

What is climate change?

Climate change is the long-term shift in weather patterns across the world.

What causes it?

Currently, the **biggest driver** of climate change is human activity.

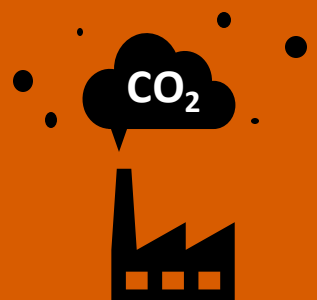
The greenhouse gas effect is where **greenhouse gases**, including carbon dioxide (CO₂) build up in the atmosphere and act like a blanket.

When sunlight enters our atmosphere and bounces off the earth, it gets turned into infrared radiation. The blanket of greenhouse gases traps some of this radiation as heat in the atmosphere – warming up the planet over time.



What is a greenhouse gas?

A greenhouse gas (GHG), is a gas that absorbs and emits energy from radiation. Carbon dioxide is the most common greenhouse gas. Others include methane and nitrous oxide.



Why is this our problem?

In the late 18th Century the Industrial Revolution began in Britain and went on to change the way people lived and worked around the world. Industrialisation in the two centuries since has dramatically increased the rate that CO₂ and other greenhouse gases have been emitted into the atmosphere.

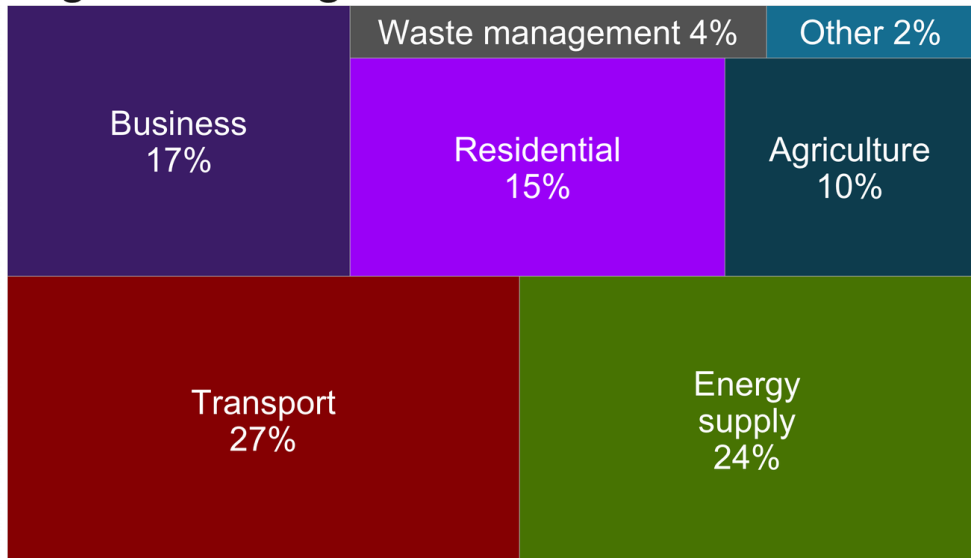
This has caused global temperatures to **rise significantly in a relatively short period of time** creating long-term changes to the climate that can't be reversed.

Where do our emissions come from?

- Electricity
- Heating
- Transport
- Agriculture
- Industry
- Deforestation
- Land use
- Aeroplanes
- Cement production



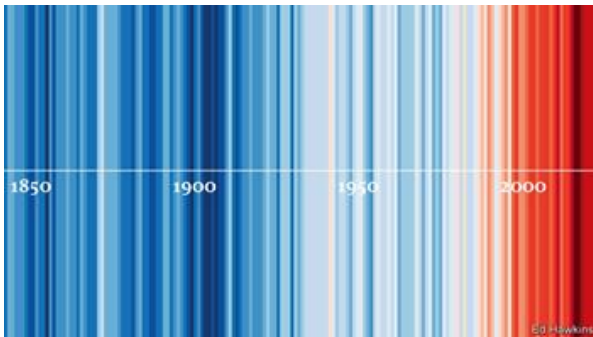
Transport was the largest emitting sector of greenhouse gases in 2017



Emissions
in the UK
in 2017

What happens next?

Scientists from across the world have been modelling different scenarios, showing how our global average temperature will change based on how much, or how little, we cut our greenhouse gas emissions.

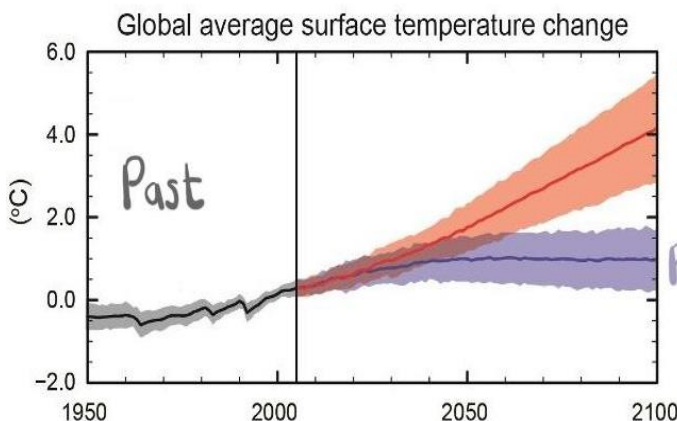


How much global temperature has increased over the last 150 years



Our actions determine our future

Here are two possible futures for our climate:



Possible future #1

Business as usual

Possible future #2

We do much better

Gets a lot hotter

Only a little hotter, much less damage

Source: International Panel on Climate Change Committee

If we do nothing, temperatures could increase by 4°C by 2080!

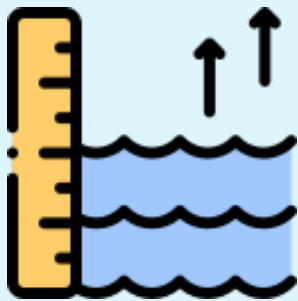
Effects on our planet

Even if we could stop all emissions today, there would still be some change in our climate.

Climate change has already impacted our planet. These impacts will be **worse** and **more frequent** if we don't cut emissions fast enough.

Impacts on our climate system include:

Extreme weather events
(droughts, floods, heatwaves)



Rising ocean levels

Ocean acidification (changing
what can live in our oceans)



Research and evidence help us to make decisions about how to cut emissions and reduce the impacts.

Effects on us

Even if we could stop all emissions today, there would still be some change in our climate.

Impacts on people and eco-systems include:

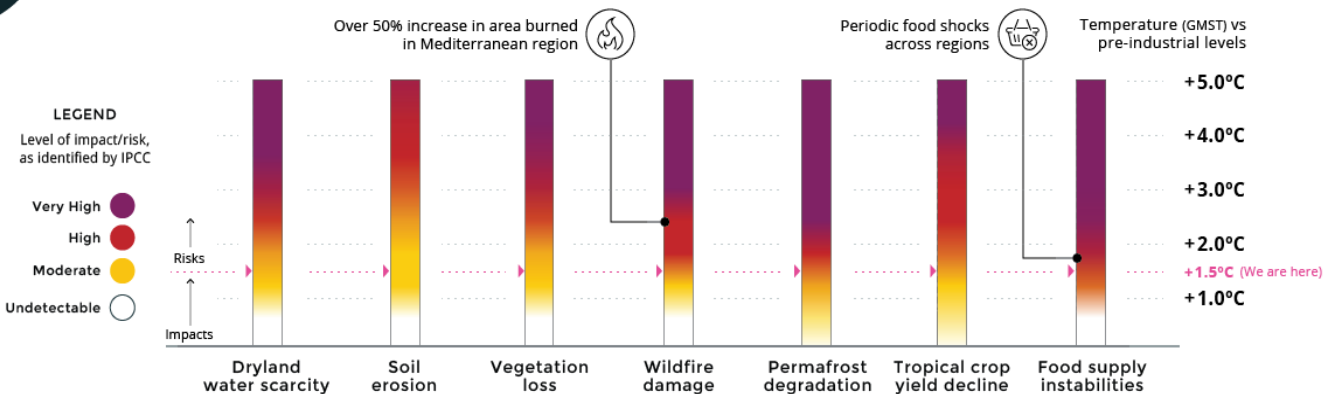
- More flooding of communities near rivers and coasts
- More food insecurity as it gets harder to grow crops and feed everyone
- More conflict over resources (e.g. food and water) as these become more scarce
- More climate migration

What is a climate migrant?
people forced to leave their homes due to extreme weather, sea-level rise, drought or water scarcity

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A 1.5° increase brings significant risks to humanity

We're already in the moderate to high risk zone in all categories



Definitions of Key Terms

‘Climate Emergency’ and ‘Climate Crisis’

“Serious problems that are being caused or likely to be caused by changes in the world’s weather, in particular the world getting warmer as a result of human activity increasing the level of carbon dioxide in the atmosphere.”

Cambridge Dictionary



As public opinion on climate change has shifted, so too has the language used to describe it.

The terms ‘**crisis**’ and ‘**emergency**’ stress the speed of climate change, and the importance of taking action now to prevent further damage to the planet.



Many politicians, news outlets and campaigners have begun using this terminology when discussing climate change.