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USE OF SATELLITE IMAGES FOR DROUGHTS STUDYING: THE BOLIVIAN CASE

Abstract

Bolivia is a country with a high risk of suffering a wide variety of natural disasters, such as forest fires, droughts, floods, earthquakes, and landslides; which may cause life losses, health impacts, property damage, and services, social and economic disruption in the country. The consequences of a natural disaster usually hinder access to the disaster area to assess the current situation and make a correct decision. It is for this reason that satellite images are a valuable tool to have complete access to the area of the disaster because we can have a full coverage and a greater facility to assess the situation and mobilize the necessary help and assistance. Due to climate change and human activities, droughts have been occurring in some regions of our planet, making access to water resources difficult for human consumption, animals and agricultural activities. In 2016, for example, Bolivia experienced the greatest drought in the country for 25 years. There was a big problem with water supply in six of the nine principal cities of the country; the problem was due to several elements such as the long period without rains in the country. In addition, the relevant authorities not had work in a previous plan and could not contain the crisis. Due to above reason, the present research work has the primary objective of use satellite imagery to generate and promote understanding of these types of natural disasters in the country, to clearly identify areas that are likely to suffer droughts, determine our vulnerabilities, and exposure the potential impact of future drought disasters. We think that in this way we could reduce the risks and increase the attention to this type of disaster in the country, with better decisions based on satellite information.