



Assessment of the Status of Water Resources and its Linkage With Climate Variability: Case Study of the Zambezi River Basin

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Climate change is a topical issue in the scientific world that has continued to attract a substantial body of research due to the complicated impact it has on the global population. This phenomenon refers to changes mainly in rainfall pattern, temperatures and other weather variables. The Continent of Africa has been identified to be highly vulnerable because of its envisioned low adaptive capacity and vulnerability. According to the Inter-Governmental Panel on Climate Change (IPCC) the Southern African region is regarded as one of the most vulnerable regions in Africa. The region is characterised by highly spatial and temporal rainfall variability, and in some cases, scarce water resources. In this paper, attempt will be made to highlight the status of current water resources situation in the Zambezi River Basin (ZRB) and to identify linkages and gaps for future intervention.

The Zambezi River Basin (ZRB) in Southern Africa is considered to have the most variable climate of any major river basin in the world, with an extreme range of conditions across the catchment and through time. For instance, the Mean Annual Precipitation (MAP) ranges from 100mm in the west to 1500mm in the northern & eastern parts. Therefore, climate change is likely to affect nearly every aspect of human well-being, from agricultural productivity and energy use to flood control, municipal and industrial water supply to wildlife management.

Regional climate modelling which provides information on climate change impact may lead to enhanced understanding of adaptive water resources management. Understanding the current status of water resources in ZRB and its linkage to climate variability will be the first step in the modelling and projection of future scenarios of water availability.

Key words: Climate change, impacts, modeling, water resources, adaptation, mitigation.