

Bioeconomy Opportunities and Challenges in Latin América

Brazilian Action Plan of Science, Technology, and Innovations in Bioeconomy

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CGBE / DECIV / SEPEF / MCTI

Brasília, October 6th, 2020

MINISTÉRIO DA
CIÊNCIA, TECNOLOGIA,
E INOVAÇÕES



MISSION



MINISTRY OF SCIENCE, TECHNOLOGY AND INNOVATION

Produce knowledge

Produce wealth for Brazil

Contribute to the quality of Brazilian people



Science, Technology and Innovation National Strategy - 2016 | 2022



Strategic Issues



Action Plan of Science, Technology, and Innovation in Bioeconomy (2018)



 **SUSTAINABLE DEVELOPMENT GOALS**



COP21 • CMP11
PARIS 2015
UN CLIMATE CHANGE CONFERENCE



WHAT IS BIOECONOMY?

Set of economic activities based on the **use of sustainable biological resources to replace fossil raw materials** in the production of food, feed, materials, chemicals, fuels, and energy (...) **for the promotion of health, development, and sustainable growth and well-being of society.**

KEY CONCEPTS

- Sustainable use of **renewable biological resources** and **national biodiversity** to replace fossil raw materials
- Integrated actions and for the **development of bio-businesses and bioproducts**
- Actions integrated into the **water, energy, and food security** approach
- Scientific and business **excellence**
- **Sustainable development** and **circular economy**

PACTI BIOECONOMY



Biomassa

- Inputs
- Integrated production systems
- Waste uses
- Genetic improvement
- Sustainable use of biodiversity and new biomasses



Processing

- Biomass pretreatment and treatment technologies
- Bioremediation
- Technologies and inputs for bioindustries
- Pilot plants



Bioproducts

- Industrial biotechnology and synthetic biology
- Renewable chemistry
- Microorganisms and enzymes
- Biomaterials, biocomposites and their uses
- Biofuels (has dedicated plan)



Brazilian Bioeconomy Observatory (knowledge hub)
National Bioeconomy Committee (governance at federal level)

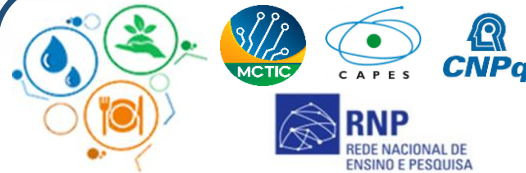
Institutional Themes

MCTI: BIOECONOMY MAIN ACTIONS



NEXUS

Water, Energy and Food Security



SAN PLATAFORM KNOWLEDGE IN FOOD AND NUTRITIONAL SECURITY



LIFE CYCLE ASSESSMENT



BIOECONOMY PRODUCTIVE CHAINS



OPPORTUNITIES AND CHALLENGES OF BIOECONOMY



INDUSTRIAL BIOTECHNOLOGY AND BIREFINERIES TECHNOLOGIES



RENEWABLE CHEMISTRY



BIOENERGY



NATURE BASED SOLUTIONS



POLINATORS



A.B.E.L.H.A.
Associação Brasileira de Estudos das Abelhas



CIRCULAR ECONOMY



BIOECONOMY VALUE CHAINS

AMAZÔNIA

Açaí
Castanhas
Cupuaçu
Pirarucu

PANTANAL

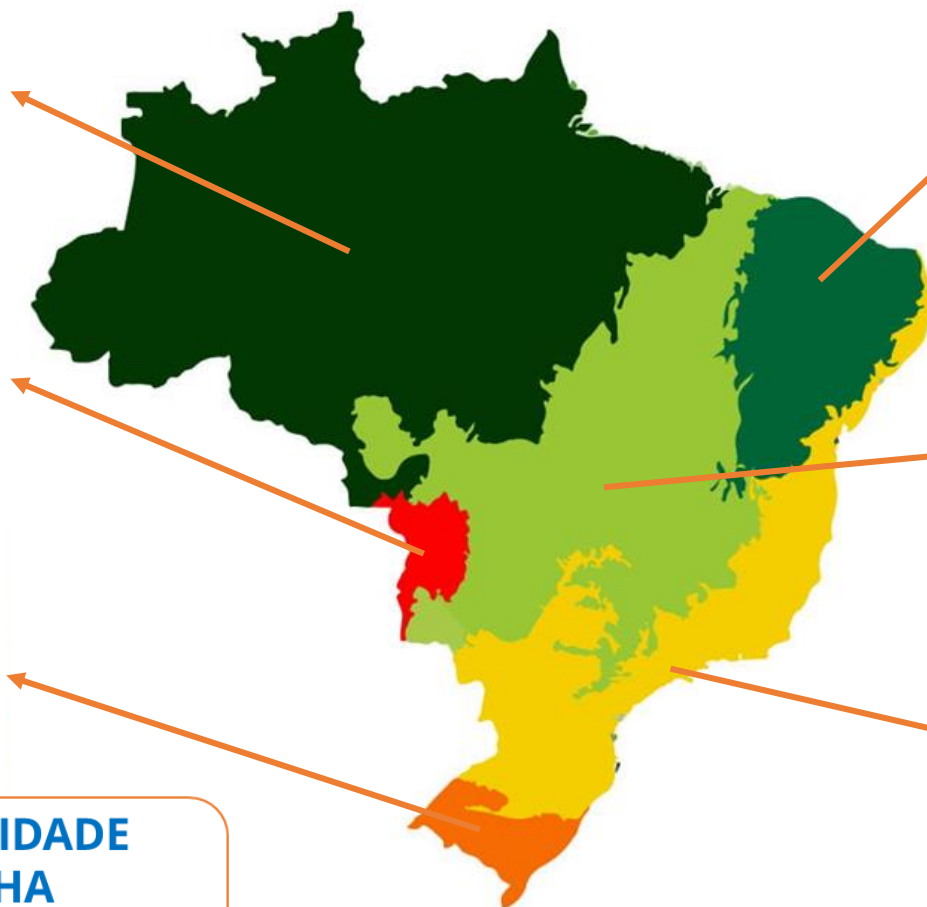
Capivara
Jacaré
Peixes

PAMPA

Butiá
Erva-mate

BIODIVERSIDADE MARINHA

Micro e macroalgas
Camarão



CAATINGA

Carnaúba
Licuri
Palma forrageira
Sisal/Ágave

CERRADO

Baru
Macaúba
Ora-pro-nóbis

MATA ATLÂNTICA

Açaí juçara
Banana
Cacau

OBJECTIVES

Adding and retaining value
in communities

Regularization,
certification, and access
to markets

Development of new
products

Utilization of waste and
by-products - Circular
Bioeconomy

Sustainability



ODBIO – OPPORTUNITIES AND CHALLENGES OF BIOECONOMY



OBJECTIVE

Develop a **strategy to implement the PACTI Bioeconomy** and support the formulation of national policies for **the definition of programs and projects that are structural, mobilizing and mission-oriented** in order to take advantage of the opportunities and overcome the challenges presented by the bioeconomy.

MAIN ACTIONS



Conceptual Field of the Brazilian Bioeconomy



Mapping competencies and capacities in RD&I



Modeling Brazilian Bioeconomy Knowledge Hub



Governance at federal level

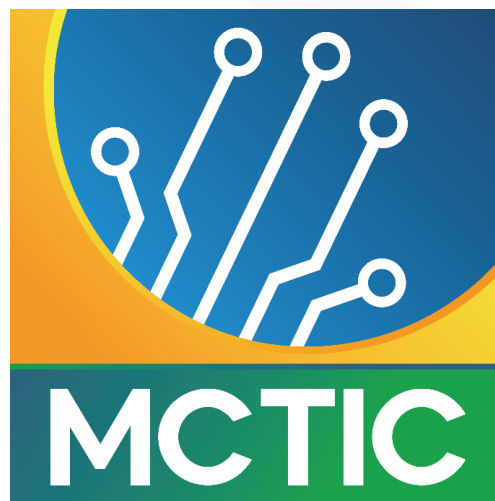


Mission-Oriented Programs (opportunities and challenges to structuring, mobilizing, and driver the development of bioeconomy)



Bioeconomy National Conference

SUBSIDIATE THE BRAZILIAN BIOECONOMY POLICY







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