

STUDY ON CHARACTERISTIC OF SEDIMENT AND BED LOAD TRANSPORT IN SUNGAI JEMBERAU AT TASIK CHINI

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Abstract:

This study was carried out to identify the characteristics of the sediment and to compare the bedload transport between measured and predicted method in Sungai Jemberau at Tasik Chini for six different days. Nowadays, extensive uncontrolled mining activities nearby the Sungai Jemberau were lead to erosion process to occur where it can increase the sediment flows into Sungai Jemberau. It becomes worsen during storm or rainfall event because high amount of sediment will settle down in stream bed and make the depth of river become shallow if the sedimentation occurred. At once, the area will face flooding because the river become overflow due to sedimentation process (Ahmad Abdul Ghani et al., 2013). Hence, the bedload transport were estimate using DuBoys and Schoklitsch equation. Also, the sediment was classified using Udden Wentworth Scale. Mostly, the median grain size (d_{d50}) are range in 2.0mm-4.0mm and it classified as Very Fine Gravel (VFG). Meanwhile, the density of sediment were range from 2.34g/cm³ to 2.97g/cm³ . Lastly, the comparison between measured and predicted bedload discharge gives that DuBoys equation are choose as the best prediction of bedload discharge in Sungai Jemberau.

Keywords: Sungai Jembera, Sediment characteristics, Bedload discharge, Predicted, Measured