



Year 8 Geography: Water & Sustainability

Global distribution of water

Areas of high precipitation

- Along the equator due to rising air of the Hadley cell causing convectional rainfall.
- South East Asia due to the seasonal monsoon rains.

Areas of low precipitation

- Along the Tropic of Cancer, due to sinking air of the Hadley Cell.
- In Central Australia due to being inland and the rain shadow.

There are three main factors that cause water scarcity: overuse, pollution and climate change.

- Water pollution caused 1.8 million deaths in 2015 and makes 1 billion people ill every year.
- 2 million tonnes of sewage, industrial and agricultural waste goes into the world's water every day.
- More than 2 billion people live in areas of water stress, this will increase due to increases in population and climate change.
- 160 million children live in areas at risk of drought.

Water supply and demand in the UK

IN THE WEST

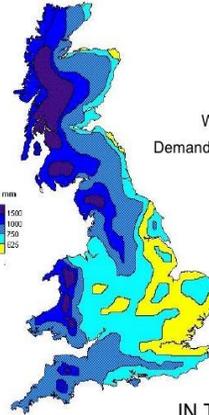
Heaviest rainfall

Lowest summer temperatures – less loss of water due to evaporation or transpiration

Areas with most cloud cover

Areas with low population density

WATER SURPLUS



Evaporation and transpiration is high

WATER DEFICIT Demand > Supply

Rainfall is lower

IN THE EAST

Water Management

Large scale schemes such as dams

- ✓ Store large volumes of water for use in times of drought
- ✓ Provide Hydro-Electric Power
- X Evaporation rates from reservoirs can be high in hot countries
- X Valuable land is lost to flooding.
- X Reduces river flow downstream.

Small Scale Schemes

- Water pumps take water out of aquifers.
- Water conservation – reduce the amount of non-essential water used such as not leaving taps running or washing cars.

Key Vocabulary

Arid	Dry areas of land where there is a lack of water available.
Aquifer	An underground layer of permeable rock that holds water.
Consumption	The action of using up a resource. What you use.
Drought	A prolonged shortage of water such as when it has not rained for a long time.
Permeable	Allows water to pass through such as soil and certain rocks.
Precipitation	Rain, snow, sleet or hail.
Relief Rainfall	When moist air is forced to rise over the mountain causing condensation and precipitation.
Water scarcity	When there is not enough water to meet demand in a region
Sustainable management	Meets the needs of the present and the future. Is good for people, the environment and the economy.