



## Dynamics and Trends of Anthropogenic Stressors in a Coastal Wetland

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### ABOUT THE STUDY

Coastal areas contain some of the most valuable resources on the planet, which are constantly threatened by human development. Wetlands, a delicate but beneficial asset to coastal dwellers, are notable among these resources. The expansion of Winneba city into the Muni Lagoon catchment, as well as the effects on the Ramsar site. During the study period, the rate of encroachment nearly quintupled. As a result of these activities, some of the lagoon's feeder streams have dried up. The encroachment was successful due to a lack of clearly defined boundaries indicating the extent of the wetland. The study recommends that the entire stakeholder should come together and work with Wildlife Division of the Forestry Commission to establish boundaries of the wetland beyond which anthropogenic activities should not be allowed.

The benefits humans obtain from wetlands cannot be necessarily quantified; they are immeasurable and form a substantial part of the ecosystem services. However, rapid urbanization is destroying the majority of the world's wetlands. Various human activities in urban areas, whether social, economic, or cultural, contribute to the change in the homeostasis of urban wetlands. Information from numerous studies such as that of Environmental Protection Agency indicate that, within urban centers, planners hardly perceive the importance of wetlands and the need to include them in planning, but rather tag them as idle lands and hence are subjected to harsh treatment. The decline in coastal wetlands are often overlooked in international policy agendas and hence have given rise to the unsavory conditions of global wetlands now.

Wetlands' ability to provide essential ecosystem services indefinitely is under threat from both adverse natural effects and growing debilitating human activities. Ecosystems have been altered more rapidly and extensively in the last 50 years than at any other time in history. This has resulted in an unprecedented transformation of freshwater ecosystems and, as a result, biodiversity loss, with river basins housing more than half of the world's population. The majority of African cities' urban wetlands are deteriorating in terms of hydrology and water quality. Because of changing socioeconomic conditions and human activities in cities, urban wetlands continue to change dramatically.

The analysis of remotely sensed images revealed a high rate of encroachment within the Muni Lagoon catchment. This was confirmed by the community members and officials of the Wildlife Division of the Forestry Commission and other stakeholders through the interviews. The encroachment is rampant and not easily monitored as a result of unclearly defined boundary of the protected area. Based on the analysis of the remotely sensed images (1990-2019), there is high loss of the open forest to settlement and agricultural activities. Area coverage of the lagoon has also keeps fluctuating over the years, especially, within most parts of its upper portion where the feeder streams are drying up. Grassland is however increasing within the catchment. The catchment is however to be kept free from developmental planning of residential, educational or industrial activities within the municipality.

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