Application of a sustainability index for integrated urban water management in Southern African cities: Case study comparison – Maputo and Hermanus

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Abstract

Poor service provision in developing countries, and particularly the provision of water-related services, present serious challenges to urban development. It is estimated that 300 m. people in Africa do not have access to safe drinking water and 313 m. have limited access to adequate sanitation. The critical situation in the water sector continues to undermine strategies for poverty eradication and retards development. It is possible that the failure in service provision can in part be attributed to an inability by policy makers to address urban water management in a holistic manner. In this study, a systems approach has been adopted to develop a composite index that could be used to assess the potential of a town or city to be sustainable. This index, the Sustainability Index for Integrated Urban Water Management (SIUWM) is composed of 5 components which disaggregate into 20 indicators and ultimately into 64 variables. Two Southern African urban centres, Hermanus and Maputo, were selected as initial case studies to test the applicability and validity of the index and to compare their sustainability index scores. Results of the SIUWM application demonstrate that the index could highlight areas for improvement and ultimately guide appropriate action and policy-making towards better service delivery and improved resource management.

Keywords: sustainability, sustainable development, sustainability indicators, integrated urban water management, systems thinking