



In September 2026, the Amazon faced a scenario of environmental contrasts, marked by persistent dry conditions in several river basins, the spread of forest fires, and episodes of heavy rainfall in other areas of the region. The precipitation deficit in basins such as those of the Negro, Branco, Purus, Ucayali, Tapajós, and Xingu rivers heightened concern about water availability and the evolution of the drought, while weather alerts indicated risks of heavy rain and flooding in parts of the Ecuadorian and Bolivian Amazon.

One of the main highlights of the month was the deterioration of air quality in Brazilian Amazonian municipalities, associated with smoke from the fires. In Manaus, recurring episodes of air pollution culminated on September 23 in a fine particulate matter (PM2.5) concentration of 188.5 µg/m³, according to the municipal government, with air quality classified as very poor. Municipalities such as Manacapuru, Manaquiri, Iranduba,

Careiro, and Itacoatiara also recorded worrying conditions. The movement of smoke between municipalities shows that the impacts of fires extend beyond the areas directly affected by the flames, increasing risks to public health.

The regional scenario was also marked by alerts about the possible effects of El Niño, which may intensify drought conditions and increase the risk of fires in parts of the Amazon in the coming months. In Peru, forest fires were recorded in Ucayali, while Brazilian hydrological monitoring indicated concerning water low levels in rivers in the Branco basin. These events reinforce the importance of integrated monitoring of precipitation, temperature, river levels, heat hotspots, and burned areas, carried out by the Amazon Regional Observatory (ARO), to understand the evolution of environmental conditions and support cooperation among the eight ACTO Member Countries.

CREDITS

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Bulletin online

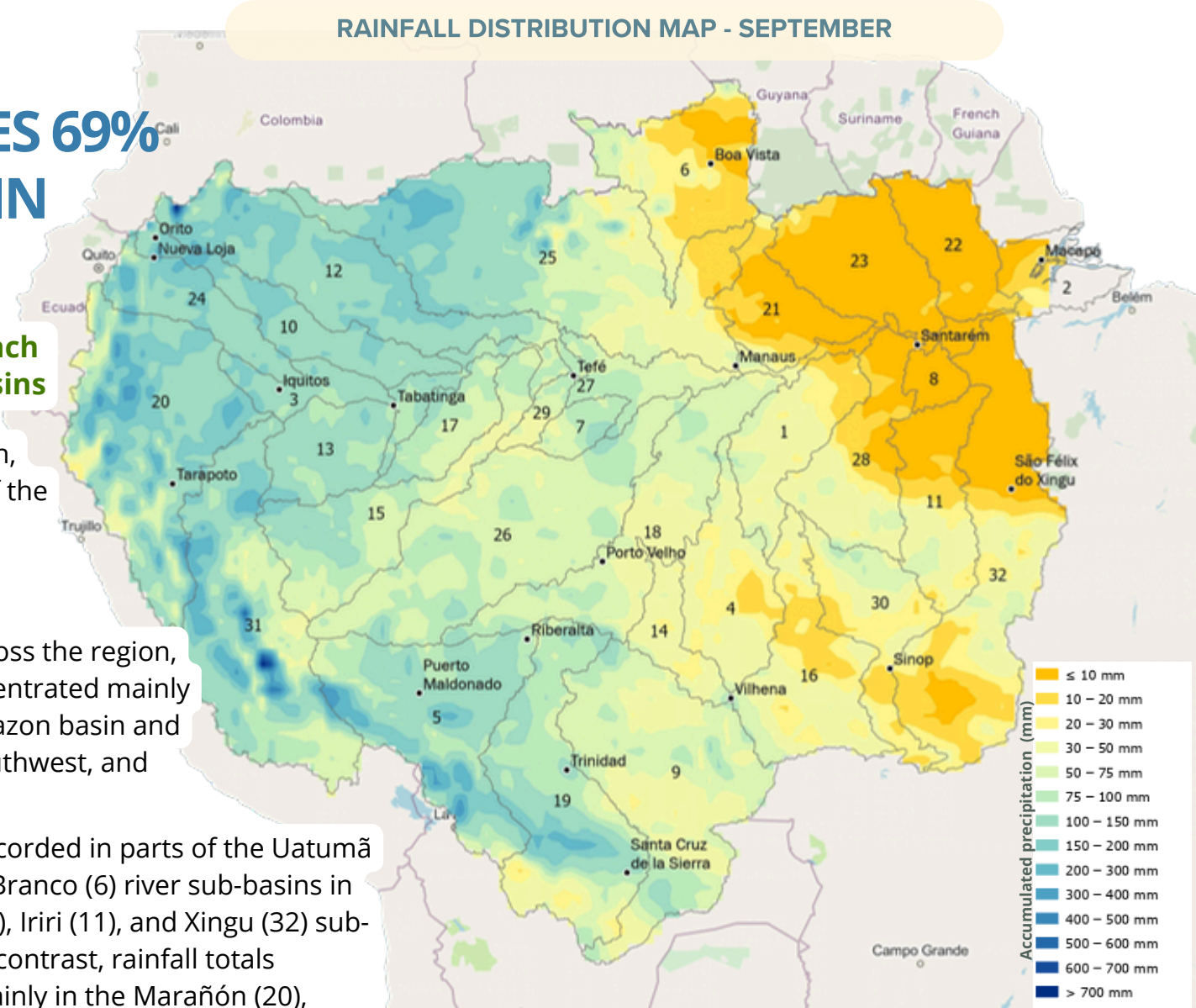
BELOW-AVERAGE RAINFALL REACHES 69% OF THE AMAZON IN SEPTEMBER

Dry conditions advance and reach 22 of the 32 Amazonian sub-basins

Considering the entire Amazon basin, which covers 5.9 million km², 69% of the area received less precipitation than expected in September, while 31% remained near normal.

Rainfall distribution was uneven across the region, with the lowest accumulations concentrated mainly in the northeast and east of the Amazon basin and the highest volumes in the west, southwest, and northwest.

Rainfall totals below 10 mm were recorded in parts of the Uatumã (21), Paru (22), Trombetas (23), and Branco (6) river sub-basins in the northeast, and the Curuá-Una (8), Iriri (11), and Xingu (32) sub-basins in the east and southeast. In contrast, rainfall totals exceeding 50 mm were recorded mainly in the Marañón (20), Napo (24), Ucayali (31), and Beni (5) river basins.



Source: ERA5/ECMWF-C3S; processing and analysis: ORA/ACTO, 2026.

32

Total sub-basins

22

Sub-basins under drought conditions

10

Sub-basins with rainfall within the normal range

0

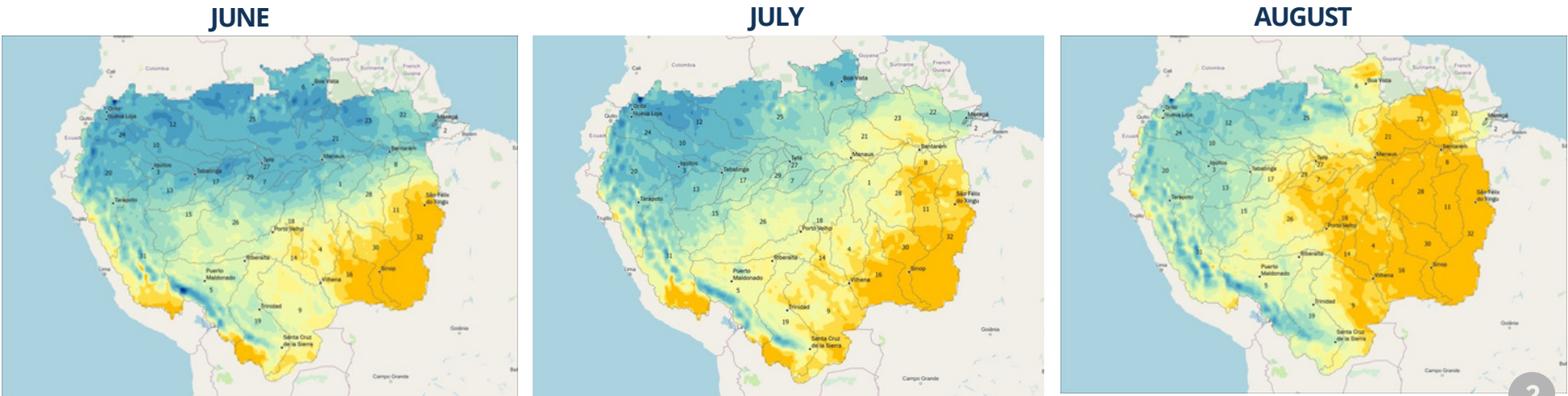
Sub-basins above normal

KEY MESSAGES

-  Below-average rainfall in 69% of the Amazon. In September, 22 of the 32 sub-basins had a precipitation deficit, four more than in August.
-  Attention to the impacts of drought and fires. Persistent dry conditions may promote forest fires, worsen the decline in river levels, and increase the population's exposure to smoke.
-  Uneven rainfall distribution. The lowest accumulations were concentrated in the northeast and east of the Amazon basin, while the highest volumes occurred in the west, southwest, and northwest.

WHAT DESERVES ATTENTION?

The development of El Niño in the equatorial Pacific deserves attention in the coming months. The phenomenon alters atmospheric circulation patterns and may lead to higher temperatures and below-average rainfall in parts of the Amazon, especially in the northern and eastern regions. If these conditions are confirmed, they could prolong the drought, intensify the decline in river levels, and increase the risk of forest fires and episodes of air pollution caused by smoke from fires.



Source: ERA5/ECMWF-C3S; processing and analysis: ORA/ACTO, 2026.

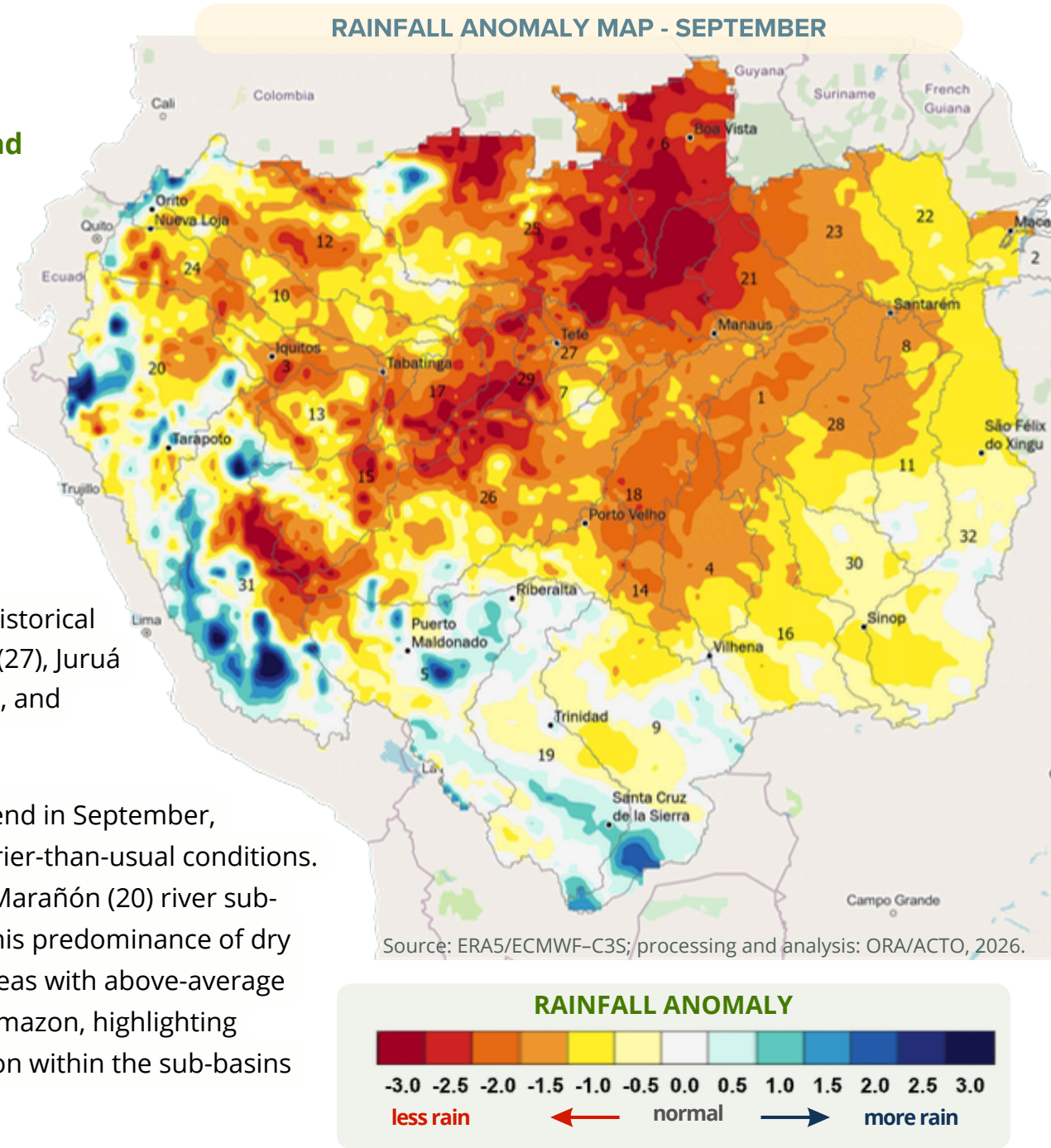
SEPTEMBER WAS DRIER THAN NORMAL ACROSS MUCH OF THE AMAZON

The north and center of the Amazon recorded the largest rainfall deficits, while some areas of the southwest had above-average precipitation.

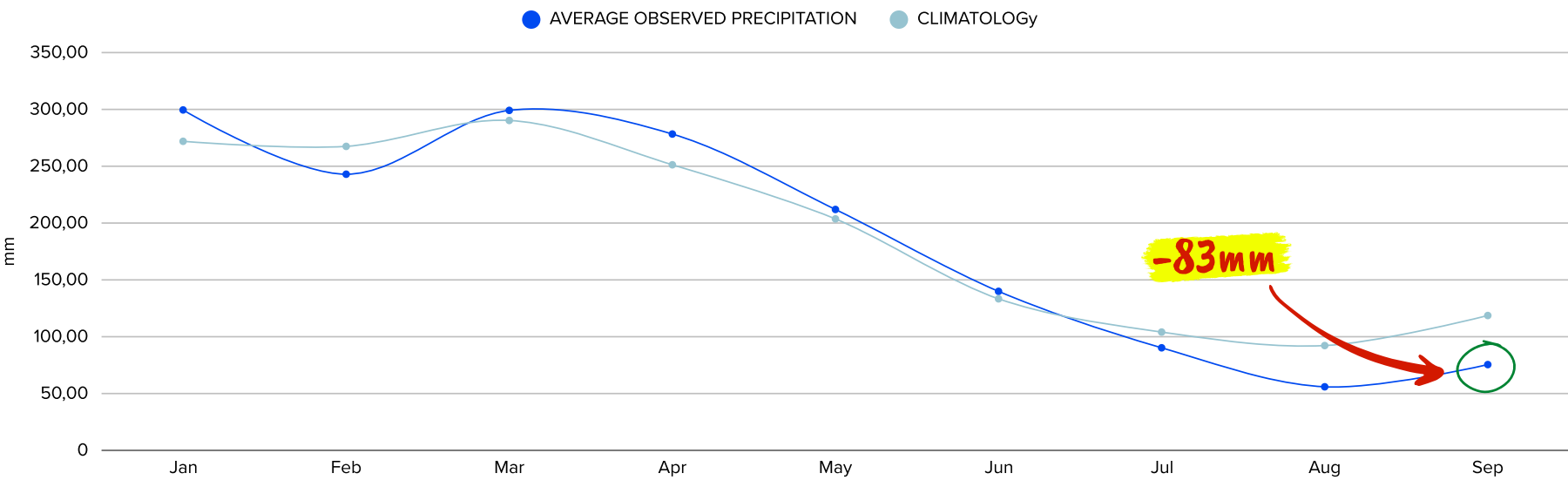
In September, negative precipitation anomalies expanded across the Amazon basin, with the most intense deficits concentrated in the northern and central areas of the region. Drier conditions persisted in the Branco (6), Tefé (29), Jutai (17), Uatumã-Nhamundá (21), and Negro (25) river sub-basins.

Below-average rainfall compared with the historical average was also observed in the Solimões (27), Juruá (15), Abacaxis (1), Trombetas (23), Napo (24), and Putumayo (10) river sub-basins.

None of the 32 sub-basins showed a wet trend in September, confirming the regional predominance of drier-than-usual conditions. The Ucayali (31), Beni (5), Guaporé (9), and Marañón (20) river sub-basins remained close to normal. Despite this predominance of dry conditions, the map also shows localized areas with above-average rainfall, especially in the southwest of the Amazon, highlighting differences in the distribution of precipitation within the sub-basins themselves.



AVERAGE MONTHLY RAINFALL IN THE AMAZON BASIN



Source: ERA5/ECMWF-C3S; processing and analysis: ORA/ACTO, 2026.



In September 2026, average precipitation in the Amazon basin was approximately 75 mm, about 83 mm below the period average. Since July 2026, the basin's observed average precipitation has been below the historical average.

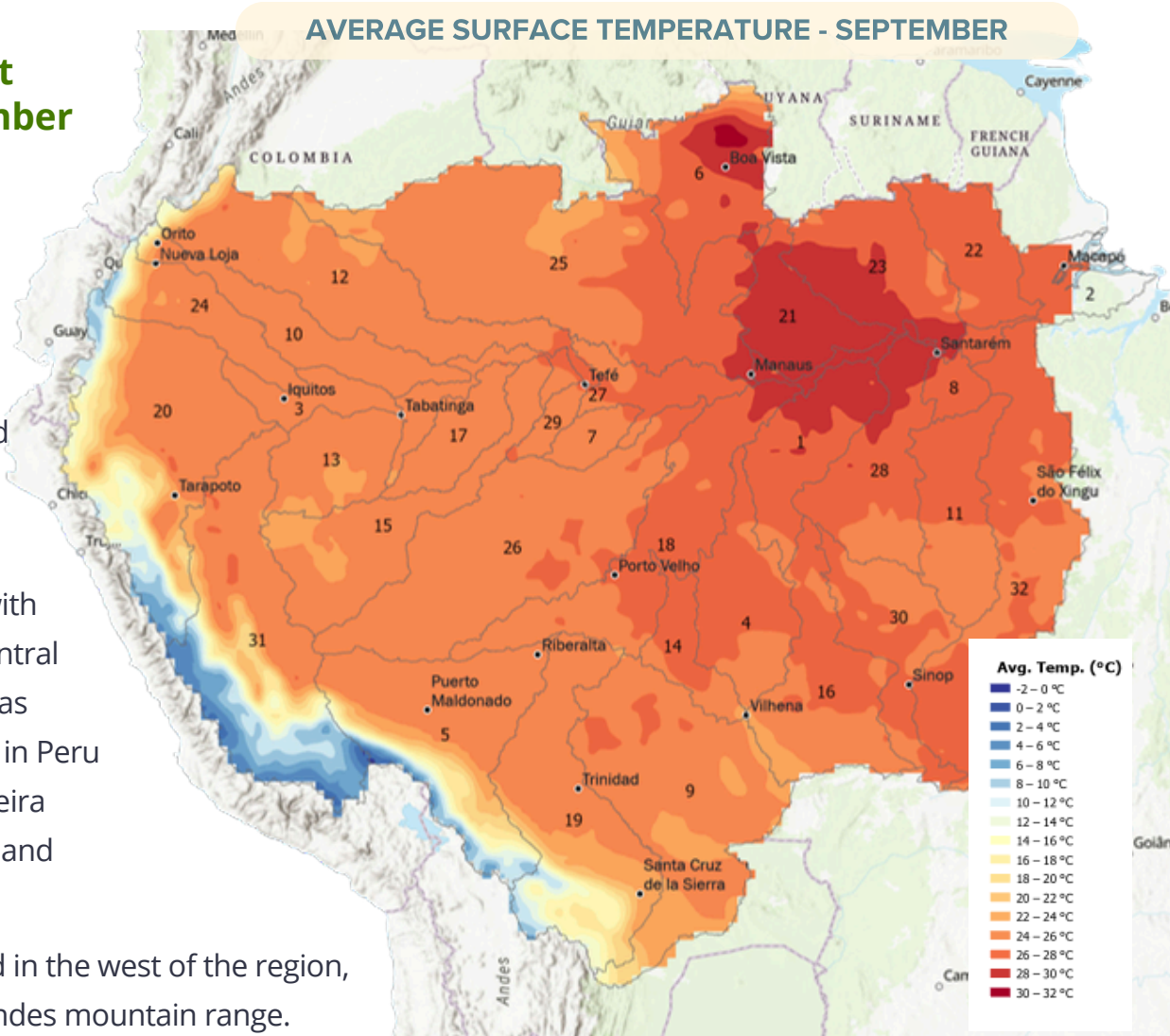
HIGH TEMPERATURES PERSIST IN THE CENTRAL-EAST AND NORTH OF THE AMAZON

Despite the reduction in the warmest areas compared with August, September recorded temperatures above the historical average.

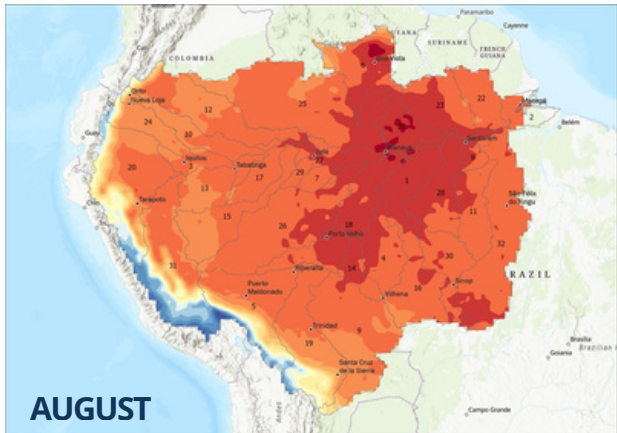
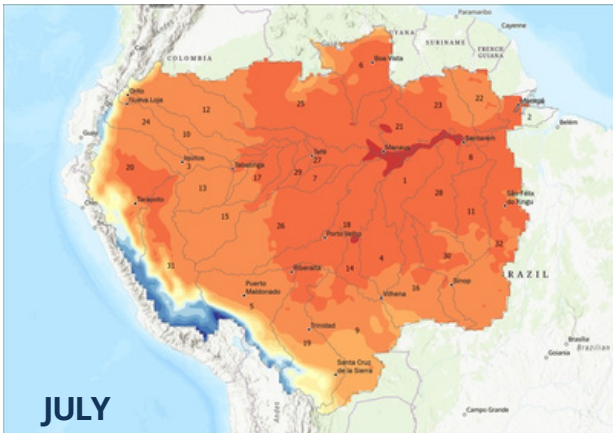
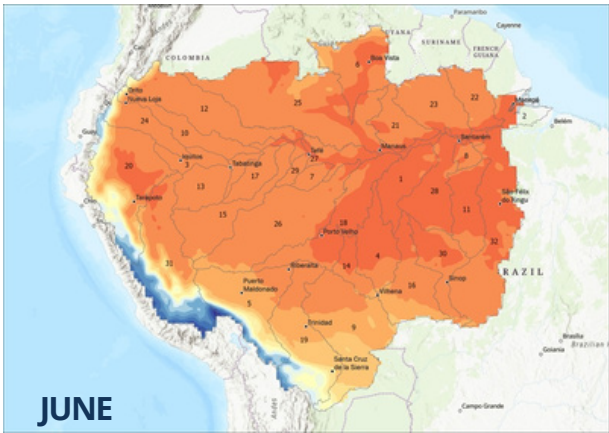
In September, the highest temperatures remained concentrated in the central-eastern and northeastern regions of the Amazon basin, especially in the Brazilian states of Amazonas and Roraima, where averages ranged from 28 °C to 30 °C.

Compared with August, the extent of the areas with higher temperatures decreased, mainly in the central and southern parts of the basin. This decrease was observed in sections of the Abacaxis (1), Amazon in Peru (3), Branco (6), Curuá-Una (8), Ji-Paraná (14), Madeira (18), Marañón (20), Uatumã (21), Trombetas (23), and Ucayali (31) river sub-basins.

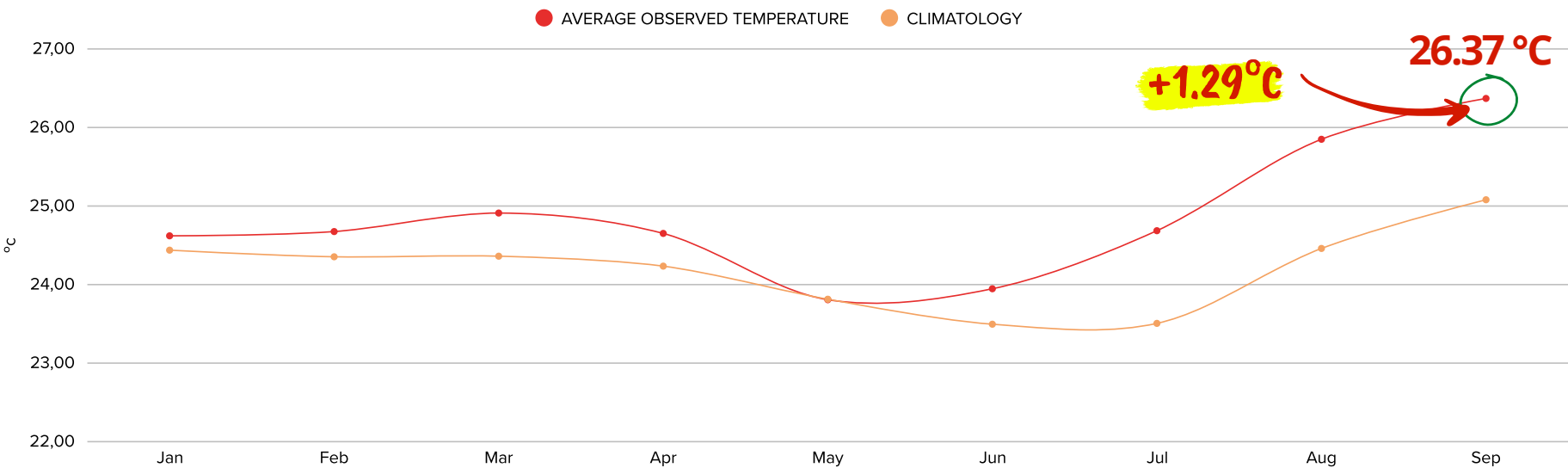
The lowest temperatures remained concentrated in the west of the region, especially in the higher-altitude areas near the Andes mountain range.



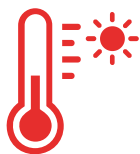
Source: ERA5/ECMWF-C3S; processing and analysis: ORA/ACTO, 2026.



AVERAGE MONTHLY TEMPERATURE IN THE AMAZON BASIN



Source: ERA5/ECMWF-C3S; processing and analysis: ORA/ACTO, 2026.

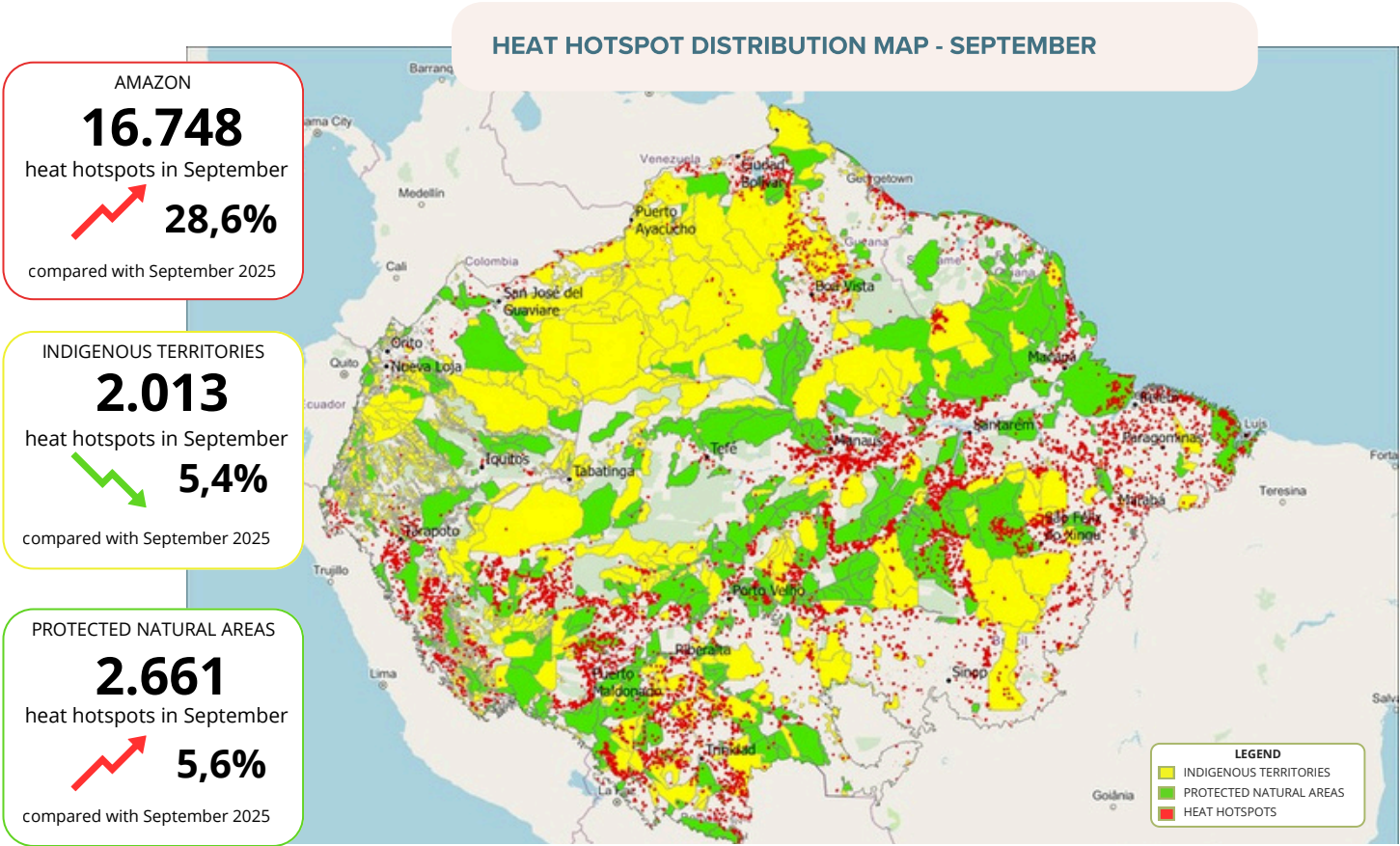


Despite the reduction in the areas with higher temperatures compared with August, the average temperature of the Amazon basin remained above the historical average in September, recording a positive anomaly of 1.29 °C.

HEAT HOTSPOTS INCREASE BY 38% BETWEEN AUGUST AND SEPTEMBER IN THE AMAZON

September recorded 16,748 hotspots, 28.6% more than in the same month of 2025

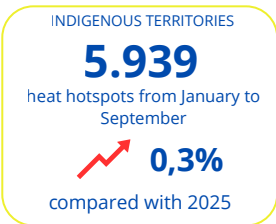
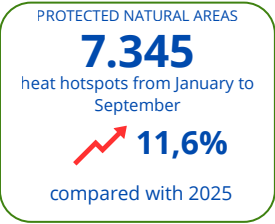
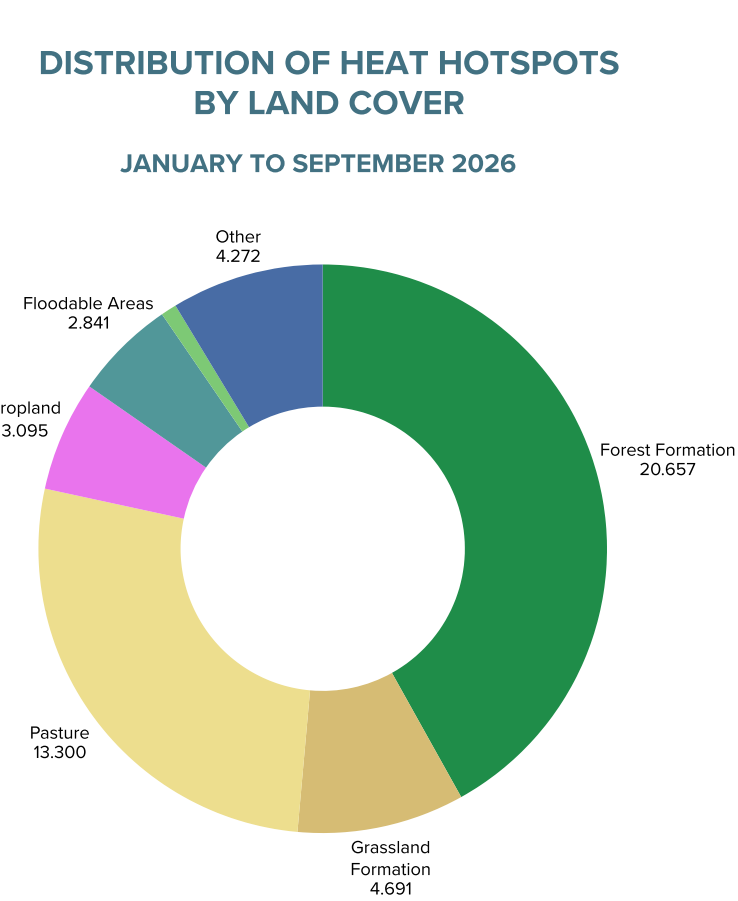
The number of heat hotspots continued to increase in September, reaching 16,748 records, 38% more than in August, when 12,123 hotspots were identified. Compared with September 2025, the increase was 28.6%. The hotspots were concentrated mainly in the central-eastern, southwestern, and southeastern regions of the Amazon basin.



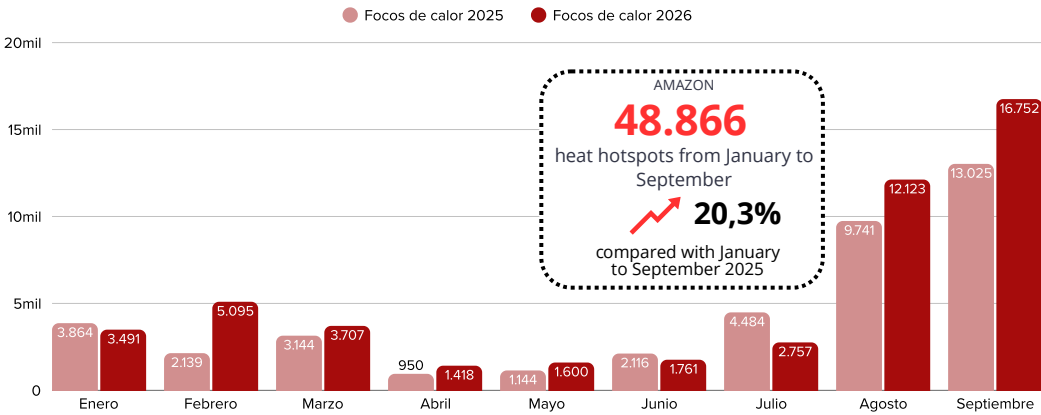
Source: Aqua - T/NASA/INPE; processing and analysis: ORA/ACTO, 2026.

YEAR-TO-DATE TOTAL

Between January and September 2026, the Amazon accumulated 48,866 heat hotspots, an increase of 20.3% compared with the same period in 2025. Forest formations accounted for the largest number of records, with 20,657 hotspots (42%), followed by pastures, with 13,300 (27%), and grassland formations, with 4,691 (9.5%).

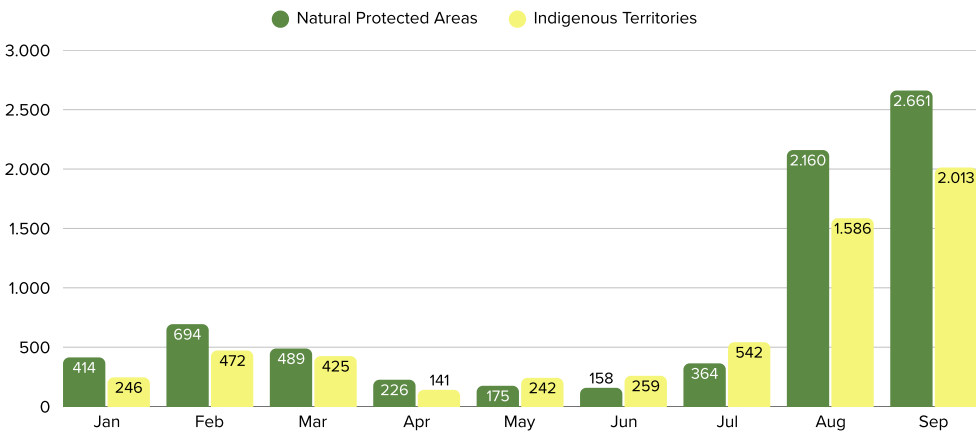


MONTHLY DISTRIBUTION OF HEAT HOTSPOTS - AMAZON



In September, 2,661 heat hotspots were recorded in Protected Natural Areas, approximately 16% of the total, and 2,013 in Indigenous Territories, nearly 12%. Compared with September 2025, records increased by 5.6% in Protected Natural Areas and decreased by 5.4% in Indigenous Territories.

MONTHLY DISTRIBUTION OF HOTSPOTS IN INDIGENOUS TERRITORIES AND PROTECTED NATURAL AREAS



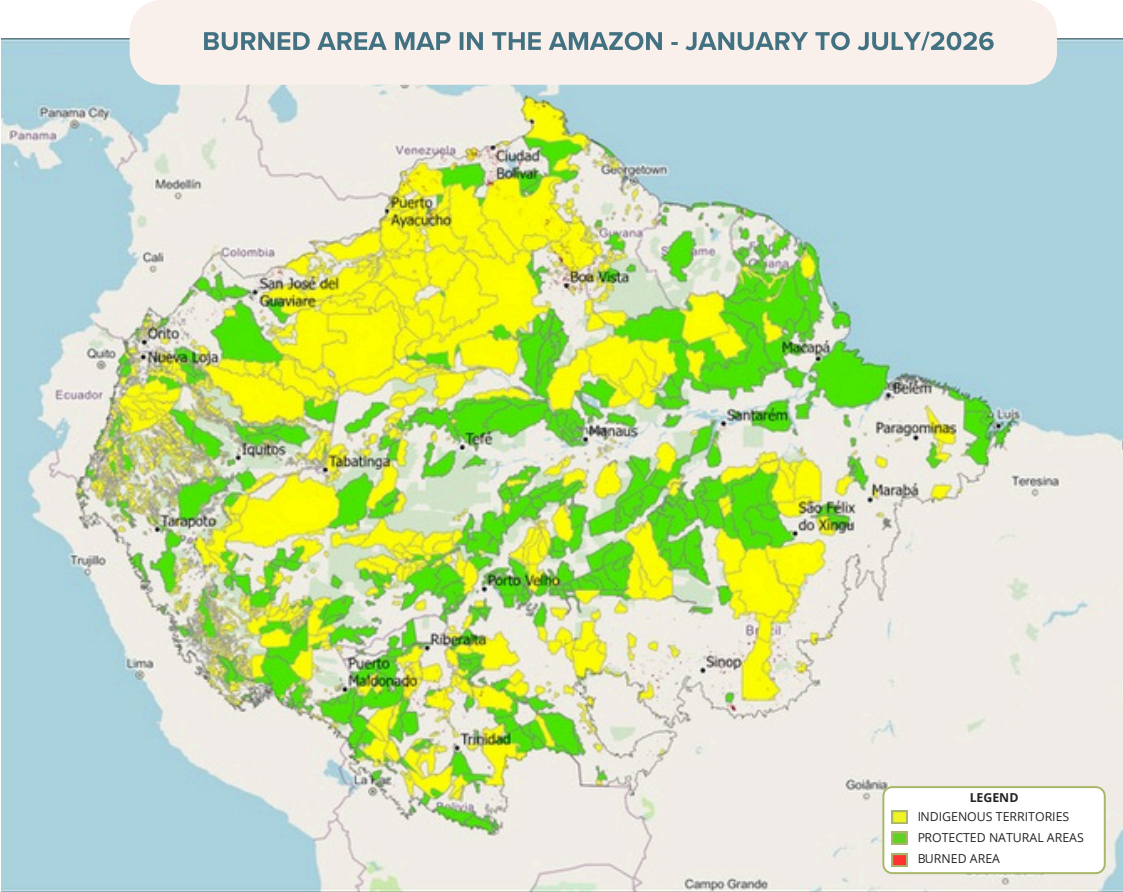
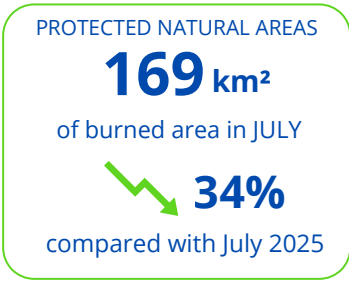
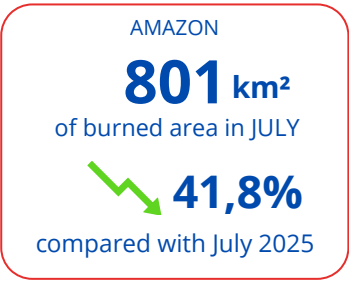
BURNED AREA DECREASES IN JULY, BUT THE 2026 TOTAL EXCEEDS THAT OF 2025

The Amazon recorded 801 km² burned in July and accumulated 7,657 km² during the first seven months of the year

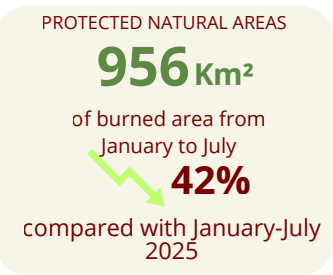
In July 2026, 801 km² burned in the Amazon basin, a 41.8% reduction compared with the same month in 2025. Of this total, 169 km² occurred in Protected Natural Areas and 182 km² in Indigenous Territories.

Despite the monthly reduction, accumulated burned area between January and July reached 7,657 km², an increase of 12.4% compared with the same period in 2025. Burned area data are available with an approximately three-month delay. Therefore, this edition presents information through July, while the heat hotspot indicators already include September.

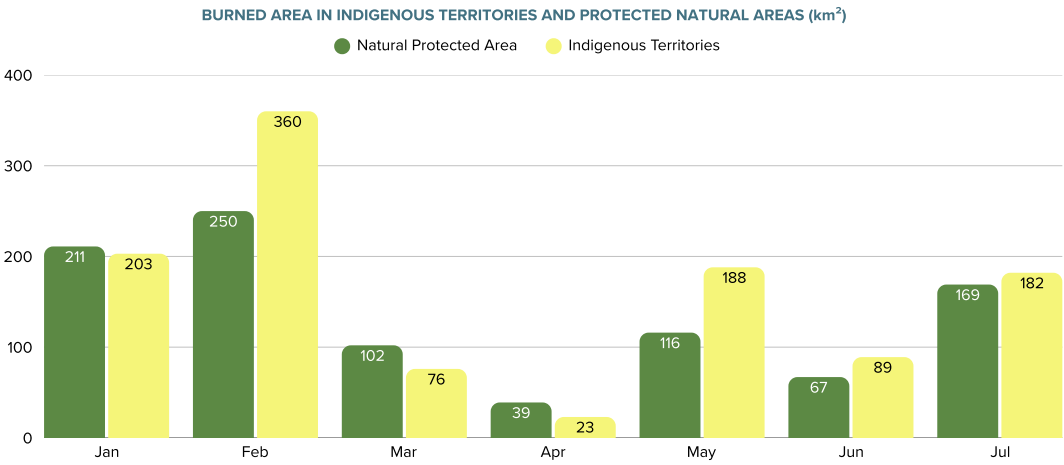
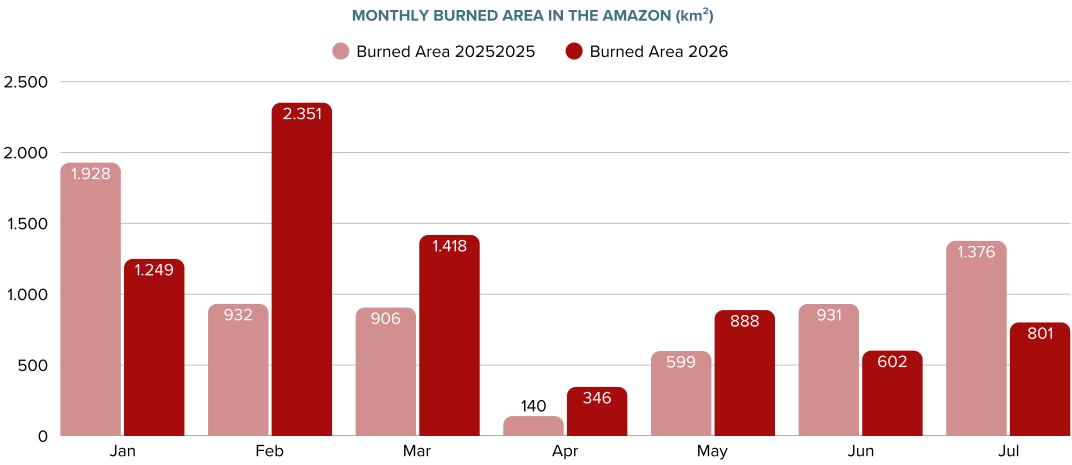
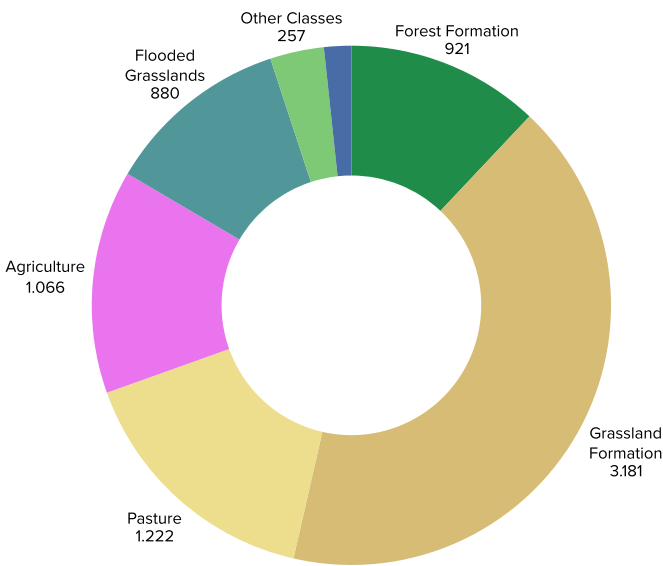
Between January and July 2026, grassland formations accounted for the largest burned area in the Amazon, with 3,181 km² (41% of the total), followed by pastures, with 1,222 km² (15%), and agricultural areas, with 1,065 km² (14%).



Source: MODIS/MCD64A1; processing and analysis: ORA/ACTO, 2026.



DISTRIBUTION OF BURNED AREA IN THE AMAZON BY LAND COVER JANUARY TO JULY 2026 (km²)



Source of charts: MODIS/MCD64A1; processing and analysis: ORA/ACTO, 2026.

⚠️ Methodological Note

Methodological note: Burned area data from the MODIS/MCD64A1 sensor are available with an approximately three-month delay compared with heat hotspot data, due to procedures for processing and consolidating the information.

ALSO READ ON THE ACTO WEBSITE

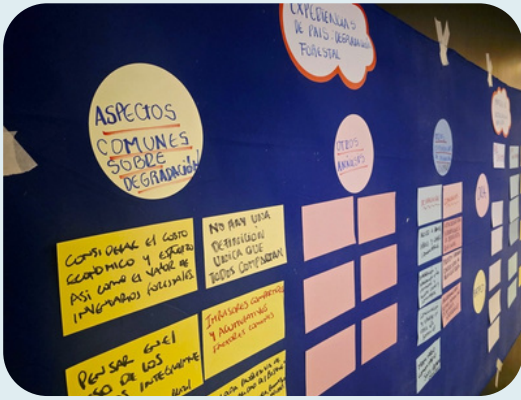
News about monitoring, data consolidation, information, and scientific knowledge for cooperation in the Amazon



Flying rivers: regional monitoring is key to water security

ACTO seminar highlights the integration of climate, hydrological, and forest data and the role of ORA in regional cooperation.

[link](#)



Amazonian countries seek to standardize the methodology for monitoring forest health

ACTO meeting brings together authorities and specialists to integrate data and advance a regional proposal on forest degradation

[link](#)



Amazonian countries advance the integration of water resources data

ORA will play a strategic role in connecting national systems and building a shared vision for Amazonian waters

[link](#)

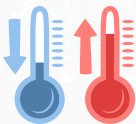


SOURCES OF PROCESSED DATA



Observed average precipitation

- Data: ERAS/ECMWF-C35 / Reference climatology: 1991-2020 / Sub-products: Accumulated precipitation and precipitation anomaly / Available from: European Space Agency - ESA / <https://cds.climate.copernicus.eu/live>



Observed average temperature

- Data: ERAS/ECMWF-C35 / CLIMATOLOGY Sub-products: 1991-2020 / Sub-products: Average monthly surface temperature, temperature anomaly. / Available from: European Space Agency - ESA / <https://cds.climate.copernicus.eu/live>



Heat hotspots

- Data: MODIS/AQUA-T / Reference: 2003-present / Sub-products: Heat hotspot statistics for the Amazon region. / Available from: National Institute for Space Research - INPE / <https://www.inpe.br/queimadas>



Burned area 2025

- Data: MODIS/MCD64A1 / Reference: 2001-May/2026 / Sub-products: Burned area statistics for the Amazon region. / Available from: Distributed Active Archive Centers (DAACs) / NASA / ladsweb.modaps.eosdis.nasa.gov