

Analysis of seasonal variation on river hydromorphology in Pelus River, Perak, Malaysia

Abstract

Pelus River were located in cascading area, which some party took this area as one of the potential area for new hydro-plant area. Pelus River discharges into the Perak River about 10 km downstream of Chenderoh and the gradients in the upper courses are steep where some river can drop to more than 50 m. Total catchment size for Pelus catchment area is estimated about 328.1794 km². The long of main Pelus River is estimated at 22.11 km. The relationship between rainfall and water level were positively strong where $R^2= 0.84925$. The rating curve show the correlation between water level and discharge are positive strong with $R^2= 0.9976$. It is clearly identify that rainfall has given strong impacts on the discharge of Pelus River. Therefore, the main purpose of this study is to study the river profile characteristic of Pelus River, which, to achieve the expected outcomes that are to produce the alternative way such as using hydrology navigation to control optimum river characteristic if any development occurs the river basin. The need to analyze the impact of seasonal variation in river morphology is due to most of the sediment transported by the rivers through the inlet in the high flow season. River discharge analysis is important in order to know the linked with channel efficiency, water supply, flood control, or the way in which people in Pelus area use the river.

Keyword: Pelus River; Catchment; River profile; River dicharges; Longitudinal profile