

SPATIAL AND TEMPORAL ESTIMATION OF TOTAL SUSPENDED SEDIMENTS AFTER LANDSLIDES EVENTS TRIGGERED BY HURRICANE MARIA IN PUERTO RICO

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Recent studies in Puerto Rico have monitored the effects of mass movement in response to natural factors associated with tropical atmospheric events, which imperatives the necessity to watch rivers and streams' channels on the island. Suspended sediments are vital for carrying nutrients to aquatic organisms through watersheds and nearby waterbodies. However, their increases upstream represent water quality degradation as they function as a fluid waterway travel for pollutants. This study seeks to validate the influence of eroded materials from the mountainous range of Puerto Rico by quantifying the total of suspended sediments (TSS) in coastal marine waters using satellite imagery. We expect to determine a relationship between the occurrence of landslides and the TSS. The timeline follows a series of short-term periods, placed as: [a] before the passages of Hurricanes Irma and Maria, [b] during the month of both hurricanes over Puerto Rico, and [c] after these events. As a result, we found that the higher values of TSS are noticed from the river mouth to roughly two kilometers into the Atlantic Ocean.