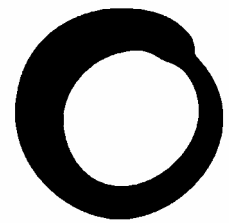


Briefing Note



**Friends of
the Earth
Cymru**

**Cyfeillion
y Ddaear
Cymru**

Climate change – an overview

The climate is changing. In Wales people are noticing that we have less snow and frosts than we used to have in winter, incidents of intense rainfall and flooding are becoming more frequent and spring flowers, such as daffodils, are blooming earlier. And globally, there is an increase in extreme weather patterns, such as drought, storms and flooding.

Why is the climate changing?

There is now overwhelming scientific evidence that these changes are due to human activity. Our dependence on fossil fuels - coal, oil and gas - to provide heating, electricity, transport power and other energy requirements is the main cause. The destruction of forests is also an important contributory factor.

When fossil fuels are burnt they emit a number of pollutants and gases, such as carbon dioxide (CO₂). This is known as a greenhouse gas because along with other natural gases such as methane, nitrous oxide and water vapour (mainly as clouds) it helps to trap more of the sun's heat in the atmosphere.

Once released, CO₂ can stay in the atmosphere for up to 200 years, heating the planet.

The greenhouse effect

Without the natural greenhouse effect of the atmosphere, the Earth would be around 30°C cooler. As the proportion of some of these gases in the atmosphere increases, more of the sun's heat is trapped raising global temperatures and destabilising the climate.

Some man-made chemicals, such as CFCs (chlorofluorocarbons), also contribute to this.

Massive amounts of extra CO₂ are now being released into the atmosphere as a result of human activities. Levels are estimated to be higher than they have been for 20 million years. Average global temperatures have risen by 0.7°C since industrialisation began in the 18th century.

Rising temperatures

Although this temperature rise might seem insignificant, it has to be remembered that, at the time of the last ice age, average temperatures in Wales were only around 5°C lower than today. Recent scientific studies estimate that, if we continue to produce greenhouse gases at present rates, average global temperatures could rise by a similar amount over the next hundred years or so.

Friends of the Earth Cymru inspires solutions to environmental problems, which make life better for people.

Friends of the Earth Cymru:

- is dedicated to protecting the environment and promoting a sustainable future for Wales**
- is part of the UK's most influential environmental campaigning organisation**
- is part of the most extensive environmental network in the world, with over 60 national organisations across five continents**
- supports a unique network of campaigning local groups, working in communities across Wales**
- is dependent upon individuals for over 90 per cent of its income.**

To join or make a donation call us on 0800 581 051

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The effects of the small temperature rise to date are becoming evident. Glaciers are retreating; sea level is rising; and there has been a noticeable increase in extremes of weather such as droughts, floods and hurricanes.

Climate justice

Climate change is the most serious threat facing people and the environment. The poorest are likely to suffer most from flooding, droughts, crop failure and the spread of disease. Yet it is the poorest people who are least responsible for emissions of climate changing gases. Extracting fossil fuels also has a devastating impact on communities and sensitive environments.

Rich countries like the UK are responsible for the majority of CO₂ emissions and so should take a lead in cutting emissions.

Government action

Climate change needs to be addressed. Governments can do this by making a steady and achievable cut in CO₂ emissions every year. Nuclear power may have minimal CO₂ emissions, but is expensive, has huge waste problems and is a security threat. For a clean, green future, electricity and heat need to come from renewable sources and less energy should be wasted.

The energy industry needs to become more efficient and focus on helping businesses and individuals to become more energy efficient. Generating energy in the home or business itself from combined heat and power (CHP) units, micro-turbines, or solar panels will reduce CO₂ emissions and bills. Renewable energy from wind turbines, tidal farms (harnessing the power of the sea), biomass fuels (from crops), are the solutions for the future.

The aviation industry should be responsible for its damage to the environment, and a greater investment needs to be made in options such as walking, cycling and public transport that minimise CO₂ emissions.

What can be done about it?

There is much that can be done to halt and reverse the increase in the emission of the gases that are changing the climate. Far more emphasis has to be given to energy saving measures, renewable energy systems (such as wind, solar and tidal power) and good public transport systems. The planning system has a role to play in ensuring that climate change is addressed by, for example, ensuring that people can work, shop and enjoy recreation facilities near to their homes – reducing the need for excessive travel.

Join the Big Ask

Friends of the Earth's new Big Ask campaign helps people who are concerned about climate change to press their MPs to pass a law that obliges the UK Government to make annual 3 per cent CO₂ emission cuts year on year.

- The UK government needs to act now to reduce carbon dioxide emissions – from electricity generation, from transport, and from industry. *Join the Big Ask Climate change campaign to ask the government to start acting on climate change www.thebigask.com.*
- You can also take action in your own home or office by saving energy and backing renewable energy initiatives, avoiding unnecessary flights and car trips and buying locally. *For further information visit our website on www.foecymru.co.uk.*



The climate is changing it's time to ask questions
Mae'r hinsawdd yn newid, mae'n bryd ofyn cwestiynau