

Integrated monitoring of water allocation reform in South Africa

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Abstract

South Africa faces significant inequities in the allocation of water for productive purposes. Water allocation is one component of a wider government mandate to address the inequities of the past. Water allocation reform is being implemented by the South African Department of Water Affairs and Forestry (DWAF), through the Water Allocation Reform (WAR) Programme. This paper presents an approach for determining indicators that can be used to monitor targets for WAR and for prioritising areas for specific WAR interventions. The approach integrates water use data with environmental, economic and equity data to provide a holistic picture of the progress and benefits of WAR. Limitations of the approach are discussed, specifically related to the data on which the indicators are based. The development of data for the equity indicator presents specific challenges which are discussed through examples from its application in four case study areas.

Keywords: monitoring, water allocation reform, equity, indicators, South Africa

Introduction

Integrated water resource management (IWRM) is not an end in itself but a means to achieve the objectives of efficiency, equity and environmental sustainability in water resource management. Anderson et al. (2008) outlined some of the difficulties in defining and using the term IWRM but it is generally agreed that IWRM supports a flexible and adaptable process, promoting the 'coordinated development and management of water, land and related resources in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital eco-systems' (Global Water Partnership, 2003). If an IWRM approach reflects a process and not an outcome, it is important to develop a means of monitoring how effective certain water resource management decisions are in achieving the desired outcomes of efficiently managed, equitably allocated and environmentally sustainable water resources. To this end, water resource management initiatives, that adopt an IWRM approach, should include appropriate indicators, supported by well managed information monitoring systems. Traditional water resource monitoring paradigms have focused predominantly, and with varying degrees of success, on monitoring water quantity and quality. Undertaking water resource management within an IWRM framework now faces the challenge of continuing to improve the traditional hydrological focus areas, while concurrently developing more holistic,

cross-disciplinary approaches that have a greater emphasis on 'the air and land phases of the hydrological cycle and the various human impacts' (Nomqophu et al., 2007). This includes social equity, economic benefits and environmental sustainability.

This paper considers IWRM in the context of water allocation reform (WAR). South Africa faces significant inequities in the allocation of water for productive purposes. The South African national government, as public trustee of the nation's water resources, is required to give effect to its legal obligation to ensure equitable access to water. WAR is one component of a wider government mandate to address the inequities of previous access to natural resources, including land and water. WAR is being implemented by the Department of Water Affairs and Forestry (DWAF), through the WAR Programme. The WAR Programme aims to implement the objectives of the National Water Act (NWA) by ensuring the 'efficient and beneficial use of water in the public interest' (NWA, S 27.1.a). In accordance with the NWA, there is a requirement to redress the effects of previously discriminatory legislation, while minimising the impacts on existing users and the economy of the country. The overall outcomes of the Programme should further the key principles of the National Water Resource Strategy (NWRS) (DWAF, 2004):

- To achieve equitable access to water: that is, equitable access to water services, water resources, and associated benefits
- To achieve sustainable use of water, by making progressive adjustments to water use to achieve a balance between water availability and legitimate water requirements, and by implementing measures to protect water resources
- To achieve efficient and effective water use for optimum social and economic benefits.

Compulsory licensing (CL) is one of the main legal instruments in the NWA that can be used to give effect to WAR. CL is a mechanism to reconsider all water-use authorisations in an area so as to potentially achieve significant reform of existing legal

Revised version. Originally presented at the International Conference on Integrated Water Resource Management (IWRM) entitled: *Lessons from Implementation in Developing Countries* which took place from 10 to 12 March 2008 in Cape Town, South Africa, at the Cape Town International Convention Centre.

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