


10 MYTHS ABOUT...

CLIMATE CHANGE

Sorting **facts** from **fiction**.

How much do you know about climate change?

Take a look and explore 10 popular myths about clean energy, global warming and avocados.



This booklet was developed out of the interactions and questions raised at a pop-up **developmenteducation.ie** fact-check booth at the Youth Summit on Climate Action in December 2019. It was hosted by the National Youth Council of Ireland, Concern Worldwide, Trócaire and GOAL. More than 400 young people from across Ireland gathered to debate, take stock of and act on climate change issues.

***“AVOIDING OVERSHOOT AND RELIANCE ON FUTURE
LARGE-SCALE DEPLOYMENT OF CARBON DIOXIDE
REMOVAL (CDR) CAN ONLY BE ACHIEVED IF GLOBAL CO₂
EMISSIONS START TO DECLINE WELL BEFORE 2030.”***

IPCC Special Report on the impacts of global warming of 1.5°C
above pre-industrial levels (2018)

***“THE CLIMATE CRISIS HAS ALREADY BEEN SOLVED. WE
ALREADY HAVE ALL THE FACTS AND SOLUTIONS. ALL WE
HAVE TO DO IS TO WAKE UP AND CHANGE.”***

Climate activist Greta Thunberg in her 2018 TED talk

INTRODUCTION

In early October in 2018, scientists from across the world issued its starkest periodic report yet. They were taking part in the leading international climate change body, the intergovernmental panel on climate change. Within two years, news reports emerged that the planet had experienced the 5 hottest years on record since 2015. That same year, the world's roadmap to tackle climate change by all governments was agreed in the landmark Paris Agreement.

The impact of climate change is worsening with:

- rising sea surface, land temperatures and the declining state of sea ice
- species decline, deforestation and biodiversity loss
- extreme weather events such as storms and hurricanes

These changes are occurring as humans continue to add heat-trapping greenhouse gases to the atmosphere, which affected more than 39 million people in 2018.

The **#FridaysForFuture** movement began in August 2018, after Greta thunberg skipped school to sit in front of Swedish parliament to protest the lack of action on the climate crisis. After going viral, her campaign has inspired many more student movements across the world.

And yet investments in fossil fuels companies by governments and institutional actors such as banks continues to be higher than investment in climate activities. In 2016 as much as US\$

781 billion went towards the fossil fuels sector compared with US\$ 681 billion in activities adapting to climate change.

At its core is a challenge to address historical inequalities between and within countries. This is where those that benefitted from industrial production and consumption, such as rich countries, are least likely to feel the impact of extreme climates and changing weather systems.

Global warming and climate change have been the subject of a great deal of political controversy, especially in the U.S. But as the science becomes clearer and consensus grows and is impossible to ignore, public debates are moving away from whether humans are causing warming and toward questions about how best to respond. The role of citizen-led conventions in Ireland, the UK and France on climate change issues are deepening debates at home, in school and in workplaces more widely across societies. And yet this agenda to secure a better future for all is under assault.

“Debunking uninfluent alarmism comes at a cost. It diverts resources away from addressing the never-ending flood of misinformation coming from climate deniers who currently control the climate policy platform of the party in charge of one of the most powerful countries on Earth.”

– Environmental scientist Dana Nuccitelli, 9 July 2018, The Guardian

There is a need to work together across countries and campaigns to generate ideas as we seek creative solutions to turn down the heat on a warming planet and lead low-carbon friendly actions. This involves all of us. Busting classic climate myths in lunchrooms, canteens and boardrooms is a good start.

WHY DOES THINKING ABOUT CLIMATE CHANGE MATTER?

1. Because, simply stated we **are all affected by climate change no matter where in the world we live**; the issue will affect all our futures as well as the futures of our children
2. **We can't say we didn't know.** Climate change is one of the most pervasive and threatening crises of our time. It has been declared a global emergency and has launched a planetary agenda that is supported by thousands of scientists across all scientific disciplines.
3. Climate change **threatens to undermine the hard-won human development and other advances made** in recent years – indeed the impact of severe drought, species decline, biodiversity loss and flooding around the world suggests that it already is.
4. **It is ultimately about justice** - climate justice is about ensuring that collectively and individually we have the ability to prepare for, respond to and recover from climate change impacts.
5. **It is about equity** – while those most responsible for climate change are relatively insulated from its impacts, natural disasters and the results of uncontrolled use of fossil fuels, poor and vulnerable populations are disproportionately impacted in life threatening ways.

6. **It is about human rights** – addressing poverty, sustainable livelihoods and having access to decent health and sanitation services, clean energy, housing and education are part of building a safer future for everyone as a right, not as a luxury for rich countries and companies.
7. Attitudes and policy responses to the many challenges of climate change require active **leadership and delivering on commitments** - affluent countries like Ireland are not observers to this crisis as thousands of climate strikers, scientists, teachers and business owners are already showing the way.
8. **Negative attitudes and myths** around climate change foster attitudes and policies that seek to reduce or dismiss its significance and do little to address challenges or encourage creative solutions.



The Sustainable Development Goals (SDGs) are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate, environmental degradation, prosperity, and peace and justice. The Goals interconnect and in order to leave no one behind, it is important that we achieve each Goal and target by 2030.

There is no country that is not experiencing the drastic effects of climate change.

As well as having a Goal devoted to **Climate Action** (Goal 13), **climate change** and its impact on society are peppered throughout the SDGs - for example air pollution is considered under **Goal 3 “Good Health and Well-Being”**; **Goal 9 Industry, Infrastructure and Innovation**; and **Goal 11 “Sustainable Cities and Communities”**.



[MYTH 01]

THE WORLD NATURALLY HEATS AND COOLS, THAT'S WHY WE HAD ICE AGES. WE HAVE ALWAYS HAD CLIMATE CHANGE.

A CLIMATE 'CONSENSUS'?

Technically, a “consensus” is a general agreement of opinion, but the scientific method steers us away from this to an objective framework. In science, facts or observations are explained by a hypothesis (a statement of a possible explanation for some natural phenomenon), which can then be tested and retested until it is refuted (or disproved).

As scientists gather more observations, they will build off one explanation and add details to complete the picture. Eventually, a group of hypotheses might be integrated and generalised into a scientific theory, a scientifically acceptable general principle or body of principles offered to explain phenomena.

Source: NASA

[TRUE, BUT...]

Natural factors were responsible for the changing climate in the past. Now, however, humans are causing the vast majority of the change. One of the biggest control buttons of the climate system (both in history and now) is carbon dioxide, or CO₂.

Right now, the amount of CO₂ in the atmosphere is the highest it's been in all of human history.

Devising tools to track the impact that humans have had on the planet has become more sophisticated and exact ever since 'global warming' was brought to public life as a global issue in the 1980s. Multiple studies published in peer-reviewed scientific journals now show that 97 percent or more of actively publishing climate scientists agree: Climate-warming trends over the past century are extremely likely due to human activities.

In addition, most of the leading scientific organisations worldwide have issued public statements endorsing this position. That list includes the U.S Academy of Sciences, 11 international science academies, the Intergovernmental Panel on Climate Change and the European Academies Science Advisory Council and its 29 national body members.

[MYTH 02]

THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC) AND MANY OTHER SCIENTISTS ARE BEING **ALARMIST.**

ABOUT THE IPCC

The IPCC was created in 1988 “to provide policymakers with regular scientific assessments on climate change, its implications and potential future risks, as well as to put forward adaptation and mitigation options.” Through a mix of assessment reports and special issue reports, report working group authors observe changes across hundreds of peer-reviewed journal articles. Over time, climate scientists improve measurement instruments and tools in order to improve projections of where our climate and earth systems are headed.

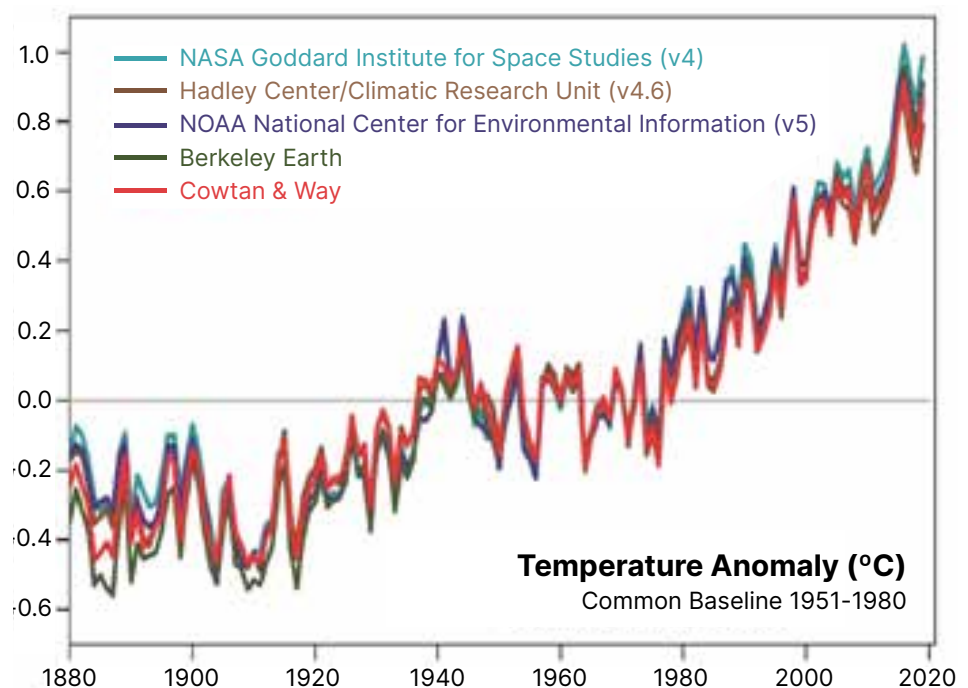
[FALSE]

The past decade has seen an astonishing run of record-breaking storms, forest fires, droughts, coral bleaching, heat waves, and floods around the world with just 1 degree Celsius (C) of global warming. Yet a common dismissal of the rising evidence base is that the science community, the IPCC in particular, is over reacting and being 'alarmist'.

Take temperature data showing rapid warming in the past few decades with the latest data going up to 2019. According to NASA data, 2016 was the warmest year since 1880, continuing a long-term trend of rising global temperatures. The 10 warmest years in the 140-year record all have occurred since 2005, with the six warmest years being the six most recent years.

Exploring likely scenarios if global warming continues to rise and goes above 1.5C and how the window of opportunity to limit global CO2 emissions by 2030 is closing in

(where overshooting 1.5C is estimated to begin), for example, provides an urgency in global debates and policy priorities that gets dismissed by some interest groups as 'exaggerated' or 'pessimistic'. Raising the alarm on action to mitigate against negative climate shocks and adapt is not equivalent to being 'alarmist'.



Credit: NASA/NOAA (2019)

[MYTH 03]

TECHNOLOGY (SUCH AS ELECTRIC CARS) HAS THE ANSWER.

Technology has the potential for many radical changes that people, companies and decision makers can innovate and include as part of a low carbon economy. A transition, however, is complicated. Replacing one type of technology for another, such as replacing petrol or diesel cars for low zero emissions alternatives such as hybrids electric cars, does not provide an immediately clean solution. Taken together, a combination of changes across materials, manufacturing, production, use and re-use, are more likely to have higher impacts than a single technology 'solution'.

[TRUE]

Combined, the petrol and diesel cars on our roads are responsible for around 20% of global carbon dioxide emissions. Electric vehicles, by contrast, have zero tailpipe emissions and are key to tackling both climate change and poor air quality in our towns and cities.

[FALSE]

Some 11 million tonnes of spent lithium-ion batteries are forecast to be discarded by 2030. An argument led by members in the World Economic Forum suggest batteries need to be designed with circular economy principles in mind.

The production of electric vehicle batteries (EVs) currently rely on rare earth metals, including lithium, nickel, manganese, and cobalt, which are at risk of elements of slave labour or child labour in the supply chain. Energy that powers EVs are typically drawn from national energy grids, which are largely rely on fossil fuels.

Worth noting: Electric vehicle debates don't usually involve wider benefits of a low carbon society (and planet). Cycling, car sharing and public transportation (especially electric) are still better for the planet along with urban planning that puts pedestrians and strong public transportation at the centre of mobility, not cars.

[MYTH 04]

**IRISH PRODUCED MEAT IS VASTLY
BETTER FOR THE PLANET THAN
VEGETABLES REFRIGERATED AND
TRANSPORTED HALFWAY ACROSS
THE WORLD.**

The food system — which covers everything from production to consumption — is responsible for over a quarter of all greenhouse gas emissions, and therefore a major driver of climate change.

[TRUE, but...]

Ireland is in a relatively good position with respect to the low emissions intensity of grass-based livestock (meat) production on a life-cycle basis and an existing infrastructure with the capacity to provide strong monitoring systems to demonstrate this.

[FALSE]

Taking the IPCC's 2019 special report on climate change and land, the Climate Change Advisory Council noted: "The food Ireland produces is predominantly exported, especially with respect to animal-sourced products, while much of the food Ireland consumes is imported."

The Climate Change Advisory Council adds that Ireland is at risk of losing its "low emissions intensity of grass-based livestock production" position due to "the observed increasing absolute greenhouse gas emissions and broader environmental sustainability concerns. The observed recent rate of increase in livestock in Ireland is not sustainable, increasing pressure on the environment including the impact on greenhouse gas emissions."

Accessing lemons, courgettes, strawberries, grapes, plums, apples, and more in Ireland in April depends on the need for fruit and vegetables to travel vast distances. A change in how we see our food system working should be taken into account as part of the 'currency' of how we see seasonal produce and not just prioritising convenient access to foods at any time of year.

Sources: Climate Change Advisory Council annual report (2019); IPCC report on climate change and land (2019)

[MYTH 05]

**AVOCADOS ARE 'BLOOD
DIAMONDS' FOR RICH COUNTRIES
LIKE IRELAND.**

[TRUE, BUT...]

The sudden onset of interest and demand for the avocado was, at first, a great plus for Mexico, where it is mainly produced. Global production for the ‘superfood’ is growing rapidly to meet demand, doubling over the past two decades.

However, Mexico now suffers heavily from deforestation. Growing avocados is a highly profitable business in Mexico, more so than any other crop. Mexican farmers began illegal deforestation in order to make more avocado orchards to increase production. As reported by RTÉ in 2016, “the growth of more avocado trees puts a strain on the water resources, as the trees requires almost twice as much water as an ordinary forest”.

Chef JP McMahon, who owns the Michelin-starred restaurant Aniar in Galway, Ireland, says avocados – “the blood diamonds of Mexico” – do not feature on any of his menus due to “air miles, deforestation and problems in Mexico with cartels”. Most plant-based foods, in the majority of cases, are better for the environment than meat-based products. McMahon says consumers need to change their attitudes about seasonal produce. “I think we need to realise what’s in season and when it’s in season. We’ve become completely divorced from that.”

Sources: ‘Should you stop eating ‘blood avocados’? The Guardian, 10 Dec 2018. www.theguardian.com/food/shortcuts/2018/dec/10/should-you-stop-eating-blood-avocados

This Is How Bad Your Avocado Obsession Is for the World by Tom Usher, Vice, 25 May 2018. www.vice.com/en_uk/article/7xm8ab/this-is-how-bad-your-avocado-obsession-is-for-the-world

[MYTH 06]

**RENEWABLE ENERGY IS JUST A
MONEY-MAKING SCHEME.**

[FALSE]

It's a commonly-held belief that renewable energy is expensive, but this simply isn't true! Solar power and onshore wind are the cheapest ways of generating electricity; meaning the energy they produce is cheaper than using nuclear, gas and fossil fuels.

The cost of renewables has fallen faster than anyone could have predicted. And yet governments are still backing fossil fuels. Did you know:

- the UK has the biggest fossil fuel subsidies in the EU. They spend €12bn (£10.5bn) a year supporting fossil fuels.
- In Ireland, the Central Statistics Office estimates that the total amount in direct subsidies and revenue foregone due to preferential tax treatment supporting fossil fuel activities in Ireland was €2.5 billion, while a further €1.6 billion supported other potentially environmentally damaging activities in 2016.
- In late 2019, Ireland ranked 26th out of 28 European countries for progress towards the overall 2020 renewable energy targets. The then Taoiseach, Leo Varadkar, admitted that Ireland is a climate 'laggard' for dragging its heels on decarbonising energy use, agriculture and transport with Ireland set to reach 13% against a European target of 16% of the country's energy use.

While fossil fuels are necessary in constructing clean energy facilities (such as mining minerals, smelting, transportation in wind farm, solar field, geothermal hydroelectric dams and so on), adapting and improving on technology as part of the transition is essential. Crucially, by only focusing on the economic 'cost', the debates on renewables miss the long-term impacts and benefits, which are driving the agenda. This includes cleaner air, reduced pollution, energy independence and restoring and safeguarding against biodiversity loss.

Source: Top 10 Myths About Climate Change by Greenpeace UK. See www.wwf.org.uk/updates/10-myths-about-climate-change; National Energy Projections 2019, Sustainable Energy Authority of Ireland

[MYTH 07]

**SMALL COUNTRIES LIKE IRELAND
CAN DO VERY LITTLE AS THE BIG
PROBLEMS ARE CAUSED BY THE
BIGGEST COUNTRIES.**

[FALSE]

While the levels of emissions vary from country to country, depending on the size of the population and level of development, for the majority of the 20th century, the US was the highest emitter of greenhouse gases globally, only surpassed by China in 2015. It is, however, worth recognising that the US is still responsible for significantly more cumulative emissions than China.

For comparison, in 2017 China was responsible for emitting 9.84bn tonnes of CO₂; the US, for 5.27bn tonnes of CO₂ and Ireland was responsible for 39.47 million tonnes. While Ireland's figures are but a fraction of the world's biggest CO₂ emitters, Ireland still has a relatively high level of emissions by head of population in comparison with the rest of Europe. Ireland had the third highest emissions of CO₂ per person in the EU with an average carbon footprint of 12.8 tonnes per person. Ireland's emissions were 45% higher than the EU average of 8.8 tonnes.

Just because we're small does not mean we are exempt from our share of responsibility in addressing our dependence on the production of CO₂ emissions at home or abroad through buying emissions-intensive goods produced outside of Ireland.

Source: thejournal.ie/ireland-climate-crisis-4777293-Aug2019

[MYTH 08]

**CLIMATE CHANGE IS PRIMARILY
AN ISSUE FOR GOVERNMENTS.
THERE IS SO LITTLE AN
INDIVIDUAL CAN DO.**

[FALSE]

The global environmental movement was launched in 1962 as a response to marine biologist Rachel Carson's book, *Silent Spring*, which railed against the long-term dangers of pesticides and their harm towards fish, birds, bees, agricultural animals, domestic animals and even humans.

Carson's single action to publish her findings showed the world how our actions effect the environment, and in turn, our future. *Silent Spring* led to a nationwide ban in the US on a number of chemical pesticides and sparked the movement that ultimately led to the creation of the US Environmental Protection Agency (EPA). Mapping, measuring and creating spaces to think about acting on climate change issues are roles that do not belong to policymakers and politicians alone. Practising everyday activism involves everyone in the spaces that our lives are busy and active, whether that be in schools, work spaces, farms, in households or in the community. Examples of this includes:

- In 25 years, 35,772 businesses have adopted and acted on standards investing in responsibly managed forest and timber product materials through Forest Stewardship Council (FSC) certification schemes
- Secondary school students in Newpark Comprehensive school in Dublin reviewed the plastic footprint within their school and decided (and succeeded) that the school should adopt a zero single-use plastics policy as part of changing school culture with their campaign 'Plastic Outta the Park'
- Undergrad students in Trinity College Dublin (TCD) mounted a petition and student-led research to make the case for the TCD board to divest its oil, gas and coal investments to 'cleaner' portfolios. Within 15 months and 2,000 signatures later, the Board of TCD agreed to sell €6 million of fossil fuel company shares

These examples illustrate a sample of how individuals have led change agendas in front of, and sometimes in spite of governments.

[MYTH 09]

**CLIMATE CHANGE IS NOT JUST
AN ENVIRONMENTAL ISSUE.**



Climate change is not just an environmental issue with very serious environmental impacts. It is a phenomenon which affects every aspect of human life.

Climate justice refers to the fact that climate change is an issue with far reaching implications in terms of human rights, equality and social justice. From an ethical standpoint, climate justice draws attention to a number of important factors which are often lost when climate change is thought of solely as an environmental issue. A **justice perspective** draws attention to a fundamental injustice underpinning climate change; those who have **caused** the problem, for the greater part, are also those who have **benefitted** most from economic development. Those who have done the least to cause the problem, in particular the world's poorest, have benefitted least from economic development to date. A 2015 Oxfam briefing demonstrates that the wealthiest 10% of the world's population are responsible for over 50% of global emissions, while the poorest 3.5 billion account for just a tenth.

Climate justice draws attention to the **current and future effects** of climate change which are highly **uneven**, as is the **capacity to deal with them**. This means that the poorest, most vulnerable communities have felt and will continue to feel the effects worst and first. In direct contrast, the majority of the wealthiest populations (due to geographic location and access to resources) have been and will continue to be sheltered from many of the most serious impacts of climate change. Of immediate concern is that early and concrete action in developed countries continues to be delayed and this impacts on justice, equality, food, jobs and human rights.

[MYTH 10]

**CLIMATE CHANGE CAN BE
TACKLED BY LIVING A MORE
'ECO-FRIENDLY' LIFESTYLE.**

[FALSE]

‘I’m only one person. What difference can I make?’ is a common argument made in various contexts; including when it comes to action on climate change. What difference does it make, or impact does it have if I – one person – eats a veggie burger, cycles and takes ‘staycations’, if the other 7,577,130,399 people (June 2019 figures) don’t do anything? Perhaps it feels futile? Perhaps it is the easy way out, to ask ‘why bother’?

On being asked this very question, ‘why bother? What’s the point?’, Greta Thunberg offered this rebuttal:

“The point is to create an opinion. By stopping flying, you don’t only reduce your own carbon footprint but also that sends a signal to other people around you that the climate crisis is a real thing and that helps to push a political movement”.

The aim of this myth buster is not to criticise individual action, or the importance of living a more eco-friendly lifestyle. It is, however, to expose how these arguments are used by people in power (decision makers, lobbyists with vested interests in the fossil fuel and emissions status quo and so on) to distract from the real causes of the climate crisis, by shifting responsibility from the system to individuals.

If we could solve climate change by living a more eco-friendly lifestyle, this would indicate that our lifestyles are the main cause of climate change, which is not the case.

Since 1998, 100 active fossil fuel companies including ExxonMobil, Shell, BHP Billiton and Gazprom are linked to 71% of all estimated industrial greenhouse gas emissions. Gathered by the Carbon Disclosure Project in 2017, these facts illustrate how concentrated the production of emissions are amongst a handful of corporations.



10 MYTHS ABOUT... SERIES

The 10 Myths About.... series looks to sort facts from fiction on key global development, human rights and justice issues.

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