

## GIS Application in Surface Runoff Estimation for Upper Klang River Basin, Malaysia

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**Abstract :** Estimation of surface runoff depth is a vital part in any rainfall-runoff modeling. It leads to stream flow calculation and later predicts flood occurrences. GIS (Geographic Information System) is an advanced and opposite tool used in simulating hydrological model due to its realistic application on topography. The paper discusses on calculation of surface runoff depth for two selected events by using GIS with Curve Number method for Upper Klang River basin. GIS enables maps intersection between soil type and land use that later produces curve number map. The results show good correlation between simulated and observed values with more than 0.7 of R2. Acceptable performance of statistical measurements namely mean error, absolute mean error, RMSE, and bias are also deduced in the paper.

**Keywords :** surface runoff, geographic information system, curve number method, environment

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