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AN ANALYSIS ON FLOOD MAPPING AND MITIGATION FOR AKKARAIPATTU MUNICIPAL COUNCIL AREA

M.M. Mohamed Nouffer

University of Sri Jayewardenepura, Nugegoda, Sri Lanka

nouffer@gmail.com

This Study was conducted in Akkaraipattu Municipal Council Area in Ampara District of Sri Lanka. Where Flooding has been found as an annual disaster, there also lack proper drainage system, or an early warning system for quantifying effects of the flood in advance. This study uses GIS as a platform with available data from the area to map the flooding and measure the effects to find out ways to mitigate the damage in early.

The primary objective of this project is to develop Hydrologic and Hydraulic models using GIS tools and techniques for the flood plan analysis of Akkaraipattu Municipal area. The model simulation output will be use to analyze mitigation alternatives within a Geographic Information System.

Hydrological and Hydraulic modeling is to be performed using HEC-HMS and HEC-RAS Software. After delineating catchment basin model using HEC-GeoHMS in ArcGIS environment. The Geometry of a natural drainage model will be created using HEC-GeoRAS in ArcGIS. And will be exported to HEC-RAS with Flow data from HEC-HMS to map the inundation area with depths.

Using GIS people and properties effected will be measured for such a flood with the help of population and statistical data. There will be an analysis to find out access routes to safer places identified by local authorities to evacuate or reach the effected peoples in the flooded area without crossing the major flow path of the floodwater.