

Assessment of Chemical and Physical Properties of Surface Water Resources in Flood Affected Area

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Abstract : Flood event that occurred in mid-December 2014 in East Coast of Peninsular Malaysia has driven attention from the public nationwide. Apart from loss and damage of properties and belongings, the massive flood event has introduced environmental disturbances on surface water resources in such flood affected area. A study has been conducted to measure the physical and chemical composition of Galas River and Pergau River prior to identification the flood impact towards environmental deterioration in surrounding area. Samples that have been collected were analyzed in-situ using YSI portable instrument and also in the laboratory for acid digestion and heavy metals analysis using Atomic Absorption Spectroscopy (AAS). Results showed that range of temperature (0C), DO (mg/L), Ec ($\mu\text{s}/\text{cm}$), TDS (mg/L), turbidity (NTU), pH, and salinity were 25.05-26.65, 1.51-5.85, 0.032-0.054, 0.022-0.035, 23.2-76.4, 3.46-7.31, and 0.01-0.02 respectively. The results from this study could be used as a primary database to evaluate the status of water quality of the respective river after the massive flood.

Keywords : flood, river, heavy metals, AAS

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