

Qualitative assessment of municipal water resource management strategies under climate impacts: The case of the Northern Cape, South Africa

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Abstract

This paper considers existing coping strategies in times of climate variability and proposes long-term strategies for dealing with future projected climate change and variability. A qualitative strategy assessment methodology is proposed and tested for climate conditions in the Northern Cape.

The analysis of the results suggests that dry sanitation, education projects and tariff structures are identified as being the most useful strategies.

Key factors which were perceived to inhibit the implementation of appropriate drought adaptation strategies are the lack of local capacity and the low financial resource base to cover the capital and running costs of most of the strategies. With the likelihood of increased future rainfall variability, it is important that planners and decision-makers take into account the effects of climate change and variability on water resources. In so doing, they need to adopt sustainable water supply and demand solutions for the longer term.

Keywords: climate change, climate variability, water resource management, Northern Cape