

The root causes of Amazonian fires

Ane Alencar and Paulo Moutinho
ane@ipam.org.br moutinho@ipam.org.br



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BRAZIL

Amazon burning: Smoke travels nearly 3000 km to black out Sao Paulo in middle of the day COMMENTS

By **Angela Barnes** with Reuters • Updated: 23/08/2019

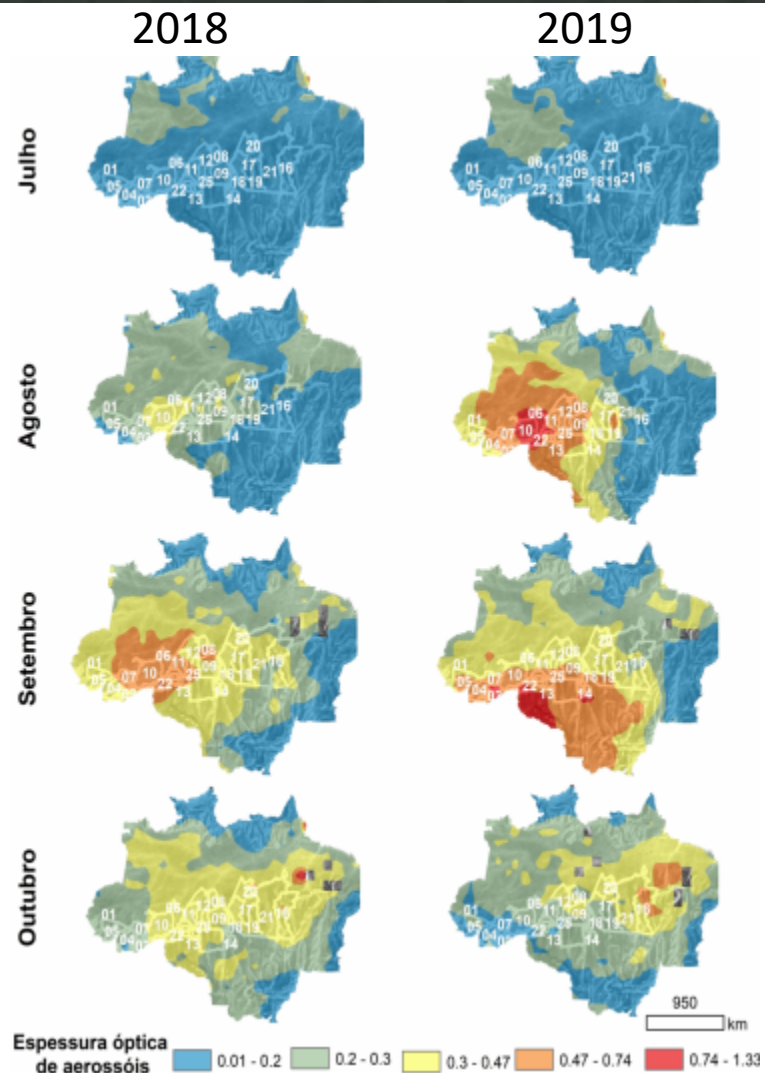
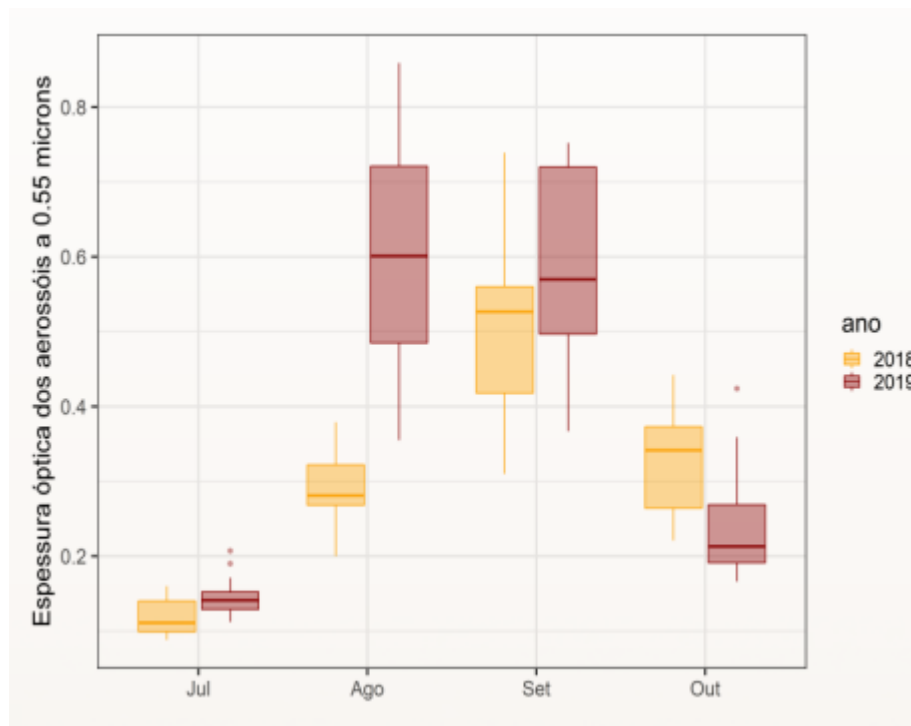


Source: Euronews

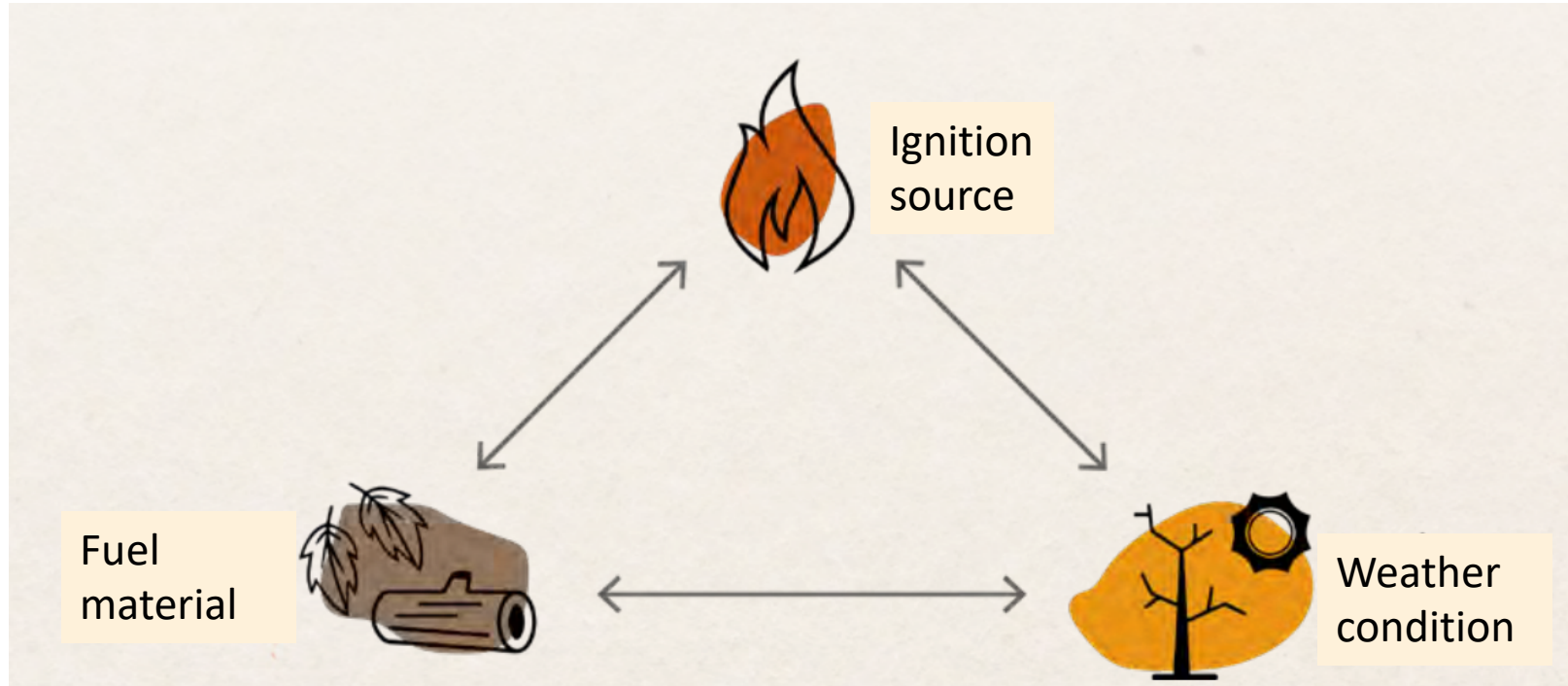
Darkness in Sao Paolo in middle of the afternoon - Copyright REUTERS - Barnes, Angela

Impact of fire on air pollution

Aerosol Optical Thickness
(Jul - Oct 2018 and 2019)



Fire Triangle



1- Deforestation fires



2- Management fires

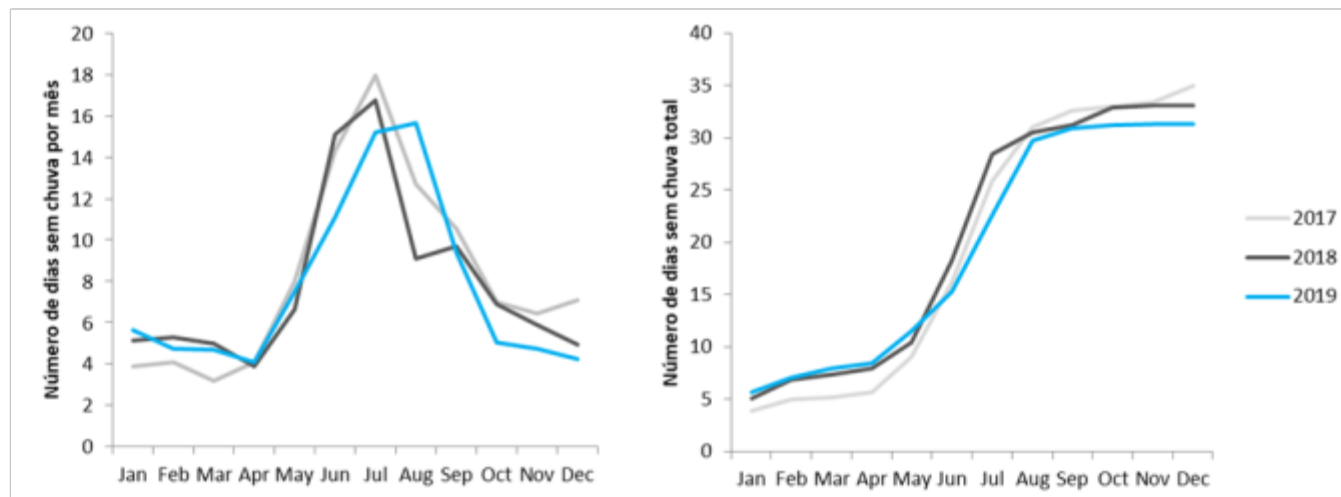


3- Forest fires



The weather in 2019

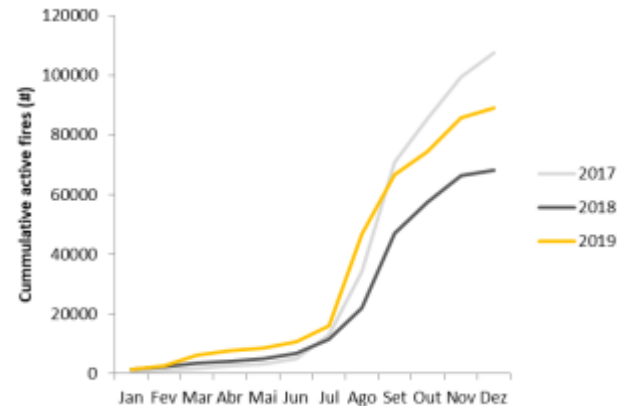
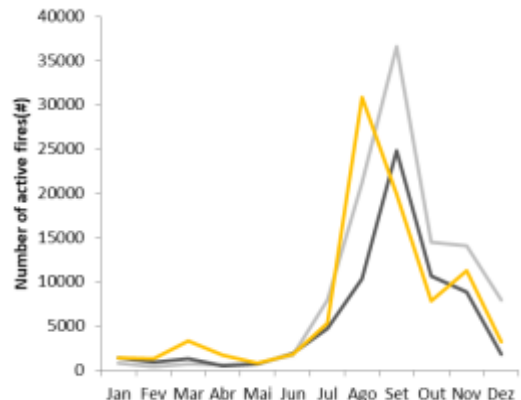
Number of days without rain



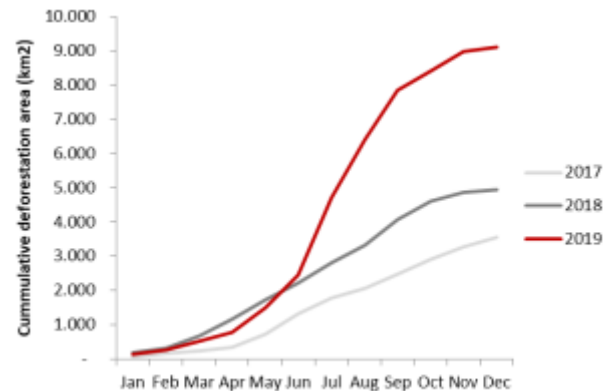
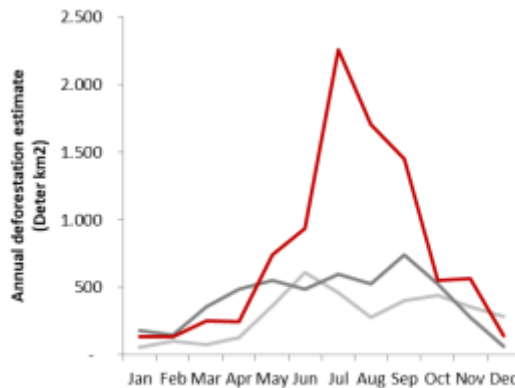
Fire and deforestation in 2019



Number of active fires



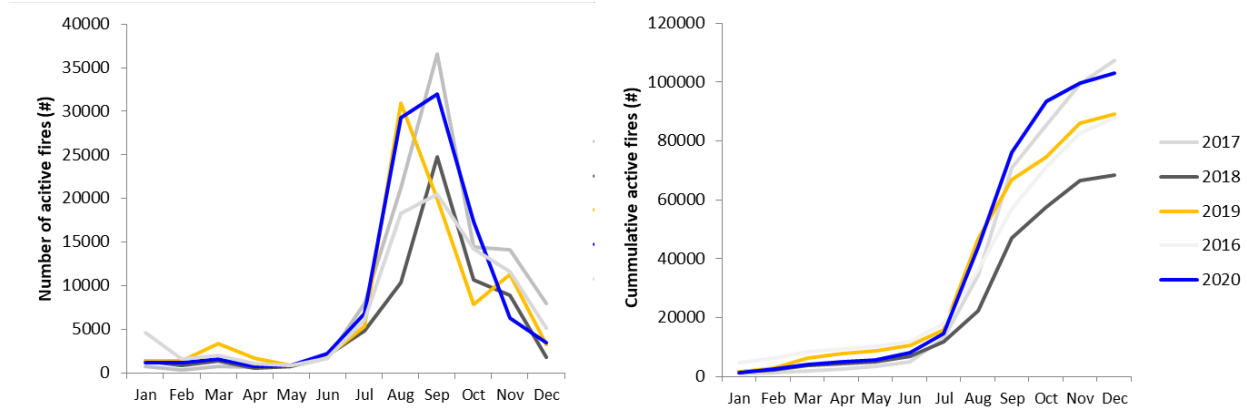
Deforestation (deter km2)



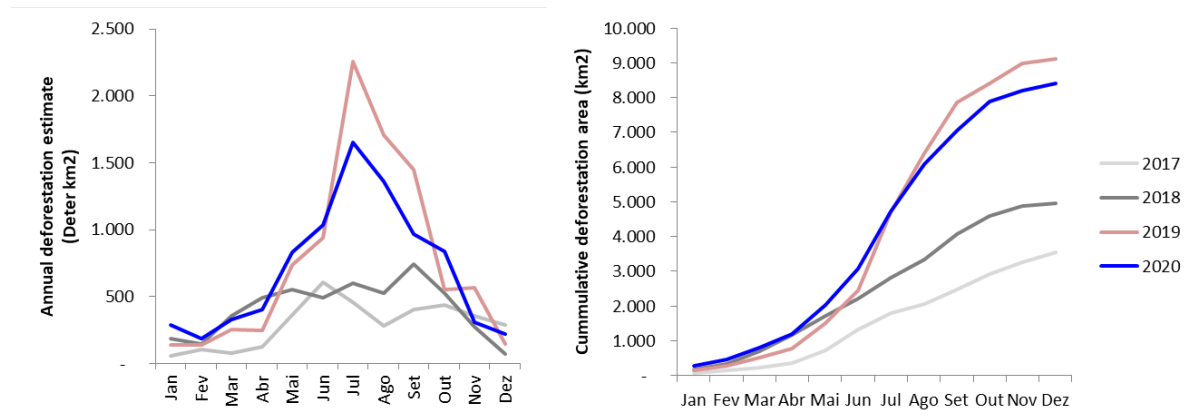
Fire and deforestation

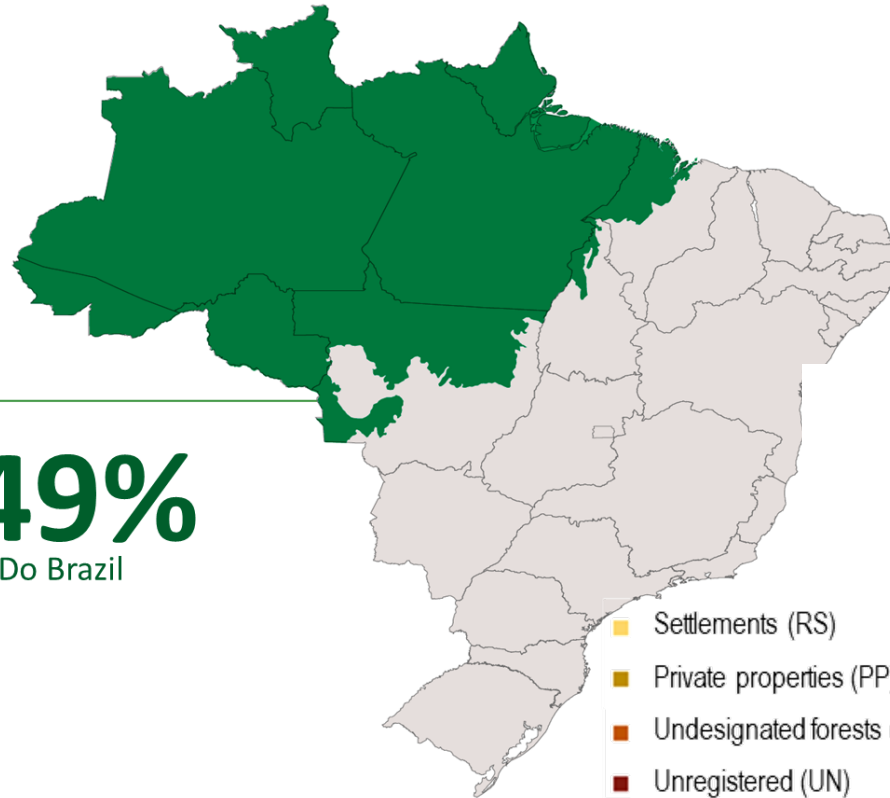


Number of active fires



Deforestation (deter km2)

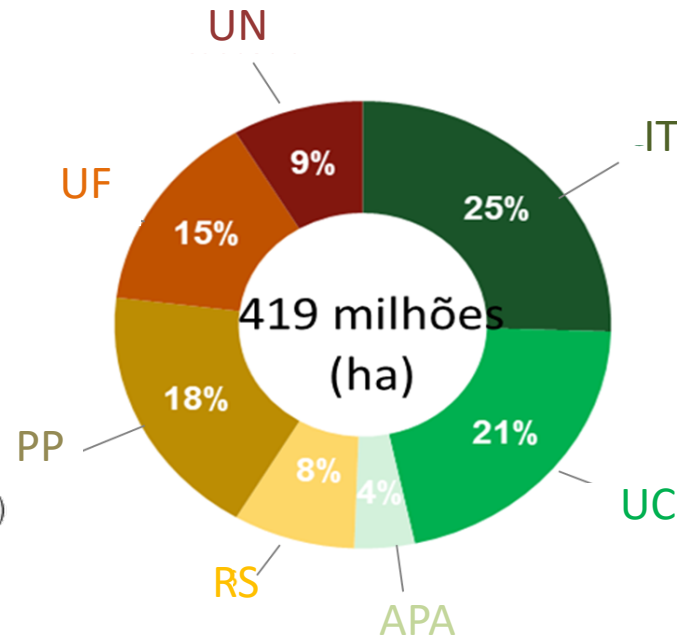




49%
 Do Brazil

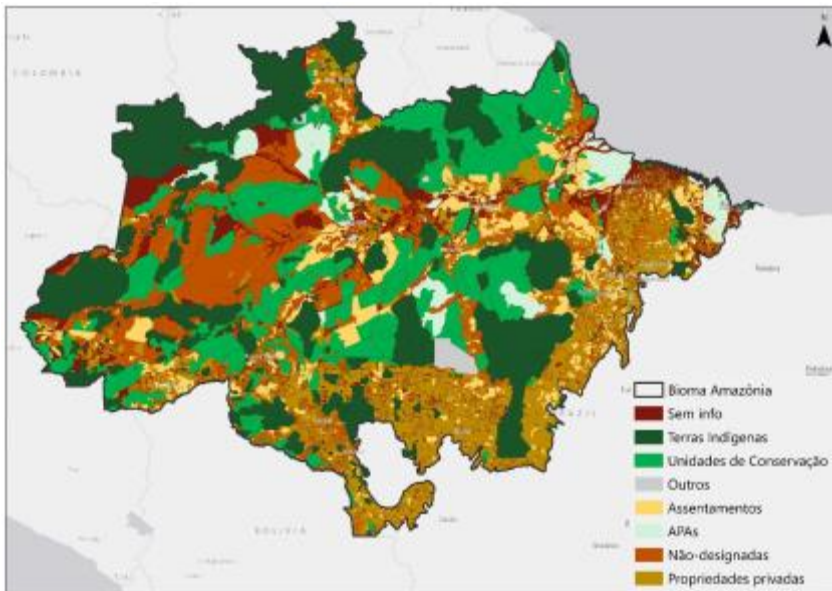
Amazon Biome

- Settlements (RS)
- Private properties (PP)
- Undesignated forests (UF)
- Unregistered (UN)
- Indigenous lands (IT)
- Conservation units (UC)
- APA

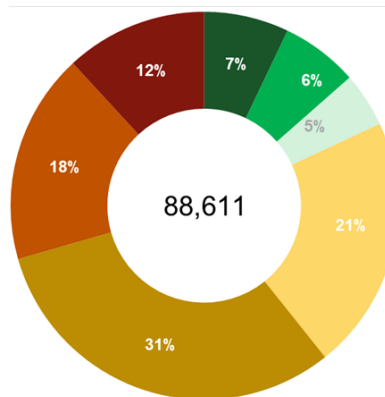


Fonte: Alencar et al. 2019

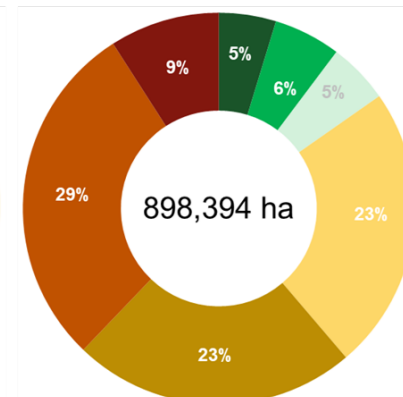
Fire and deforestation from Jan – Nov 2020



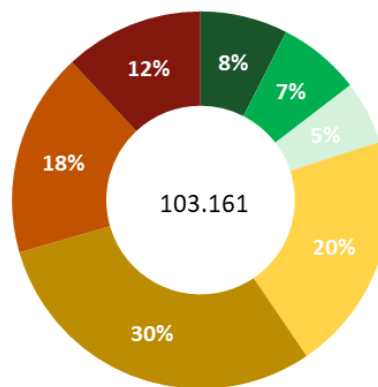
No. Fires (Jan-Dec 2019)



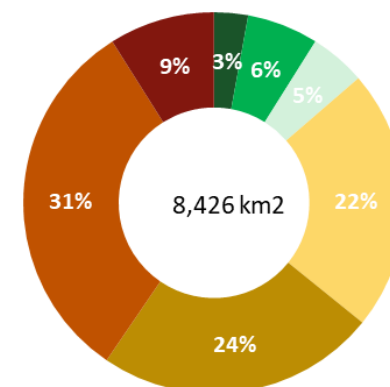
Area deforested (Jan-Dec 2019)



No. Fires (Jan-Dec 2020)

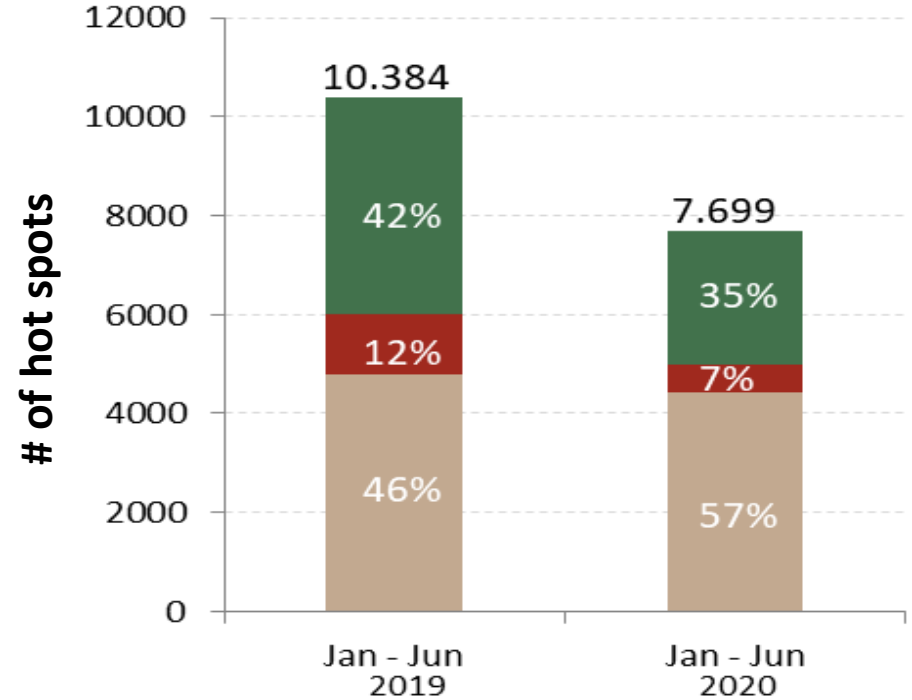


Area deforested (Jan-Dec 2020)



- Settlements (RS)
- Private properties (PP)
- Undesignated forests (UF)
- Unregistered (UN)
- Indigenous lands (IL)
- Conservation units (CU)
- APA

Fire type in the Amazon

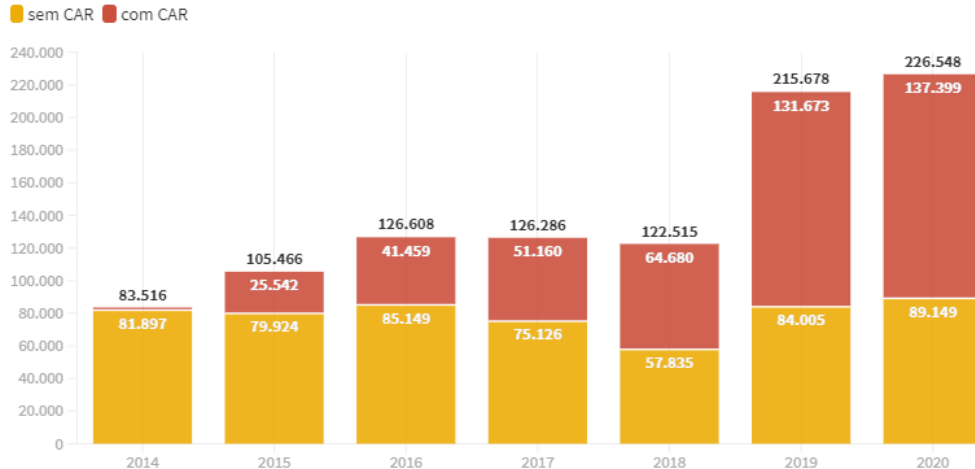


- Forest fires
- Deforestation fires
- Management fires

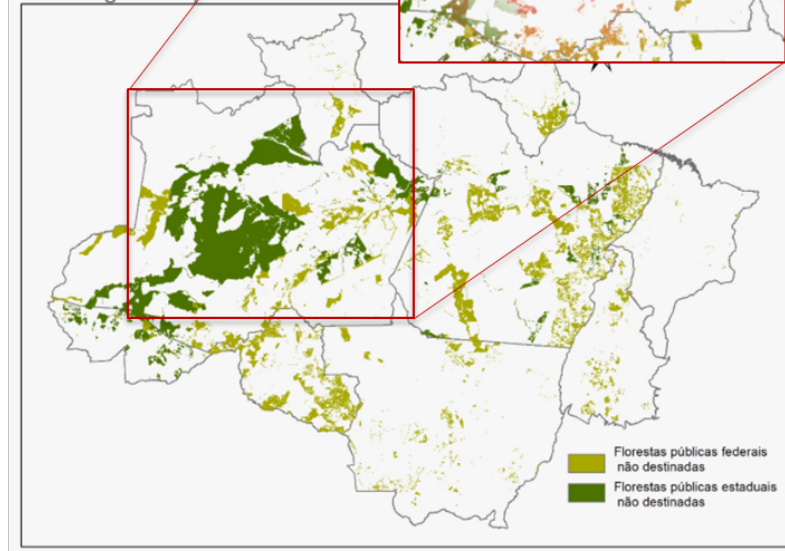
Deforestation in undesignated public forest

~30% of UPF are covered by illegal CAR

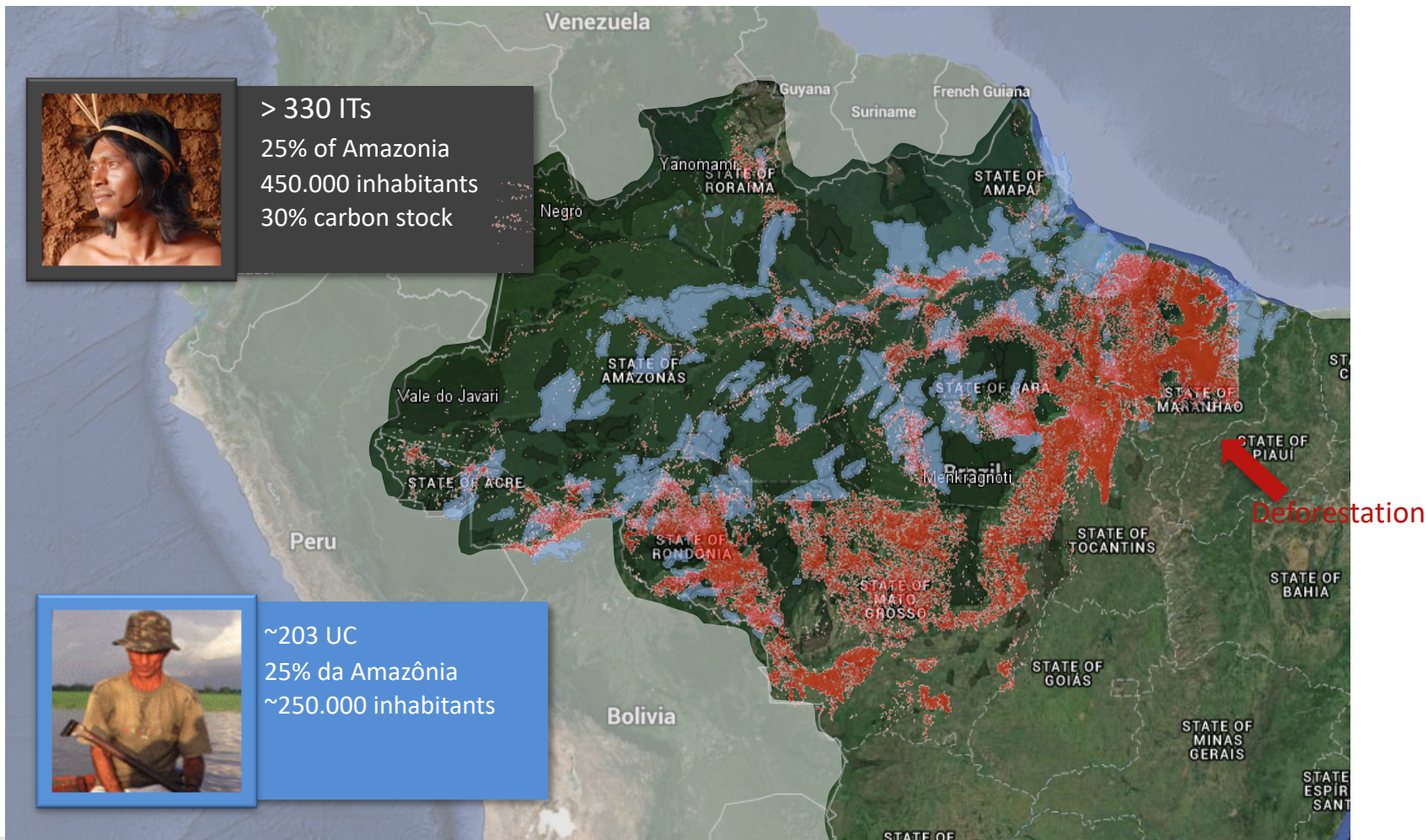
- Deforestation in UPF within and without CAR (Environmental Property Registry)



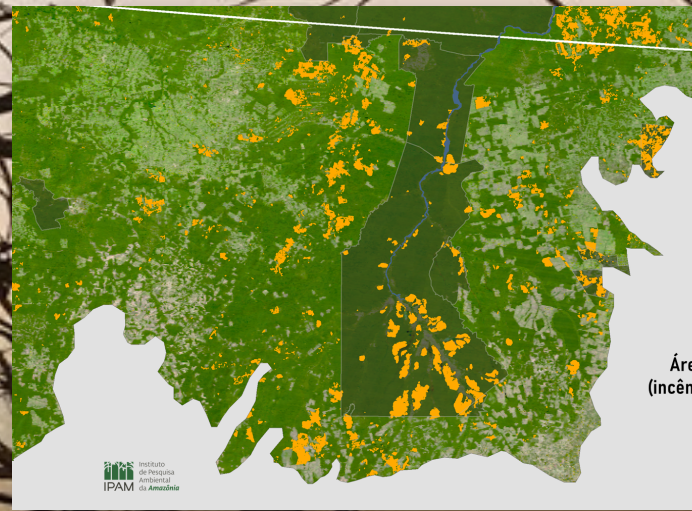
State and federal undesignated public forests



Protected Areas = Indigenous Territories + Conservation Units



Increase of Fire in PIX

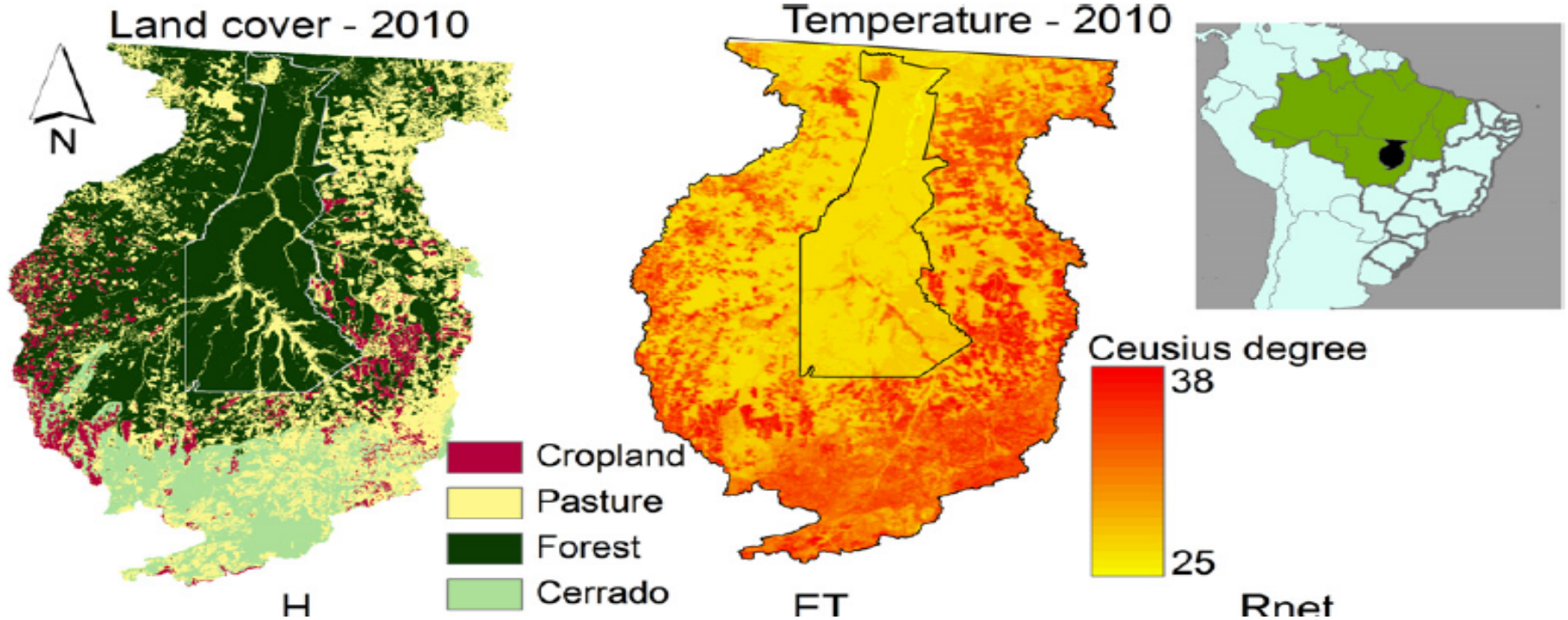


2019: **10%** of PIX was burned

2% more than in 2016 El Nino



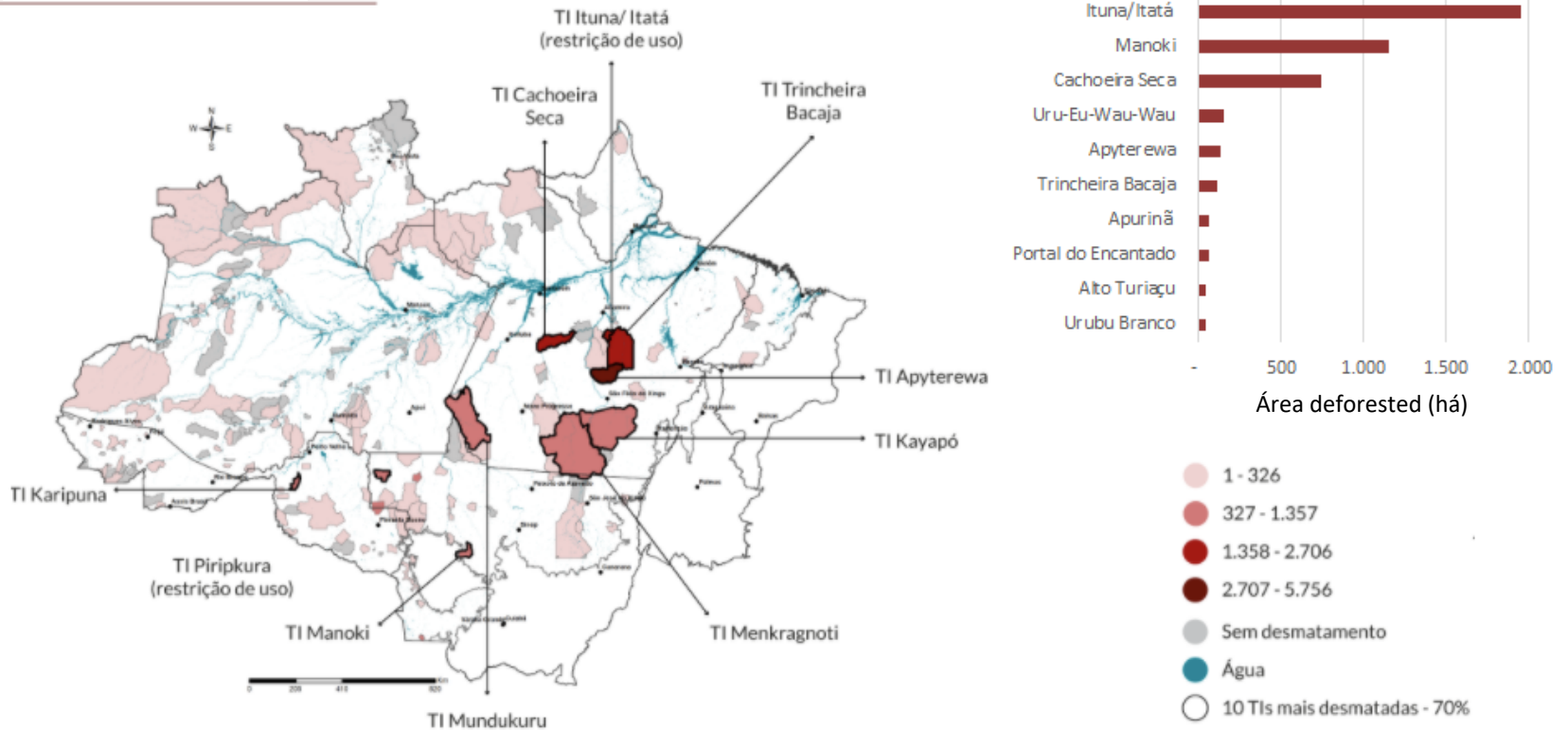
Indigenous lands and climate



Deforestation in Indigenous Territories (ITs) (Jan-Dec 2020)

Only 3% of ITs (10) hold
70% of deforestation inside ITs

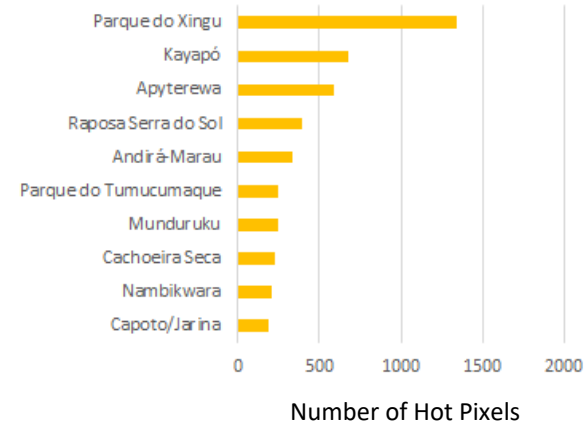
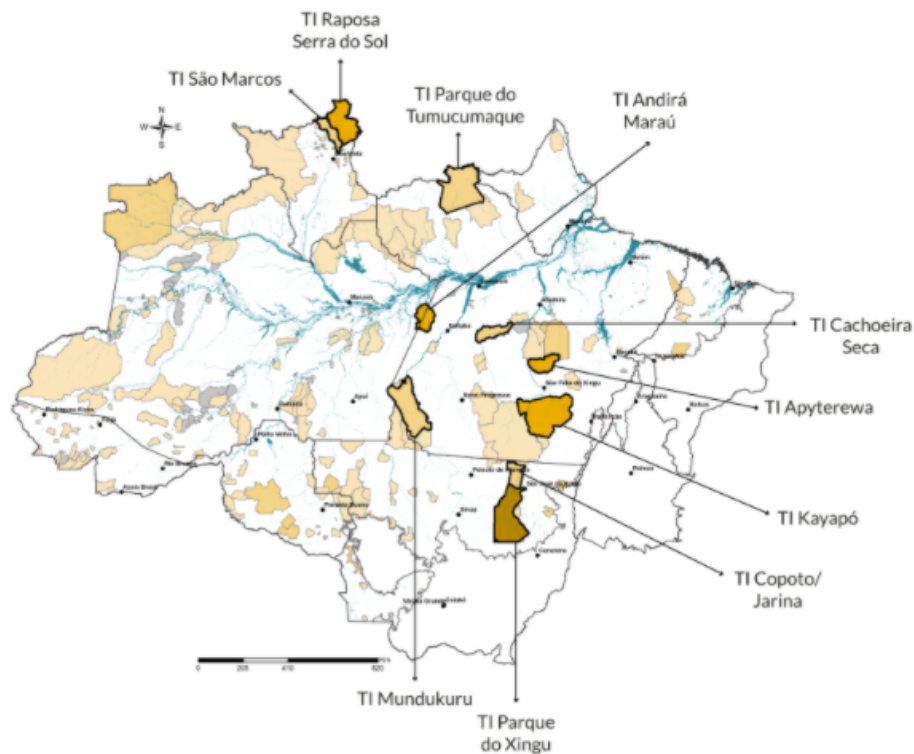
Deforestation in IT - 2020



Fire in Indigenous Territories (ITs)(Jan-Dec 2020)

Only 3% of ITs (10) hold
Half of fires inside ITs

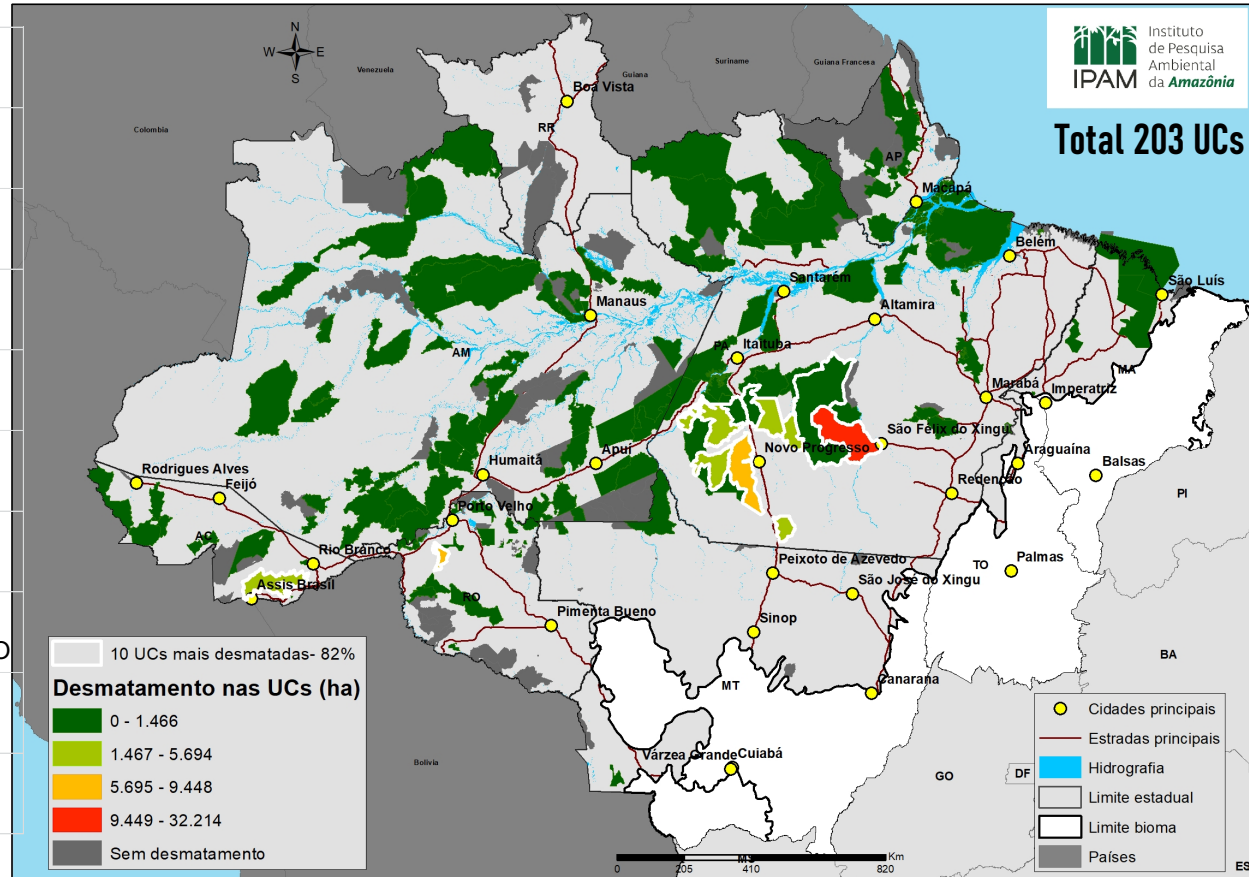
Hot pixels in IT - 2020



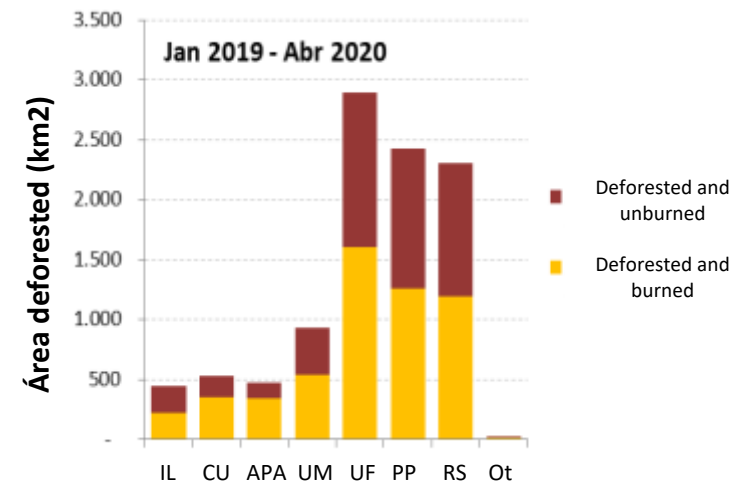
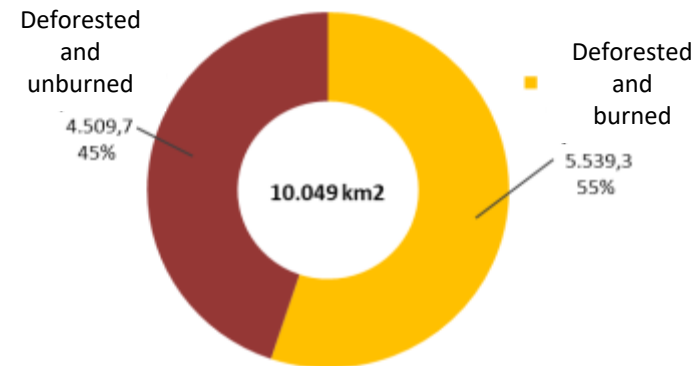
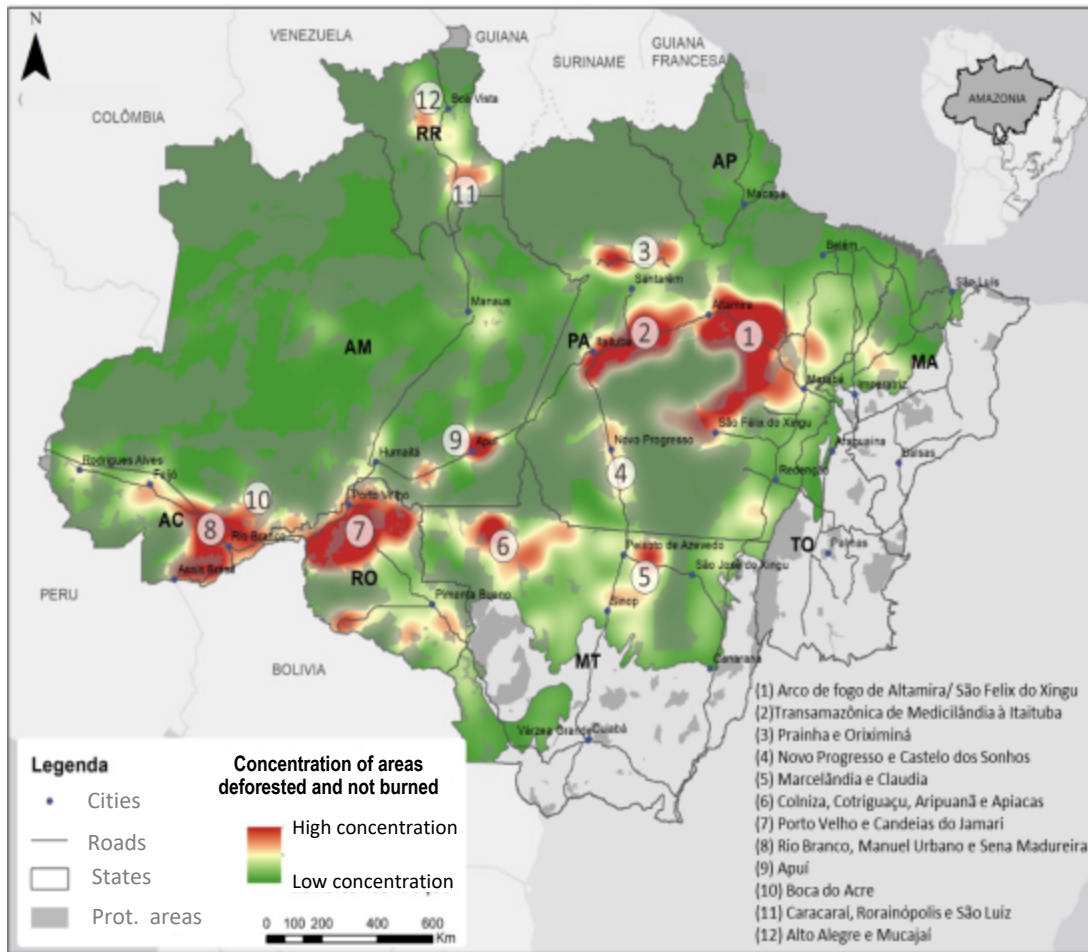
Deforestation in Conservation Units (UCs) (Jan-Dec 2020)

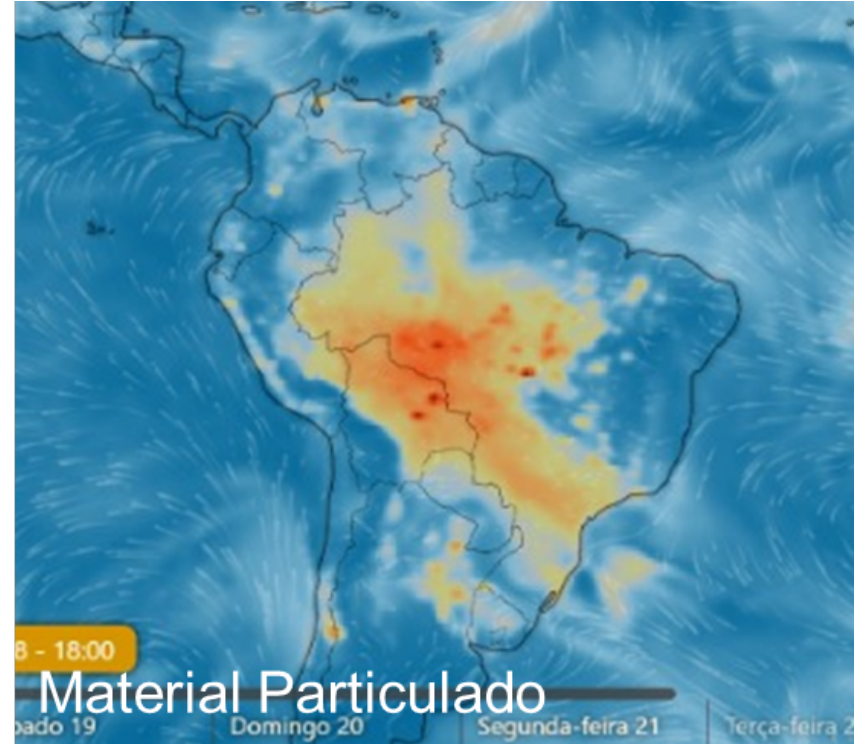
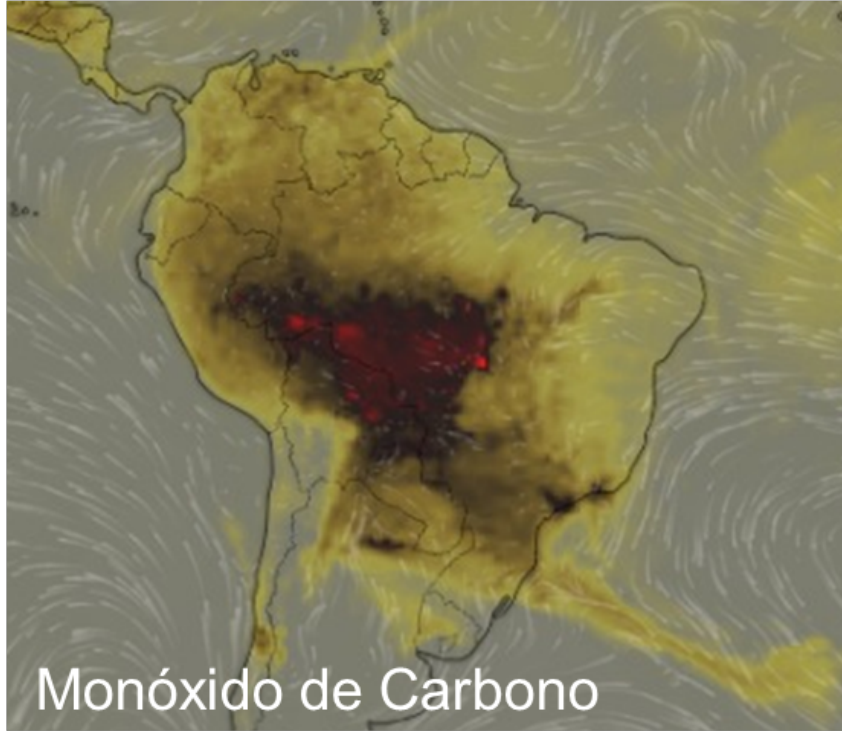
85% of deforestation in 10 UCs

1	PA	APA TRIUNFO DO XINGU
2	PA	FLONA DO JAMANXIM
3	RO	RESEX JACI-PARANÁ
4	PA	APA DO TAPAJÓS
5	PA	FLONA ALTAMIRA
6	AC	RESEX CHICO MENDES
7	PA	FE DE IRIRI
8	PA	REBIO NASCENTES SERRA DO CACHIMBO
9	PA	PARNA DO JAMANXIM
10	MA	ESEC DA TERRA DO MEIO



Deforested and unburned - Jan 2019 to Apr 2020





Cuiaba in 2020

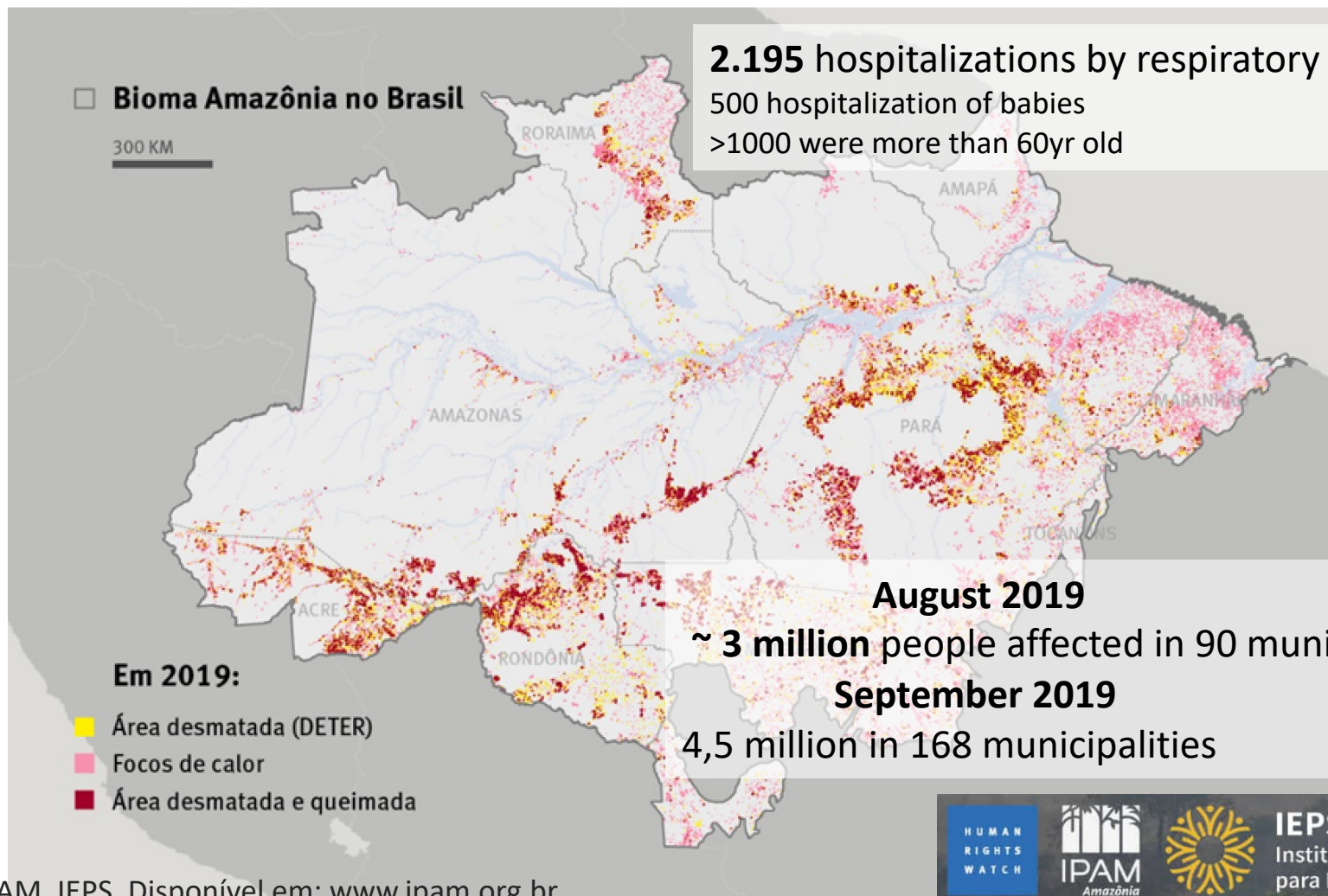
May 2020



September 2020

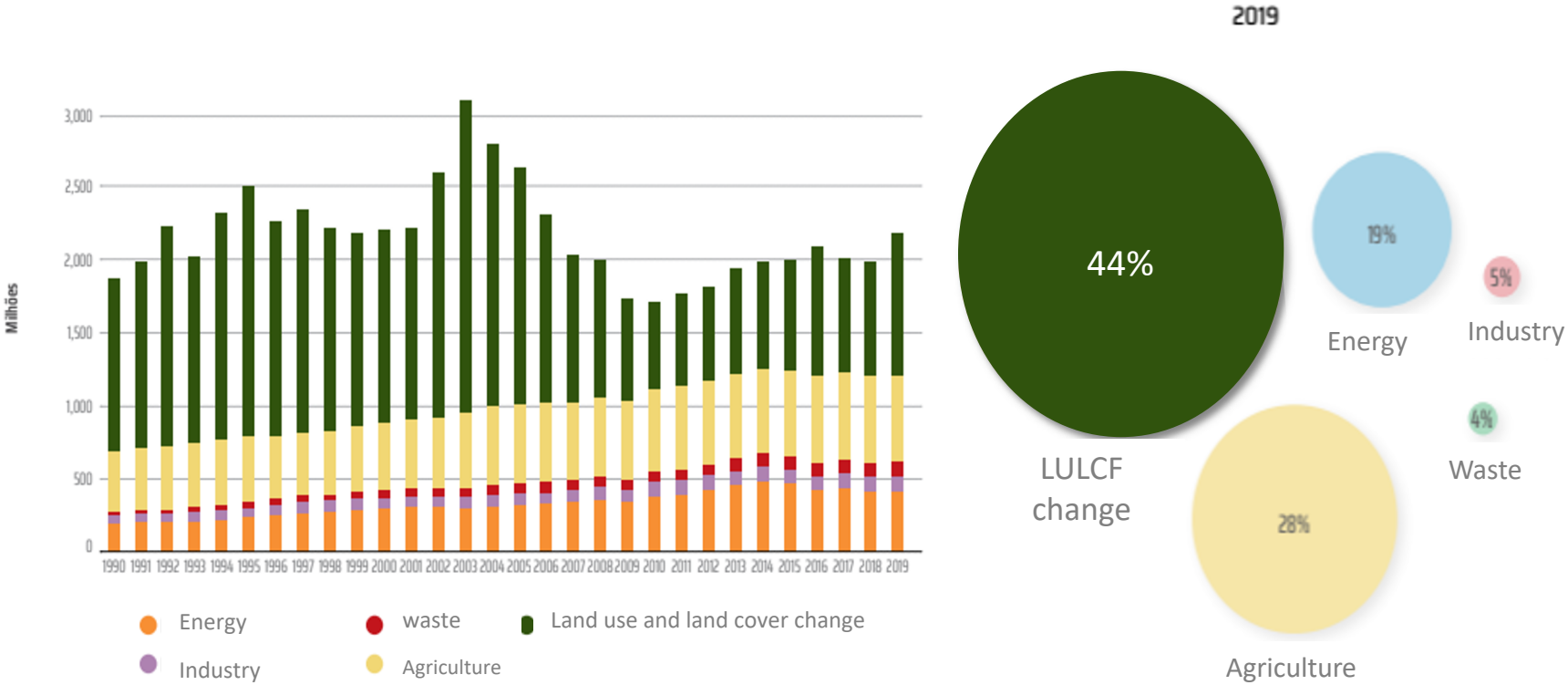


Area deforested and unburned: Jan 2019 - Apr 2020

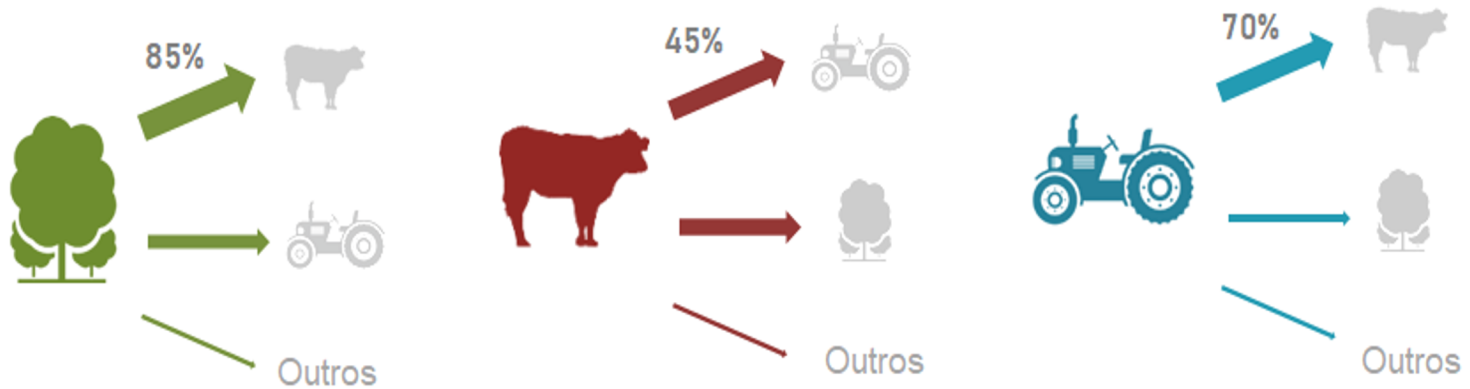
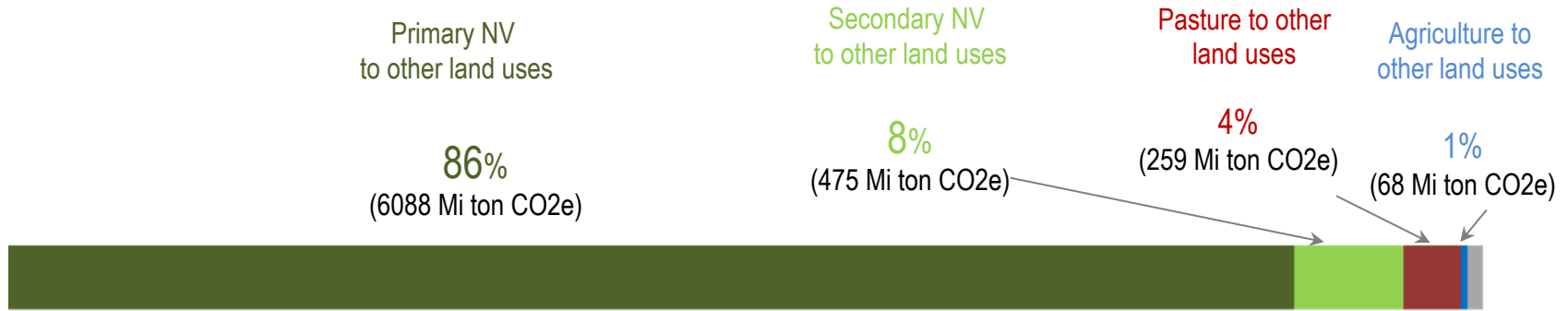


Brazilian GHG emissions

- LULC change was responsible for 44% of Brazilian GHG emissions in 2019

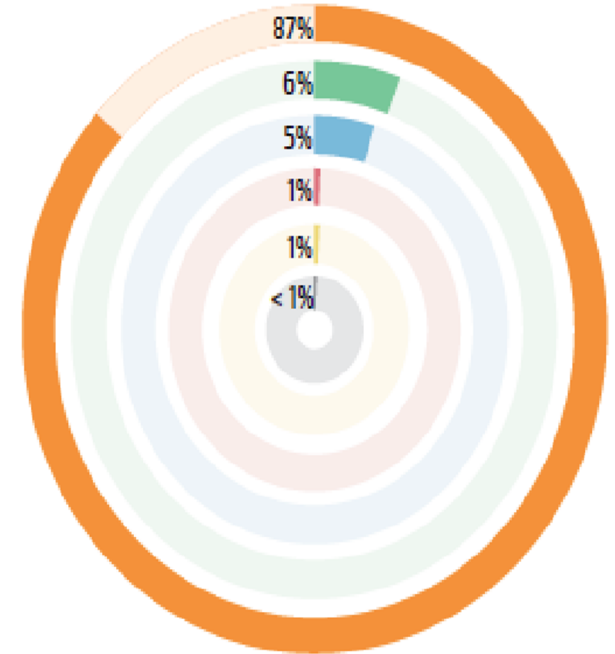
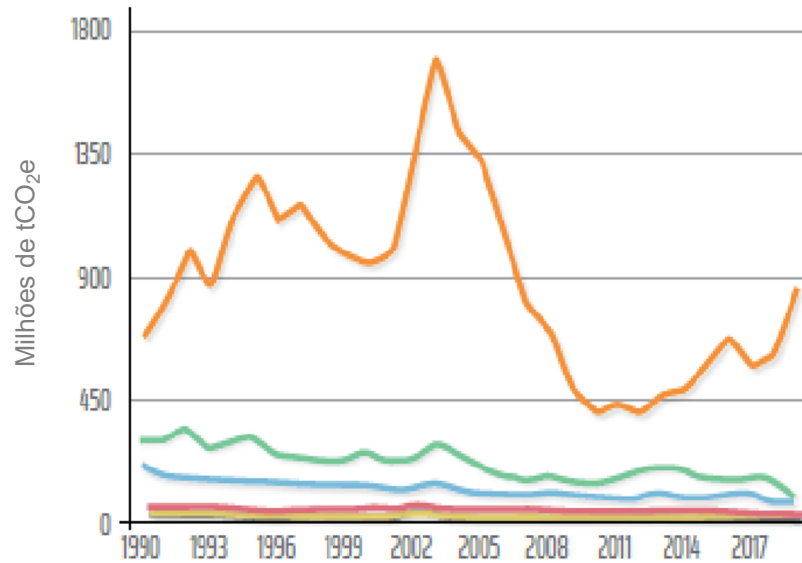


Gross emissions 1990 - 2019 (transitions)



Gross emissions by Biome

- Em 2019



● Amazônia

● Cerrado

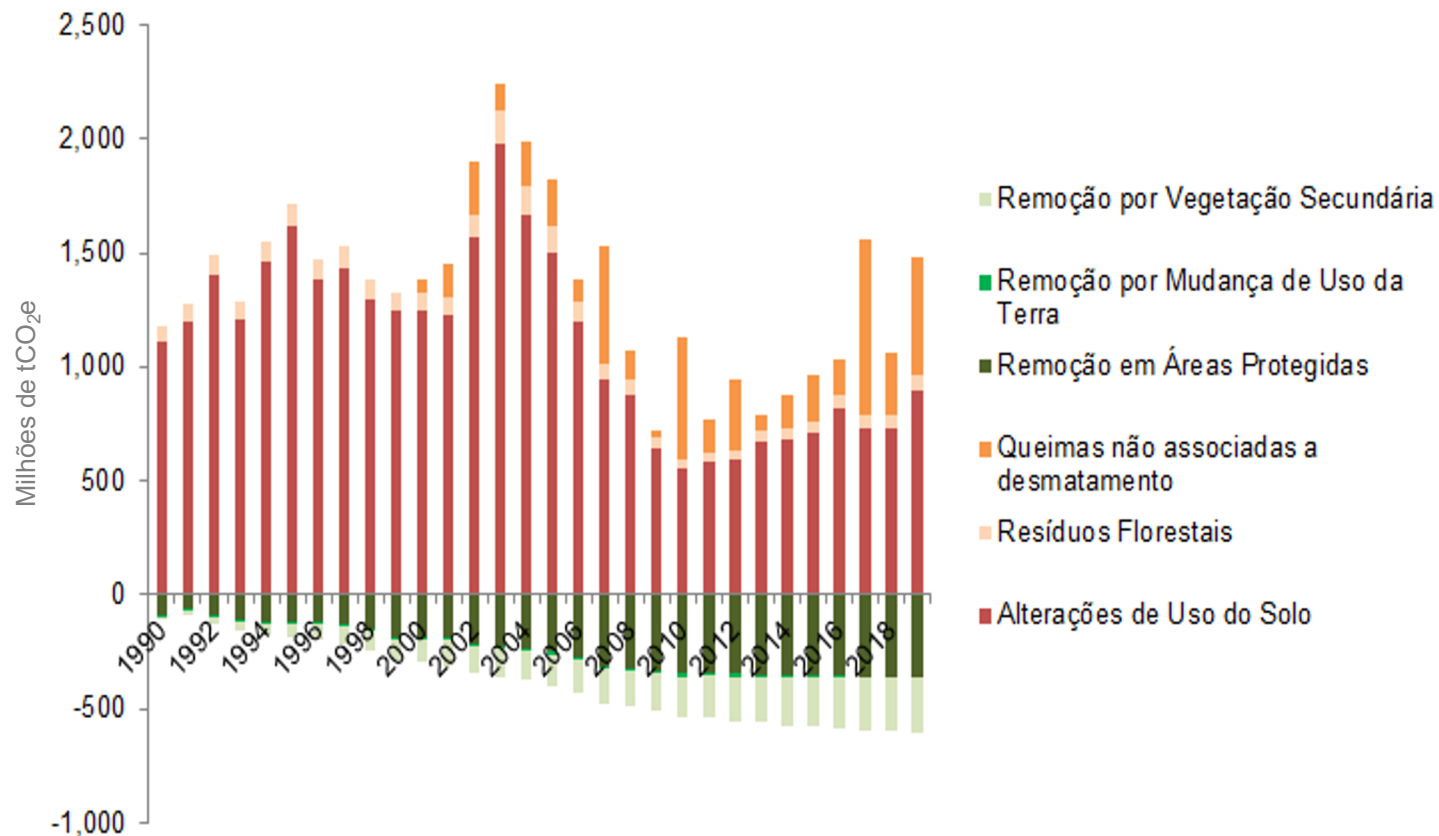
● Pampa

● Caatinga

● Mata Atlântica

● Pantanal

Gross emissions by fire non associated with deforestation



50%

+

50%

- 1 **Strategic Enforcement** alone can reduce at least half of deforestation (half of deforestation happens in public lands and it is illegal)
- 2 **Designate public forests** for sustainable conservation
- 3 **Consolidate** Protected Areas and support forest based economies
- 4 **Economic Incentives for conservation of private forests**
- 5 **Support and technical assistant for sustainable production in settlements**

Thank you!

ane@ipam.org.br



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