

Monitoring Strategies for Wildfires Operations in Amazon Indigenous Lands

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ABSTRACT - Fire combat in amazon indigenous lands is complex to monitor, due to the tree cover, the cloudiness, the existence of isolated peoples, the presence of indigenous villages near the fire lines and the vastness of these territories. In this sense, the purpose of this abstract is to divulge the fire monitoring methodology of 2019 Roraima Verde Operation used for defining the strategy of attack areas. The work was organized in stages: 1. Evaluation of the active fire database, 2. collect of local geospatial data of the physic, administrative, political and cultural geography, 3. definition of information flow according to command posts, 4. training the aerial staff and brigadists for georeferencing fires with mobile app, 5. generation of burn surface estimation and, finally, 6. preparation of strategic maps with all information collected in the previous stages. It was observed that the active fire products omitted ~61% of the flames detected by overflight; on the other hand, the complementation of the information by aerial monitoring with the crews, drastically reduced the problem of omission, with mapping burn lines, reports of the fire situation - active, controlled or extinct - and photo registration. The daily systematization of the combat conditions done by the brigades and the leader of operations also aided to organize the data. The intention of these procedures was to avoid the diffusion of tasks, assist less expensive decisions and focus on areas with high socio-environmental vulnerability. To do so, the use of geotechnologies is still necessary, like softwares and mobile apps, because of the difficulty in using current brazilian fire monitoring systems for combat strategies. The improvement of procedures is expected for the next years, with the creation of mobile apps to assist data collect integrated with monitoring systems and geodatabases.

Keywords: Methodology of monitoring; active fires; wildfire; combat

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