Alliance
Bioversity & CIAT

THE ALLIANCE OF BIOVERSITY INTERNATIONAL AND CIAT IN BRAZIL

Unlocking the potential of biodiversity and forest to transform food systems

The Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT) delivers science-based solutions that harness agricultural biodiversity and sustainably transform food systems to improve people's lives. Through an integrative approach to research for development, the Alliance provides solutions to address the global crises of malnutrition, climate change, biodiversity loss, and environmental degradation. The Alliance is part of CGIAR, a global research partnership for a food-secure future.

Our work in Brazil

Brazil is a strategic player in achieving global sustainability goals and is strongly aligned with the Alliance's research-for-development priorities. The country holds significant importance in the global socio-environmental agenda, supported by a consolidated ecosystem of institutions with a long history and proven track record in sustainability.

The Alliance has actively worked in Brazil, collaborating closely with various partners and stakeholders to build a shared vision for sustainable development. This effort is exemplified through the implementation of an eco-efficient landscape and a collaborative approach that involves communities and cross-sector stakeholders to restore deforested areas. The goal is to better understand Brazil's environmental, social, and economic dynamics, generating strategies that reduce environmental impact in the Amazon, improve community quality of life, and develop more productive and sustainable land-use models.

The Alliance is recognized in Brazil as an applied research organization that generates knowledge and impact to achieve the Sustainable Development Goals, particularly those related to the nexus of biodiversity and socio-environmental development. Collaborating with diverse stakeholders, donors, and the Brazilian private sector, the Alliance promotes initiatives for territorial development, strengthens positive impact businesses, and provides science-based analysis for biodiversity conservation in the Amazon. Notably, the Alliance has a longstanding and successful collaboration with the Brazilian Agricultural Research Corporation (EMBRAPA), and has signed a Memorandum of Understanding with the Brazilian Ministry of Agriculture, Livestock, and Food Supply (MAPA) to advance technological development and complementary research capabilities for the sustainable development of tropical agriculture.

Diverse priority work areas for sustainable action

Over the last decades, the Alliance has expanded its work in Brazil with a variety of projects ranging from research in crops and biodiversity conservation to the application of digital technologies in agriculture.

Our areas of work in Brazil include:

- **Crop improvement**
- **Biodiversity for food and nutrition**
- **Agrobiodiversity**
- **Partnerships with the private sector for Amazon conservation**
- **Digital technologies and applications for digital agriculture**
- **Soil and land management and soil fertility**
- **Use of e-DNA for forestry and biodiversity conservation**
- **Agroforestry and agroecological approaches**

The Alliance and EMBRAPA a long-term and fruitful collaboration

The Alliance and EMBRAPA share a long-standing and impactful partnership committed to advancing sustainable agriculture and food security in tropical regions. Through joint research, innovation, and strategic knowledge exchange, this collaboration leverages the complementary expertise of both institutions to address some of the most pressing challenges in tropical agriculture. Together, we have been delivering high-impact initiatives in key areas

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such as crop improvement, climate-resilient farming practices, and evidence-based policy development, for more resilient and inclusive food systems.

A key example is the current collaboration on **the Cassava Brown Streak Disease -CBSD-**, a major threat to food security and rural livelihoods in tropical regions. By uniting scientific expertise, we can accelerate the development of disease-resistant cassava varieties and scalable disease management strategies, to protect livelihoods, enhance productivity, and reinforce the resilience of food systems.

Innovative collaborations unite local, international and private sector expertise for Amazon sustainability

Catalyzing partnerships and investment, and monitoring innovations for biodiversity conservation and sustainable development in the Brazilian Amazon

Since 2017, the Alliance of Bioversity and CIAT has been driving transformative partnerships and investments for biodiversity conservation and sustainable development in the Brazilian Amazon. The **Catalyzing and Learning through Private Sector Engagement for Biodiversity Conservation (CAL-PSE)** program, supported by the U.S. government, aims to reshape conservation efforts while enhancing the wellbeing of indigenous and local communities. Through co-creation and co-investment with local and private sector partners, CAL-PSE fosters sustainable development and conservation funding in the Brazilian Legal Amazon.

Through CAL-PSE, the Alliance and the U.S. government facilitate the **Amazon Partnership Platform (PPA)**, an innovative, private sector-led multisectoral platform aimed at promoting sustainable business models and economic opportunities that support biodiversity, forests, and natural resources in the Brazilian Amazon. The PPA fosters partnerships, private sector investment, technical cooperation, and institutional collaboration, catalyzing impactful solutions for sustainable development in the region.

As part of the CAL-PSE program, the Alliance and Impact Earth (an impact investor/fund manager), with the support of the U.S. government co-designed and launched the **Amazon Biodiversity Fund for Brazil (ABF)** in 2019. The ABF provides flexible, long-term capital to sustainable businesses in the Amazon, targeting sectors such as agriculture, extractive activities, and technology improvements that benefit biodiversity and local communities.

From Space to Village: Harnessing geospatial information for improved environmental decision-making in the Amazon

In partnership with the National Aeronautics and Space Administration (NASA) and the U.S. government, the Alliance developed and leads the **SERVIR-Amazonia** consortium, which integrates local knowledge and some of the world's best science in geospatial and earth observation technology in six countries: Brazil, Colombia, Ecuador, Guyana, Peru, and Suriname. The Program collaborates with regional partners to tailor decision-support services that address natural disasters, climate change, and deforestation in the Amazon Basin. **SERVIR-Amazonia** prioritizes the needs of communities, ensuring that the voices of women and indigenous peoples are incorporated into environmental decision-making.

Inclusive digital tools to scale smallholder agroecology

Digital innovations in agriculture are changing the way food is produced and have the potential to transform agriculture at large scales. Yet smallholders, women, and marginalized groups in low- and middle-income countries often lack access to these tools. The **Transitions ATDT project** (part of the EU-IFAD-funded Agroecological Transitions for Building Resilient, Inclusive, Agricultural and Food Systems, or TRANSITIONS program) addresses this gap by promoting inclusive digital resources and citizen science. The project empowers farmers in Brazil and Vietnam to co-create and adopt agroecological practices, focusing on sustainable agronomy and traceability tools. In Brazil, it supports small farmers along the Amazon agricultural frontier of the states of Pará and Mato Grosso, enhancing recognition of their sustainable practices.

Compensating farmers for ecosystem services

Payments for ecosystem services (PES) offer smallholder farmers in low- and middle-income countries an opportunity to diversify income while encouraging practices that provide essential ecosystem services, such as climate change mitigation and adaptation. However, consolidating these payments has faced challenges. Funded by the German Federal Ministry for Economic Cooperation and Development (BMZ), the **CompensACTION Initiative** incentivizes small-scale farmers to enhance their environmental stewardship. The Alliance, in collaboration with academic partners, is developing the scientific foundation to support this initiative.

CIAT

EC – Nexus Framework for biodiversity-relevant transformative change – BIOTRAILS

The BIOTRAILS project aims to generate knowledge and develop tools that will inspire and accelerate transformative change for biodiversity. By using Participatory Systems Dynamics Modelling (PSDM), BIOTRAILS considers the complex interrelations of indirect drivers across four global value chains of traded products: cocoa in Peru, fisheries in the Mediterranean, gold mining in Ghana, and **forest-based products created by indigenous communities in the Brazilian Amazon.** The project unites stakeholders to collaboratively design sustainable pathways, proposing interventions in policy, consumption, and corporate practices to achieve a sustainable future that aligns with climate and social justice goals.

Key Areas of Synergy and Collaboration

1. **Crop Improvement and Genetic Research**
   - Rice breeding to develop high-yielding, climate-resilient rice varieties.
   - Cassava research to enhance disease resistance, productivity, and value chains.
   - Forages to develop improved tropical forages for sustainable and low-emission livestock systems.
2. **Climate-Smart and Sustainable Agriculture**
   - Agroecological practices promoting diversified cropping systems and conservation agriculture.
   - Carbon sequestration to analyze soil carbon dynamics to improve land management.
   - Digital agriculture for leveraging AI, big data, and remote sensing to enhance decision-making.
3. **Impact Evaluation and Policy Analysis**
   - Rural development policies
   - Capacity building

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Perspectives for the future

The Alliance plans to enhance and expand its work in Brazil by focusing on four strategic axes:

1. **Agricultural Agenda:** Strengthening food security efforts, particularly for small and medium rural producers.
2. **Environmental and Climate Agenda:** Deepening existing partnerships and mobilizing new ones to secure strategic funding.
3. **Monitoring, Evaluation, and Learning (MEL) Agenda:** Providing technical expertise to local private sector actors, civil society, and governments.
4. **Impact Investment and Private Sector Engagement:** Leveraging expertise in social, environmental, climate, and ESG issues to foster impactful partnerships and investments.

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