



F A C T S H E E T

RAD 2024

Annual Report on
Deforestation in Brazil

MAY
2025

Sixth year of the most comprehensive X-ray of deforestation across **all Brazilian biomes**, with analyses for different territorial limits and land tenure categories.

Deforestation and native vegetation conversion alerts, validated and refined based on **high-resolution imagery**.

Assessment of indications of illegality and overview of **enforcement actions** carried out by public authorities to control and reduce deforestation in the country.

ACCESS THE FULL REPORT AND
THE DATA PLATFORM AT:

<http://alerta.mapbiomas.org>

DEFORESTATION IN BRAZIL PER BIOME

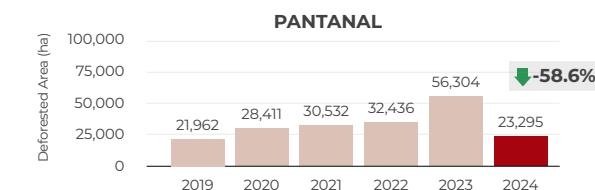
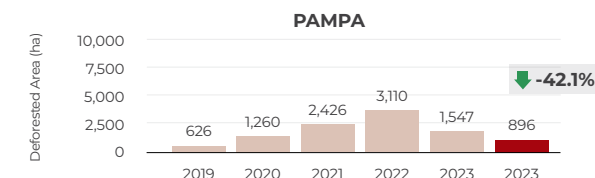
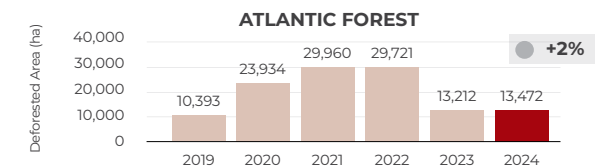
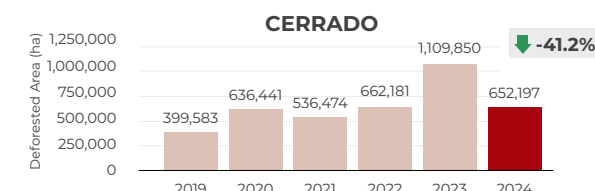
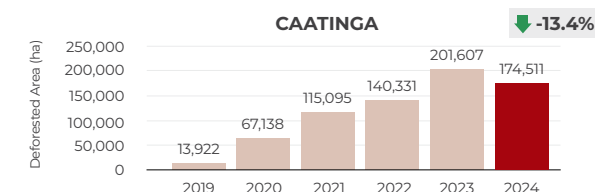
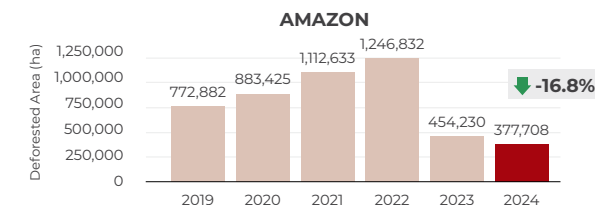
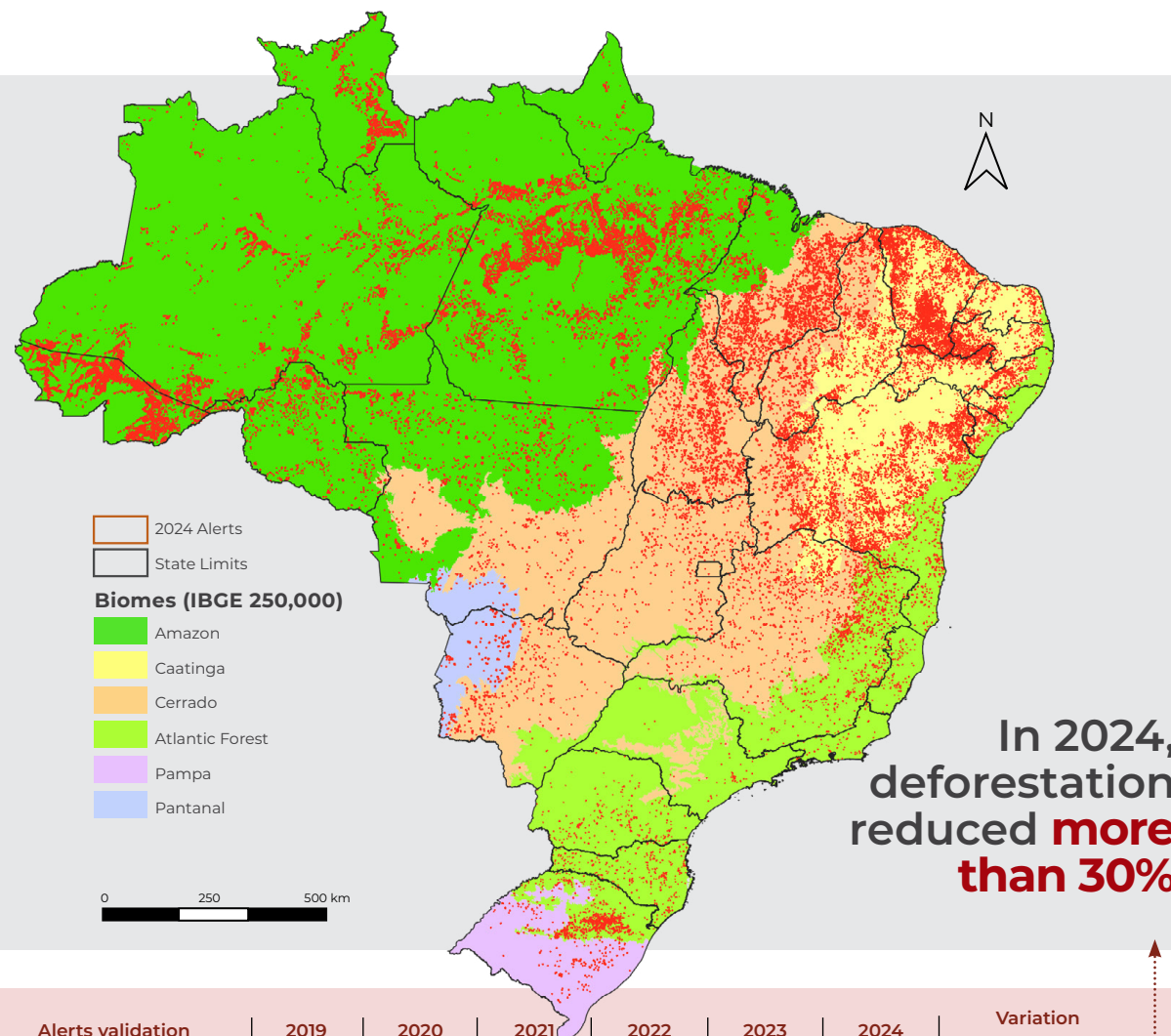
IN 2024

The **Amazon** and **Cerrado** biomes account for **over 83%** of the deforested area in the country.

The **Cerrado** remains the biome with the **largest deforested area**, totaling **652,197 hectares**.

There was a **reduction in the deforested area for all biomes** in the country, with the exception of the Atlantic Forest*, which remained stable after a significant decrease in the previous year.

In the **Pantanal**, there was the **largest proportional reduction** in the deforested area, a **decrease of 59%** compared to 2023.



Over the last 6 years, Brazil has lost approximately **9,880,551 hectares** of native vegetation.

Equivalent to the **area** of South Korea

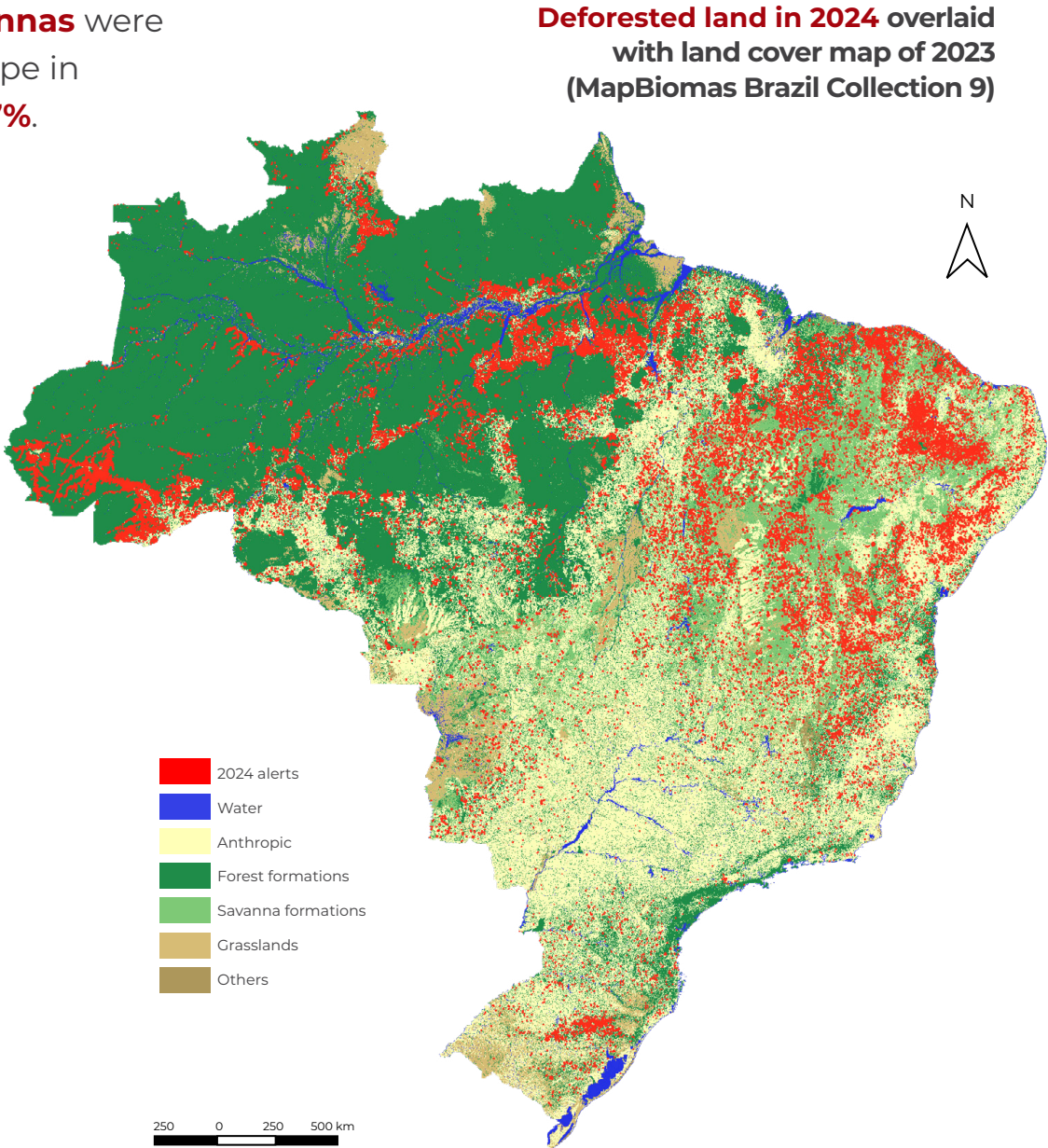
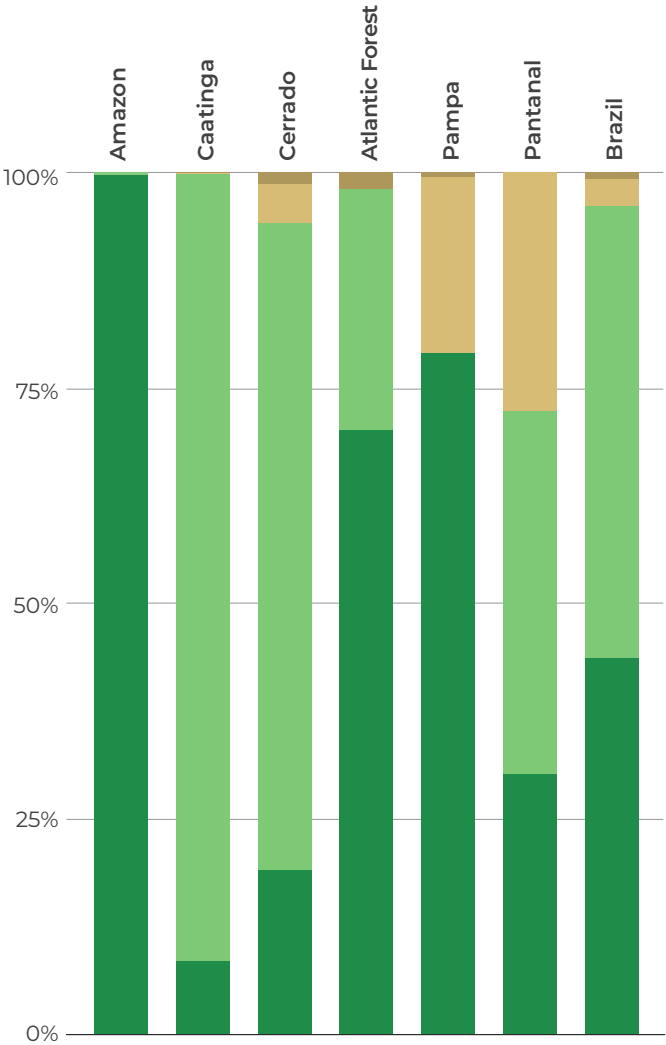


Alerts validation	2019	2020	2021	2022	2023	2024	Variation 2023-2024
Number of alerts published by MapBiomas Alerta	56,528	98,959	85,560	80,132	83,479	60,983	-26.9%
Total converted area (ha)	1,219,372	1,640,611	1,827,129	2,114,611	1,836,749	1,242,079	-32.4%

* affected by extreme climate events in the state of Rio Grande do Sul

NATIVE VEGETATION TYPES MOST CONVERTED

For the second consecutive year, **savannas** were the most affected native vegetation type in Brazil **(52.4%)**, **Forests** follow with **43.7%**.



European Union Deforestation Regulation (EUDR)

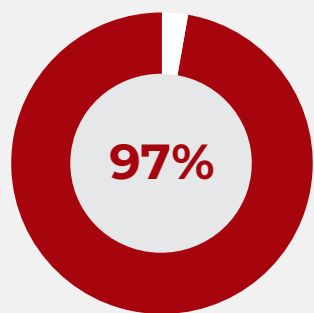
The new EUDR restricts the entry into the European market of products originating from forests deforested after December 31, 2020.

More than **5.5 million** hectares of deforestation have been identified after December 31, 2020*.

This restriction could affect approximately **310,000** rural properties (4% of the 7.8 million properties registered in the CAR).

*This analysis was conducted by applying an alert filter with images from before (intact vegetation) with a date after 01/01/2021 and considering the forest classes of MapBiomas Brazil Land Use and Land Cover (forest and savanna formations).

Deforestation driven by **Agriculture** accounts for



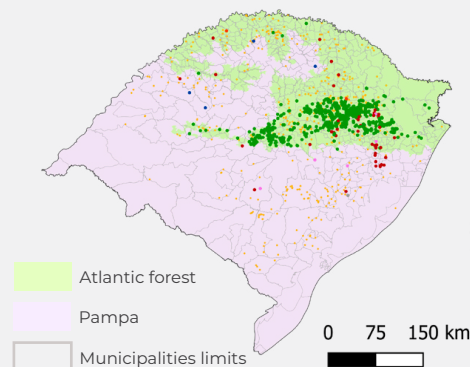
of all native vegetation loss in Brazil over the last six years.

The **Cerrado** is responsible for 45% of the deforested area related to **urban expansion** in 2024.

Between April and May 2024, **extreme weather events in the state of Rio Grande do Sul** resulted in significant losses of native vegetation in the state, **627 alerts** were recorded, totaling **2,805,8 hectares** of lost natural areas.

Of the deforestation associated with **renewable energy projects** since 2019, **93%** is concentrated in the **Caatinga**.

State of Rio Grande do Sul after extreme weather events



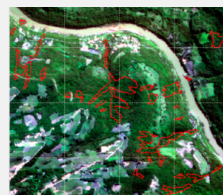
Before images



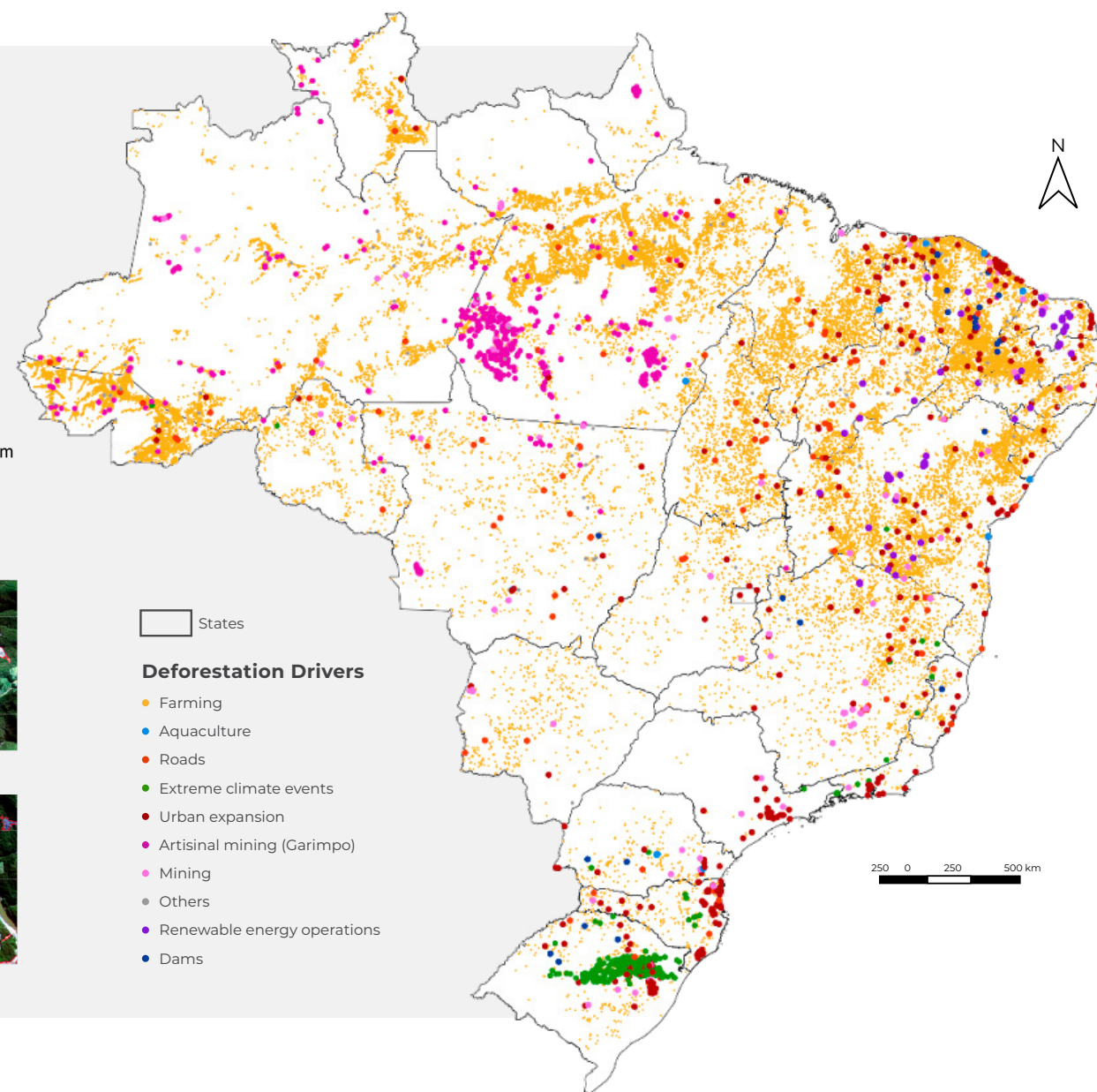
After images



04/21/2024



06/14/2024



Over the last six years, the territory of the
LEGAL AMAZON

has lost 6,647,146 hectares of native
vegetation. In 2024, the loss was
700,063 hectares, a



28%

reduction compared to 2023.

For the second consecutive year,

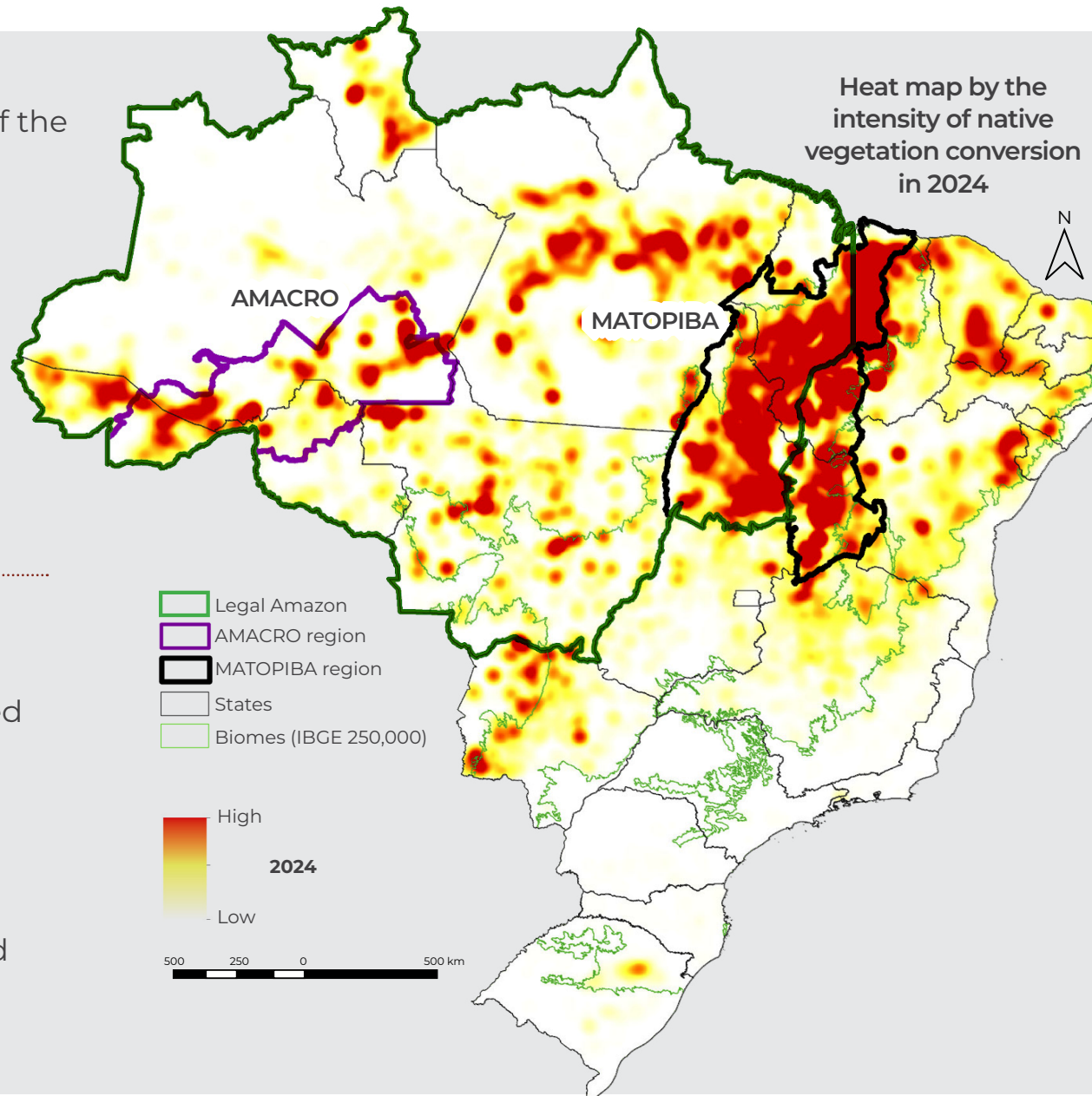
AMACRO

recorded a decrease in the deforested
area. In 2024, there was a

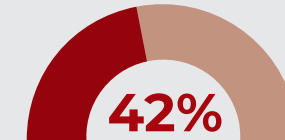


13%

reduction in deforestation compared
to 2023, with **5,753 alerts** totaling
89,826 hectares.



IN 2024



42%

of all native vegetation
loss in the country
occurred in the
MATOPIBA
region, totaling 516,529
hectares.

This represents a



40%

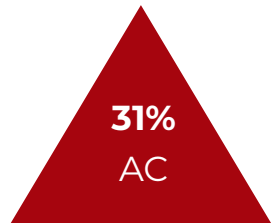
reduction compared
to 2023.

75% of deforestation
in the Cerrado is located
within the boundaries of
MATOPIBA.

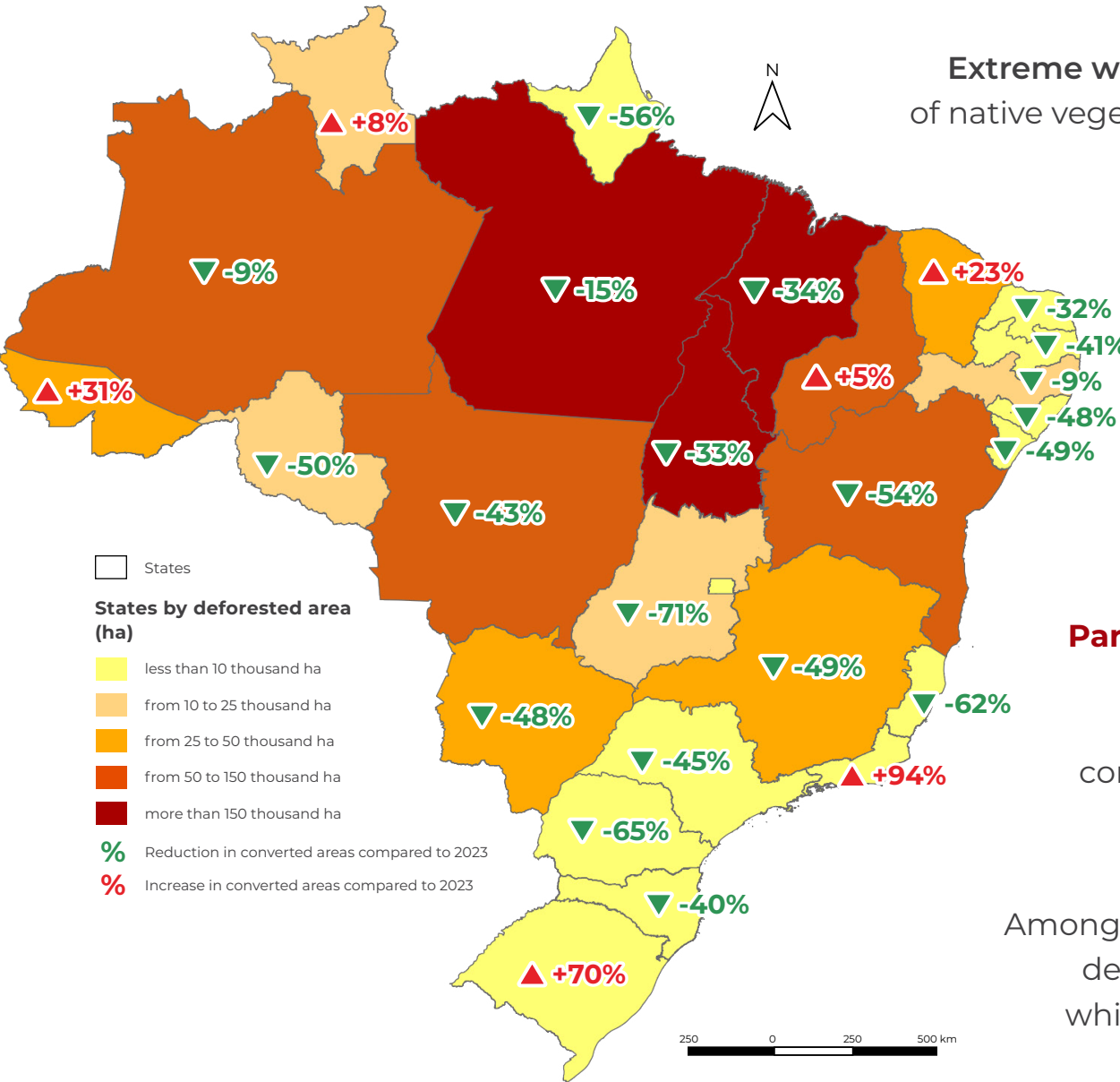
DEFORESTATION BY STATE

The four states of **MATOPIBA** are among the **5 Brazilian states with the highest deforestation rates in 2024**. Together with **Pará**, they account for over **65%** of the deforested area in Brazil.

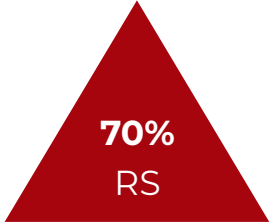
Pará is the state with the **largest accumulated deforested area from 2019 to 2024**, with approximately 2 million hectares cleared.



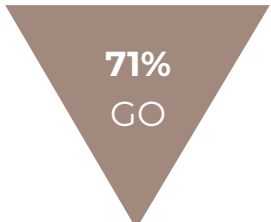
In the **Amazon**, most states showed a decrease in the deforested area. However, **Acre** registered a **31% increase**.



Extreme weather events drove the loss of native vegetation in **Rio Grande do Sul**, which saw a **70% increase**.



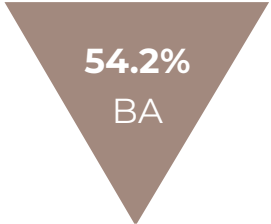
Goiás recorded a **71% decrease** in the deforested area, dropping from 69,388 hectares in 2023 to 19,467 hectares in 2024.



Paraná, Espírito Santo and the Federal District showed **reductions of over 60%** compared to the previous year.



Among the 5 states with the largest deforested area in 2024, **Bahia**, which ranks fifth, registered the largest **decrease at 54.2%**.



DEFORESTATION BY STATE

Maranhão leads the ranking for the second consecutive year, even with a **34.3% reduction** in the deforested area, totaling **218,298.4 ha** of native vegetation lost in 2024.

State	Area of native vegetation in 2023*	Converted Area in hectares						Rank 2023	Rank 2024	Participation 2024
		2019	2020	2021	2022	2023	2024			
Maranhão	20,129,241.5	81,203.8	232,573.8	185,226.9	171,500.2	332,092.8	218,298.4	1	1 ●	17.6%
Pará	96,164,070.3	300,256.0	385,850.5	469,622.0	487,421.7	184,673.6	156,990.0	4	2 ⬆	12.6%
Tocantins	16,996,379.2	99,160.4	109,308.3	65,537.6	82,871.4	230,255.2	153,310.5	3	3 ●	12.3%
Piauí	20,258,818.8	42,022.5	77,034.7	69,683.9	148,281.7	135,984.6	142,871.2	6	4 ⬆	11.5%
Bahia	29,711,551.2	63,633.8	113,063.7	154,404.3	227,779.7	290,808.8	133,334.9	2	5 ⬇	10.7%
Mato Grosso	54,514,235.3	201,507.1	200,305.2	207,761.9	242,572.2	162,668.4	92,553.6	5	6 ⬇	7.5%
Amazonas	147,701,807.3	126,243.6	133,685.4	214,303.8	280,827.5	87,761.6	79,582.8	7	7 ●	6.4%
Mato Grosso do Sul	14,175,689.4	33,946.1	54,148.8	57,627.6	50,234.1	87,108.4	45,424.2	8	8 ●	3.7%
Ceará	10,129,131.0	848.7	8,859.7	20,473.9	23,194.7	32,485.9	40,108.3	12	9 ⬆	3.2%
Minas Gerais	23,146,100.1	26,283.3	45,815.4	51,784.9	50,346.0	75,044.7	38,165.6	9	10 ⬇	3.1%
Acre	13,868,176.0	57,237.7	58,057.7	75,751.9	94,691.6	28,707.4	37,693.1	13	11 ⬆	3.0%
Roraima	20,831,142.4	24,184.6	23,149.3	23,669.1	25,647.9	21,792.1	23,555.6	14	12 ⬆	1.9%
Rondônia	13,985,876.7	122,724.8	119,756.3	146,515.5	145,390.6	41,747.0	20,659.4	11	13 ⬇	1.7%
Goiás	11,885,549.4	33,698.2	54,450.1	40,670.2	30,868.8	69,388.7	19,467.0	10	14 ⬇	1.6%
Pernambuco	5,259,076.6	138.2	3,768.9	14,424.0	21,882.6	16,236.0	14,703.1	15	15 ●	1.2%
Paraíba	2,896,259.3	11.2	2,750.7	6,834.3	6,420.7	13,260.2	7,733.6	16	16 ●	0.6%
Rio Grande do Norte	2,501,924.4	76.4	3,965.5	6,597.4	3,502.2	9,134.5	6,130.3	17	17 ●	0.5%
Rio Grande do Sul	12,142,979.7	1,119.3	2,148.2	3,748.1	5,218.2	2,343.2	3,998.6	20	18 ⬆	0.3%
Alagoas	629,411.4	59.7	952.0	918.5	3,070.6	5,355.5	2,762.8	18	19 ⬇	0.2%
Sergipe	433,933.3	258.4	845.7	1,495.2	3,657.8	5,077.7	2,592.0	19	20 ⬇	0.2%
Amapá	13,541,419.8	1,461.3	1,628.5	783.6	1,230.3	1,392.5	617.3	21	21 ●	0.0%
Santa Catarina	4,321,165.7	487.1	1,760.7	1,470.8	2,189.3	754.9	453.4	23	22 ⬆	0.0%
Paraná	5,472,469.4	2,132.0	5,509.9	6,887.1	3,971.9	1,229.9	432.1	22	23 ⬇	0.0%
Rio de Janeiro	1,402,974.8	125.3	321.1	160.9	495.0	163.4	317.4	27	24 ⬆	0.0%
São Paulo	5,434,013.2	369.8	530.4	535.4	752.9	281.2	155.3	26	25 ⬆	0.0%
Espírito Santo	1,185,741.5	88.3	217.0	114.5	501.9	362.8	137.4	25	26 ⬇	0.0%
Distrito Federal	274,155.4	94.6	153.3	125.3	89.6	638.4	31.4	24	27 ⬇	0.0%
TOTAL (BRAZIL)	548,993,293.1	1,219,372.3	1,640,610.6	1,827,128.7	2,114,611.2	1,836,749.3	1,242,079.1			

*Source: MapBiomas - collection 9, 2023

DEFORESTATION BY MUNICIPALITY

54%

Out of Brazil's 5,572 municipalities, **2,990 (54%)** had at least one detected and validated deforestation event in 2024.

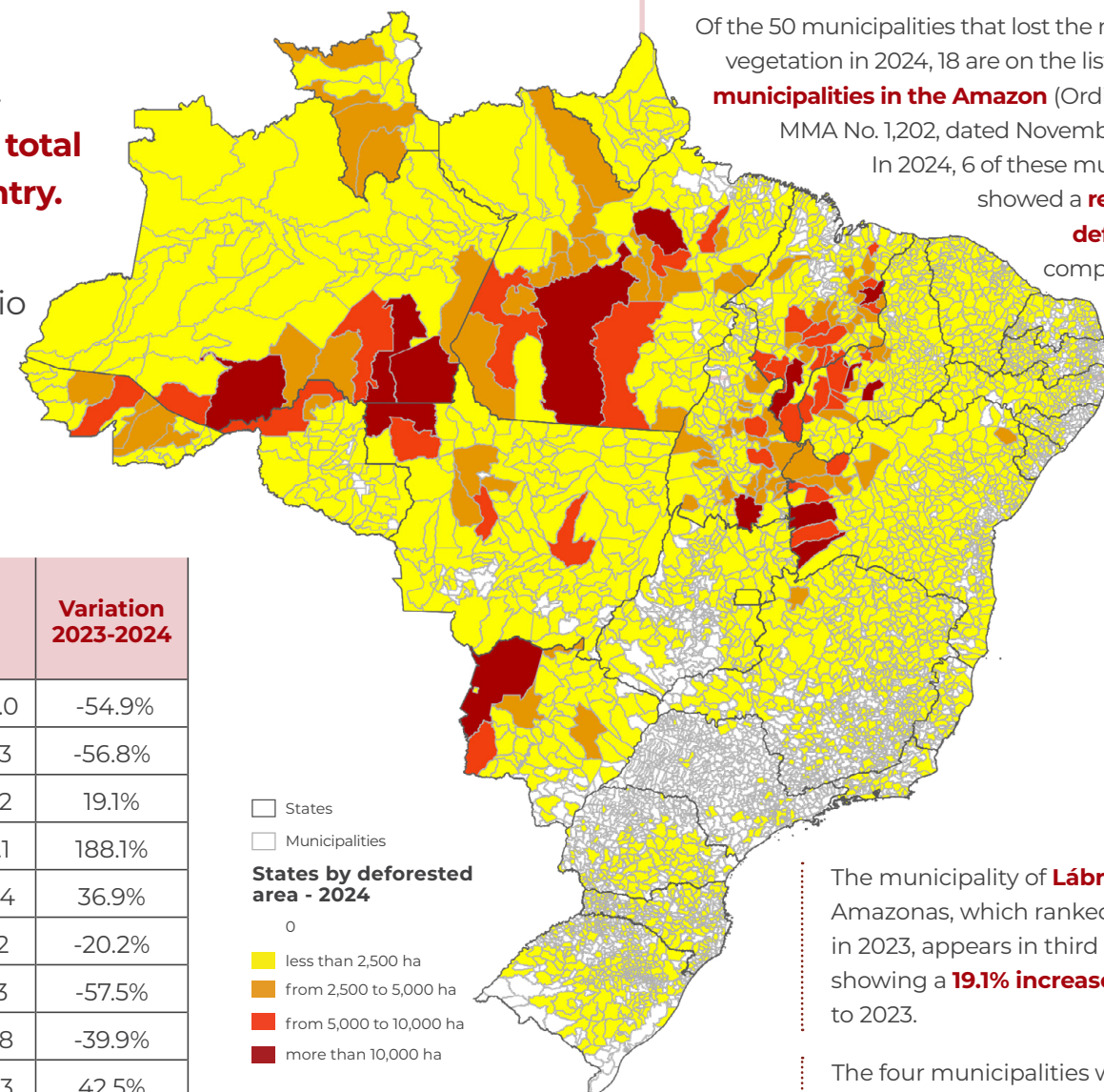
The **10 municipalities** with the **highest deforestation rates** in 2024 together accounted for **10.2% of the total validated deforestation in the country**.

Despite a **reduction of over 50%** in the deforested area, São Desidério (BA) and Balsas (MA) continue to occupy the **top positions in the ranking**.

10 municipalities with the largest deforested area in Brazil in 2024

Rank	STATE	Municipality	2019	2020	2021	2022	2023	2024	Variation 2023-2024
1	BA	São Desidério	2,312.4	12,468.7	17,491.1	36,591.1	40,051.4	18,049.0	-54.9%
2	MA	Balsas	8,010.3	21,159.3	16,902.1	27,854.0	37,596.0	16,252.3	-56.8%
3	AM	Lábrea*	32,484.5	37,639.9	53,938.3	64,808.8	10,794.7	12,852.2	19.1%
4	PI	Sebastião Leal	124.4	8,054.6	5,613.7	19,984.9	4,305.8	12,407.1	188.1%
5	AM	Novo Aripuanã*	18,137.5	10,803.7	17,432.2	29,873.7	8,833.6	12,094.4	36.9%
6	TO	Paranã	5,362.0	5,812.7	4,985.0	3,988.4	14,746.3	11,772.2	-20.2%
7	MS	Corumbá	9,183.8	14,775.3	11,149.1	16,239.0	26,284.5	11,164.3	-57.5%
8	AM	Apuí*	21,865.0	22,217.1	39,956.1	59,201.6	18,273.7	10,973.8	-39.9%
9	PA	Portel*	11,670.3	19,166.4	24,755.7	31,266.3	7,670.6	10,928.3	42.5%
10	MT	Colniza*	18,364.4	19,806.0	24,683.1	36,100.0	9,447.2	10,716.5	13.4%

*Municipalities presented in the list of priority municipalities in the Amazon according to Ordinance GM/MMA No. 1,202, of November 11, 2024.



Of the 50 municipalities that lost the most native vegetation in 2024, 18 are on the list of **priority municipalities in the Amazon** (Ordinance GM/MMA No. 1,202, dated November 11, 2024). In 2024, 6 of these municipalities showed a **reduction in deforestation** compared to the previous year.

The municipality of **Lábrea**, in Amazonas, which ranked 22nd in 2023, appears in third position, showing a **19.1% increase** compared to 2023.

The four municipalities with the **largest proportional increases** are located in **Piauí**: Canto do Buriti, Jerumenha, Currais and Sebastião Leal.

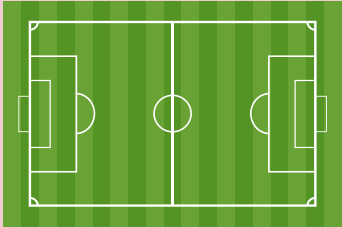
DEFORESTATION THROUGHOUT THE YEAR AND DEFORESTATION SPEED

In **2024**, the average deforested area per day in Brazil was 3,403 hectares - or **141.8 hectares per hour**.

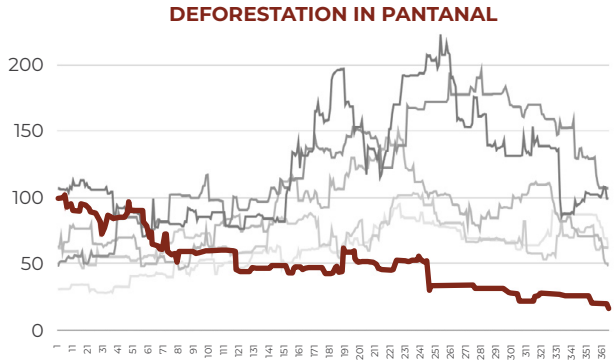
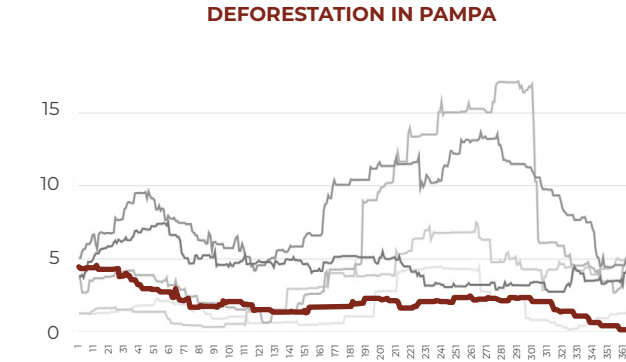
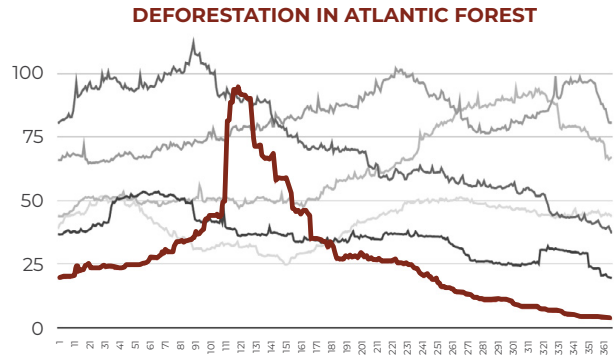
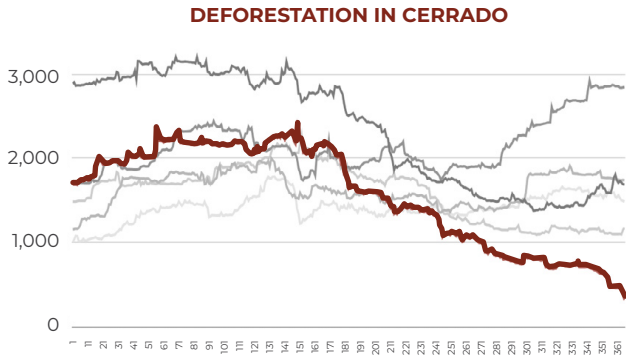
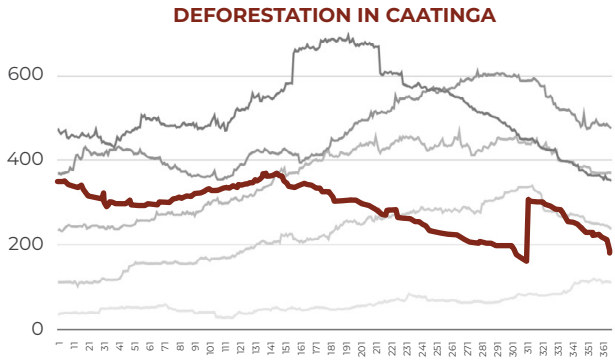
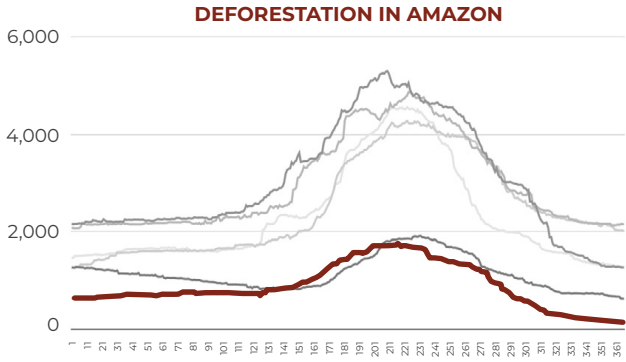
In the **Cerrado** alone, **1,786 hectares of native vegetation were lost per day**.

In the **Amazon**, 1,035 hectares were lost per day, which is equivalent to about **7 trees per second**.

The day with the largest deforested area in **2024 was June 21st** - on that single day, **an area equivalent to 3,542 soccer fields** was deforested.



Distribution of deforestation by biome throughout the year - estimated **deforested area per day in Brazil over the last six years** (in hectares).*



In the **Caatinga**, the period between **November 5th and 6th** stands out, marking the beginning of the **largest deforestation event** recorded in **Brazil** for the year.

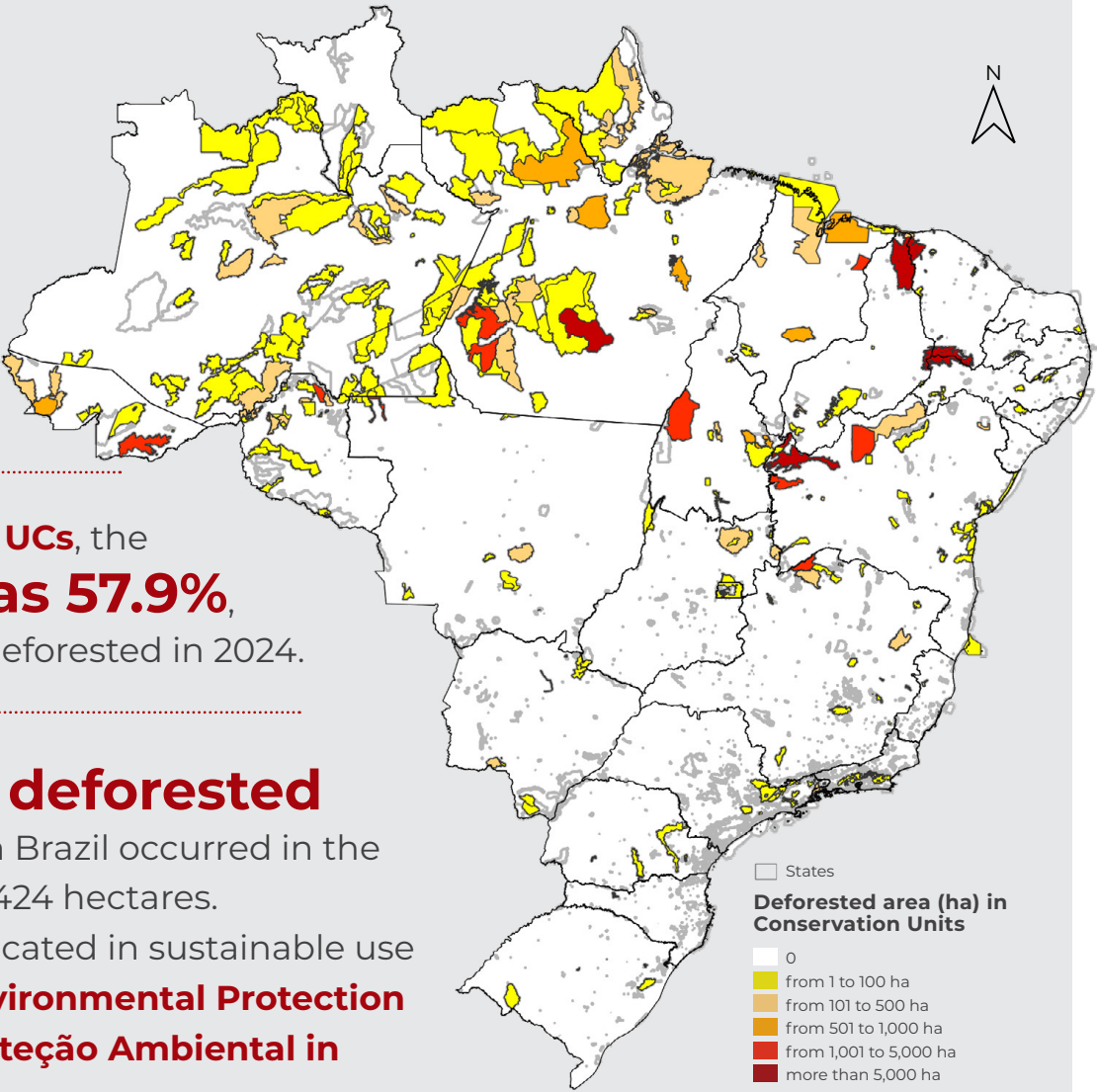
The dynamics of the **Atlantic Forest** were impacted by the **extreme weather events** recorded in Rio Grande do Sul during the months of **April and May**.

* The alert area attributed to the days of the second half of 2024 shows slightly lower values than the actual figures, because deforestation from the beginning of 2025 (not considered in this report), for which pre-deforestation imagery may have been selected in the last months of 2024, has not yet been accounted for. This uncounted fraction of the area will be distributed and added to the corresponding days of 2024 only in the next annual report.

57,930 hectares
hectares of native
vegetation were lost
within UCs in 2024,
representing a
**42.5%
reduction**
compared to 2023.

In **Strictly Protected UCs**, the
reduction was 57.9%,
with 4,577 hectares deforested in 2024.

**43.9% of the deforested
area** within UCs in Brazil occurred in the
Amazon, totaling 25,424 hectares.
Of this total, **45%** is located in sustainable use
UCs called **APAs (Environmental Protection
Areas / Áreas de Proteção Ambiental in
Portuguese)**.



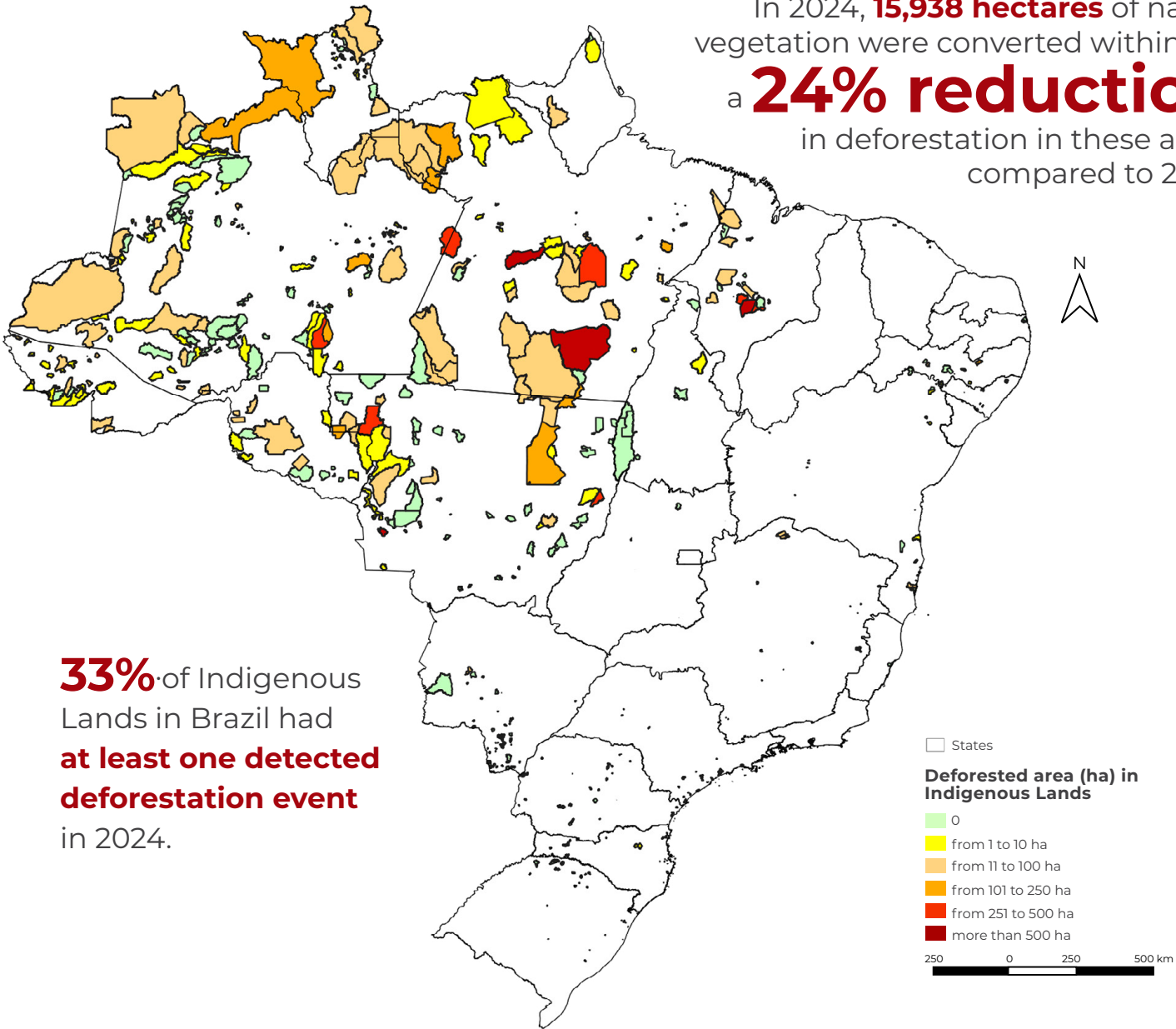
**Deforested Area (hectares) in Conservation
Units (UCs) in Brazil from 2019 to 2024.**

UC category and level	2019	2020	2021	2022	2023	2024	Total	Variation 2023-2024
State level Strictly Protected	6,696	6,645	7,247	9,902	2,148	1,612	34,251	-24.92%
State level Sustainable Use	38,579	41,784	57,886	49,651	22,967	23,239	234,105	1.18%
State level Strictly Protected	13,792	20,198	26,721	30,084	8,723	2,952	102,470	-66.16%
State level Sustainable Use	88,170	98,750	113,137	124,121	64,203	29,449	517,831	-54.13%

The **APA Triunfo do Xingu (PA)**, in the
Amazon, was the UC with the largest
deforested area in Brazil, despite a **31.7%
reduction** compared to 2023, when it ranked
third with 9,391 hectares.

31.7%

RANK	NAME OF THE UC IN THE FEDERAL DATA BASE SNUC	UF	NUMBER OF ALERTS IN 2024	DEFORESTED AREA (HA) IN 2024
1	APA Triunfo do Xingu (0000.15.1039)	PA	186	6,413
2	APA Serra da Ibiapaba (0000.00.0029)	CE, PI	862	6,145
3	APA da Chapada do Araripe (0000.00.0008)	CE, PE, PI	652	5,965
4	APA Serra do Rio Preto (0000.29.1016)	BA	102	5,328
5	APA do Tapajós (0000.00.0268)	PA	261	3,421



Deforested Area (hectares) in Indigenous Lands (TIs) in Brazil from 2019 to 2024.

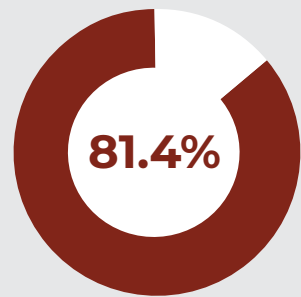
Deforestation in TIs compared to the total	2019	2020	2021	2022	2023	2024	Total	Variação 2023-2024
Deforested area in TIs (ha)	40,354	39,075	35,375	31,389	21,039	15,938	183,170	-24.2%
Total deforested area in Brazil (ha)	1,219,372	1,640,611	1,827,129	2,114,611	1,836,749	1,242,079	9,880,551	-32.4%
% of deforested area in TIs in Brazil	3.3%	2.4%	1.9%	1.5%	1.1%	1.3%	1.9%	

RANK	NAME OF THE TIS IN THE FEDERAL DATABASE FUNAI	NUMBER OF ALERTS IN 2024	DEFORESTED AREA (HA) IN 2024
1	Porquinhos dos Canela-Apãnjekra (36602)	23	6,208
2	Cachoeira Seca (7601)	228	1,463
3	Sararé (42101)	62	962
4	Kayapó (23001)	409	689
5	Wedezé (73601)	1	402

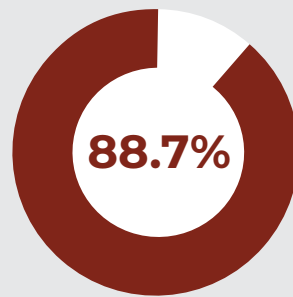
The **Porquinhos dos Canela-Apãnjekra (MA)**, Indigenous Land (MA) registered a **125% increase** in the area of native vegetation loss compared to 2023 and remained in the **top position** of the ranking.

125%

0.8% of the properties registered on the CAR* have some record of deforestation in 2024. However, these properties account for



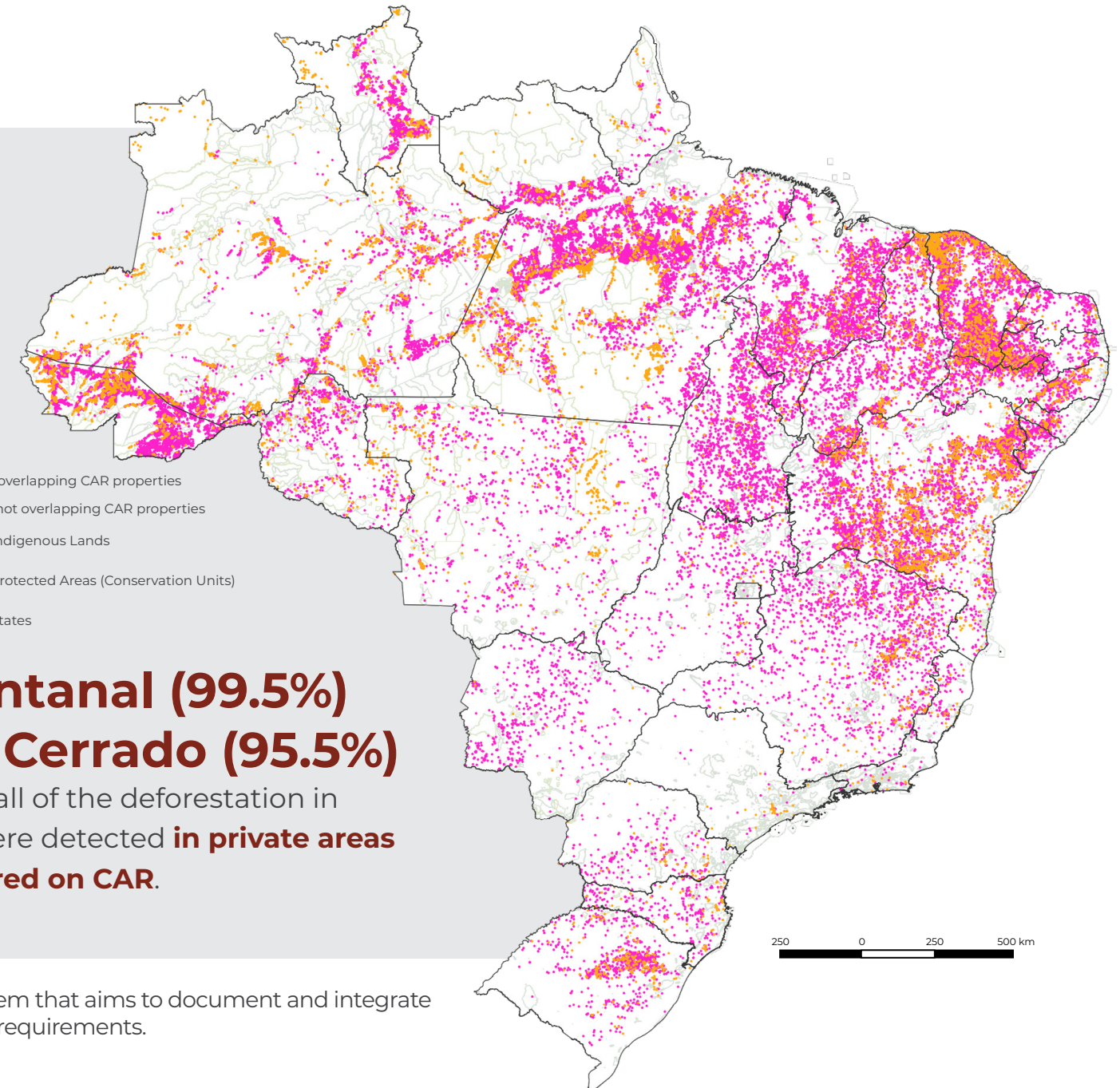
**OF THE VALIDATED
DEFORESTATION EVENTS**



**OF THE TOTAL DEFORESTED
AREA IN BRAZIL**

Out of the total of **62,508 properties** registered on CAR with validated deforestation in 2024, **46.3%** already had records of deforestation in previous years

38.8% of the properties on CAR with deforestation alerts **are concentrated in the Amazon**



In **Pantanal (99.5%) and Cerrado (95.5%)** almost all of the deforestation in 2024 were detected **in private areas registered on CAR.**

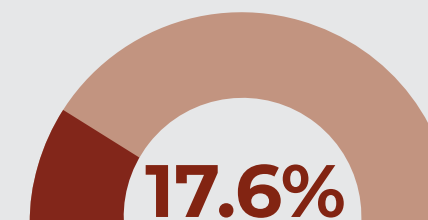
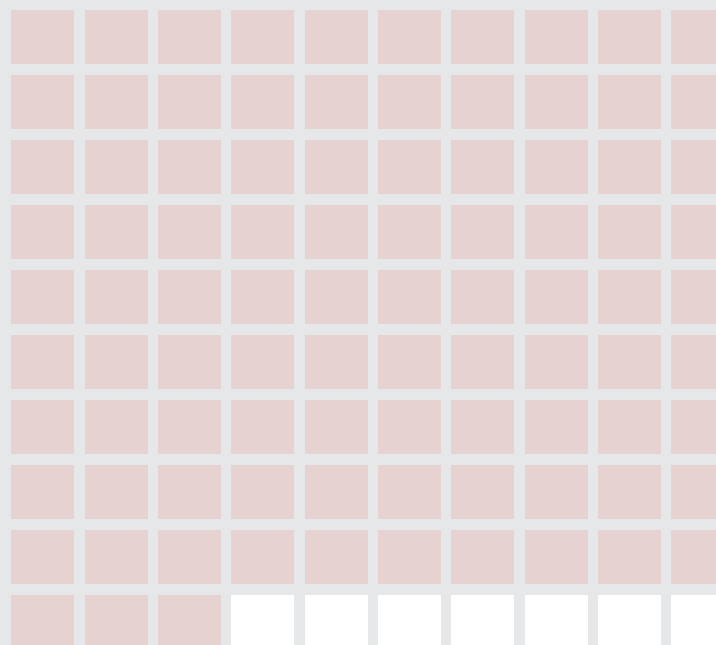
*CAR refers to the Cadastro Ambiental Rural (Rural Environmental Registry). It's a national system that aims to document and integrate all information on rural properties, ensuring compliance with natural vegetation conservation requirements.

INDICATION OF ILLEGAL DEFORESTATION

EVALUATED CRITERIA:

- (i) whether there is overlap with areas **authorized** for the suppression of native vegetation;
- (ii) whether there is no overlap with areas protected by Law (**Strict Protection Conservation Units and Indigenous Lands**);
- (iii) whether there is no overlap with protected areas within rural properties (**Legal Reserve and Permanent Preservation Area**); and
- (iv) whether there is no overlap with **embargoed** areas where deforestation occurred.

For the year **2024**, 4,481 alerts were identified (7% of the total) with no indication of irregularity or illegality in Brazil, which indicates that **93% of the alerts showed some sign of irregularity**.



From 2019 to 2024, 17,931 deforestation events, totaling 1,741,370 hectares, showed no signs of illegality. This means that **17.6% of all deforested area in Brazil over the last six years shows no indication of illegality or irregularity**.

DEFORESTATION IN LEGAL RESERVES (RLs)

Over the past six years, Brazil lost **1,962,575 hectares of native vegetation** within LR. This corresponds to 19.9% of all deforested area in the country during this period.

In **2024**, deforestation overlapping with LR (Legal Reserves) **decreased by 23%** compared to 2023. And all biomes showed a reduction in deforestation within LR.

23%

AUTHORIZED AND SUPERVISED DEFORESTATION

up to 40% between 40% and 70% above 70%

Over the past six years, **54% of all deforested area** in the country spatially overlaps with an **authorization and/or enforcement action**.

The three states with the highest proportion of **authorized deforestation** were: **TO** (59.6%), **BA** (54.9%) and **MS** (51%).

In the last three years, **ES, MT, TO and GO** maintained their rates of deforested area overlapping with **authorizations and/or enforcement actions above 70%**.

STATE	Deforested area (ha)	Area of alerts that cross federal or state authorization (ha)	% of area with federal or state authorization	Area of alerts that intersect with federal or state inspection action (ha)	% of area subject to federal or state inspection action	% of the area of alerts that intersect with authorizations and/or inspection actions
AC	352,139.50	14,061.80	4.00%	95,416.50	27.10%	29.90%
AL	13,119.20	524.2	4.00%	6,093.70	46.50%	48.90%
AM	922,404.60	7,603.40	0.80%	567,278.40	61.50%	61.80%
AP	7,113.30	2,239.70	31.50%	1,578.60	22.20%	50.10%
BA	983,025.20	539,303.90	54.90%	139,572.90	14.20%	60.30%
CE	125,971.20	18,722.00	14.90%	11,445.00	9.10%	22.60%
DF	1,132.60	510.3	45.10%	249.2	22.00%	63.20%
ES	1,421.90	568.4	40.00%	1,408.50	99.10%	99.90%
GO	248,543.00	26,821.90	10.80%	142,540.30	57.40%	64.30%
MA	1,220,895.80	385,982.10	31.60%	54,939.30	4.50%	35.30%
MG	287,439.90	53,359.40	18.60%	148,727.30	51.70%	61.20%
MS	328,489.10	167,507.30	51.00%	8,555.10	2.60%	52.50%
MT	1,107,368.50	337,030.10	30.40%	654,723.00	59.10%	82.60%
PA	1,984,813.80	22,835.80	1.20%	929,172.90	46.80%	47.40%
PB	37,010.70	3,676.60	9.90%	2,748.60	7.40%	15.80%
PE	71,152.70	3,889.00	5.50%	2,525.30	3.60%	9.00%
PI	615,878.60	218,963.60	35.60%	184,721.70	30.00%	57.50%
PR	20,162.90	899	4.50%	16,578.00	82.20%	85.40%
RJ	1,583.10	84.3	5.30%	723.8	45.70%	48.10%
RN	29,406.40	9,789.20	33.30%	86.5	0.30%	33.40%
RO	596,793.60	13,787.50	2.30%	246,503.10	41.30%	42.90%
RR	141,998.70	41,620.60	29.3 %	35,016.00	24.70%	49.20%
RS	18,575.60	2,928.70	15.80%	8,940.00	48.10%	58.30%
SC	7,116.40	589.2	8.30%	304.1	4.30%	12.20%
SE	13,926.80	1,541.50	11.10%	3,558.10	25.60%	31.90%
SP	2,625.00	346.9	13.20%	1,095.20	41.70%	54.10%
TO	740,443.30	441,376.10	59.60%	100,966.50	13.60%	67.00%
BRAZIL	9,880,551.20	2,316,562.40	23.50%	3,365,467.60	34.10%	54.00%

ABOUT MAPBIOMAS ALERTA

WHAT IS MAPBIOMAS ALERTA



MapBiomias Alerta is a **validation** and refining system for deforestation alerts based on **high-resolution satellite images**.



In a single platform, we bring together alerts from several detection systems for **all of Brazilian biomes**. We cross-reference them with relevant territorial data (e.g. municipalities, rural properties, protected areas, authorizations, embargoes, etc.) and provide **detailed ready-to-use reports** for each deforestation event in a free and open-access way.



The MapBiomias Alerta initiative publishes **any and all losses of native vegetation**, without assessing the legality, regularity or responsibility for the suppression of the vegetation.



Every week you will find new deforestation alerts validated for all Brazilian biomes, with several filter options for temporal and territorial analysis.



By selecting one alert, you can view high-resolution images of before and after the deforestation occurred.



Access the full report for each rural property that overlaps a deforestation alert and search by CAR code.

PROCESS

1

Compilation of alerts from detection systems

DETER / INPE
SAD / Imazon
SAD / Caatinga / Geodatin
SIRAD-X / ISA
SAD / Mata Atlântica / SOS Mata Atlântica and ArcPlan
SAD / Pantanal / SOS Pantanal and ArcPlan
SAD / Pampa / GeoKarten and UFRGS
SAD / Cerrado / IPAM
Atlas SOS Atlantic Forest / SOS Atlantic Forest and INPE
GLAD / Maryland University
PRODES / INPE

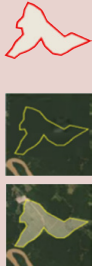
2

Validation and selecting images of before and after



3

Refining the polygon based on high resolution images



4

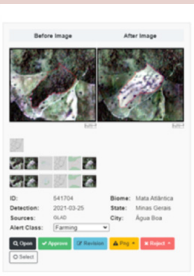
Cross-referencing with public data sets



FUNAI
ICMBIO
IBAMA
INCRA
SFB
IBGE
ANA
(...)

5

Audit of images and crossings



6

Publication on the platform and API



HOW TO REFERENCE

The MapBiomias data is public, open, and free under the Creative Commons CC-BY license and with attribution to the source.
RAD2024: Annual Report on Deforestation in Brasil 2024 - São Paulo, Brazil - MapBiomias, 2025.

<http://alerta.mapbiomas.org>

Find out more at mapbiomas.org

