



climatechampions
local learning communities



BECOMING A CLIMATE CHAMPION
SDG 13 Climate action



Co-funded by the
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of the European Union



WELCOME!

This module is part of the Climate Change Community Champions course, and is dedicated to Climate Action.

We will explore questions like:

- What is Climate Change?
- What is causing Climate Change?
- What are the impacts of Climate Change?
- And what can we do?



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01

**A Call To Climate
Action**



Source

WATCH: United Nations Climate Action Overview



[Click to Learn More: United Nations SDG 13: Climate Action](#)

The Sustainable Development Goals Report
2022



Click image above to
read the 2022 United
Nations SDG report
and learn more



02



**Climate Change: What's
Causing it?**

SDG specifically addressed in this course



Good health and well-being

Ensure healthy lives and promote well-being for all at all ages

Quality Education

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all



Sustainable Cities and Communities

Make cities and human settlements inclusive, safe, resilient and sustainable



Responsible Consumption and Production

Ensure sustainable consumption and production patterns



Climate action

Take urgent action to combat climate change and its impact

Current
Module

Life on Land

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.



SGD 13

13 CLIMATE ACTION



Context - Sustainable Development Goal 13 – Climate Action

Overarching goal

“Take urgent action to combat climate change and its impacts”

Targets

- Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
- Integrate climate change measures into national policies, strategies and planning
- Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
- Implement the 10-year framework of programmes on sustainable consumption and production, all countries taking action, with developed countries taking the lead, taking into account the development and capabilities of developing countries



When you think of Climate Change what do you think of...?



We experience the impacts of climate change in a multitude of ways

What happened to global warming?

Global warming refers to the long-term warming of the planet, or the rise in global temperatures. While this is occurring, the way we experience this day to day is not always hotter weather, but rather comes in the form of more extreme weather events.

Climate Change is a broad, more general term for the changes we are witnessing. It's largely the consequence of global warming, and describes a wide range of changes in our long-term climate including hurricanes, drought, flooding and heat waves

'Climate Change' and 'Global Warming' are often used interchangeably but despite being profoundly linked, they are not the exact same thing

KEY TERMS

- **Weather** – refers to atmospheric conditions that occur locally over short periods of time – think rain, snow, clouds etc
- **Climate** – refers to the long term regional or even global average of temperature, humidity, and rainfall patterns over seasons, years or decades.

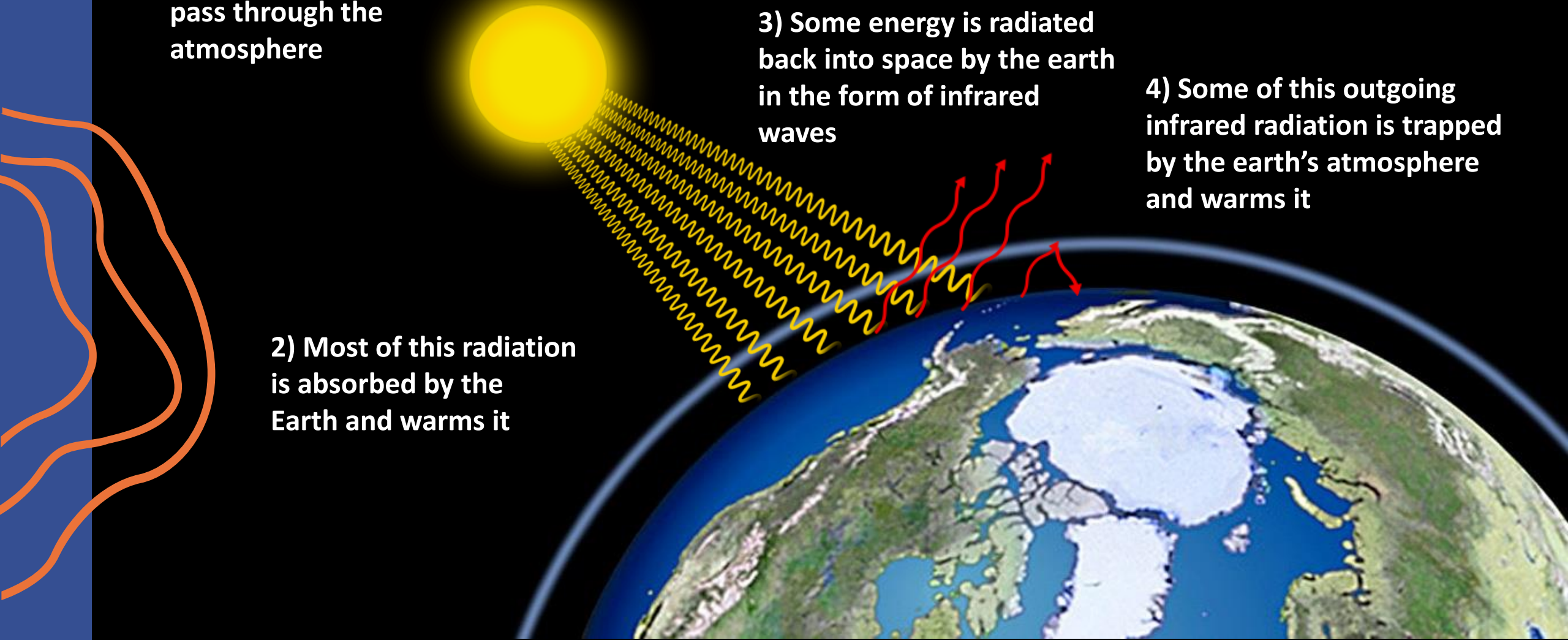
Climate Change: The Greenhouse Effect

1) Solar radiation in the form of light waves pass through the atmosphere

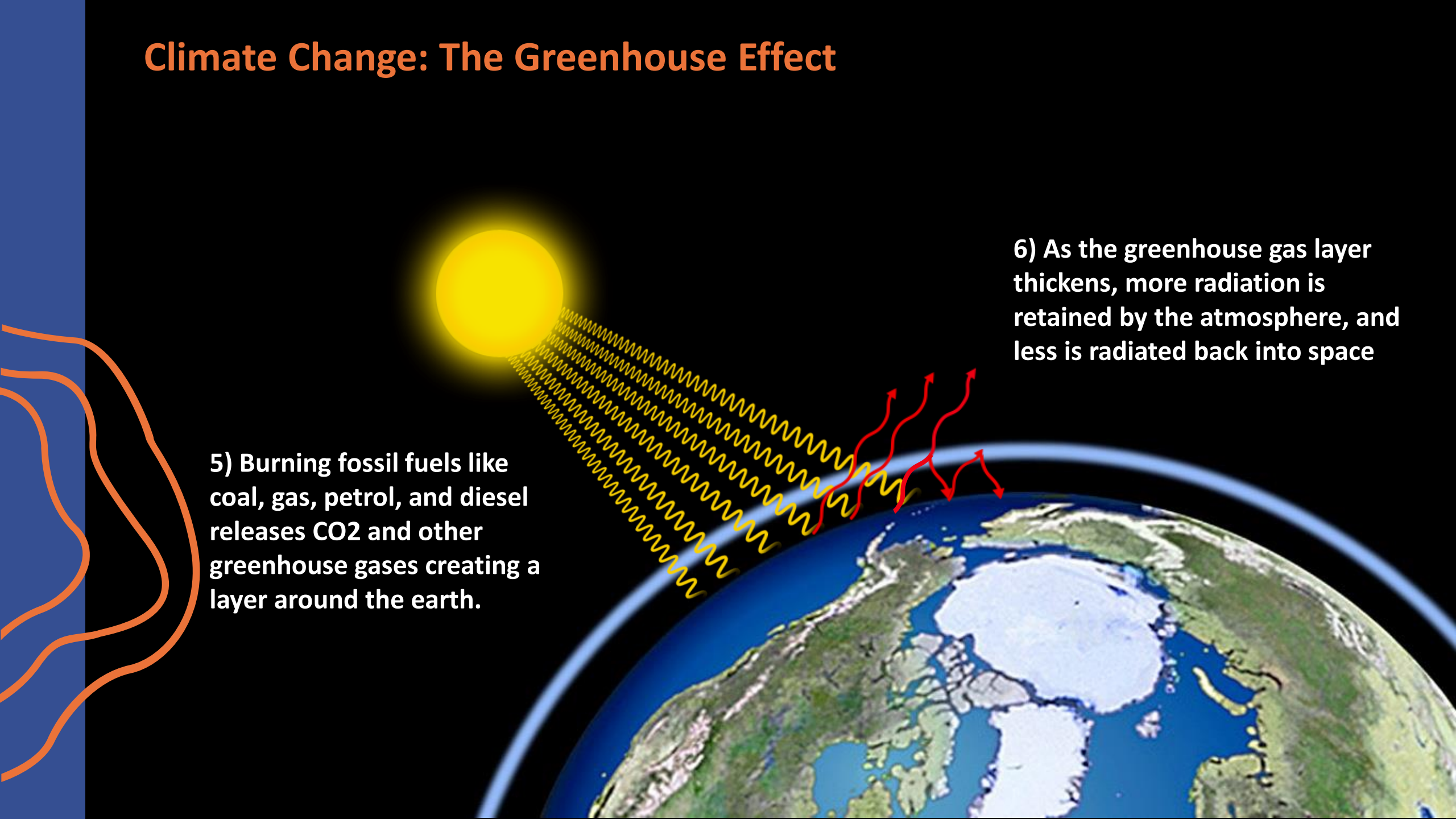
2) Most of this radiation is absorbed by the Earth and warms it

3) Some energy is radiated back into space by the earth in the form of infrared waves

4) Some of this outgoing infrared radiation is trapped by the earth's atmosphere and warms it



Climate Change: The Greenhouse Effect



5) Burning fossil fuels like coal, gas, petrol, and diesel releases CO₂ and other greenhouse gases creating a layer around the earth.

The diagram illustrates the greenhouse effect. At the top left, a bright yellow sun emits yellow wavy lines representing solar radiation towards the Earth. The Earth is shown from space, with a blue atmosphere and a green and white surface. Red wavy lines with arrows pointing downwards from the atmosphere represent infrared radiation being trapped by greenhouse gases. On the left side, orange wavy lines represent heat being retained by the Earth's surface.

6) As the greenhouse gas layer thickens, more radiation is retained by the atmosphere, and less is radiated back into space

Greenhouse Gases

While the greenhouse effect outlined above is a natural and essential phenomenon that helps maintain the Earth's temperature, the balance of greenhouse gas 'sources' and 'sinks' are affected by humans leading to increased concentrations in our atmosphere, which in turn causes global temperatures to rise. (See Carbon Cycle on the next slide)

The most abundant greenhouse gases in the Earth's atmosphere are carbon dioxide, methane, nitrous oxide, ozone, and chlorofluorocarbons.

Why the focus on Carbon? **CO₂ makes up 82% of the harmful gases being released into our atmosphere.** When discussing GHGs we relate everything back to Carbon, treating it like a currency for environmental footprint.

Carbon
Dioxide
(CO₂)

Methane
(CH₄)

Nitrous
Oxide
(N₂O)

Ozone
(O₃)

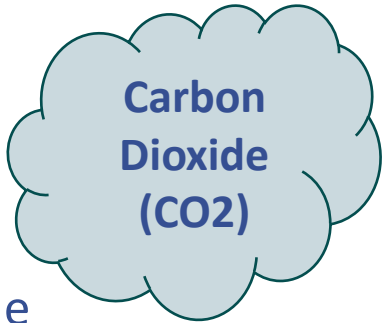
Chloro-
fluorocarbons
(CFC)

Carbon
Monoxide
(CO)

Sulphur
Dioxide
(SO₂)



The Carbon Cycle



Carbon
Dioxide
(CO₂)

Carbon is essential to all life on Earth – it's in our DNA, in the food we eat and the air we breathe. The amount of carbon on Earth has never changed but where carbon is located is constantly changing – **it flows between the atmosphere and organisms on Earth as it's released or absorbed**. This is known as the carbon cycle – a process that has been perfectly balanced for thousands of years.

A **carbon sink absorbs** carbon dioxide from the atmosphere. The **ocean, soil and forests** are the world's largest carbon sinks.

A carbon source releases carbon dioxide into the atmosphere. Examples of carbon sources include the burning of fossil fuels like gas, coal and oil, deforestation and volcanic eruptions.

Now, increased human activity is upsetting the balance. We're releasing more carbon into the atmosphere than the Earth's natural carbon sinks can absorb. Our continued reliance on fossil fuels for energy means billions of tonnes of carbon are released into the atmosphere every year. The importance of carbon sinks has never been greater.

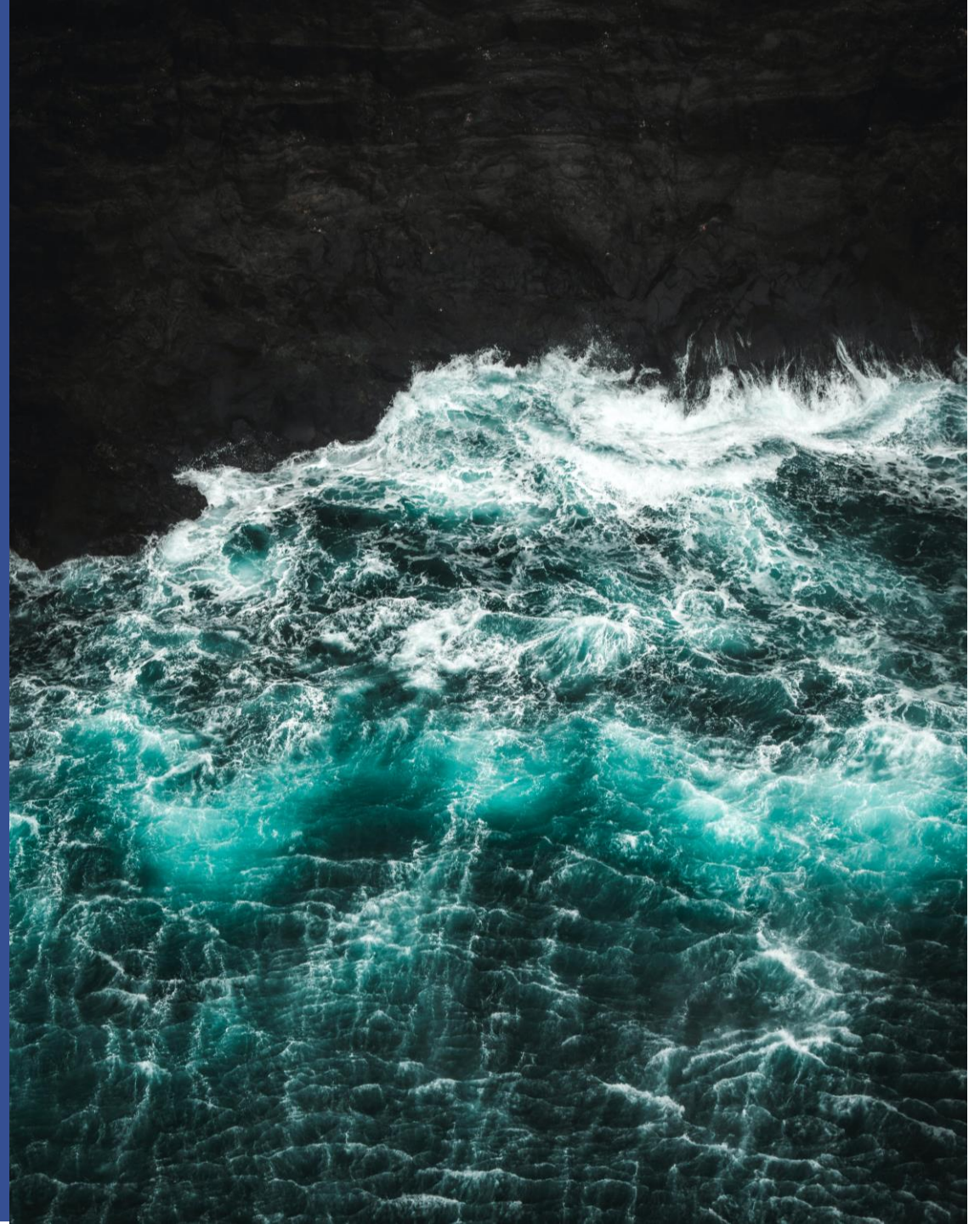
Source



What sinks are in your area?


We're all familiar with the importance of planting and maintaining forests and ecosystems as carbon sinks, but **did you know the important role our seas play?**

The ocean has sucked up about a quarter of the carbon dioxide released into the atmosphere since we began burning fossil fuels for energy during the Industrial Revolution. Phytoplankton are the main reason the ocean is one of the biggest carbon sinks. These microscopic marine algae and bacteria play a huge role in the world's carbon cycle - **absorbing about as much carbon as all the plants and trees on land combined.** By reducing plastic waste reaching the water we can help keep these phytoplankton's healthy



Carbon Sink Spotlight: Raised Bogs (Ireland)

- The Earth's wetlands are one of the largest carbon sinks on Earth. Despite this, when managed incorrectly they can also be a major source of GHG emissions.
- Raised bogs are discreet, raised, dome-shaped masses of peat occupying former lakes or shallow depressions in the landscape.
- They occur throughout the midlands of Ireland. Their principal supply of water and nutrients is from rainfall and the substrate is acid peat soil, which can be up to 12m deep. Raised bogs are characterised by low-growing, open vegetation dominated by mosses, sedges and heathers, all of which are adapted to waterlogged, acidic and exposed conditions.



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CASTLECOOTE BOG BIODIVERSITY & ECOLOGICAL STUDY

CATEGORY
Biodiversity conservation in the community

LOCATION OF THE PRACTICE
Castlecoote Co. Roscommon, Ireland

PROBLEM THAT TACKLES

- 01 Provide a comprehensive analysis of the flora and fauna of Castlecoote Bog (selected sections);
- 02 Provide information for signage and information boards;
- 03 Provide information for printed and digital media for schools and other organisations for education and training purposes;
- 04 Provide information to inform a potential project to construct a boardwalk across the bog

VOLUNTEERING ASSOCIATION OR PERSONS INVOLVED

Castlecoote Tidy Towns was re-activated in the 1980's. From that time, the group have gone from strength to strength, winning two environmental awards, two bronze, three silver and six gold medals. For three years in a row, 2016/7/8, came 1st in Roscommon. In 2019, they again received a gold medal and increased their overall score by 4 marks. In 2013 the village received the major award of winning the Tidiest Village and Small Town in Ireland.

Castlecoote Tidy Towns is a vibrant and hardworking community group representative of a variety of interest from throughout the community. This group has been instrumental in voluntary community activities for the past number of years and is supported in its endeavors by Roscommon County Council, CE Scheme and Sesame Construction. The group has also successfully completed work on the Old Mill Wheels and the development of the Island on the River Suck. This group has good experience in dealing with funding applications.

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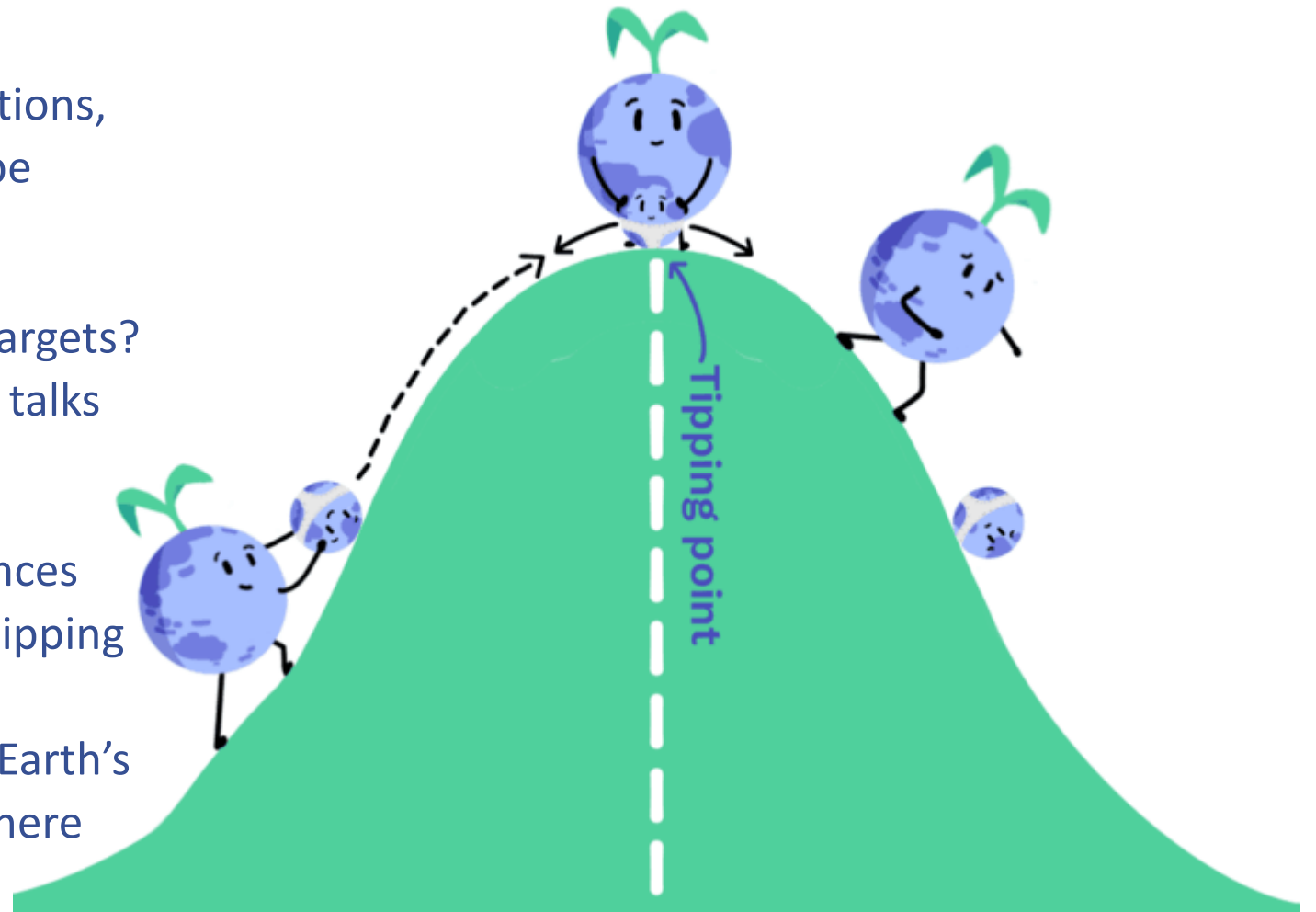


Irreversible Damage

The IPCC have warned that without immediate and deep emissions reductions, limiting global warming to 1.5°C will be impossible.

But what is the significance of these targets? And what does Greta mean when she talks about “irreversible chain reactions”?

We’ve already spoken about the balances that exist in the Earth’s systems. The tipping point concept suggests that if certain thresholds are breached some of the Earth’s systems will reach a breaking point where the effects of climate change will be drastically increased.



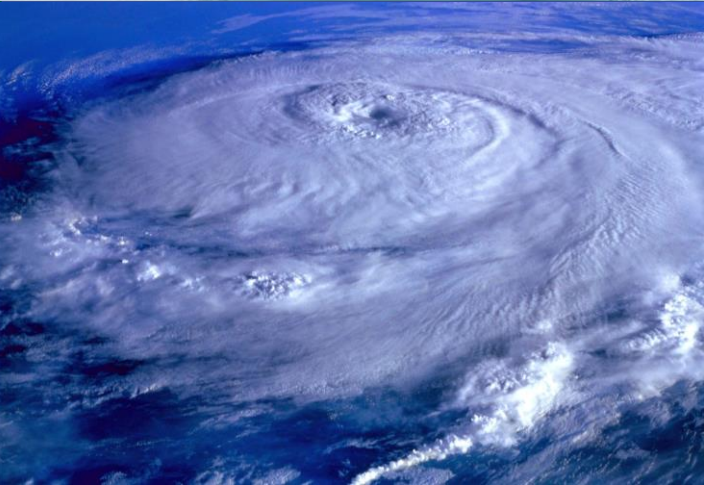
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01

Ice Body Tipping Point

The Earth's ice caps, reflect some of the sun's energy. When the ice caps retreat it exposes dark water and rock below which absorbs more heat, which in turn causes the surrounding sea temperature to rise, and the cycle continues.



02

Circulations of the Ocean and Atmosphere

The Earth's climate and weather events are dictated by cyclical oceanic and atmospheric systems that rely on the transfer of heat and salinity. With temperatures rising and freshwater ice caps melting, these systems are becoming broken leading to more extreme weather events. (E.g. Gulf stream, El Niño, Jet Stream)



03

Large Scale Ecosystems Tipping Point

The water system and local rain systems surrounding large ecosystems such as the Amazon are dictated by the water released by trees during photosynthesis. When a critical mass of destruction is met this water system could be broken leading to water shortages and further destruction of the ecosystem





Climate Change: What's Causing it? The Drivers

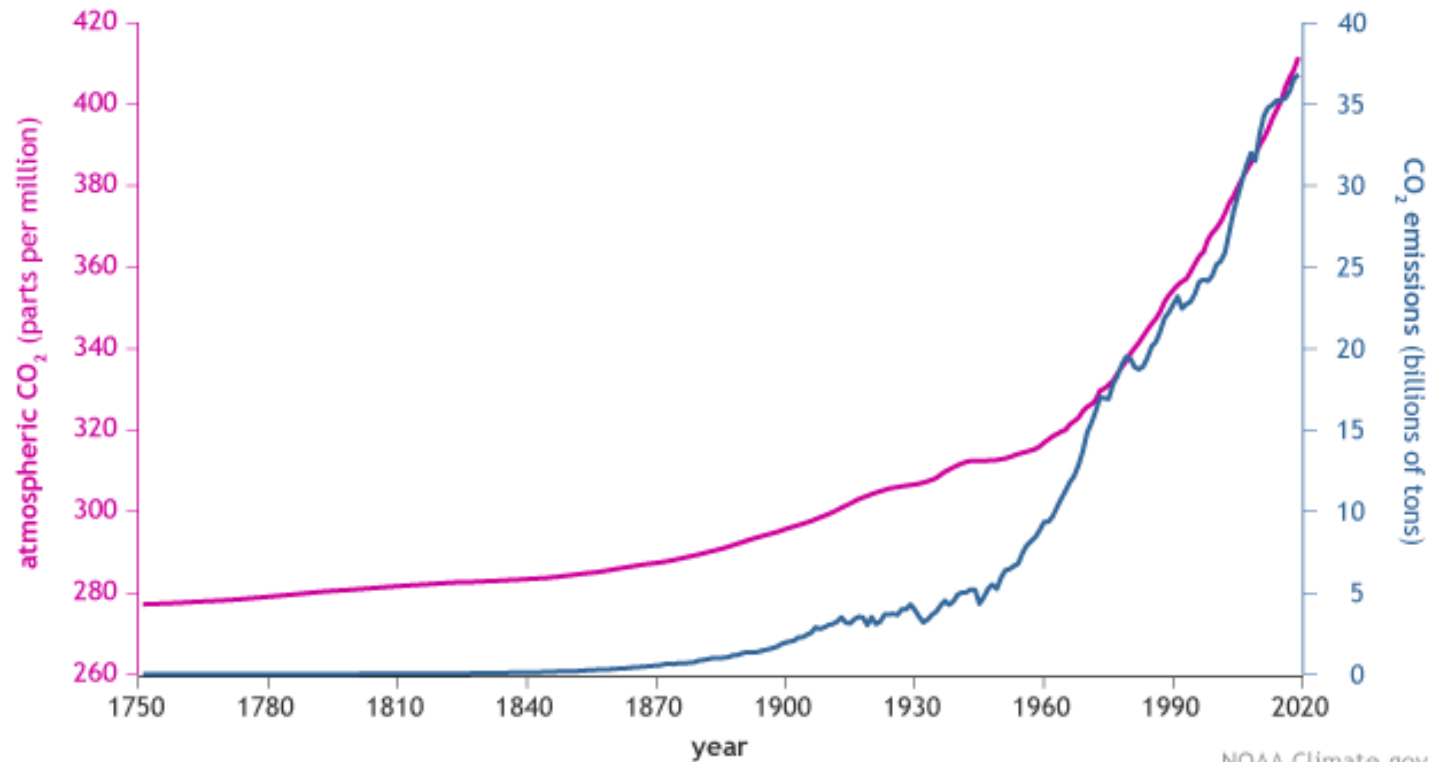
Having covered some of the science behind climate change, discussing Earth's natural Balances and the significance of throwing them off, we are now going to discuss the main causes of Climate Change



Climate Change: What's causing it?

97% of climate scientists agree that man made pollution is causing climate change and the science is clear to see when we look at the Emissions and atmospheric CO₂

CO₂ in the atmosphere and annual emissions (1750-2019)



NOAA Climate.gov
Data: NOAA, ETHZ, Our World in Data



The Drivers of Climate Change

- Fossil fuels – coal, oil and gas – are by far the largest contributor to global climate change, accounting for over 75 per cent of global greenhouse gas emissions and nearly 90 per cent of all carbon dioxide emissions.
- Just blaming fossil fuels and the natural resource companies extracting them would be too simplistic. It is important we look at what activities are causing these fossil fuels to be burnt.



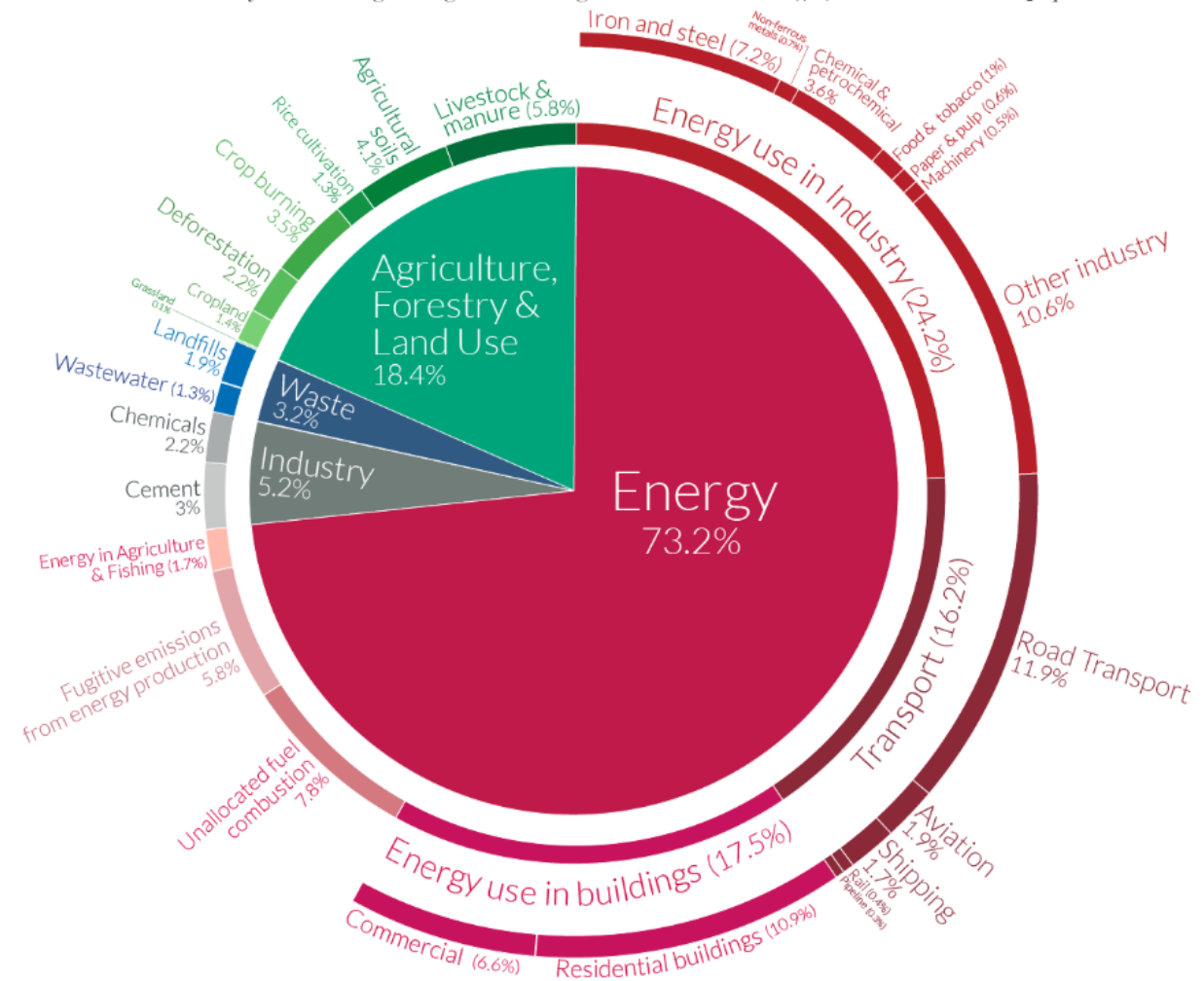
Climate Change: What's causing it?

From looking at the graph attached it is clear that energy dominates the Global Carbon Emissions. However this energy comes from a wide range of sectors and it is important we understand the source of our fossil fuel burning.

Global greenhouse gas emissions by sector



This is shown for the year 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO₂eq.



OurWorldinData.org – Research and data to make progress against the world's largest problems.

Source: Climate Watch, the World Resources Institute (2020).

Licensed under CC-BY by the author Hannah Ritchie (2020).



Generating Power

Generating electricity and heat by burning fossil fuels causes a large chunk of global emissions. Most electricity is still generated by burning coal, oil, or gas, which produces carbon dioxide and nitrous oxide – powerful greenhouse gases that blanket the Earth and trap the sun’s heat. Globally, a bit more than a quarter of electricity comes from wind, solar and other renewable sources which, as opposed to fossil fuels, emit little to no greenhouse gases or pollutants into the air.

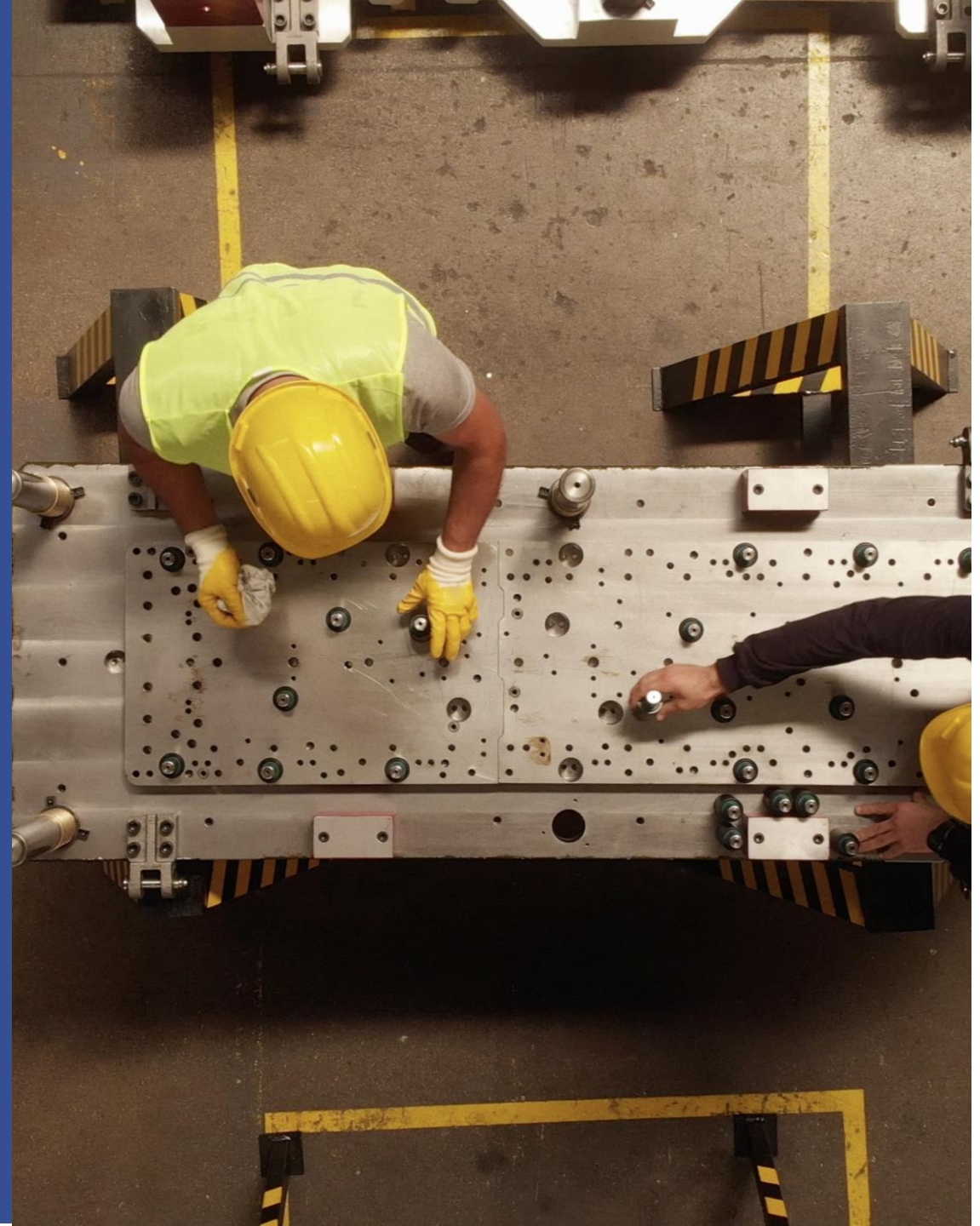
[UN Climate Action: Causes and Effects of Climate Change](#)



Manufacturing Goods

Manufacturing and industry produce emissions, mostly from burning fossil fuels to produce energy for making things like cement, iron, steel, electronics, plastics, clothes, and other goods. Mining and other industrial processes also release gases, as does the construction industry. Machines used in the manufacturing process often run on coal, oil, or gas; and some materials, like plastics, are made from chemicals sourced from fossil fuels. The manufacturing industry is one of the largest contributors to greenhouse gas emissions worldwide.

[UN Climate Action: Causes and Effects of Climate Change](#)



Cutting down forests

Cutting down forests to create farms or pastures, or for other reasons, causes emissions, since trees, when they are cut, release the carbon they have been storing. Each year approximately 12 million hectares of forest are destroyed. Since forests absorb carbon dioxide, destroying them also limits nature's ability to keep emissions out of the atmosphere. Deforestation, together with agriculture and other land use changes, is responsible for roughly a quarter of global greenhouse gas emissions.

[UN Climate Action: Causes and Effects of Climate Change](#)



Using transportation

Most cars, trucks, ships, and planes run on fossil fuels. That makes transportation a major contributor of greenhouse gases, especially carbon-dioxide emissions. Road vehicles account for the largest part, due to the combustion of petroleum-based products, like gasoline, in internal combustion engines. But emissions from ships and planes continue to grow. Transport accounts for nearly one quarter of global energy-related carbon-dioxide emissions. Trends point to a significant increase in energy use for transport over the coming years.

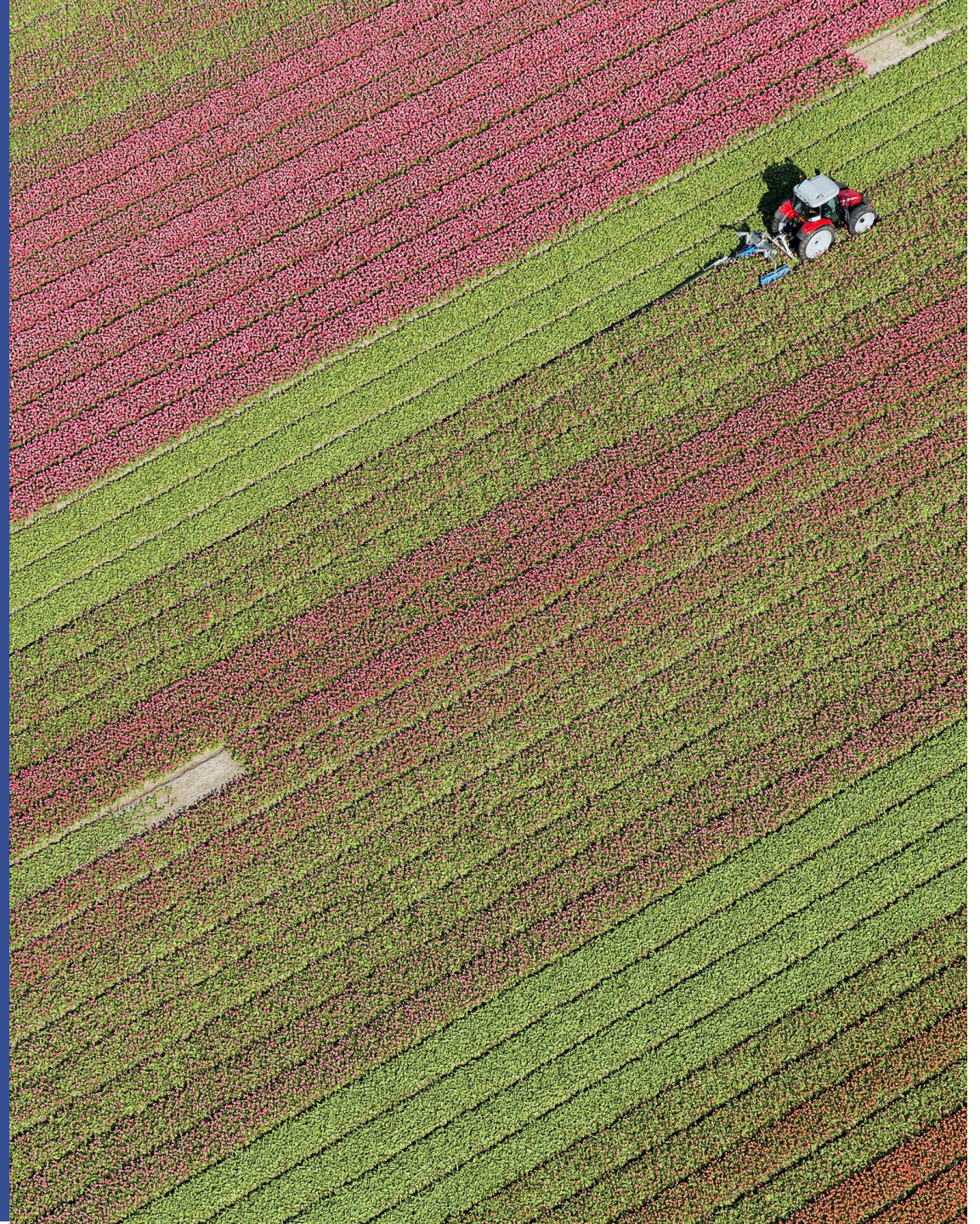
[UN Climate Action: Causes and Effects of Climate Change](#)



Producing food

Producing food causes emissions of carbon dioxide, methane, and other greenhouse gases in various ways, including through deforestation and clearing of land for agriculture and grazing, digestion by cows and sheep, the production and use of fertilizers and manure for growing crops, and the use of energy to run farm equipment or fishing boats, usually with fossil fuels. All this makes food production a major contributor to climate change. And greenhouse gas emissions also come from packaging and distributing food.

[UN Climate Action: Causes and Effects of Climate Change](#)



Powering buildings

Globally, residential and commercial buildings consume over half of all electricity. As they continue to draw on coal, oil, and natural gas for heating and cooling, they emit significant quantities of greenhouse gas emissions. Growing energy demand for heating and cooling, with rising air-conditioner ownership, as well as increased electricity consumption for lighting, appliances, and connected devices, has contributed to a rise in energy-related carbon-dioxide emissions from buildings in recent years.

[UN Climate Action: Causes and Effects of Climate Change](#)



Consuming too much

Your home and use of power, how you move around, what you eat and how much you throw away all contribute to greenhouse gas emissions. So does the consumption of goods such as clothing, electronics, and plastics. A large chunk of global greenhouse gas emissions are linked to private households. Our lifestyles have a profound impact on our planet. The wealthiest bear the greatest responsibility: the richest 1 per cent of the global population combined account for more greenhouse gas emissions than the poorest 50 per cent.

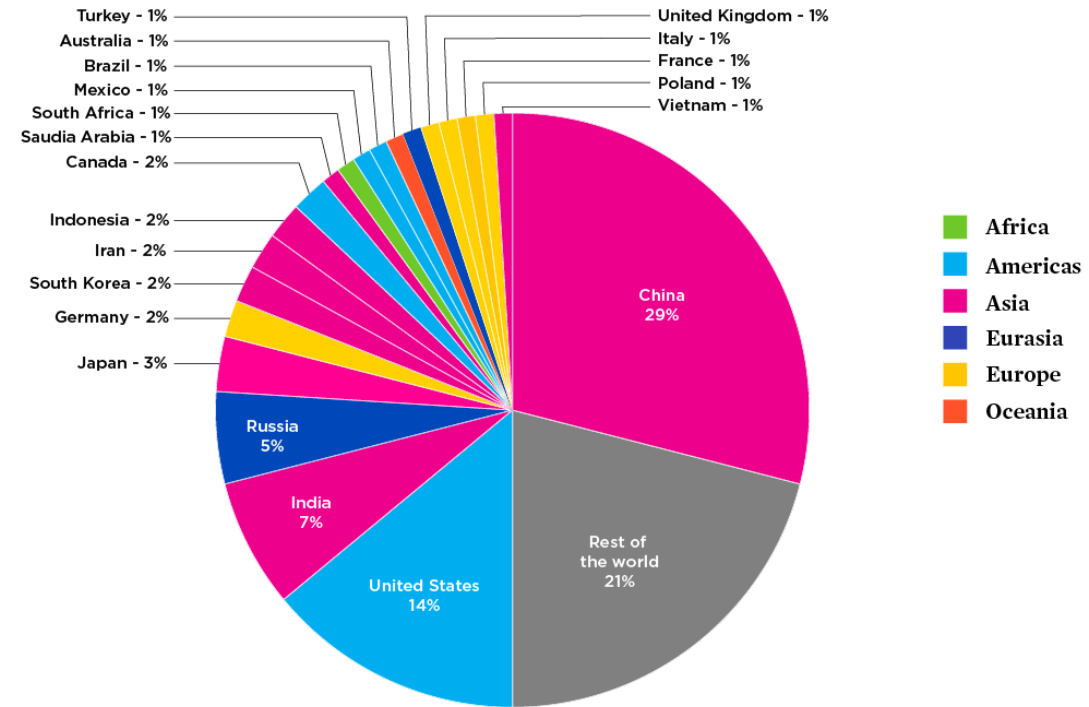
[UN Climate Action: Causes and Effects of Climate Change](#)



Climate Change: Who is to Blame?

The emissions that cause climate change come from every part of the world and affect everyone, but some countries produce much more than others. The 100 least-emitting countries generate 3 per cent of total emissions. **The 10 countries with the largest emissions contribute 68 per cent.** Everyone must take climate action, but people and countries creating more of the problem have a greater responsibility to act first.

Top Annual CO₂ Emitting countries, 2019
(from fossil fuels)



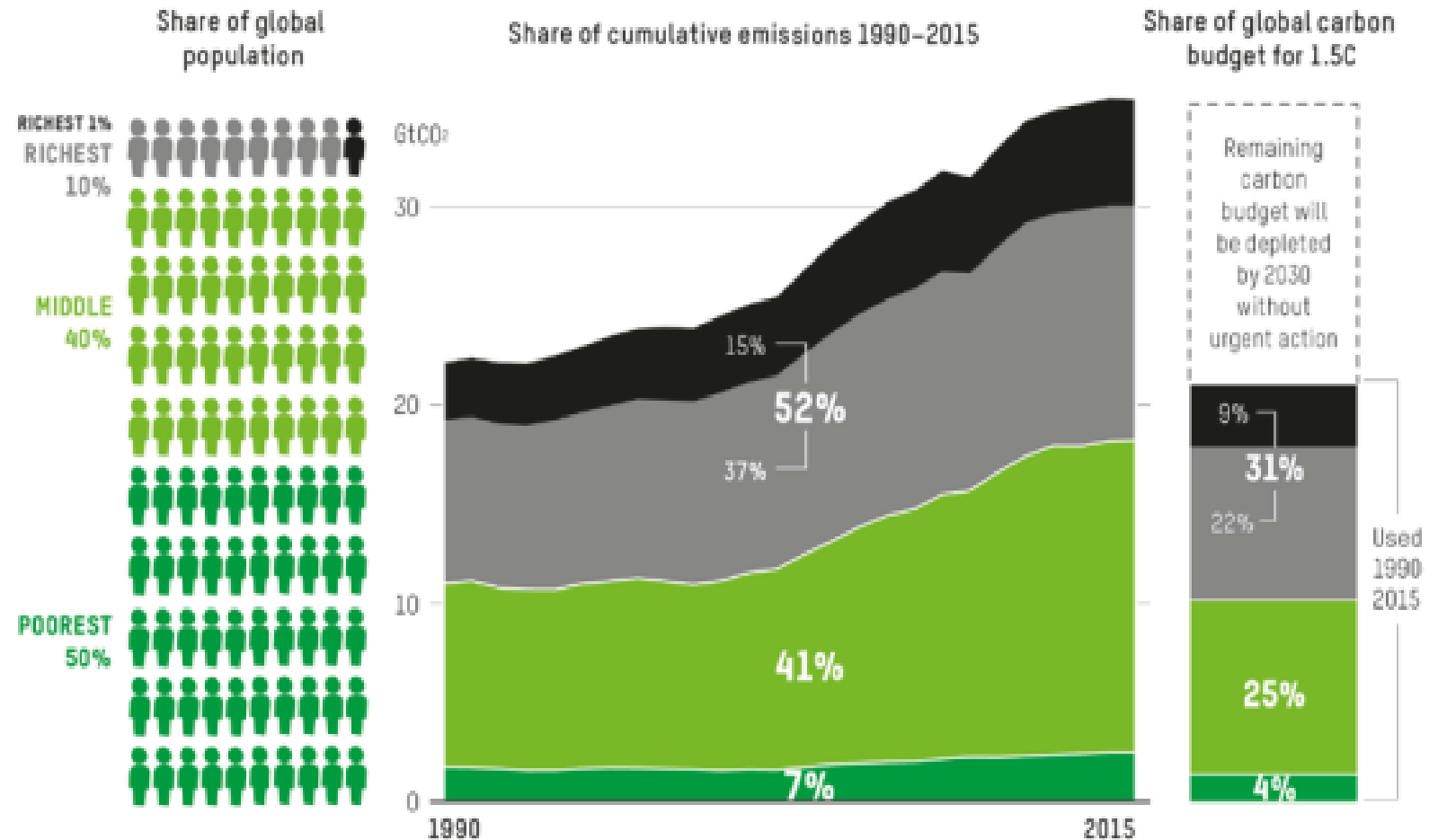
© 2021 Union of Concerned Scientists
Data: IEA Atlas of Energy

Climate Change: What's causing it?

New research shows that extreme carbon inequality exists. Between 1990 and 2015:

- The richest 10% were responsible for 52% of the cumulative carbon emissions
- The poorest 50% were responsible for just 7%
- The richest 1% alone were responsible for 15%

Figure 1: Share of cumulative emissions from 1990 to 2015 and use of the global carbon budget for 1.5C linked to consumption by different global income groups



Per capita income threshold (SPPP2011) of richest 1%: \$109k; richest 10%: \$38k; middle 40%: \$6k; and bottom 50%: less than \$6k.
Global carbon budget from 1990 for 33% risk of exceeding 1.5C: 1,205Gt.



'It is "unequivocal" that human influence has warmed the atmosphere, oceans and land, with human activities responsible for approximately 1.1°C of warming since the late 19th century. The contribution of natural factors to this warming is estimated to be close to zero.'

IPCC Working Group I

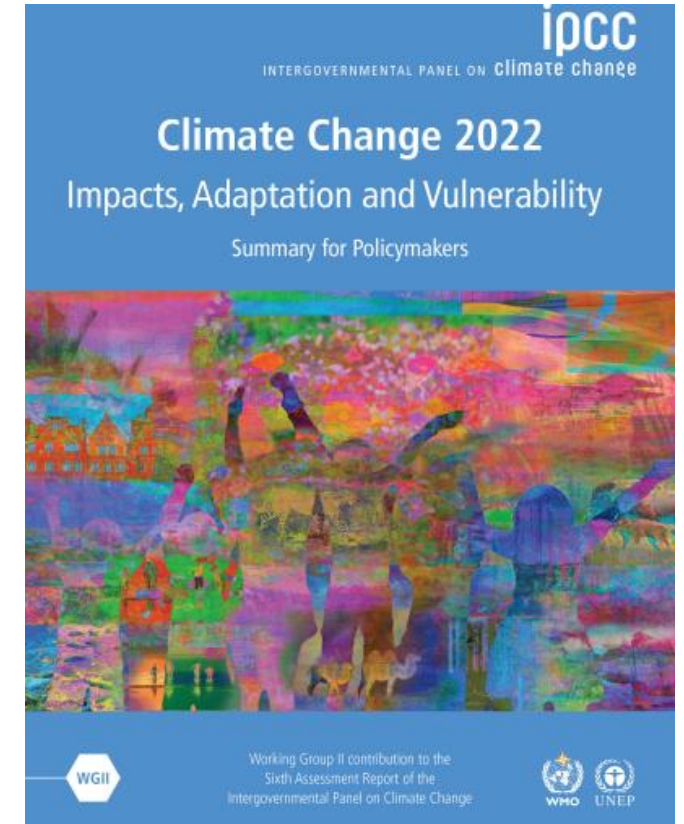
03

Climate Change: The Impacts



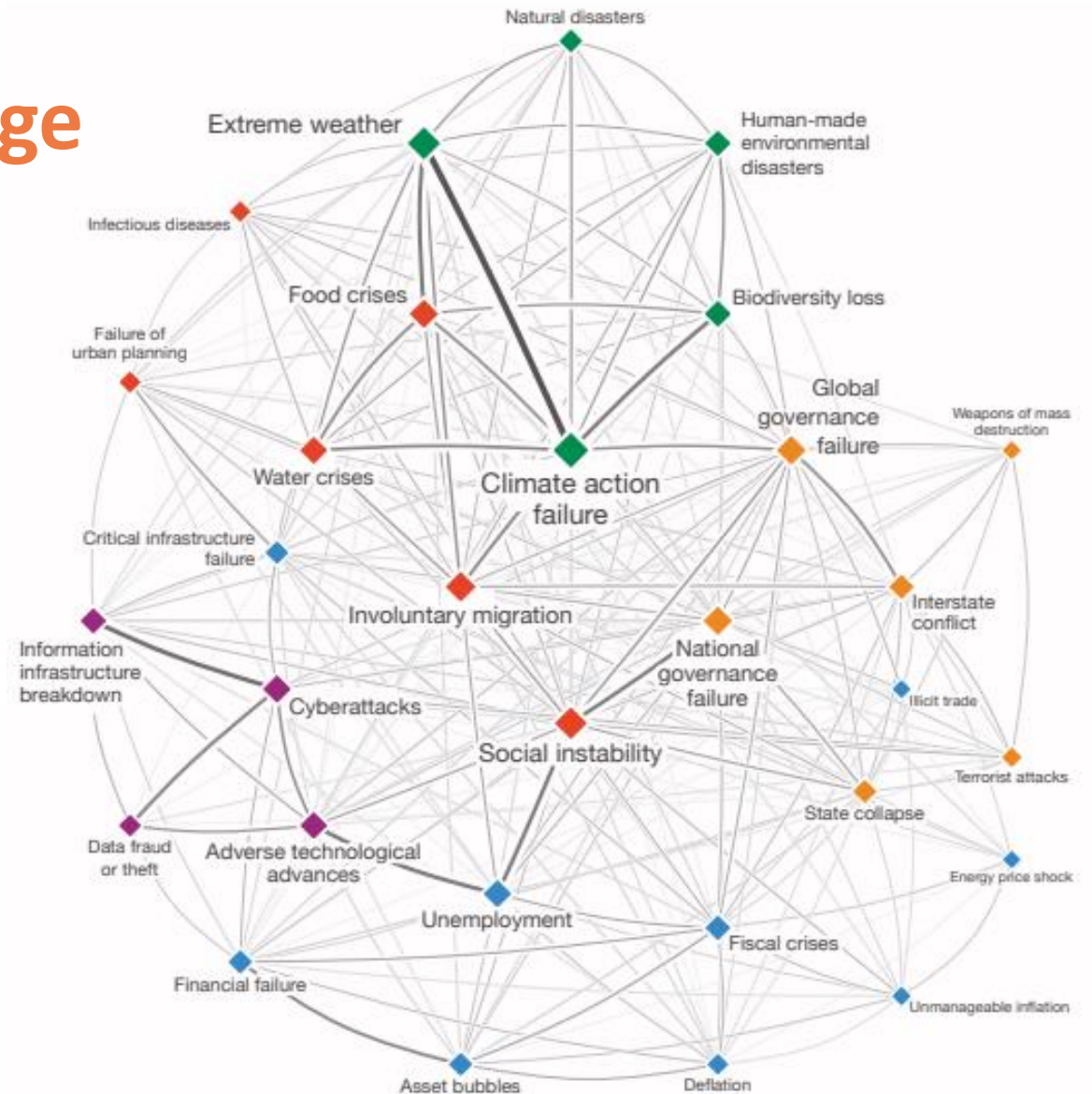
IPCC Report: Impacts, Adaption and Vulnerability

- Human-induced climate change is causing dangerous and widespread disruption in nature and affecting the lives of billions of people around the world, despite efforts to reduce the risks. What's more, the people and ecosystems least able to cope are hardest hit
- The IPCC reports that even with only the current level of warming, climate change impacts on ecosystems, people, settlements, infrastructure and water and food production systems are already pervasive. These impacts have mainly resulted from increases in the frequency and intensity of hot temperature extremes on land and in the oceans, heavy precipitation, drought and fire weather.



The Interconnected Nature of Climate Change

- As COVID spread across the world, you may have heard many experts talk about how climate change was to blame. Check out our module on health and wellbeing to explore how the two were connected.
- By Looking at the World Economic Forums Global Risk interconnections Map 2020, we can see how a lack of climate action and its impacts are connected to a multitude of economic, health and environmental related potential disasters and risks.



[Source: World Economic Forum Global Risk Perception Survey 2019 – 2020](#)



Climate Change is humanity's “code red” warning, impacting across the SDGs

Human activity has irrefutably caused warming of the climate, at a rate unprecedented in the last 2,000 years, according to the IPCC. Its Sixth Assessment Report signals an urgent “**code red**” warning for humanity and outlines what the world can expect if global temperatures rise 1.5 °C or higher.

The Sustainable Development Goals Report
2022





Code Red: Disasters and extreme weather events

Every region across the globe is already experiencing weather and climate extremes. As the planet warms, scientists anticipate increases in the frequency and intensity of heatwaves, flooding, precipitation, droughts and cyclones. If current trends continue, the UN Office for Disaster Risk Reduction projects that medium- to large-scale disaster events could reach 560 a year – an average of 1.5 a day – by 2030, a 40 per cent increase from 2015. The IPCC projects that about one third of global land areas will suffer at least moderate drought by 2100. With every additional increment of global warming, the projected changes in extremes will become larger. For instance, children under age 10 today are expected to experience a nearly fourfold increase in extreme weather events by 2100 under a 1.5 °C scenario and a fivefold increase under a 3 °C scenario.

[UN Sustainable Development Goals Report 2022](#)





Code Red: Oceans

Sea levels have already risen faster than in any preceding century. Projections show that sea level could rise 30 to 60 centimeters by 2100, even if greenhouse gas emissions are sharply reduced and global warming is limited to well below 2 °C. A rising sea level would lead to more frequent and severe coastal flooding and erosion. Ocean warming will also continue with increasingly intense and frequent marine heatwaves, ocean acidification and reduced oxygen. About 70 to 90 per cent of warm-water coral reefs will disappear even if the 1.5 °C threshold is reached; they would die off completely at the 2 °C level. These impacts are expected to occur at least throughout the rest of this century, threatening marine ecosystems and the more than 3 billion people who rely on the ocean for their livelihoods.

[UN Sustainable Development Goals Report 2022](#)





Code Red: Biodiversity

Even before the full fury of climate change has been unleashed, biodiversity loss is accelerating. Further losses in terrestrial, ocean and coastal systems are expected, with varying severity depending on the temperature threshold reached. For instance, endemic species in biodiversity hotspots face a very high extinction risk, which will double if the global average mean temperature rises 1.5 °C to 2 °C, but will increase tenfold at 1.5 °C to 3 °C. Declining ecosystems and biodiversity loss will affect nature-based services, threatening human health and our very survival. These conditions also increase opportunities for the emergence of new zoonotic diseases, such as COVID-19, and possible future pandemics. **Check out our modules on Biodiversity and Health and Wellness to learn more...**

[UN Sustainable Development Goals Report 2022](#)





Code Red: Agriculture and food systems

The droughts, floods and heatwaves brought on by climate change are putting added pressure on food production in many regions of the world. Parts of Africa and Central and South America are already experiencing increased, sometimes acute, food insecurity and malnutrition due to floods and droughts. Other projected impacts include devitalised soils, increased pest infestations and disease as well as weakened ecosystem services, such as pollination.





Code Red: Vulnerable populations

Climate change is affecting everyone, but the most vulnerable are hardest hit. The IPCC report estimates that 3.3 billion to 3.6 billion people live in contexts that are highly vulnerable to climate change. Hotspots of high human vulnerability are concentrated in small island developing States, the Arctic, Southern Asia, Central and South America, and much of sub-Saharan Africa. Poverty, limited access to basic services, conflict and weak governance limit adaptability to climate change, resulting in humanitarian crises that could displace millions from their homes. By 2030, an estimated 700 million people will be at risk of displacement by drought alone.

[Photo Source](#)

[UN Sustainable Development Goals Report 2022](#)



A photograph of a vast field of bright orange poppies under a clear sky. In the foreground, a weathered, grey wooden post stands upright. The text is overlaid in white, bold font across the center of the image.

According to the latest IPCC report, “The scientific evidence is unequivocal: climate change is a threat to human well-being and the health of the planet. Any further delay in concerted global action will miss a brief and rapidly closing window to secure a livable future.” The report calls for urgent climate action now.

David Attenborough: collapse of civilisation is on the horizon

Naturalist tells leaders at UNclimate summit that fate of world is in their hands



04

What can we Do? Individuals and Communities



“Climate change isn’t an “issue” to add to the list of things to worry about, next to health care and taxes. It is a civilizational wake-up call. A powerful message—spoken in the language of fires, floods, droughts, and extinctions—telling us that we need an entirely new economic model and a new way of sharing this planet. Telling us that we need to evolve.”

Naomi Klein

Paris Agreement 2015

In 2015 196 countries at COP 21 in Paris, signed a legally binding international treaty on climate change.

The Goal of the treaty was to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.

The Global Agreement called for a peaking of global temperatures and emissions asap with rapid reductions after that.



Photo Source



Ambitious Commitments have not been Met by Action

- Following the Paris Agreement in 2015, countries drafted their own climate action plans and defined their NDCs (Nationally Determined Contributions).
- Global companies matched these plans with their own ambitious emission reduction plans.
- Despite this increase in net zero goals and reporting; action has failed to match the plans.

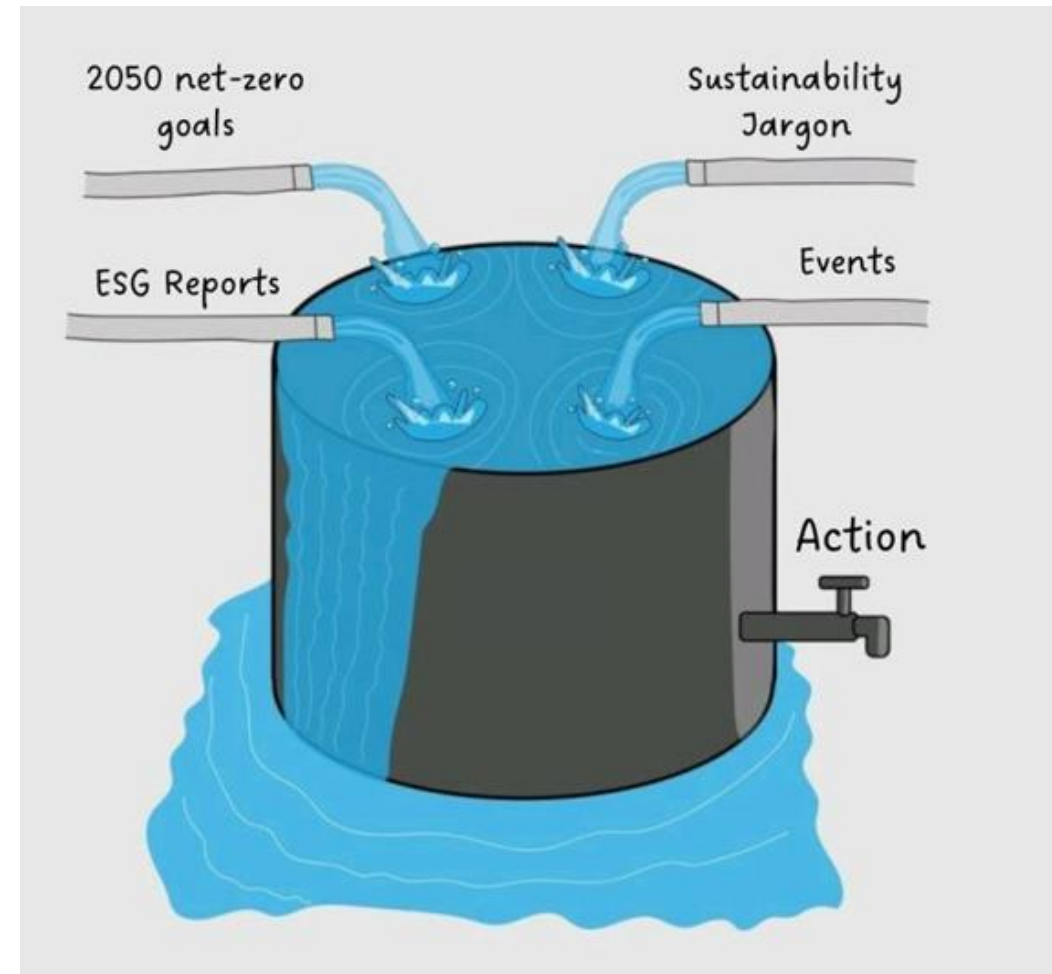
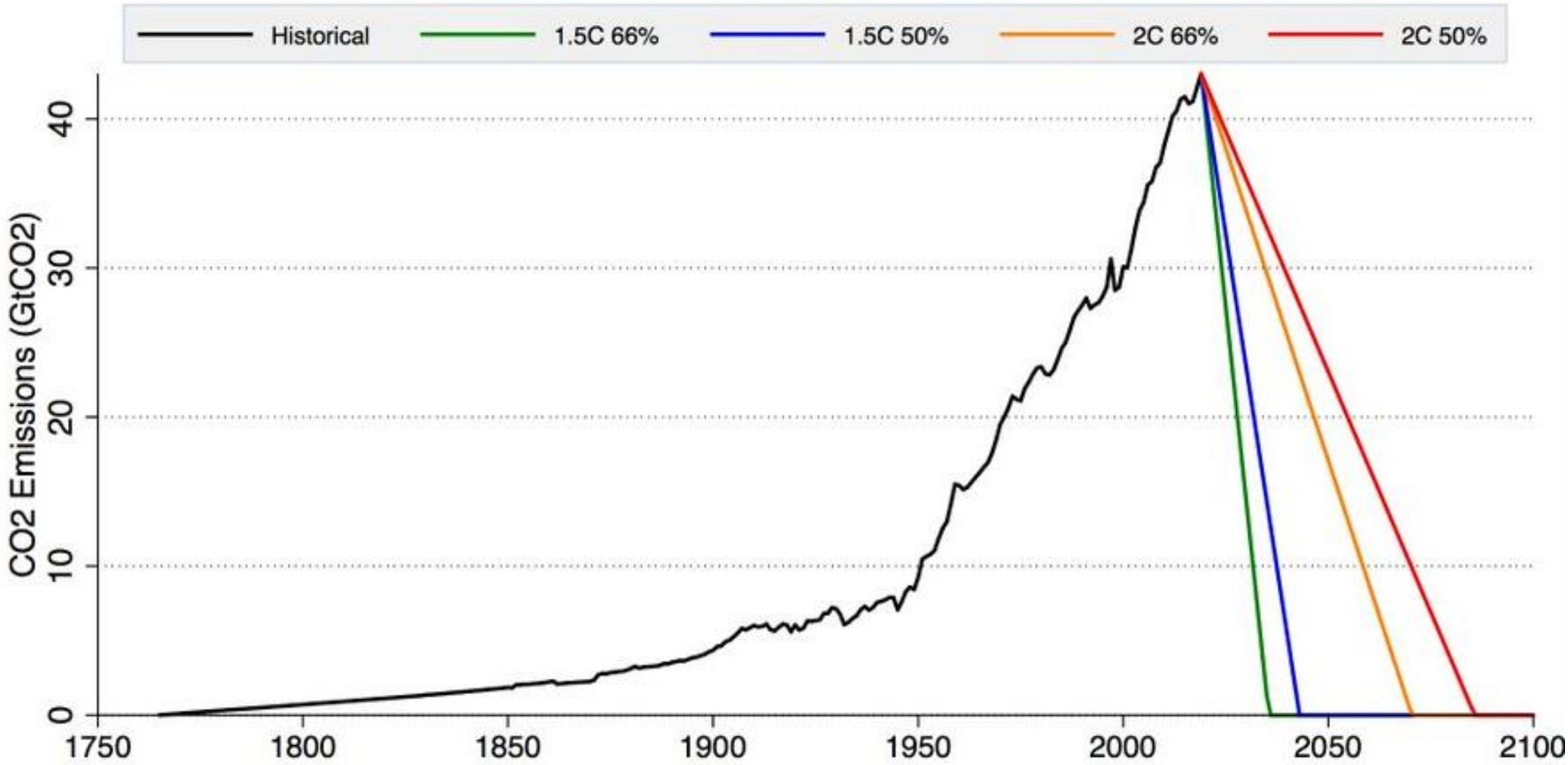


Illustration Source

Simplified Emissions Pathways for Climate Targets



Source: [Climate Scientist Zeke Hausfather](#)





A Step in the Right Direction but a Mountain to Climb

To limit warming to 1.5° Celsius above pre-industrial levels, as set out in the Paris Agreement, global greenhouse gas emissions will need to peak before 2025. Then they must decline by 43 per cent by 2030, falling to net zero by 2050, according to the Intergovernmental Panel on Climate Change (IPCC).

Virtually all scenarios allow ‘negative emissions’ or ‘carbon offsets’ to expand the budget of emissions.

However, when offsets are removed from the model, and we see the raw emissions reductions needed to meet the targets it seems daunting, and we cannot help to feel fatalistic about any actions.

What can we do as individuals and as communities?

Communities and individuals have a massive role to play both in holding others accountable and taking small steps together to achieve a massive impact

[Source: Climate Scientist Zeke Hausfather](#)





What Can We Do?

Individual Action

We face a huge challenge but solutions already exist and there are many resources being applied to the largest challenge we have faced.

While it is wrong to place the blame on individuals, and large corporations and governments must shoulder the blame and make drastic changes, each of us have a responsibility to take and we can all do our part in creating more healthy communities and a more healthy planet





***“START WHERE YOU ARE.
USE WHAT YOU HAVE.
DO WHAT YOU CAN.”***

ARTHUR ASHE

Change your Diet

Making changes to your diet can be advantageous for the health of the planet and your own health. Switching to diet that's higher in fibre is better for your health.

While switching to a vegan diet can be the most planet friendly option, there are small adjustments you can make that can have a large effect on the impact of our foods.

Eat fewer or smaller portions of meat, especially red meat, which has the largest environmental impact, and **reduce dairy products** or switch them for non-dairy alternatives.

Try to **choose fresh, seasonal produce that is grown locally** to help reduce the carbon emissions from transportation, preservation and prolonged refrigeration.

Source: [United Nations Act Now](#) and [Imperial College London](#)

Change your Travel Habits

In 2017, 27% of greenhouse gas emissions in the EU came from the transport sector. If everyone makes changes to their travel habits we can have a significant impact on the overall emissions.

Instead of getting in the car to go to work, choose public transport, walking or cycling. Physical exercise in the morning also provides us with a range of physical and mental benefits.

When driving is unavoidable, look at ride-sharing platforms or renting a car for the use. If you are someone who needs to travel by car, consider a hybrid or electric option at your next upgrade.

Consider your **air travel**. Airplanes burn large amounts of fossil fuels which contribute greatly to global greenhouse emissions. It's important we build back better from the COVID-19 pandemic so when you can choose to meet virtually and decide whether your travel is essential before hoping on a flight.

Source: [United Nations Act Now](#) and [Imperial College London](#)



Speak Up

What you say matters. Climate Action is an issue for everyone and using your voice is the most effective way of getting more people involved.

What can you do? Start by engaging your friends and family in conversation and discuss the positives and the negatives. [Listen here](#) to learn more about how to talk about climate change.

Find out who your local MP or TD and express your concerns and why climate change is important to your area.

Join a social movement or campaign that focuses on sustainability. Or even better, be a climate champion and start your own.

Source: [United Nations Act Now](#) and [Imperial College London](#)



A photograph of a diverse crowd of people, many with their fists raised in a gesture of protest or solidarity. The image is partially obscured by a large blue rectangular overlay in the center. On the right side, a young man with glasses and a white face mask is visible, wearing a denim jacket. The overall scene suggests a public demonstration or rally.

***“USE YOUR VOICE, USE YOUR VOTE, USE YOUR
CHOICE”***

AL GORE

Ireland's Citizens' Assembly on Climate Change Recommends ...

1. Climate change is **at the centre of policy-making** in Ireland.
2. State to **lead by example** with mitigation and adaptation measures.
3. 80% of voters were willing to pay **higher carbon taxes**.
4. Assessment of **vulnerability of critical infrastructures** and resilience.
5. Selling back to the grid of **electricity** from **micro-generation**.
6. **Community ownership** in all future renewable energy projects.
7. **End** all subsidies for **peat extraction**.

And



Ireland's Citizens' Assembly on Climate Change Recommends ...

8. Increase **bus lanes, cycling lanes** and **park and ride facilities**.
9. Support the transition to **electric vehicles**.
10. **Prioritise public transport** spending over roads at ratio 2:1.
11. 89% voted for **tax on greenhouse gas emissions** from agriculture.
12. **Mandatory measurement & reporting of food waste** at every level.
13. Supports for **planting forests** and encouraging **organic farming**.

Local Action for Climate Change

Are your elected representatives following the Citizen Assembly's recommendations? Do they know you care? Asking them is a great place to start!

<https://www.europarl.europa.eu/ireland/en/your-meps>

<https://www.oireachtas.ie/en/members/>

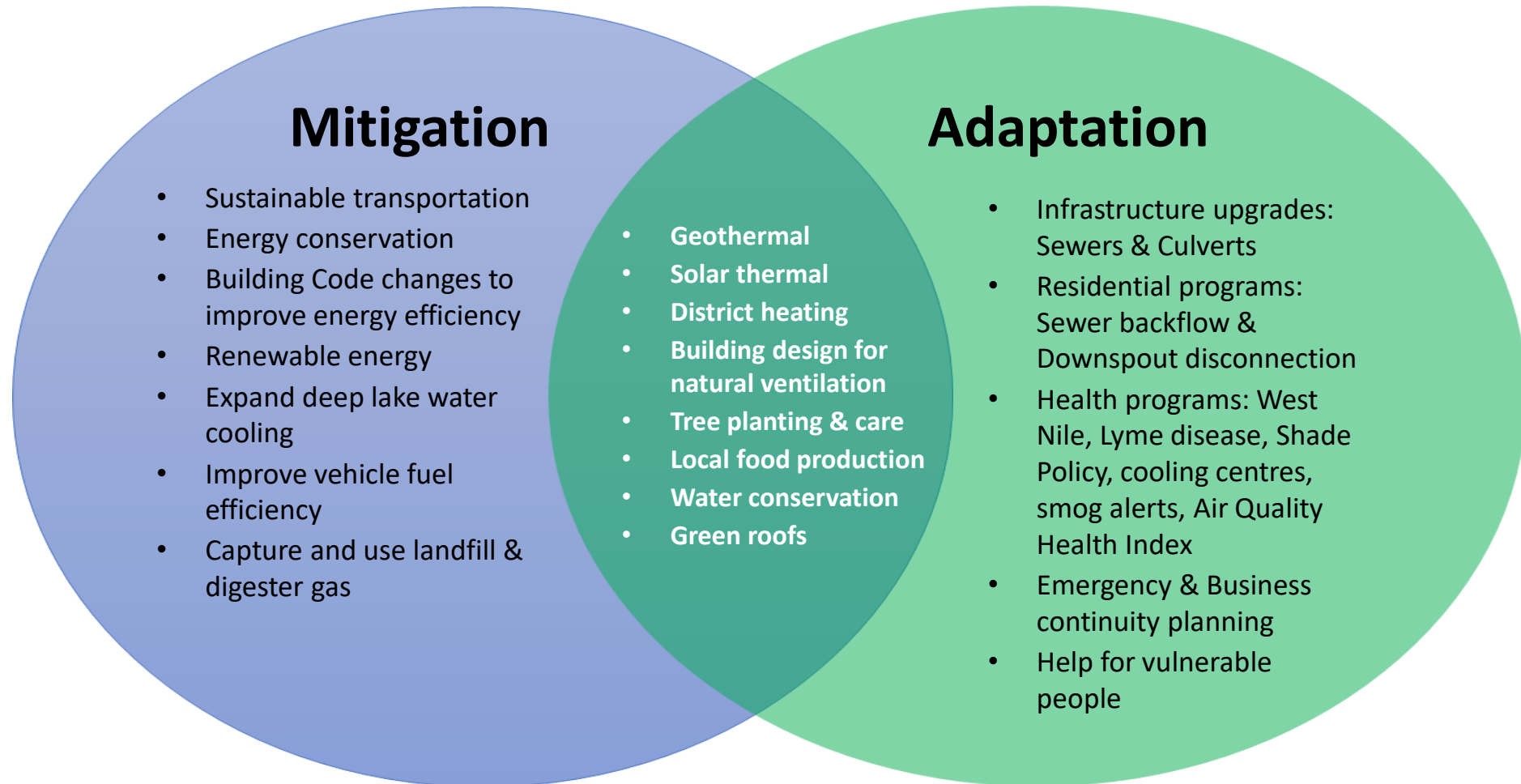
Find and join local organisations addressing climate change:

<https://ien.ie/our-members/>

Four Courts, Dublin,
Ireland



Actions to Address Climate Change:



Mitigation: the globally responsible thing to do

Actions that reduce the emissions that contribute to climate change.

Adaptation: the locally responsible thing to do

Actions that minimise or prevent the negative impacts of climate change.



05

Summary & Review 😊



Summary: Climate Change

We delved into the complex topic of climate change and its far-reaching consequences for our planet and our lives. We gained a deeper understanding of this global challenge and the urgent need for action.

- How has your perception of climate change evolved throughout this module?
- What are some initial thoughts on how you can contribute to climate action?
- Can you remember the differences between Global Warming and Climate Change?

Summary: Gas, more than just hot air?

Next, we explored the role of greenhouse gases in the atmosphere and their natural function in regulating the Earth's temperature. We looked at how human activities, particularly the burning of fossil fuels, have intensified the greenhouse effect, leading to rising global temperatures.

- Can you remember the main Greenhouse Gases?
- How does the impact of human activities on greenhouse gas emissions make you reflect on the need for sustainable practices?

Summary: Protecting our Natural Carbon Sinks

Throughout our journey, we discovered the significance of carbon sinks, such as oceans, soil, and forests, in the carbon cycle. These ecosystems play a crucial role in absorbing and storing carbon dioxide, mitigating the effects of climate change.

- What Carbon Sinks have you identified in your community?
- How can we protect and restore these natural carbon sinks to help combat climate change?

Summary: Fossil Fuels – Not as simple as it seems

We also examined the main causes of climate change, with a particular emphasis on the role of fossil fuels and their contribution to greenhouse gas emissions. However, we realised that climate change is not solely a consequence of energy production but also influenced by various sectors, including transportation, agriculture, manufacturing, and consumption patterns.

- How can collective action across these sectors lead to meaningful change?

Summary: What can we do?

Finally, we explored the importance of climate action and the global efforts outlined in the Paris Agreement. We looked at some of the local actions we can all take.

- What small steps are you going to take to create a more sustainable future in your community?
- What role do you envision for yourself in contributing to climate action and fostering a sustainable future?



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THANK YOU

Any questions?



www.climatechampions.how