

172nd EAAE Seminar

Brazil's Agri- environmental policies

Challenges and opportunities

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About IPAM

Our mission is to provide science, education and innovation for Brazil to have a healthy environment, developed economy and social justice.

Publications and Platforms

- Published more than 800 papers
- Contributed to over 1,000 Masters' PhD and Post-doctorates
- Developed 5 data and map platforms



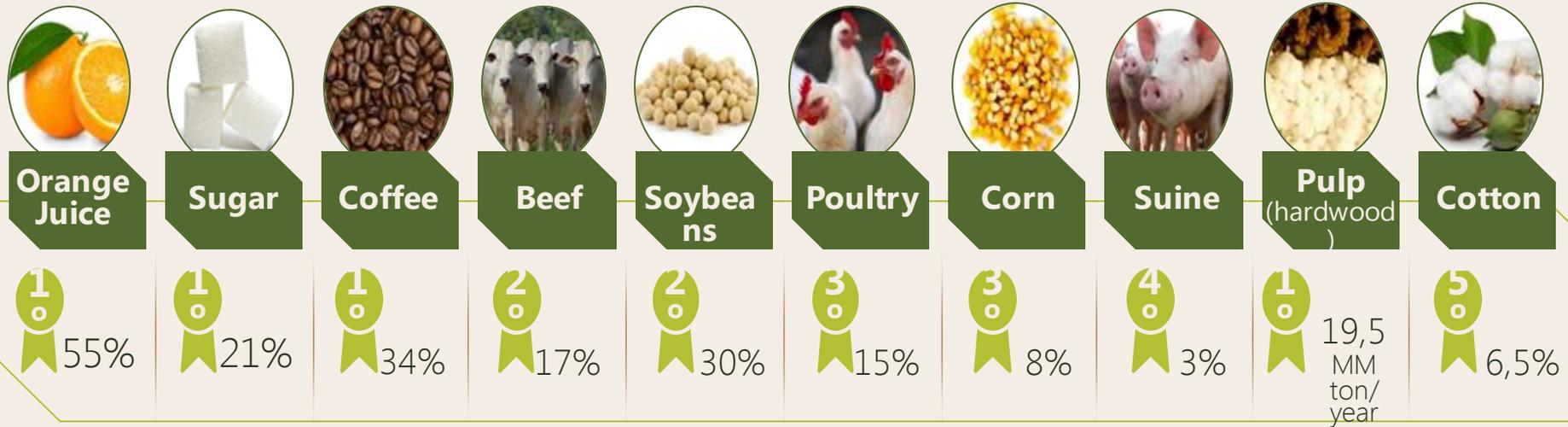
For 25 years, IPAM has been one of the most relevant science-based, independent entity with influence in public policy in Brazil

Message #1

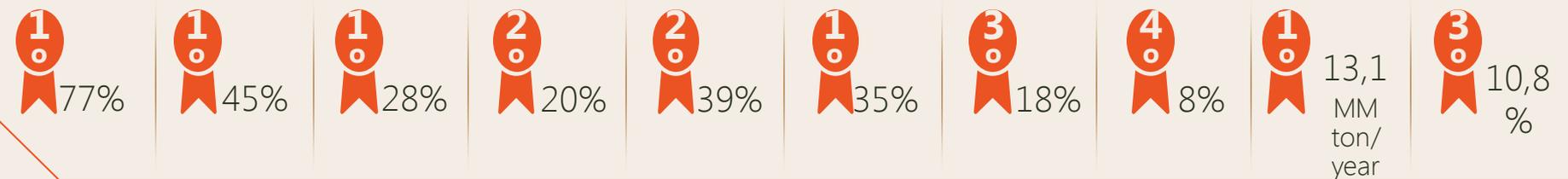
***Brazil is an Agricultural
Powerhouse***

Brazil's Agricultural production and exports

PRODUCTION



EXPORTS



For good...

AGRIBUSINESS IN THE BRAZILIAN ECONOMY 2017

23,5% of domestic GDP (US\$ 2.5 Tri)

US\$ 500 Billion

45% of exports (US\$ 213 Bi)

US\$ 96 billion

19% of jobs

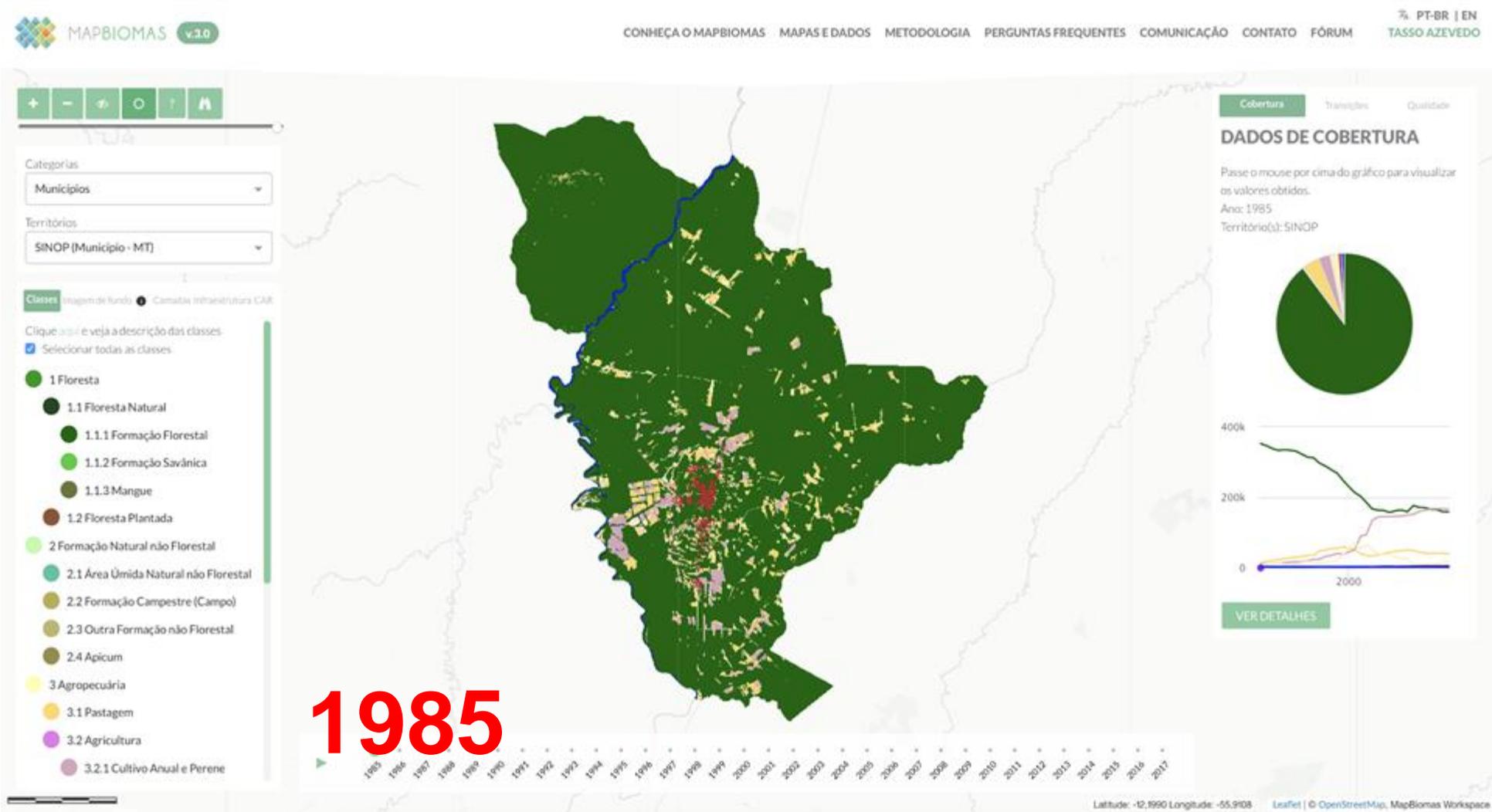
18 Million

**Reduction in the
relative prices of food**

3.5% p.y.*

And for bad...

Recent deforestation in the southern Amazon



Recent deforestation in the southern Amazon

Map navigation controls: +, -, Home, Full Screen, Layers, Search.

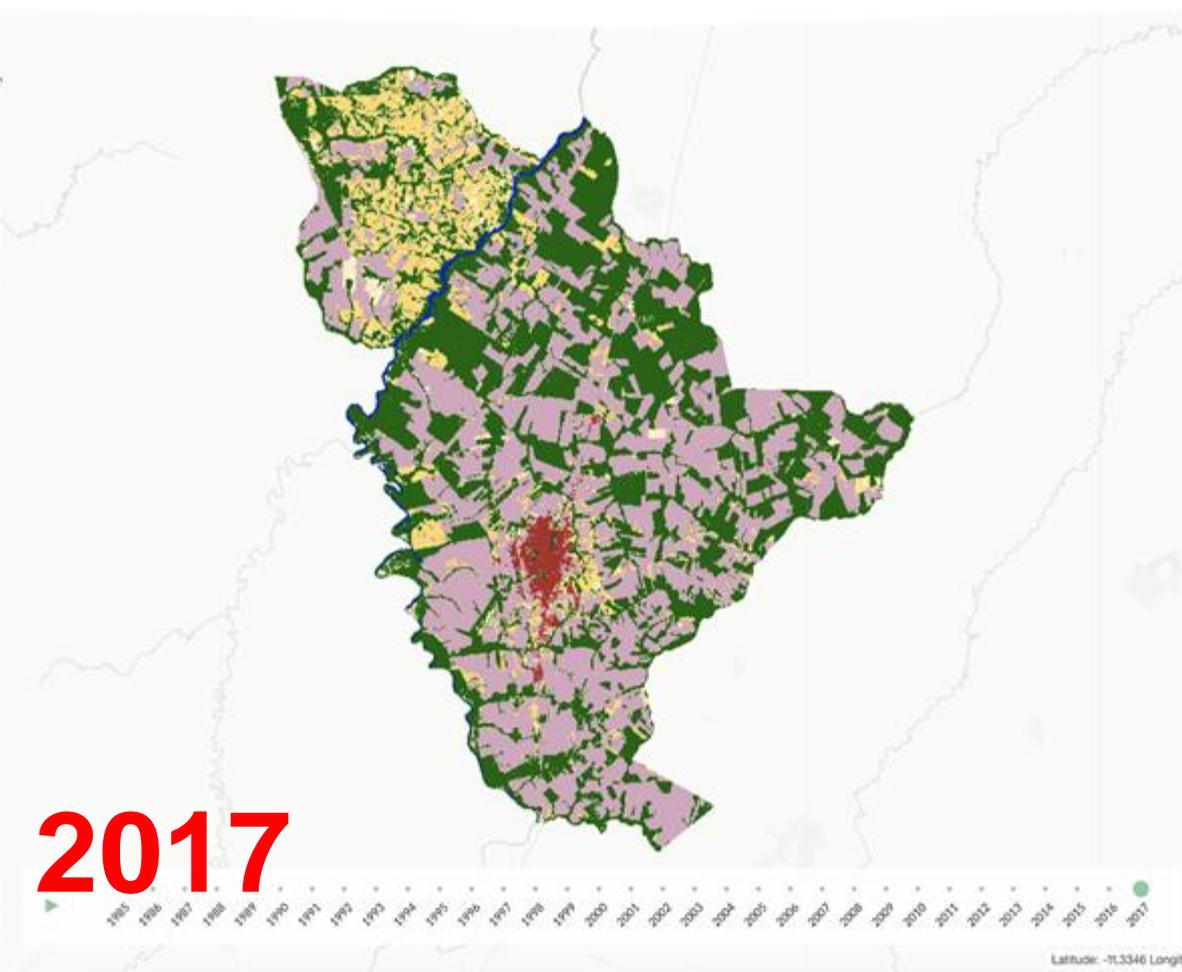
Categories: Municipios

Territórios: SINOP (Município - MT)

Classes: Imagem de fundo, Camada Infraestrutura CAR

Clique aqui e veja a descrição das classes

- Selecionar todas as classes
- 1 Floresta
 - 1.1 Floresta Natural
 - 1.1.1 Formação Florestal
 - 1.1.2 Formação Savânica
 - 1.1.3 Mangue
 - 1.2 Floresta Plantada
- 2 Formação Natural não Florestal
 - 2.1 Área Úmida Natural não Florestal
 - 2.2 Formação Campestre (Campo)
 - 2.3 Outra Formação não Florestal
 - 2.4 Apicum
- 3 Agropecuária
 - 3.1 Pastagem
 - 3.2 Agricultura
 - 3.2.1 Cultivo Anual e Perene



2017

CoBERTura Transições Quantidade

DADOS DE COBERTURA

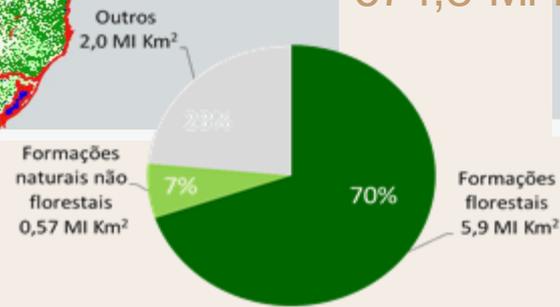
Passa o mouse por cima do gráfico para visualizar os valores obtidos.
Ano: 2017
Território(s): SINOP

400k
200k
0

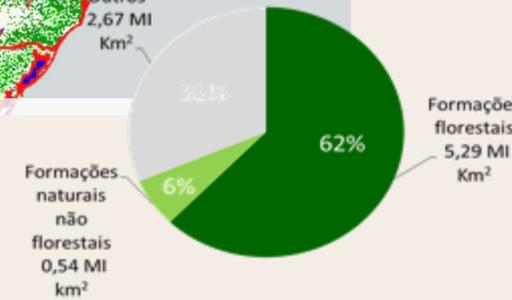
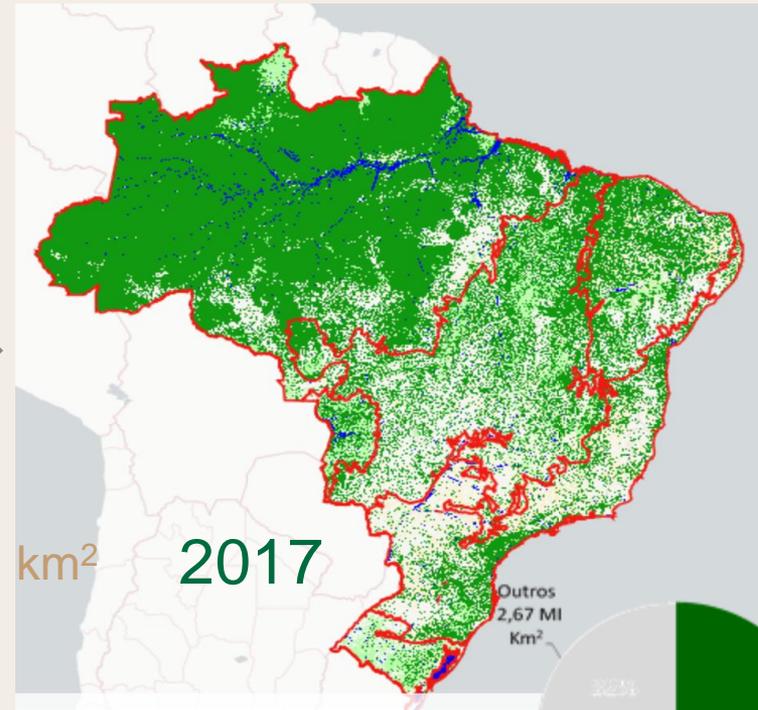
VER DETALHES

Latitude: -11,3346 Longitude: -56,4821 Leaflet | © OpenStreetMap, MapBiomass Workspace

How much did we lose in the past 33 years?



8%
Net lost
674,8 MI km²



Message #2

***Brazil is an Environmental
Powerhouse***





400.000.000.000 trees

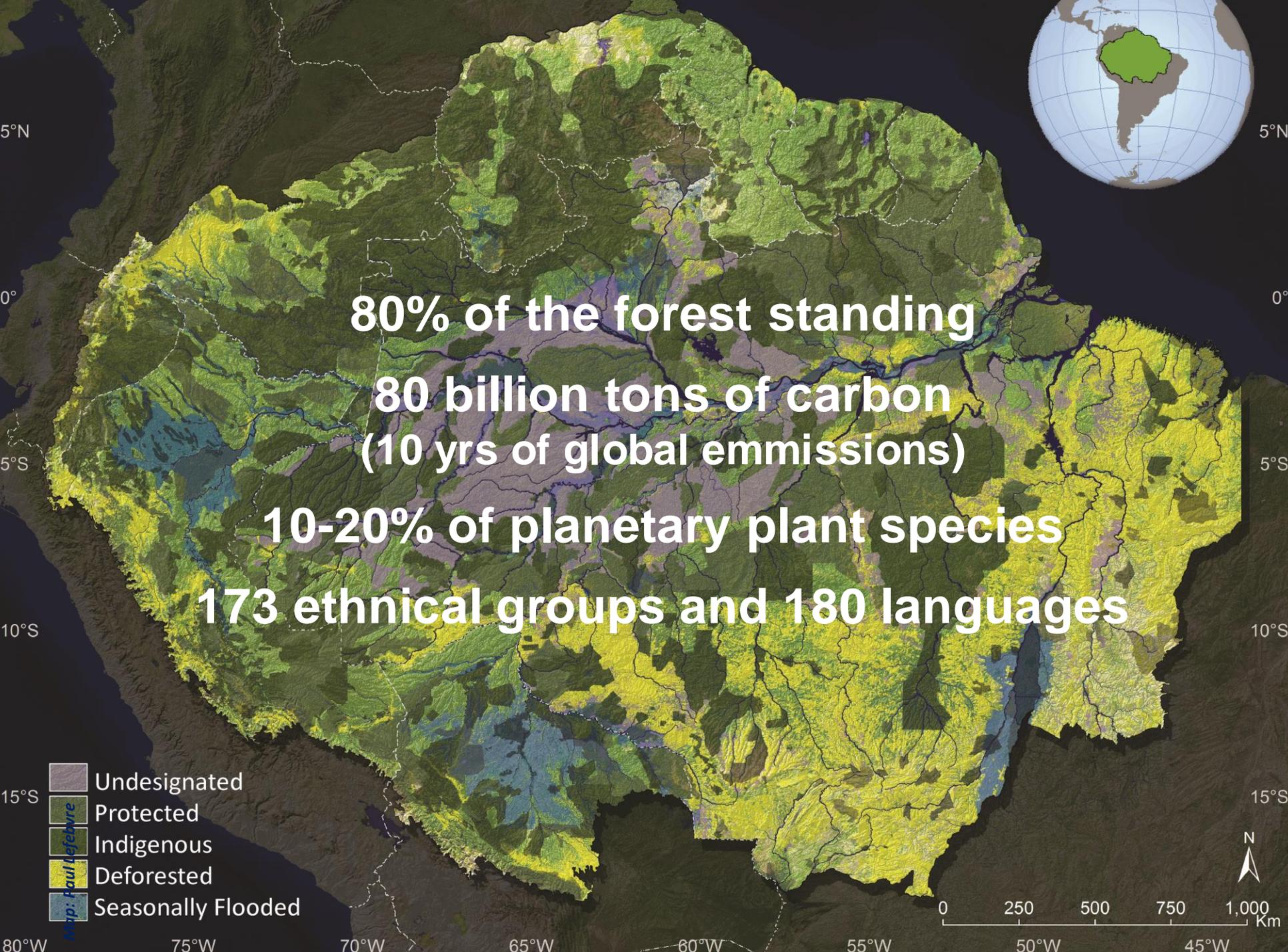
16.000 tree species
(compared to 650 in North America)

One tree = pumps 1,000 liters of water/day
and has more insects than the UK

Forest are an irrigation system for agriculture

- Undesignated
 - Protected
 - Indigenous
 - Deforested
 - Seasonally Flooded
- Map: Paul LeFebvre





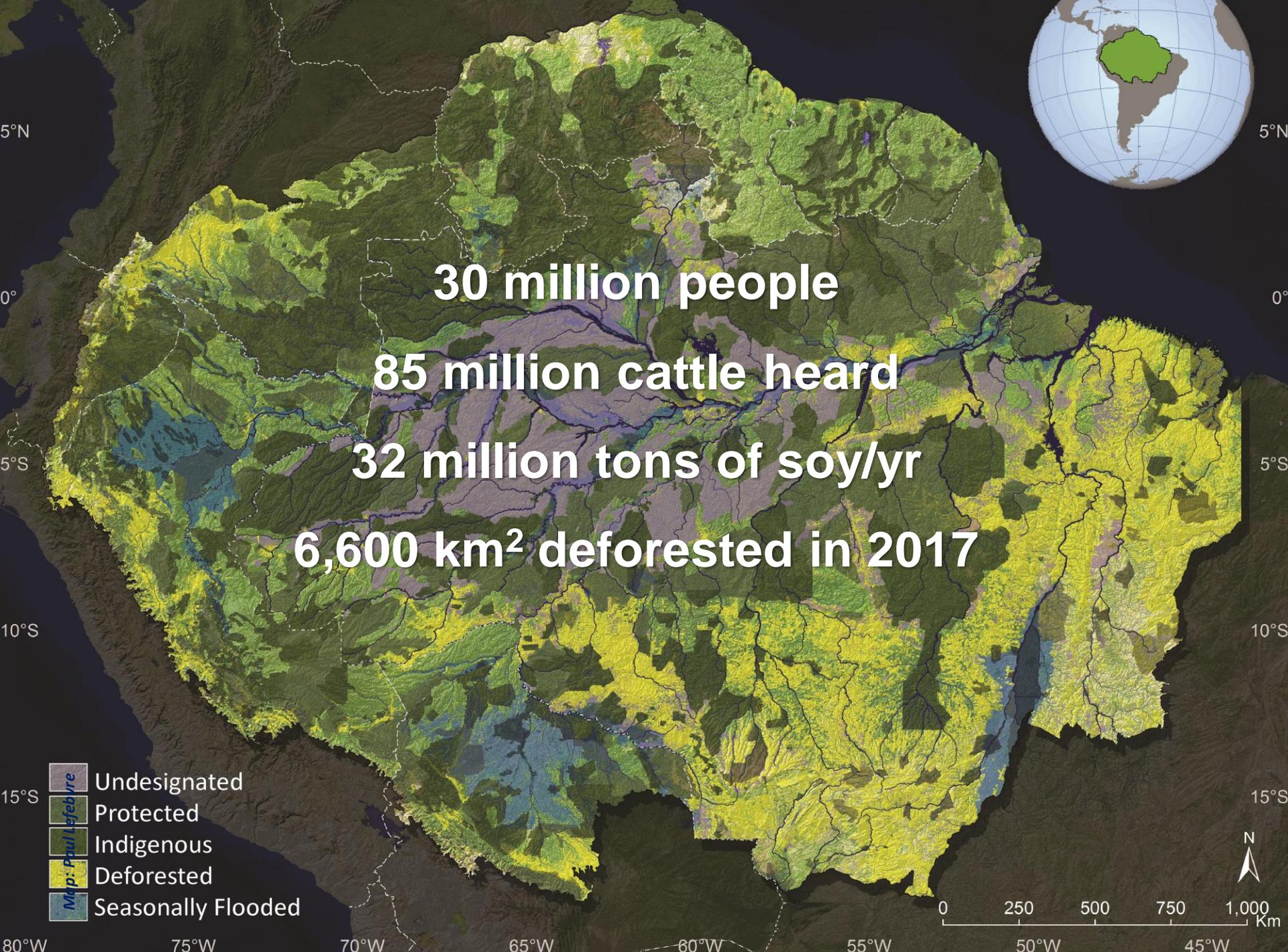
80% of the forest standing

**80 billion tons of carbon
(10 yrs of global emmissions)**

10-20% of planetary plant species

173 ethnical groups and 180 languages

- Undesignated
 - Protected
 - Indigenous
 - Deforested
 - Seasonally Flooded
- Map: Paul LeFebvre



30 million people
85 million cattle heard
32 million tons of soy/yr
6,600 km² deforested in 2017

- Undesignated
- Protected
- Indigenous
- Deforested
- Seasonally Flooded

0 250 500 750 1,000 Km



Message #3

***The paradigm “expand to grow”
has to be replaced for “intensify to
grow”***

VALUE OF AGRICULTURAL PRODUCTION INCREASED WHEREAS DEFORESTATION FELL AFTER 2005

Production value (BRL billion)



Km² deforested/year

- Yearly deforestation
- Value of agricultural production

Looking ahead

The role of public policies to continue to reduce deforestation and increase production

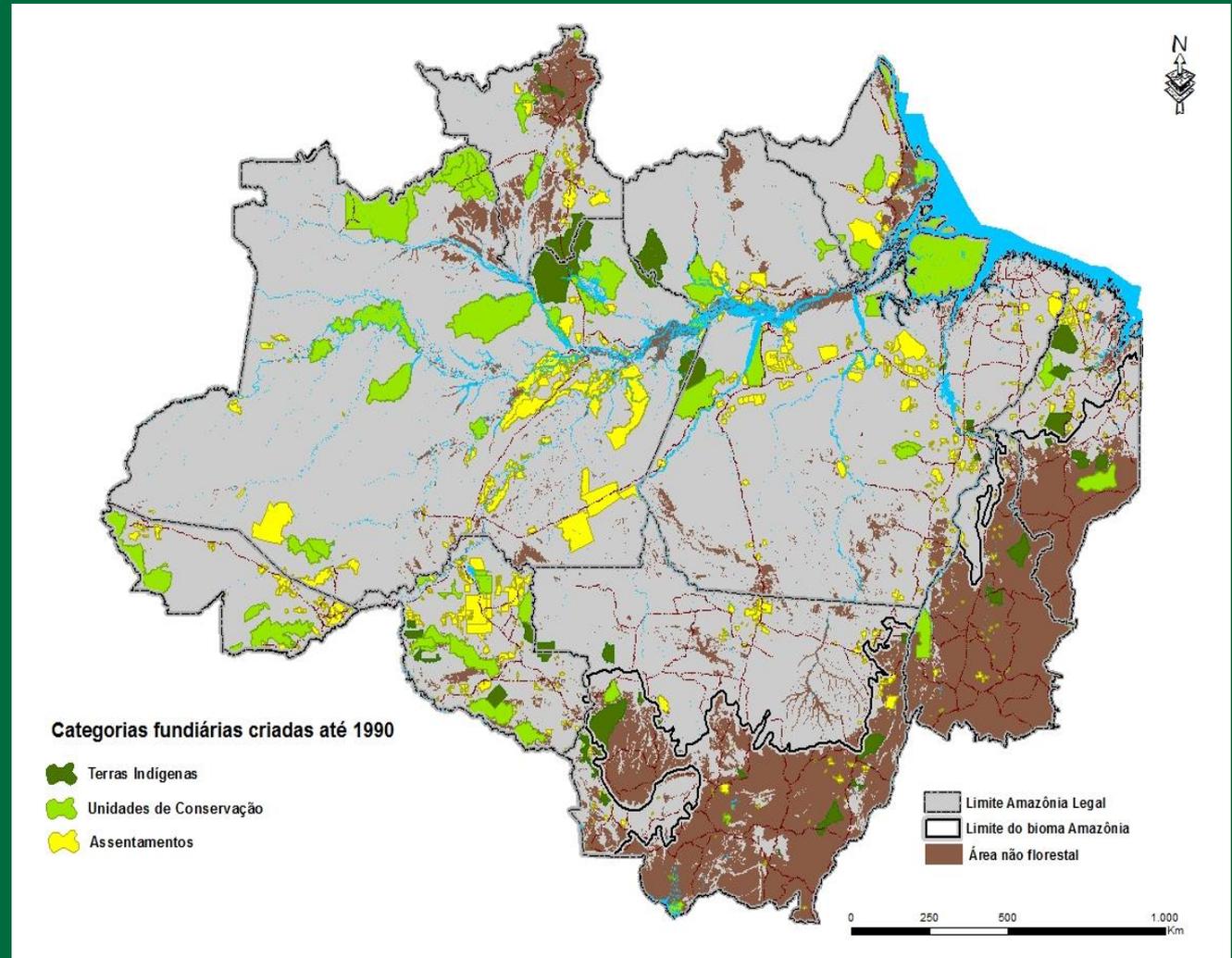
1- National Protected Area System must continue its implementation

Although today, nearly 55% of the Amazon is under protection, the biome still has 65 million hectares (2 x Germany) in undesignated forests

AMAZON PROTECTION - 1990

Indigenous
Lands: 54
Area: 11 million ha

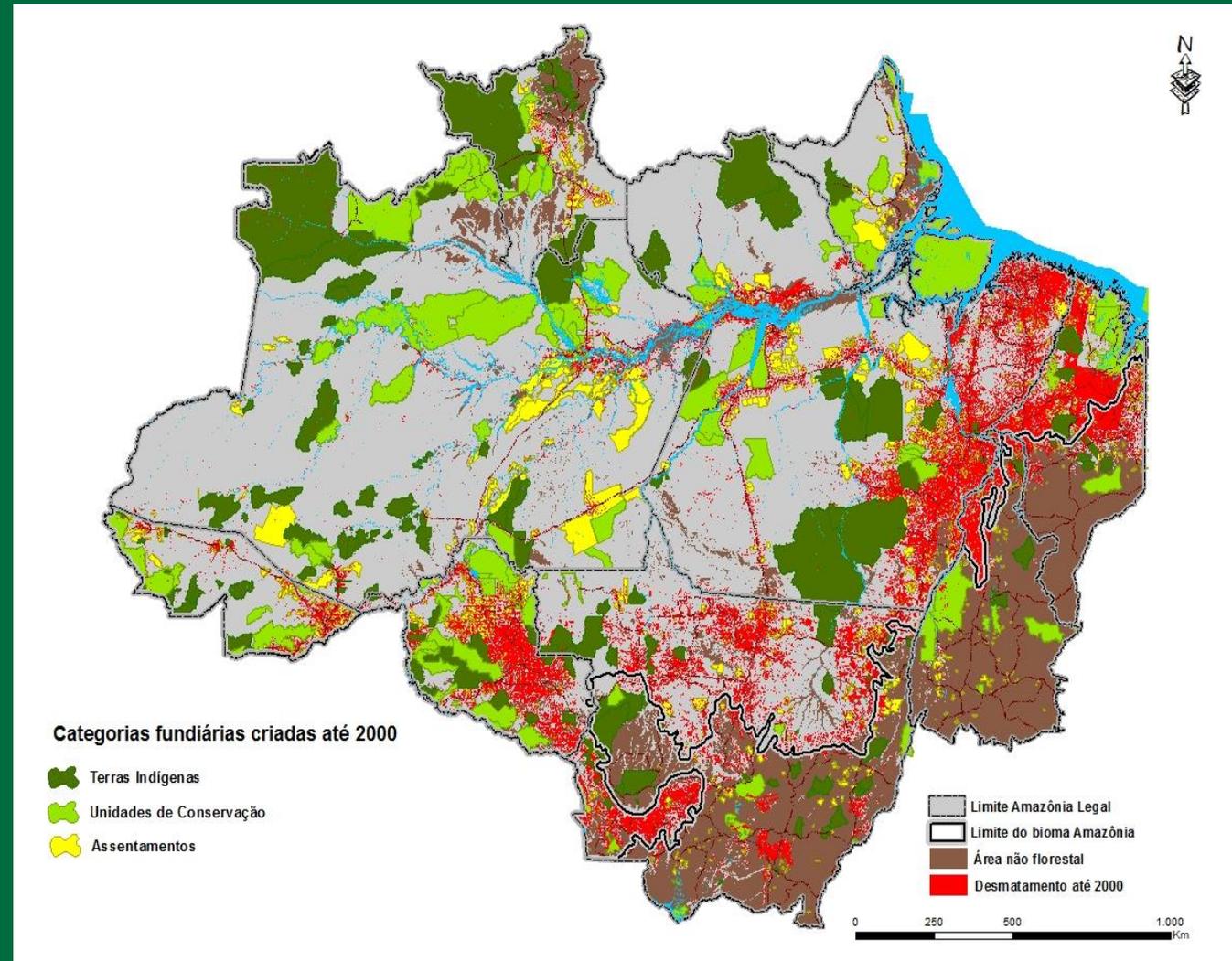
Protected Areas:
65
Area: 33 million ha



AMAZON PROTECTION - 2000

Indigenous Lands:
212
Area: 69 million ha

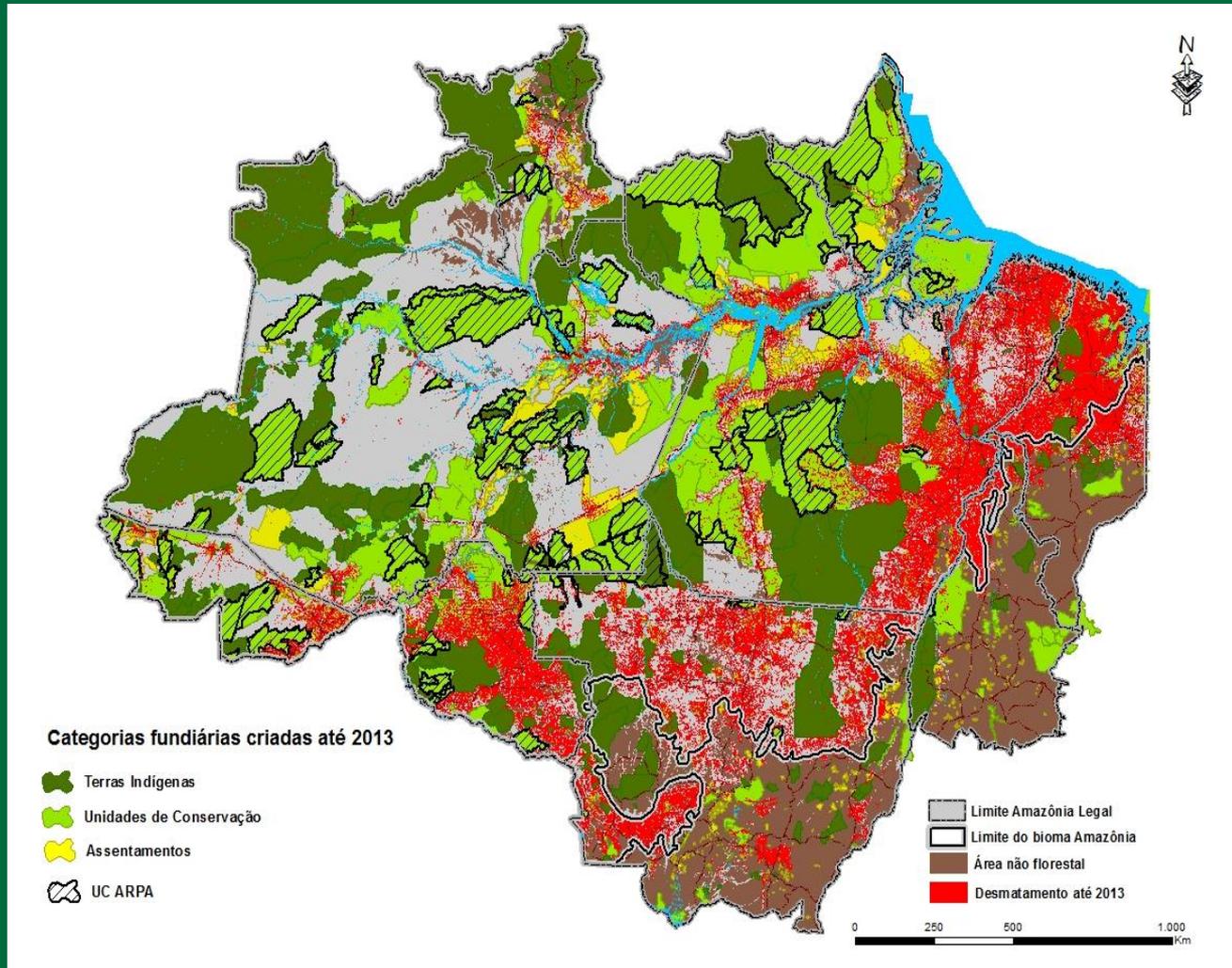
Protected Areas:
149
Area: 54 million ha



AMAZON PROTECTION - 2013

Indigenous Lands:
381
Area: 112 million ha

Protected Areas:
311
Area: 125 million ha



2- Forest Code enforced

Private properties have to set between 20% and 80% of the area for conservation – Legal Reserve

In addition, landowners have to protect vegetation near water, steep slopes and top of mountains

The Forest Code has created a “Legal Reserve surplus” of 28 million hectares in the Amazon – an asset for offsetting emissions abroad

Making agricultural production compatible with the end of deforestation – in Brazil

- 1- Payment for Environmental Services national legislation voted
- 2- Forest Code quotas in effectiveness
- 3- Investments in Protected Areas and Indigenous Territories
- 4- Investments in forest based economy

Making agricultural production compatible with the end of deforestation – abroad

- 1- Investing in agricultural intensification
- 2- Forest offsets emission schemes – REDD+
- 3- Consumer's pressure – ex. Soy moratorium in the Amazon
- 4- International cooperation for Amazon and Cerrado deforestation reduction

Conclusions

Brazil has a great potential both to supply food to the world and to mitigate climate change through deforestation reduction

But investments are demanded – to continue protecting forests and intensify production

More science is needed to better understand the interaction between deforestation and risks to the agriculture, particularly from an economic perspective, both micro and macro

National and global payment for environmental services schemes must be implemented ASAP





Raoni Metuktire

Thank You!!!

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