

The Orange – River of Diamonds

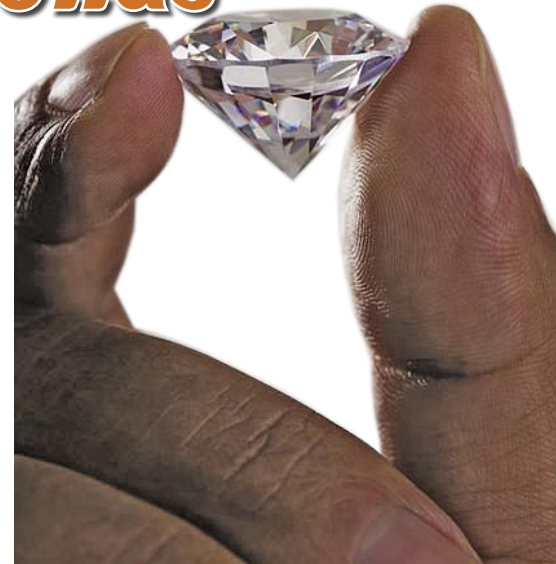
Known as the Gariiep or 'the Great River' by the indigenous Nama people, the Orange River when viewed for the first time, is said to be an impressive sight.

At more than 2 000 kilometres long, the Orange River is the longest river in South Africa. The river is a political and geographical divide, separating Namibia from South Africa and the massive sand dunes of the lower Namib Desert from the swept-rock moonscape of northwestern Namaqualand. The Orange River basin is the largest of all the so-called international river basins in southern Africa, both in terms of physical size, and in terms of volume of water (mean annual rainfall) involved. The river has a total catchment area of about 1 000 000 square kilometres of which almost 600 000 square kilometres is inside South Africa, with the remainder in Lesotho, Botswana and Namibia.

Along with its main tributary, the Vaal, the river conveys nearly 23% of the total surface water of South Africa.

The Orange River catchment varies dramatically both in climate and topography from east to west. To the east, at the source of the Orange River high in the Lesotho Highlands, the precipitation, some of which occurs as snow, can exceed 2 000 millimetres a year in places which, together with the relatively shallow soil cover and low evaporation results in significant run-off.

As the river progresses towards the west, the lush pastures of Lesotho are gradually transformed into harsh but impressive desert areas where only the most drought resistant plants can grow. It is reported that the desert areas of the lower Orange basin are among the driest in the world with an average rainfall of less



than 50 millimetres a year an annual potential evaporation of more than 3 000 millimetres in some areas. The river eventually connects with the Atlantic Ocean at Oranjemund. There are many deposits of alluvial diamonds along the Orange River. In fact, the first diamond discovery in Africa was made on the banks of the river in 1867.

Arguably the most dramatic point on the river occurs at the Augrabies Falls where the mighty Orange plunges 56 metres in a deafening and breathtaking explosion of power. Legend has it that the biggest cache of diamonds in the world lies in the swirl-hole eroded into the granite at the foot of the waterfall by the thundering waters. The name of the falls is derived from the Nama name meaning 'Place of Big Noise'.

The Orange River is the most developed of all the rivers in southern Africa. Historically, the average runoff from the total basin was more than 12 000 million cubic metres a year, but extensive developments over the



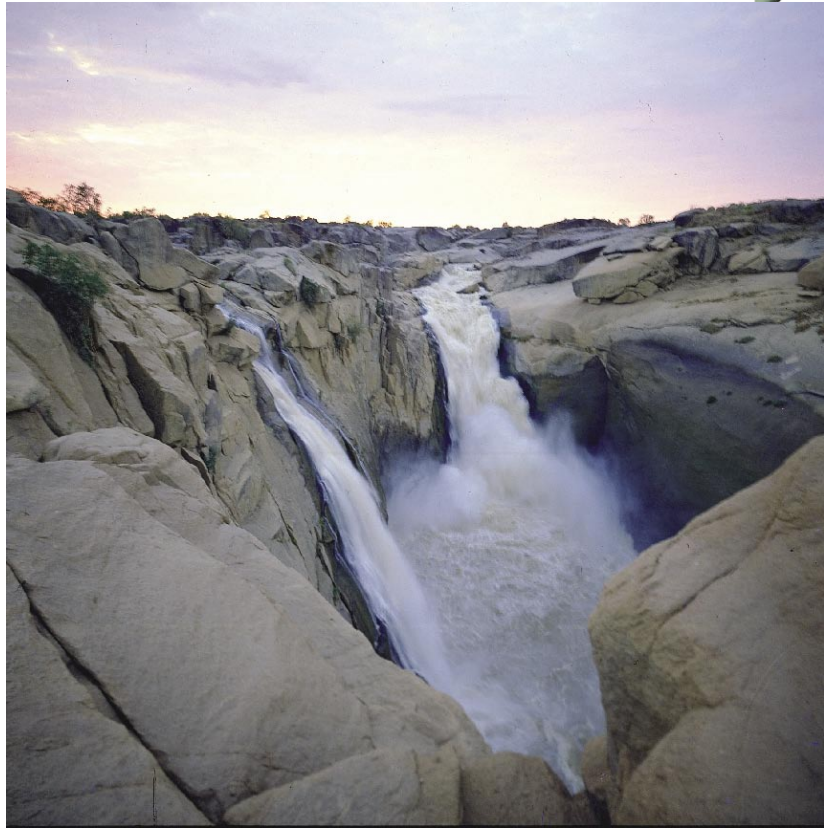
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decades have resulted in the runoff reaching the river mouth being much less. The first time the Orange was dammed was in 1929, when Buchu-berg Dam was built.

Today, there are at least 29 dams in the basin with a storage capacity of more than 12 million cubic metres. The largest of these is the Gariep Dam with a storage capacity of 5 600 million cubic metres (also South Africa's largest dam), and the Vanderkloof Dam, with a storage capacity of 3 200 million cubic metres. More recently the Katse and Mohale dams have been constructed as part of the Lesotho Highlands Water Project to bring much needed water to Gauteng.

The Gariep Dam forms the central structure of the original Orange River Project which involves the supply of water to parts of the Vaal, Fish and Sundays catchments as well as to irrigation along the Orange River itself.

Another major construction is the Orange-Fish tunnel which diverts water from the Gariep Dam towards the Eastern Cape with a maximum capacity of 54 cubic metres a second. The main purpose of the tunnel is to divert water to the Eastern Cape for irrigation, urban and industrial use. At 82,45 metres long, this is the longest tunnel in the world. The Orange-Fish



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tunnel, which is 405 metres below ground level at its deepest point, took 12 years to construct, and was officially opened by then Prime Minister BJ Vorster on 22 August 1975. The tunnel has a diameter of 5,3 m, large enough for a train to drive through.

Development in the Orange River Basin, it seems, has still not come to an end. In August 2005, the Namibian

government and South Africa's Department of Water Affairs & Forestry announced that the possibility of building a dam on the Lower Orange River is being studied. In the same month, Lesotho and South Africa announced that the second phase of the LHWP is under investigation. ♦



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WHAT'S IN A NAME?

Contrary to popular belief, the Orange River was not named after the reddish orange colour of its silt-laden water. It was, in fact, named in 1779 by Colonel Robert Gordon, the commander of the garrison of the Dutch East India Company during a reconnaissance into the interior, in honour of the Dutch Royal House of Orange.