Promoting the Sustainable Tropical Agriculture for a Low Carbon Development

João Adrien

Special Advisor for Socioenvironmental Issue

Ministry of Agriculture, Livestock and Food Supply of Brazil

MINISTRY OF AGRICULTURE, LIVESTOCK AND FOOD SUPPLY

PÁTRIA AMADA BRASIL BRAZILIAN GOVERNMENT

Priority Agenda

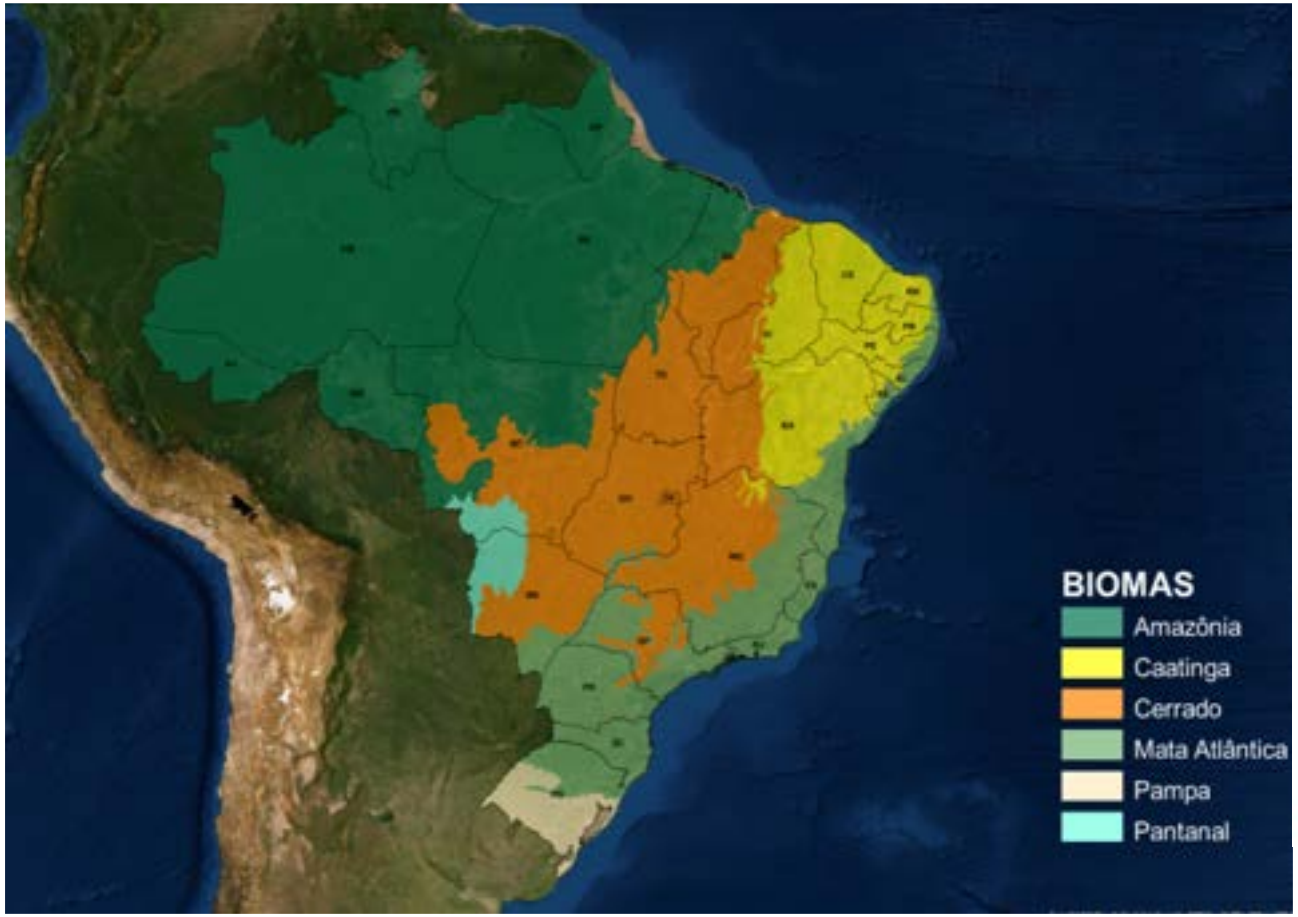
Low Carbon Agriculture

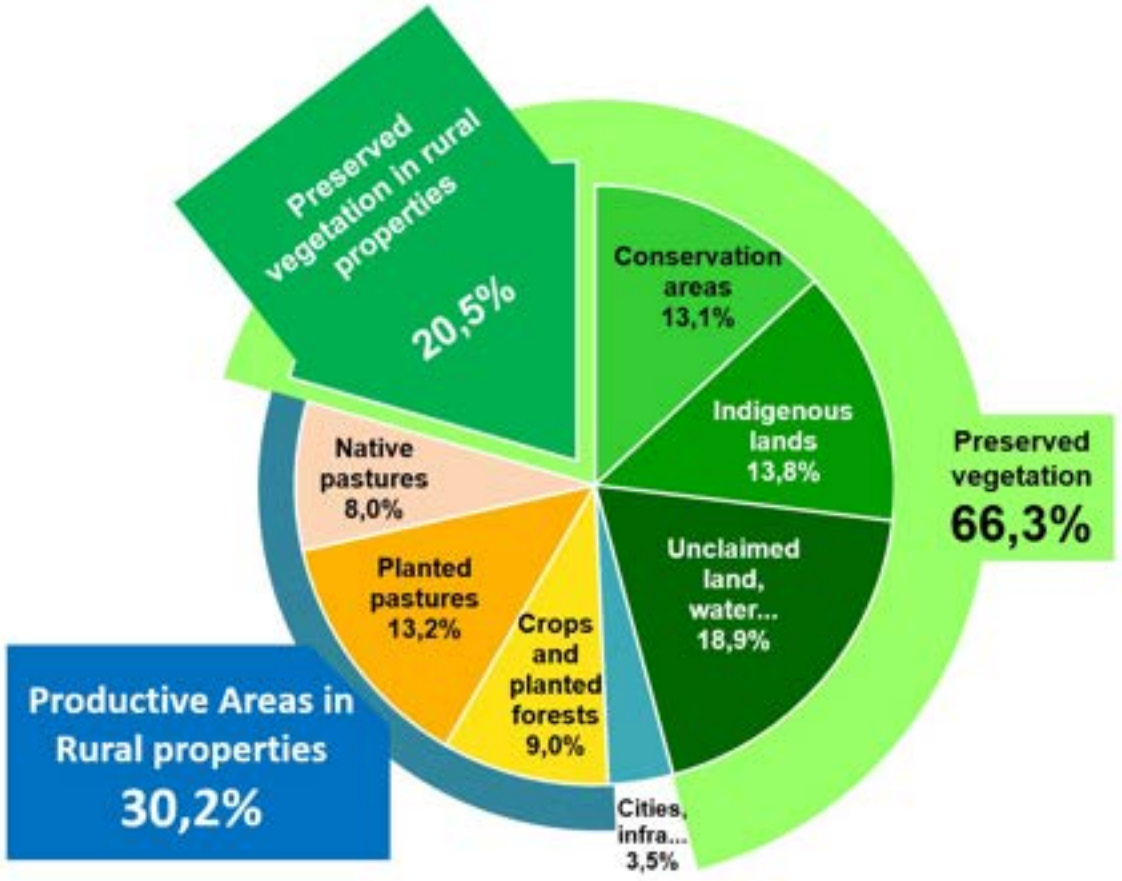
Food, Fiber and Renewable Fuel Production Increase

Increase in Rural Family Incomes

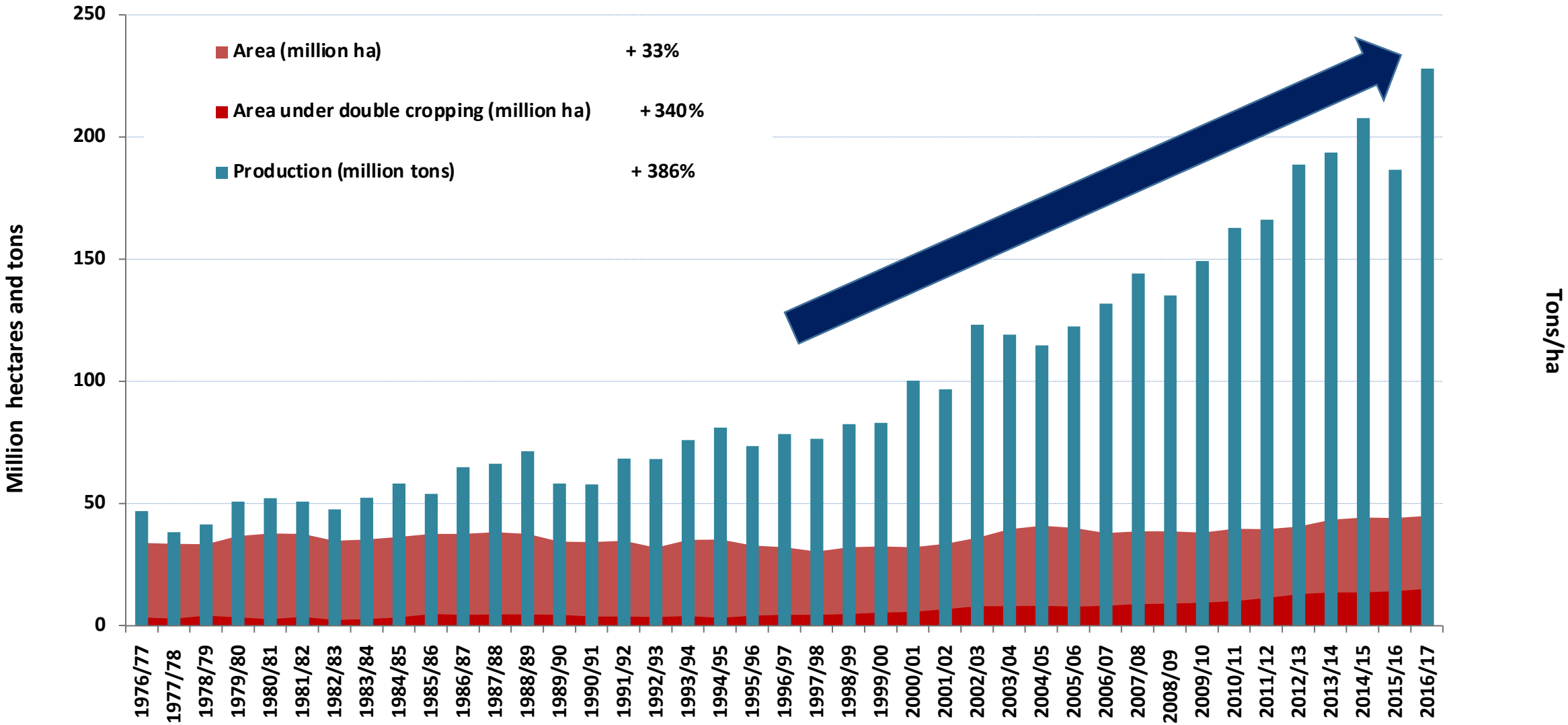
2050

BRAZILIAN BIOMES AND LAND USE



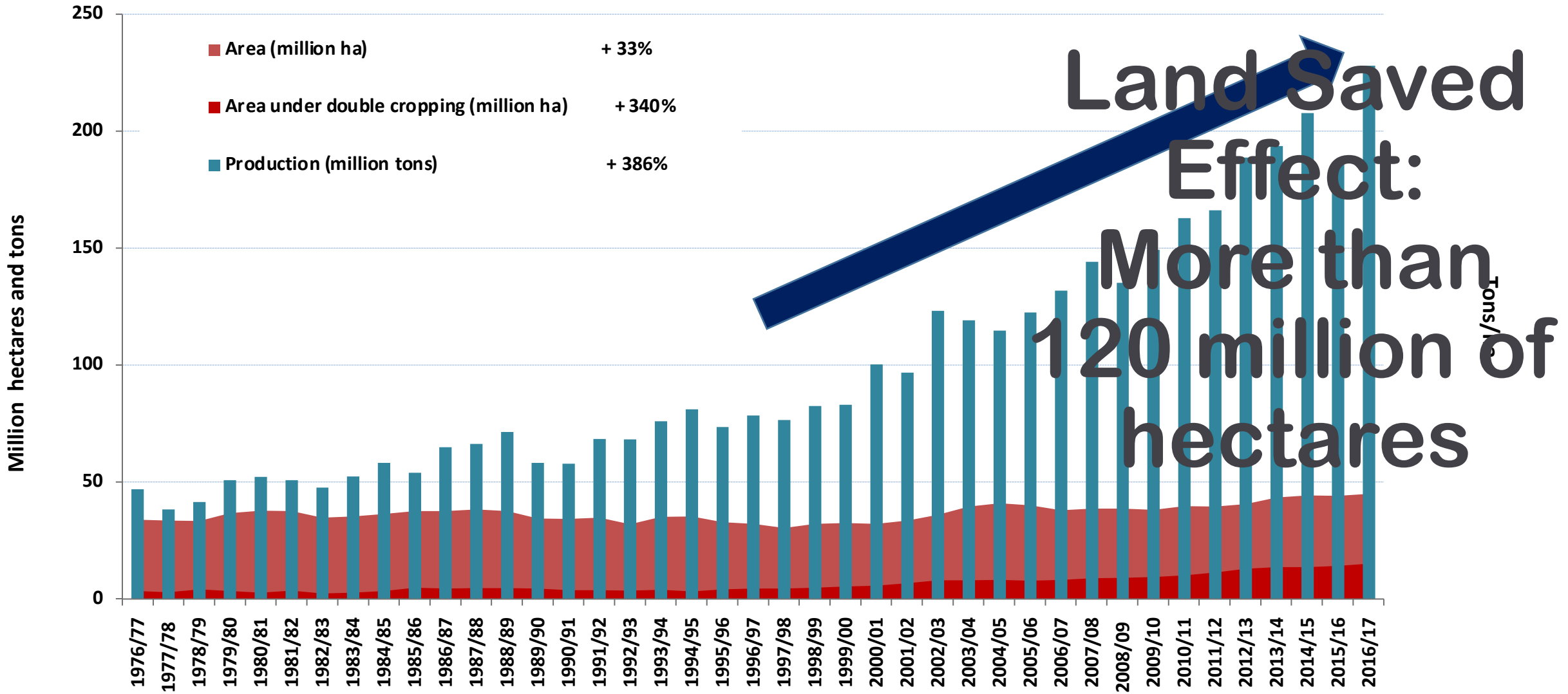


Land use and Agriculture Productivity



Source: Conab Prepared by: SRI

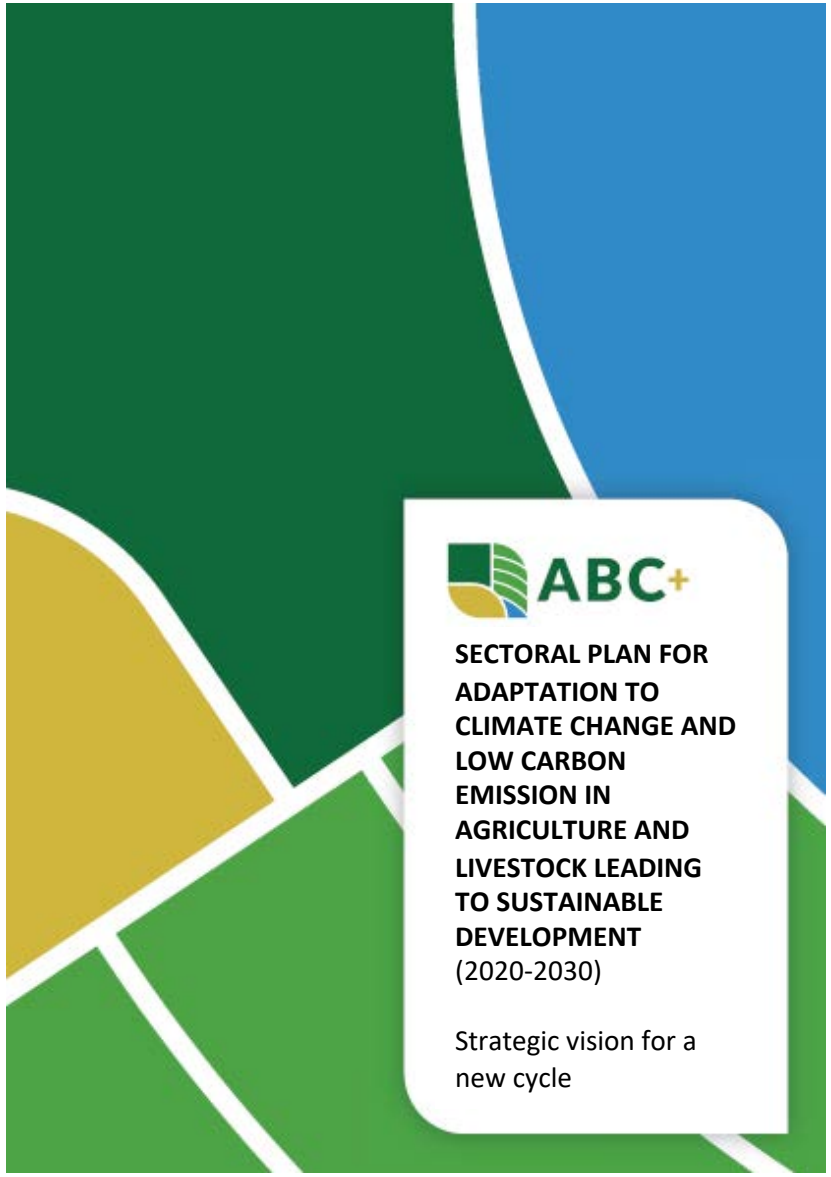
Land use and Agriculture Productivity



Source: Conab Prepared by: SRI

ABC+

More sustainable, resilient and competitive agricultural systems



Fostering the adaptation of Brazilian agriculture and cattle raising to climate change and mitigating greenhouse gas emissions, with increased efficiency and resilience of production systems, through integrated landscape management

ABC+

Integrated Agricultural Model

1°Crop: Main Crop

2°Crop: Summer Crop

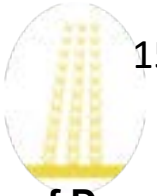
3°Crop: Pasture

ABC+

ABC TECHNOLOGIES

VOLUNTARY GOALS (until 2020)

- **Adoption of technologies in 35.5 million ha**
- **Mitigation of 133 to 163 million Mg CO_2 eq.**



15 million ha

Recovery of Degraded Pastures

4 million ha

ILPF

8 million ha

No-till farming System

3 million ha

Planted Forests

5.5 million ha

Biological Nitrogen Fixation

4 million m3

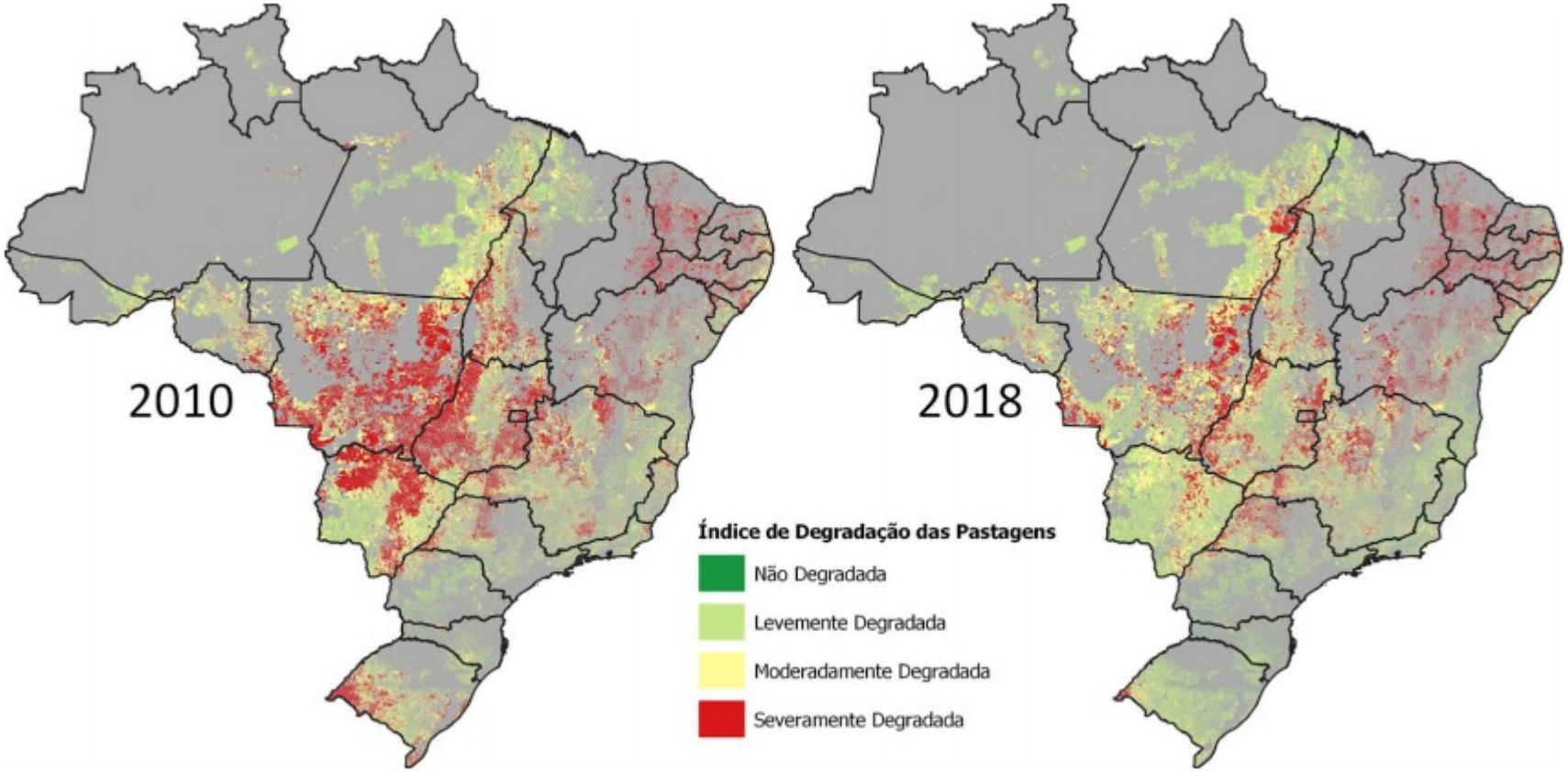
Waste Treatment Animals

RESULTS (from 2010 to 2018)

Adoption in **52 million ha (~ 1.5 GERMANY)**

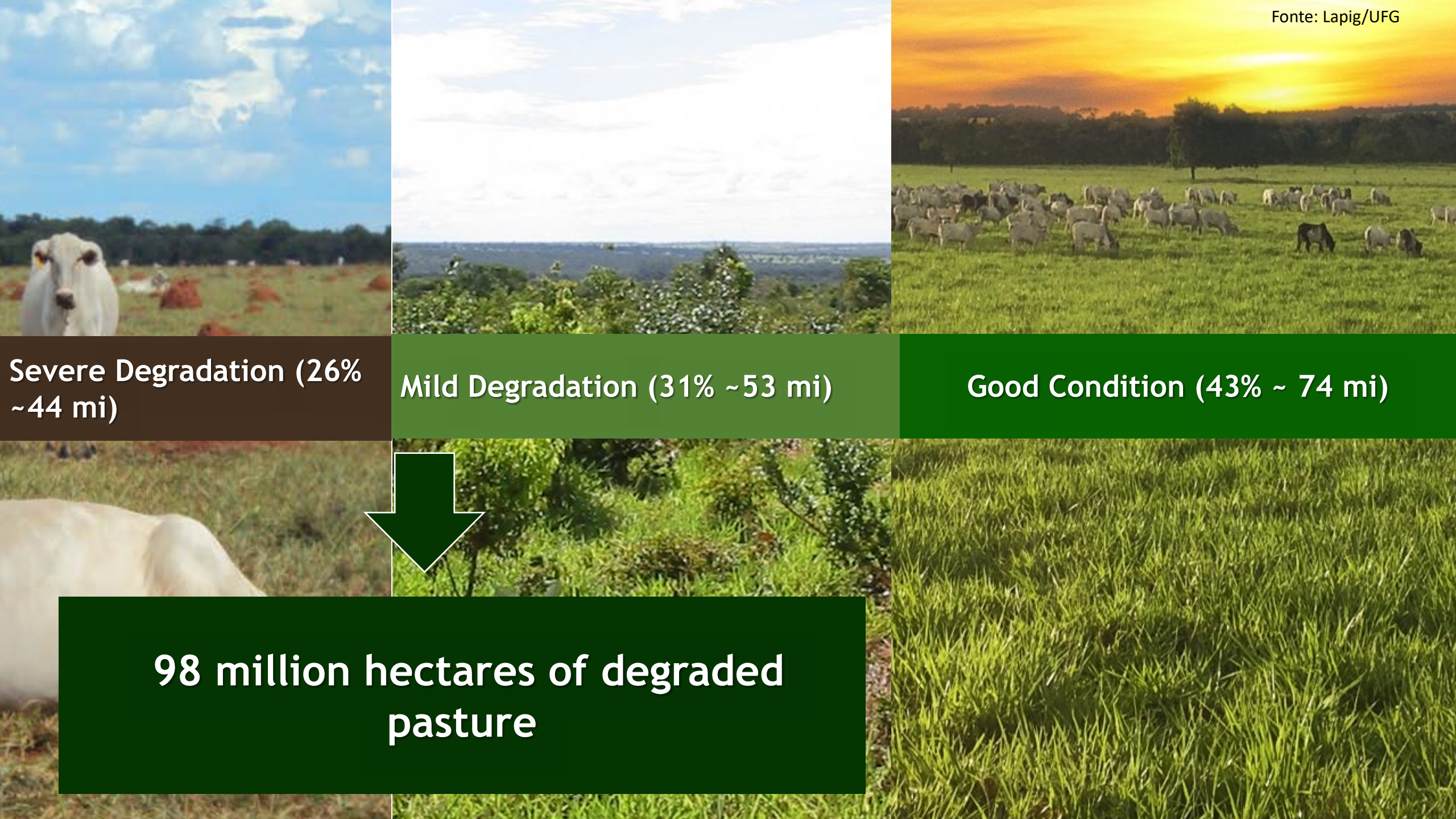
Mitigation ≃ 170 million Mg CO2 eq.

Reach ≃ **115% of the goal**



26,8 million of hectare – Recovery of Degraded Pastures

Fonte: Lapig/UFG



Fonte: Lapig/UFG

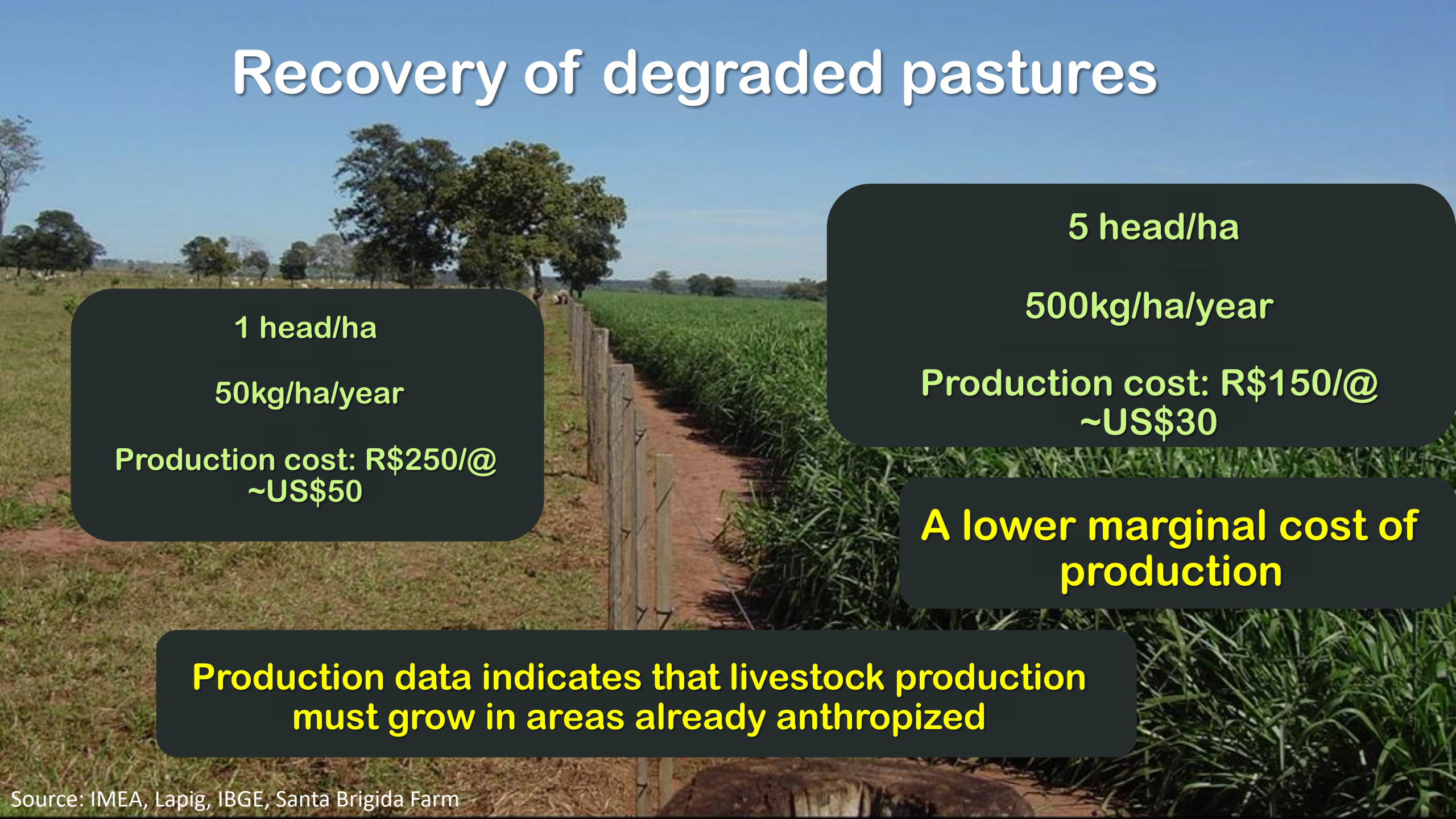
Severe Degradation (26% ~44 mi)

Mild Degradation (31% ~53 mi)

Good Condition (43% ~ 74 mi)

98 million hectares of degraded pasture

Recovery of degraded pastures



1 head/ha

50kg/ha/year

Production cost: R$250/@
~US$50

5 head/ha

500kg/ha/year

Production cost: R$150/@
~US$30

A lower marginal cost of production

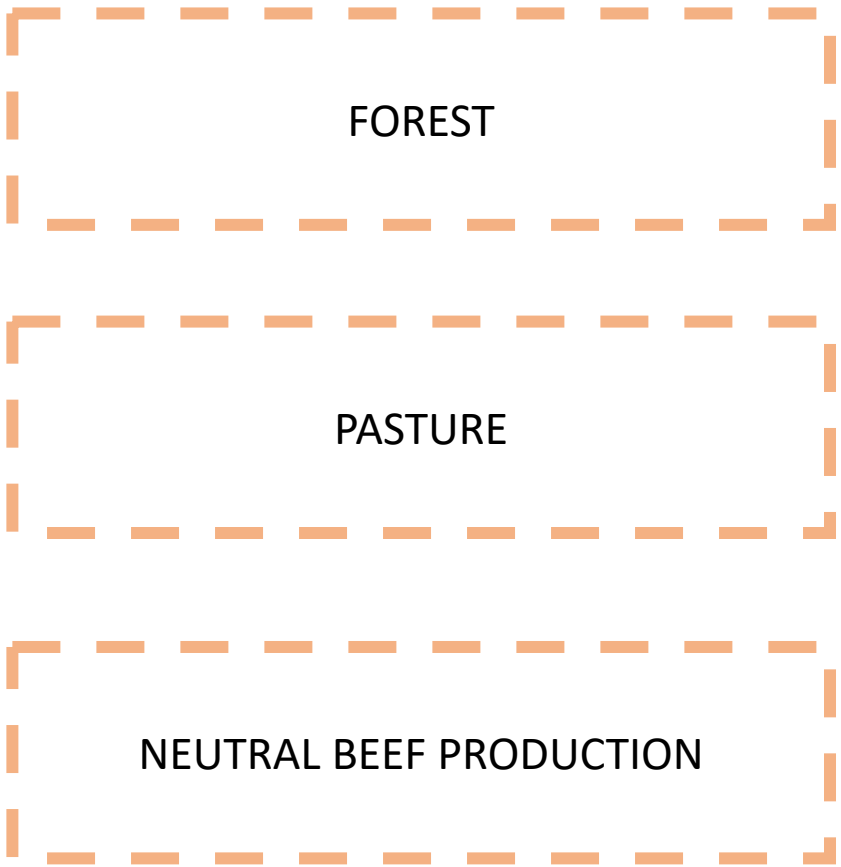
Production data indicates that livestock production must grow in areas already anthropized

Source: IMEA, Lapig, IBGE, Santa Brigida Farm

Diretrizes Técnicas para Produção de Carne com Baixa Emissão de Carbono Certificada em Pastagens Tropicais: Carne Baixo Carbono (CBC)

carne baixo carbono

Embrapa


FOREST
PASTURE
NEUTRAL BEEF PRODUCTION

Brazilian Forest Code- Environmental Compliance and Transparency

- Rural Environmental Register -CAR
- Environmental Compliance – Brazilian Forestry Code
- Environmental Conservation on Rural Proprieties
- Transparency and Traceability

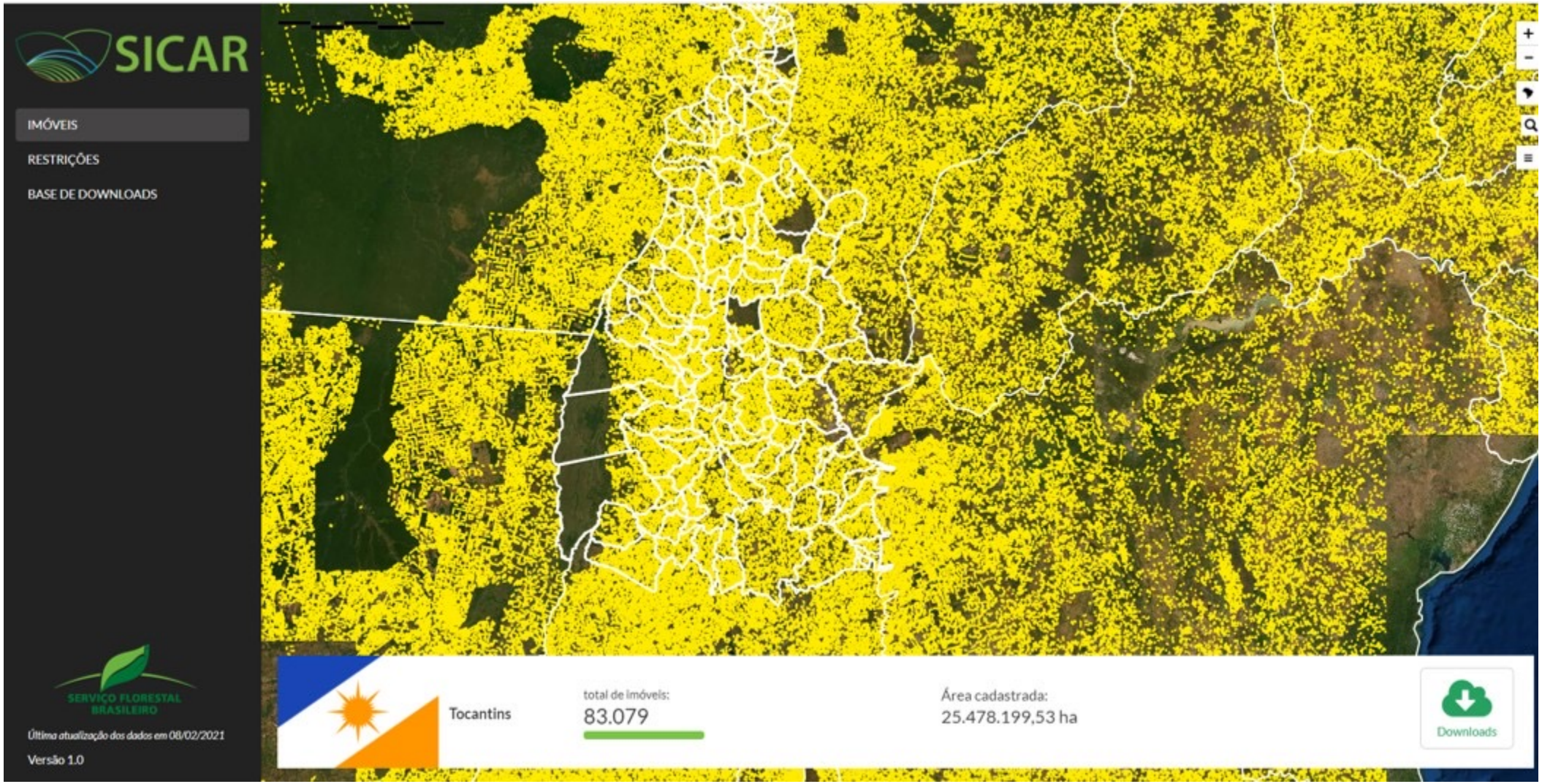
CAR

- Farmers must protect 20% to 80% of native vegetation on proprieties;

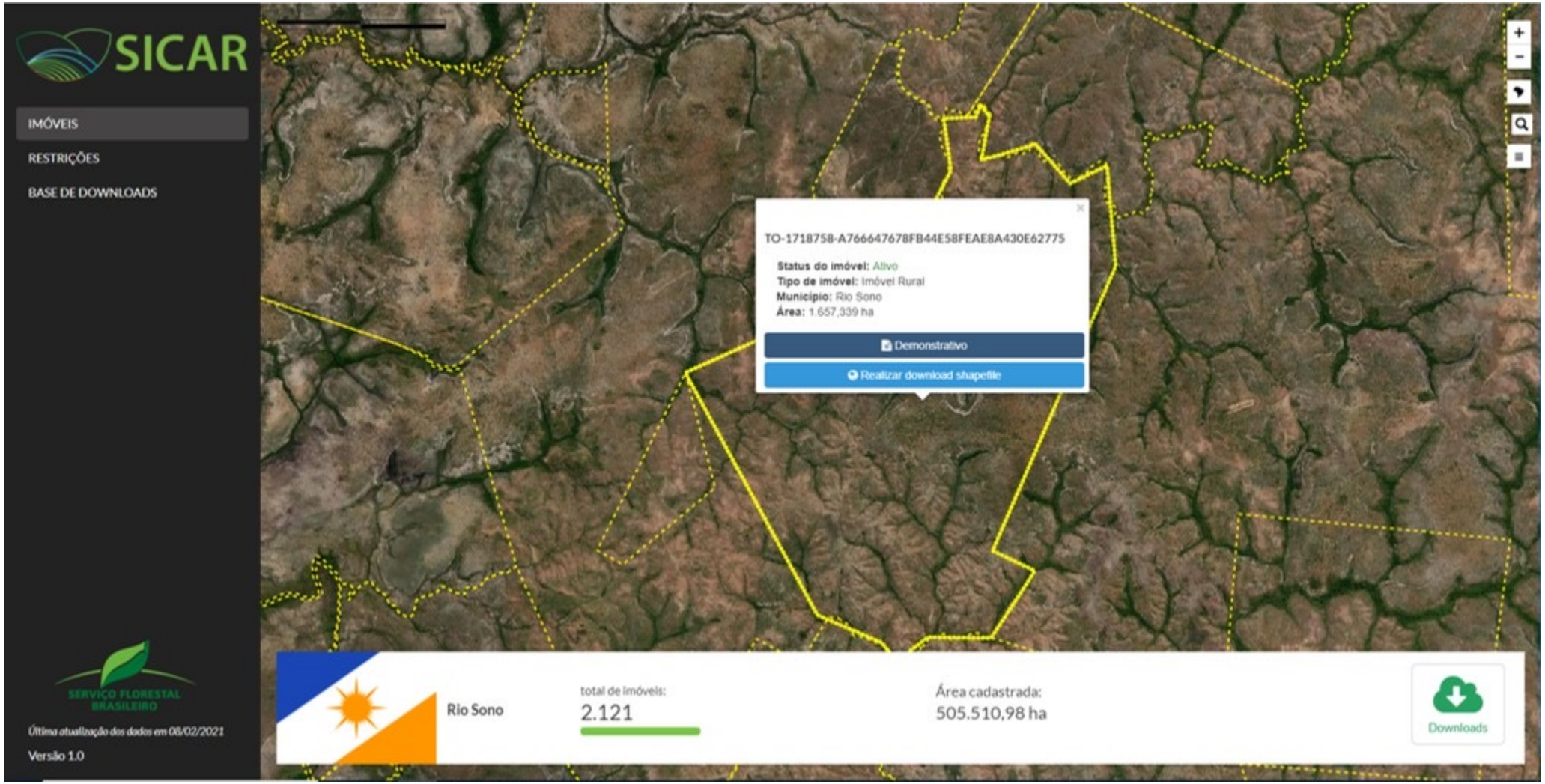
- Sustainable Landscape Management;

20% of Preserved Areas in Private Proprieties

SICAR
IMÓVEIS
RESTRIÇÕES
BASE DE DOWNLOADS
SERVIÇO FLORESTAL BRASILEIRO
Última atualização dos dados em 08/02/2021
Versão 1.0
Brasil
total de imóveis:
6.110.418
Área cadastrada:
614.355.082,25 ha


SICAR
IMÓVEIS
RESTRIÇÕES
BASE DE DOWNLOADS
SERVIÇO FLORESTAL BRASILEIRO
Última atualização dos dados em 08/02/2021
Versão 1.0
Tocantins
total de imóveis:
83.079
Área cadastrada:
25.478.199,53 ha
Downloads

SICAR
IMÓVEIS
RESTRIÇÕES
BASE DE DOWNLOADS
SERVIÇO FLORESTAL BRASILEIRO
Última atualização dos dados em 08/02/2021
Versão 1.0
Rio Sono
Clique para mais detalhes
Rio Sono
total de imóveis:
2.121
Área cadastrada:
505.510,98 ha
Downloads


SICAR
IMÓVEIS
RESTRIÇÕES
BASE DE DOWNLOADS
SERVIÇO FLORESTAL BRASILEIRO
Última atualização dos dados em 06/02/2021
Versão 1.0
TO-1718758-A766647678FB44E58FEAE8A430E62775
Status do imóvel: Ativo
Tipo de imóvel: Imóvel Rural
Município: Rio Sono
Área: 1.657,339 ha
Demonstrativo
Realizar download shapefile
Rio Sono
total de imóveis:
2.121
Área cadastrada:
505.510,98 ha
Downloads

Demonstrativo

Situação cadastro:	Ativo
Registro no CAR:	TO-1718758-A766647678FB44E58FEAE8A430E62775
Condição cadastro:	Aguardando análise
Aderiu ao Programa de Regularização Ambiental:	Sim

Dados do Imóvel

Área do Imóvel:	1.657,34 ha	Data de registro no SICAR:	27/09/2019
Módulos fiscais:	20,72	Data da análise do CAR:	-
Município / UF:	Rio Sono (TO)	Data da última retificação:	-
Coordenadas centroide:	Lat: 09°30'40,1" S Long: 47°27'11,64" O		

Cobertura do Solo

Área total de remanescentes de vegetação nativa	1.652,16 ha
Área total de uso consolidado	-
Área total de servidão administrativa	-

Reserva Legal

Situação da reserva legal: Não Analisada

Área de reserva legal averbada vetorizada	-
Área de reserva legal aprovada não averbada vetorizada	-
Área de reserva legal proposta vetorizada	580,24 ha
Total de reserva legal declarada pelo proprietário/possuidor	580,24 ha

Área de Preservação Permanente (APP)

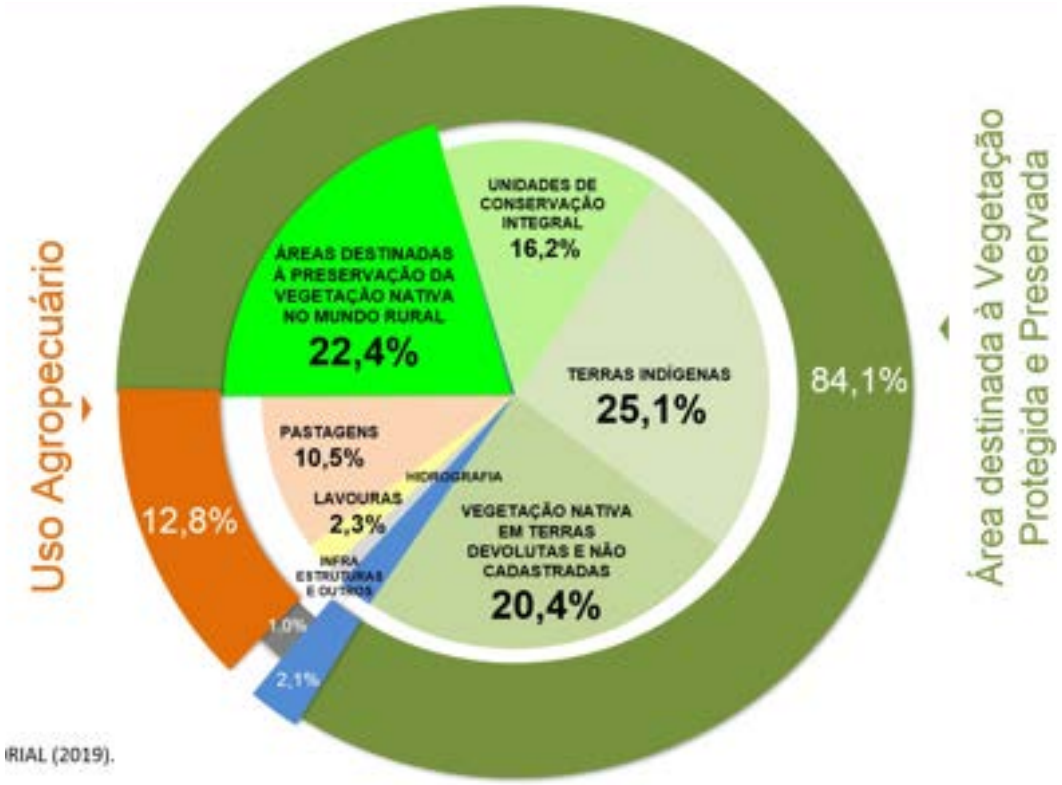
Áreas de preservação permanente	158,14 ha

Amazon Biome Circumstances

AMAZON BIOME- RAINFOREST REGION

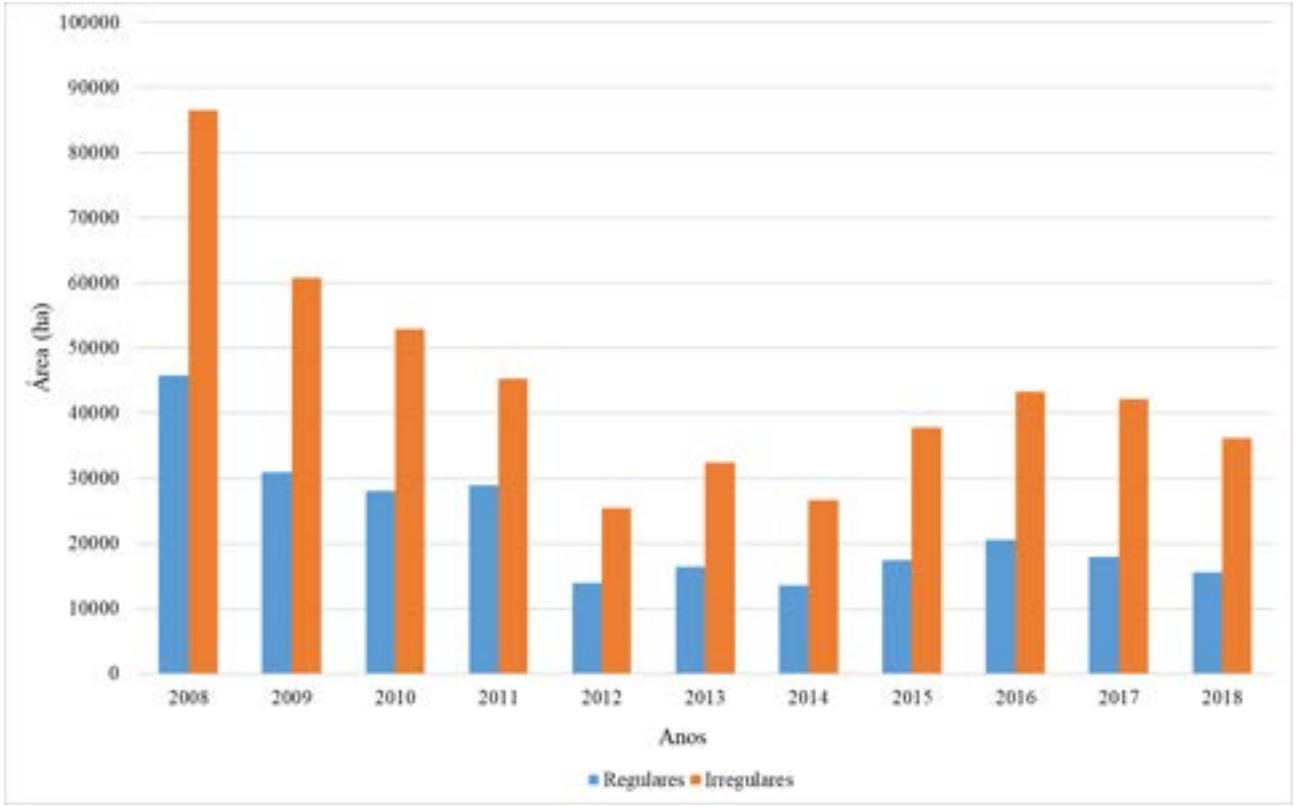
- 420 mi/ha- 50% of the Brazilian Territory;
- 100%-Amazon Biome- Rainforest
- 447mi/ha- European Union Territory as an example

THE AMAZON BIOME



IRIAL (2019).

Land Regularization



DEFORESTATION WERE 132% HIGHER IN NOT TITTLED LAND REFORM SETTLEMENTS

Fonte: PRODES 2008 - 2018

ACHIEVING PARIS AGREEMENT

2025
37% OF GHG REDUCTION

→

2030
43% OF GHG REDUCTION

→

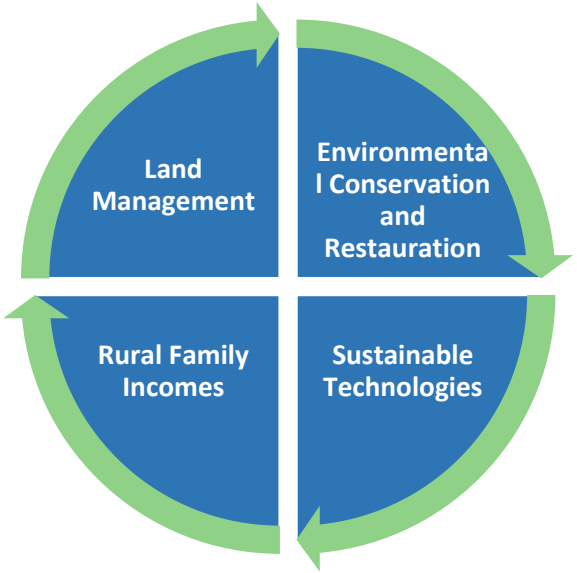
2050
CARBON NEUTRALITY

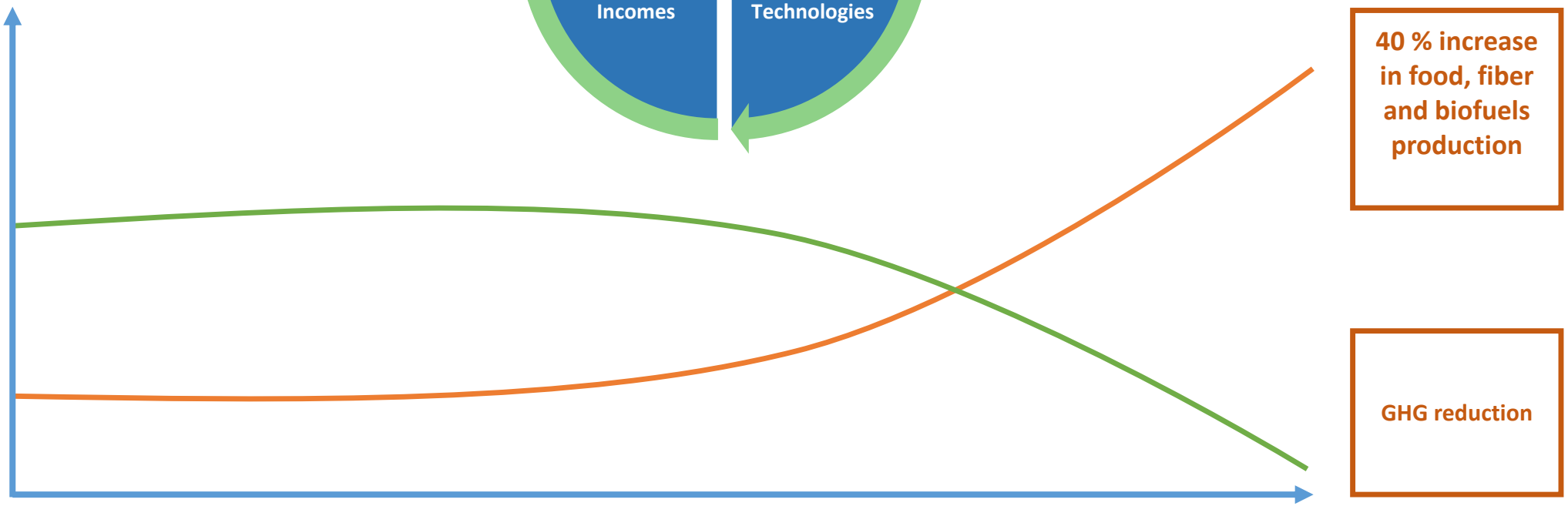
MAIN CONTRIBUTION FOR BRAZILIAN AGRICULTURA FOR NDC:

- **FOREST CODE IMPLANTATION;**
- **INCREASE TO 18% OF BIOFUELS USE IN ENERGY MATRIX;**
- **12Mi/ha OF FOREST RESTAURATION;**
- **15Mi/ha OF DEGRADED PASTURE RESTAURATION;**

PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11

Long Term Trend





40 % increase in food, fiber and biofuels production

GHG reduction

Promoting the Sustainable Tropical Agriculture for a Low Carbon Development

João Adrien

Special Advisor for Socioenvironmental Issue

Ministry of Agriculture, Livestock and Food Supply of Brazil

MINISTRY OF AGRICULTURE, LIVESTOCK AND FOOD SUPPLY

PÁTRIA AMADA BRASIL BRAZILIAN GOVERNMENT