

What is climate change?

- Climate change is a controversial issue and lots of people have different and opposing viewpoints about climate change. For example, Swedish climate change activist Greta Thunberg has said that **“this is the biggest crisis humanity have ever faced”**. In contrast, US president Donald Trump disagreed saying **“we can’t destroy the competitiveness of our factories in order to prepare for non-existent global warming.”**
- Greenhouse gases make up 1% of the world’s atmosphere. They act like a blanket around the Earth which traps heat from the sun to keep the planet warm. Scientists say that without the greenhouse effect, the average temperature of the Earth would drop from 15C to as low as -18C.
- The main greenhouse gases are carbon dioxide, methane, water vapour and nitrous oxide. Water vapour is present in the atmosphere due to the water cycle, erupting volcanoes emit carbon dioxide stored in the crust, and methane is released in low-oxygen environments such as swamps.
- Human activity is increasing the amount of greenhouse gases in the atmosphere. As the world’s population grows and countries become more developed, they require more energy to power cars, factories and homes. A growing demand for food also means more trees are getting cut down and land used for farming, which adds carbon dioxide levels in the atmosphere.

Key Words

Climate Change	The variation in the Earth’s temperature over a long period of time (usually over 30 years).
Global Warming	An increase in the overall temperature of the earth’s atmosphere, which is largely down to the enhanced greenhouse effect.
Greenhouse effect	Natural warming of the earth’s atmosphere as heat given off the Earth is absorbed by liquids and gases, such as carbon dioxide.
Extreme Weather	When a weather event is significantly different from the average or normal weather pattern.
Drought	A prolonged period of abnormally low levels of rainfall, leading to a shortage of water.
Atmosphere	The gases that surround the earth. It’s what comprises the air that we breathe.

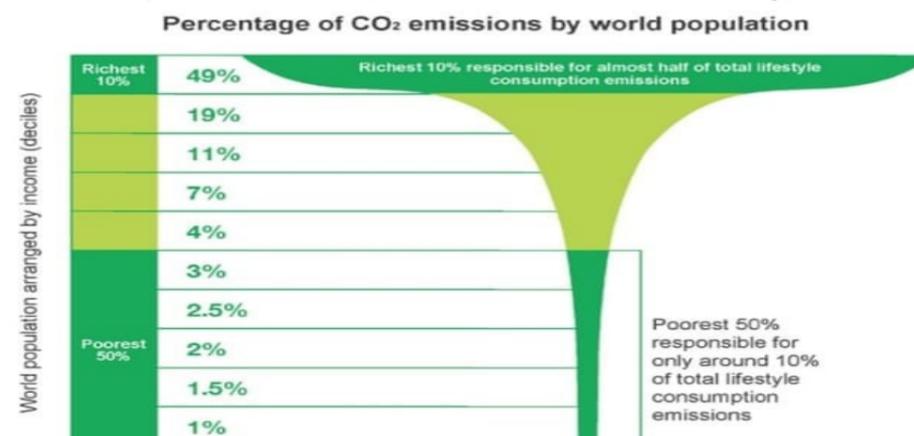
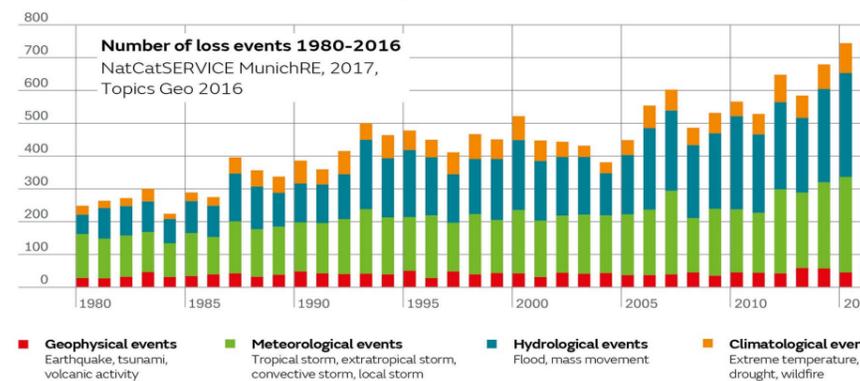
What are the impacts of climate change in the UK?

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Is the UK’s weather becoming more extreme?

- Extreme weather events have been occurring in the UK throughout history but scientists have noticed that these events seem to be happening much more frequently in the present day than in the past.
- In February and March 2018, the ‘Beast from the East’ brought easterly winds from Siberia, extreme snowstorms and temperatures as low as -10C. 48 people died, thousands of schools had to be closed and it cost the UK economy £1 billion a day.
- In February 2020, storms Ciara and Dennis brought heavy rain and wind speeds as high as 97mph to the UK. Areas across Calderdale, Shropshire and South Wales experienced heavy flooding with people being displaced from their homes and businesses being destroyed. However, a flight going from Heathrow airport to New York City broke the world record for the fastest time to cross the Atlantic Ocean because of the strong winds!
- Extreme weather is also becoming more extreme around the world. This is because climate change is affecting atmospheric circulation which is bringing floods to normally dry regions and heatwaves to normally cooler areas.

Are extremes becoming more frequent?



What are the impacts of climate change in the UK?

- British Prime Minister Boris Johnson has claimed that the UK is a ‘world leader’ in tackling climate change. In 2017, the UK government published the climate change risk assessment which outlines what actions need to take place to prevent the damaging impacts of climate change.
- The UK passed the Climate Change Act in 2008 which committed to reducing greenhouse emissions by 80% by 2050. This was amended in 2019 to reduce emissions by 100% by 2050.
- The UK have also committed to obtaining a larger proportion of their energy from renewable sources such as solar and wind power. The UK has aimed to produce 15% of their own energy from renewable sources by 2020.
- The UK government have also committed to obtaining more of their food supply from local, organic farmers. This reduces the need of importing food from abroad, which emits huge amounts of carbon dioxide.
- Attacking climate change requires countries around the world to co-operation with each. This has happened through international agreements such as the Paris Climate Agreement in 2015, which 197 countries around the world have signed.