Brazilian Tool Helps Amazon Countries Fight Forest Fires

BY Nelza Oliveira/Diálogo ⋮ 15.9.2023

Brazil's technology for monitoring fire outbreaks in the Amazon will now help protect the entire rainforest, regardless of borders, since the countries of the Amazon Cooperation Treaty Organization (ACTO) can now access it.

file photo. A member of fire prevention group PREVFOGO extinguishes a burning area in the Amazon rainforest reserve, south of Novo Progresso, in Para state, Brazil, on August 15, 2020. (Photo: João Laet/AFP)

The "Fire Dashboard" technology of the Management and Operational Center of the Amazon Protection System (Censipam), an agency of the Brazilian Ministry of Defense, has been available since July to ACTO countries, made up of Bolivia, Colombia, Ecuador, Guyana, Peru, Suriname, and Venezuela.

The tool, a web platform to assist specialized teams in detecting and fighting forest fires, provides information on fires and burn-offs in close to real time, to support the deployment of brigades or battalions. The system combines geospatial information, satellite images, and data from a severity level indicator.

"Currently, the Fire Dashboard is the only tool that provides a remote sensing product called a fire event for the entire Amazon biome, in addition to the other biomes that make up the Brazilian state. While hotspots give us a snapshot at the moment the satellite passes by, fire events go one step further, individualizing each occurrence and characterizing them in terms of duration, speed of expansion, and direction of evolution. In this way, the user of the Fire Dashboard can classify events in terms of combat priority," Censipam told *Diálogo* in a statement.

The tool has helped firefighters get to the scene of a fire more quickly, thus preventing new hotspots from appearing and eliminating the time and resources spent making rounds in vulnerable areas. This is a great advantage, considering that during the dry season in the Amazon there are more fire outbreaks than firefighters.

According to Censipam, although monitoring tools do exist in other countries, standardizing methodologies is a must for an effective response against fire in the Amazon biome, as far as team deployment, especially in cross-border regions, where firefighting can involve two or more countries.

The Brazilian Ministry of Defense announced that the Fire Dashboard tool will be available to all Amazonian countries, July 19, 2023. (Photo: Hamilton Garcia/Ministry of Defense)

"Standardization goes beyond joint firefighting. It also provides an opportunity to share decision-making based on the patterns of fires and burn-offs that occur in the area monitored by the Fire Dashboard," Censipam said. "Both OTCA and Censipam see the Fire Dashboard service as an opportunity to standardize the activation and monitoring of fire occurrences, which can generate more synergy between countries having very severe events or even events in border areas."

The first time the tool was used outside Brazil was in February 2023, when it helped Chile fight forest fires in the south-central part of the Andean country. According to Censipam's statement, Bolivia and Peru are currently the countries that use the tool most intensively, as the current season and climate are more prone to fires.

The Fire Dashboard was launched in 2021 but has since been updated and now offers various features, such as prioritizing events, updated optical images of the terrain, graphs of the evolution of fires over days, night images, and position of the latest fire front detections.

Censipam added that the Fire Dashboard indirectly helps to combat criminal organizations operating in the Amazon. "Considering that many of these more severe fire events are the result of environmental illicit acts and, as the tool is prepared to generate situational awareness of the event, it is common for combatants to come across cases linked to criminal organizations," it concluded.