

# ORANGE RIVER PROJECT OVERVIEW

## LOCATION

The Orange River Project (ORP) is the largest scheme in the Orange River Basin, and includes the two largest dams in South Africa, the Gariep and Vanderkloof dams. They regulate flows to the Orange River and increase assurance of supply.

## DESCRIPTION

Gariep and Vanderkloof dams were constructed as part of the project, and have a combined storage of 8 500 million m<sup>3</sup>. The ORP includes several sub-systems which form part of the system, and include:

- ▣ The Orange–Riet Transfer Scheme\*
- ▣ The Orange–Fish Transfer Scheme\*
- ▣ The Orange–Vaal Transfer Scheme\*
- ▣ Bloemwater: Pipeline network between Gariep Dam and the towns of Trompsburg, Springfontein and Philippolis.
- ▣ Irrigation abstractions: Abstractions between Gariep Dam and downstream of Vanderkloof Dam, up to the confluence of the Vaal and Orange Rivers (near the town of Marksdrift).
- ▣ Urban and industrial abstractions: Between Gariep Dam and Marksdrift (including Hopetown and Vanderkloof towns)
- ▣ Support to the Lower Orange Water Management Area Schemes:\* Support to most of the demands in the Lower Orange, including irrigation, urban use and power generation.
- ▣ Caldon–Bloemfontein Government Water Scheme.

\* Further details are given in separate sheets

## PURPOSE

The purpose of this very complex scheme is to supply demands within several sub-systems, including the Upper Orange Water Management Area, the Eastern Cape and the Lower Orange Water Management Area all the way down to the Orange River mouth. These demands include irrigation, urban, industrial and environmental water requirements. Power generation is also part of the system, including at both Gariep and Vanderkloof Dams, which contributes to the Eskom national power grid.



Gariep Dam (© Hendrik van den Berg/Panoramio.com)



Vanderkloof Dam (© S Crerar)