

Climate Change

think about buying second hand goods.



Mitigation is important in the long term since it is only by reducing our greenhouse gas emissions that we can hope to reduce climate change. Many of the measures to help cut emissions may also have other benefits. These include saving money and encouraging a healthier and more sustainable society—which is of course a win-win situation!

Adapting to Climate Change

Whether or not mitigation works, it is widely agreed that there will still be some degree of climate change that we can't stop—due to our past emissions. Because of this, we will need to also take steps to *adapt* to the new conditions that climate change will bring. It is likely to bring a whole range of changes to the way that we live and the environment that we are used to living in...

Here in Wales, hotter, drier summers and wetter, milder winters are likely, bringing more droughts and flooding in turn.



Coastal areas are likely to suffer

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from heavy flooding and people will have to move or build houses that are more likely to withstand this. As well as flooding, droughts are likely in the summer—lack of water is most likely to affect areas such as the south of England. This will mean a huge demand for Wales' plentiful water resources.

As a result of our different climate, our farmers will have to grow different crops. Traditional British crops could be replaced by more exotic crops such as olives and grapes in the future.



Energy is a huge problem too—we are used to a constant supply of coal, oil and gas, but these are running out. We must adapt to a world with less energy and/or develop new sources to meet our demand.

All adaptation efforts are extremely important to how comfortably we humans deal with climate change. Its effects and how quickly they happen depend a lot on efforts to **mitigate** climate change. Mitigation needs to happen now - small everyday collective actions as well as big policy decisions by government and businesses will decide how much we will need to **adapt** to climate change's effects on us all.

More information?

Get in touch with the team at Science Shops Wales. You can phone us on 0845 841 3545, email us at scishopw@glam.ac.uk or visit our website www.scienceshops wales.org.uk

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TACKLING CLIMATE CHANGE

Towards A Sustainable Future

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Tackling Climate Change

Climate change is one of the biggest challenges facing the world today. Left unchecked, it will have a big impact on our lives.

Scientists studying our weather patterns have become increasingly convinced that human actions, or, more precisely, human *emissions* are changing the world's climate.

Given that over 40% of carbon dioxide (CO₂) emissions in the UK come directly from our everyday lives (such as the electricity in our homes and the petrol in our vehicles), we can all play our own part in work to help **SLOW** climate change down.

For information the causes of Climate Change see our Climate Change Explained leaflet.





There are two main approaches to dealing with climate change - slow it down (**mitigation**), and work to adjust to the new circumstances it will bring (**adaptation**).

Both adaptation and mitigation are important if we're going to deal with climate change. We need to try to think about both approaches together rather than separately as the actions are often connected. This is not always possible but it is important that any adaptation actions take account of mitigation, and any mitigation takes account of the need for adaptation.

Mitigating Climate Change

Mitigation refers to our efforts to **limit** the man-made causes of climate change.

This means reducing our emissions of greenhouse gases, such as carbon dioxide (CO₂), through more efficient use of energy and using alternative forms of transport and energy.

There are some easy ways to help mitigation work— and reducing the amount of **energy** that you use is a good way to make a worthwhile start.

Over a third of all UK carbon emissions are generated in the home so any renewable energy use or energy saving can have a big impact on our contribution to climate change.

The most effective measure you can take to cut the amount of carbon that you are personally responsible for is



A Sustainable Future Climate Change

to change your energy provider. A number of energy suppliers have electricity generated by wind farm or hydropower, usually at no extra cost. They'll do all the paperwork too, making it really easy, so look up a renewable energy supplier today!

There are tons of ways to save energy, and once you start you will notice more and more ways to cut back. Try switching electrical appliances off stand-by, turn the heating down by 1°, and change your light bulbs to energy saving ones.



If you follow the basic principle of not using more than you absolutely **HAVE** to, not only will you save energy and cut down on harmful emissions, but it is also likely that you will save money on your energy bills too.



Other actions key to mitigation includes cutting down on **waste**. Waste creates harmful gases as it breaks down in landfill sites. Following the “3 R’s”: Reduce, Re-use, Recycle will help reduce your contribution! Reduce the amount of waste you produce, save and re-use items wherever you can instead of throwing them out and, finally, recycle anything that can be recycled.

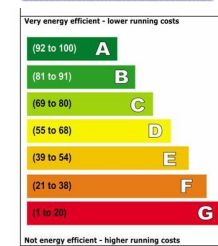
Food waste is a particularly easy area to tackle at home— get a compost bin for kitchen and garden waste and turn it into compost to help your garden grow.



Travel also has a big impact on climate change, so it makes sense to cut down on car journeys. Use a bike or walk short distances and you'll feel the health benefits too.

Where possible, use public transport, and if you must use a car, take measures to ensure maximum fuel efficiency □ for example, make sure the tyres are pumped up and stick to a speed of around 55mph on faster roads. Flying is a particularly big problem for climate change—think about holidays closer to home instead of jetting off on cheap flights...

Shopping is an area where you can help— buying goods that are made and grown locally has a huge effect. Consider also energy efficiency when it comes to electrical goods. Check for energy ratings and marks on brand new products and



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