Comparative Study of Flood Frequency Method on Selective Rivers

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ABSTRACT

This present study consisted of study of four commonly used probability distribution function namely: Gumbel Extreme Value Type I, Log-Normal, Log-Pearson Type III, and Pearson Type III distribution and hence carry out flood frequency analysis using the studied probability distribution functions on three selected rivers namely: Kelantan River, Perak River, and Pahang River. Historical discharge data for the selected rivers are obtained from DID Malaysia in Malaysia. The parameter of all distributions function used in this study is estimated using method of moment. Two goodness-offit- test: chi-square test and Kolmogorov-Smirnov test are conducted in order to study how well the distribution fits with the historical data. Moreover, the extreme flood value of the selected river with return period of 5, 10, 25, 50, 75, and 100 are computed in this study as well. Three software namely "Easyfit" which developed by Mathware , "HEC-SSP" which developed by US Army Corps of Engineers and "Microsoft Excel" which developed by Microsoft Corporation are used in present study to assist in computing data, cross-checked results obtained before presenting, fitting the distribution functions as well as carry out goodness-of-fit test.