

Orange-Senqu River Awareness Kit

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

The River Basin → Ecology and Biodiversity



- Introduction
- ▶ Geography
- ▶ Climate and Weather
- ▶ Hydrology
- ▶ Water Quality
- ▼ **Ecology and Biodiversity**
- Ecology
- Aquatic Ecology
 - Building Blocks
 - Aquatic Habitats
 - In the Basin
 - Life in Aquatic Ecosystems
 - Food Chains and Webs
 - Biomass and Production
 - Classification of Organisms
 - Microorganisms
 - Plants
 - Invertebrates
 - Vertebrates
 - Fish Species
- Factors Affecting Ecosystems
- Wetlands
 - Function of Wetlands
- Biodiversity
 - Biodiversity in the Basin
 - Endemic Species
 - Alien Invasive Species
 - Biodiversity Resources
 - Terrestrial Biomes and Eco-regions
 - Human Impacts
 - Laws and Policies
- Millennium Ecosystem Assessment
- References

In broad terms, **Ecology** is the scientific study of how organisms interact with each other and with their environment.

Biodiversity is the variety of organisms found in a particular environment. It is affected by the characteristics of this environment, such as nutrient concentrations, temperature, water flow, and shelter. Only those best adapted to these conditions, and best able to use the available resources, will thrive. Interactions between organisms also matter, as predation and competition for resources (e.g., food, habitat) affect species abundance and diversity. In turn, the organisms in an environment can influence some aspects of their environment.

Understanding aquatic ecosystems and the interaction between organisms and their environment can help manage human effects better.

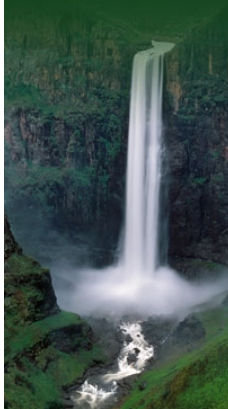
This chapter covers mainly aquatic ecosystems in the Orange-Senqu River basin. The topics are:

- The principles of [aquatic ecology](#) and the [aquatic ecosystems](#) of the Orange-Senqu River basin
- The importance and functions of [wetlands](#) and their distribution in the Orange-Senqu River basin
- [Biodiversity](#) (endemic species and the threat from alien invasive species), The principles laid out in the [Millennium Ecosystem Assessment](#) and the nature and importance of ecosystem goods and services.



Orange River at Upington.
Source: Paffy 2006
(click to enlarge)

[Next: Ecology](#) ▶



Feedback

[send a general website comment](#)

[report a specific problem with this page](#)



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](#) ▶