METHODS OF WATER SUPPLY

For a named country or area you have studied, describe different methods used to supply clean drinking water to the population.
Content guide - Reservoirs/dams - Pumping water from aquifer - Wells - Road tankers - Desalination - Water treatment plants - Cloud seeding - Rainwater harvesting - Pipelines - Water transfer/importing water - Bottled water - Restrictions on use - Grey water/ reuse/ recycling
Place specific reference: Locational details, Named places/reservoirs, Specific details of supply networks/schemes, etc.

LESOTHO

Introduction

- An LEDC in southern Africa, with an abundance of water.
- Lesotho Highlands Water Project, one of Africa's largest engineering schemes, was first introduced in the 1950s.

Reservoirs/dams

- The project involves damming Lesotho's major rivers that flow into the Senqu (Orange River).
- The damming process has created large artificial lakes (reservoirs) from which water is diverted north to South African rivers.
- These rivers lead to the Vaal Dam that supplies the densely populated industrial areas of Johannesburg and Pretoria.
- South Africa pays Lesotho around US $1.5 million a month for this water supply.
- Some major dams include the Katse Dam (tallest dam - 186 m high).

Groundwater - Aquifers & wells

- 11.4% Lesotho's water supply is from groundwater.
- This is especially in rural areas which rely on springs, boreholes and hand-dug wells.
- Lesotho shares an aquifer with the Republic of South Africa and there is no joint groundwater monitoring of this aquifer.

Sewage treatment plants

- Ratjomose Sewage Treatment Plant - largest sewage treatment facility in Lesotho, located on the banks of the Caledon River.
- 11 pumping stations serve a population of over 12,000.

Rainwater harvesting

- The Underground RainWater Harvesting Tank project was launched in Leribe (a district in Lesotho).
- Up to 50 % of drinking water can be saved, preserving groundwater reserves.
- These rainwater harvesting tanks have a capacity of 30,000 litres.

Pipelines

- Delivery tunnel carries water into the Vaal river, towards Johannesburg.
- 48.2 km tunnel transfers water from Katse reservoir to Muela HEP station in northern Lesotho.