Outlook of Brazil's new environmental policies: 2023-2026

RESTORE+ team

image: Alamy

The new Brazil

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NDC

Mitigation: Greenhouse Gas Emissions

Reference Year: 2005.

2025 Reduction (Contribution)	2030 Reduction (Indicative Contribution)
37%	**43%**

Type: absolute target in relation to a base year

Scope: whole territory, economy wide, greenhouse gases (CO_2, CH_4, N_2O, PFCs, HFCs, SF_6)

Metric: GWP-100 (IPCC AR5).

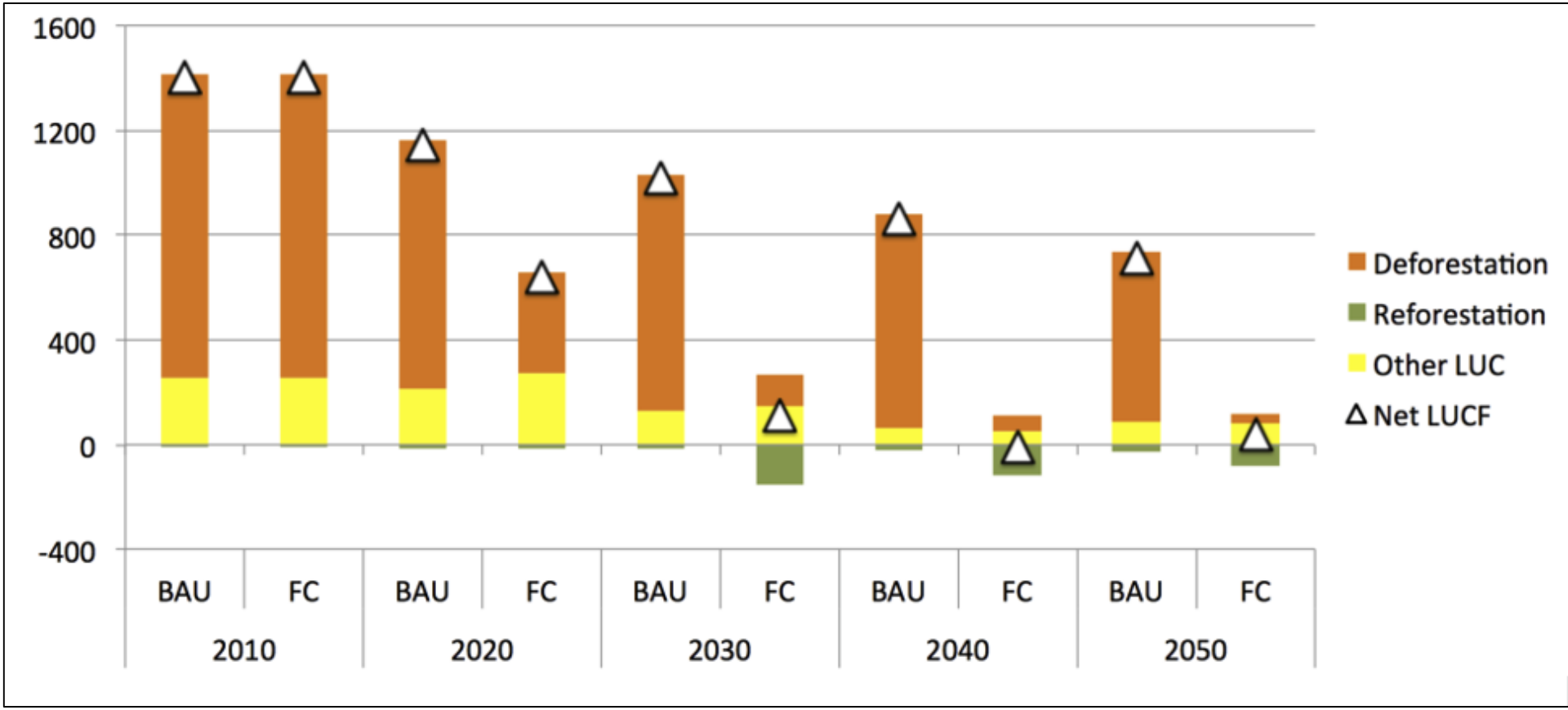
MINISTRY OF ENVIROMENT

BRASIL GOVERNO FEDERAL

Brazil's NDC (2015)

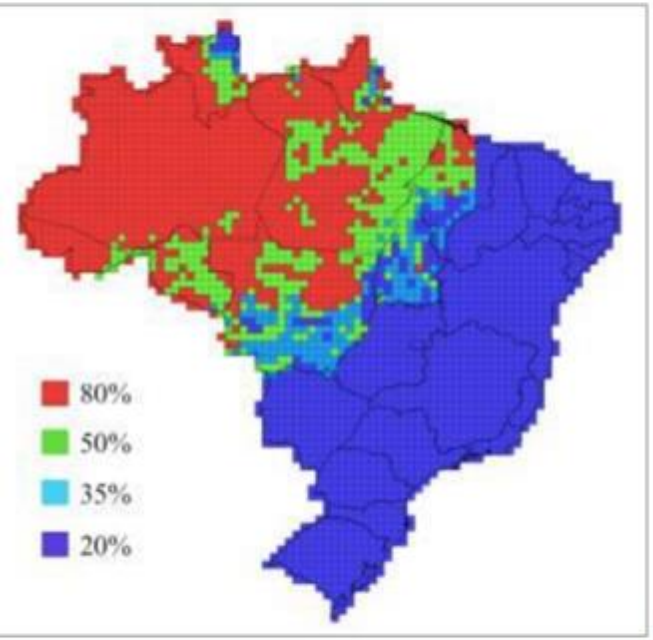
1. Energy:
   Biofuels: 18% of energy matrix.
   Non-hydro renewables to 30% of matrix.
   45% of the energy matrix with renewables.
2. Amazonia:
   end illegal deforestation and zero emissions
3. Forest Code:
   Restore 12 Mha of forests.
4. Low-carbon agriculture:
   Restore 15 Mha of pastures.
   Obtain 5 Mha of crop-livestock-forest integration.

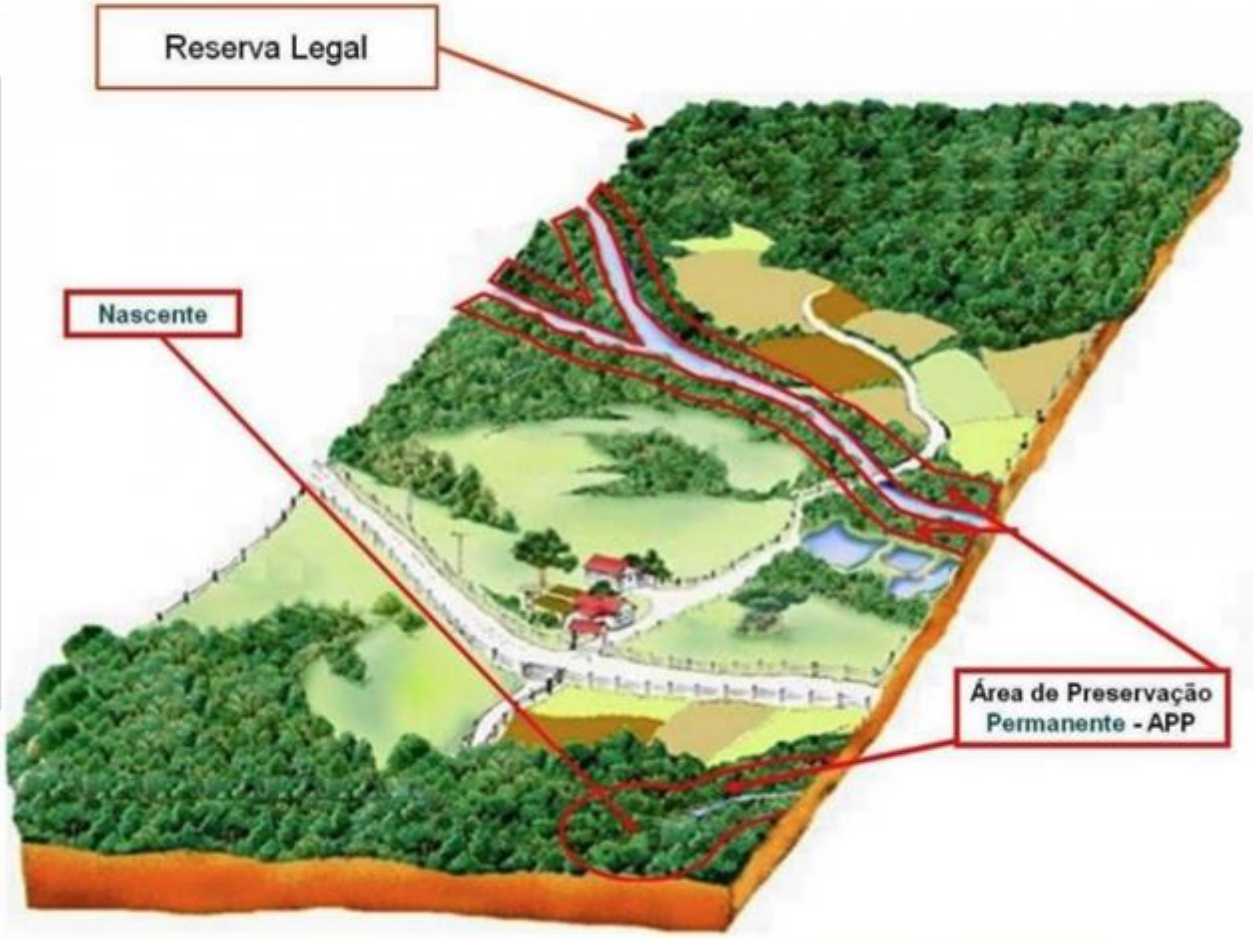
Challenges for Brazil



Reducing deforestation and restoring natural vegetation

Brazil's Forest Code: what is the effect of the rule of law?





Private farms have to preserve natural vegetation (20% - 80%)

Future environmental and agricultural impacts of Brazil's Forest Code

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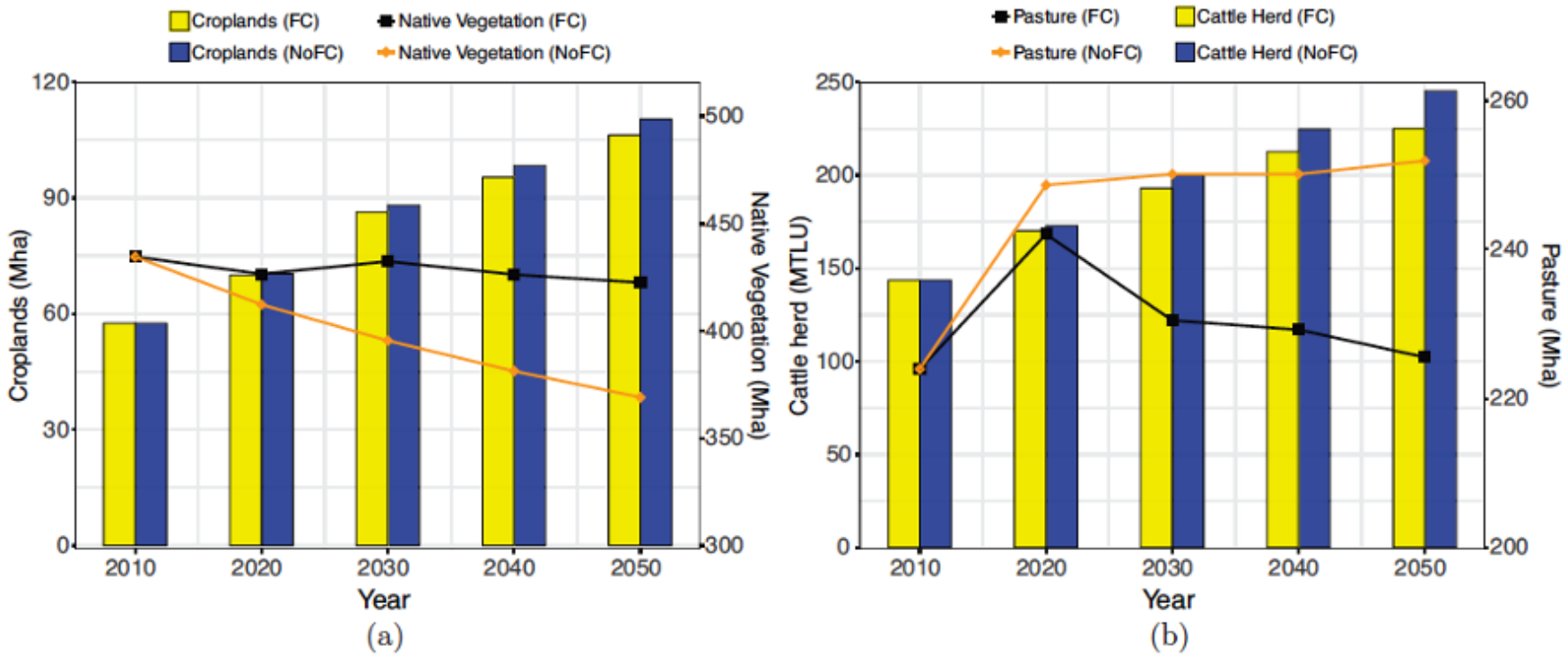
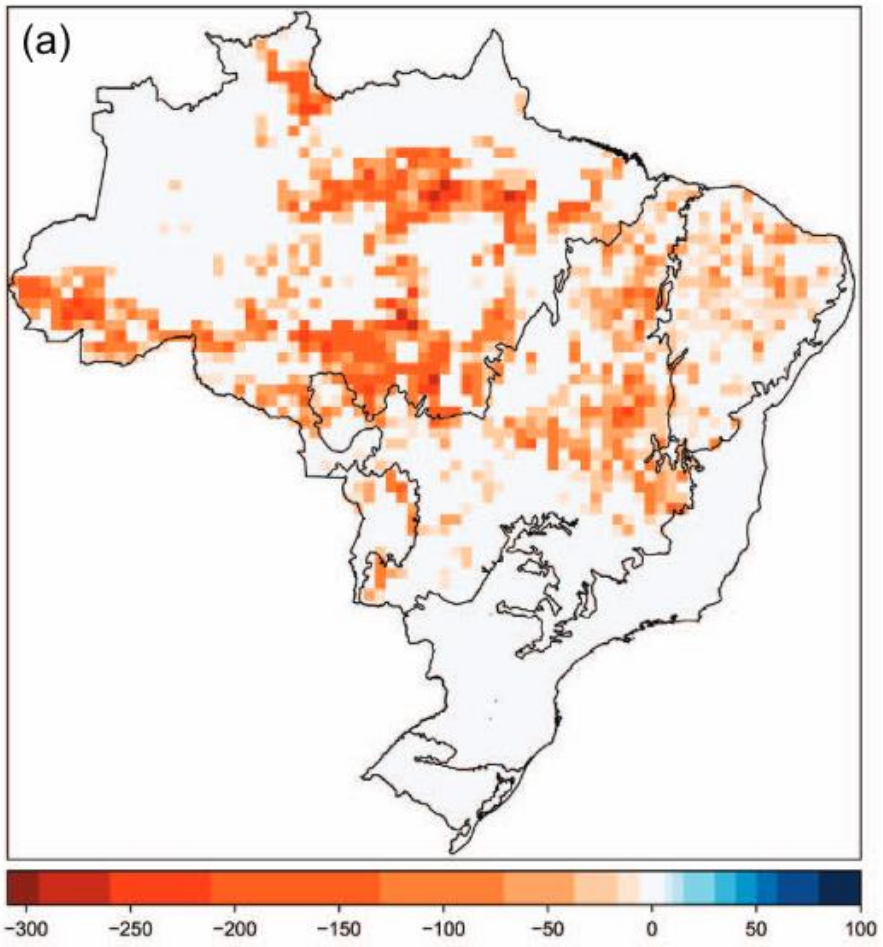
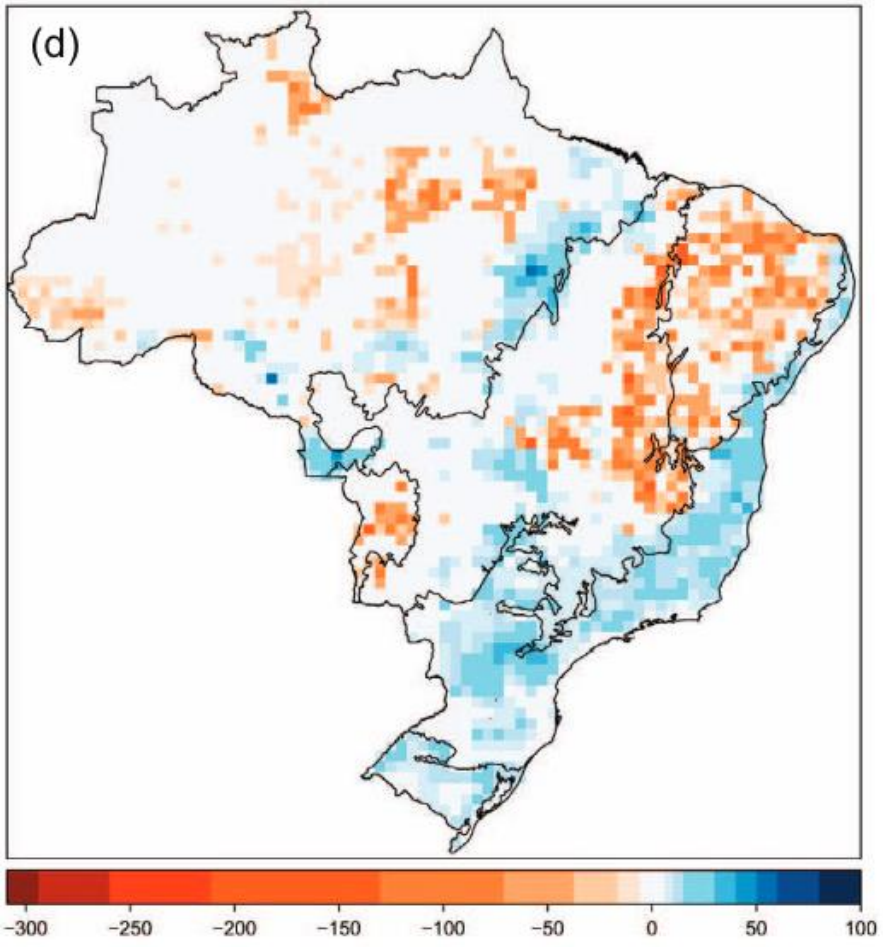


Figure 2. Production versus protection. (*a*) Cropland expansion (bar charts) and native vegetation area evolution (line charts) as projected by the FC and NoFC scenarios. (*b*) Cattle heads (bar charts) and pasture area evolution (line charts) as projected by the FC and NoFC scenarios. Abbreviation: FC = Forest Code fully implemented; NoFC = no implementation of the Forest Code. 1 Mha = 10^4 km^2; 1 MTLU = 10^4 TLU; 1 TLU = 0.7 cattle heads.

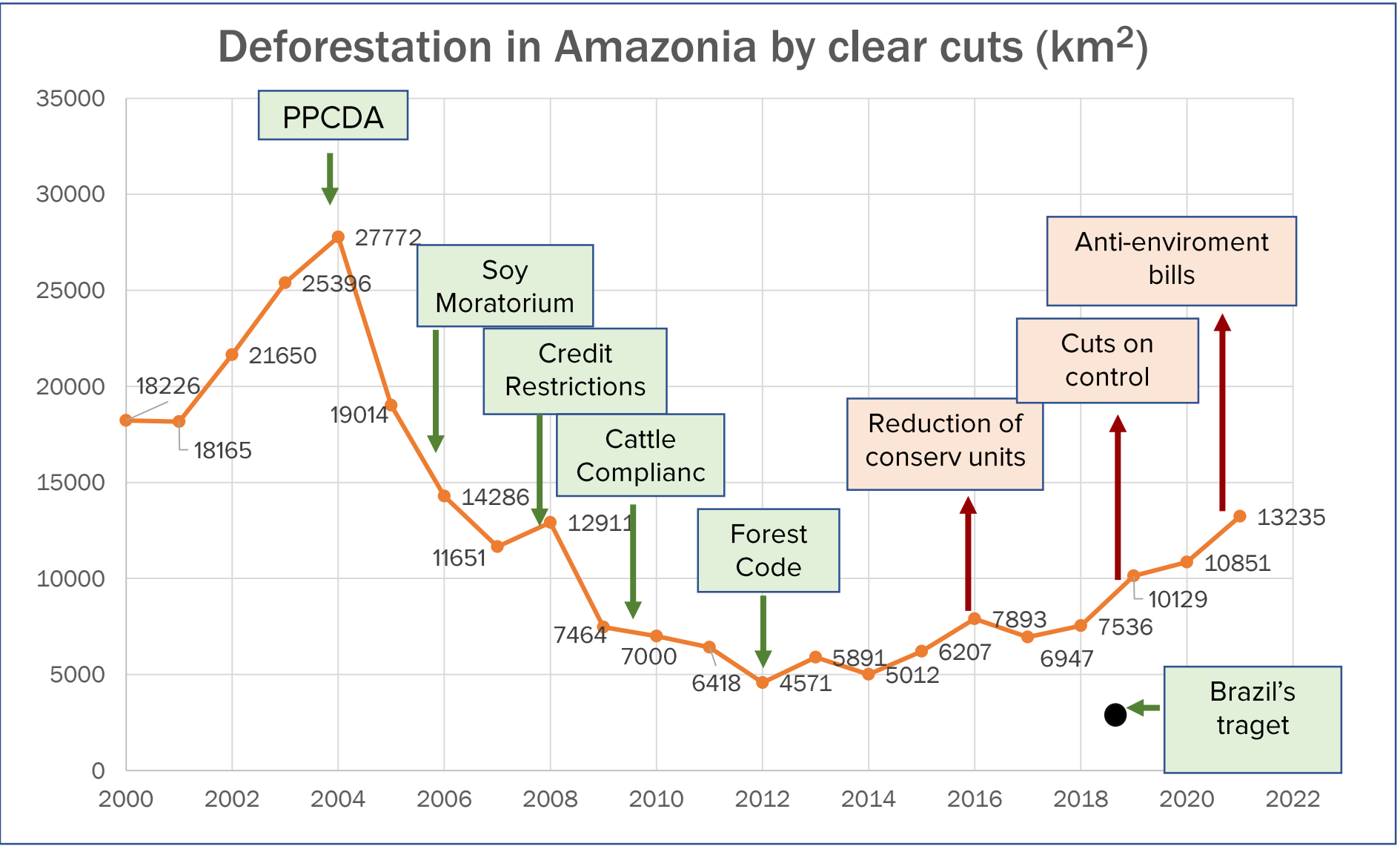
Projected impact of Forest Code enforcement



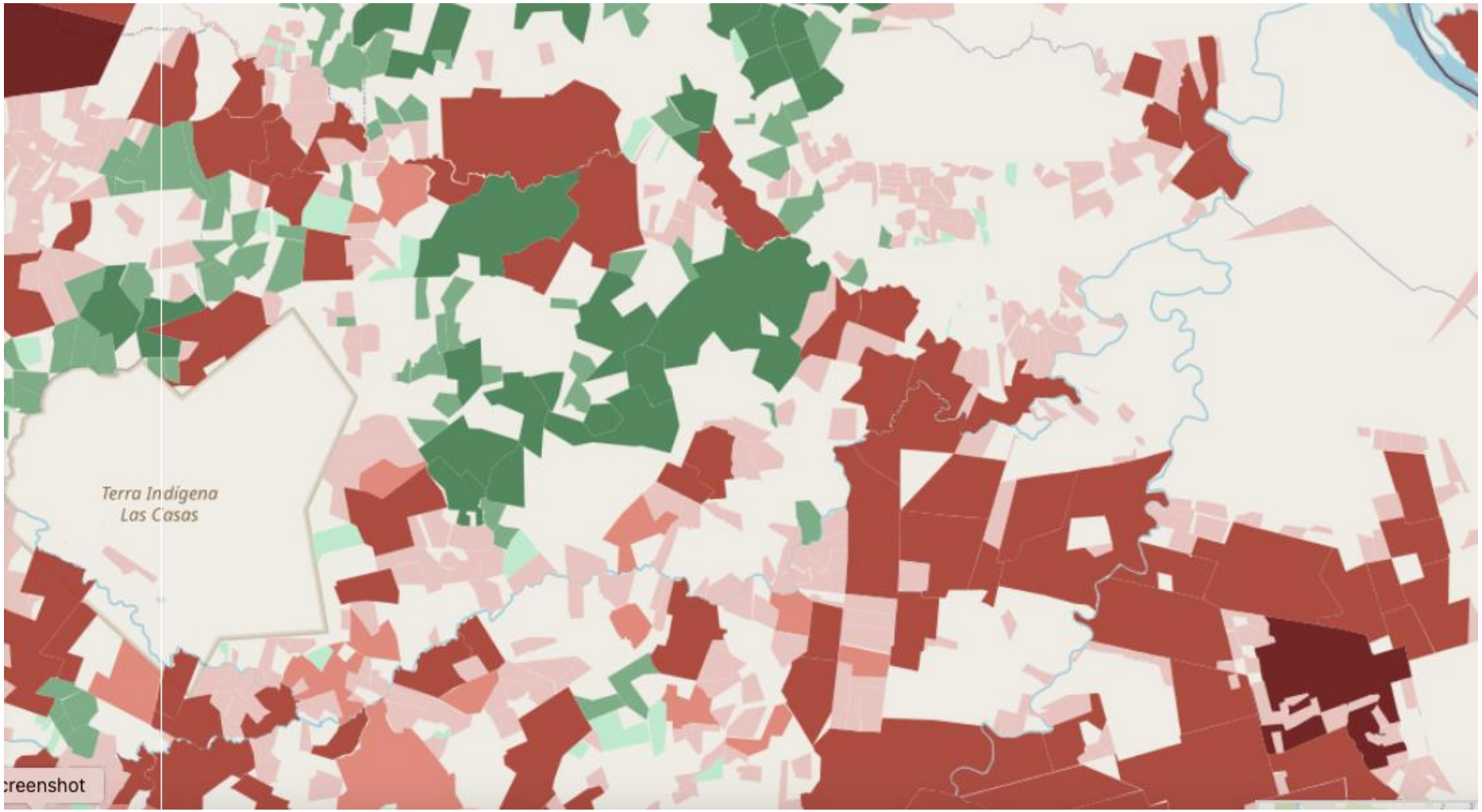
No Forest Code



Forest Code 2010-2050

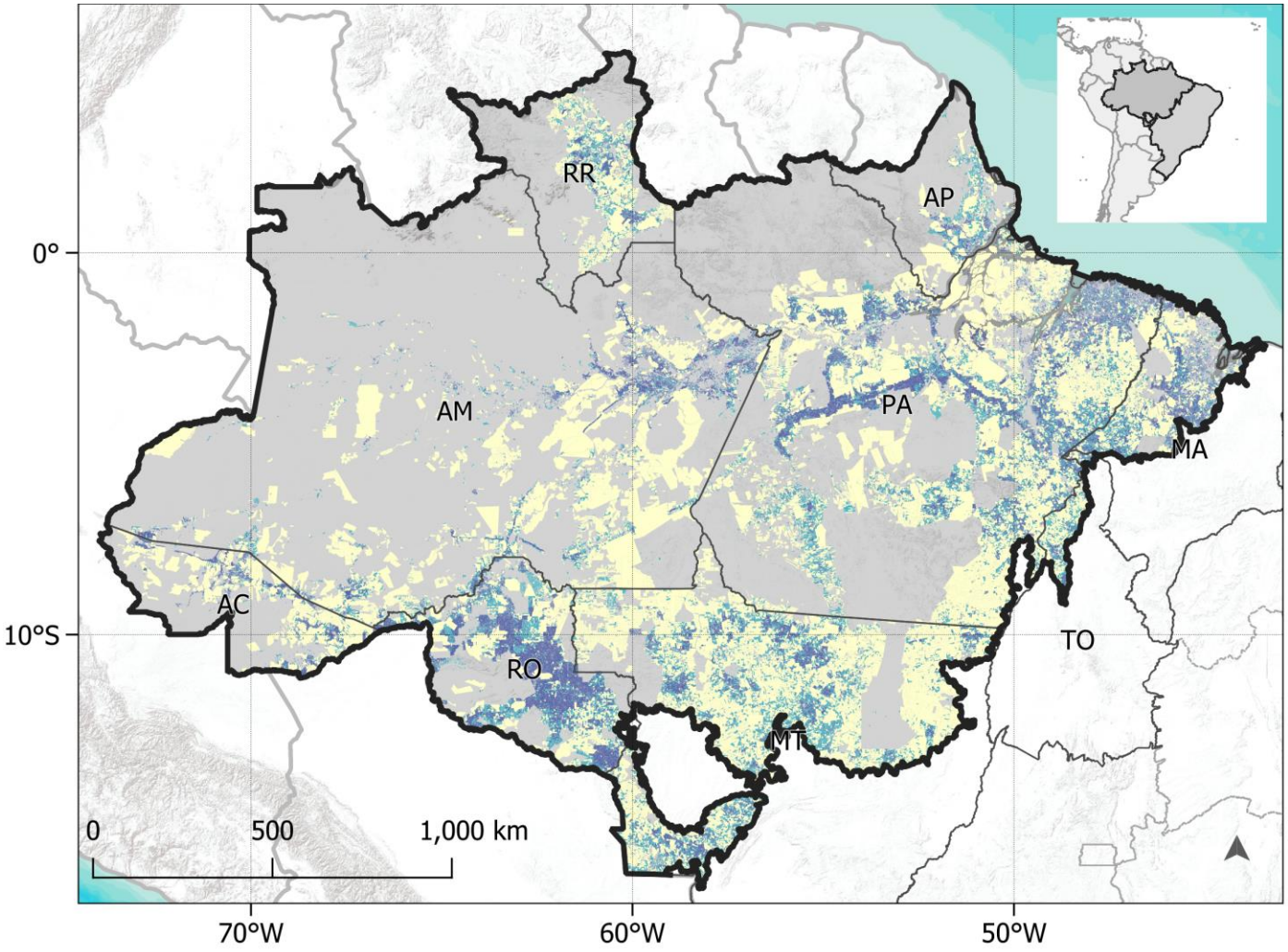

Deforestation in Amazonia by clear cuts (km²)
35000
30000
25000
20000
15000
10000
5000
0
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020
2022
PPCDA
Soy Moratorium
Credit Restrictions
Cattle Complianc
Forest Code
Reduction of conserv units
Cuts on control
Anti-enviroment bills
Brazil's traget
18226
18165
21650
25396
27772
19014
14286
11651
12911
7464
7000
6418
4571
5891
5012
6207
7893
6947
7536
10129
10851
13235

Rural environmental cadastre: key to implement Forest Code

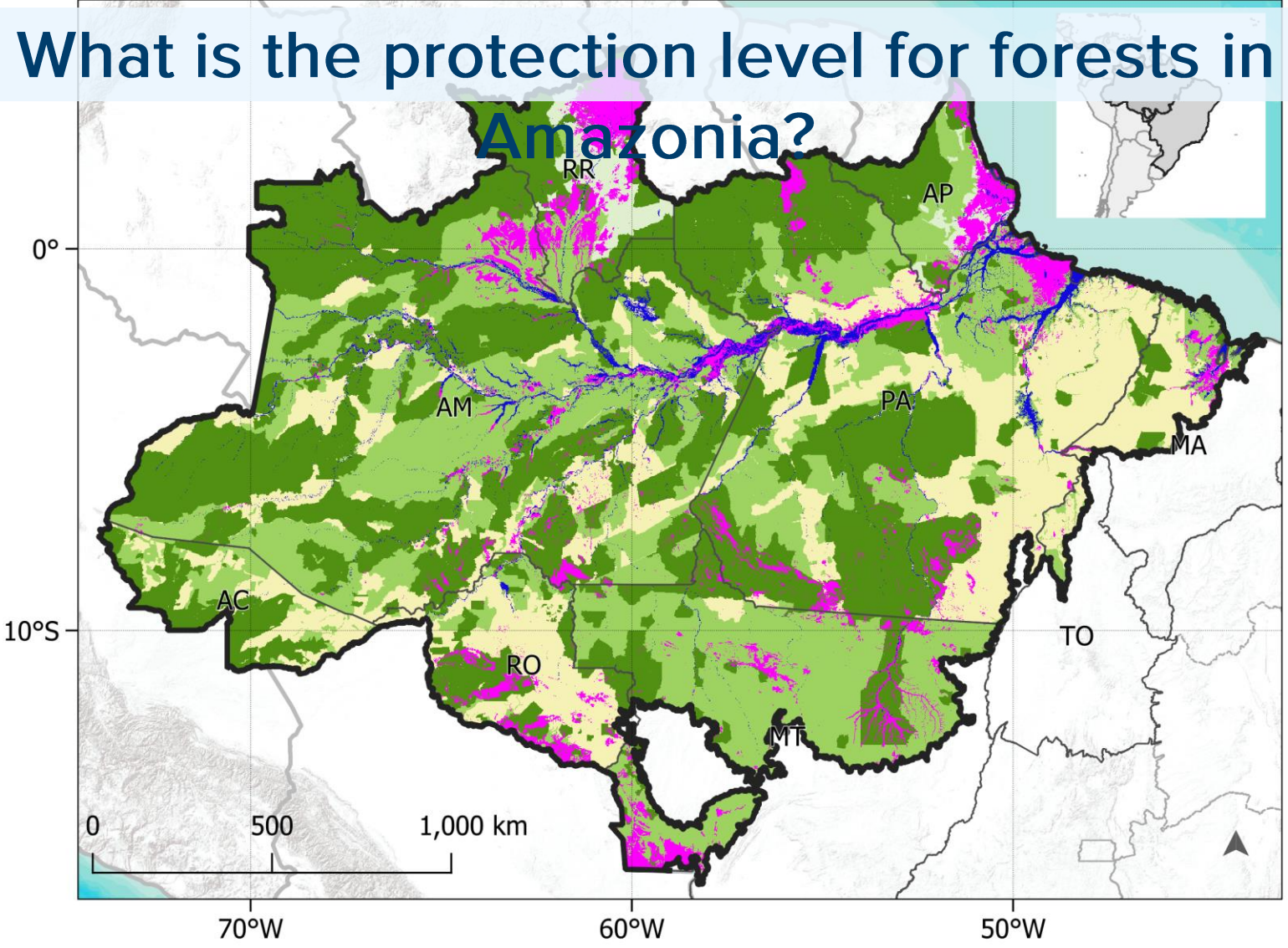


Self-declaration: overlaps and conflicts (slow validation)

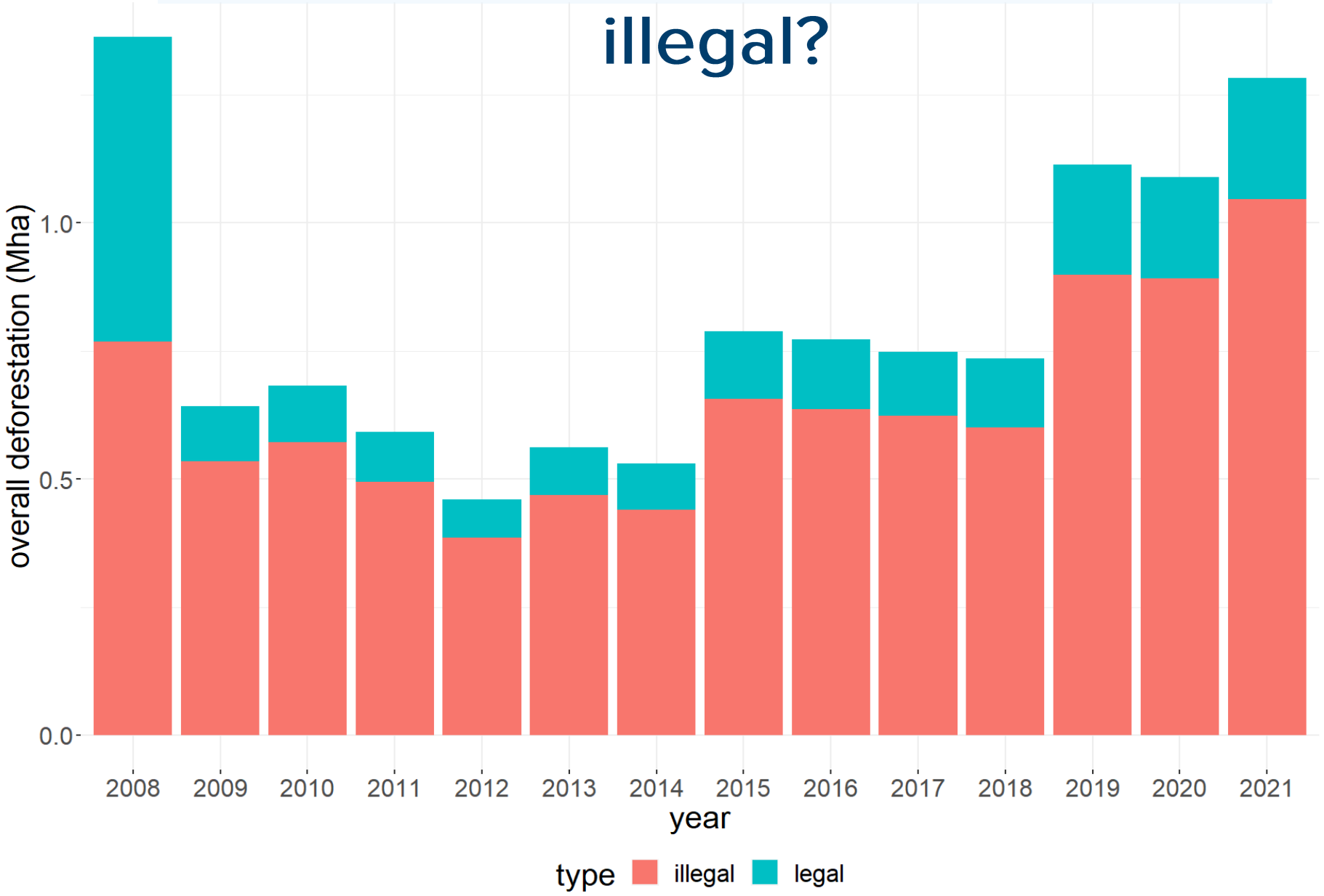
Rural cadastre (rebuilt and cleaned)



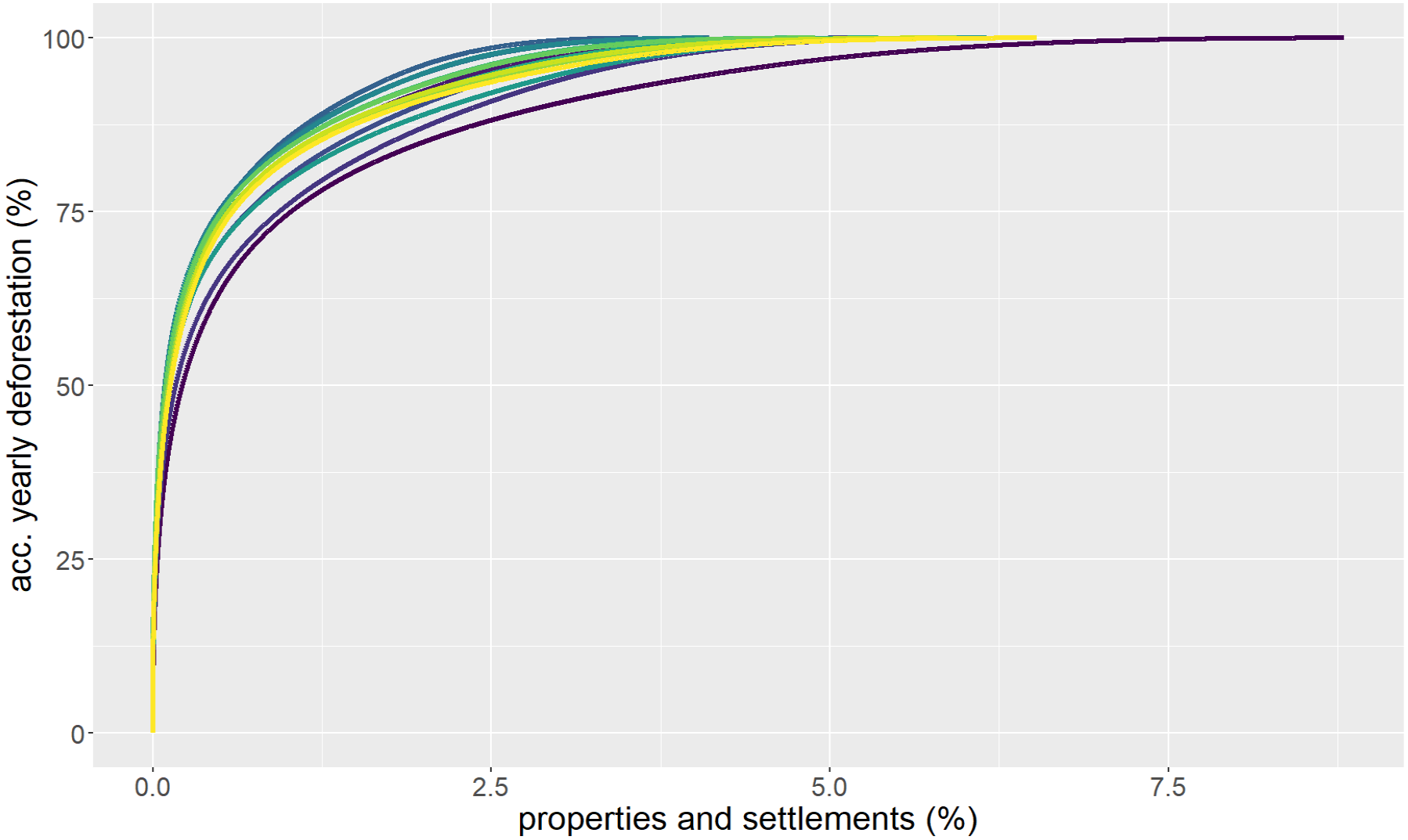
What is the protection level for forests in Amazonia?



How much deforestation is illegal?



Who is cutting the forest?



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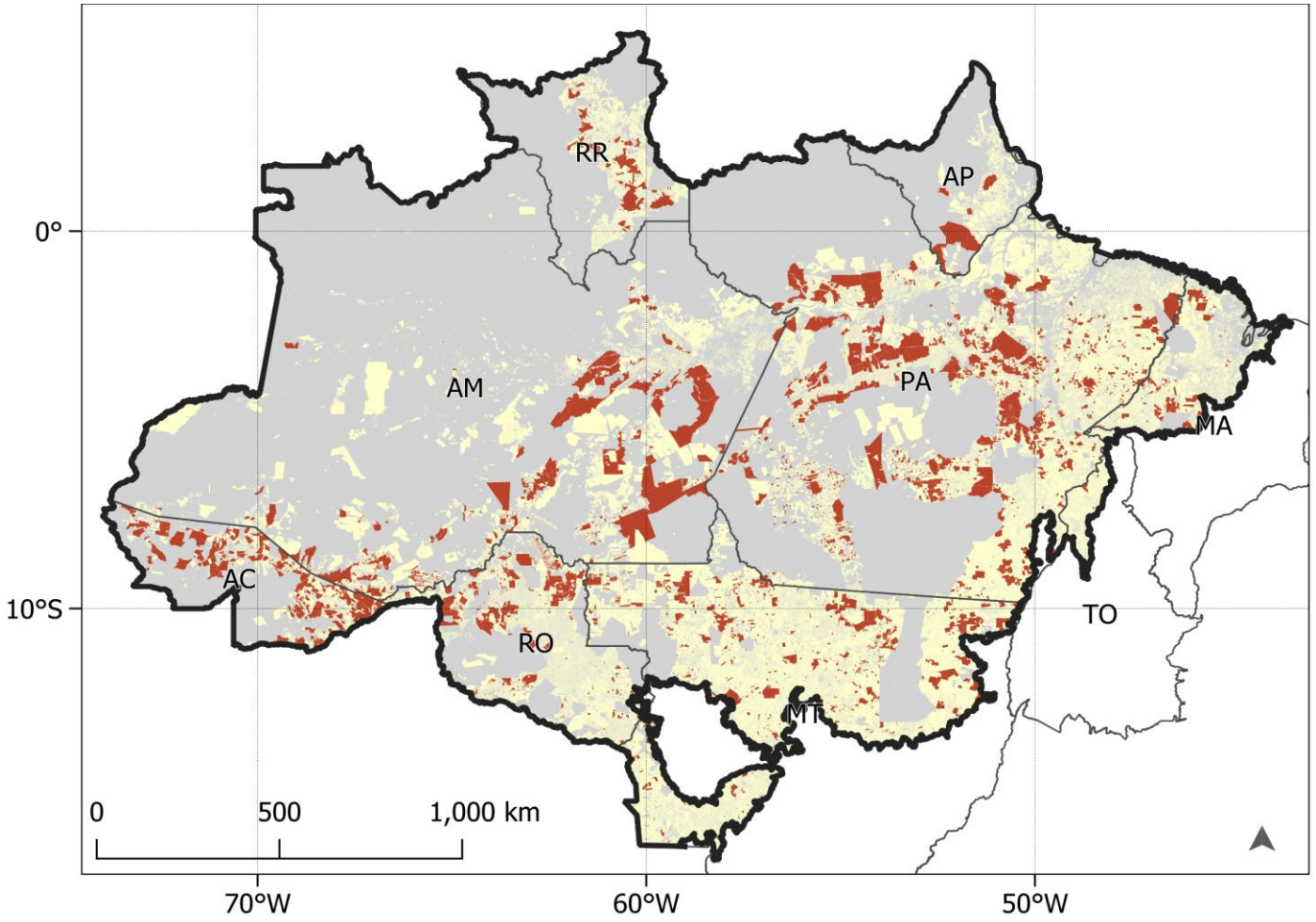
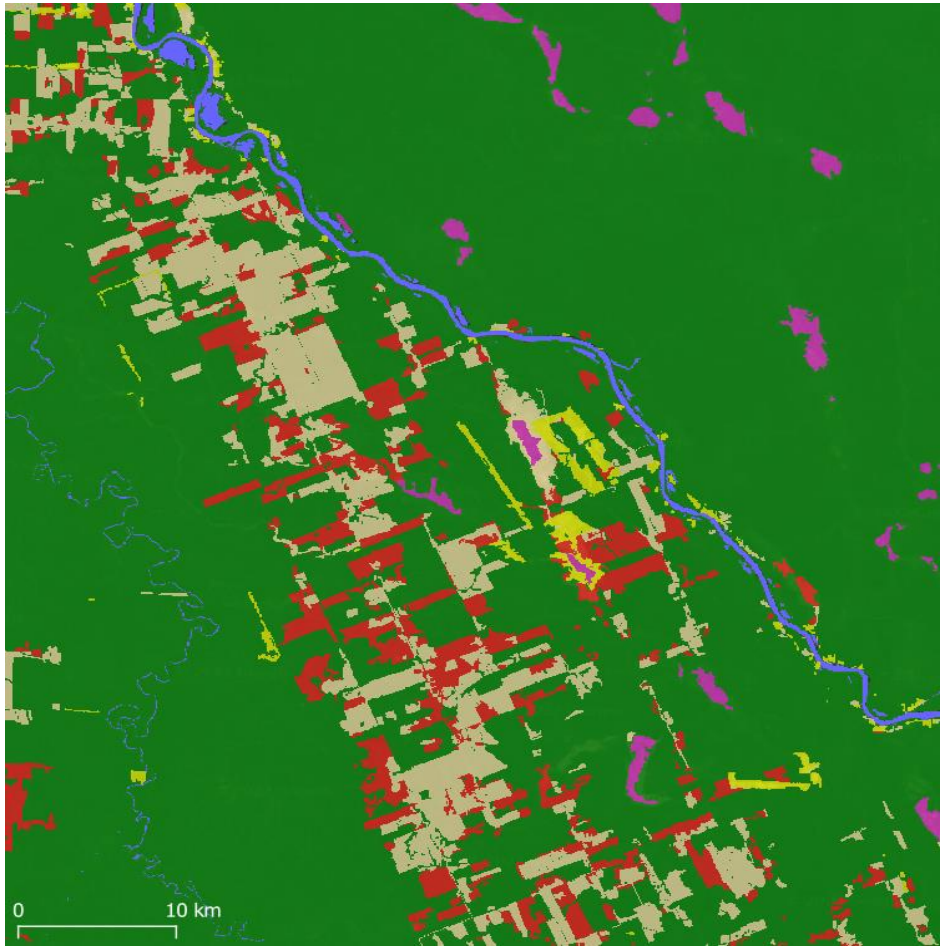
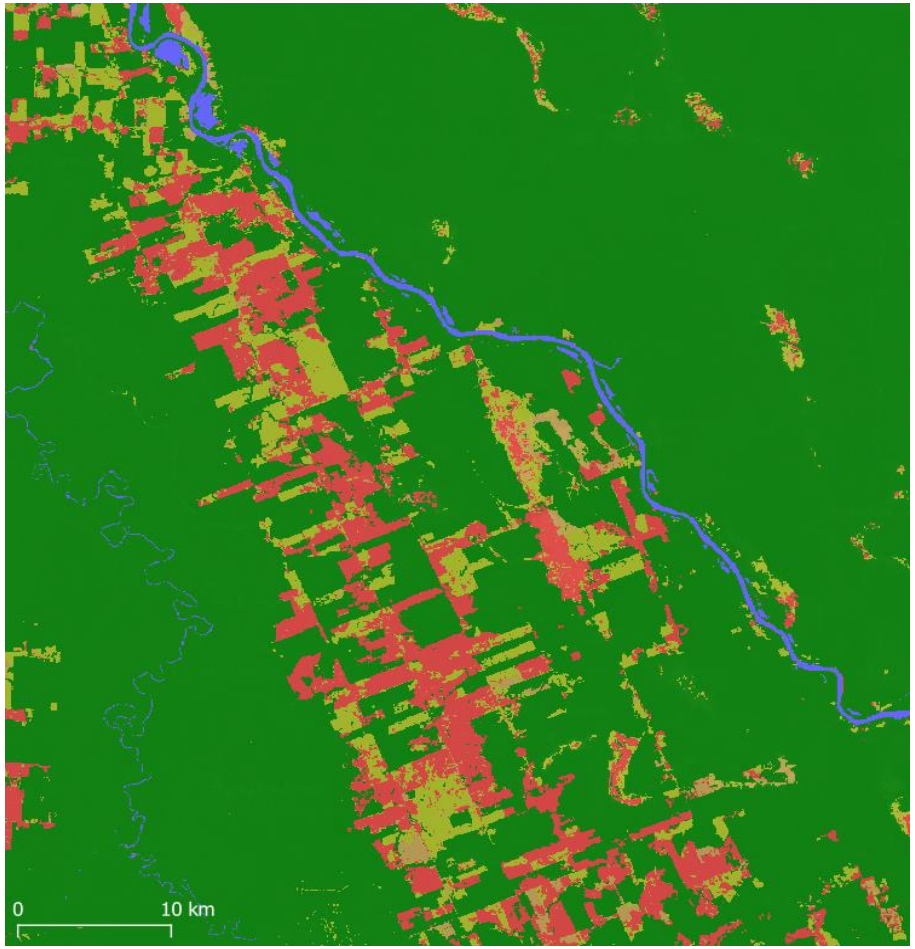


Transitioning from visual interpretation to big data analysis





PRODES: accurate, time-consuming

Big data + deep-learning: accurate, faster

RESTORE+ cost-plus extension

1. Forest Code:
   Improve CAR processing and share with MMA.
   Estimate CAR for the Cerrado.
   Estimate opportunity costs for restoration.
   Options for forest credits market.
2. Monitoring:
   Operational version of big data analysis for deforestation and transfer to INPE.
   Include forest degradation.
3. Modelling:
   New version of GLOBIOM-Brazil to use new CAR.
   Model the impact of forest credits market.

4-year work (working closely with new Brazil government)