

PLOTTING AND ONLINE PUBLISHING OF RECENT FLOODED AREAS IN KELANIYA USING GIS

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Geographic Information Systems (GIS) has a part to cooperate in all geographic and spatial aspects of the areas like land management, land administration, utility management and disaster management. Among them, there is growing needs for web based GIS for easy and fast distribution, displaying and processing of spatial information which in turns helping in decision making for when natural disasters occurs.

The aim of this study is to design and development of an open source web-based Geographical Information System allowing users to interact with spatial data within their web browser. This project is only focus on the spatial data of Kelaniya area which was affected from flood in 2016. The data on roads, hydro features and buildings were obtained as secondary data. Geospatial data related to the area is acquired from ground surveys, GPS surveys, aerial surveys and remote sensing surveys. Data collection depends on the map which is going to be created. Arc Map 10.1 and Arc GIS online are the software used to design the map and publish the generated map. The modifications of the web map can be done from Java Script to print the launched map and draw polygons, lines on the web map at the end. GIS branch of Sri Lanka Survey Department is funding in both data providing and knowledge related to data collection, data processing, creating map and publishing them.

As the final outcome, buildings, hydro features, roads in that flooded area and flood boundary which is created using collected data are presented in a web map which can be accessed through a web browser at any time by anyone from getting the URL of the map from the Sri Lanka Survey Department (SLSD). These spatial data in the flooded area is mainly used for disaster management purposes. This web map provides better solution to the current methods using for distributing maps in SLSD with easy access.

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