



Spatial and Temporal Variation of Water Quality in the Bertam Catchment, Cameron Highlands, Malaysia

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Abstract

References

Citations

Supplementary Data

Data/Media

Metrics

ABSTRACT:

The spatio-temporal variability of water quality associated with anthropogenic activities was studied for the Bertam River and its main tributaries within the Bertam Catchment, Cameron Highlands, Malaysia. A number of physico-chemical parameters of collected samples were analyzed to evaluate their spatio-temporal variability. Nonparametric statistical analysis showed significant temporal and spatial differences ($p < 0.05$) in most of the parameters across the catchment. Parameters except dissolved oxygen and chemical oxygen demand displayed higher values in rainy season. The higher concentration of total suspended solids was caused by massive soil erosion and sedimentation. Seasonal variations in contaminant concentrations are largely affected by precipitation and anthropogenic influences. Untreated domestic wastewater discharge as well as agricultural runoff significantly influenced the water quality. Poor agricultural practices and development activities at slope areas also affected the water quality within the catchment. The analytical results provided a basis for protection of river environments and ecological restoration in mountainous Bertam Catchment.

Keywords: Bertam Catchment; Cameron Highlands; anthropogenic activities; physico-chemical parameters; spatio-temporal variability; water quality

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