

Amazon

DEFORESTATION:

Observations and Research



GEOGRAPHICAL DISTRIBUTION OF AFFECTED SPECIES:



RESEARCH QUESTION

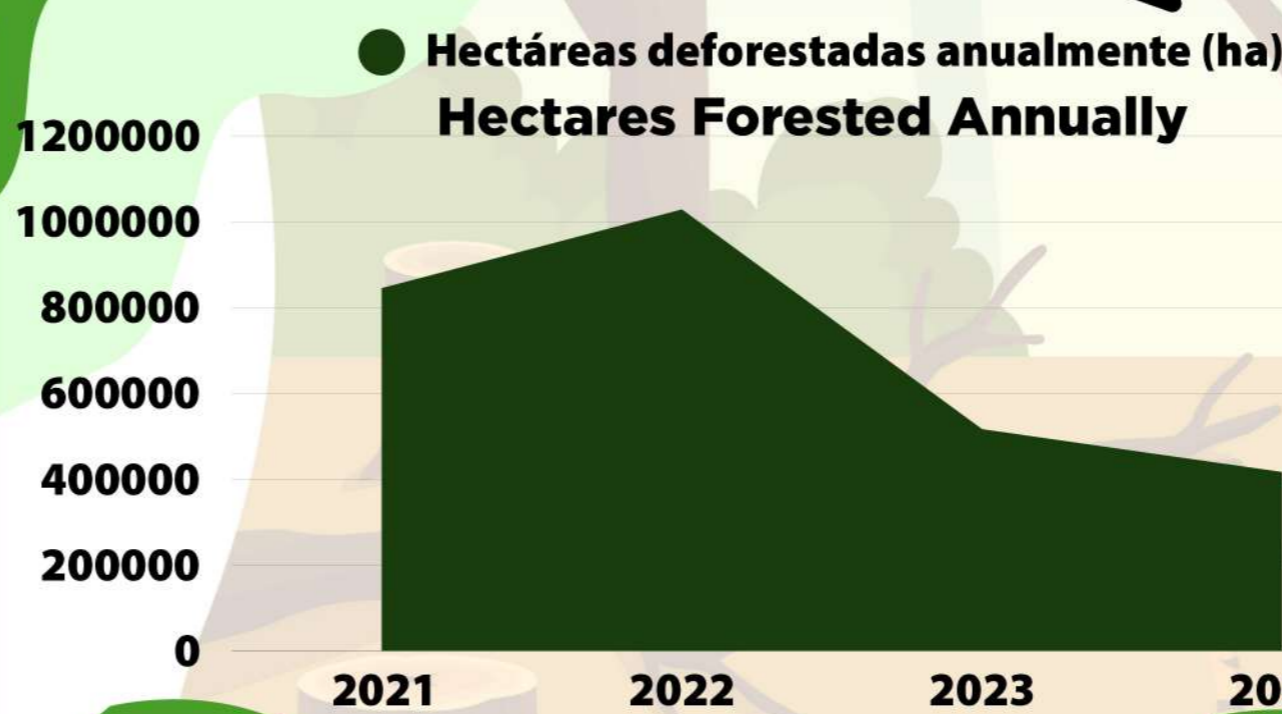
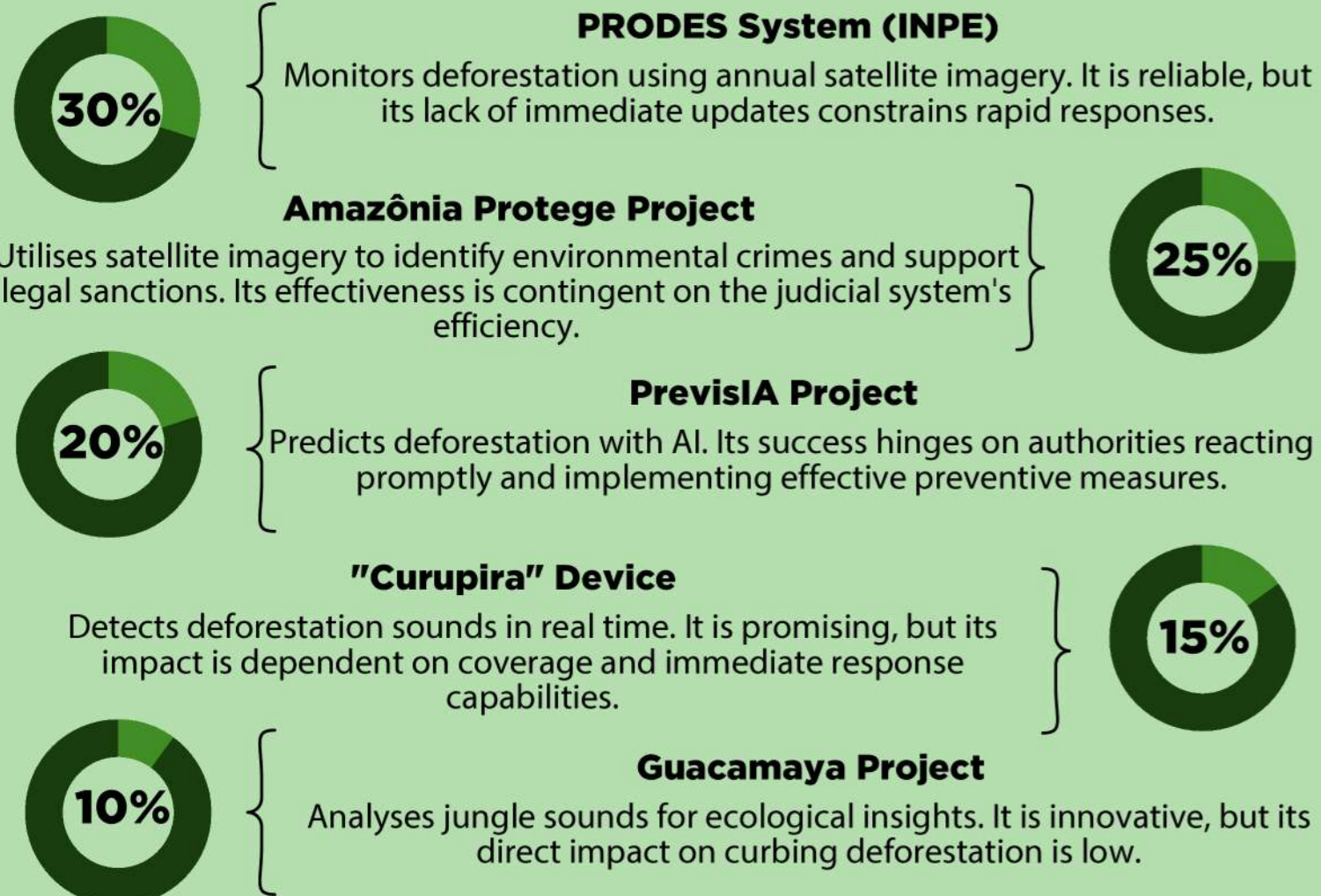
How does Artificial Intelligence (AI) facilitate the monitoring of deforestation in the Amazon region?

KEY CAUSES OF DEFORESTATION

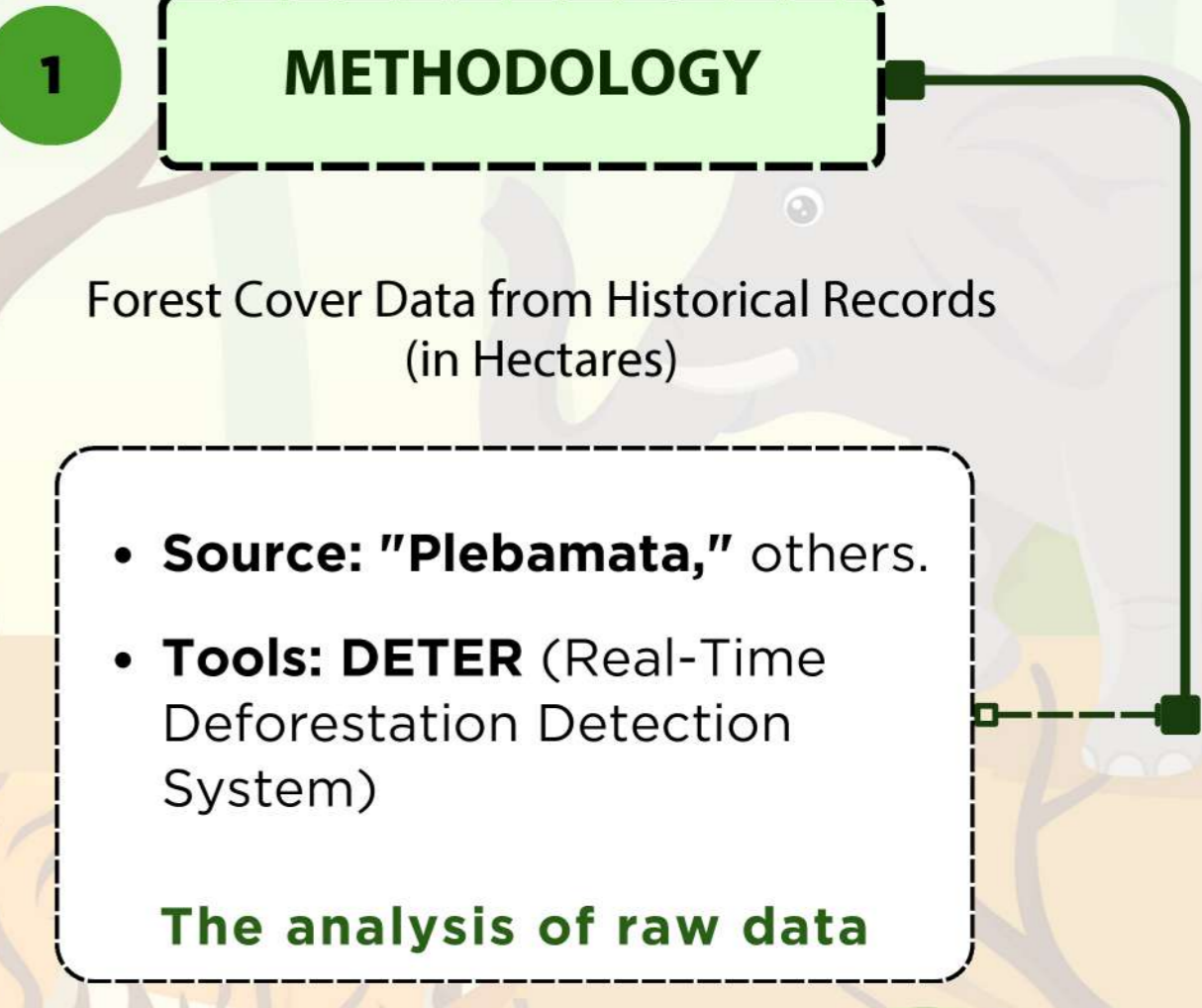


2 AI SYSTEM IMPLEMENTATIONS

Percentages derived from a comparative analysis, which evaluated each initiative's impact, coverage, responsiveness, and maturity using available data.



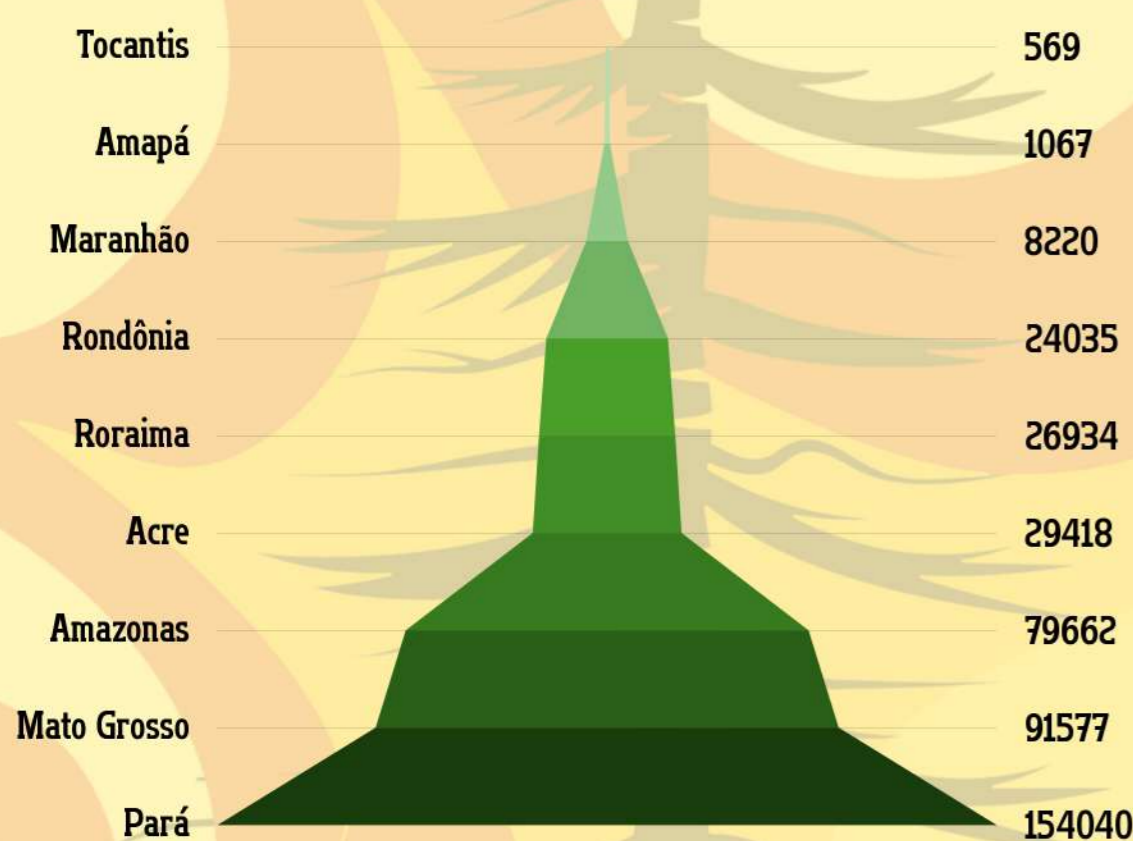
Approximately 200 trees per 100,000 are impacted by deforestation each year.



Approximately 15,000 of the estimated 3 million species inhabiting the Amazon are annually affected by deforestation

3 RESULTS

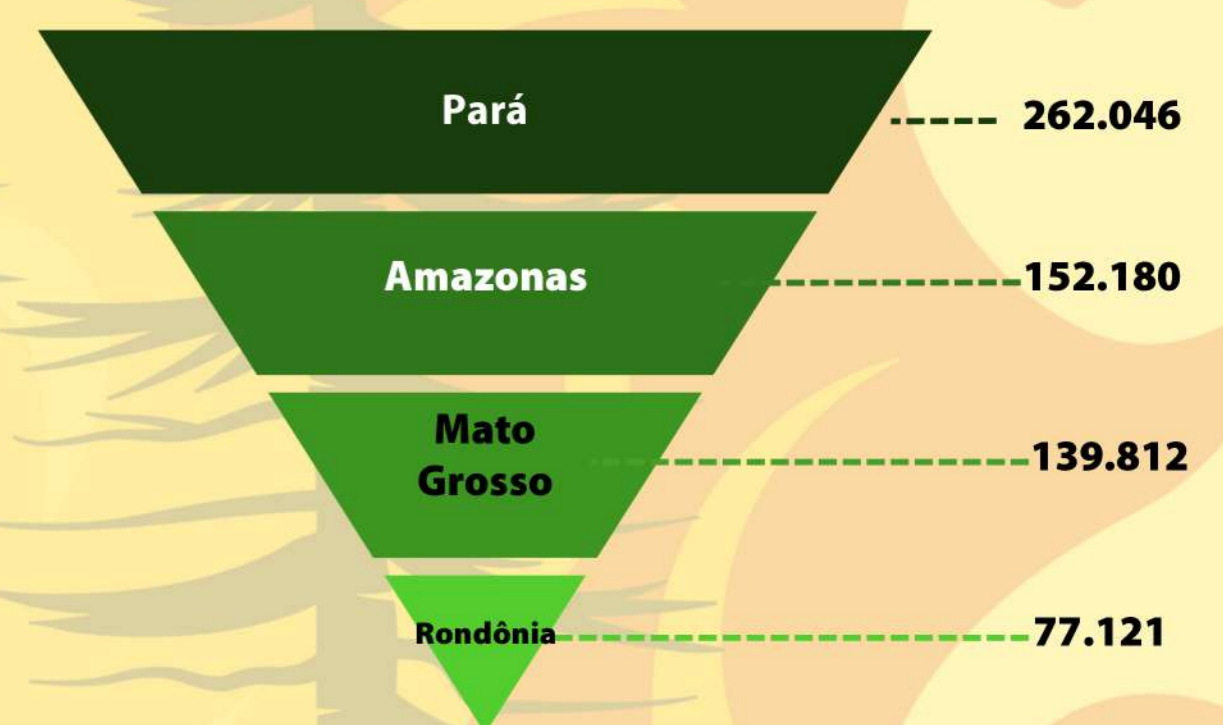
CONCENTRATION OF DEFORESTATION IN 2014



DEFORESTATION TRENDS: 2021-2024



AVERAGE DEFORESTATION IN HECTARES PER AREA



Note: According to the latest annual record (2024), Pará is experiencing the most significant forest loss, followed by Mato Grosso and Amazonas. This concentration of values suggests a pattern of intensive degradation.

Note: Within the Brazilian Amazon states, deforestation rates exhibit a decreasing trend. This decline suggests potential challenges in control during 2021, and a possible increase in ecological awareness by 2024.

Based on information provided by the DETER tool, an analysis of the annual period from 2021 to 2024 was conducted to obtain the average values. These four regions account for the highest average hectares lost.

MAIN CONSEQUENCES OF DEFORESTATION



The application of Artificial Intelligence (AI) enhances deforestation monitoring within the Amazon biome. Through the analysis of trends and the detection of environmental changes, AI optimises decision-making conservation strategies. However, the accuracy of these models is compromised by interference in satellite imagery, and their opacity has hindered the interpretation of their predictions.