

ANALYSIS OF ENVIRONMENTAL AND ECONOMIC EFFECTS OF KIRI DAM, ADAMAWA STATE, NIGERIA

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ABSTRACT

This research was an attempt to study the consequences of dam construction in Nigeria. This was expedient because such projects are known to be characterised by array of disasters that ensued their construction. Satellite images captured before and after the dam in 1976 and 2014 respectively were subjected to image processing techniques so as to assess the likely changes in environmental variables of the area. This was supplemented by 250 questionnaires administered in settlements along the riverbank to elicit information on the socioeconomic characteristics of the people. Additionally, field observations and informal interviews were conducted to probe further into details of information required. Results show that natural vegetation has decreased by 63%. This has led to chains of environmental problems including soil erosion, loss of biodiversity and pollution. The other land use/cover types experienced increase, with water body accounting for the highest value of 54.7% owing to dam in the reservoir. The hitherto common crops of the area such as maize, guinea corn have been replaced with cash crops like cotton and potato etc., some of which are foreign to the area. This coupled with inundation of farmlands by dam water, has constituted undesirable impacts on the livelihood of the local farmers. Unfortunately, the dam water meant for irrigation farming and fishing, has not been utilized maximally. Instead, the presence of the water has led to emergence of life-threatening animals and birds. It was recommended that the local farmers be provided with appropriate fishing and irrigation facilities to enable them take advantage of the dam. Vast hectares of lands lying fallowed should be utilized to ensure food security.

KEYWORDS: Kiri Dam, Environment, Irrigation, Fishing, Quella birds