

Feature Story

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LACK OF FISCALIZATION GIVES UNCLEAR VIEW OF FOREST FIRES IN BRAZIL

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NOAA-11 Satellite Data and Map by Inpe-SCT/NMA Embrapa (Credit is mandatory)

São Paulo (AE) -- Most of the more than 447,180 fire points (known locally as "queimadas") detected in Brazil in the past four months were not in the Amazon region, but in the agricultural areas of the Central-west and Mid-North regions.

In reality, there is no data available on the total area hit by the fires this year. The American NOAA-11 satellite used by the Brazilian Institute for Spacial Research, Inpe, is a meteorological satellite, which can only note the fire spots, and is unable to define their origin.

Still, the effect of the queimadas on the Brazilian countryside is plain: once more the smoke invaded highways, airports and cities, and caused problems in both air and land traffic, as well as in the general health of the population.

Much of the area burned this year was in the transitional forests and the savanna-like cerrado vegetation, partially occupied by cattle-raisers, grain producers, and small-time farmers. The transitional forests are lower and less dense than the Amazon rain forest. The cerrados are made up of grasses and sparsely distributed trees, similar to the African savannas.

Because the queimadas were mostly slash and burn for agricultural purposes, there was a change in the exaggerated calculations of carbon emissions from Brazil, made by international institutions such as the World Resources Institute (WRI). Since the vegetation in the Central-west and Mid-North is composed of grasses and left-over cultures, the emitted carbon dioxide is reabsorbed by the environment during the rainy season _ the growth phase for this type of vegetation.

"The annual agricultural queimada balance is zero," said Gylvan Meira Filho, an Inpe researcher. "In a year, the amount of carbon dioxide released into the atmosphere from pasture, grasses, and annual culture fires is practically equal to the amount fixed by plant growth," he explained.

According to Meira Filho, the carbon dioxide emissions only surpass the reabsorbed totals when they occur in recently cut-down forests. In this case, the carbon dioxide liberated was stocked for many years in the tree trunks.

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"The fact that the queimadas are agricultural does not reduce our worry as to the unplanned occupation of the Brazilian territory and loss in biodiversity, but it certainly reduces our responsibility over the greenhouse effect," said Evaristo Eduardo de Miranda, a researcher from the federal environmental monitoring nucleus (NMA-Embrapa), responsible for the analysis of the satellite images.

The NOAA-11 satellite maps showed that the most severely hurt areas were in the states of Tocantins, Mato Grosso, in southern Pará, west of Maranhão, and in Rondônia — what corresponds to the edge of the Amazon region. The occupation in Tocantins, Mato Grosso, Pará, and Maranhão is older than in the dense and humid Rondônia jungles.

The queimadas in these states are mainly used to combat weeds and agricultural pests, or to renew pastures. In the dense and humid forests, the queimadas were most numerous in the state of Rondônia, one of the most devastated in the Amazon River basin.

In Rondônia the queimadas are generally used to clear fields for subsistence agriculture. After they are cut, the tree trunks are left on the ground to dry. The cultures are made between the fallen logs, since the settlers, many of them squatters, cannot afford their removal. In the winter, when the rains lessen their impact, the squatters set fire to the dry trunks and get rid of the wood.

There is also plenty of man-made fire for deforestation. The lumberers set fire to the trees to encover illegal timber removal, and encroach police action. With the satellite readings, however, it has become easier to detect larger queimada areas, helping fiscalization.

Still in Rondônia, the satellite images show a direct relationship between the highways and the queimadas. The path of the fires on the maps corresponds to the length of the BR-364 highway, as well as the secondary roads which cross it.

The BR-364, along the eastern border with Bolivia, made world headlines last year, when a plan to pave it was publicized. The project was severely opposed by environmentalists, who believed unplanned expansion in the region would increase with the onset of an accessible highway.

Away from the Amazon, this year the worst queimadas were in the Pantanal and in southern Bahia. The Pantanal, in southern Brazil, is the richest wildlife region in this South American giant. Here, a rigorous dry spell permitted the fires to spread. There is still no news on the extent of the fire damage over the fauna.

In Bahia, a coastal state in the northeast, the queimadas were registered in Atlantic rain forest fragments, indicating illegal deforestation processes.