Parameter estimation of generalised extreme distribution for rainfall data in Sabah

ABSTRACT

The purpose of this study is to compare the Generalized Extreme Value (GEV) parameter estimation by using several methods; the Probability weighted moment (PWM), the Maximum likelihood estimation (MLE) and the Penalized maximum likelihood estimation (PMLE). The analysis will be illustrated using an application of GEV to the extreme rainfall in Sabah with small sample size event. As a result, the PMLE has a better estimation compared to other methods. The return level of the rainfall then can be computed using these parameter estimation.