

## **Marine records of the coast of Africa: a case of mechanisms and consequences of past and present climate changes over West Africa coast and its effect on adaptation.**

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The West African Coastal Regions houses 40% of the resources and it is the seat of intense economic activities, in addition, it contains the rich and varied ecosystems (Magrove, Lakes, Lagoons etc.) which offer ecological advantages of international significance. The Coastal Region of West Africa is prone to changes- resulting from a combination of natural factors (Sea level, Risk marked by climate changes) and human (increases puncture of natural resources, urbanization, construction of hydro-electric dams). Several areas of the West African Littoral Zones have experiences Coastal Erosion in order of 1-3 meters per annum with Ecological and Socio-economic repercussion.

The main objective of this Study is to produce a conceptual framework for developing contextually relevant response strategies and effective communication networks that are inter-disciplinary to past and present Coastal Sea Level changes and how it effect primary production, the impacts of past and present climatic changes on Coastal Level rise and ecosystem changes etc by addressing the following three themes: Detection, Prediction ,Adaptation and also determine the history of potentially important forcing factors and its effect on Adaptation.

The attempt in this study is to improve the understanding of the past and present coastal sea level changes, ecosystem changes and livelihood of human development in Africa: a case for West Africa and identify the important feedbacks which amplify or reduce the influence the effect of these forcings and its effect on Adaptation.

The study revealed that barriers to successful information sharing must be managed to allow the delivery of accurate and timely information to those able to use it for greatest protection of those in coastal regions in West Africa and Nigerian coastline especially.

The research study conclude, over the last decades ,that there is lack of data and logistical difficulties for global change research in the coastline of West African region.