Friends of the Earth
Celebrating 50 years

Climate Mythbusters

MYTH	FACT
The earth's climate always changes with warm and cold periods. 	Over the course of Earth's 4.5-billion-year history, the climate has changed a lot, this is true. However, the rapid warming we're seeing now can't be explained by natural cycles of warming and cooling. The kind of changes that would normally happen over hundreds of thousands of years are happening in decades. Global temperatures are now at their highest since records began. In fact, the 10 warmest years on Earth, since 1880, have occurred since 2014. So, when people talk about climate change today, they mean anthropogenic (human-made) climate change. This is the warming of Earth's average temperature as a result of human activity, such as burning coal, oil and gas to produce energy to fuel our homes and transport, and cutting down trees to produce the food we eat. (Source WWF)
Humans have nothing to do with causing climate change? 	It is widely accepted that human activity is the main cause of this climactic change. Scientists have comprehensively ruled out the influence of solar activity or any other source for the increased radiative forcing which is warming the oceans and the atmosphere. A key UN report released in 2021 said it "is unequivocal that human influence has warmed the atmosphere, oceans and land". The "human influence" here is from burning fossil fuels, deforestation and land-use change. The earth's atmosphere naturally contains greenhouse gases which warm the planet and make it possible to grow plants and crops and for humans to survive. The problem is that we have pushed up the concentrations of these gases in the atmosphere beyond what the planet's natural sinks can absorb. We are causing the stable climate that we need for our survival to break down. The increase in concentrations can be traced directly back to the dawn of the industrial era. According to the IPCC, the concentration of CO2 in the atmosphere is about 50% higher than in 1750, far exceeding the natural changes over at least the past 800,000 years.
Climate change and its impacts won't harm me, it will only harm future generations 	We're already seeing the devastating effects of climate change on global food supplies, health, conflict, disease and global instability, which will only get worse if we don't act now. Women, men and children in the global south countries who have done the least to cause this crisis are suffering the most. They are living through worsening droughts, storms and disasters. However, as the Earth warms up, climate change will eventually affect more and more people, property and infrastructure, especially coastal cities, with increased drought and heat stress, storms and flooding, and sea level rise. We are seeing the fires and the floods, the droughts and the deluges encircling the globe ever more frequently. Ireland is by no means immune, with more intense storms, more unpredictable weather extremes, and towns, villages and farms scarred by the impacts. Radically reducing global and national emissions is urgent and essential to protect the world's poorest people. Pushing the burden of addressing the climate crisis onto future generations would be ethically irresponsible and economic madness.

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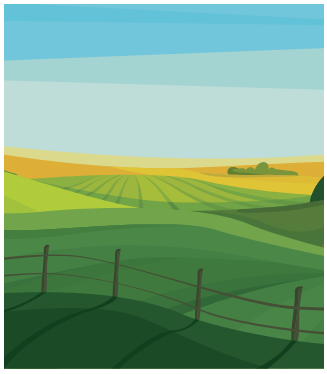
Nothing will change unless the big global polluters, like the US, India, and China do something.	Climate change is a global problem. That is why we need a global solution to the climate emergency. Yes, countries like China, India and the US continue to be big polluters and have high national emissions. But when you add together the pollution of all the countries that each emit less than 2% of global climate pollution it is 36% of the total. So even the biggest polluters can't solve this problem alone, we all need to act. But we need to consider the entire picture and that means looking to the past. Historically, countries like the US and EU countries have contributed way more to climate breakdown than China and India. The historical concentration of industry and wealth in the more developed countries reveals that for example the US was responsible for around 400 billion tonnes of CO2 since 1751 – a total of 25% of historical emissions. Meaning the US has emitted more CO2 than any country to date and twice as much as China. The 27 European countries and the UK are also large historical contributors to emissions, totalling a 22% cumulatively. Historically, places like India are not large contributors. If we calculate pollution per person then we see that Australia emits 10 times as much as India per person and the US twice as much as China. Among the 38 rich "developed" countries in the OECD Ireland is the sixth most polluting per person, and the second worst per person in the EU. But we also need to look at who is generating the most emissions in each country. Data from the International Energy Agency (IEA) details the energy-related CO2 emissions per person in 2021 in a dozen major countries, plus the 27-nation EU. In the US, UK, EU and Japan, the richest 10% have carbon footprints about 15 times greater than the poorest 10%. In China, South Africa, Brazil and India, the top 10% cause 30-40 times more emissions than the bottom 10%. Therefore, a global solution is required where all countries address and cut their emissions. Countries are also required to act fast where they have the capability and wealth to do so, and to support developing countries with assistance and finance. Ireland is a wealthy member of the EU and the OECD and we have no excuse not to invest now in climate action.
Taking action in Ireland won't make a difference.	Ireland has a responsibility to cut its greenhouse gas emissions for a variety of reasons including our legal obligations to do so, the prudence of participating in cooperative political efforts and because our relative wealth and capacity means we have no excuse not to. Every fraction of a degree counts in addressing climate change and its effects on human and non-human life. Ireland is a rich and developed western country and we have a responsibility to lead the way in addressing climate change.
The future of the climate is bleak and there's no point in taking action.	The future of the climate is only so bleak if we stay on the same course and keep emitting carbon and other planet-warming emissions. There is no denying that there are already large changes in climate and weather extremes across the globe, and that some of these are irreversible. But every fraction of a degree matters: we should not be resigned to any level of global warming that we can prevent. But there is hope. It is not too late. We already have the solutions. In its most recent report, the IPCC laid out a detailed plan that it believes could help the world avoid the worst impacts of rising temperatures. It involves "rapid, deep and immediate" cuts in emissions of greenhouse gases - which trap the sun's heat and make the planet hotter. In Ireland the seeds of transformative change have already taken root. Ireland has declared a climate change and biodiversity loss emergency. We have a new climate law and legally

MYTH	FACT
	binding carbon emission ceilings. The state has legislated to divest public funds from fossil fuel companies, halt new exploration for fossil fuels and ban hydraulic fracking. Acting on climate change also protects us from volatile energy markets by enhancing energy security and reducing pollution from fossil fuels which cause health and environmental impacts.
Ireland has an abundance of green fields we don't need to worry about our environment and ecosystem 	Yes, Ireland has some outstanding areas of natural beauty and healthy ecosystems that support native wildlife. We're mostly a rural country with a small population, so in theory, there is lots of space for other species and habitats to thrive. Ireland's original natural ecosystem on land is native oak forest, which once covered 80% of the island. This has been reduced to perhaps only 1% today. The sea around us was once teeming with fish but has been chronically overfished and there are virtually no areas where marine life is protected. Many of our rivers and lakes have been polluted or have been artificially modified to drain adjacent land. Most of our bog land, including on our hills has been damaged through drainage, afforestation with non-native conifers, grazing animals and burning. Bees and other insects are struggling because there are so few flowers in the landscape, particularly on farmland. There are no longer natural ecosystems on land or at sea in Ireland due to human pressure and settlements, which have not been constructed in a sustainable manner. The way we use our land also contributes to climate change, for example a significant source of GHGs in Ireland are from damaged peatlands. Natural forests store a lot of carbon but plantations of conifers on drained peat are emitting GHGs. Climate change is also a significant threat to biodiversity. The lack of healthy ecosystems has left us vulnerable to the effects of global heating. In other words, our land is more prone to droughts, fires, floods and coastal erosion. On the other hand, restoring nature, including natural ecosystems, could take a lot of carbon out of the atmosphere and store it for a long time, sometimes indefinitely.
Environmentalists and Farmers are opposed to each other when it comes to climate action. 	The debate around farming has become increasingly polarised but it is important to acknowledge that the interests of 'environmentalists' and farmers (some of whom are environmentalists) are linked. Having a healthy, sustainable food system is one that is of benefit to its producers and consumers. Many farmers in Ireland have become increasingly trapped by neoliberal market policies and some have clearly been influenced by misinformation spread by agri-industry and climate sceptics. Due to increased international competition, small farmers are struggling without support from programmes such as the EU's Common Agricultural Policy subsidising running costs. Recently Friends of the Earth Europe joined French protests against the EU-Mercosur trade deal which is bad for both farmers and the environment by increasing competition between farmers in the EU and Latin America where deforestation for beef farming is having far reaching climate impacts. For both economic and environmental reasons farming, like any other industry, will have to change in response to the climate crisis but in a way that is just and leaves no one behind. This means a phasing out of intensive animal agriculture such as dairy and beef production which produces methane at an alarming rate (see answer above about our greenhouse gas emissions in Ireland). Farmers also need to do their part to protect the water quality of rivers and lakes, alongside biodiversity, which are essential to sustain their livelihoods.

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FACT

For instance, the practice of slurry spreading and over-fertilising fields can be harmful as nitrogen-rich fertilisers can seep into lakes and rivers, creating toxic algae blooms which crowd out other life in our bodies of water. The spraying of pesticides like glyphosate has impacts on the population of pollinators which in turn hurts food production long-term. The conversion of evermore land to monocultures of ryegrass pasture means that there is less space for nature to thrive.

Alternatives to the current status quo do exist, for example Talamh Beo's emphasis on agro-ecological farming, and we believe that with proper regulation and incentive for farmers, such as a modification of the CAP to focus on environmentally sustainable production, we can create a just countryside where both people and nature thrive.

We're always going to need cars. Not everyone can walk, cycle, or get public transport where they need to go.

Yes, some people may need to use cars- the design of Ireland's transport system currently prioritises and encourages car use and ownership by making the car the most convenient transport mode, leading to high traffic and emissions as well as other negative outcomes such as poor health and safety and unequal access to opportunities.
But we all know that we need to reduce our dependence on cars in order to reduce polluting emissions and going electric is not enough. Promoting active travel, cycling and walking, for daily journeys in urban areas has real potential to cut pollution with knock-on benefits like safe routes for children, air quality, and public health.

The National Transport Authority's national household travel survey for 2022 also demonstrated the dominance of car travel in Ireland, which represents almost seven in 10 of all trips. Trips of less than 5km accounted for almost 50pc of journeys in 2022.

It is essential if we are to meet our climate change obligations that we encourage people out of private cars and into active travel modes, especially for shorter journeys. Our political leaders and Government must do more to secure the provision of convenient, safe and connected walking and cycling infrastructure, integrated with an affordable public transport system.

Retrofitting and energy poverty has nothing to do with climate change.

Residential buildings contribute 11% of our greenhouse gas emissions, with poorer insulated housing wasting significant energy and requiring more fossil fuels to heat. The majority of our housing stock is energy inefficient – Irish homes use 7% more energy than the EU average and emit 60% more CO2.

In general, those in lower quality housing with lower energy efficiency standards rely more on fossil fuels resulting in higher carbon emissions and higher expenditure on energy.

A retrofitting scheme that prioritises lower quality housing or those otherwise unable to access the current scheme has a positive impact for people's quality of life and our climate targets.

The success of many of our climate policies ultimately depends on people's ability to participate and engage with them. If households are struggling to cover their basic needs for energy and heat, they may not have the capacity or finances to become active participants in the energy transition. Current retrofitting policies that require households to pay significant upfront costs risk creating a two-tier energy system, whereby wealthier households can enjoy the benefits of warm homes and lower energy bills, and those without the means remain in inefficient housing, locked into fossil fuel reliance and the volatile energy costs that come with it.

It's vital that all climate policies don't further disadvantage people who are struggling in other ways, and that we prioritise policy decisions that will have the biggest impact on people's quality of life as well as reducing fossil fuel pollution.

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There's already a retrofitting scheme we don't need more.	The government's current retrofit programmes and grants do provide many people with the opportunity to insulate their homes and move away from fossil fuel heating, however we are still seeing slow uptake of these schemes as well as lots of people falling through the cracks and unable to access them. In Friends of the Earth we have conducted research and identified major barriers preventing people getting their home insulated, including a lack of awareness of the benefits of home retrofitting; schemes requiring too much upfront investment; and schemes missing the needs of particular groups like Travellers, renters, households on low incomes, and older people. For example, private rental tenants often reside in substandard accommodation with low energy efficiency. People receiving Housing Assistance Payment (HAP) are living in accommodation with the lowest energy efficiency ratings on average. There is currently no way for tenants to access the retrofitting scheme, and no incentive for landlords to avail of it. Without proper tenancy protections in legislation we also risk tenants being evicted for the substantial renovations required in retrofitting without any security of tenure or alternatives.

Data centres are sustainable	Eighteen per cent of Irish electricity was consumed by data centres in 2022, as much as all urban homes. Data centres are a serious threat to Ireland's carbon budgets The CSO recently announced that data centres consumed 18% of total electricity last year and electricity consumption of Irish data centres grew by 31% between 2021 and 2022. While the Government has taken some measures to address data centre demand in recent years, these figures clearly show it is not enough. And the number of applications for more data centres suggests that the situation will continue to deteriorate unless addressed, putting pressure on local communities and undermining the achievement of climate targets. The impact of further projected developments on electricity demand, as well as risks of fossil fuel lock-in are ignored by politicians and local authorities. While the deployment of renewables is growing, the growth of data centres is diverting this clean energy from where we really need it - the decarbonization of our homes and transport. We are running to stand still. Data centres are by far the largest source of Ireland's energy demand growth. As a result of this trend, the IEA projects that Ireland's electricity demand will grow faster than all other countries in Europe over the coming years, and as a result, natural gas demand – and consequently greenhouse gas emissions from power generation – will barely fall, despite significant new renewable power. We need to pause any new data centres coming online until any threat to the sustainability of our energy system from data centre expansion has passed. The current uncontrolled growth of data centres is not compatible with a stable electricity system, nor with the binding pollution limits adopted by the Dáil and the Government's decarbonisation plans that flow from them. Allowing unchecked data centre growth will also seem unfair to other sectors of society required to make deep changes to cut emissions, particularly farmers and motorists, and could undermine support for climate action and for new renewable energy projects.

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MYTH

We cannot ban or phase out Fossil Fuels

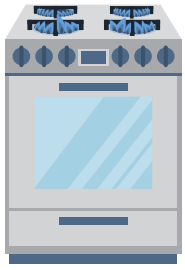
FACT

There is already enough oil, gas and coal in production to meet needs as the world moves to renewable energy. Additionally, there is enough renewable energy potential in every region of the globe to ensure energy access for everyone and spur economic progress including in the Global South.

Fossil fuels are the greatest cause of premature death on the planet. 1 in 5 deaths worldwide are from air pollution due to fossil fuels. Oil, gas and coal are the primary cause of the climate emergency which is resulting in greater water and food scarcity, a dramatic rise in flooding, heatwaves and other extreme weather events that threaten lives and livelihoods. These three products also fuel wars and threaten biodiversity.

Scientists say most existing fossil fuel reserves must remain in the ground. But the fossil fuel industry is planning the opposite, expanding production by double the amount compatible with 1.5C. A political signal that fossil fuels will be phased out will help push countries and companies to end that expansion. A global fossil fuel non-proliferation treaty can heighten attention on the need to stop the expansion of new fossil fuels and strengthen the case to phase out existing production of coal, oil and gas.

Gas is clean energy



Natural gas is a fossil fuel like oil and coal – formed from the remains of plants, animals, and microorganisms that lived millions of years ago. When burned, it releases carbon pollution into the atmosphere. Burning natural gas was responsible for 22 percent of global carbon emissions from fuel combustion in 2020 (not far behind oil, 32 per cent, and coal, 45 per cent).

In addition, the extraction and transport of natural gas often releases methane – a powerful greenhouse gas – into the atmosphere. Natural gas production was responsible for 40 million tons of methane emissions in 2021 – about the same amount of methane emissions as from the oil industry. Methane is about 84 times more potent than CO2, measured over a 20-year period.

There is not enough renewable energy to use as it is dependent on the weather and we cannot store it.

Power supply must be available on demand. While all power plants suffer occasional outages, those powered by variable renewables are constrained to a greater degree due to unpredictable seasonal and daily weather changes. Such bottlenecks can be overcome by electricity storage and technical power balancing to meet demand changes.

Variability issues can also be reduced by upgrading to new intelligent grid systems that can integrate a number of renewable energy sources and generation centres into a reliable supply of power. These enhanced grids, built as a combination of centralised and decentralised systems, can source and combine small-scale as well as large-scale electricity generation centres with locations for demand, as well as provide mutual back-up, export and storage needs. Smart grid enhancement can help compensate for seasonal or daily-low power generation in particular areas (e.g. for wind or solar) by harvesting power in others where resources are more abundant during the same period, thereby minimising variability issues and continuously reducing the need for back-up power which is always perceived as an impediment. In view of this, arguing that renewables cannot always deliver energy on demand is a myth.

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MYTH	FACT
Renewable energy technologies are just as polluting as fossil fuels	Clean energy technologies – from wind turbines and solar panels to electric vehicles and battery storage – do require a wide range of minerals and metals, and produce some emissions, but still use far less of these than fossil fuels. Solar panels produced today only need to operate for 4-8 months to make up for their manufacturing emissions (and the average solar panel has a lifetime of around 25-30 years). Wind turbines, similarly, take only about 7 months to produce enough clean electricity to make up for the carbon pollution generated during manufacture (and they have a typical lifespan of 20-25 years). Most of the carbon pollution generated during a wind turbine's life occurs during manufacturing. Once it's up and spinning, the turbine generates close to zero pollution. A coal or natural gas plant, in contrast, burns fuel — and releases carbon dioxide — every moment that it runs. Even the most carbon-intensive wind turbine is responsible for far less carbon emissions per kilowatt-hour of electricity produced than any coal or natural gas-fired power plant. (Coal-fired power plants produce 675 to 1.689 grams of CO2 per kilowatt-hour, while natural gas power plants produce 437 to 758 grams — far more than on- and offshore wind which produce, on average, 15 and 12 grams, or even the most carbon-intensive wind turbine at 25.5 grams). Electric vehicles, over their lifecycle, from manufacturing to disposal, produce about half the carbon emissions of the average internal combustion engine car, with the potential for a further 25 per cent reduction with low-carbon electricity.
The methane produced by cattle is not harmful to the climate as it breaks down after just 12 years	Methane – the greenhouse gas cattle, sheep and goats release from their stomachs – is highly potent. Its warming potential is 28 times higher over 100 years than carbon dioxides. Every tonne of methane emitted impacts the climate over two dozen times more than a ton of carbon dioxide. When measured in a shorter time frame, over the course of just 20 years, methane's impact is even more dramatic, causing about 85 times more warming a tonne than CO2. But industry messaging works to systematically downplay this impact, mostly by pointing out that methane only persists in the atmosphere for about a decade. While this is true, what is also true is that methane emissions are still being produced and are rising. So while methane only lasts in the atmosphere for 10 years, more and more methane is being released into the atmosphere each year. This is the case globally and in Ireland. There are no easy solutions or get-out-of-jail free cards. Ireland's agricultural system, which relies on producing the most carbon-intensive foods, is highly unsustainable. To meet the goals of the Paris Agreement and to avert the worst impacts of climate change, deep cuts in global methane emissions are required, which will likely require making diets more sustainable as well as transforming food production systems.
The aviation industry must be allowed to grow to support the global economy	While aviation accounts for around 2.5% of global CO2 emissions, its overall contribution to climate change is higher. Along with emitting CO2 from burning fuel, planes also affect the concentration of other atmospheric gases and pollutants. Scientists estimate that aviation has been responsible for 4% of global temperature rise since pre-industrial times. CO2 accounts for less than half of this warming, two-thirds come from non-CO2 forcings. Contrails — water vapour from aircraft exhausts — account for the largest share. This explains why aviation contributes 2.5% of annual CO2 emissions but more when it comes to its total impact on warming. In many countries, aviation is not subject to anything like the same degree of taxation on fuel that would apply to road transport. Just a few European countries - Austria, France, Germany,

MYTH

FACT

Italy, Norway, Sweden, and the United Kingdom - levy taxes on air travel tickets. Most European countries levy either standard or reduced VAT rates on domestic flights. International air travel is VAT-exempt. This is one of the reasons why air travel is often much cheaper than travelling by ferry and rail. In May 2021, France positioned itself as the frontrunner in a carbon-cutting train renaissance when its government enacted a ban on domestic flights where the journey could be done by train in less than two and a half hours.

Global demand for air travel will likely grow in the coming decades. Therefore, the rise in emissions will be determined by whether aviation can maintain improvements in energy efficiency and switch to low-carbon fuels.

Ultimately solutions to the climate impact of air travel will require a mix of new technologies, fuels and demand management approaches including eco-tourism, measures to reduce business travel demand and encourage sail/rail as alternatives.

Major airports such as Dublin airport are responsible for a significant level of environmental impact from noise, air quality, traffic, greenhouse gas and other emissions. Some European airports have imposed strict passenger caps to reduce this impact, for example Schiphol airport in Amsterdam, Such caps will only inhibit growth: they do not mean that air travel is banned or restricted.