

# **INTEGRATED WATER, ENERGY, AND ENVIRONMENTAL MANAGEMENT: EXPERIENCE FROM TANZANIAN RIVER BASINS**

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In recent decades sharply rising populations, economic development pressures, and myopic environmental management practices have been escalating the use and pollution of water resources worldwide. Tanzania is also witnessing its share of environmental degradation as large swaths of woodlands and savannahs are rapidly cleared to make way for farmland and pastures; forests are cut for timber, charcoal, and firewood; wetlands are drained for agricultural use; river banks and hill slopes are cultivated intensely; and water withdrawals from rivers, lakes, and aquifers are increased to meet the rising demands for irrigation and other water uses. Climate change is causing more severe and more frequent droughts and floods and exacerbates environmental stresses and socio-economic vulnerabilities, especially for the poor. The Rufiji River and Lake Rukwa Basins are well-endowed with environmental resources and hold great promise of socio-economic prosperity for their communities and Tanzania as a whole. In many watersheds comprising these basins, this promise remains intact, but in others, the lack of good management practices has allowed water and environmental stresses to become unsustainable, threatening to reverse economic development and bring about societal and environmental crises. This article reports on the hydro-climatic, water resources, and socio-economic assessments, findings, and recommendations of Integrated Water Resources Development and Management (IWRMD) Plans recently prepared to address the above concerns and harness the considerable basin water and natural resources. The single most important message of the plans is that the Rufiji River and Lake Rukwa River Basins can indeed deliver their full societal and environmental promise to their communities and Tanzania, but for this to occur, there must be a systemic change in the way water and environmental resources are managed by government institutions (at all levels) and by the stakeholders themselves. The Rufiji River and Lake Rukwa IWRM Plans have successfully been ratified and legally adopted by the Government of Tanzania.

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