

# BioForestALC

Report of the First Forum on the Potential  
of Non-Timber Forest Products for a  
Bioeconomy in Latin America and  
the Caribbean



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2022



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Sebastião dos Santos Pereira (Company Veja / Vert Calçados)  
Sérgio Lopes (RECA Cooperative)  
Tarcila Portugal (Coordinator of Articulation and Support for Map Extractivism)  
Thais Linhares Juvenal (Food and Agriculture Organization – FAO)

It is observed that this document also includes contributions from the participants of the events, listed in Annex I.

#### **Explanatory note**

The Bioeconomy of Non-Timber Forest Products in Latin America and the Caribbean is the subject of this document.

The term Non-Timber Forest Products was coined with the intention of unifying the language in Latin America and the Caribbean; however, it should be noted that these products can also be referred to by other terms.

In the case of Brazil, there is a term commonly applied to the concept of Non-Timber Forest Products, which was widely discussed with the Brazilian society and implemented in 2009:

#### ***Sociobiodiversity Products***

*Goods and services (final products, raw materials, or benefits) derived from biodiversity resources, with the goal of establishing productive chains of interest to traditional peoples and communities, as well as family farmers, to promote the preservation and enhancement of their practices and knowledge, and to ensure the resulting rights, while also generating income and promoting the improvement of their quality of life and the environment in which they live (National Plan for the Promotion of Socio-biodiversity Product Chains, 2009).*



# Summary

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## Presentation

This document was created using material gathered from secondary sources as well as contributions from attendees and speakers at all BioForestALC events.

BioForestALC is the First Virtual Forum on the Potential of Non-Timber Forest Products for a Bioeconomy in Latin America and the Caribbean: *Connecting the bioeconomy and forests with human development*.

BioForestALC's activities began with preparatory seminars held between October 20 and November 25, 2021, and during the week of its realization, May 23 to 26, 2022.

The objective of this document is to present an analysis of the actors' perspectives on the bioeconomy of non-timber forest products in Latin America and the Caribbean, as well as the outcomes of the BioForestALC discussions, and to promote the formation of a network of people and institutions interested in exchanging experiences and information and funding future projects related to the theme to be developed in the region.



## Introduction

There will be no healthy economy on an unhealthy planet, according to the FAO document “The State of the World’s Forests” (2022). According to the report, environmental degradation has resulted in biodiversity loss and climate change, among other things. In this sense, forests are critical to the development of inclusive, resilient, and sustainable economies. One of the three pathways identified in the document as essential for the development of inclusive, resilient, and sustainable economies is the sustainable use of forests and the development of value chains.

Furthermore, according to FAO (2022), forests encompass 31% of the earth’s surface (4.06 billion ha), despite a 420-million-hectare decline owing to deforestation between 1990 and 2020. More than seven hundred million hectares of forest (about 18% of total forest area) are legally protected. However, deforestation and forest degradation continue to harm forest biodiversity. Despite ongoing land loss, forests hold 662 billion tons of carbon, accounting for more than half of the global carbon storage in soils and vegetation.

More than half of the world’s GDP (\$84.4 trillion in 2020) is predicted to be (\$31 trillion per year) or extremely (\$13 trillion per year) dependent on ecosystem services, including those provided by forests. Non-timber forest products are used directly or as a source of livelihood by 3.5 billion to 5.76 billion people. And over 3.27 billion people, or 75% of the world’s non-urban population, live within forests or within 1 km of a forest. Forest foods harvested from the nature increase the food and nutritional security of people close to the forest, especially in remote areas in the tropics and subtropics. In many tropical countries, people close to the forest earn about a quarter of their income from forest resources (FAO, 2022).

According to FAO data released in 2014, non-timber forest products provide food, medicine, and income to approximately 20% of the world’s population, primarily women and children. In 2011, the estimated income derived from non-timber forest production stood at about U\$ 88 billion, with the knowledge that these figures are likely to be far higher if data from the informal market were obtained (BRAZIL, 2022).

Overall, the value of forests extends far beyond economics, as they play an important role in combating rural poverty, ensuring food security, and providing people with a means of subsistence. Furthermore, they provide environmental services like as clean air and water, biodiversity conservation, and the mitigation of processes that contribute to climate change (FAO, 2018).

Regarding Latin America and the Caribbean, according to FAO (2022), of the 4.06 billion forests in the world, South America accounts for 21% of this total, which if combined with Central America and the Caribbean would reach 22%, or 874.5 million hectares. This account includes the Amazon, which encompasses eight of South America’s twelve countries. It is important noting that, as mentioned by Neves et al., 2021, it is impossible to separate natural and cultural heritage in the Amazon, given the importance of tropical forests in their relationship with the original peoples of the region.

Non-timber forest products (NTFPs) are important for the economies of local communities in Latin America and the Caribbean and represent alternative uses of forests. In this regard, a wide range of non-timber products are traded in both domestic and international markets. Among these are foods, herbal medicines, fibers, essential oils, rubber, waxes, dyes, cosmetic oils, wild mushrooms, and others.

With the spread of the concept of bioeconomy in several countries over the last decade, NTFPs have gained prominence. This concept is still not widely accepted in Latin America and the Caribbean and requires further discussion. Some countries have established public policies aimed at the development of NTFPs and bioeconomy value chains. Brazil, Argentina, and Ecuador are three examples.

Brazil established the *Programa Bioeconomia Brasil Sociobiodiversidade* (Bioeconomy Brazil Sociobiodiversity Program in English) in 2019, which is overseen by the Ministry of Agriculture, Livestock and Food Supply (MAPA). Argentina was the first country in Latin America to have a national bioeconomy policy focused on regional governance in the various territories of the country. Ecuador has also established a fund for bio enterprise and has developed agreements between the government and universities to develop the sector. In order to include Latin America and the Caribbean in the global discussion on the subject, it is still necessary to harness the potential of forests and NTFPs for the development of the bioeconomy in the region, despite some political initiatives.

Based on this context, a proposal to organize a Virtual Forum on the Potential of Non-Timber Forest Products for the Bioeconomy of Latin America and the Caribbean emerged in order to discuss the region’s desired bioeconomy.





## Chapter 1

### The Forest Bioeconomy in Latin America and the Caribbean

#### 1.1 The Concept of the Forest Bioeconomy

The concept of the bioeconomy has grown in popularity over the last decade. According to a 2020 report from the International Advisory Council on Global Bioeconomy (IACGB)<sup>1</sup>, nearly sixty countries worldwide are pursuing bioeconomy policies. According to the IACGB, by implementing bioeconomy strategies, governments lay the groundwork for policy support and investment, which in turn allows for pioneering research, the development of new and advanced technologies, capacity building, driving industrialization processes, raising awareness, and stimulating consumer demand.

The bioeconomy is defined in this report as *“the production, utilization, and conservation of biological resources, including associated knowledge, science, technology, and innovation, in order to provide sustainable solutions, information, products, processes, and services across all economic sectors and enable the transition to a sustainable economy”* (Global Bioeconomy Summit, 2020).

FAO uses this concept, in a document that deals with Principles and Criteria for a Sustainable Bioeconomy<sup>2</sup>. The ten principles presented by FAO are grouped into four themes: society, environment, economy, and governance.

With regard to the environment, the bioeconomy must rely on the best efficiency in the use of resources and biomass, as well as ensuring that natural resources are conserved, protected and improved. As for governance, effective mechanisms must support the bioeconomy, which in turn must promote cooperation, collaboration and sharing among stakeholders.

On the principles related to the subject of economics, the bioeconomy should support competitive and inclusive economic growth, make good use of existing relevant knowledge and technologies and appropriate best practices, as well as promote research and innovation and fair trade. As for society, the bioeconomy should support food and nutrition security, make communities healthier, harness social and ecosystem resilience, as well as encourage sustainable consumption in society.

<sup>1</sup> [https://gbs2020.net/wp-content/uploads/2021/04/GBS-2020\\_Global-Bioeconomy-Policy-Report\\_IV\\_web-2.pdf](https://gbs2020.net/wp-content/uploads/2021/04/GBS-2020_Global-Bioeconomy-Policy-Report_IV_web-2.pdf)

<sup>2</sup> <https://www.fao.org/3/cb3706en/cb3706en.pdf>



Definitions, principles, and criteria are essential for guiding the bioeconomy discussion. Given this, we attempted to raise concepts more related to the forest theme for the purposes of this document.

Hurmekoski et al. (2019), consulted European experts to construct the concept of forest-based bioeconomy, obtaining 5 categorical definitions:

- i. a vision for the future, the bioeconomy being based on the innovative use of renewable natural resources;
- ii. a concept for promoting real change in the forest sector;
- iii. a synonym for the forest sector;
- iv. a concept that presents a new identity for bio-based sectors;
- v. a concept that restricts the perspectives of forests to biomass production and industrial uses.

In a systematic review, Piplani, M., and Smith-Hall, C. (2021) defined the forest-based bioeconomy as the set of economic activities that cultivate, harvest, process, reuse, recycle, and trade forest products and forest ecosystems.

When analyzing Brazilian public policies on the topic, Afonso (2021) proposes the concept of the forest bioeconomy as a set of activities related to obtaining forest products and forest ecosystem services in an innovative and sustainable manner, considering the environmental, social, and cultural aspects associated with the use of forest resources.

In the chapter on the forest bioeconomy that comprises the Science Panel for the Amazon publication, Abramovay et al. (2021) state that the bioeconomy is more than a sector, it is an ethical-normative value; it is necessary to bridge the gap between tropical forests and the global frontier of scientific and technological innovation by combining the millennial knowledge existing among indigenous and traditional populations with the development and application of new impact technologies in products, processes or services for the generation of innovative solutions. The forest (as an ethical value) and the people who live in it and contribute to its conservation are the starting point for any project aiming to usher in a new bioeconomy. It is about more than just reducing carbon emissions by replacing oil or expanding sustainable businesses; it is about creating an inclusive economic model that promotes diversity and leaves no one behind.

In general, these concepts are close to the intended debate when discussing the bioeconomy in Latin America and the Caribbean, but other elements from the conversations established within BioForestALC could be added.

## 1.2 The Forest Bioeconomy in Latin America and the Caribbean

As stated in the introduction to this document, South America is estimated to account for 21% of the world's forests, with Central America and the Caribbean accounting for the remaining 22%, or 874.5 million hectares.

Within this context are non-timber forest products, which have gained prominence in the last decade with the spread of the concept of bioeconomy in several countries. This is since some countries have established public policies aimed at the development of value chains of NTFPs and Bioeconomy.

According to a UNDP report (2010)<sup>3</sup>, the countries of Latin America and the Caribbean are the most biologically diverse region in the world. South America alone is home to half of the Earth's biodiversity. Furthermore, biodiversity is embedded in the foundations of the cultures that have inhabited Latin America and the Caribbean. Biodiversity is of vital importance for the long-term provision of ecosystem services and plays a key role in maintaining the resilience (endurance and recovery capacity) of ecosystems.

Also, according to UNDP (2010): *"By limiting malnutrition and large-scale migration to cities, biodiversity serves as the primary safety net for rural populations in Latin America and the Caribbean."* Many rural and Indigenous communities rely on biodiversity for a living, whether through fisheries, non-timber forest products, or agriculture. The region's vast natural resources serve as a one-of-a-kind laboratory for products and processes that could incubate medicinal solutions for current and future generations. Markets for biodiversity medicines are expanding, and the region could position itself as a leader if more money is invested in research and development. The global market for herbal remedies is estimated to be worth \$60 billion.


<sup>3</sup> UNDP. Latin America and the Caribbean: a biodiversity superpower, 2010

According to the document produced by the ECLAC<sup>4</sup> team as part of the activities of the ALCUE-KBBE Project (*América Latina Unión Europea-Bioeconomía Basada en el Conocimiento*), several pathways for the development of the bioeconomy in Latin America and the Caribbean have been identified, which can be summarized in five categories:

- i. exploitation of biodiversity and ecosystem services;
- ii. ecological intensification;
- iii. biotechnology applications;
- iv. bioenergy and bioproducts (biorefineries);
- v. improving the efficiency of value chains in the food system.

The region's status as one of the most biodiverse in the world represents the region's main potential in the exploitation of biodiversity resources and ecosystem services; however, many of the most biodiverse countries lack the scientific capabilities to advance the development of biodiversity-related value chains. There have also been significant advances in the field of ecosystem services, such as the establishment of payments for environmental services and participation in forestry-related carbon markets; however, these developments were part of the climate change architecture and were not viewed as part of a bioeconomy-oriented strategy for sustainable development.



<sup>4</sup> *Bioeconomía en América Latina y el Caribe: contexto global y regional y perspectivas* | Publicación | Comisión Económica para América Latina y el Caribe (cepal.org) 

## Chapter 2

### The BioForestALC: Implementation Proposal

#### 2.1 Context

BioForestALC is the first Virtual Forum in Latin America and the Caribbean on the Potential of Non-Timber Forest Products for a Bioeconomy: Connecting the bioeconomy and forests with human development, instituted from actions carried out in the years 2021 and 2022.

The proposal came as part of the Task Force “*Unlocking The Bioeconomy and Non-Timber Forest Products*”, which was established during the XXV World Congress of the International Union of Forest Research Organizations (IUFRO) in Brazil in 2019. The Task Force involves researchers from more than twenty-five countries, including representatives from all over Latin America, and members of international organizations such as the Food and Agriculture Organization of the United Nations (FAO), who have been actively participating.

A proposal to organize an e-FORUM on the Potential of Non-Timber Forest Products for the Bioeconomy of Latin America and the Caribbean emerged from the Task Force, inspired by the European INCREdible Thematic Network on Innovation Networks in NTFPs in the Mediterranean. Although in different contexts, the European network’s goal of closing the knowledge gap in research and effectively implementing innovation in the sector is also of interest in Latin America and the Caribbean, particularly when considering developing inclusive bioeconomy strategies.

Members of the Task Force of the International Union of Forest Research Organizations (IUFRO) initially developed this proposal<sup>5</sup>. From this, the proposal for BioForestALC was structured by the representatives of the executing institutions of this forum, namely: Brazilian Forest Service (SFB), University of Brasília (UnB), Brazilian Agricultural Research Corporation (Embrapa), IPÊ - Institute for Ecological Research, Centro Agronómico Tropical de Investigación y Enseñanza (Catie), WWF-Brazil and the Amazon Cooperation Treaty Organization (ACTO).

<sup>5</sup> International Union of Forest Research Organizations (IUFRO) Task Force “Unlocking the Bioeconomy and Non-Timber Forest Products”: Sandra Regina Afonso (Brazilian Forest Service); Ana Margarida Castro Euler (Brazilian Agricultural Research Corporation - Embrapa); Janaina Deane de Abreu Sa Diniz (University of Brasília); James Chamberlain (U. S. Forest Service); Sven Mutke (Centro de investigación Forestal, INIA-CSIC, Spain); Sven Walter (Food and Agriculture Organization of the United Nations - FAO); Verónica Loewe Muñoz (Forestry Institute - INFOR, Chile).

#### 2.2 Participants

Although the initial proposal came from researchers, it has always sought to include, in addition to technicians and researchers, public and private managers, people involved in the value chains (associations of producers, processors and secondary industries, distributors and traders, consumers), as well as members of non-governmental organizations, regional or international development agencies, and regulatory institutions.

#### 2.3 Objectives and Expected Products

The forum aims to identify and formulate coordinated initiatives to boost the bioeconomy in Latin America and the Caribbean through the development of non-timber forest product value chains. The exchange of experiences and knowledge among specialists and key sector actors is expected to result in the attainment of certain medium and long-term goals.

#### Specific goals from the implementation of BioForestALC

- i. Systematize and give visibility to information and knowledge about NTFPs and their relevance to the bioeconomy;
- ii. Analyze the use of NTFPs as food and income sources, taking into consideration the food security and vulnerability of local communities;
- iii. Map the experiences, highlighting the success stories and lessons learned, in order to propose inclusive economic and organizational strategies for producers in the post-pandemic period;
- iv. Discuss ways to add value to products through the formation of innovation, research and development networks;
- v. Identify financial mechanisms for the incorporation of NTFPs into the bioeconomy while considering short commercialization circuits;
- vi. Provide grants to improve and propose public policies related to the bioeconomy and NTFPs.

### Expected products from the implementation of BioForestALC

- i. publications;
- ii. innovation, research, and development networks;
- iii. discussion forums;
- iv. strategic and/or commercial alliances between countries.

## 2.4 Implementation Steps

As previously stated, BioForestALC will be realized through a series of prior activities beginning in September 2021, which will be described below.

### Forum Announcement

#### Event at IUFRO World Day

- **Date:** September 28, 2021
- **Session:** *Unlocking the Bioeconomy and Nontimber Forest Products – Untapping the Potential of Nontimber Forest Products for Latin American Bioeconomy*
- **Description:** BioForestALC Launch and Dissemination

### First Preparatory Meeting with members from Pan–Amazonian countries

#### Event associated with the World Bioeconomy Forum

- **Date:** September 20, 2021
- **Organized by:** SFB, Embrapa, Catie, IPÊ; University of Brasília.
- **Session:** Pan–Amazonian Preparatory Stage for the Virtual Forum *The Potential of Non–Timber Forest Products for a Latin American and Caribbean Bioeconomy*
- **Schedule:**

#### Panel 1

##### Importance of NTFPs for the Latin American and Caribbean Bioeconomy

- » **Moderation:** Neluce Soares (IPÊ)
- » **Speakers:**  
Sandra Regina Afonso (Brazilian Forest Service)  
Evelyn Chaves Jaén (Catie – Centro Agronómico Tropical de Investigación y Enseñanza)  
Max David Yamauchi (Catie – Centro Agronómico Tropical de Investigación y Enseñanza)

#### Panel 2

##### Inclusive experiences in Sociobiodiversity Chains in the Amazon

- » **Moderation:** Judson Valentim (Embrapa Acre)
- » **Speakers:**  
Kimberly Silva (Iratapuru Fund – COMARU)  
Sebastião dos Santos Pereira (Company Veja/ Vert Calçados)  
Sérgio Lopes (RECA Cooperative)

#### Panel 3

##### Challenges for an Amazonian Bioeconomy

- » **Moderation:** Janaína Diniz (University of Brasilia – UnB)
- » **Speakers:**  
Ana Euler (Embrapa Amapá)  
Danilo Fernandez (Federal University of Pará)  
Edel Moraes (National Council of Extractive Populations – CNS)  
Marciely Tupari (Association of Indigenous Warriors of Rondônia – AGIR)

♦ **Access Link:** <https://www.youtube.com/watch?v=Dvz7nCFVG-Q>

### Second Preparatory Meeting

#### Event associated with GreenRio/ Green Latin America

- **Date:** November 25, 2021

#### Moment 1: GreenRio Opening Event

- **Organized by:** Green Rio (Maria Beatriz Costa with support from the BioForestALC organization team)
- **Panel name: Bioeconomy in Latin America and the Caribbean**
- » **Moderation:** Sandra Regina Afonso (BioForestALC Organization Team)
- » **Speakers:**  
Thais Linhares Juvenal (Food and Agriculture Organization – FAO)  
Rafael Zavala (FAO Representative in Brazil)  
Alida Bellandi (Board of the Argentine–Brazilian Chamber of Commerce)  
Michael Hennesey (Inter–American Development Bank – IDB)  
Ingo Plöger (Latin American Business Council – CEAL)

♦ **Link de Acesso:** [https://www.youtube.com/watch?v=kl\\_MLZ-siZU](https://www.youtube.com/watch?v=kl_MLZ-siZU)

## Moment 2: Second Preparatory Meeting for BioForestALC

- **Organized by:** SFB, Embrapa, Catie, IPÊ; University of Brasília.
- » **Moderation:** Neluce Soares (IPÊ)
- **Schedule:**
- » **Welcome:** Sra. Lizane Soares Ferreira (Ms. Lizane Soares Ferreira – SFB Director of Forest Development)

### Panel 1

#### Bioeconomy and public policies in Latin America and the Caribbean

- » **Moderation:** Ana Euler (Embrapa Researcher)
- » **Speakers:**
  - Alexandra Moreira Lopez (ACTO Secretary-General)
  - Sr. Carlos Salinas (SP ACTO Director. ACTO Forestry Program)
  - Sr. René López Camacho (*Teacher at Universidad Distrital Francisco José de Caldas*)
  - Sra. Tarcila Portugal (Coordinator of Articulation and Support for Map Extractivism)

### Panel 2

#### Experiências inclusivas em Cadeias da Sociobiodiversidade na América Latina e Caribe

- » **Moderação:** Fabiana Prado (IPÊ)
- » **Palestrantes:**
  - Raipin Jitashe (Fundação Tuhka – Suriname)
  - Ana Centeno (Associação das Comunidades Florestais do Peten – ACOFOP – Guatemala)
  - Mayk Arruda (Central Cerrado – Brazil)

♦ **Link de Acesso:** <https://www.youtube.com/watch?v=rAmWh6CMHL8>



## The BioForestALC Forum

- **Date:** 23rd to 26th /05/2022
- **Schedule:**

May 23, 2022

### 3:00 pm – Opening

**Pedro Alves Corrêa Neto**  
 Director-General  
 Brazilian Forest Service/Ministry of Agriculture, Livestock and Food Supply (Brazil)

**Guy Capdeville**  
 RD&I Director  
 Agricultural Research Company (Brazil)

**Pedro Henrique Zuchi da Conceição**  
 University of Brasilia (Brazil)

**James Chamberlain**  
*International Union of Forest Research Organizations*

**Roger Villalobos**  
 Researcher at the Centro Agronómico Tropical de Investigación y Enseñanza and President of the Red Latinoamericana de Bosques Modelo (Costa Rica)

**Eduardo H. Ditt**  
 Executive Secretary  
 IPÊ – Institute for Ecological Research (Brazil)

**María Alexandra Moreira López**  
 General Secretary  
 Amazon Cooperation Treaty Organization

**Octávio Nogueira**  
 Sociobiodiversity Strategy Coordinator  
 WWF Brazil (Brazil)

**3:30 pm – Presentation of the Event Proposal and the Platform of Experiences**

Sandra Regina Afonso  
Brazilian Forest Service (Brazil)

Vicente Guadalupe  
Amazon Cooperation Treaty Organization

**4:00 pm – Panel: The forest bioeconomy in promoting human development in Latin America and the Caribbean**

Thais Juvenal  
Food and Agriculture Organization of the United Nations – FAO

Ricardo Abramovay  
University of São Paulo – USP (Brazil)

Joaquim Belo  
National Council of Extractive Populations – CNS (Brazil)

May 24, 2022

**3:00 pm – Working Groups**

With Presentations of Experiences and construction of the Action Panel

**WG 1 – Capacity Building**

Coordination: Janaína D. A. S. Diniz (UnB) e Álvaro Nogueira de Souza (UnB)

**CAP Management Program: building capacities for the management of family farming enterprises, Brazilian traditional peoples, and communities**

Claudia Souza (GIZ – German Agency for International Cooperation)

**Training and technical assistance, effective methods for developing and strengthening knowledge in associative rural enterprises**

Evelyn Chaves (*Centro Agronómico Tropical de Investigación y Enseñanza* – Tropical Agricultural Research and Higher Education Center – Costa Rica)

**Post-graduation in the Amazon: use of Problem Based Learning and Territorial Bioeconomics**

Patrícia Oliveira (Federal University of Western Pará – Brazil)

**WG 2 – Commercialization, Markets and Value Chains**

Coordination: Kolbe Soares (WWF) and Bruna de Vita (UnB)

**Exportation of Baru: partnership between Central do Cerrado and Botanica Origins**

Luiz Carrazza (Central do Cerrado) and Camila Gusmão (Empresa Botanica Origins – Brazil)

**Partnership between company and community in the development of rubber value chains**

Sebastião dos Santos Pereira (Veja Company – Brazil)

**Origins Brazil: Business Assurance for the Standing Forest**

Fabiano Ruas (Imaflora/Origins Brazil – Brazil)

**Proyecto de Uso Sostenible de la Biodiversidad**

Sandra Sharry (*Universidad Nacional de La Plata* – Argentina)

**WG 3 – Bioeconomy of Restoration**

Coordination: Roger Villalobos (*Catie*) e Max Yamauchi (*Catie*)

**Experiences in supporting non-timber forest product chains in southern Brazil**

Leonardo Urruth (Rede Sul de Restauração – Brazil)

**Arboretum Program for Conservation and Restoration of Forest Diversity**

Natália Albuquerque (Brazilian Forest Service – Brazil)

**Redário: seed networks for restoration**

Eduardo Malta Campos-Filho (Socioambiental institute – Brazil)

**Non-timber forest products and restoration: challenges and opportunities**

Roger Villalobos (*Centro Agronómico Tropical de Investigación y Enseñanza* – Costa Rica)



May 25, 2022

### 3:00 pm – Working Groups

With Presentations of Experiences and construction of the Action Panel

#### WG 4 – Research and Development for an Inclusive Bioeconomy

Coordination: Fátima Brito (SFB) and Ana Euler (Embrapa)

##### National overview of Embrapa's research on NTFPs and the experience with yerba mate and pine nut.

Cristiane Helm (Brazilian Agricultural Research Corporation- Embrapa - Brazil)

##### Açaí'ação: co-construction of knowledge and consolidation of quality markets for sociobiodiversity products

Nathalie Cialdella (CIRAD - French Guiana)

##### Chakra management by kichwas families in the Ecuadorian Amazon.

Carlo Pozo and Bladimir Dahua (Kallari Association - Ecuador)

#### WG 5 – Financial Mechanisms for the Development of Chains

Coordination: Fabiana Prado (IPÊ) and Juliana Napolitano (ISPN)

##### Impact Finance Platform for Sociobiodiversity

Carina Pimenta (Conexsus - Brazil)

##### Carbon credit commercialization mechanism

Luana Cordeiro (Biofílica Company - Brazil)

##### LIRA Fund: a blended finance arrangement

Fabiana Prado (Institute for Ecological Research - Brazil)

May 26, 2022

### 3:00 pm – Presentation of Working Group Results

#### 4:00 pm – Panel: Fostering the Forest Bioeconomy in Latin America and the Caribbean

Nabil Kadri

National Development Bank - BNDES (Brazil)

Benno Pokorny

German Agency for International Cooperation – GIZ

Giulia Muir

Food and Agriculture Organization of the United Nations – FAO

Ana Maria Gonzalez

World Bank

Luz Marina Mantill

Sinchi Institute

### 17:30 – Referrals

♦ Link with more information about the event: <http://otca.org/pt/bioforestalc-conectando-a-bioeconomia-e-as-florestas-com-o-desenvolvimento-humano/>



## Chapter 3

### The BioForestALC: Result and Propositions

#### 3.1 Preparatory Results

##### 3.1.1 Concept, premises, and challenges for the promotion of the bioeconomy of non-timber forest products.

In the first preparatory, held in the framework of the Pan-Amazon, the 75 participants were asked what the key elements for the development of the Amazon bioeconomy would be. The answer emphasized “social organization.” Inclusion, equity, participation, justice, partnerships, sustainability, and traditional knowledge were also frequently mentioned. (Figure 1).



Figure 1

The second preparatory session, held in Latin America and the Caribbean, was attended by about sixty participants from Brazil, Suriname, Costa Rica, Ecuador, Peru, Spain, France, and Colombia.

Based on the comments from the first and second preparatory sessions, assumptions, challenges, and opportunities were raised for the promotion of the bioeconomy of non-timber forest products, described below:

1. highlight that the development of the bioeconomy is essential to mitigate the impacts of Climate Change;
2. combat deforestation and illegal logging in the forest for the development of the bioeconomy;
3. empower communities to implement fair partnerships with companies
4. give visibility to Payment for Environmental Services strategies that have been implemented with the support of companies (Example: Natura, Veja/Vert);
5. offer equity, territory, energy, communication, among others to develop the bioeconomy;
6. defend LIFE, think about SocioBioeconomics;
7. recognize the importance of Indigenous peoples in forest conservation and their role;
8. promote the transition to the bioeconomy we want with justice, inclusion, biodiversity protection, inequality reduction, forest regeneration/recovery, and the integration of technologies with traditional knowledge;
9. consider the various biomes, keeping in mind that the bioeconomy of sociobiodiversity extends beyond markets, including food security;
10. question how to combine the bioeconomy with the logic of the “market of scale” (for example, açai), which leads to monoculture;
11. broaden the concept of technology by considering traditional (endogenous) knowledge - do not separate the concepts;
12. consider the integration of different knowledge;
13. think about the generational transition, considering technology and training for young people;
14. promote partnerships between community associations, support organizations, governments, and local businesses;
15. increase the commitment of the community companies in meeting the demands;
16. strengthen the cooperatives in the strategic axes of the value chain;
17. provide financial resources for the promotion of the bioeconomy as a sustainable business possibility;
18. put INCLUSION at the center of the definition of the bioeconomy;
19. consider the Nexus: Food Security + Bioeconomy + Forest;
20. construir capacidades para uma boa governança da Bioeconomia;

21. learn about and integrate the public policies of the different LAC countries;
22. broaden the vision of the bioeconomy thinking about the various products and productive sectors (energy, food, phytotherapies, seeds, among others);
23. learn about the ecology of non-timber species and build management protocols;
24. invest in the restaurant sector to publicize the consumption of NTFPs;
25. focus on innovation actions to add value to NTFPs;
26. include Forest Restoration/Recovery in the construction of the bioeconomy;
27. expand regional efforts (between countries) to strengthen the economy or the economy of *Madre Terra* for the mitigation of Climate Change;
28. promote national, regional, and international competitiveness through innovation and inclusion;
29. invest in research to promote the bioeconomy;
30. overcome barriers to the commercialization of NTFPs in LAC.

### 3.1.2 Conception of Working Groups (WGs) from the Preparatory sessions

Based on the assumptions and challenges for promoting the bioeconomy of non-timber forest products, 5 WGs were proposed, described below. The construction of the objectives and the scope of the WGs were elaborated with the participation of several partners when a base document was elaborated for the discussions in the WGs.

#### WG 1 : Capacity Building

##### Objective:

Discuss possibilities for promoting the exchange of scientific and technical knowledge and expertise with a view to building capacity for the implementation of an inclusive bioeconomy.

##### Scope of Topics for Discussion:

Building capacity for the transition to the bioeconomy by considering the integration of different knowledge, including traditional and endogenous knowledge. Capacity building for good governance of the bioeconomy for storage and distribution of production, good processing practices, implementation of fair partnerships with companies, among others. Promotion of female empowerment. Strengthening existing educational processes. Generational empowerment, considering the knowledge and wisdom of the elders and motivating young people to work on the theme of the bioeconomy using appropriate technologies and encouraging entrepreneurship. Obtaining resources for bioeconomy training at all levels.

#### WG 2 : Commercialization, Markets and Value Chains

##### Objective:

Discuss and propose economic and organizational strategies based on the development of value chains that include and strengthen traditional peoples and communities (IPLC - Indigenous Peoples and Local Communities).

##### Scope of Topics for Discussion:

Production and distribution/logistics planning considering the specificities of each community and region. Broaden the vision to the value chain by addressing standardization, value addition, traceability, fair trade, and certification. Promotion of alternative commercialization channels, such as short circuits and policy instruments for government procurement and subsidy of NTFPs. Promotion of partnerships between community associations, support organizations, governments, and local businesses. Dissemination of possibilities for using lesser-known products in sales channels. Promotion of the bioeconomy as a sustainable business possibility. Overcoming barriers for the commercialization of products in LAC.

#### WG 3 : Restoration Bioeconomy

##### Objective:

Discuss possibilities of implementing landscape restoration and forest recomposition for the development of the bioeconomy, considering the importance of these activities in mitigating the impacts of climate change.

##### Scope of Topics for Discussion:

Broadening the vision of the bioeconomy to include the landscape restoration/forest recomposition chain and recognize the importance of traditional peoples and communities in maintaining biodiversity. Possibilities of regional action to strengthen the chain of landscape restoration/forest recomposition, aiming at mitigating Climate Change. Discussion of models of landscape restoration and forest recomposition with an interdisciplinary approach considering social, historical, and economic aspects.

#### WG 4 : Research and Development for an Inclusive Bioeconomy

##### Objective:

Discuss possibilities of promoting, rescuing, and applying research and development actions, in an interdisciplinary and continuous way, aiming at adding value to the implementation of an inclusive bioeconomy.

##### Scope of Topics for Discussion:

Promoting national, regional, and international competitiveness through innovation and inclusion. Transition to the bioeconomy seeking innovation and aggregation of technologies together with traditional (endogenous) knowledge and promoting socio-technical adequacy. Broadening the vision of the bioeconomy thinking about the various products and productive sectors (energy, food, phytotherapies, seeds, handicrafts, bioactive compounds, among others). Promoting production diversification, including the use of processing residues. Prioritizing the participation of technology users in defining research and developing solutions for innovation, recognizing the rights of those involved. Dissemination, in aggregate form, of the research and practices developed, to produce documents with accessible language that can be used in training courses. Production of knowledge related to the ecology of non-timber species. Development of interdisciplinary research considering social, economic, technological, environmental aspects, among others.

#### WG 5 : Financial Mechanisms for the Development of Chains

##### Objective:

Discuss financial mechanisms capable of promoting the development of value chains with a focus on an inclusive bioeconomy.

##### Scope of Topics for Discussion:

Possibilities of access to reimbursable and non-reimbursable financial resources, both public and private. Arrangements for channeling financial resources to the initial actors in the production chains through private and public credit. Guidance for the use of financial resources with responsibility for individual and collective production. Joint action between financial resource providers and technical assistance and rural extension institutions to ensure the supply of credit in a targeted manner. Promotion of dialogues between the sectors that provide resources and those that receive them. Reduction of regional asymmetries in the supply of credit and development.

### 3.2 Forum Results

Overall, BioForestALC attracted 250 participants from thirteen countries from May 23 to 26. The event drew 180 participants on the first day, when the organizing institutions of BioForestALC, the proposal and program for the following days, as well as the ACTO Platform of Experiences, were presented to the participants.

The Working Groups (WGs) took place on May 24th and 25th. On the first day, WGs 1, 2, and 3 were held, with 32, 78, and 39 participants, respectively. On the second day, WGs 4 and 5 were held, with 51 and 50 participants, respectively. All the working groups had three or four specific presentations, followed by an analysis and prioritization of the challenges and opportunities raised during the preparatory meetings in order to propose actions.

The results of the working groups were presented on the fourth and last day of the event, as well as a panel on financing and the presentation of proposals for the continuation of the BioForestALC initiative.

In total, 142 action proposals were developed, which are listed below.

## WG 1 : Capacity Building

Challenges/Opportunities	Proposals
<p>Consider the Nexus: Food Security + Bioeconomy + Forest</p>	<ul style="list-style-type: none"> <li>Propose training that works more on interdisciplinarity with a focus on the bioeconomy of NTFPs and consider training in areas of knowledge that promote and strengthen commercialization (sanitary regularization, market differentiation).</li> <li>Stimulate the formation of intersectoral groups and consortiums to enter public notices for the fomentation of capacity building processes.</li> <li>Elaborate and use participative methodologies in the training actions.</li> <li>Consider the educational context of local communities that lack basic high school training, but have ancestral training, as an opportunity for empowerment.</li> <li>Research and communicate data.</li> </ul>
<p>Consider the integration of different knowledge</p>	<ul style="list-style-type: none"> <li>Promote systematization of experiences.</li> <li>Include empirical, endogenous, technical, and scientific documents in courses/training.</li> <li>Training courses that do not require formal prerequisites, with a focus on traditional knowledge.</li> <li>Entrepreneurship courses based on the integration of traditional and scientific knowledge and training in financial services for the promotion of the bioeconomy, in partnership with educational institutions.</li> <li>Work with action research.</li> <li>Consider intersectionality (race/ethnicity, social class, gender) in the proposition of educational processes and promote training for gender visibility in bioeconomy value chains.</li> <li>Alternating courses for undergraduate and graduate students, recognizing the roles in the family nucleus.</li> <li>Stimulate the formation of groups to exchange knowledge among the actors in the chain.</li> <li>Create training courses that do not require formal prerequisites, with a focus on traditional knowledge.</li> <li>Courses with meetings in distinct locations.</li> <li>Promote seminars, workshops, and field days.</li> </ul>
<p>Motivate political actors to implement the bioeconomy</p>	<ul style="list-style-type: none"> <li>Take training proposals to forums such as the Fórum Nacional de Educação do Campo (National Forum for Field Education in English), PRONERA, Ministries of Education, and production-oriented programs <i>Observação: O Fórum Nacional da Educação do Campo tem se mostrado um campo mais aberto de participação no âmbito da educação (no Brasil) em relação a programas que valorizam a produção do campo e da floresta.</i></li> <li>Create intersectoral discussion forums between universities, NGOs, legislative chambers, and local governments and promote training in partnership with educational Institutions in communication for the strengthening of the bioeconomy.</li> <li>Stimulate the integration/participation of political agents with agro-extractivist associations and cooperatives.</li> <li>Involve the state in supporting capacity building for the potentialities of the territories.</li> <li>Promote seminars, workshops, and field days.</li> <li>Promote the dissemination of courses and mobilize politicians through influencers, artists, public people and through podcasts.</li> <li>Offer professional courses and specializations.</li> </ul>

Challenges/Opportunities	Proposals
<p>Popularize the subject of the bioeconomy in graduate courses in Latin America and the Caribbean</p>	<ul style="list-style-type: none"> <li>• Offer Lato senso courses (specializations) and professional masters/doctorates focused on the bioeconomy.</li> <li>• Scientific formation of children using elements from nature, like extraction of oils and aromas, manufacturing of creams and soaps, active principles from plants.</li> <li>• Training with a comprehensive approach to the bioeconomy and transfer of knowledge with entities on a national and international level.</li> <li>• Promotion of science fairs for scientific dissemination on the theme of the bioeconomy of NTFP.</li> </ul>
<p>Recognize, train, and give visibility to bioeconomy initiatives or value chains – initiatives that involve Amazonian communities in the process of socioeconomic reincorporation, or communities located in territories that have implemented productive projects that point to peace processes – through “green seals”, “peace seals” (Colombian Amazon)</p>	<ul style="list-style-type: none"> <li>• Propose training courses that value bioeconomy initiatives based on social implications. Develop a strategy that is sensitive to the diversity and complexity of communities through valorization and best practices.</li> <li>• Propose NTFP training that promotes added value by converting to sustainable productive models.</li> <li>• Promote environmental education to the consumer, focused on marketing and market before touching the issue of certification seals.</li> <li>• Search for conscious markets, like RainForest Alliance, which promote environmental education of producers and consumers.</li> <li>• Know market alternatives and demands that can be exploited by communities.</li> <li>• Participatory certification. Training to implement other alternatives from the territories themselves.</li> <li>• Give visibility to the product concept, considering what differential quality it offers to the market and to the demand. Develop a marketing/communication strategy.</li> <li>• Give visibility to the bioeconomy in platforms and forums.</li> </ul>

## WG 2 : Commercialization, Markets and Value Chains

Challenges/Opportunities	Proposals
<p>Promote the transition to bioeconomy with justice, inclusion, biodiversity, reduction of inequality, forest regeneration/recovery, aggregation of technologies with traditional knowledge</p>	<ul style="list-style-type: none"> <li>• Encourage partnerships with companies that practice fair trade.</li> <li>• Structure the productive base of the value chains, with stimulus to training, technologies, financing at the base</li> <li>• Offer an adequate market that stimulates inclusion.</li> <li>• Encourage research on value chains in universities (for example, Embrapa researcher Roberto Porro's study on the babaçu chain).</li> <li>• Develop technologies that add value to the products.</li> <li>• Create models based on successful experiences.</li> <li>• Create public policies to guarantee territories for traditional peoples and communities.</li> <li>• Develop the Brazilian industry to add value and stimulate the domestic economy.</li> <li>• Respect the characteristics and differences of each local community/social group.</li> <li>• Empower women.</li> <li>• Encourage young people to stay in the territory.</li> <li>• Stimulate the Circular Economy.</li> </ul>
<p>Logistics</p>	<ul style="list-style-type: none"> <li>• Ensure accessibility by providing adequate roads, internet, and funding.</li> <li>• Create norms and regulations for access to lines of financing and access to water.</li> <li>• Create e-commerce (need for internet and storage places for products).</li> <li>• In the case of Brazil, do not privatize Correios.</li> <li>• Create networks of organizations representing the smaller ones.</li> <li>• Install industry, laboratories closer to the communities.</li> <li>• Bring some links in the chain closer to production, such as processing, packaging, boosting the local economy.</li> <li>• Improve the fluvial outflow, mainly in the Amazon, besides the ports.</li> <li>• Encourage the formation of trade networks and larger organizations (such as, for example, the model adopted by the company Magazine Luiza in Brazil).</li> <li>• Add value at the origin of the product and guide the location of plantations in appropriate places and improve the production of in natura products.</li> </ul>
<p>Partnerships between community associations, support organizations, governments, and local businesses</p>	<ul style="list-style-type: none"> <li>• Create incentive policies to promote the relationship, such as tax reductions.</li> <li>• Subsidies should be provided so that there is a balance of advantages in all links of the chain in competition with economies of scale.</li> <li>• Provide accompaniment and assistance in the organization of the territories, training, and financing.</li> <li>• Search for differentiated strategies for differentiated groups.</li> <li>• Create insertion policies such as the PGMBio (Policy of Payment for the Minimum Price of Biodiversity Products – existing policy in Brazil).</li> <li>• Establish price for environmental services and all links in the chain.</li> <li>• Establish smart strategies to sensitize federal and state agencies by creating a project with a solution.</li> <li>• Aggregate existing public policies.</li> <li>• Aggregate partners.</li> </ul>



Challenges/Opportunities	Proposals
Fair Trade	<ul style="list-style-type: none"> <li>• Share information with all the links, aiming at fairer relations (as, for example, the certification of the Origins Brazil Seal presented in WG 2).</li> <li>• Implement product traceability to generate transparency and to know the origin of the products.</li> <li>• Implement benefit sharing – in addition to product traceability, apply the biodiversity law and the law of benefit sharing in Brazil.</li> </ul>
Strategy of Payment for Environmental Services even implemented with the support of companies (Example: Natura, Veja/Vert)	<ul style="list-style-type: none"> <li>• Develop research to find out the price of the services (cost and impact).</li> <li>• Present to the companies the services that are being provided (importance of biodiversity conservation of the peoples and communities that produce, cultural values of the peoples and communities).</li> <li>• Disclose to consumers the services that are included in the product.</li> <li>• Survey the services provided by all the links.</li> <li>• Encourage the carbon market (Brazil).</li> </ul>
Promote “lesser known” products (e.g., bacaba, peach palm, cupuaçu, cashew/cajuína)	<ul style="list-style-type: none"> <li>• Use social networks, TV shows, interviews, fairs, and newspaper articles.</li> <li>• Encourage consumers to taste the products: invite chefs, let them visit stores and fairs.</li> <li>• Publicize on the products the history of the products and values of the communities that produce them, in addition to the ecosystem services associated with production.</li> <li>• National campaign on sociobiodiversity products.</li> </ul>

### WG 3 : Bioeconomics of Restoration

Challenges/Opportunities	Proposals
<p>Promote the transition to a bioeconomy with justice, inclusion, biodiversity, reduction of inequality, forest regeneration/ reclamation, and aggregation of technologies together with traditional knowledge</p>	<ul style="list-style-type: none"> <li>• Define the concept of bioeconomy: principles, considering social aspects, promote equity and ecosystem improvement with a socioecological focus.</li> <li>• Systematize methods of restoration and recovery of biomes from different countries – with a focus on bioeconomy to identify and know the techniques, teachings, processes, and costs of restoration.</li> </ul>
<p>Create policies and laws that encourage production within forest ecosystems while minimizing bureaucracy and controls while providing technical assistance</p>	<ul style="list-style-type: none"> <li>• Build indicators to measure social and biodiversity progress and setbacks, and that this determines incentives and resource allocation.</li> <li>• Focus on public policies for restoration, including the concept of bioeconomy.</li> </ul>
<p>Include Forest Restoration/ Recuperation in the building of the bioeconomy</p>	<ul style="list-style-type: none"> <li>• Inclusion of the bioeconomy in international forums and other participatory spaces on restoration and bioeconomy, and vice versa;</li> <li>• Develop new businesses, productive chains – niche value based on forest species, diversify production, and improve the analysis of financial capabilities.</li> <li>• Bridging the technical knowledge gap regarding the functioning of the markets and attract investors.</li> </ul>
<p>Survey and develop restoration models for bioeconomy considering recovery techniques for degraded soils caused by deforestation or inappropriate land use</p>	<ul style="list-style-type: none"> <li>• Invest in research and identification of experiences to achieve methodologies that meet the diversity of realities, which recovered the soil understanding the forest products as part of the system.</li> </ul>

Challenges/Opportunities	Proposals
Recognize the importance of Indigenous peoples in forest conservation	<ul style="list-style-type: none"> <li>• Consider Indigenous peoples' perspectives on what restoration is and what its goals should be.</li> <li>• Ensure benefit sharing in the process of accessing traditional knowledge associated with biodiversity.</li> </ul>
Broaden the vision of the bioeconomy thinking about the various products and productive sectors (energy, food, phytotherapics, seeds, among others)	<ul style="list-style-type: none"> <li>• Expand the use of bioenergy in LAC to contribute to the balance of emissions.</li> <li>• Promote broad health and prevention of zoonoses.</li> </ul>
Take advantage of the theme of the UN restoration decade to boost the bioeconomy	<ul style="list-style-type: none"> <li>• Promote forests with a focus on non-timber forest products.</li> </ul>
Promote a language of business models and productive bioeconomy for restoration, so that restoration is not believed to be unrelated to production (economic, social, and equitable development)	<ul style="list-style-type: none"> <li>• Expand the training of people in bioeconomy and promote the insertion of the subject within the training centers.</li> </ul>

## WG 4 : Research and Development for an Inclusive Bioeconomy

Challenges/Opportunities	Proposals
<p>Promotion of the transition to the bioeconomy we want with justice, inclusion, biodiversity protection, inequality reduction, forest regeneration/recovery, and the integration of technologies with traditional knowledge</p>	<ul style="list-style-type: none"> <li>• Involve the various actors of society in the search for investments that reach research, development, and innovation of the existing PFM productive chains.</li> <li>• Seek international collaboration to conduct collaborative research for LAC NTFPs.</li> <li>• Elaborate proposal to propose calls for proposals for multilateral cooperation between LAC governments/MCTIs to enable research networks in forest bioeconomy with a focus on human and territorial development.</li> <li>• Rescue previous research and projects that address cross-cutting Amazonian issues for the forest bioeconomy, with the goal of learning from mistakes and successes and replicating improvements for today.</li> <li>• Share LAC research, knowledge, and experiences through a website (repository), jointly managed by those involved.</li> <li>• Integrate research laboratories with NTFPs, share research protocols, promote exchanges to enhance traditional knowledge and successful experiences.</li> <li>• Work on equity and symmetry among partners.</li> <li>• Seek financial support from private companies that work with NTFP for the development of research for new products.</li> <li>• Develop an open letter within BioforestALC.</li> <li>• Conduct broad consultation with civil society organizations in the various countries, perhaps with leadership from Amazonian universities, to identify the main demands of research, to avoid top-down. And that these demands be the axes of a Work Plan for inclusive Bioeconomy research.</li> <li>• Mobilize ministries of science and technology of countries involved to signal demands, of a research network, from a document prepared in BioforestALC.</li> </ul> <p><i>Note: It is important that the transition to the bioeconomy we want is accompanied by state investments.</i></p>

Challenges/Opportunities	Proposals
<p>Knowledge about the ecology of non-timber species and construction of management protocols</p>	<ul style="list-style-type: none"> <li>• List native species to take advantage of and equip sites to process NTFPs.</li> <li>• Research and disseminate calendars of species that can be used in local circuits, such as school meals. This is part of education and information about the species to the population/consumers. Many are unaware of the seasonality.</li> <li>• Support communities, associations, and cooperatives in the development of management protocols and best practices for the collection/harvesting, processing, transportation, storage, production costs and exosystemic valuation, based on their empirical/traditional knowledge and with technical-scientific collaboration.</li> <li>• Train producers with courses on sanitation, good handling practices and product development and processing.</li> <li>• List the species that already have productive chain research established, estimate the production, seasonality, place of commercialization and values.</li> <li>• Support the communities in developing management protocols and best practices based on their knowledge and technical-scientific collaboration.</li> <li>• List producer associations and agro-industries in the locations that can assist in the processing and storage of products to be marketed.</li> </ul>
<p>Investments in productive chains that generate jobs</p>	<ul style="list-style-type: none"> <li>• Support and encourage innovation programs at universities and public technical education institutions, aimed at solving technological bottlenecks to promote the competitiveness of the sociobiodiversity product chains in their places/regions of origin.</li> <li>• Seek government support and public investment in science and technology for already consolidated NTFP value chains and support the development of new chains.</li> <li>• Seek public-private partnerships with companies that work with sociobiodiversity products.</li> <li>• Seek international investments and knowledge in order to develop the bamboo value chain as a means of creating jobs and income in LAC countries.</li> <li>• Stimulate educational institutions (technical and professional) to research priority chains.</li> </ul>

## WG 5 : Financial Mechanisms for the Development of Chains

Challenges/Opportunities	Proposals
<p>There is a lack of arrangements for offering credit/private and public development capable of being conducted by traditional peoples and communities</p>	<ul style="list-style-type: none"> <li>• Bring closer and expand the dialogue between the funders and the grassroots, so that the communities can access the resources and discuss the flexibility of the mechanisms.</li> <li>• Expand the technical support/advice (support organizations) to expand the technical knowledge of the communities to elaborate their own financing projects.</li> <li>• Invest in financial education processes - community learning.</li> <li>• Facilitate the understanding of the step-by-step process that enables access to credit and development.</li> <li>• Overcome the lack of knowledge of the project evaluator of credit financing with respect to socio-biodiversity chains.</li> <li>• Create short-term credit/promotion mechanisms as an entry point, in an educational process that can gain results and grow.</li> </ul> <p><i>Note: Land title regularization is a challenge to expand credit</i></p>
<p>Lack of hybrid finance arrangements with repayable and non-repayable funds</p>	<ul style="list-style-type: none"> <li>• Expand non-reimbursable funds (from donors) to support small projects and promote sustainable landscapes that assist in well-living by reaching out to communities.</li> <li>• Create a network of non-reimbursable funds.</li> <li>• Expand non-reimbursable funds (from donors) to support small projects and promote sustainable landscapes that assist in well-living by reaching out to communities.</li> <li>• Provide training and publications, by funders, related to the projects the funds wish to finance.</li> <li>• Develop a long-term process starting with support to small projects (non-reimbursable), giving continuity by favoring institutional and administrative-financial learning to go beyond and access other funds.</li> <li>• Start with a non-reimbursable fund to gain strength at the beginning, with participative work, in a future perspective so that the organizations function as enterprises. Having as a horizon the formal employment that has better labor guarantees.</li> </ul>

Challenges/Opportunities	Proposals
Lack of knowledge for access to the carbon market	<ul style="list-style-type: none"> <li>• Provide transparency to the mechanism on how to measure the carbon credit and say where the money comes from, in what currency, etc.</li> <li>• Bringing carbon trading companies closer to communities that have the potential to access the carbon credit.</li> </ul>
Credit associated with the offer of technical assistance and extension, with a focus on management, production, processing, and commercialization	<ul style="list-style-type: none"> <li>• Offer specific advisory services for each line of financing to the community enterprise.</li> <li>• Offer continuous technical assistance and co-responsibility for the credit project and the results of the enterprise.</li> <li>• Share responsibilities between technicians and communities, in which the success of the enterprise is also the success of the ATER technician.</li> </ul>
Payment for Environmental Services within government policies and public procurement	<ul style="list-style-type: none"> <li>• • Readjust the price by introducing resources from PES, valuing the minimum price (PGPMBio+PES).</li> <li>• • Create a fund from PES to support technical assistance.</li> <li>• • Gather information about the demand for non-timber products to promote public purchases.</li> </ul> <p><b>Experiences:</b></p> <ul style="list-style-type: none"> <li>- <i>Conexus technical-enterprise cooperation strategy (Brazil)</i></li> <li>- <i>Ecological ICMS mechanism based on criteria with transfer to municipalities (Brazil)</i></li> <li>- <i>Minimum price for sociobiodiversity products (PGPMBio) - (Brazil)</i></li> <li>- <i>Valuation of non-timber products through a public seal so that the producer does not have a cost to maintain the certification - differentiating these products (Argentina)</i></li> <li>- <i>Experience of PES from the consumption of gasoline (Costa Rica)</i></li> </ul>

### 3.3 Forum Referrals

At the end of the working group and funding panel presentations and based on the expectations of the participants raised in the working groups, three proposals were formulated.

The proposals presented were:

- i. construction of a network with BioForestALC participants;
- ii. strengthening of the platform of experiences developed by ACTO;
- iii. preparation of a document with the results of BioForestALC 2022.

### 3.4 Proposal Summary

Following the Forum, the event organizers systematized the 142 proposals submitted to bring them together and present them more succinctly. The outcomes of this systematization are shown in the table below.

#### Action Line 1

**Capacity Building considering the integration of different knowledges and considering the Food Security + Bioeconomy + Forest nexus through:**

1. participatory and interdisciplinary educational processes on bio-economy value chains, such as courses, workshops, trainings, exchanges, which consider local contexts, traditional knowledge, and intersectionality (race/ethnicity, social class, gender) and intergenerationality;  
**Topics:** commercialization (sanitary regularization, market differentiation, certification); entrepreneurship; finance; marketing; production and handling (good practices); conscious consumption.
2. inclusion of the bioeconomy issue in primary, technical, and higher education courses;
3. intersectorial forums for the promotion and planning of training processes;
4. systematization, communication, and dissemination of training experiences.

#### Action Line 2

**Strengthening the bioeconomy's commercialization, markets, and value chains by:**

1. structuring the value chains' productive base, stimulating training, developing technologies, and providing financing that takes intersectionality (race/ethnicity, social class, gender) and intergenerationality into account.
2. fostering diverse commercialization strategies centered on fair trade and the circular economy, including Payment for Environmental Services, and taking into account successful examples;
3. promoting research and development at all stages of the value chain;
4. development of networks and/or partnerships between community associations, support organizations, governments and businesses;
5. communication and dissemination of products, their origins and the values of the communities that produce them, as well as the ecosystem services associated with them, in order to encourage conscious consumption.

#### Action Line 3

**Inclusion of the restoration chain in bioeconomy promotion strategies through:**

1. systematization of methodologies and monitoring of restoration of biomes in diverse countries, considering sociocultural differences and traditional knowledge;
2. business development throughout the restoration chain and at various stages of forest succession;
3. inclusion of the bioeconomy in international forums and other participatory spaces on restoration and bioeconomy, and vice versa;
4. bridging the technical knowledge gap on market functioning and attracting investors.



**Action Line 4**

**Public/private promotion of research considering the different knowledge and involving the various actors in society, by means of:**

1. development of collaborative research on NTFPs in LAC (integrating research laboratories on NTFPs, sharing research protocols, and valuing traditional knowledge);
2. exchange and sharing of LAC experiences through a website/site (repository), platform, events, and publications;
3. research and innovation programs aimed at promoting the competitiveness of sociobiodiversity product chains in their places/regions of origin;  
**Topics:** NTFP processing, species calendars for use in local circles, seasonality, management protocols and good harvesting practices, improvement, transportation, storage, production costs, and ecosystem valuation;
4. public-private partnerships with companies that work with sociobiodiversity products.

**Action Line 5**

**Promotion of financial mechanisms for the development of bioeconomy chains, through:**

1. expansion of the dialogue between the funders and the communities, for access and flexibility of resources;
2. technical support to increase the communities' understanding of how to access and manage funding, through training, advice, and publications;
3. non-reimbursable funds for promoting sustainable landscapes and organizational learning;
4. disclosure of the mechanisms related to the carbon credit to give transparency to the processes.

**Action Line 6**

**Articulation for the elaboration, regulation, and implementation of public policies for:**

1. bioeconomy that considers socio-cultural aspects and promotes equity and the improvement of the ecosystem;
2. incentive and subsidies to all the links in the value chains: credit, tax reduction, research, technical assistance to increase competitiveness;
3. guaranteed access and regulation of territories for traditional peoples and communities;
4. supply of basic infrastructure: roads, ports, river runoff, water, internet, post office;
5. incentive to the consumption of sociobiodiversity products (school meals);
6. incentive and access to conscious markets;
7. traceability of product origin;
8. encouraging public purchases of products;
9. public investment in science and technology for existing NTFP value chains, as well as support for the establishment of new chains;
10. subsidy payment from the minimum price set for biodiversity products, following the example of PGPMBio in Brazil, but including Payment for Environmental Services (PES) in the price formation;
11. establishment of a fund from PES to support technical assistance;
12. ensuring benefit sharing to the process of access to traditional knowledge associated with biodiversity.

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# BioForestALC

## Realization

