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ESTIMATING SEDIMENT YIELD OF A SMALL CATCHMENT IN A TROPICAL REGION USING THE AGNPS MODEL: THE WATERFALL RIVER CATCHMENT, PENANG, MALAYSIA

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ABSTRACT

This paper presents the result of our research in testing the applicability and performance of the AGNPS (Agricultural Non-Point Source) model to estimate sediment yield of a small tropical catchment. The results of the modelling were compared with actual data collected in the field. Based upon limited sampling data, AGNPS produced variable results. At the lower end, the model underestimated the actual sediment yield by about 20 percent. On the other hand, at the extreme, the model overestimated the actual sediment yield by as high as 62 percent. The relatively high deviations between the actual and predicted sediment yield might be due to high rainfall intensity and its impact on the erosion index in the region. However, the results of this study are comparable to similar studies using AGNPS in other parts of the world.

Reference: Rainis, R., W.R. Ismail and N.M. Shariff; Estimating Sediment Yield of a Small Catchment in a Tropical Region Using the AGNPS Model: The Waterfall River Catchment, Penang, Malaysia, Journal of Environmental Hydrology, Vol. 10, Paper 9, December 2002.

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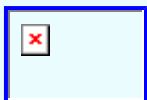
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