# Floods and droughts



We all need clean drinking water to survive. Different countries receive different amounts of rainfall during the course of a year. In some places it doesn't rain enough and in some places it might rain too much!

Although the Anglian Water region is the driest in the UK, we are drenched regularly by rain storms you would normally expect to see only once in 100 years.

#### Rainfall patterns in the UK

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#### **Floods**

The average amount of precipitation (rain, snow, hail) in the UK is about 960 millimetres per year. However, across the country there are wide variations. For example, in the Highlands of Scotland and the Lake District the average is about 2,500 millimetres a year, whilst the Anglian Water region is the driest and receives the least amount of rain. Some parts of the Norfolk coast receive only about 600 millimetres per year!

Average amount of precipitation (mm) per year

2500 - 2250 - 2000 - 1750 - 1500 - 1250 - 1000 - 750 - 500 - 250 - 250 - 1000 - 250 - 250 - 1000 - 250 - 250 - 1000 - 250 - 250 - 1000 - 250 -

Too much rainfall can cause floods, which can have devastating consequences. Homes, businesses, schools and farms can all be damaged or even washed away, causing suffering for those living in the affected areas. Floods can occur all over the world and can be caused by a number of problems:

- Heavy downpours can cause flash floods.
- Prolonged rainfall can cause the ground to become waterlogged, with water remaining on the surface.
- Rivers become too full and burst their banks.
- High tides can cause coastal flooding.

In 1953, 300 people were killed and thousands of animals died when the Anglian region was affected by a tidal flood of 2.5 metres which funnelled down tidal rivers, flooding 150,000 acres of land.

A tidal flood happens when the sea level is high and comes over the land, with devastating effects.

### **Droughts**

Droughts are caused when it doesn't rain for long periods of time. Droughts occur all around the world in places where there is not enough rainfall. Life can be a struggle for all living creatures as it becomes difficult to find drinking water and food to eat.

There was a very serious drought in England in 1976. Look at the table below, which shows the amount of rain that fell each month in 1976, compared to the normal average for England and Wales.

#### Monthly rainfall totals for England and Wales

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
1976*	61	41	46	20	62	18	30	25	147	148	81	87
average** 1971-2000	94	67	73	62	61	67	57	72	81	94	94	100

<sup>\*</sup> www.metoffice.gov.uk

All rainfall totals are in centimetres.

2006 was also a particularly dry year for much of the UK. Very little rain fell and 13 million people in parts of the country were affected by hosepipe bans. During the summer of 2006 many people tried hard to avoid wasting water by doing simple things like turning off the tap when they brushed their teeth, or watering the garden using rainwater from a water butt. In the Anglian region this meant that a hosepipe ban was not needed.



### **Wet and dry**



The driest place in the world is the Atacama Desert in Chile, which had no rain for 400 years from 1571 until 1971.



One of the wettest places in the world is Mount Wai'ale'ale in Hawaii, which has an average rainfall of 1,143 centimetres per year.

<sup>\*\*</sup> weatheronline.co.uk

# Floods and droughts



Wet or dry? Different parts of the UK receive different amounts of rainfall each year.

# **What to do**

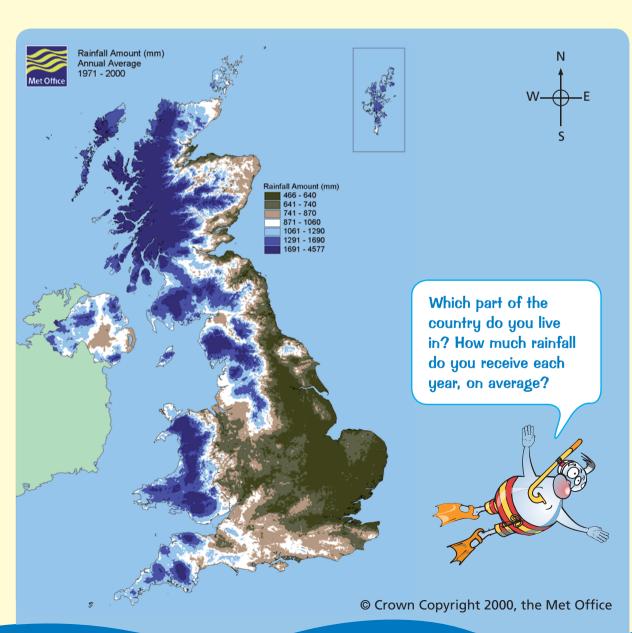
Use the map below which shows the amount of rainfall each part of the UK receives each year, on average. See if you can answer the questions on the next page, using an atlas to help you.

## **Learning objective:**

To interpret data in maps, tables and charts.

## You will need:

- An atlas
- A pen







1	What is the average rainfall in London?
2	What is the average rainfall in Manchester?
3	What is the average rainfall in North Wales?
4	What is the average rainfall in Edinburgh?
5	What is the average rainfall in Norwich?
6	Which side of the country has the least amount of rain? Look at the compass to help you.
7	Which side of the country has the most rain?
8	Why do you think different areas of Britain have different amounts of rain?
9	Why might a low average annual rainfall be a problem for big cities like Norwich?