Brazil

From the Arc of Deforestation to the Arc of Restoration in the Tocantins-Araguaia Basin

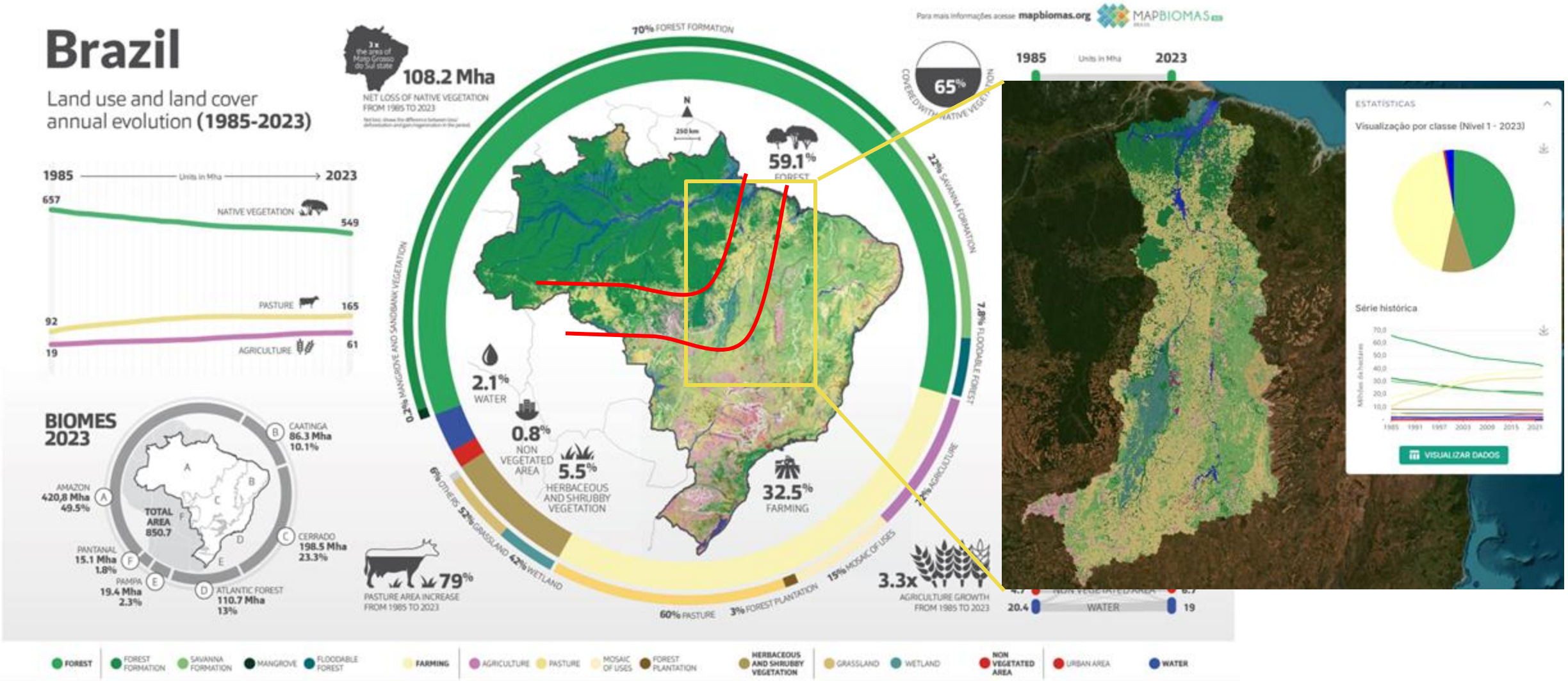
BRAZIL INVESTMENT PLAN
CIF NATURE, PEOPLE & CLIMATE PROGRAM

CIF SCF Committee Meeting | February 27, 2025

PRESENTATION OUTLINE

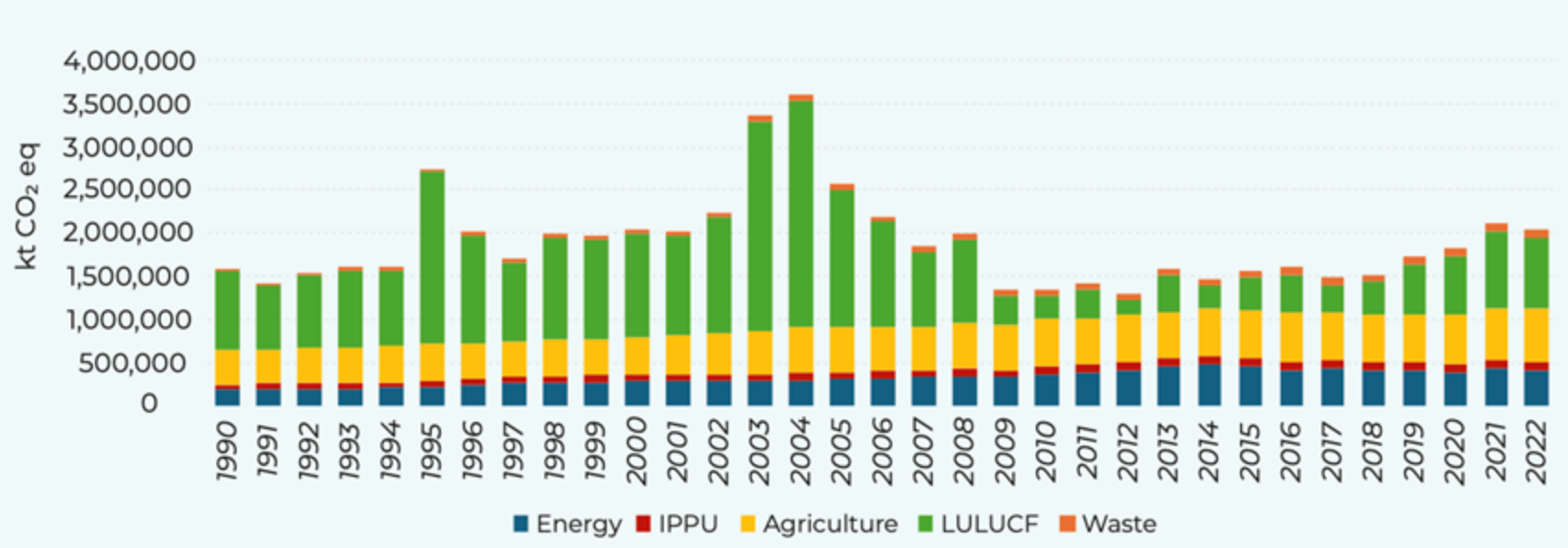
1. Climate change drivers and impact in Brazil
2. National policies to tackle climate change and forest restoration
3. BNDES and the Arc of Restoration
4. Brazil's NPC IP objective, development and indicators
5. Expected results
6. Concluding Remarks

CLIMATE CHANGE: DRIVERS AND IMPACTS IN BRAZIL



CLIMATE CHANGE: DRIVERS AND IMPACTS IN BRAZIL

Brazil's sectoral emissions from 1990 to 2022 in kt CO2 eq



Source: Ministry of Science, Technology and Innovations (2025).

Brazil has a clean electric matrix (86% of renewables X 29% in the world), with most GHG emissions originating from land use change

- LULUCF: 39.5% of total emissions
- Agriculture: 30.5% of total emissions
- Energy: 20.5% of total emissions


climate change
affected
83%
of Brazilian
municipalities

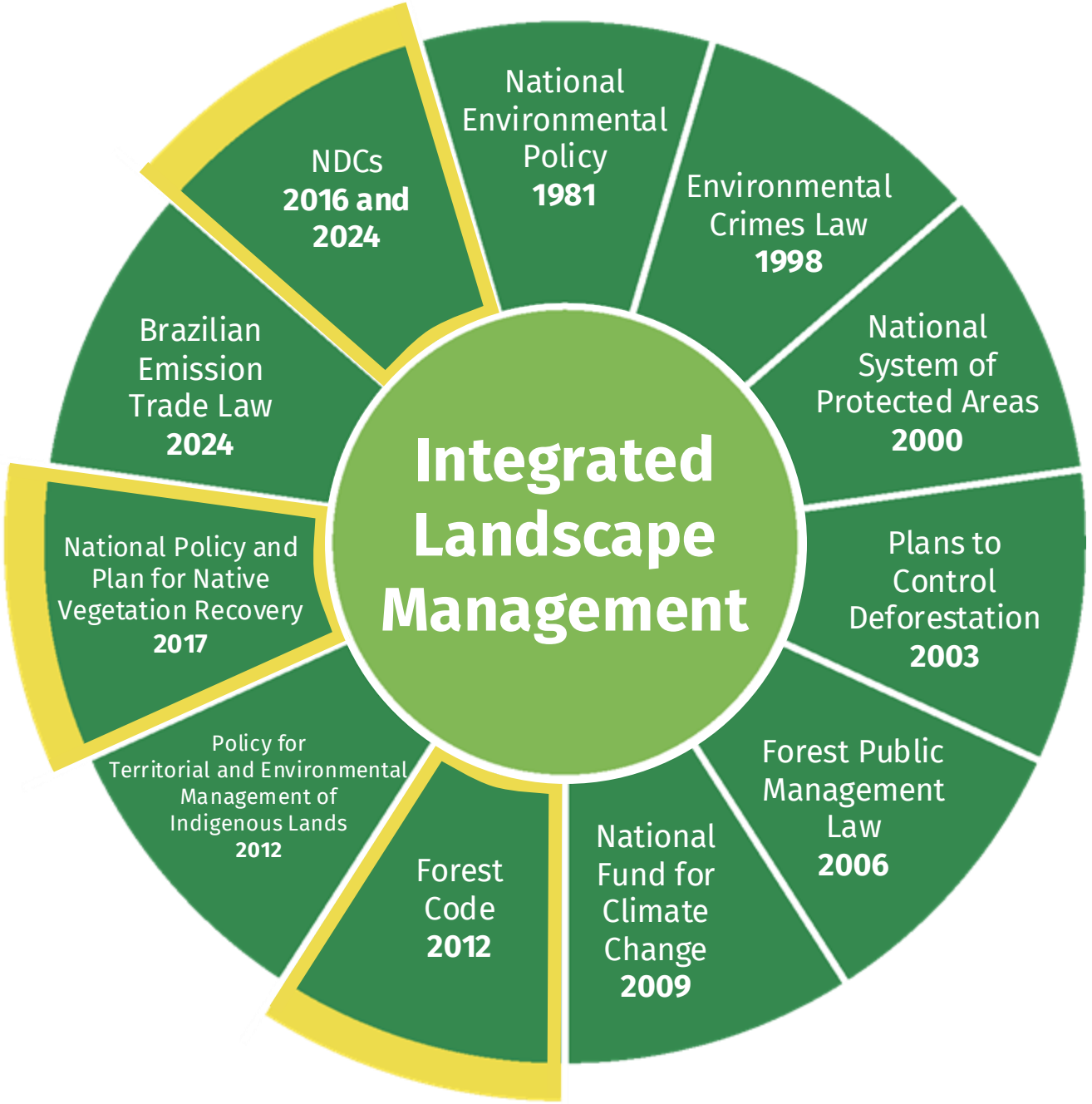

caused damages of
more than
R$ 421 billion


affected
177.41 million
people,
4.98 million
of them directly


loss of
25.2 million tons
in grain production (2022)


More than
745,000 internal
displacements were due to
disasters (2023)


left
1.5 million
homes damaged



National framework of conservation and restoration policies

NDCs

New Climate Plan to be launched in 2025

Sectoral allocation TBD, but big expectations on land use

Net-zero emissions in land use by 2030

Legal Reserves

Waterway Permanent Preservation Areas

Water spring permanent preservation areas

Natural lakes and ponds permanent preservation areas

Restricted use areas

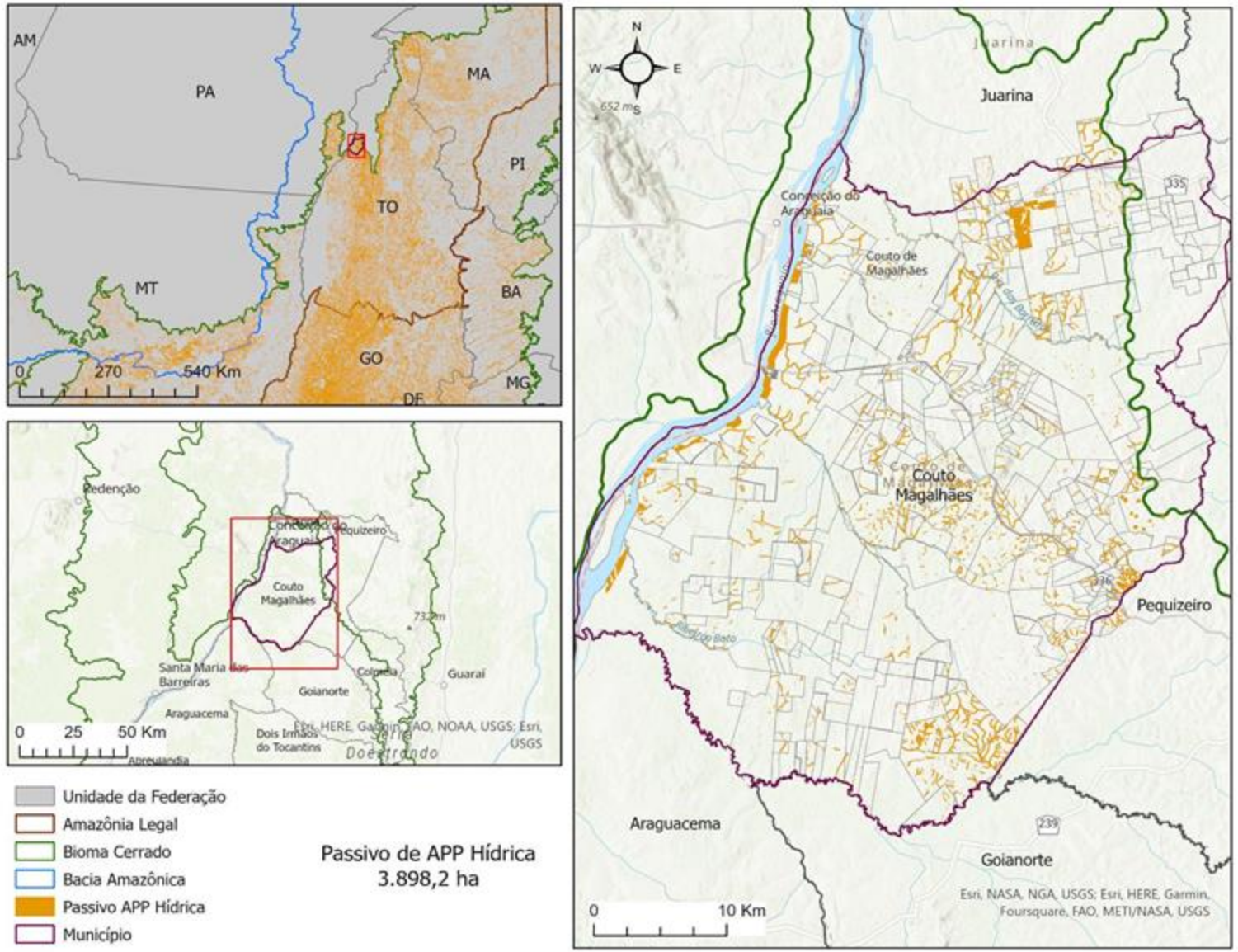
Hilltop permanent preservation areas

Utility Easement

Alternative land use areas

Forest Code (Law 12.651/2012)

Forest Code:
Example of mandatory restoration at the property level



RESTORATION MODALITIES

ECOLOGICAL RESTORATION

Spontaneous Natural Regeneration (RNE)

Assisted Natural Regeneration (ANR)

Active Restoration

Figures: Forest Restoration in Brazil: Essential Factors for Promoting Restoration at Scale. CPI/PUC-Rio, 2024.

PRODUCTIVE REHABILITATION (OR PRODUCTIVE RESTORATION)

Diverse Economic Planting (Native)

Mixed Planting (Native and Exotic)

Agroforesty Systems (AFS)

Crop-Cattle-Forest Integration (CCFI)

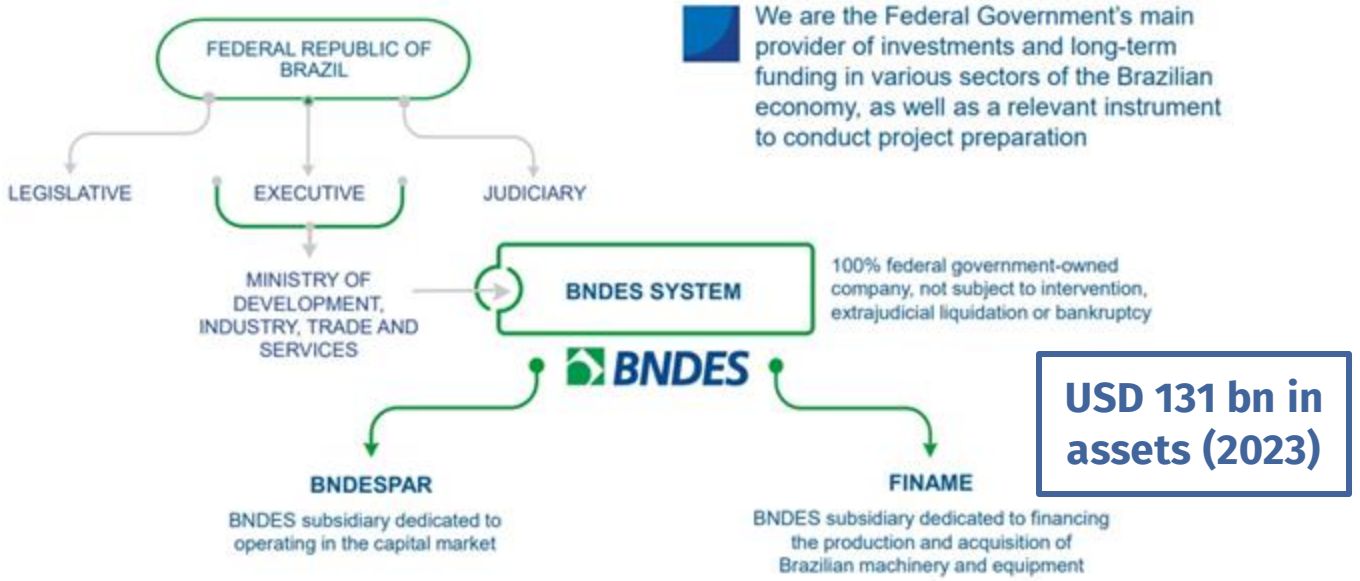
12 million ha restored up to 2030

Strategies

- Restoration supply chain
- Spatial intelligence and monitoring
- Financing restoration
- Research development and innovation

To implement a **financial strategy** for the recovery of native vegetation that considers the projection of implementation costs; the identification, access and **optimization of the flow of diverse sources of financing for each arrangement/target audience;** and the development or **strengthening of financing mechanisms and incentives**, mobilized and coordinated by **public-private governance** on a national, regional and local scale.

BNDES: FINANCING FOREST RESTORATION



We are the Federal Government's main provider of investments and long-term funding in various sectors of the Brazilian economy, as well as a relevant instrument to conduct project preparation

USD 131 bn in assets (2023)

Brazil launches $204 million drive to restore Amazon rainforest

By **Steven Grattan** and **Jake Spring**

December 2, 2023 2:33 PM GMT-3 - Updated a year ago

[1/2] Smoke billows from a wildfire in the Amazon rainforest near a dry river in Iranduba, Amazonas state, Brazil September 25, 2023. REUTERS/Bruno Kelly/File Photo Purchase Licensing Rights

SAO PAULO, Dec 1 (Reuters) - Brazil's national development bank (BNDES) on Saturday launched an effort to restore degraded or destroyed woodland amounting to 60,000 square km (23,160 square miles) - an area nearly the size of Latvia - in the Amazon rainforest by 2030.

At the United Nations COP28 climate summit in Dubai, BNDES announced that the Arc of Restoration program, with funding of up to 1 billion reais ($205 million) through 2024, would also seek to capture 1.65 billion tons of carbon from the atmosphere by 2030.

BNDES: FINANCING FOREST RESTORATION

The goal of the Amazon Restoration Arc: to restore

24 million hectares

in the Amazon

PHASE 1 | UP TO 2030

- To restore priority areas, starting with the lowest complexity/cost ones: **6 million hectares**
- **1.65 billion** tons of carbon removed
- Investments: **10 billion** USD
- **USD 200 mi** already launched in **2024** with the Amazon Fund (grants) and the Climate Fund (loans)

PHASE 2 | 2030-2050

- To restore **18 million** hectares
- Investments: **153 billion** BRL or **30 billion** USD

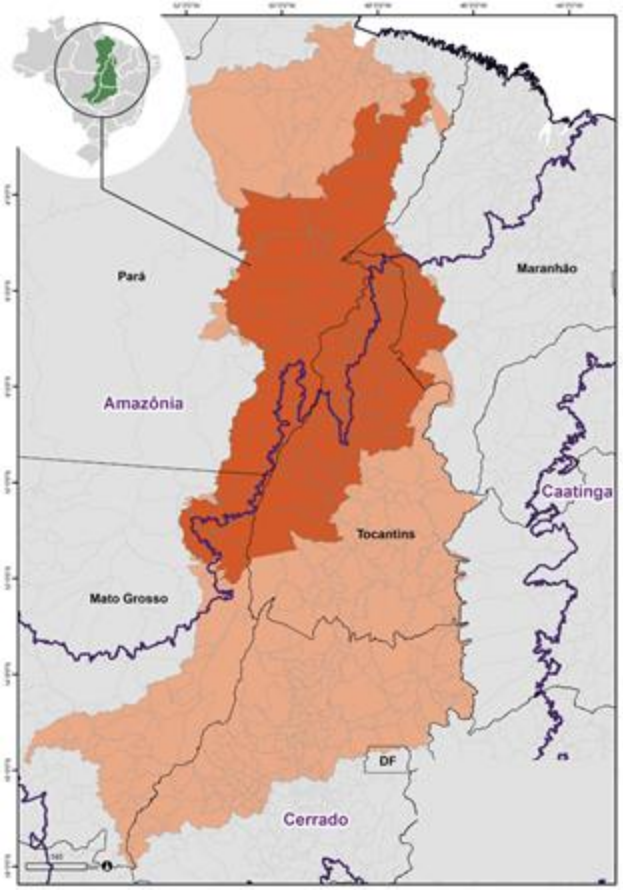
TERRITORIES	AREA (MILLION HA)
Protected areas	1.00
Indigenous Territories and Quilombola areas	0. 20
Non designated public area	3,50
Settlements	0.25
Family Farming Properties	0.20
Other private areas	0.85
Total (up to 2030)	6.00

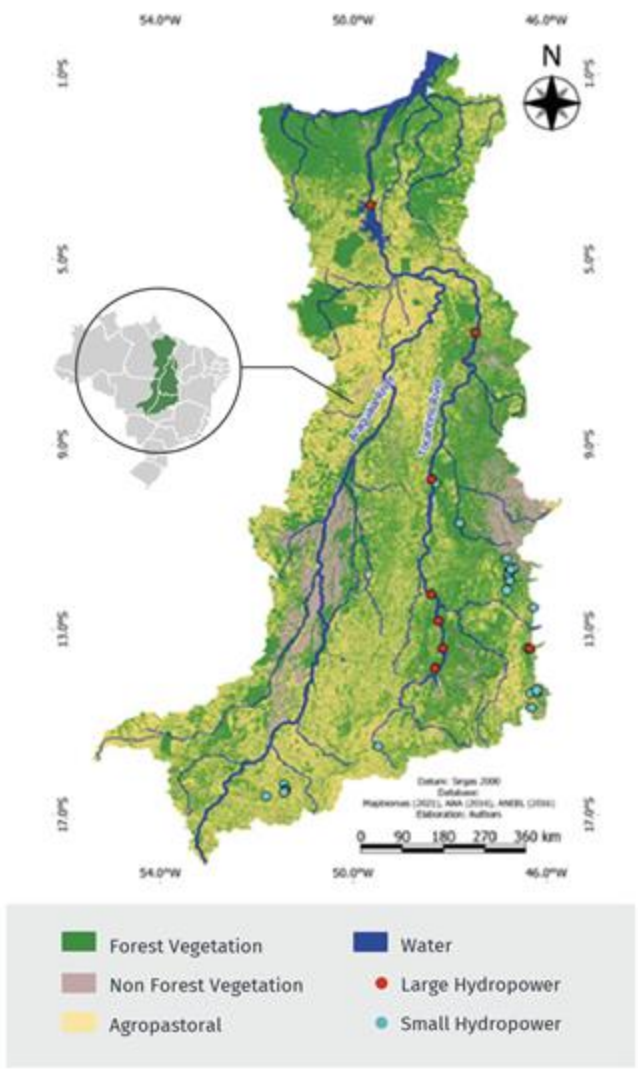
BRAZIL'S IP OBJECTIVE

The main objective of Brazil's IP for the NPC is **to promote forest restoration in the Tocantins-Araguaia Basin**.

Through **scaling up restoration efforts through private sector and local community engagement**, the region will enhance its resilience to climate change, fostering just transition with focus on gender equality and social inclusion.

TOCANTINS-ARAGUAIA BASIN OVERVIEW





Drainage Area: 918,822 km2 (11% of Brazil)

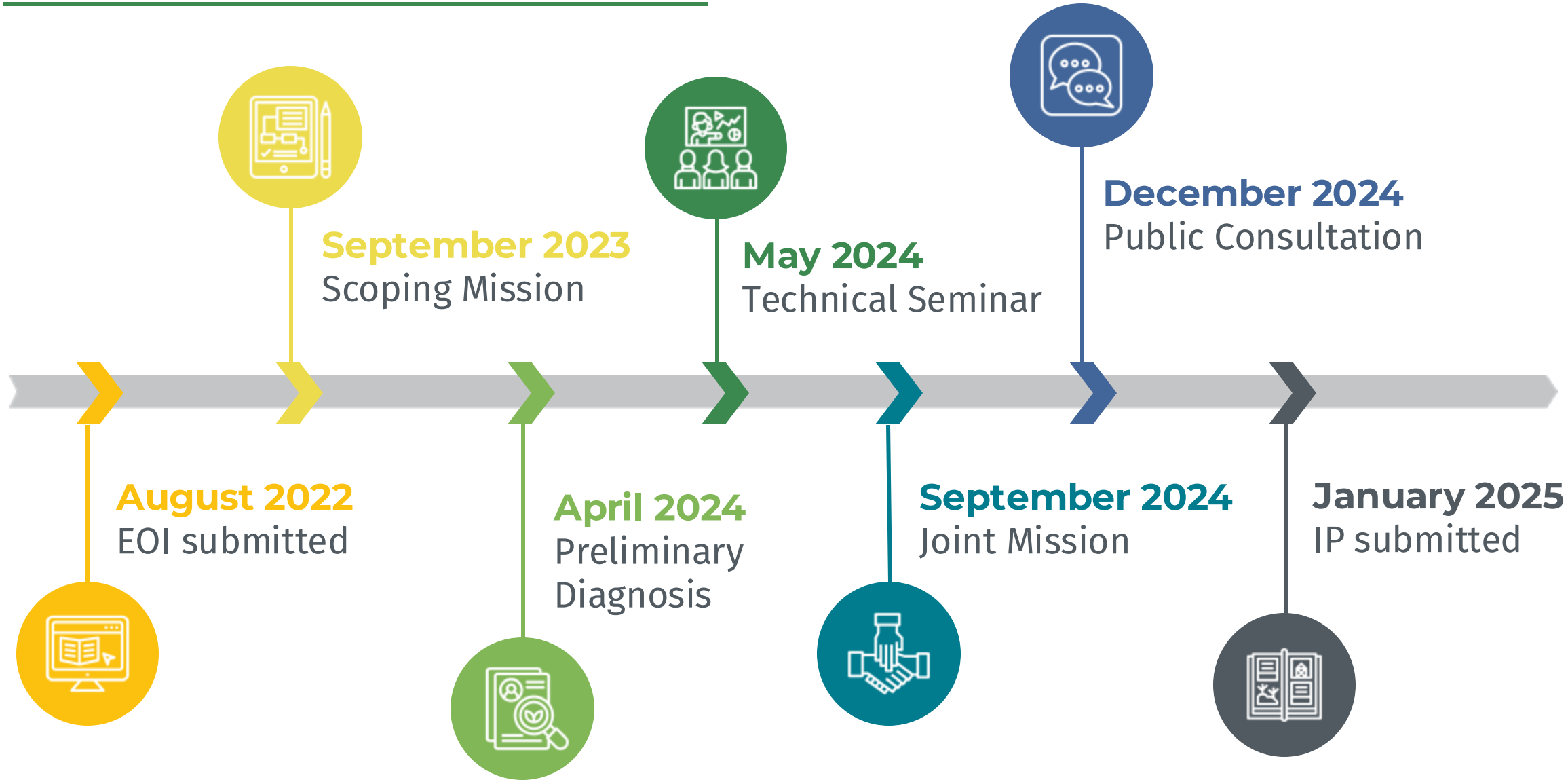
Municipalities: 453 (8,1% of Brazil)

Population: 10.5 million inhabitants (5,2% of Brazil)

Indigenous Lands: 53 indigenous lands totaling 47,031 km2 (5% of the total area)

Source: MapBiomas (2021) in Pelicice et al. (2021)

IP PREPARATION PROCESS

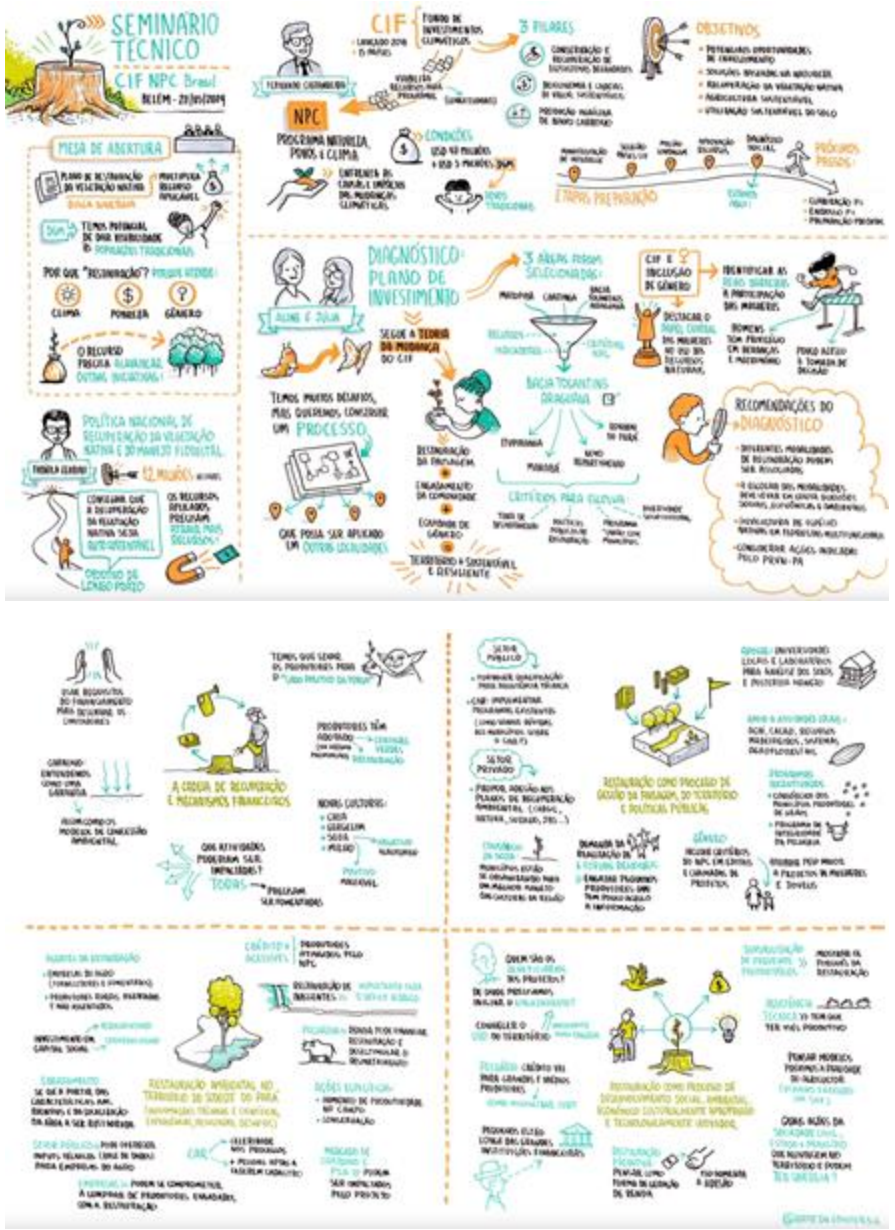


IP STAKEHOLDER ENGAGEMENT PROCESS

- **Civil Society & Academia**
- **Companies, financial institutions and capital markets/funds**
- **Municipal and state governments**
- **Development Partners**
- **National Government**

The engagement process involved:

- **Interviews** with **30 representatives** from government institutions, civil society organizations, companies, financial institutions and multilateral development banks.
- The **Technical Seminar** was attended by **40 representatives** from local communities, universities, governments, financial institutions, socio-environmental organizations and companies.
- The **joint mission** was attended by **45 people** from climate investment funds, governments, multilateral development banks, civil society and the private sector.
- **Five interviews** focused on **gender and social inclusion** were conducted with government and civil society stakeholders on restoration and climate change.



Source: Luis Crepaldi - Arte da Conversa

LESSONS LEARNED AND RESULTS FROM BIP/FIP (2012-2024 / USD 80 MI)

BIODIVERSITY

- **83%** of the Cerrado biome with information on vegetation cover, forest resources (timber and non-timber), uses of biodiversity species, carbon stocks, and deforestation
- **309 million** hectares with enhanced sustainable management practices
- **12** new species and new records of plant occurrences in the Cerrado
- **6,467** hectares with the adoption of conservation and restoration practices

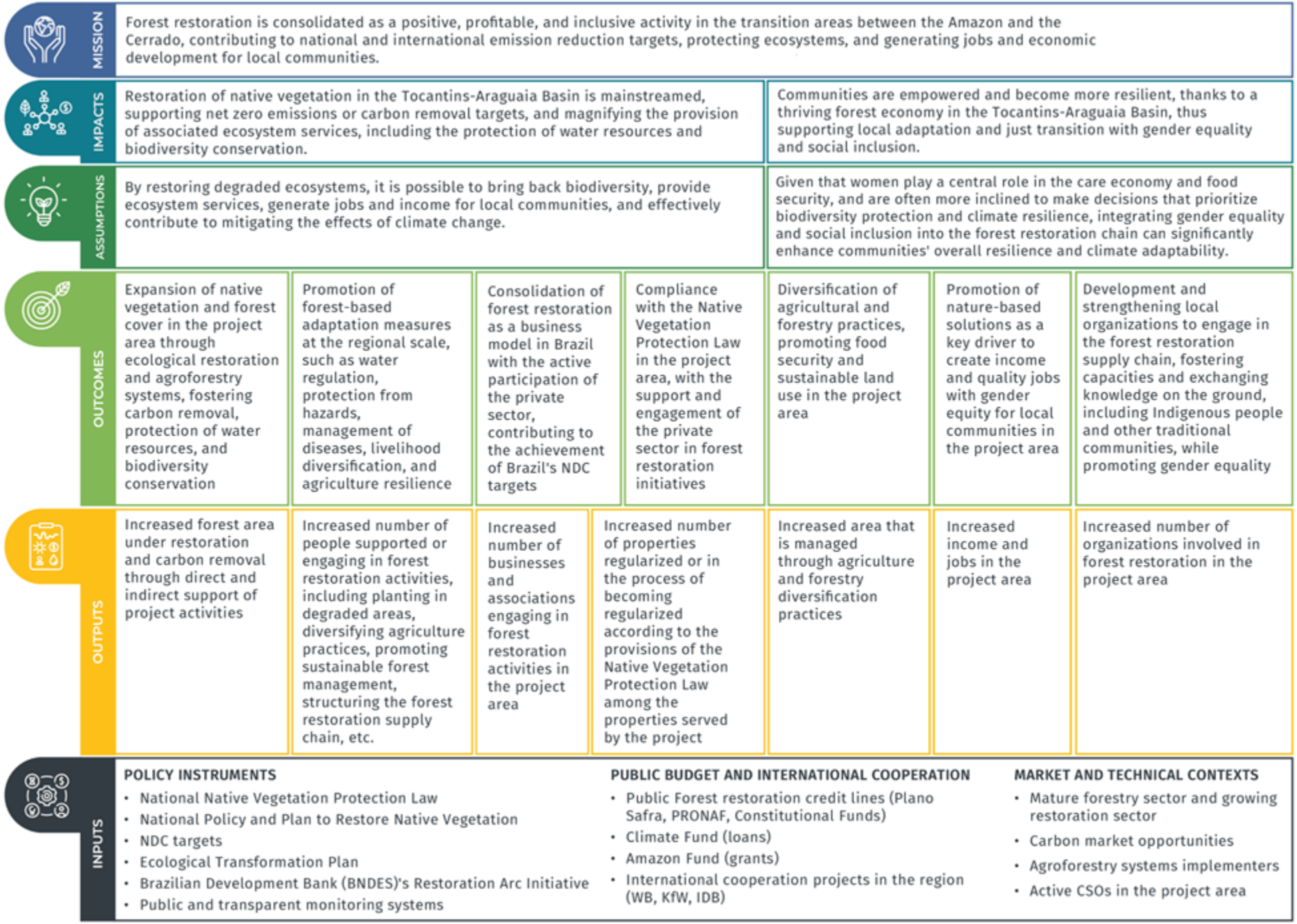
POVERTY REDUCTION

- **5,956** macaúba palm trees planted in agroforestry systems
- About **7,000** people trained, strengthening their employment ties and providing opportunities for employment and income generation
- **17** out of 64 subprojects of DGM Brazil focused on food security
- **20** projects for income generation through increased production and market diversification

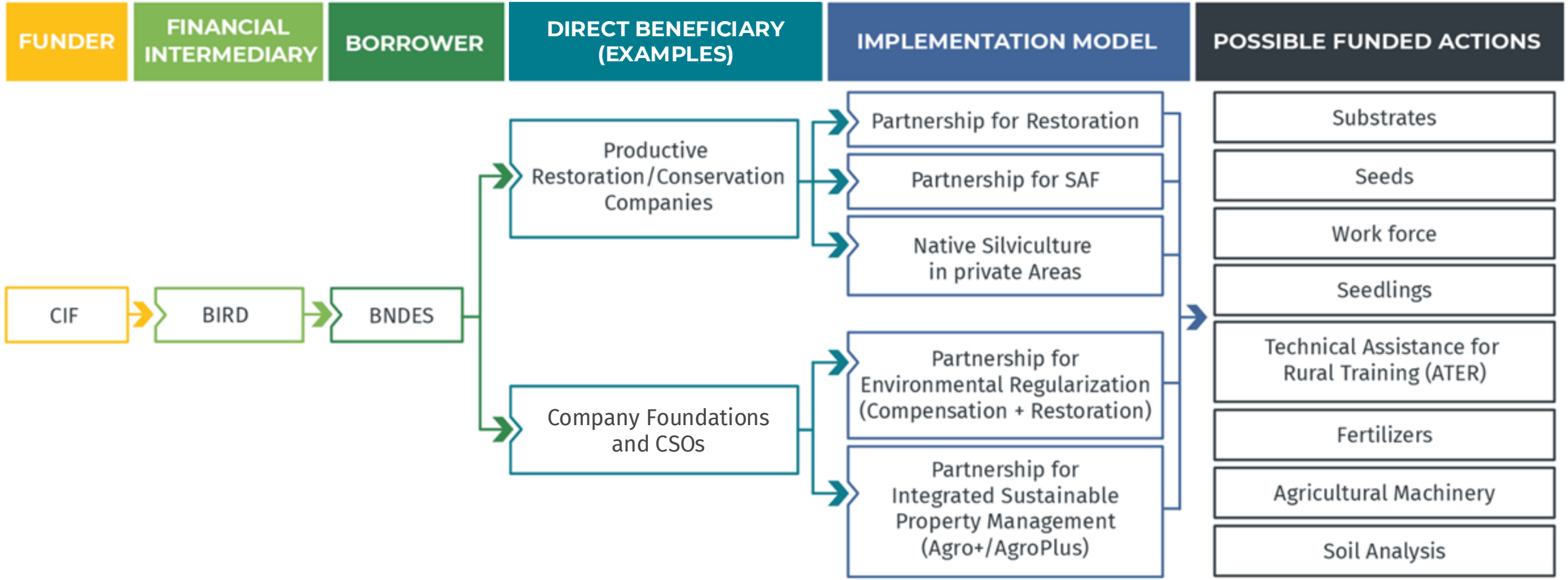
INSTITUTIONAL CAPACITIES

- **20** projects for income generation through increased production and market diversification
- **11** Federation Units with the Rural Environmental Registry System (Sicar) implemented and integrated into state systems

THEORY OF CHANGE



PROJECT ACTIVITIES AND FINANCE FLOW FOR FOREST RESTORATION BRAZIL'S IP



FINANCING PLAN AND INSTRUMENTS

PROJECT NAME	RESPONSIBLE MDB	MDB COFINANCE (USD MILLION)	BRAZIL CLIMATE FUND COFINANCE (USD MILLION)	CIF FUNDING (USD MILLION)				TOTAL (USD MILLION)
				PPG	GRANT	LOAN	MPIS	
Support for the Arc of Restoration	IBRD	100[a]	100	0	0	47[b]	0	247

a World Bank co-finance

b Sovereign guaranteed loan from Brazil with BNDES as borrower

FOREST RESTORATION ECOSYSTEM IN THE IP'S REGION

Pará Sustainable Territories

It integrates public, private, and third sectors to strengthen low-carbon socioeconomic development in Pará

Pará Productive Restoration Initiative

It promotes productive restoration activities. Aims to designate more than 100,000 ha of public areas for concession to restoration by 2026

Tocantins Protocol for Forest Restoration

Tocantins Restaura Project, with R$120 million for the restoration of degraded areas, with an initial area of 12,000 ha. Actions include water and soil protection, generation of jobs and income through bioeconomy and ecotourism

National Program of Productive Forests

The Ministry of Agrarian Development created the Program of Productive Forests, which is operating in 21 rural settlements and supporting 1,700 families in Pará with technical assistance, seeds, nurseries, and equipment

Eletrobrás Regional Funds

Forest Germplasm Program in Tucuruí (PA), dedicated to the conservation of flora DNA through the collection, production, analysis and distribution of seeds and seedlings. Restoration of 3,360 ha and collection of 37 million seeds

Redário

It brings together 24 Networks and Groups of Seed Collectors, with about 1,200 collectors, its goal is to provide the necessary support for the production of native seeds, boost the market and enable the best seeds for the recomposition of each ecosystem

Alliance for the Amazon Restoration

The network, with more than 100 members, acts as a catalyst for restoration, reconciling interests and integrating actions to expand the scale and efficiency of forest restoration, boosting the restoration economy by stimulating all links in the production chain

Araguaia Biodiversity Corridor

A Black Jaguar Institute's project that aims to restore the Brazilian Amazon Forest and Cerrado through planting native trees on a large scale in partnership with landowners. It plans to reforest 1 million hectares in a 20-kilometer strip on each side of the Araguaia River

Mombak's Reforestation with Native Seedlings

Mombak's carbon credit projects have already raised 1.4 billion reais, planted 3 million native seedlings in 12 months in Pará

Belterra's Agroforestry Systems

Belterra Agroflorestas has been implementing agroforestry system over thousands hectares of small and médium-sized rural Properties in the Amazon, including Xingu, Carajás and Transamazônica region

RISK ASSESSMENT

Financial Risks

Mitigated by Brazil's sovereign guarantees and BNDES' fiduciary guarantees

Technical-Operational Risks

Challenges include lack of coordination within the restore chain and regulatory framework issues

Strategy Risks

Involves balancing multiple risk matrices with transparency and independent oversight

Compliance and Legal Risks

Complexity increases with diverse stakeholders; careful governance required

Reputational Risks

Essential to manage with extensive governance despite the increased risks

Supplementary Considerations

Social, environmental, and technical risks to be evaluated at the project level

GENDER AND SOCIAL INCLUSION

OVERALL CHALLENGES

1. Women face greater barriers in accessing resources, goods and services.
2. Women in agricultural establishments make up less than half of the workforce and are primarily responsible for unpaid domestic and care work.
3. Female participation in green jobs is low, with women more likely to be in lower salary brackets
4. Women in rural areas, are highly exposed to GBV and face unique challenges in accessing justice and support services

SOLUTIONS

During project preparation phase companies will:

- Identify main gender and social inclusion gaps in the specific territory and develop an action plan
- Develop a risk assessment on GBV and corresponding activities to prevent and mitigate the risks

The company's approach should focus on

- Enhancing women's access to resources and economic opportunities generated by the project.
- Increasing women's participation in decision-making processes within the forest restoration sector.
- Strengthening the safety of women and vulnerable populations by addressing gender-based violence and other forms of violence and discrimination.

Monitoring and Verification goals for the following set of indicators

INDICATOR	UNIT OF MEASUREMENT	RESPONSIBLE
Area identified as secondary vegetation (in restoration) in the Amazon and Cerrado Biomes	Hectares	MMA
NPC Core 1 Mitigation: Reduced or avoided GHG emissions or increased carbon stock	t/CO2e	BNDES/ Funding Recipient
NPC core 2 Land area: Land area or other physical environment adopting natural resource management practices in a climate-responsive manner	Hectares	BNDES/ Funding Recipient
NPC core 7: Jobs created directly and indirectly	# (disaggregated by gender)	BNDES/ Funding Recipient
Co-benefit 1: green growth Economic growth of target sectors or industries within the landscape or ecosystems	R$/year	BNDES/ Funding Recipient

EXPECTED RESULTS

NATURE

54,000 ha of restored forests

Connectivity among forest fragments

Biodiversity conservation and restoration

PEOPLE

21,000 jobs created

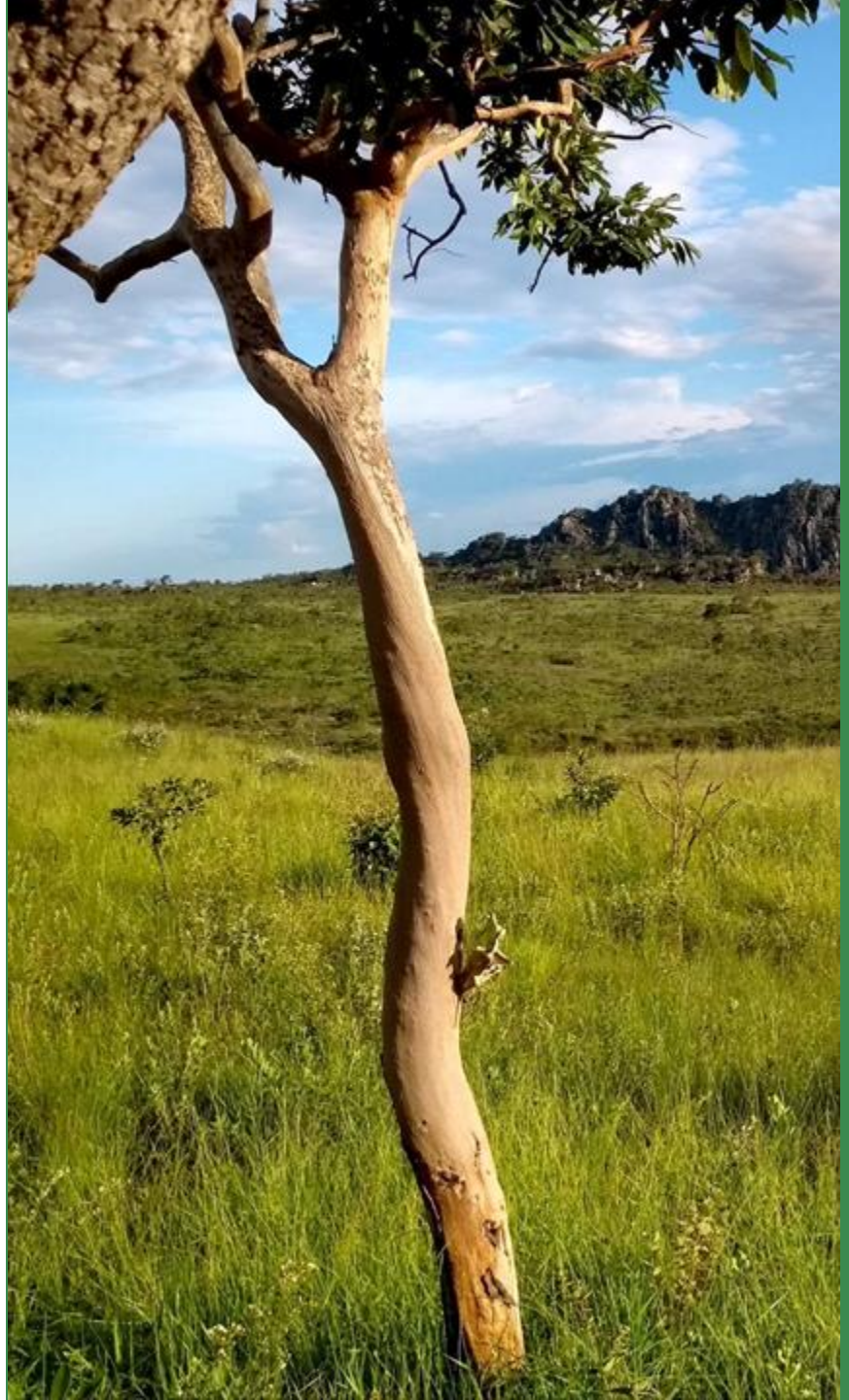
Inclusion of women and local and traditional communities in the restoration supply chain

Capacity building and technical education in restoration

CLIMATE

7,75 million tons of CO2eq captured

Adaptation at local level, with soil and water conservation, and more resilient and climate-friendly economic activities



CONCLUDING REMARKS

- The IP aims to support the transformation of the Tocantins-Araguaia Basin to drive long-term change, addressing local and global climate challenges while promoting inclusive and sustainable development.
- The IP will boost reforestation in a high-value landscape, focusing on biodiversity, climate and socio-economic objectives, with adaptation and resilience components.
- The IP employs an innovative private-focused approach to accelerate a business model for forest restoration using native vegetation and sustainable forestry, offering attractive returns in an expanding market.
- The approach aims to scale up restoration efforts by securing substantial long-term capital to increase the attraction to the private sector.
- The IP is instrumental to increase the funding capacity of a national priority, which is to reach net-zero deforestation by 2030 and net-zero emissions at the country level by 2050.

THANK YOU
OBRIGADO

Brazilian Forest Service/Ministry of the Environment of Brazil

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