

**Aplikasi Kaedah Paras Ambang dalam Menentukan Peristiwa Kemarau di  
Lembangan Sungai Langat, Selangor, Malaysia**

**ABSTRACT**

Drought is a phenomenon associated with water shortages that usually have significant economic, social and environmental impacts on areas affected. Generally, drought is a condition of prolonged deviation of water from the normal level of any variable of water such as precipitation, streamflow, groundwater and soil moisture. The term of normal condition is one of the keywords used in any discussion about droughts because it is the boundary between the occurrence of drought or otherwise. The term of normal condition is also known as the threshold level. Several methods are used to refer to a normal level. Some of the methods used are the mean, the median, average and 75% of the average, minus one standard deviation of the average and percentile value that is obtained from a flow duration curve (FDC). In the context of this study, threshold level (PA) method using the percentile value (Q) from the FDC is used to determine a drought event (PK). By using Q-percentile, PA values from 49 years of discharge data at Dengkil station were obtained namely  $Q_{70} = 16.27 \text{ m}^3\text{s}^{-1}$ ,  $Q_{80} = 12.91 \text{ m}^3\text{s}^{-1}$ ,  $Q_{90} = 9.71 \text{ m}^3\text{s}^{-1}$  and  $Q_{95} = 7.61 \text{ m}^3\text{s}^{-1}$  as threshold level, it was found that the number of drought events, the number of deficit days and total discharge deficits differ. Based on the analysis, the number of drought day deficit at the level of  $Q_{95}$  were 62 days with 1 drought events (PK) compared to  $Q_{70}$  that had 1971 deficit days with 25 PK. For the deficit volume, the total was  $19904.17 \text{ m}^3\text{s}^{-1}$  at  $Q_{70}$  level compared to  $427.55 \text{ m}^3\text{s}^{-1}$  at  $Q_{95}$  level. The total deficit volume recorded was approximately 3.33% of the total discharge. \*please refer hardcopy Jurnal Perspektif vol.7 no.3 / 2015