

Assessing the Social, Economic, and Environmental Impacts of Flood Disasters in the Mathugama Region, Sri Lanka

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Abstract

Flooding is among the most destructive natural hazards worldwide, with Sri Lanka experiencing frequent and severe flood events that significantly disrupt communities and livelihoods. The Mathugama Divisional Secretariat has recently faced notable physical and human challenges due to recurrent floods. This study aims to comprehensively assess the social, economic, and environmental impacts of flood disasters in the Mathugama area. In addition, it seeks to propose effective strategies and recommendations for minimizing future flood-related damages. The research utilizes a mixed-methods approach, gathering primary data through questionnaires, interviews, direct observations, and group discussions, alongside secondary data from published literature and official reports. Analytical tools such as MS Excel and ArcGIS 10.8 were employed to process and interpret both qualitative and quantitative data. The findings highlight the multifaceted consequences of flooding on local populations, infrastructure, and the environment, and offer actionable insights to enhance flood management and resilience in the region.

Keywords: flood impacts, Mathugama, disaster management, Sri Lanka, vulnerability