

## Outcome-Based Water Resources Management in the Gash River Basin, Eastern Sudan

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**Abstract :** This paper responds to one of the key national development strategies and a typical challenge in the Gash Basin as well as in different parts of Sudan, namely managing water scarcity in view of climate change impacts in minor water systems sustaining over 50% of the Sudan population. While now focusing on the Gash river basin, the ultimate aim is to replicate the same approach in similar water systems in central and west Sudan. The key objective of the paper is the identification of outcome-based water governance interventions in Gash Basin, guided by the global Sustainable Development Goal six (SDG 6 on water and sanitation) and the Sudan water resource policy framework. The paper concluded that improved water resources management of the Gash Basin is a prerequisite for ensuring desired policy outcomes of groundwater use and flood risk management purposes. Analysis of various water governance dimensions in the Gash indicated that the operationalization of a Basin-level institutional reform is critically focused on informed actors and adapted practices through knowledge and technologies along with the technical data and capacity needed to make that. Adapting the devolved Institutional structure at state level is recommended to strengthen the Gash basin regulatory function and improve compliance of groundwater users.

**Keywords :** water governance, Gash Basin, integrated groundwater management, Sudan

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