

Climate Change



Contents

Introduction	2
Confidence level.....	2
Core Concepts	2
What do you think?	3
External expectations	4
UK reporting	5
Governmental actions	5
Personal actions.....	6
What do you think?	7
Offices: action points	7
Travel: action points	8
Managers: action points	9
Conclusion	9
Three Personal Action Points.....	9
Climate Change: Glossary	11

Introduction

Welcome to this course on climate change.

Hello and welcome to this course on climate change.

The long-term shift in temperatures and weather patterns caused by human activity, is the most serious environmental challenge facing humanity, and it's an area where most people are keen to make a difference.

As individuals, we're increasingly making personal choices with climate change in mind. Across society it's affecting the food we buy, the holidays we take, the houses we live in – even the way we vote.

But what about in our professional lives? What can we do when we go to work? How can we make an impact on the organisations we work for?

This course is designed to help you answer that question.

We'll cover:

- The basic concepts of climate change.
- The climate change-related expectations that society – and specific stakeholders – increasingly have of organisations.
- And what practical steps you can take at work – today – to start making a difference.

Confidence level

There's some complex science behind climate change – but how confident are you with the basics?

The basic concepts aren't very complicated (or don't have to be). So over the next couple of screens we'll go over a quick intro to the underlying issues, that doesn't assume any prior knowledge.

Core Concepts

Presenter - So what do we mean by 'climate change'?

Since the 1800s, the earth has been getting warmer, and the last ten years have been the warmest on record.

This is caused largely by increasing levels of 'greenhouse gases' like carbon dioxide or methane that trap energy from the sun when they're in our atmosphere.

These greenhouse gas emissions can come from burning fossil fuels, such as coal and oil, as well as other human activities such as increased levels of industrial and agricultural activity.

Rising average global temperatures have a range of dangerous risks associated with them including extreme weather events.

As polar ice melts, sea levels will rise. In fact where I'm standing right now is predicted to be underwater within 20 years.

In addition many species of plants and animals could become extinct, and levels of food production could fall around the world. So climate change is the most serious environmental challenge facing the world today. And understanding why it is happening is essential, if humanity is going to be able to take the necessary steps to put things right.

What do you think?

When it comes to climate change, people sometimes talk about the 'carbon footprint' of an organisation, product or service. What do you think this means?

- A ranking of an activity or entity in terms of how much pollution it produces
- A measure of the quantity of greenhouse gases produced by a specific activity or entity
- A UK government 'badge' given to organisations and products that produce low levels of CO₂

A carbon footprint measures the quantity of all greenhouse gases (referred to as 'CO₂e' – 'carbon dioxide and equivalent') in tons per year, produced by a specific activity or organisation. This is made up of 'direct emissions' (like the CO₂e produced by gas used to heat a factory) and 'indirect emissions' (e.g. the CO₂e produced by a power station supplying the factory's electricity).

Using carbon footprints allows analysts to work out how much environmental damage results from specific activities such as air travel, or the 'climate change' impact of an organisation as a whole. So the quantity of CO₂ that an organisation produces every year (both directly and indirectly) is their carbon footprint. Most modern organisations are seeking to reduce theirs as much as possible – but be careful! There is lots of 'greenwashing' going on as well.

Climate change issues

How did human-caused climate change begin? What will happen if it continues?

Why has climate change become a big problem?

Basically, the problem has developed due to the global process of industrialisation that has been ongoing since the 18th century. (Many people would date this from 1781, when the coal-fired steam engine was invented).

There has been an enormous rise in emissions of greenhouse gases since then – and the result has been climate change.

What will happen if climate change continues?

Climate change means that arctic ice will melt on a massive scale. Sea levels will rise, with millions of people potentially losing their homes. This also influences and disrupts weather patterns.

Extreme weather events (e.g. Hurricanes) have already started to occur more frequently, and this trend will continue and then accelerate.

The natural world will be hit very hard, with mass extinctions occurring and habitats such as coral reefs dying out due to rising ocean temperatures. Changing rainfall patterns will inevitably impact farming, making food production harder and less secure.

What should be done?

In terms of the numbers, humanity needs to limit any additional climate change. The international target is to restrict climate change (in relation to average pre-industrial temperatures) to 1.5 degrees centigrade by the end of the century.

What's the biggest challenge?

Energy production is one of the most significant drivers of climate change. So transitioning from coal, oil and gas to renewables such as solar or wind power will make a big impact.

Every organisation around the world uses energy. So they can all contribute to fighting climate change by reducing consumption of energy where possible, and transferring to using energy from renewable sources.

External expectations

We've covered some of the basics when it comes to the science of climate change. Now let's move on to review the expectations that external stakeholders (governments, clients, service users) increasingly have of organisations in this key area.

Whatever type of organisation you work for, your stakeholders will expect you to be doing something about climate change. Exactly what these expectations are will often vary with what your organisation does, but on a general level, such expectations are increasing across the board.

Let's look at wider society first.

Generally speaking, demand keeps rising for services and products that offer environmental benefits – and which reduce negative impacts such as climate change.

The public increasingly has a more positive opinion of organisations that make a clear difference when it comes to environmental challenges...

...and the reverse is also true.

The underlying point here is that social values are changing – and changing quickly. Customers, students, retired people, investors – their priorities and preferences are all shifting, and shifting in the same direction.

So, this introduces a measure of potential risk that organisations need to manage – because priorities can become protests, if people don't feel listened to. In 2020, Barclays Bank became a target of Greenpeace activists, who occupied around 100 UK bank branches, as part of their opposition to Barclays' funding of global oil companies.

Investors and shareholders are also increasingly putting pressure on companies – for example, by scrutinising their carbon footprints. Pension funds are becoming particularly active in this area.

Speaking more broadly, the Bank of England has stated that companies that don't transition quickly enough to become sustainable will, in the end, go out of business. And governments around the world are backing-up such concerns by establishing regulatory frameworks that require organisations to reduce their carbon footprints.

So, in conclusion – when it comes to climate change, external pressures and expectations are increasing for all organisations. And how organisations respond to such pressures will be of increasing importance in years to come.

UK reporting

The UK government is talking climate change increasingly seriously. They have stated that in a few years' time, many large organisations will be legally required to report their exposure to climate risk. What do you think the target date is for this to become law?

The target date for starting to legally require large organisations to report climate risk exposure is 2025. This requirement will initially cover listed companies, insurers, banks and other financial organisations.

However, it may be wise for all organisations to start preparing for an expanded reporting regime. And at a minimum, information-gathering efforts in this area will only help attempts to bring carbon footprints down within organisations.

Governmental actions

Governments around the world are taking an increasing interest in this area, and

regulatory activities are set to increase in future.

Climate Change Act 2008

The key UK law in this area has been the Climate Change Act 2008. 'The Climate Change Act 2008 is the basis for the UK's approach to tackling and responding to climate change. It requires that emissions of carbon dioxide and other greenhouse gases are reduced and that climate change risks are adapted to. The Act also establishes the framework to deliver on these requirements. The Act supports the UK's commitment to urgent international action to tackle climate change.' (Climate Change Committee). A new Environment Bill was also passed at the end of 2021.

Net Zero by 2050

The UK Government has committed (via the Climate Change Act) to reducing greenhouse gas emissions to 'net zero' by 2050.

As of 2021 'Almost 1 in 3 of the UK's largest businesses are leading the way in the world's transition to a low carbon economy, committing to align with UK government ambitions and eliminate their contribution to climate change by 2050. 30 of the UK's FTSE 100 companies have signed up to the United Nation's Race to Zero campaign – the largest ever global alliance committed to achieving net zero carbon emissions by 2050 at the latest, backed with science-based targets, with many opting to go even faster.' (Gov.uk)

International laws

UK regulations in this area (especially re disclosure and reporting) are evolving within a wider context of global laws and frameworks, including:

- The UN Paris Agreement
- The European Commission's Action Plan for Financing Sustainable Growth
- The EU Non-Financial Reporting Directive and Sustainable Finance Disclosure Regulation
- COP26

Personal actions

We've looked at the core concepts associated with climate change, as well as some of the expectations modern organisations have to deal with – from clients, stakeholders and regulators. But what can you – personally – do to help?

Presenter - When faced by a challenge on the scale of climate change, it's quite natural to feel overwhelmed, and to ask yourself what individuals can really do about it. Such feelings are sometimes referred to as 'eco anxiety' – but they shouldn't become an excuse for inaction.

Because the fact is that individual actions – when added together – can make a positive difference. Many people now personally choose to buy sustainable products,

save energy in their homes and reduce consumption. And the same day-to-day, practical approaches can also be applied in the workplace.

So whatever type of organisation you happen to work for, there are a range of practical steps you can take to help minimise the 'carbon footprint' of your workplace.

And these actions don't have to involve changing organisational policies on things like energy use or recycling – although if you are in a role that has influence on things like this, that could be very helpful.

Instead, there are specific things you can start doing right now that will make an immediate difference. For example, you could join a car pool, turn down office thermostats and avoid printing hard copy documents.

But whatever you feel you can do, the important thing is to make a start, and then work to maintain positive behaviours. Because by acting as individuals, together we can start to make a real difference.

What do you think?

Turning off lights when you don't need them is a great way to save energy. But how much difference does it really make? Try to imagine an office where twenty people work every day. Then imagine that all the lights were left on overnight. How much energy would be wasted? To be specific, how many cups of tea could be made using the same amount of energy to boil water?

You could boil water for 1,000 cups of tea using the energy wasted by leaving the lights in an average office on all night!

Offices: action points

If you work in an office, there are lots of things you can change that will make an immediate difference.

Energy

- Turn off lights (optimise daylight) and air conditioning when not in use.
- Wear appropriate layers for the weather to reduce need for heating or cooling.
- Where possible, turn down thermostats and close windows in winter to save heat. Why not contact your building manager to see what you can do?
- Keep clutter/furniture away from radiators so they can work efficiently.

Equipment

Everyone should turn their computer and monitor off when not in use. And other equipment should be used efficiently too:

- Keep fans and filters free of dust.

- Close fridge doors promptly.
- Report faults promptly so they can be fixed ASAP to prevent wasting energy.
- Try and share between departments stationary/furniture that is not needed anymore (or give it to charity).

Resources & Waste

- Using less paper cuts carbon footprints, so reduce, reuse and recycle. (If you must print, do so 'double-sided').
- Water is a resource. Ensure you report taps that drip/pipes that leak. Use the 'short flush' option on toilets.

Catering

A couple of times a week, aim to bring lunch in a reusable container rather than purchasing single-use goods on the go.

Agriculture and food production has a significant impact on emissions, so consider buying local and plant-based foods to reduce environmental impacts.

What do you think?

Transport is something that generates significant amounts of CO₂e. If a car owner reduces their average mileage by one mile a day – how much would their annual carbon emissions reduce by?

- 10kg
- 50kg
- 100kg
- 125kg
- 500kg

Cutting their mileage by even one mile per day could reduce their carbon emissions by 125kg a year – which is 1/8th of a tonne of CO₂!

Of course, you might want to be more ambitious and replace a car journey with one by train – or switch to walking, and enjoy the health benefits!

Travel: action points

People in organisations spend a lot of time travelling to and from work.

If you need to drive as you cannot walk, get public transport or car pool to your location, drive in a way that reduces fuel use:

- Keep a constant speed and observe speed limits.

- Accelerate and brake smoothly.

Plan your journeys to and from work. Reduce driving by using a bike, car sharing or public transport.

Using virtual meetings more can help you to avoid unnecessary business travel.

Managers: action points

Managers can encourage positive behaviours in their teams:

- Keep people informed about helpful schemes (e.g. recycling) and policies.
- Support 'carbon friendly' work patterns/culture (like online meetings).
- Request more 'sustainable' office equipment.
- Use their influence to request or get involved with creating or adjusting existing policies that consider the environment/sustainability.

Conclusion

Presenter - You have now reached the end of this course on Climate Change. As Next Steps, why not consider these three Personal Action Points?

- Identify three actions you can take today to reduce the carbon footprint of your organisation.
- Familiarise yourself with relevant organisational policies (e.g. recycling, energy saving).
- Connect with any groups in your organisation that seek to reduce climate change/protect the environment.

Thank you for your time.

Three Personal Action Points

You have now reached the end of this course on Climate Change. As Next Steps, why not consider these three Personal Action Points?

Identify three actions you can take today to reduce the carbon footprint of your organisation.

Familiarise yourself with relevant organisational policies (e.g. recycling, energy saving).

Connect with any groups in your organisation that seek to reduce climate change/protect the environment.



Glossary

Climate Change: Glossary

Carbon footprint

A carbon footprint measures the quantity of all greenhouse gases in tons per year, produced by a specific activity or organisation.

Climate change

Over recent decades, average temperature levels around the planet have risen. This overall rise in global temperatures is called 'climate change'.

CO₂

Carbon Dioxide. The most significant greenhouse gas.

CO₂e

All greenhouse gases ('CO₂e' – 'carbon dioxide and equivalent').

Direct emissions

For example, the CO₂e produced by gas used to heat a factory.

Eco anxiety

This happens when individuals feel overwhelmed by the scale of environmental problems (such as climate change).

Emissions

The process of releasing greenhouse gases into the Earth's atmosphere.

Extreme weather events

Events such as hurricanes.

Greenhouse gases

Greenhouse gases trap energy from the sun, causing the planet to heat up. There are many greenhouse gases, but one of the most significant is carbon dioxide, or 'CO₂'.

Greenwashing

A misleading effort to present something as more environmentally-friendly than it really is.

Indirect emissions

For example, the CO₂e produced by a power station supplying a factory's electricity.

Net zero

A situation where the amount of greenhouse gases going into the atmosphere (e.g. produced by a company's activities) are balanced by the amount they are removing from the atmosphere.

Paris Agreement

A major international climate change treaty.

Renewable energy

Energy that is produced by a source that is not depleted when it is used (e.g. solar, wind).

Sustainability

An approach that conserves natural resources and protects global ecosystems.