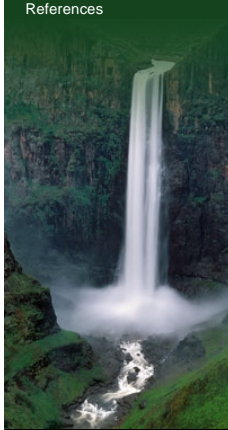


Orange-Senqu River Awareness Kit

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Water Demand in the Basin: Water Demand Management: Climate Change and Water Demand Management

Water Demand Management has long been acknowledged a critical tool to cope with the pressures of growing populations and their demand for natural resources. Today, the growing evidence of climate change makes development and implementation of Water Demand Management policies even more important for national institutions responsible for managing water. Intensifying water scarcity, problems with deteriorating water quality, and the effects of more severe and more frequent extreme climatic events (storms, floods and droughts) will almost certainly increase the need for Water Demand Management measures. In short, adaptation to climate change has to start now.

Box 1: Managing Climate Change

In theory, the effects of climate change can be slowed down in many ways, including:

- Increasing sinks of greenhouse gases
- Decreasing sources of greenhouse gases

A sink is a process that removes greenhouse gases from the atmosphere. For example, growing a tree where one did not previously exist provides a sink for carbon dioxide, because the tree extracts carbon dioxide for photosynthesis. A source is a place or activity from which greenhouse gases are emitted such as coal burning.

The Kyoto Protocol

The Kyoto Protocol is a legal instrument that is separate from, but related to, the UN Climate Change Convention. Countries which abide by the Protocol have the following obligations:

- Developed countries are obliged to ensure that their greenhouse gas emissions do not exceed the amounts assigned to them.
- Climate change policies must be implemented.
- Energy efficiency must be enhanced.
- Emissions in the waste and transport sectors must be limited or reduced.
- Sinks for greenhouse gases must be protected.
- Market instruments that are counterproductive to the aims of the Protocol should be phased out.
- Sustainable forms of agriculture and relevant research must be promoted.

All these activities must be undertaken in such a way that adverse effects on developing countries are minimised.

The future of climate change issues in South Africa is for the moment mainly in the government's hands. If they decide to sign the Kyoto Protocol, it will involve changes in all the economic sectors - something we should accept and adhere to.

Source: Weather SA 2009



Alexander Bay.
Source: Vogel 2009
(click to enlarge)

A very useful new publication in this context is "[Climate Change Adaptation in SADC – A Strategy for the Water Sector](#)" (SADC 2011). This publication provides very concrete advice for all kind of stakeholders to conceive concrete measures of adaptation. For the "Strategic Framework" subchapter look at the following box:

Box 2: Strategic Framework

Climate change adaptation in the water sector is multi-faceted. First, global warming and climate change are by nature planetary phenomenon

Interactive

Basin Map

Explore the sub-basins of the Orange-Senqu River

[enter](#)

Water Management

Explore the water management systems around the basin - including intra-basin transfers and sectoral water requirements

[enter](#)

Dams

Investigate the dams and water infrastructure in the Orange-Senqu basin

[enter](#)

Video Tour

Tour video scenes along the Orange-Senqu River related to Meeting the Water Challenge

[enter](#)

Panel Discussion

Listen to a panel discussion about the history and challenges in the Orange-Senqu basin

[enter](#)

transcending national political boundaries. Climate change adaptation is therefore a transboundary process which requires the adjustment of societies and economies at different levels, from the grass roots up to the river basin and regional levels.

Second, adaptation is not just about prevention. In many cases, regardless of the level of preparation, extreme events such as floods and droughts will continue to occur in Southern Africa. A sound adaptation strategy should therefore provide recommendations on ways to respond to and recover from these extreme events.

Finally, adaptation in the water sector is not just about water, it is also about the people who use the resource and who are affected by the variations triggered by climate change. Climate change adaptation is therefore as much an issue of water management as it is a matter of water governance. In Southern Africa, given the limited storage capacity, climate change adaptation is also a matter of infrastructure development.

In order to reflect the different dimensions of adaptation, the SADC CCA Strategy promotes the adoption of a comprehensive and multi-dimensional approach to climate change adaptation, in alignment with integrated water resources management (IWRM). The strategy calls for the implementation of adaptation measures at different levels, at different stages of the adaptation process and in different areas of interventions.

Source: SADC 2011

[Next: Water Use and Allocation](#) ►

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