



WEC – AMAZON FIRES MONITORING

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Monthly Bulletin for Monitoring Wildfires in the Amazon

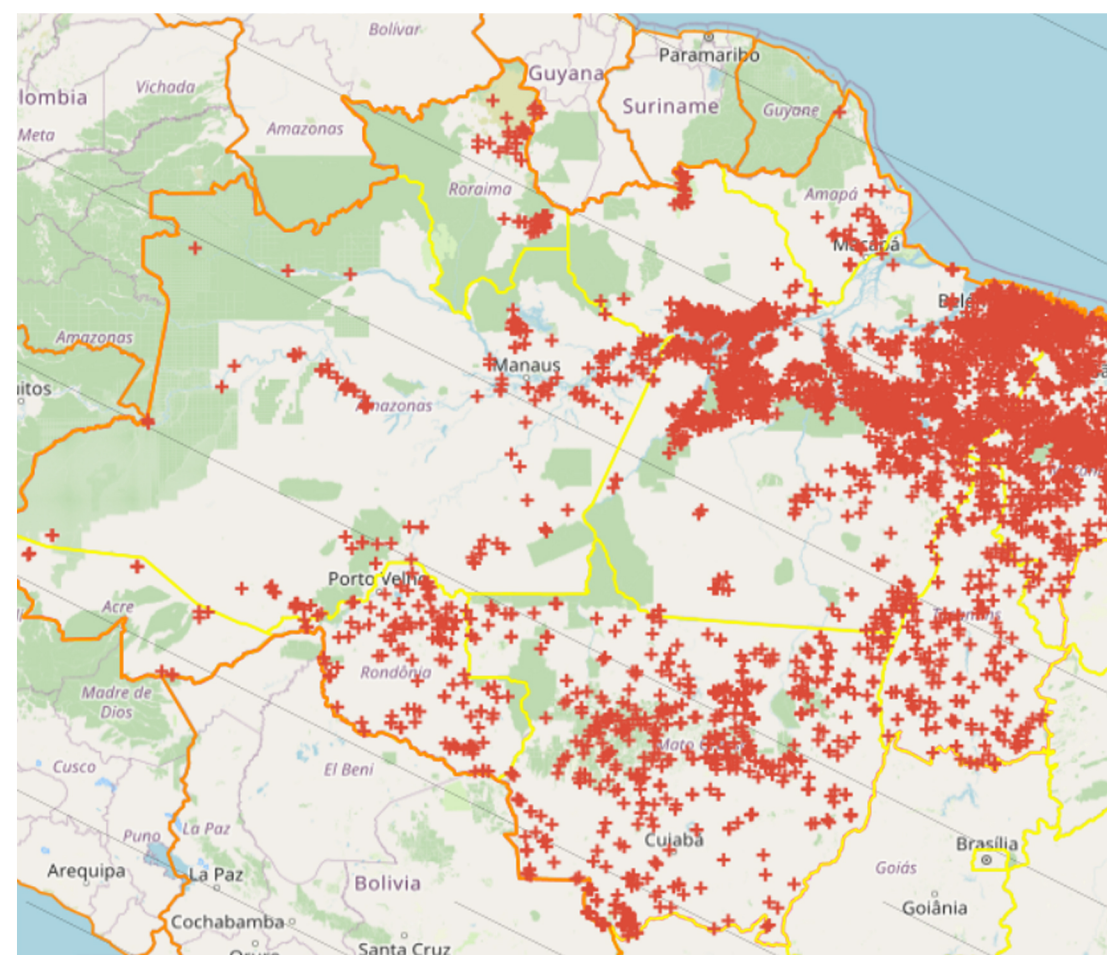
AMAZON FIRES DEC/2020

During December of 2020, there were a total of 3,479 detections (graph 1) of hotspots/fires in the vegetation in the early afternoon passages having been recorded in the entire Amazon biome, through the use of NASA's AQUA, reference satellite (map 1). The following outbreaks of fire were recorded in the Amazonian states. There were 184 in Pará (63%), 488 in Maranhão (14%), 357 in Mato Grosso (10%), 175 in Amazonas (5%), 144 in Rondônia (4%), 38 in Amapá (1%), 58 in Roraima (2%), 24 in Tocantins (0.7%), and 11 in Acre (0.3%). When compared to the same month of the previous year, there was an increase of 7% in the number of outbreaks (Table 1).

State	Numbers of outbreaks 2019	Numbers of outbreaks 2020	Variation
Pará	1,745	2,184	+25%
Maranhão	826	488	-41%
Mato Grosso	323	357	+10%
Amazonas	163	175	+7%
Rondônia	65	144	+121%
Amapá	67	58	-13%
Roraima	36	38	+5%
Tocantins	35	24	-31%
Acre	02	11	+450%
Total	3,261	3,479	+7%

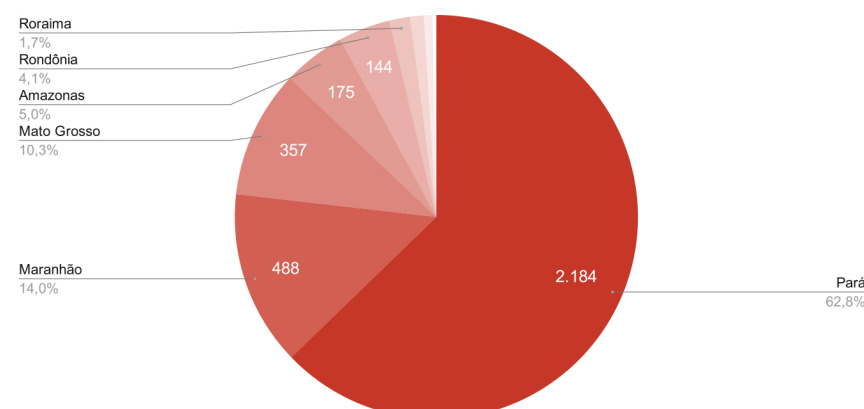
Table 1: Outbreaks of fire in Amazonian Legal states in Dec/2020 according to the reference satellite
Source: Fire Program - CPTEC-INPE / Brazil

TOTAL FIRES DETECTIONS



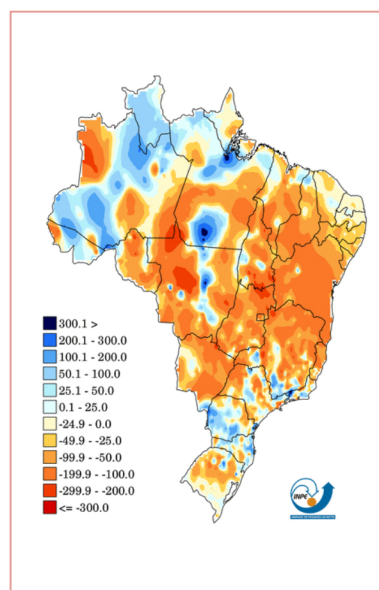
Map 1 - Total detections registered in Dec/2020 by the reference satellite | Source: Fire Program - CPTEC-INPE / Brazil

FIRES BY STATES IN %



Graph 1: Fire detections registered in Dec/2020 by states | Source: Fire Program - CPTEC-INPE / Brazil

PRECIPITATION ANOMALIES RECORDED DURING DEC/2020



The map of precipitation anomalies (Map 2) indicates that rainfall was above average only in the states of Acre and Roraima. In the other states of the Amazon biome, such as Maranhão, Rondonia, Mato Grosso, and Tocantins, the rainfall was well below average, leading to an abundance of fires in these drought-ridden areas. In the state of Amazonas, rainfall was close to average.

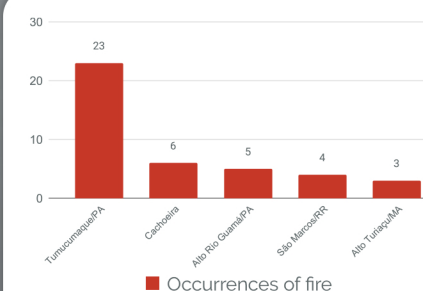
Map 2 - Precipitation anomalies recorded during Dec/2020

Municipality	State	Nº of Outbreaks
Pacajá	PA	100
Óbidos	PA	87
Uruará	PA	80
Monte Alegre	PA	78
Alenquer	PA	72
Novo Repartimento	PA	72
Santarém	PA	68
Praíha	PA	65
Placas	PA	61
Mojui dos Campos	PA	56

AMAZONIAN MUNICIPALITIES WITH THE MOST RECORDED FIRES

Among the ten Amazonian municipalities (Table 2) that suffered the most from fires this month, the state of Pará, which is typically dry during this time of year, experienced the most outbreaks. The total number of fires in these ten municipalities alone was 739 hotspots, which represented 10% of all outbreaks registered in Brazil and 21% of all fires in Amazon biome.

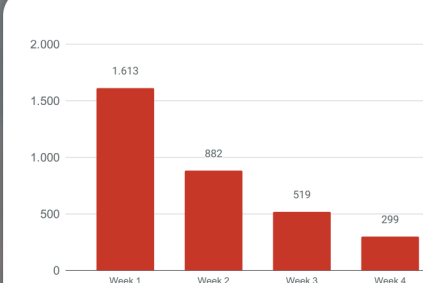
Table 2: Most recorded fires in Dec/2020 according to the reference satellite.
Source: Fire Program - CPTEC-INPE / Brazil



FIRES BY INDIGENOUS RESERVES IN DEC/2020

Throughout December 2020, fires affected some indigenous reserves of the Brazilian Amazon, most of them in the states of Pará and Roraima. The graph 3 shows the five indigenous reserves that experienced the most occurrences of fire during this month. A total of 41 fires/hotspots were registered in indigenous villages, and this number indicates that only 1% of all the fires that occurred in the Amazon were within indigenous reserves.

Graph 2: Fires in the indigenous reserve in Dec/2020
Source: Fire Program - CPTEC-INPE / Brazil



HOTSPOTS/FIRES BY WEEK

By December, the Amazon's burning season is practically over, so a gradual decrease in the number of outbreaks is expected over the weeks. Even with much lower values than in previous months, this month, the fourth week was the one that registered the most fires (Graph 2).

Graph 3: Hotspots/Fires by week in Dec/2020
Source: Fire Program - CPTEC-INPE / Brazil



FIRES BY FEDERAL CONSERVATION UNITS

Several federal conservation units, such as parks, biological reserves, national forests, etc. recorded fires this month. In total, according to the reference satellite, 27 fires / hotspots, this number indicates that at least 0.8% of the fires registered this month occurred in an area that wasn't supposed to be exposed to fire, the conservation units. Graph 4 shows the Conservation Units that burned the most this month.

Graph 4: Fires by federal conservation units in Dec/2020
Source: Fire Program - CPTEC-INPE / Brazil

This technical bulletin contains the monthly summary of the main data and outbreaks of fire recorded in the Brazilian Amazon biome, and is based on the information available on the website www.inpe.br/queimadas. The main information reported here refers to the number of outbreaks and the areas burned. The monitoring program of the INPE "Fire Program" makes use of roughly 200 images a day, received from nine different satellites. For comparative temporal and spatial analyzes, only the reference satellite is employed.

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