

Development of Total Maximum Daily Load Using Water Quality Modelling as an Approach for Watershed Management in Malaysia

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Abstract : River is one of important water sources for many activities including industrial and domestic usage such as daily usage, transportation, power supply and recreational activities. However, increasing activities in a river has grown the sources of pollutant enters the water bodies, and degraded the water quality of the river. It becomes a challenge to develop an effective river management to ensure the water sources of the river are well managed and regulated. In Malaysia, several approaches for river management have been implemented such as Integrated River Basin Management (IRBM) program for coordinating the management of resources in a natural environment based on river basin to ensure their sustainability lead by Department of Drainage and Irrigation (DID), Malaysia. Nowadays, Total Maximum Daily Load (TMDL) is one of the best approaches for river management in Malaysia. TMDL implementation is regulated and implemented in the United States. A study on the development of TMDL in Malacca River has been carried out by doing water quality monitoring, the development of water quality model by using Environmental Fluid Dynamic Codes (EFDC), and TMDL implementation plan. The implementation of TMDL will help the stakeholders and regulators to control and improve the water quality of the river. It is one of the good approaches for river management in Malaysia.

Keywords : EFDC, river management, TMDL, water quality modelling

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