

Approaches towards practical adaptive management options for selected water-related sectors in South Africa in a context of climate change

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Abstract

As a point of departure, the South African water-related sector is placed within the broader climate change context. Following on brief explanations of the terms adaptation, adaptive management and adaptive capacity, a summary of recent (2011) findings on projections of climate change effects on hydrological responses over South Africa is presented as the scientific cornerstone to practical adaptive management options. These options are based on the identification of major categories and subcategories in which adaptive capacity can be enhanced, the identification of 17 sectors within the broader South African water-related community which are likely to be impacted by climate change and the identification of the range of foreseen changes that these various sectors are likely to have to cope with, and adapt to, as a consequence of projected changes in climate drivers and hydrological responses. Five sectors are then selected for detailed case studies on adaptive management options, viz. national water planners, municipalities, rain-fed (dryland) agriculture, the insurance industry and aquatic ecosystems. The paper concludes by stressing the importance of adaptation to climate change and briefly outlines further plans of action in this field.

Keywords: climate change, South Africa, water sector, adaptation options