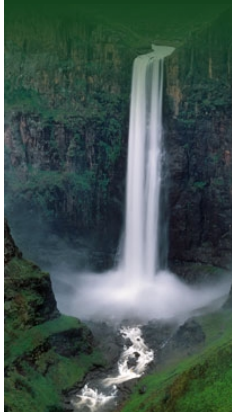


Orange-Senqu River Awareness Kit


[THE RIVER
BASIN](#)
[PEOPLE AND
THE RIVER](#)
[GOVERNANCE](#)
[RESOURCE MANAGEMENT](#)

The River Basin → Climate and Weather

- Introduction
- ▶ Geography
- ▼ **Climate and Weather**
 - Principles of Climate and Meteorology
 - Hydrologic Cycle
 - Climate Variability
 - Climate Classification
 - Water Scarcity
 - Drought
 - Climate of the Orange-Senqu River Basin
 - The Regional Climate
 - Climatic Patterns
 - Climatic Classification
 - Water Scarcity in the Basin
 - Drought in the Basin
 - Climate Change
 - Climate Change in southern Africa
 - Climate Change Downscaling
 - Water for the Future Report
- ▶ Hydrology
- ▶ Water Quality
- ▶ Ecology and Biodiversity
- References



Climate is perhaps the single most important driver determining the amount, distribution and to some extent, the availability of water in the environment. The temporal and spatial distribution of water, the intensity of precipitation and temperature regimes all drive elements of the hydrologic cycle and the many other physical and chemical processes that shape the landscape.

The climate of the Orange-Senqu River basin varies significantly along the path of the river from the temperate climates of the Lesotho mountains, through dry grasslands and savanna, to the arid landscapes of the semi-desert Nama and Succulent Karoo regions close to the river mouth.

Our global climate is changing. The question is, when and where the changes will take place, and what the impacts will be on our local environment and livelihoods? These are profound questions for the Orange-Senqu River basin, with much of the basin already in a state of water scarcity; a situation that is already presenting water managers and planners with significant challenges in terms of water quality, distribution and allocation.



Lightning during a storm on the Lower Orange River.
Source: Kruchem 2011
(click to enlarge)

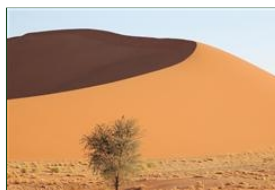
Chapter Summary

This chapter covers the following concepts and material:

- The [principles of climate and meteorology](#), including the [hydrologic cycle](#), [climate variability](#), [climate classification](#), [water scarcity](#) and [drought](#)
- An overview of the [regional climate of southern Africa](#)
- An overview of the [climate of the Orange-Senqu River basin](#)
- The basic principles of [climate change](#) and an outline of the projected impacts of climate change on the climate and environment of the Orange-Senqu River basin



The climate of Orange-Senqu River basin varies from snow in the winter in Lesotho...
Source: Lesotho Water Commission 2008
(click to enlarge)



...to the scorching Namib desert in Namibia.
Source: Huber 2008
(click to enlarge)

Interactive

Basin Map

Explore the sub-basins of the Orange-Senqu River

[enter](#)

Video Tour

Tour video scenes along the Orange-Senqu River related to the River Basin

[enter](#)

Geography Maps

Investigate land cover and terrestrial ecoregions in the basin

[enter](#)

Water Cycle

Examine how the hydrologic cycle moves water through and around the earth

[enter](#)

Food Web

Explore the interactions of living organisms in aquatic environments

[enter](#)

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[Next: Principles of Climate and Meteorology](#)