

# A Guide to Climate Change

Help tackle the climate emergency



What is climate change and how will it affect you?

What is causing climate change?

What efforts are being made to tackle climate change?

What is a carbon footprint?

What can you do to help tackle climate change?

# What is climate change and how will it affect me?

Climate change is the name given to the change in our climatic patterns, both at a regional and global level, particularly over the last few decades.



**Across Scotland** we expect sea level rise as increased temperatures cause ice sheets worldwide to melt and seawater to expand. This will threaten our coastal communities with flooding. In addition to increasing temperatures we expect more extremes of weather. This will affect our infrastructure, the crops we can grow, our ecosystems and our natural plants and animals. Some of these changes are happening now.

**Worldwide** we also expect more extreme weather events as well as unpredictable and changing weather patterns resulting in droughts, flooding and disruption to ecosystems.

This will affect global food and water supply, the livelihoods of millions, and will result in climate refugees. Climate change often has the greatest impact on people who have contributed least to causing it and are least able to adapt to it.

**Worldwide** sea levels are rising as increased temperatures cause seawater to expand and ice sheets to melt. Many coastal cities and whole islands are at risk of being flooded by the rise in sea levels.



Why not have a conversation with friends and family about how climate change will affect you?

# What is causing climate change?

Human activities have increased the amount of greenhouse gases in the atmosphere, causing our planet to warm and our climate to change.

Naturally occurring greenhouse gases trap heat from the sun, keeping our planet warm enough to sustain life. Since the industrial revolution humans have increased the amount of greenhouse gases in the atmosphere to their highest level in over 400,000 years<sup>1</sup>. This increase has been caused by activities including:



- Burning fossil fuels such as coal, oil and gas to heat and light our homes, fuel our vehicles and create stuff
- The way we produce food
- Deforestation of trees that absorb greenhouses gases
- Landfilling our waste



More greenhouse gas in the atmosphere means more heat from the sun is being trapped, causing our planet to heat up. This is called global warming and NASA figures show that since 1880 global average temperatures have increased by 0.8°C. The global warming of our planet is causing our climate to change.



On 8 October 2018 a special report by the Intergovernmental Panel on Climate Change (IPCC) called for urgent action to help reduce the impacts of climate change by limiting global temperature rise to 1.5°C above pre-industrial levels.

**The 20 warmest years on record have occurred in the past 22 years, according to the World Meteorological Organisation.**



Why not try to explain what's causing climate change to a friend?

<sup>1</sup> [https://climate.nasa.gov/climate\\_resources/24/graphic-the-relentless-rise-of-carbon-dioxide/](https://climate.nasa.gov/climate_resources/24/graphic-the-relentless-rise-of-carbon-dioxide/)

# What efforts are being made to tackle climate change?

Work is underway to cut or prevent the emission of greenhouse gases. This is known as mitigation.

## In Scotland

Scotland has world-leading climate change policies and targets. On Wednesday 25 September 2019 the Scottish Parliament voted to end Scotland's contribution to climate change within a generation through the new Climate Change Bill.

The new Climate Change Bill commits Scotland to a target of net-zero emissions of all greenhouse gases by 2045. The Scottish Government will also introduce a new target to reduce emissions by 75% by 2030.

To meet Scotland's greenhouse gas emissions reduction targets there will need to be many changes to our infrastructure and the way we live and work such as:



More energy demand to come from renewables.



Increased domestic warmth to come from low carbon sources.



Increased planting of trees.



More journeys to be made by bicycle.

Efforts to lower the risks associated with the impacts of climate change are known as adaptation and these include:

- Flood risk management
- Biodiversity action planning
- Urban greening



Find out more about the Scottish Government's Climate Change Ambition at [www.climate.scot](http://www.climate.scot)

# What is a carbon footprint?

Your carbon footprint is the total quantity of greenhouse gases that you create from your day-to-day life through home energy use, the way you travel, what you eat and the stuff you buy.

In Scotland, individuals and households account for over 75% of Scotland's greenhouse gas consumption emissions, (all the emissions for which we are responsible as consumers of goods and services, including those we import into Scotland).<sup>2</sup>



Contributions to our consumption emissions in Scotland are made up from:<sup>1</sup>

**Housing: 32%**

How we heat and light our home.

**Transport: 30%**

How we travel to work, school, for leisure and holidays.

**Food: 16%**

The food and drink we choose to eat and what we waste.

**Stuff: 11%**

The things we buy and waste.

**Other: 10%**



If we all work to reduce our carbon footprints we can reduce the amount of greenhouse gases in the atmosphere and start to tackle global warming and climate change.

<sup>2</sup><http://www.gov.scot/Resource/0053/00532096.pdf>

# What can I do to help tackle climate change?

Have a discussion with a friend about how you could make reductions to your carbon footprint to help tackle climate change. Reducing your carbon footprint could save you money and be good for your health!

Tick the actions you are already taking. Is there more you could do?



## **Additional benefits:**

Saves money on energy bills.

## **Reduce your home energy use**



Install a more efficient heating system

☐

Install draught proofing and insulation

☐

Turn thermostat down by 1°C

☐

Switch lights off when not in a room

☐

Carry out a home energy audit

☐

## **Additional benefits:**

Improved diet, health benefits of gardening, saves money.

## **Eat local and seasonal**



Buy local fruit and vegetables that are in season

☐

Avoid food waste

☐

Grow your own food

☐



#### Additional benefits:

Can improve fitness, reduce stress and saves money.

#### Greener travel



Fly less

☐

Enjoy activities close to home

☐

Walk or cycle instead of car travel

☐

Use public transport instead of the car

☐

Car share

☐

Drive efficiently

☐


#### Additional benefits:

Saves money.

#### Reduce, reuse and recycle



Cut down the stuff you use

☐

Consider buying second hand

☐

Find new uses for items rather than throwing out

☐

Recycle items at the end of their life

☐


Read more about ways to take climate action at:  
[www.keepsotlandbeautiful.org/ccfclimatechange](http://www.keepsotlandbeautiful.org/ccfclimatechange)

## Saving the world isn't just for the movies

Greener Scotland have produced a series of films showing easy ways to help fight climate change, with further hints and tips on how to go greener. Find out more at:

[www.greenerscotland.org](http://www.greenerscotland.org)





We support the Sustainable Development Goals.

The Climate Challenge Fund is a Scottish Government grant programme managed and administered by Keep Scotland Beautiful. We provide support, resources and training to help community groups take action on climate change.



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