

The South African Polycentric Water Resource Governance-Management Nexus: Parlaying an Institutional Agent and Structured Social Engagement

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Abstract : South Africa, a water scarce country, experiences the phenomenon that its life supporting natural water resources is seriously threatened by the users that are totally dependent on it. South Africa is globally applauded to have of the best and most progressive water laws and policies. There are however growing concerns regarding natural water resource quality deterioration and a critical void in the management of natural resources and compliance to policies due to increasing institutional uncertainties and failures. These are in accordance with concerns of many South African researchers and practitioners that call for a change in paradigm from talk to practice and a more constructive, practical approach to governance challenges in the management of water resources. A qualitative theory-building case study through longitudinal action research was conducted from 2014 to 2017. The research assessed whether a strategic positioned institutional agent can be parlayed to facilitate and execute WRM on catchment level by engaging multiple stakeholders in a polycentric setting. Through a critical realist approach a distinction was made between *ex ante* self-deterministic human behaviour in the realist realm, and *ex post* governance-management in the constructivist realm. A congruence analysis, including Toulmin's method of argumentation analysis, was utilised. The study evaluated the unique case of a self-steering local water management institution, the Impala Water Users Association (WUA) in the Pongola River catchment in the northern part of the KwaZulu-Natal Province of South Africa. Exploiting prevailing water resource threats, it expanded its ancillary functions from 20,000 to 300,000 ha. Embarking on WRM activities, it addressed natural water system quality assessments, social awareness, knowledge support, and threats, such as: soil erosion, waste and effluent into water systems, coal mining, and water security dimensions; through structured engagement with 21 different catchment stakeholders. By implementing a proposed polycentric governance-management model on a catchment scale, the WUA achieved to fill the void. It developed a foundation and capacity to protect the resilience of the natural environment that is critical for freshwater resources to ensure long-term water security of the Pongola River basin. Further work is recommended on appropriate statutory delegations, mechanisms of sustainable funding, sufficient penetration of knowledge to local levels to catalyse behaviour change, incentivised support from professionals, back-to-back expansion of WUAs to alleviate scale and cost burdens, and the creation of catchment data monitoring and compilation centres.

Keywords : institutional agent, water governance, polycentric water resource management, water resource management

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