CATIE), a representative of the National Research Institutes and the EU.

The project is implemented by IICA, with Technical Support from CATIE. IICA has its headquarters in Costa Rica, and permanent representations in all countries of the region that provide support during the implementation. IICA has established a Regional Implementation Unit based in Costa Rica for the general coordination of the project. IICA has signed an agreement with CATIE for the implementation of the project.

Implementing organization

Interamerican Institute for Cooperation in Agriculture, IICA

Partners of the project

Centro Agronómico Tropical de Investigación y Enseñanza, CATIE

Other main stakeholders

In Costa Rica

- ✓ Instituto del Café de Costa Rica (ICAFE),
- ✓ Cámara Nacional de Productores de Leche,
- ✓ Coopeleche, (Cooperativa de productores de leche de Occidente)
- ✓ Consejo Nacional de Clubes 4s (CONAC 4S),

In Guatemala

- ✓ Ministerio de Agricultura, Ganadería y Alimentación (MAGA),
- ✓ Secretaría de Agricultura y Ganadería (ANACAFE),
- ✓ Instituto Nacional de Bosques (INAB),
- ✓ Organización rural de productores ASPRECH,

In Nicaragua

- ✓ Ministerio Agropecuario (MAG),
- ✓ Instituto Nicaragüense de Tecnología Agropecuaria (INTA)

In Honduras

- ✓ Ministerio de Agricultura y Ganadería (MAG),
- ✓ Instituto Hondureño del Café (IHCAFE),
- ✓ Secretaría de Agricultura y Ganadería - Dirección de Ciencia y Tecnología Agropecuaria (SAG-DICTA),
- ✓ Instituto de Formación Profesional de Honduras (INFOP),

In El Salvador

- ✓ Ministerio de Agricultura y Ganadería(MAG),
- ✓ Centro Nacional de Tecnología Agropecuaria y Forestal de El Salvador (CENTA),
- ✓ Ayuda en Acción,
- ✓ Proyecto Raíces,

In Panama

- ✓ Ministerio de Desarrollo Agropecuario (MIDA),
- ✓ Instituto de Investigación Agropecuaria de Panamá (IDIAP)
- ✓ Facultad de Ciencias Agropecuarias de la Universidad de Panamá (FCA-UP)

And farmers' organizations identified in the intervention territories.

Location

Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panamá

Funding and co-funding

EU	€ 6,000,000
IICA	€ 600,000
Total budget	€ 6,600,000

Duration

54 months (November 2019 - April 2024)

Website

https://agroinnova.iica.int/

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