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GROUP 15

A Dive into Water Quality: Exploring Assessment Technique

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This project investigates the water quality of sewage effluents discharged into Sungai Stulang and Sungai Tampoi in Skudai, Johor Bahru, Malaysia. The objectives were to evaluate key physicochemical parameters, assess compliance with national standards, and determine the public health implications of river pollution. Water samples were collected from selected sewage treatment plants (STPs) and analyzed for parameters including dissolved oxygen (DO), biochemical oxygen demand (BOD), chemical oxygen demand (COD), ammoniacal nitrogen (NH_3-N), total suspended solids (TSS), and pH, following Universiti Teknologi Malaysia (UTM) laboratory protocols and Department of Environment (DOE) guidelines. Results revealed poor water quality, with Water Quality Index (IKA) values ranging from Class III to Class V, indicating heavily polluted conditions. DO levels were critically low (<2 mg/L), while BOD, COD, and NH_3-N were significantly above permissible limits, suggesting severe organic and chemical contamination. The findings highlight the risks of waterborne diseases, ecological degradation, and potential long-term health impacts from exposure to polluted water. The project suggests that stricter wastewater management, continuous monitoring, and improved sewage treatment are urgently needed to protect river ecosystems and safeguard community health.