

# A Study on Water Balance Models for Selected Catchments

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## ABSTRACT

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Water resources management is of high importance in this contemporary society as today we have the threat of water being depleted. As Malaysia is a country which has rainfall throughout the year, if water management systems have been established ample amount of water could be saved to be used for those in need. This study presents the use of water balance models to predict runoff generated from rainfall, so that using the estimation of runoff for the future water can be managed better.

In this study a daily conceptual model, HBV-light, was applied for 3 catchments of Sugai Weng. These catchments are located in a virgin jungle, *Ulu Muda Ulu Muda Forest Reserves* in Kedah state. The basin areas are very small, which ranges from 2.3 km<sup>2</sup> to 8.4 km<sup>2</sup>. The input data required by the model are daily series of rainfall, runoff and long-term mean monthly series evaporation. The output of the model consists of actual evaporation, soil moisture, ground water recharge, runoff to stream, groundwater level and runoff at outlet.