Paper A24

The two seasonal characteristics of Pahang River, Pahang, Malaysia

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Pahang River is the longest river in Peninsular Malaysia. Pahang River starts from the confluenc of Tembeling River and Jelai River at Kuala Tembeling with length more than 300 km to estuary of Pahang River at Pekan. Rapid development and conversion of forested land into other land uses within the Pahang Basin has an impact to the river ecosystem due to lack of proper and effective management and have led to deterioration and shortage of water quality and water resource. Higher of Soil loss also related to urbanization and agricultural activities were recognized as the cause of water pollution. Two hydrological and water quality samplings have been carried out during the study; firs sampling was conducted from 1st to 3rd January 2010 and the second sampling from 22nd to 25th February 2010. At least 15 stations along Pahang River have been chosen to determine hydrology (rainfall, velocity and stream flow and water quality (WQI parameters) of the river. During firs sampling, measurement of the velocity ranged from 0.31 to 0.58 m/s and river flo was ranged from 153.28 to 439.68 m^3/s. For water quality analysis; pH range from 7.2 to 7.6; dissolved oxygen range from 5.24 to 7.28 mg/L, chemical oxygen demand from 20.0 to 69.0 mg/L, biochemical oxygen demand from 0.40 to 0.97 mg/L; total suspended solids from 50.0 to 65.6 mg/L and ammonia nitrogen from 0.19 to 1.16 mg/L. For the second measurement, almost all of parameters were dropped; velocity ranged from 0.22 to 0.48 m/s the river flo from 52.07 to 304.49 m^3/s. For water quality analysis; pH range from 7.2 to 7.5; dissolved oxygen range from 7.51 to 8.65 mg/L, chemical oxygen demand from 5.0 to 17.0 mg/L, biochemical oxygen demand from 0.26 to 1.49 mg/L; total suspended solids from 18.5 to 34.5 mg/L and ammonia nitrogen from 0.03 to 0.21 mg/L. Due to no proper rainfall between sampling period, It can be shown that during the second sampling water level of Pahang River was dropped, this phenomenon is reflecte by decrease of velocity, stream flo and water quality level for the most water quality parameters unless for dissolved oxygen.

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