

An Integrated Assessment of the Ecological Health Status of Coastal Aquatic Ecosystems of Ada in Ghana

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Abstract

This paper aims at assessing the ecological health status of aquatic ecosystems in the coastal area of Ada in Ghana. Healthy aquatic ecosystems are characterized by high species diversity, good water and habitat quality among others. An ecological assessment was conducted to describe the landuse pattern, water quality and habitat quality of critical aquatic ecosystems. Physicochemical parameters of water were monitored for three months each in the dry and wet seasons. Biological components which composed of macroinvertebrate and aquatic macrophyte were studied to determine the biodiversity status. The results revealed that 70% of the sampled aquatic ecosystems have concentrations of water parameters within the limits of natural background levels. However, the concentrations of nitrates and phosphates were significantly higher than the recommended World Health Organization (WHO) standards for healthy aquatic ecosystems. With regards to landuse and habitat quality, seventy percent (70%) of the sampled ecosystems were found to be in poor condition. Increasing effort on awareness programmes is needed to improve community participation to ensure proper disposal of domestic and industrial waste.