

A study of the effect of environmental changes on the hydrology of Lake Turkana, Kenya
Janga, Joseph E.T.
Master of Science (Engineering)
University Of Dar es Salaam, College of Engineering and Technology, 1991

This dissertation is meant to study the environmental changes on the hydrology of lake Turkana and to demonstrate how data from land sat series satellites with a Multi Spectral Scanner (MSS) on board are able to provide synoptic view with high observational density for analysis within a short time and at lesser operational costs- a situation which would have been time consuming or sometimes not getting information at all due to the difficulties in getting access to the area if conventional methods of ground measurements were to be used. The study attempts to use meteorological data, hydrological data, fish data and the satellite image data of the study area in photographic form, plus ground truth information by visiting the study area on the Western side of the lake. Results show that the study area is characterized by high evaporational losses which are always higher than the rainfall. Relative humidity is 1.1 ways low. The lake levels have continued to fall throughout the study period with a corresponding decrease in fish catches. River discharges also were noticed to have reduced into the lake. Vegetation, bushland and grassland were identified against the background of the lake Turkana. Drainage patterns identified from the images on the iurKwell and Kerio catchment basins were dendritic in nature.