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Image Processing Research Laboratory (INTI-Lab). Universidad de Ciencias y Humanidades - UCH, Peru,
avid.roman-gonzalez@ieee.orgANALYSIS OF THE ENVIRONMENTAL IMPACT OF THE SAMA FOREST FIRE IN TARIJA
BOLIVIA**Abstract**

Remote sensing is a crucial tool for the collection of information, monitoring and analysis of natural disasters. For example, in the case of forest fires, satellite images are used for prevention, monitoring of the fire and for damage assessment.

On August 9, 2017 in the department of Tarija in southern Bolivia, there has been a large-scale forest fire that has caused at least 3 deaths, 1,479 people injured and 3,000 families who not only lost their homes but also lost their agricultural crops and animals and with it their sources of economic income.

This forest fire has occurred in a context of drought in the region, as a direct consequence of the deforestation of the area. It is believed that the drought is the main cause of the natural disaster, but the burning of garbage in a nearby community was the trigger for the fire. The fire also destroyed 10,600 hectares of forests, pastures and 10% of the surface of the Biological Reserve Cordillera de Sama has been affected since many endemic flora and fauna of the region have lost their lives, this aspect is critical because this nature reserve is the home of endangered species.

Given this problematic the present study aims to analyze the environmental impact of the forest fire in Tarija. The primary objective is to use satellite imagery to clearly identify areas that have been more affected due to the fire, on the other hand an extraction of environmental parameters of the affected area will be done to compute meteorological, hydrological and agricultural indicators, prior and after the fire to make a complete comparison. With this study we want determine the real and concrete impact of forest fires in the Bolivian ecosystem, because we consider that in this way we could increase the attention to this type of disaster in the country, with better decisions based on satellite information.