



## **Susceptibility Assessment and Rainfall Thresholding: Application to Landslide Hazard Management in Jamaica.**

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The parish of St Thomas in Jamaica has one of the highest densities of landslides on the island, landslides that continue to have negative impact on lives, the local economy, and the built and natural environment. The occurrence of these landslides is a result of a combination of steep slopes, faulting, heavy rainfall and highly weathered geology (volcanics, sandstones, limestones and sandstone/shale series) that occur within this area. The problem of slope instability in the parish is a recurring one particularly during the hurricane season (June- November) when they are triggered by heavy rainfall associated with hurricanes. Two methods, rainfall thresholding and landslide susceptibility assessment, that may be used in the management of slope instability in landslide prone areas of the parish, were explored in this research. Both methods have yielded good results which in combination may be used as management tool to better determine when and where landslides are likely to occur and in the process mitigate the effects of landslides in the area.

Keywords: Landslide; susceptibility; GIS; logistic regression; Jamaica; rainfall thresholding.