

UNIVERSITI TEKNOLOGI MARA

**FLOOD HAZARD MAPPING IN
PERLIS, USING GIS AND
ANALYTICAL HIERARCHY
PROCESS (AHP)**

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Thesis submitted in partial fulfillment
of the requirements for the degree of
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CANDIDATE DECLARATION

I declare that the work in this thesis/dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Flood is one of the most devastated natural phenomenon that can cause lot of damage to socio-economic of a country. Flood hazard potential mapping is required for management and mitigation of flood in order to reduce and avoid the damage it can cause. This study centers on an evaluation of flood hazard areas in Perlis where it has experienced flood in consistently with various degree of destruction. Spatial analysis in GIS had been used for the evaluation of flood hazard map which 6 main parameters has been selected that is rainfall, slope, drainage density, elevation, geology, and land use. This data had been analyzed during the process of Analytical Hierarchy Process (AHP) in order to find the most causative factor among them. Each of the data has its own weight according to influence to flood. This weight had been decided by experts in this field. The flood hazard zones have been mapped according to their weights by using Weighted Overlay method in ArcGIS. The final output map will show flood hazard map of Perlis which can be used as a reference for future development of Perlis.

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