

**UK Climate Change  
Risk Assessment**

**Climate  
Change  
Adaptation**

**Factsheet for Children & Young People**



# Hello!

**Our climate is changing, and we need to change with it.**

All over the world, including in the UK, people and the environment are feeling the effects of climate change. The UK Parliament has declared a climate emergency, and everyone must act now. Luckily, there are lots of things you can do to learn more and take action - and there are loads of excellent organisations that can help.

## This factsheet

We hope this factsheet will help you think about:

- > **The difference between weather and climate**
- > **How and why the UK's climate is changing**
- > **What can be done to help places, people, and nature be ready for climate change (we call this climate change adaptation)**

There are also lots of great places to find out more information and ideas for how you can take action - there are links at the end of the factsheet to help you explore further.



## What is the difference between climate and weather?

- > **Weather changes day by day, hour by hour and sometimes minute by minute. When we talk about weather, we normally mean what is happening now, or in the next few days and weeks – is it going to be raining, sunny, windy or snowing today or this week? How warm will it be?**
- > **Climate describes the average weather over a much longer time – usually at least 30 years. By comparing today's weather with the weather records from tens or even hundreds of years ago, scientists can spot changes in our climate more clearly.**

## Is our climate changing?

By looking at the past, scientists can tell clearly that our climate has changed, especially over the last 100 years. It is warmer than it used to be, for example, and we have heavier rain at times than before.

## Why is our climate changing?

- > Surrounding our planet is a layer of gases, called the atmosphere. The earth's atmosphere is mostly made of two gases, nitrogen and oxygen, but it also contains smaller amounts of other gases, sometimes called 'greenhouse gases'. These include carbon dioxide and methane.
- > Scientists are sure that the changes in climate we have experienced over the past 100 years are being caused by an increase in these greenhouse gases. They are released as we burn fossil fuels (like coal, oil and gas) for energy, heat and transport, and through farming to make food. They trap more of the sun's heat inside the earth's atmosphere which is causing the planet to warm.

- > That warming is already changing weather and affecting the level of seas. In the future we expect to see:



**Hotter summers and warmer winters**

**Wetter winters, heavier rain and rising sea level**



**Less frost and snow**

**Possibly stronger storms and extreme weather**



- > Warmer weather might sound nice, but many of the changes we will see in the future will be harder to manage. Flooding and storms can damage buildings, water supplies can become scarce during really hot summers and animals and plants can struggle with the changes in the places where they live and grow.

## What do we need to do?

- > You may feel a little anxious or scared when thinking about climate change, but the good news is that there are lots of things we can do to prepare and lots of ways to help people, places and nature to prepare too.
- > Reducing our greenhouse gas emissions will reduce future climate change. This is sometimes called climate change mitigation. This is really important, and there are lots of ways you can personally help to reduce greenhouse gas emissions, like walking and cycling instead of going by car or by eating less meat to help reduce the amount of methane that is produced by animals that we eat. **BUT**

The planet's climate will continue warming until global greenhouse gas emissions fall to zero. This will take time even if we start making serious efforts now. **SO**

We also need to get ready for climate change. This is called climate change adaptation. This is also really important, and the rest of this factsheet will give you some examples of what can be done.

# Climate Change Adaptation

The next section tells you about what climate change can mean for places, people, and nature if they are **un-adapted** (not ready for climate change). It also gives some examples of what can be done to help get them ready, so that they are **adapting** (ready for climate change).



## Buildings where we live, work and play

Buildings are damaged by bad weather like high winds and heavy rain. This can cause water to leak in, making them damp, cold and mouldy. Buildings can also get too hot during very warm weather. This isn't good for the health of the people in those buildings.

**Changing and caring for buildings** can help them cope with more rain and wind, and to keep cool during warmer weather. This also helps people to stay healthy. Here are some actions we can take:

- Add green roofs or walls that are covered in plants to help soak up rainwater and keep buildings cool.
- Repair windows and cracks in walls to stop rain getting in.
- Open up air vents to let air to flow through at night, and close curtains and blinds during the day to keep cool during hot weather.



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Why not... try making your own mini green roof?

## Flooding and heat

More rain means that rivers and streets are more likely to flood. In towns and cities, we often find hard surfaces and buildings next to rivers, which can trap flood water above ground. This means there is nowhere for rivers to flood safely, and people's houses and buildings get flooded instead. We need to create safe spaces for flood water, especially in our towns and cities. Hard surfaces like concrete also make places and people hotter during warm weather, whereas plants and water make them cooler.

**Replacing hard surfaces with green spaces** lets water drain away underground, so places don't flood. Green spaces provide cool shady places for people during warmer weather and can reduce air pollution and the amount of energy we use. They are also great places for wildlife, and for people to exercise, meet friends, and grow food to share! Here are some actions we can take:

- > Replace concrete surfaces with trees, grass and green spaces.
- > Create parks next to rivers to give water a safe place to go during floods.
- > Ponds, streams and dips in the ground help water to flow away and also provide places for wildlife.



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**Why not... find out how to be prepared for flooding**

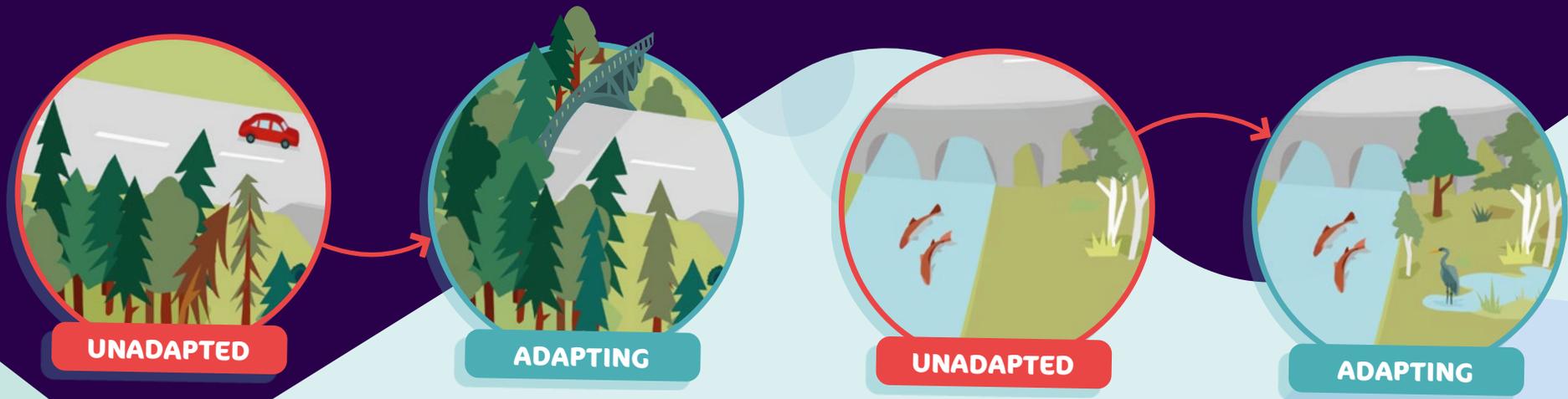
(this is a Scottish page but has some handy hints wherever you live in the UK!)

## Challenges for nature

Animals like birds and fish, and trees and other plants need help to deal with climate change. Some wild animals will need to move so that they can stay in a comfortable environment that is not too hot, cold, dry or wet for them. Warmer temperatures might bring new pests and diseases for plants and animals, on land and in water. Sea level rise can wash away the coastline in some places, which can also lead to more flooding.

**Creating and connecting habitats** makes sure wildlife has somewhere to live. It also protects places from flooding and creates more space for people to enjoy nature! Here are some actions we can take:

- Expand natural areas and make towns and cities better places for wildlife. This links up habitats and makes it easier for animals to move around to find somewhere that suits them.
- Plant more trees and bushes on riverbanks, and let rivers keep their natural shape. This provides shade and deeper water for fish and other wildlife. It also reduces flooding!
- Plant a mixture of different types of trees to improve the health of forests.



Why not... find out about planting trees with your school?

## Challenges for people

Like nature, people will also need help to deal with climate change. Our police, fire and health services will have to help keep people safe during flooding and storms. Dealing with flooding is stressful for people and communities who have to repair their homes and businesses. Roads, railways and cycle paths can be damaged by bad weather and stop people traveling to work or school or stop goods from being delivered. However, warmer temperatures may also mean we can be outdoors more and enjoy a healthier and more active lifestyle.

**Communities working together** will help people deal with climate change. This is really important, as local people (like you) are often the ones who know what will work best to get their particular place ready for climate change. Here are some actions we can take:

- > Get involved with community hubs, which can bring people together, support community groups and share ideas with others.
- > Create community green spaces which is good for wildlife and flooding.
- > Protect schools, hospitals, fire and police stations from flooding and extreme heat, so that they can keep working during emergencies.
- > Connect different types of transport together, so people don't have to rely on one way of getting around. Having more places to walk and cycle also improves people's health and are good places for wildlife too.



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Why not... find out about how to grow local food at school?

## How to learn (and do) more

**Connecting with other children and young people and adults about what you feel and think about climate change can help you to take positive action.**

- Think about how the UK's climate is changing and the actions above. Are there any that would help places you live, play, and go to school get ready for climate change? Choose a place and try designing a poster showing how some of these ideas could work.
- There are loads of great organisations working with the help of children and young people to understand and take action on climate change. Below are a few links you might find interesting, but if you know of others, we would really like to hear about them!
- [Learn about weather and climate](#) with the Met Office.
- [Visit the Glasgow Science Centre's Envirotent](#) for loads of great videos about climate science, and ideas for how you can help at home.
- Find out what [Wales is doing to adapt to climate change](#) and [meet the Youth Climate Ambassadors for Wales](#).
- See how [the Scottish Children's Parliament is working with 100 children to get their voices heard on climate change](#).
- Get creative to tackle climate change with the [Climate Coalition's Show the Love activity pack](#).

## Background

The information in this factsheet is part of the independent assessment for the third UK Climate Change Risk Assessment (CCRA3) led by the UK Climate Change Committee, who have worked with hundreds of experts in climate change. [Find out more here.](#)

Published by:  
Climate Change Committee (CCC)

Graphics:  
courtesy of Adaptation Scotland from the [Climate Ready Places resource](#)