



Extreme weather

What is happening?

Extreme rainfall occurs at the same time in countries thousands of miles apart. Scientists think that this is because waves of wind, Rossby waves, in the atmosphere 10km above the Earth, allow weather systems to move very quickly over really long distances.

How do we know this?

- Scientists studied satellite data to look for patterns in extreme rainfall events across the world. They used maths and computers to find out how strong the connections were.

Why is this important?

- With global warming, there could be more energy in the weather systems and we might see more extreme weather events across the world.
- In recent times we have experienced extreme weather in the UK: severe floods in winter and heatwaves in summer. By understanding the 'teleconnections' between the weather in different regions, scientists hope they will be more accurate predicting extreme weather in the future.

What else can you find out?

- Do you know why it rains?
- If the Earth becomes warmer, how do you think this will affect the water cycle?
- Use the QR code to find out the weather forecast in your area.

<https://www.metoffice.gov.uk/>

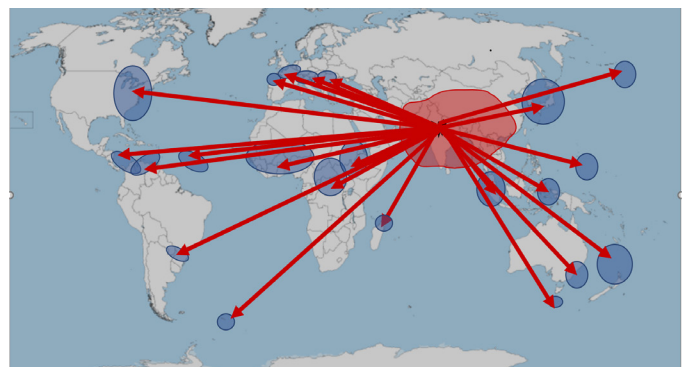
KEY FACTS

Extreme weather

Many scientists believe that global warming is increasing the strength and the number of extreme weather events such as hurricanes, droughts and floods.

Weather systems

High in the atmosphere, narrow bands of strong wind move weather systems (heat and moisture) around the globe. Weather systems can extend over thousands kilometres, depending on the time of year.



'Teleconnections' of extreme weather events

Monsoon rains in India (red areas) are linked to extreme rainfall in China, Europe, Africa and the east coast of the United States (blue areas).

