

# Economic Analysis of the Pulp Value Chain in Mato Grosso do Sul:

## *Value Generation, Employment, and Regional Sustainability*

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**Date & Location:** July 2, 2025 – Porto Seguro, Brazil



# Methods

## Analytical Approach

- **Descriptive statistics** to measure employment and wage dynamics
- **Time-series analysis (2010–2024)** to identify trends in industrial and forestry growth
- **Spatial mapping** of planted forest areas using georeferenced data

## Data Sources

- **RAIS & CAGED** – Formal employment and wage data
- **SIGA-MS** – Geospatial and agricultural statistics
- **COMEXSTAT** – Trade and export data
- **SEMADESC Investment Database** – Corporate investment tracking
- **MS Statistical Profile (2025)** – Socioeconomic indicators

## Introduction

# MATO GROSSO DO SUL

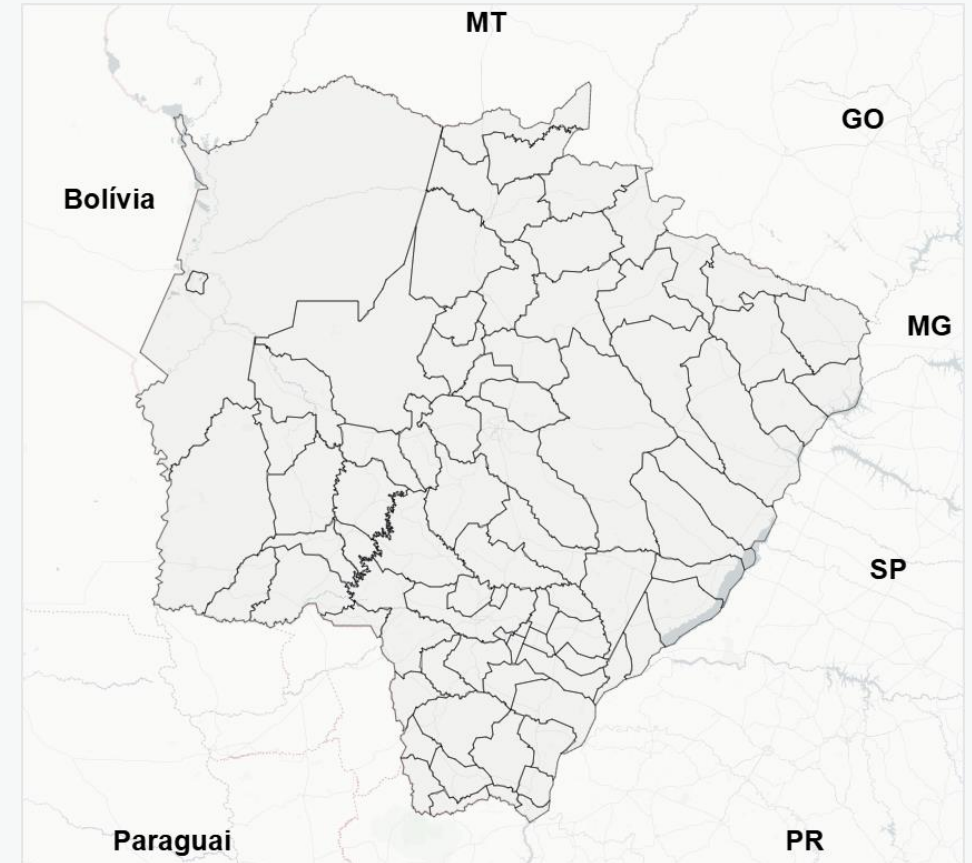
**Context:** Mato Grosso do Sul (MS) is a leading hub for eucalyptus-based pulp production in Brazil - **2nd largest planted area** of eucalyptus in the country.

MS is responsible for approximately 25% of Brazil's total pulp production, with an installed capacity of 7.0 million tons per year.

The state leads national pulp exports, generating US\$ 2.37 billion or 27% of Brazil's total revenue from the sector (4.14 million tons).

**Objective:** To analyze the economic structure and impacts of the pulp value chain in MS.

**Importance:** Strategic for regional development, sustainability, and bioeconomy expansion.







# MATO GROSSO DO SUL



## BIOMES

- PANTANAL: 27%
- CERRADO: 63%
- ATLANTIC FOREST: 10%

**38% OF NATIVE VEGETATION**

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Territorial Area: **357,142 km<sup>2</sup>**

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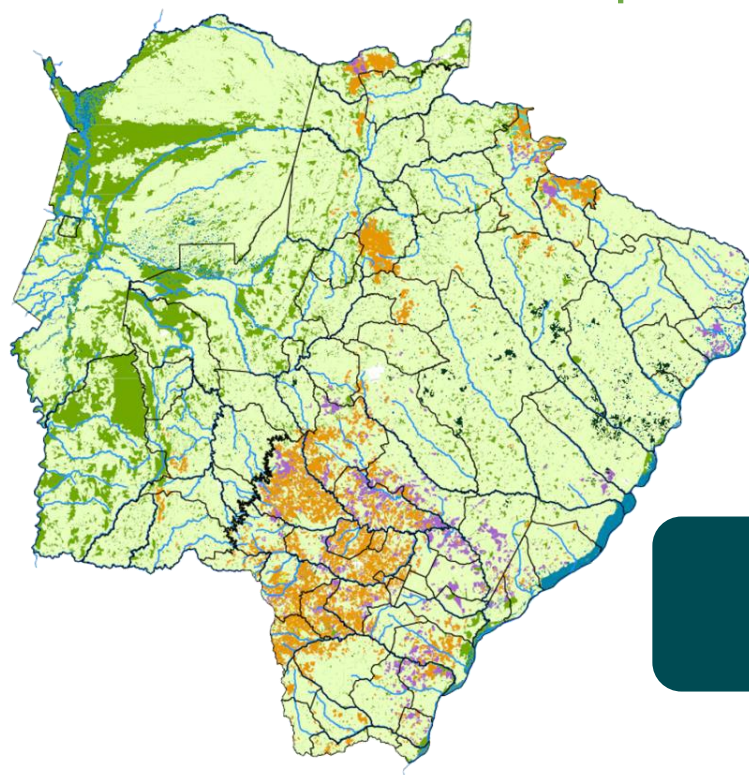
Population (2024 estimate): **2.9 million inhabitants**

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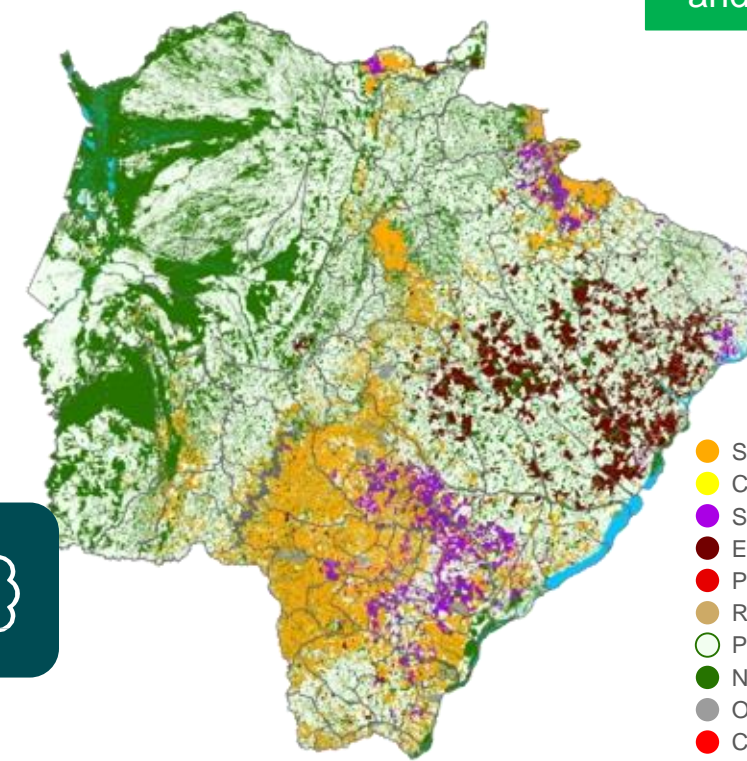
Population Density: **7.72 people/km<sup>2</sup>**  
*(one of the lowest in Brazil)*

# Growth of Planted Area (2009/10 – 2023/24)

2009/2010 first crop



2024/2025 first crop



Increase in planted areas with grains, sugarcane, and reforestation in pasture and non-native areas

416%









- Soybean
- Corn
- Sugarcane
- Eucalyptus
- Pine
- Rubber tree
- Pasture
- Native vegetation remnants
- Others
- CAMPO GRANDE
- Water

Planted Forests – 339,772 hectares

Planted Forests – 1,753,340 hectares

# Expansion of Agricultural and Forestry Areas

	2010	24/25	
 PASTURES	21,819,309	16,668,158	5,131,151 ▼
 REMAINING	10,580,850	10,987,465	406,615 ▲
 GRAINS	1,813,375	4,535,179	2,721,804 ▲
 PLANTED FORESTS	341,350	1,753,340	1,413,568 ▲
 SUGARCANE	592,950	904,211	311,261 ▲
 OTHERS	566,577	846,138	279,561 ▲
TOTAL AREA	35,714,411	35,714,492	

\*Data in hectares. **Source:** SIGA-MS, 2010-2025.



# Cellulose Valley:

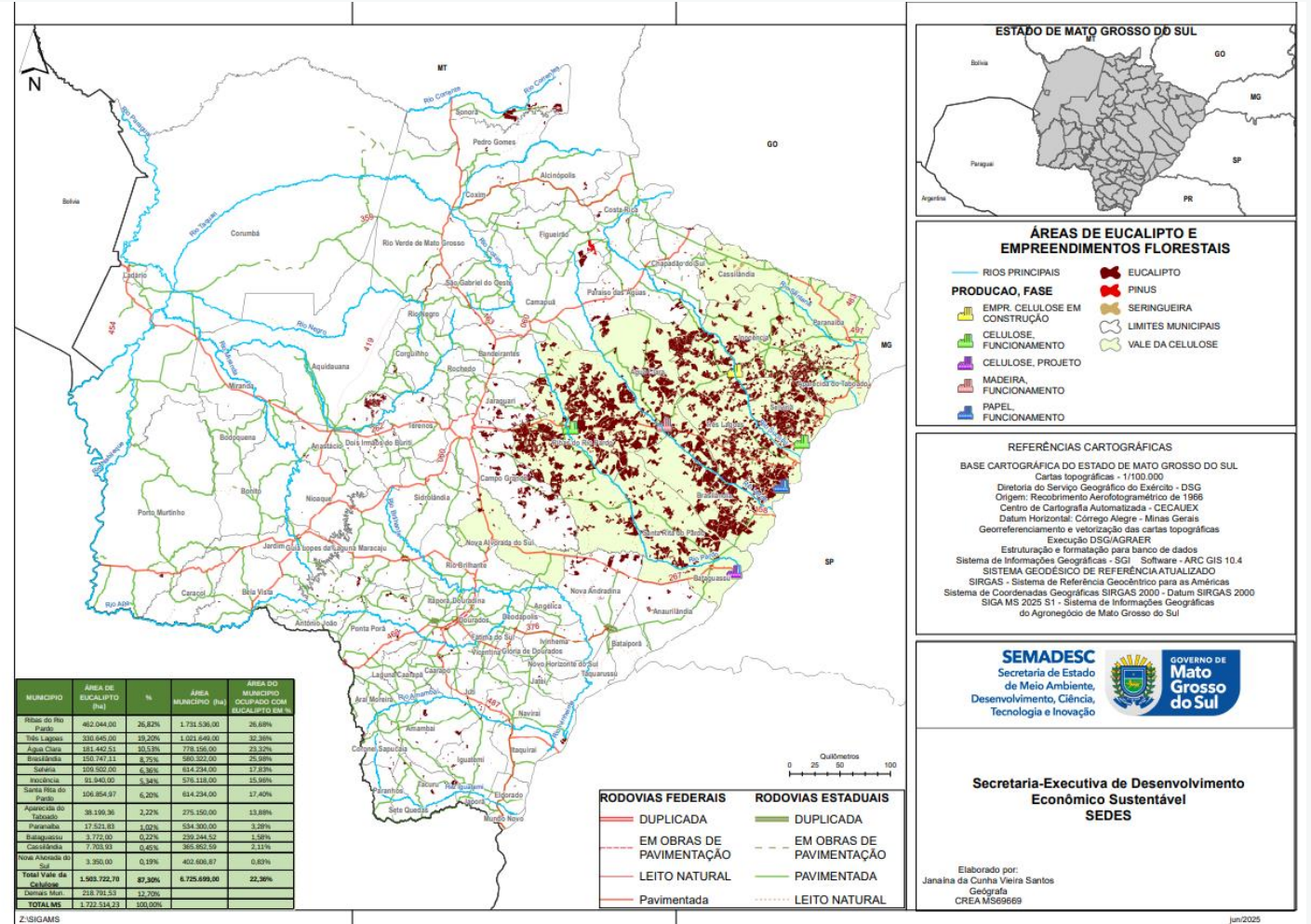
## A Strategic Industrial Development Hub in Mato Grosso do Sul



**State Law No. 6.136/2023** officially designates the **Cellulose Valley** as a strategic industrial development region in Mato Grosso do Sul, Brazil.



**Location:** The Cellulose Valley spans multiple municipalities, including Ribas do Rio Pardo, Três Lagoas, Água Clara, Inocência, Brasilândia, and Selvíria — forming a high-potential corridor for forest-based industries.



State Law No. 6.136, October 31, 2023.

# Pulp Industry in Mato Grosso do Sul

## Operational and Under Development

### ✓ Mills Operating (Cellulose Valley)

Company	City	Status	Capacity (tons/year)
Suzano	Três Lagoas	Operating	3.5 million
Eldorado Brasil	Três Lagoas	Operating	1.8 million
Suzano	Ribas do Rio Pardo	Operating (2024)	2.5 million

◆ Total installed capacity: ~7.8 million tons/year

### 🏗️ Mills Under Licensing or Planning

Company	City	Status	Estimated Capacity
Arauco	Inocência	Licensing phase (planned for 2028)	~2.5 million tons/year
Bracell	Bataguassu	Under licensing	~2.6 million tons/year

20 million tons by 2032

Source: SEMADESC, 2025.



# Export Performance

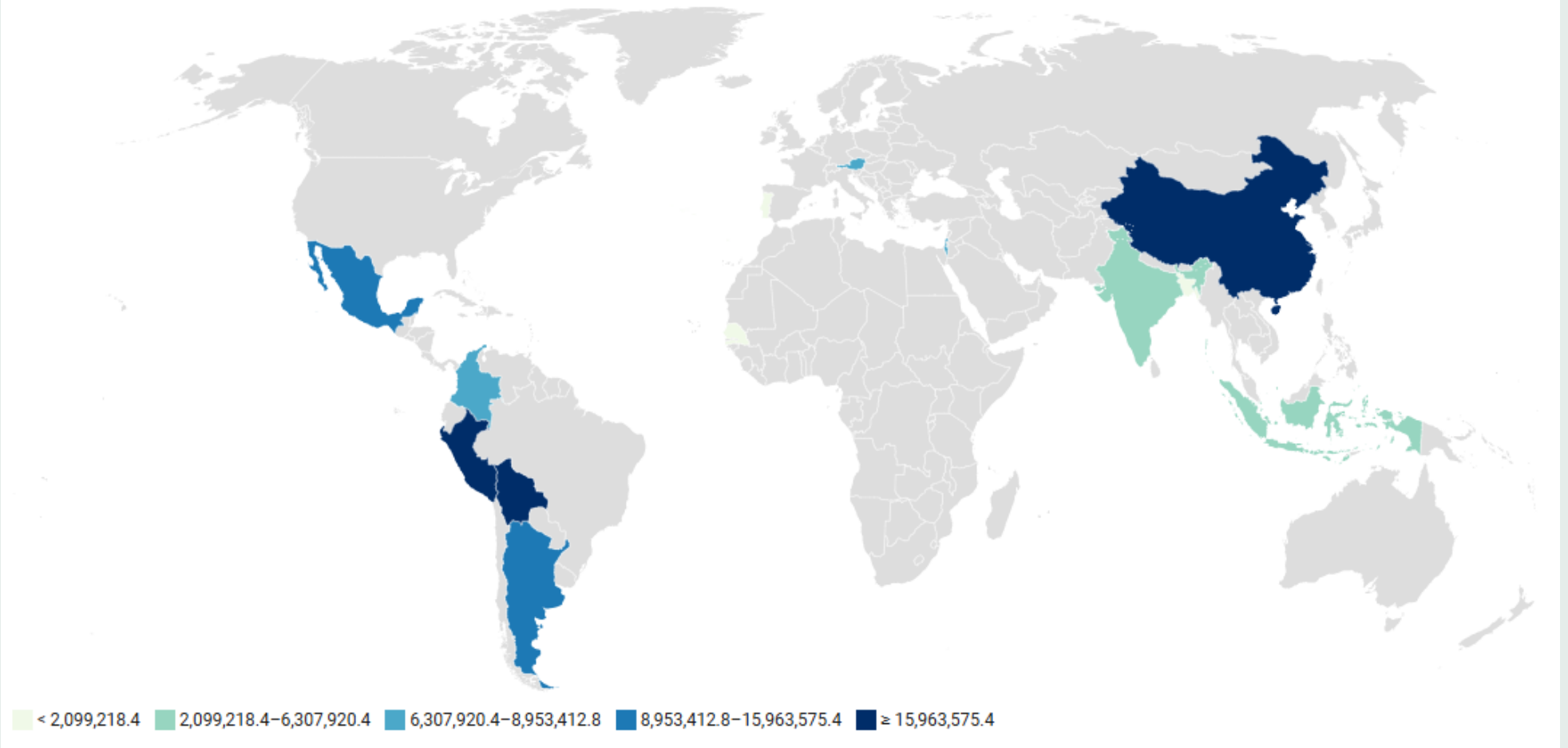
The state leads  
national pulp  
exports

## 2024 Main destinations:

- China (55%)
- Netherlands (9%)
- USA (8%)

Exports of chemical pulp grew by **106%** in volume and **160%** in revenue compared to the same period in 2015.

## Main Destinations of Pulp Exports – Mato Grosso do Sul (2024)



Source: COMEXSTAT, 2024.

# Employment and Wages

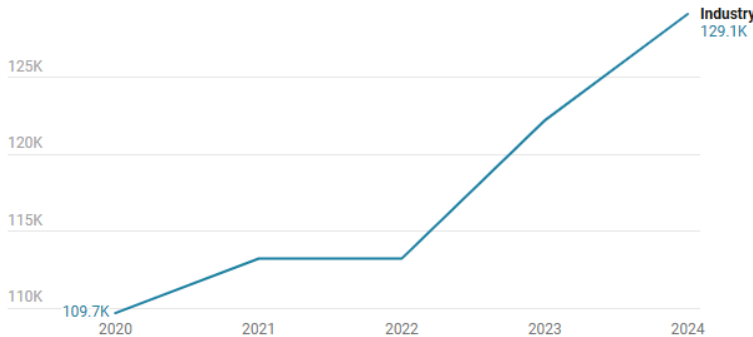
## 📈 Growth in formal industrial employment:

From **109.7K** in **2020** to **129.1K** in **2024** (+17.6%)

## 🌲 Pulp, Paper and Paper Products Sector:

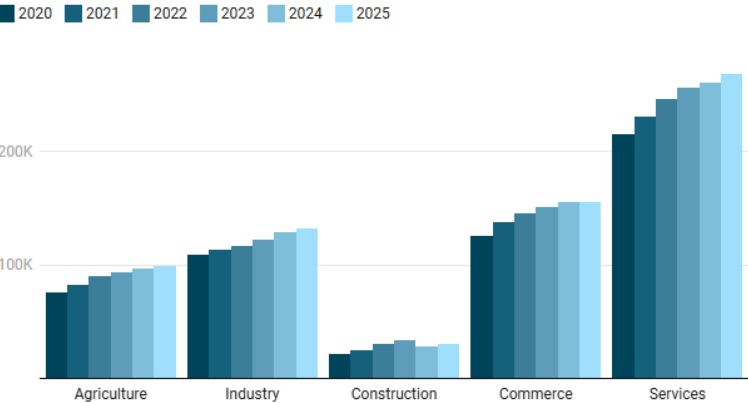
Employment increased from **5,834 (2020)** to **7,419 (2025)**

Growth of **+27.2%** in the period



## 🚧 Direct and indirect impacts:

Job creation extended to planted forests, transport, maintenance, logistics, and support services.



📍 In 2024, the industrial sector offered the highest average real earnings among all major economic groups in the state.

Sector	Average Real Earnings (R\$) (2024)
Agriculture	R\$ 3,227.80
Industry	R\$ 3,807.14
Construction	R\$ 3,178.08
Commerce	R\$ 2,891.47
Services	R\$ 3,189.94
Overall Average	R\$ 3,248.85

# Workforce and Education Gaps

## Growing Demand for Skilled Labor

- MS aims to expand from **2 to 3 million hectares of planted forests**.
- In 2023 alone, over **11,700 workers** were hired in key municipalities (Três Lagoas, Água Clara, Ribas do Rio Pardo, Campo Grande).
- Estimated labor demand: **9,350 workers across forestry operations**.

## Identified Gaps

- **Shortage of professionals in:**
  - Nursery operations, silviculture, harvesting
  - Machine operation and maintenance
  - Transport and logistics
- **Key Programs**
  - **Voucher Qualificação – Forestry Sector**
  - Free technical and non-technical courses aligned with market needs
  - Examples: Harvester/Forwarder operators, Forestry Technicians
- **Transporter Voucher Program**
  - Over 7,000 drivers enrolled for licensing and cargo/passenger training (SEST/SENAT)



# Toward a Carbon Neutral State

In MS, the expansion of eucalyptus plantations is not only an economic asset but also a climate mitigation strategy.

These planted forests :

- Sequester CO<sub>2</sub> from the atmosphere
- Recover degraded lands
- Support biodiversity corridors and ecosystem restoration



**Brazil's First Carbon-Neutral Beef Cattle Farm**

 Santa Vergínia Agropecuária, located in Mato Grosso do Sul, is **the first officially certified carbon-neutral beef cattle farm in Brazil.**


# Conclusions

## Global Leadership in Pulp

Mato Grosso do Sul has positioned itself as a **leading global producer of eucalyptus pulp**.


Backed by strategic policies and industrial investments, the state holds **~25% of Brazil's pulp output**.

## Sustainable Growth

 **+400% growth** in planted eucalyptus area (2009 → 2024)

 Strong **economic spillovers** in logistics, transport, and services

## Challenges Ahead

 Persistent **skills gap** in forestry operations and industrial roles

 Need to expand **technical education**

Labor qualification must match the sector's technological complexity

## Strategic Opportunity

Eucalyptus pulp is more than a commodity — **It plays an essential role in advancing the bioeconomy, supporting carbon markets, and enabling a more sustainable industrial future.**

# Let's connect!

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