**Drone Technology Deployment in Landslide Emergencies: A Case Study of Major Landslides Recorded in Sri Lanka During the Second Inter Monsoon of 2023**

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***ABSTRACT***

A significant proportion of Sri Lanka's land and population are located in areas prone to landslides. Landslide susceptibility is apparent in more than half (52%) of the administrative districts, covering 30% of the land area (19,500 km2)  and impacting 38% of the total population (7.6 million) in 13 out of 25 districts. The activation of the Second Inter-Monsoon of 2023 resulted in increased rainfall in specific areas in Badulla, Galle, Kegalle, Matara, and Ratnapura districts. Due to heavy rainfall, five significant landslides occurred in the districts of Badulla, Kegalle, Matara, and Ratnapura, causing major damage to houses, agricultural land, and infrastructure, as well as four deaths.

Therefore, it is crucial to rapidly assess the magnitude of the damage produced by these landslides and what are the implications for recovery and reconstruction efforts.

This study adopted a multi-phase approach to investigate landslides. Initially, landslides were identified and preliminary data was gathered. Subsequent field reconnaissance provided in-depth site information. Drone surveys and ground-based damage assessments were conducted to capture detailed spatial and impact data enabling an accurate assessment of the damage caused to property, agricultural land, and infrastructure. Rigorous data analysis followed, culminating in the production of maps and conclusive findings.

The preliminary evaluation shows that the overall gross damage and loss in all sectors totals LKR 160.1 million. The rapid assessment of the damage will lead to precise estimations of both the economic losses caused and the vital first investments needed for the following landslide recovery efforts.

**Keywords:** Landslide, Rapid Assessment, Landslide Early Warning and Second Inter Monsoon