



## Objectives of the Project

Strengthen agriculture, forestry, among other land uses, (AFOLU) and artisanal fishing sectors within agroecological systems and bioeconomies (AEBE) to increase their competitiveness, productivity, resilience and efficiency.

## Background

The Government of Colombia (GOC) has increased its NDCs (National Determined Contribution) and committed (COP26 Glasgow, 2021) to reduce GHG emissions by 51% and achieve a zero-deforestation rate by 2030 and carbon neutrality by 2050. In addition, the GOC also committed to the 30-30 goal of protecting 30% of land and marine territories by 2030. Drastic transformations and science-based innovations in the agriculture and forestry sectors are absolute key to achieving these ambitious goals.

The country's forests from the Amazon to the Pacific region cover 52% of its territory and are recognized for their potential to support sustainable bioeconomies. However, an array of political, sociocultural, and institutional factors hinders the development of a sustainable forest economy, or otherwise said, a bioeconomy based on integrated forest and agricultural production systems that keep trees standing and rivers flowing. Today deforestation remains one of the main environmental problems afflicting the country. This has its roots in socio-economic conflicts in areas with low State presence in remote areas, accentuated by factors such as population growth and the increase in illegal activities such as extraction of minerals, establishment of crops for illicit use, land grabbing, extension of road infrastructure, illegal logging, expansion of the agricultural frontier and corruption, among others.

At present, despite governmental, NGO-supported, and community-based efforts, concrete experiences in nature-based and sustainable bioeconomies are still scattered, very limited in scale, mostly sustained by international cooperation and public subsidies and with insufficient appropriation and empowerment by local entities and communities. Lack of sustained technical and financial assistance, weak institutional and policy frameworks and insufficient flow of science-based innovation hinder the achievement of economic and environmental sustainability at a sufficiently large scale to counteract the growing and destructive pressures on the country's natural capital.

This project proposes development-smart research for the implementation, testing and monitoring of AEBE innovations, both technical and organizational, that transform agri-food systems and land management practices and strengthens and integrate value chains. The aim is to implement a bottom-up, territorial approach to co-design and test a basket of AEBE innovations that can ultimately facilitate other initiatives at the national and local scale.

### Theory of change

With the promotion of science-based innovation, through relevant practices in adaptation and climate change mitigation, ABRIGUE is expected to have a positive effect on the transition models towards sustainable agriculture and responsible value chains which involve multiple actors and mobilize research and technological development towards the transformation of agri-food systems. A side effect is that national and regional entities related to climate change and risk management will improve their capacity to maintain, promote and scale technological and innovation systems, agroecological knowledge and bioeconomy strategies, towards reducing deforestation and mitigating climate change impacts.

To achieve these results ABRIGUE proposes the transformation and transition of the agricultural (including livestock management) and forestry sectors, among other land uses (AFOLU) as well as artisanal fishing, towards integrated agroecological food systems and bio-based economies (AEBE) with potential to increase competitiveness, productivity, resilience and sustainability.

ABRIGUE proposes a strategy at two levels: (i) Through a coherent analysis of existing national policies in relation to climate change, agroecology and science, technology, and innovation. The project will identify gaps regarding coordination between policies, possible synergies between sectors and formulate relevant recommendations. In turn, actors of sectoral and regional systems related to climate change adaptation and mitigation will be strengthened in their conceptual and methodological capacities. By promoting knowledge dialogues and training mechanisms, ABRIGUE is expected to generate a portfolio of options for innovative agroecological transitions of food systems which will then provide inputs to innovate and improve public policies.

ii) At the territorial level, ABRIGUE is expected to promote and support technical and organizational innovations in agroecology, circular bioeconomy (ACBE) and responsible artisanal fishing in three forest frontier areas (one of them, a forest-marine frontier). To achieve this, an smart research development strategy is proposed for the implementation, testing, and monitoring of AEBE innovations, both technical and organizational. As a result, it is expected that agro-food systems will be transformed, land management practices adapted, and value chains strengthened. The goal is to implement a bottom-up territorial approach to co-design and test a wide range of AEBE innovations that can enable other initiatives at a national scale; in such a way that intersectoral and interterritorial efforts contribute to the fulfillment of greenhouse gas emission reduction goals. Likewise, the National Technology and Innovation Systems (STI) will be strengthened to promote and increase investment in STI, and, above all, generate new strategies and mechanisms in the challenge to adapt to climate change and reduce greenhouse gas emissions from agriculture, forestry, and other land uses.

The main outcomes of ABRIGUE are: (i) The actors related to the technical assistance are trained to support farmers in the implementation of agroecological production systems that integrate nature-

based products and generate sustainable bioeconomies, (ii) local communities and technical advisors monitor the impact of agroecological production systems on ecosystem services and adaptation to climate change strategies, (iii) actors in integrated value chains implement a participatory safeguard system to certify their bio-economy products, (iv) policy and decision makers are equipped with practical knowledge and recommendations on enabling conditions to support bioeconomy products based on agroecology, and (v) indirect beneficiaries develop and share knowledge about co-innovative approaches in agroecology and integrated bioeconomy value chains.

The main outputs of ABRIGUE are: (i) agroecological knowledge and co-design of bioeconomy value chains, (ii) monitoring and evaluation system for adaptation to climate change and responsibility for ecosystem services, (iii) participatory guarantee system for bioeconomy products, (iv) recommendations for policy guidelines, and (v) communication products such as scientific articles, manuals, videos, social media pieces; among others.

### Main activities

As part of ABRIGUE project implementation the carbon footprint and the possible effects of climate variability and climate change on current production systems will be estimated. Climate change adaptation scenarios will be developed by integrating adaptation and carbon footprint reduction elements in production systems. The project will also design and validate agroecological practices and incorporate them into existing production systems. A multi-stakeholder platform will be developed to aid in the formulation of AEBE strategies and train local stakeholders in agroecological production techniques and sustainable artisanal fishing practices. The project will develop a strategy for the commercial strengthening of the AEBE value chains and establish a system of knowledge sharing and technological innovation (AKIS) in support of AEBE. ABRIGUE will design and test new value chains based on agroecological products, implement strategies to improve their commercial aspects and develop a participatory guarantee system for the certification of agroecological / bioeconomy products. Finally, the project will implement strategies for the strengthening of capacities, financing, governance, regulations, and policy in STI with respect to AEBE, in line with the OECD multilevel governance model and will generate guidelines and recommendations to improve the conditions for policy implementation.

### Organization

The project is organized into six interrelated work packages (WP). In each of these, the tasks are organized into activities that generate the outputs: (i) Work Package 1 focuses on the analysis of public policies and the generation of capacities for responsible governance, (ii) the Work Package 2 focuses on methodological development, development of the innovation platforms (AKIS) and training to support the design of strategies for bioeconomic chains based on agroecological production systems (AEBE) and related marketing strategies, (iii) Work Packages 3, 4 and 5; organize, co-design in a participatory way and implement AEBE strategies in each of the project's work regions (Caquetá, Meta and Chocó), implement multi-stakeholder platforms for training and knowledge sharing, and generate climate change impact and adaptation indicators and indicators for monitoring and evaluating value chains (iv) work package 6 will coordinate the administrative and

financial management of the project. Specifically, WP6 will coordinate and integrate the activities of the work packages.,

Executing entity:

- Amazon Institute of Scientific Research-SINCHI,

Main partners

- Ministry of Science, Technology and Innovation-Minciencias,
- Centre de Coopération Internationale en Recherche Agronomique pour le Développement – CIRAD;
- Technological University of Choco “Diego Luis Córdoba” (UTCH);
- Colombian Corporation of Agricultural Research– AGROSAVIA.

Other main stakeholders

Producer organizations, local enterprises, local authorities, Ministry of Environment and Sustainable Development, Ministry of Agriculture and Rural Development, Ministry of Science, Technology and Innovation, local community councils.

Location

Colombia, Chocó, Caquetá and Meta Departments.

Funding and co-funding

EU	€ 3,320,000
Partners	€ 830,000
Total budget	€ 4,150,000

Duration

36 months (May 2021-May 2024)