

## **Integrated river basin management: incorporating the use of abandoned mining pool and implication on water quality status**

### **ABSTRACT**

Exploring alternative water resource has been an option in an Integrated River Basin Management approach for Selangor River Basin, Malaysia. This includes the use of abandoned mining pool water as additional raw water resource to downstream water treatment plants. Monitoring of water quality along Selangor River was performed at selected locations within the river basin including active (sand mining) and abandoned mining pools to evaluate on current water quality status of the river for raw water supply. Measured variables were compared with the recommended acceptable value by the Ministry of Health (MOH) for guideline compliance. Generally, the abandoned mining pools were classified as Class II according to Water Quality Index sufficient to be used as alternative water resource in terms of water quality and have metal contents below the recommended acceptable values. The water intake point of the water treatment plant downstream the river basin indicated satisfactory water quality level and in compliance with the MOH guidelines despite partly sourced from the abandoned mining pool.

**Keyword:** Alternative water resource; Integrated river basin management; Mine water; Water quality index; Water supply