

Comparative Assessment of Moyog River Watershed and Malaysia Water Quality Index

ABSTRACT

Water is vital to the existence of all living organisms, but this invaluable resource is badly threatened by fast-growing human population and urbanization when increasing number of rivers are polluted due to the uncontrolled human activities. Here, we report the assessment of Water quality of Moyog river through the Malaysia Water Quality Index (NWQI) versus Canadian Water Quality Index (CWQI) as well as Biological Monitoring Work Party (BMWP) index. Sampling stations were set at Kg. Kibunut (KB), Kg. Notoruss (NT) and Kg. Babagon (BB) located in middle stream, as well as Kg. Kibabaig (KG) located in the lower stream of the Moyog river. NWQI shows that all the selected sites except KG fall under First Class category indicating an excellent water quality of the river. However, under CWQI, water quality for both MY, NT and BB falls into Second Class and Third Class, respectively, signifying a deterioration of water quality, and inconsistency of NWQI and CWQI in the water quality assessment. Besides, through BMWP index approach, a total of 538 individuals belonging to 8 orders, 17 families and 18 genera identified during the whole sampling event. The BMWP index is in good agreement with CWQI and this implies that a more stringent and holistic NWQI should be proposed for better assessment of river water quality in Malaysia.