PrevislA: Al-Powered
Deforestation Forecasting and
Prevention in the Amazon

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14:00-15:45

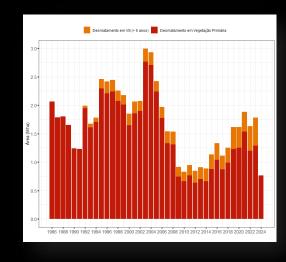
Session 3: AI Driven Environmental Sustainability across Industries



Deforestation (1985–2024)

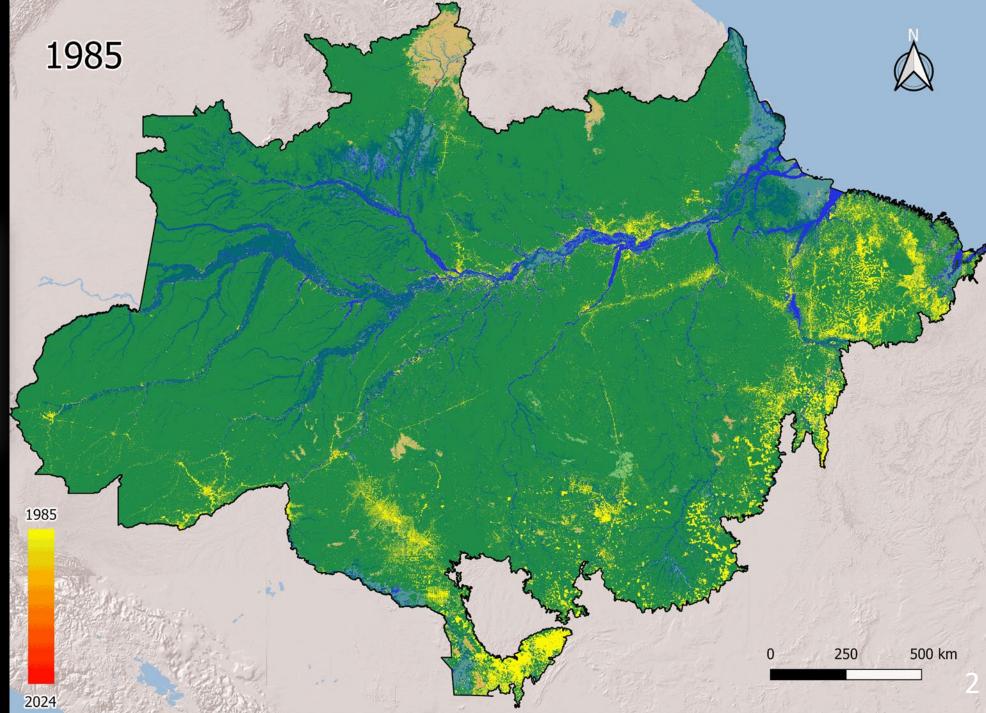
586,000

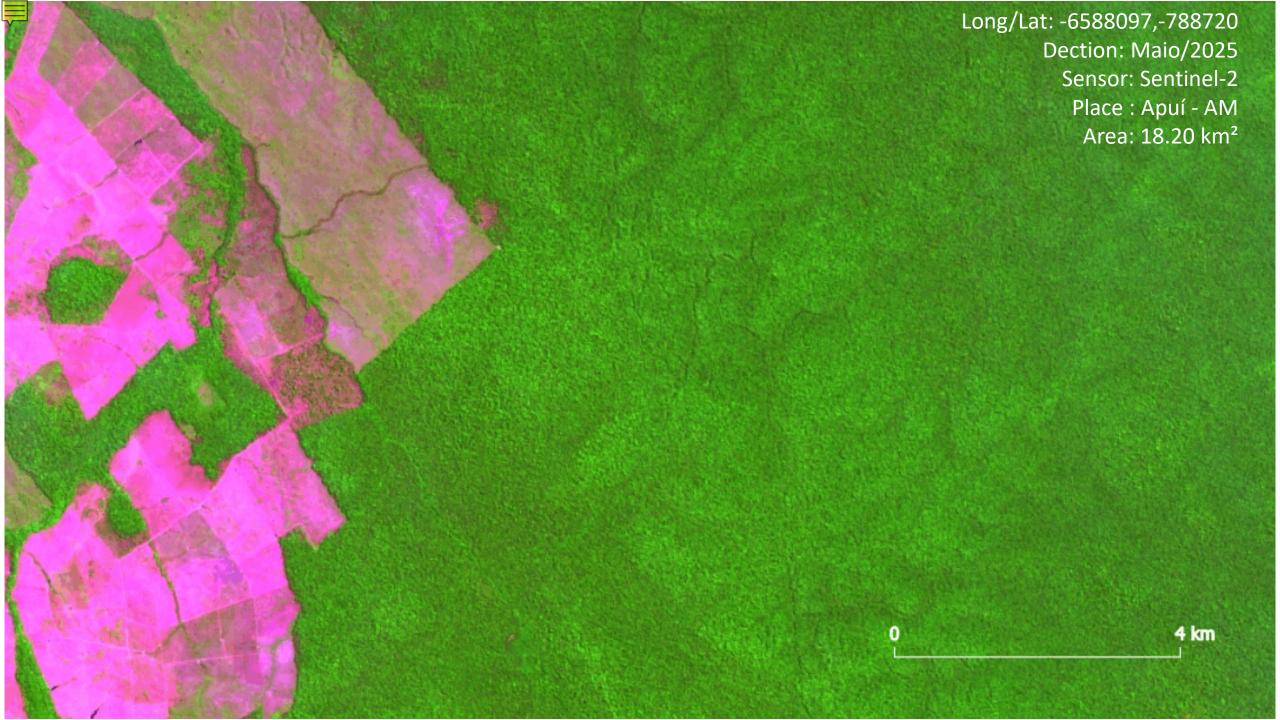
square kilometers



France (543,941 sq km)
Spain (505,983 sq km)
Sweden (450,295 sq km)
Germany (357,587 sq km)

<u>Souza Jr. et al. (2023)</u>

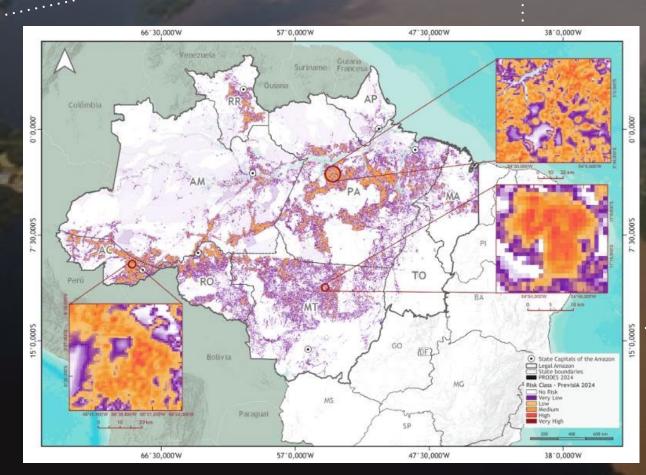






previsia.





1. Information Technology

2. Deforestation forecast model

3. Collaborative Impact





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(A)

Pretictive Variables

Human setlltement

Roads

Deforestation

Municipal Industrial GDP

State conservation units

Federal conservation units

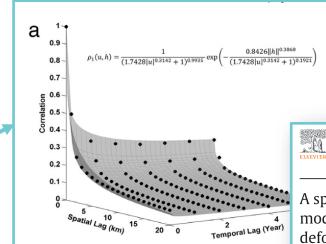
Indegenous land

Population

Water bodies

Terrain topography

Spatialtemporal Correlation



Spatial Statistics

Volume 21, Part A, August 2017, Pages 304-318

A spatiotemporal geostatistical hurdle model approach for short-term deforestation prediction

Marcio Sales ^a $\stackrel{\triangle}{\sim}$ $\stackrel{\boxtimes}{\bowtie}$, Sytze de Bruin ^a, Martin Herold ^a, Phaedon Kyriakidis ^b, Carlos Souza Jr. ^c





Yan Gao,

TYPE Original Research
PUBLISHED 04 December 2023
DOI 10.3389/ffgc.2023.1294552

Landsat sub-pixel land cover dynamics in the Brazilian Amazon

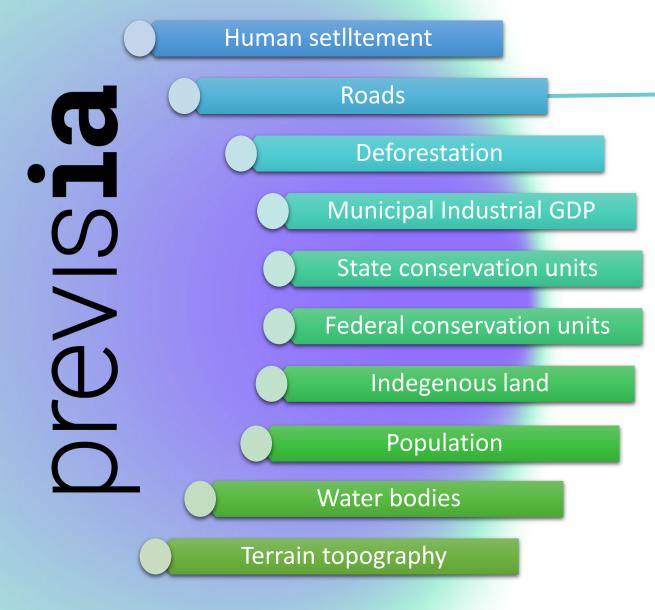
Carlos M. Souza Jr.^{1*}, Luis A. Oliveira¹, Jailson S. de Souza Filho¹, Bruno G. Ferreira¹, Antônio V. Fonseca¹ and João V. Siqueira²

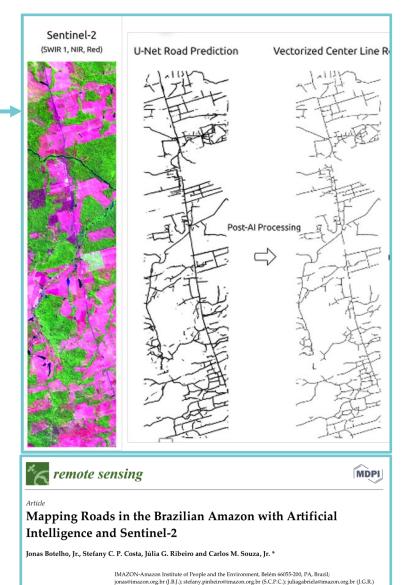
nazon—Amazonia People and Environment Institute, Belém, Pará, Brazil, ²Jvn Siqueira – Me, Belém, rá. Brazil

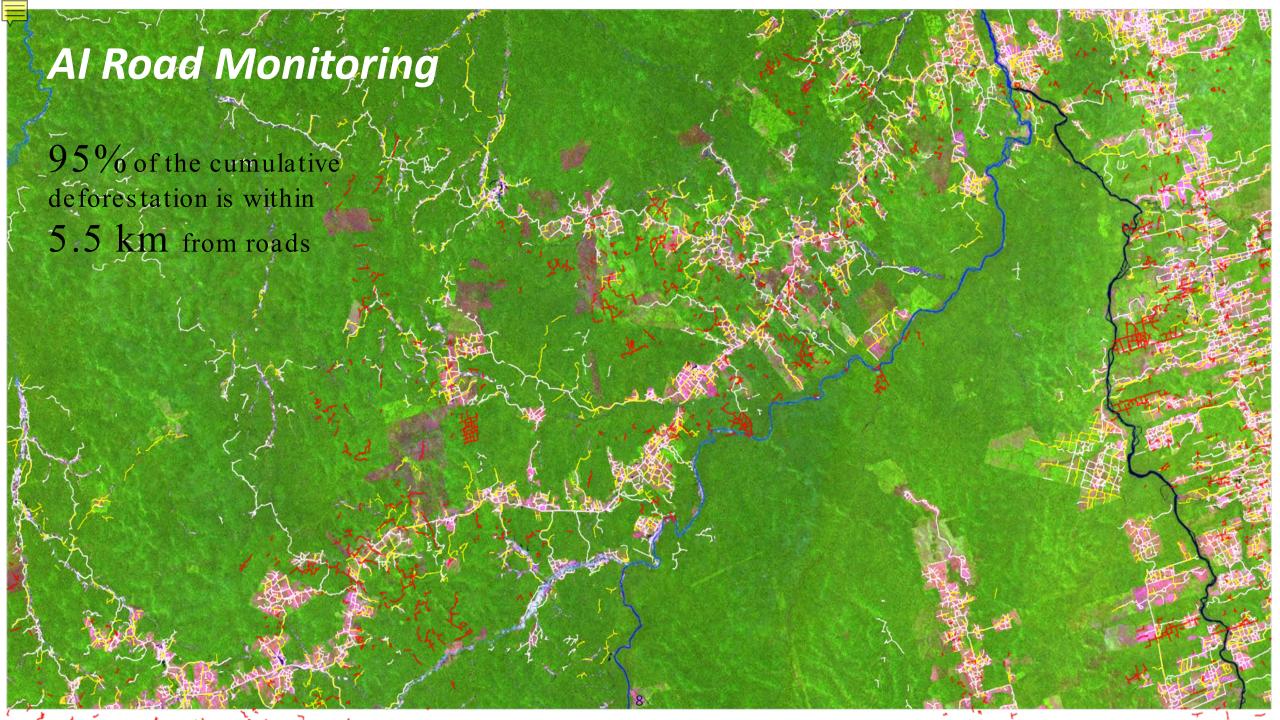


Pretictive Variables

Spotting New Pathways: AI Model to Track Roads

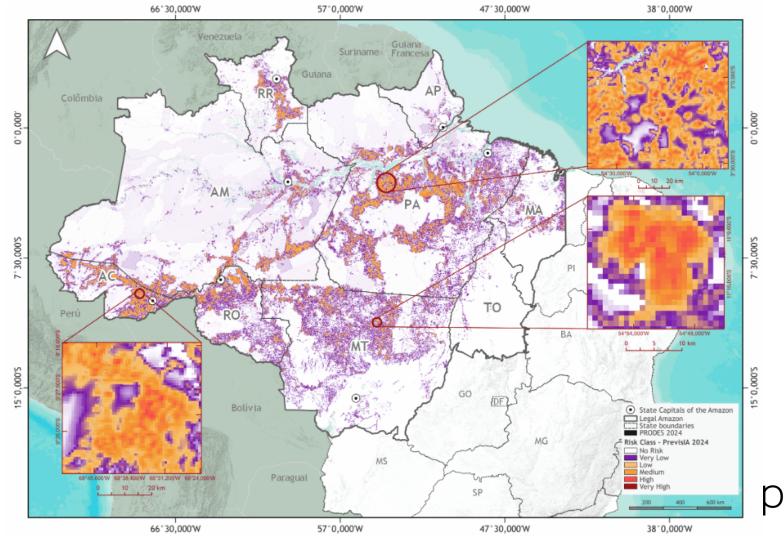




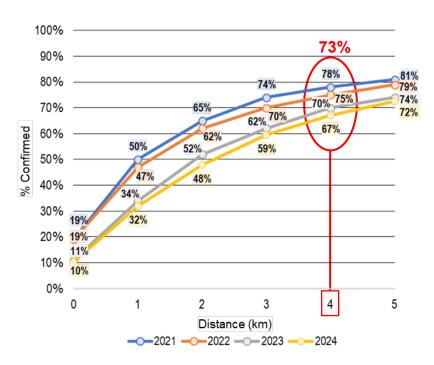




Putting PrevisIA to work!



Deforestation Risk vs Prodes (2021-2024)







Collaborative Impact Approach

The Roadmap for Functional Action



O2 Capacity
Building

TECHNOLOGY TRANSFER (2022-2025)

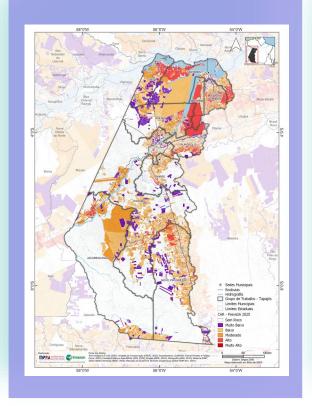
- 107 Attendees
- 3 States (Acre, Pará and Rondônia)
- 6 Municipalities:

Acre Pará
Rio Branco Altamira
Belém

Pará Rondônia Altamira Porto Velho Belém Marabá Santarém



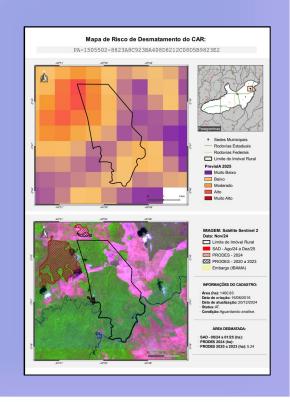
03 Detailed Report

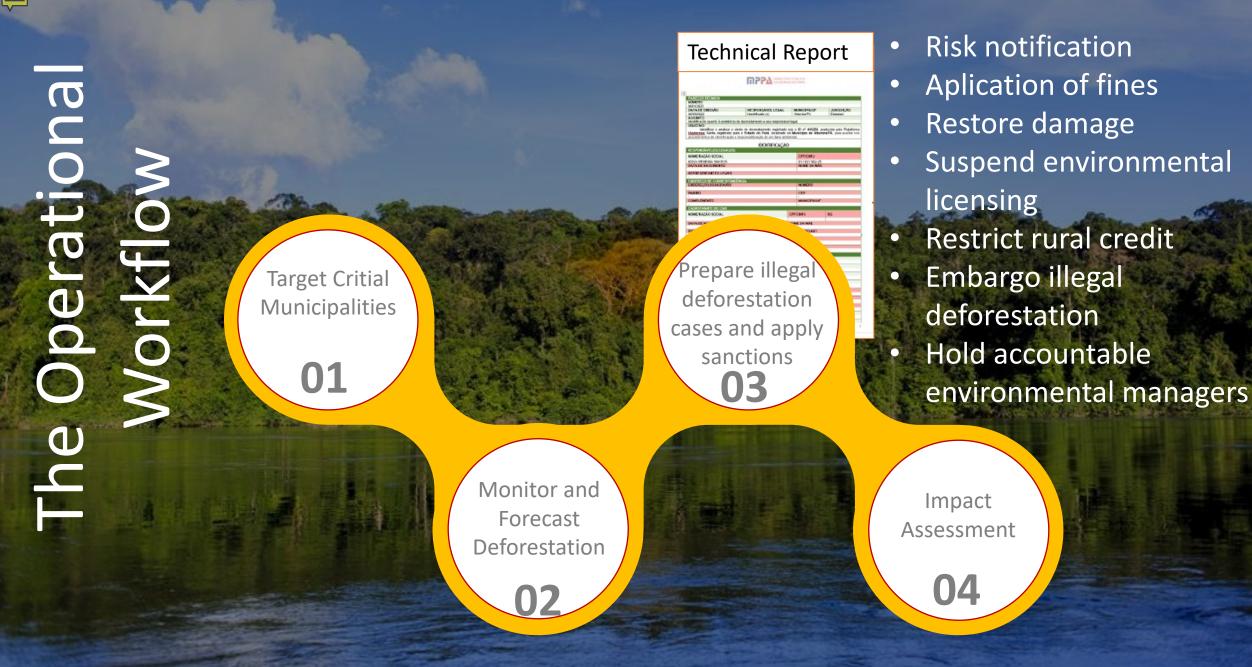


Deforestation

Alerts and

Forecast





There is still time. Yet!

Thanks!



