

# Delivering a Net Zero future

## Module one



# Delivering a Net Zero future

## Agenda

What is Sustainability and Net Zero?

---

Sustainability and the Changing Global Context

---

Global Frameworks for Action

---

The Great Acceleration

---

Megatrends

---

Interconnected Risks

---

Final Thoughts

# What is Sustainability and Net Zero?

**Net Zero** – a balance between CO2 emissions released into the atmosphere from production and other activities, with equivalent amounts captured and stored.

**Sustainability** - meeting the needs of current generations without compromising the ability of future generations to meet their own needs. Many approaches to sustainability focus on three key aspects: the economy, the environment and society (sometimes referred to as “people, planet and prosperity”).



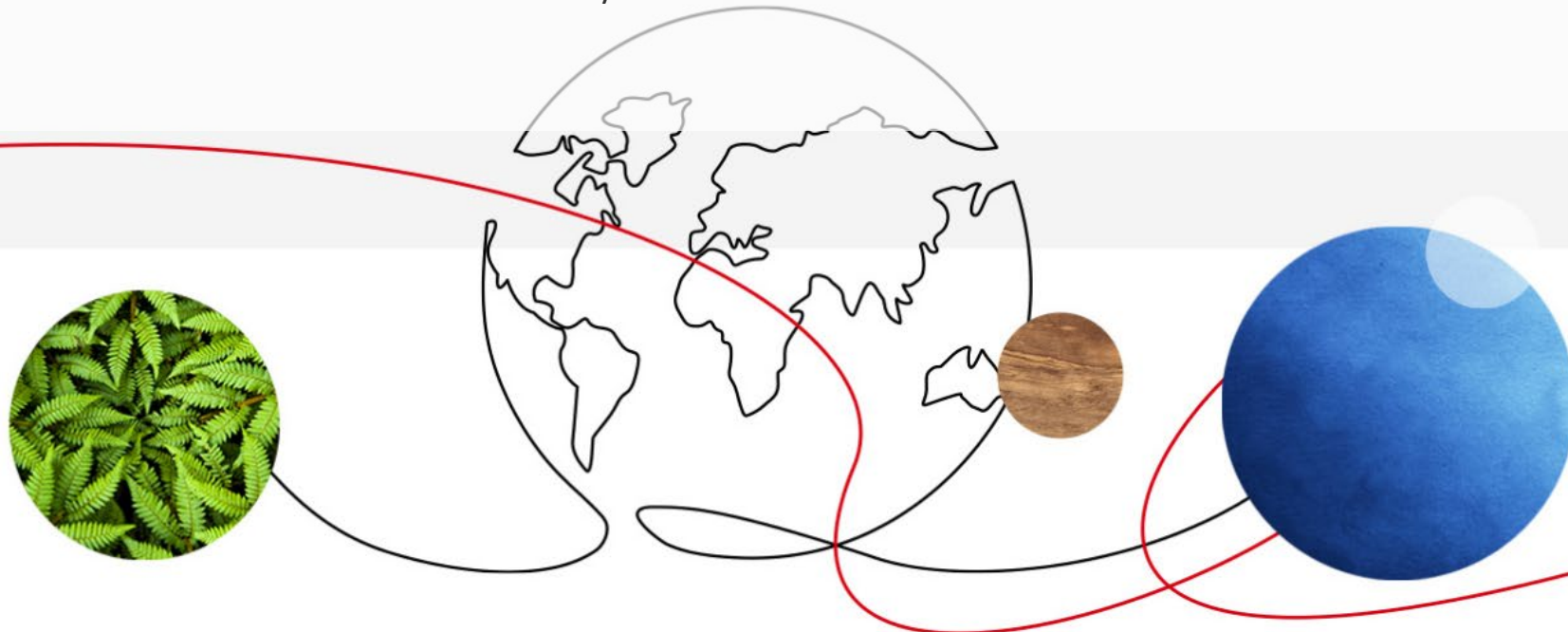
# Sustainability and the Changing Global Context

The world is changing at an unprecedented rate. Globalisation, Climate Change, demographic shifts, social cohesion, new technologies and the pandemic are all making the operating context more volatile and uncertain than any other time in history.

Many of these changes will affect you personally. They also affect our businesses, customers, society and the wider environment.

This module will explore some of these changes, helping you understand the rate of change, direction of travel and the interconnections between the different social, environmental and economic trends.

We'll look at some of the drivers for change, the implications for our businesses and the role we can play to help seize new opportunities and deliver a sustainable economy.



# Global Frameworks for Action

There are many frameworks and initiatives that are shaping the sustainability debate globally.

Here are four that you may of heard of:

1. The Paris Climate Agreement (COP 21)
2. The Task Force on Climate related Financial Disclosures (TCFD)
3. The UN Sustainable Development Goals (SDGs)
4. The Environmental, Social and Governance framework (ESG)





# The Paris Climate Agreement (COP 21)

## What is it?

Over 180 countries have signed the Paris Climate Agreement to limit global temperatures rise to well below 2°C and to push for efforts to limit the increase to 1.5°C.

Under this agreement, each party has to provide a road map which details its efforts to mitigate and adapt to a low carbon economy. These road maps are referred to as NDCs – Nationally Determined Contributions.

On 21<sup>st</sup> September 2020 the UNFCCC (UN Climate Change) reported that commitments to reach Net Zero emissions from local Governments and businesses had roughly doubled in less than a year, as many prioritise climate action in their recovery from Covid-19.

# The Task force on Climate related Financial Disclosures (TCFD)

## What is it?

The Task Force on Climate related Financial Disclosures (TCFD) is a voluntary approach to help companies consistently disclose information about their exposure to risks associated with Climate Change. Since it was launched in 2017, nearly 800 public and private sector organisations have supported TCFD.

Learn more about the importance and aspirations for TCFD by watching this video [Introduction to the FSB Task Force on Climate related Financial Disclosures](#). This video is provided by TCFD and is hosted externally.





# The UN Sustainable Development Goals (SDGs)

## What is it?

A global strategy for sustainable development between now and 2030.

The strategy consists of 17 goals and 169 supporting targets that aim to create a peaceful, prosperous and equitable planet. The goals are driven by the United Nations with the support of 180+ countries and businesses.



# The Environmental, Social and Governance Framework (ESG)

## What is it?

The Environmental, Social and Governance (ESG) framework sets out non-financial criteria to allow the investment community to comprehensively analyse companies.

Corporations are rated on their ESG performance, giving investors – whether institutional or individual – information on which to make investment choices.



# The Great Acceleration

The last 70 years or so have been a unique time in human existence. Since the mid 1950s, increases in population, economic activity and technology have led to a profound transformation in the impacts of humanity on the planet.

This is known as “**The Great Acceleration**”.



Socio-Economic Trends



Earth System Trends



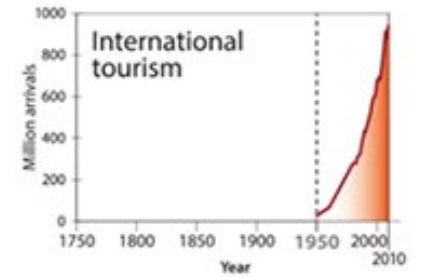
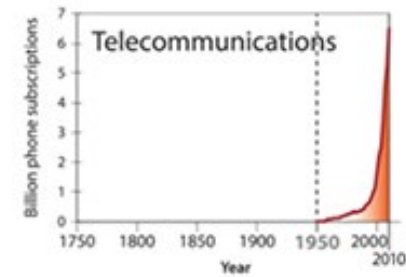
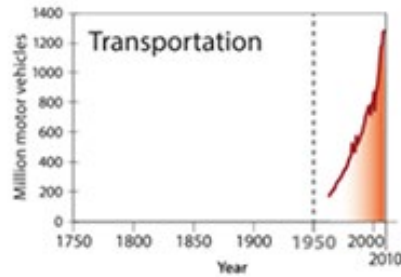
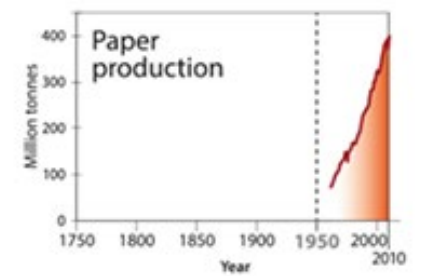
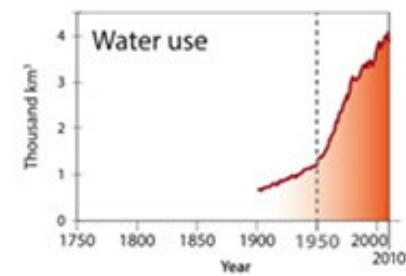
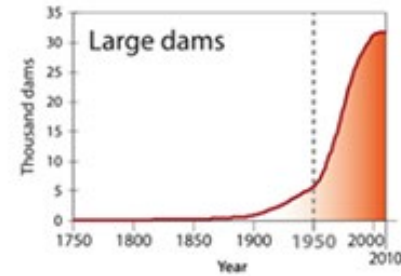
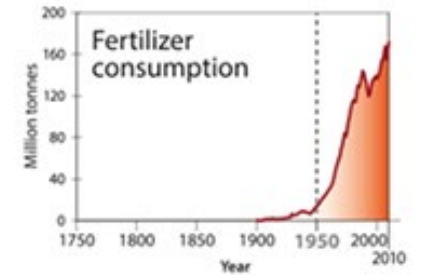
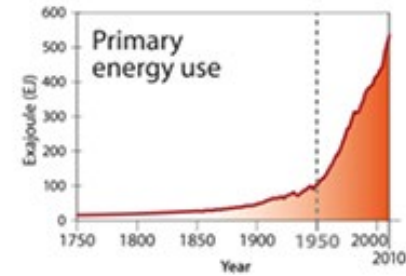
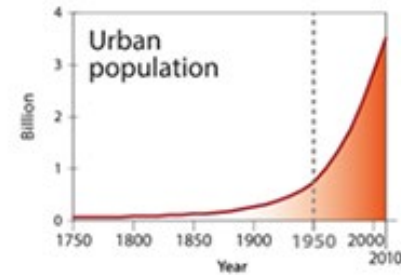
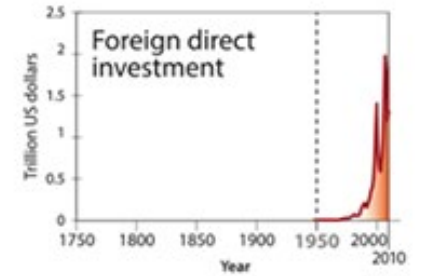
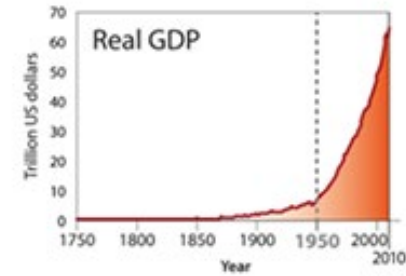
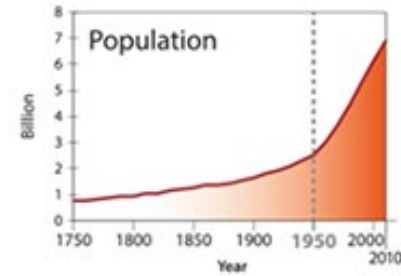
VUCA world examples



# Socio-Economic Trends

A series of graphs show how socio-economic trends have evolved over the years. All the graphs show a significant increase since 1950. The trends listed are:

- Population
- Real GDP
- Foreign direct investment
- Urban population
- Primary energy use
- Fertilizer consumption
- Large dams
- Water use
- Paper production
- Transportation
- Telecommunications
- International tourism

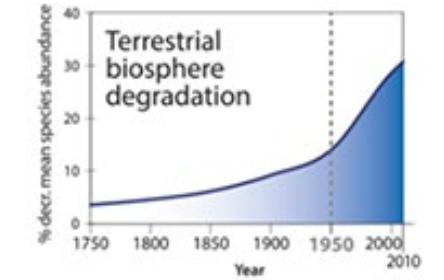
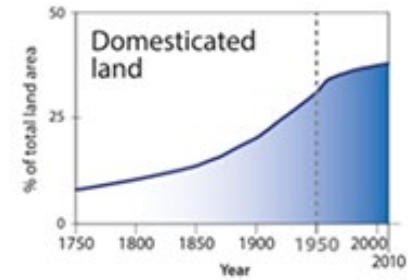
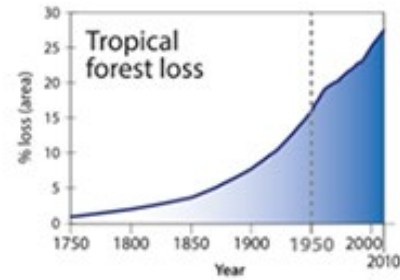
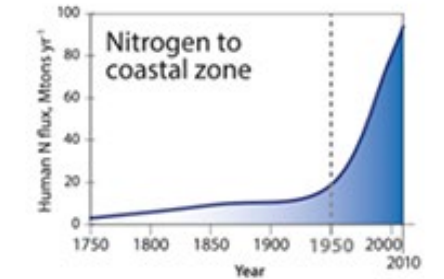
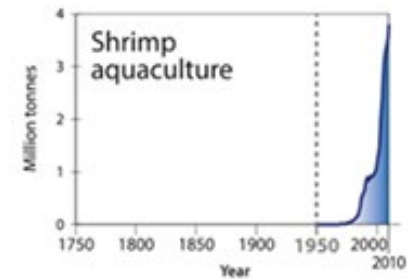
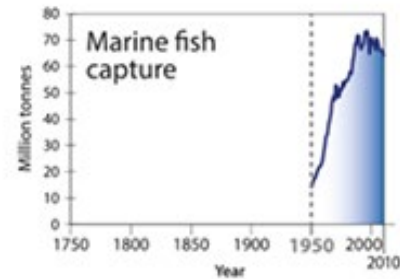
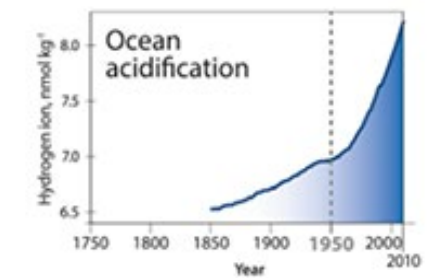
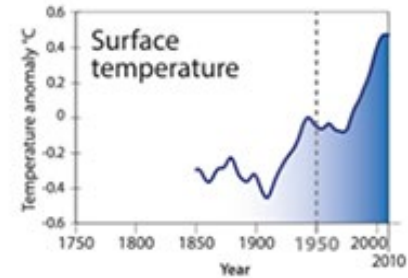
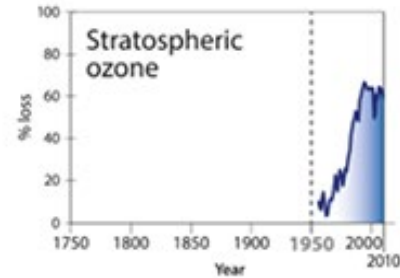
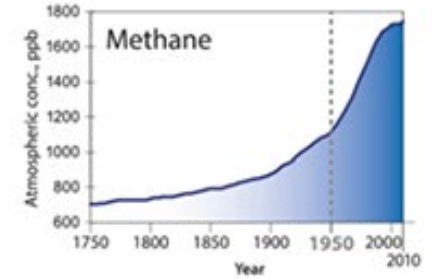
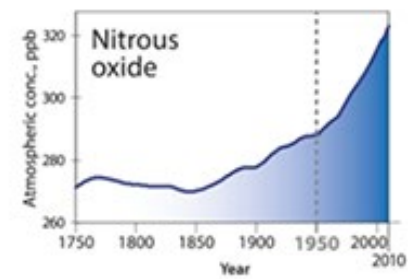
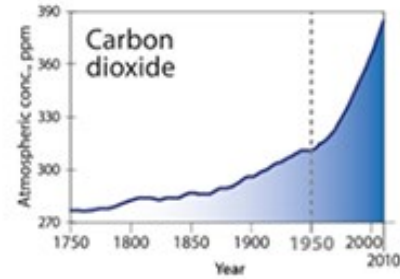




# Earth System Trends

A series of graphs show how earth system trends have evolved over the years. All the graphs show a significant increase since 1950. The trends listed are:

- Carbon Dioxide
- Nitrous Oxide
- Methane
- Stratospheric Ozone
- Surface temperature
- Ocean acidification
- Marine fish capture
- Shrimp aquaculture
- Nitrogen to coastal zone
- Tropical forest loss
- Domesticated land
- Terrestrial biosphere degradation





## VUCA world examples

The Great Acceleration has resulted in a world that is more **volatile, uncertain, complex** and **ambiguous** (VUCA). Many of these trends have been apparent since the Industrial Revolution in the 1750s but they have accelerated in the last 60 years.

Examples of the VUCA world include:

- Greenhouse Gas levels are rising
- Ecosystems are degrading
- Inequality is rising
- Resources are depleting
- Food, water and energy demands are growing

## The 4<sup>th</sup> Industrial Revolution

Globally, we are in the midst of the 4<sup>th</sup> Industrial Revolution, marked by the fusion of new technologies in the digital and biological spheres.

The 4<sup>th</sup> Industrial Revolution will create new standards and shape the economic system as we adopt new business models, revise regulations, and navigate the changing context.

### What are the consequences of the 4<sup>th</sup> Industrial Revolution?

Up to 7.1 million jobs could be lost globally, with the greatest loss in white collar and administrative jobs.

47% of executives anticipate an Artificial Intelligence board of directors by 2025.

By 2022, 54% of all employees globally will require significant re/up skilling. Not having the right skills reduces people's earning potential and increases their vulnerability to societal shocks.

## Globalisation

We live in a global society. Individuals, businesses and supply chains now operate regularly across national boundaries.

This increase in global connectivity results in complex and sometimes vulnerable supply chains that can present a new generation of risks and opportunities. From natural disasters to geopolitical upheavals, understanding the exposure to changes around the world is vital to operating a business today.

### What are the consequences of globalisation?

Over a billion people have been lifted out of poverty because of globalisation.

Complex supply chains result in avoidable environmental impacts in developing countries with cheaper labour and resources.

Trade between countries accounted for about 60% of global GDP, but the rise of protectionist policies and the impact of COVID-19 may affect this in the future.

## Urbanisation

Cities around the world are growing rapidly. By 2050, an additional 2.5 billion people will live in urban areas.

For many their homes will be 'informal settlements' on the outskirts of cities. In many cases, residents will lack access to basic sanitation, drinking water or transportation.

For others, cities will be enabled by technology and become smarter. This could enable better lifestyles, but it will require good urban infrastructure to maintain social stability and promote economic growth.

### What are the consequences of urbanisation?

Over half of the global population live in cities today (54%). Urbanisation presents new opportunities for infrastructure and the built environment, but also challenges such as sourcing food, controlling pandemics and the impacts of flooding.

The number of people living in 'informal settlements' often without basic sanitation, has increased by a third since 1990.

40% of the world's urban expansion is taking place in 'informal settlements' increasing socio-economic inequalities and potentially the spread of disease.

The impacts of Covid-19 are likely to affect these urbanisation trends, but will these be evenly distributed around the world?

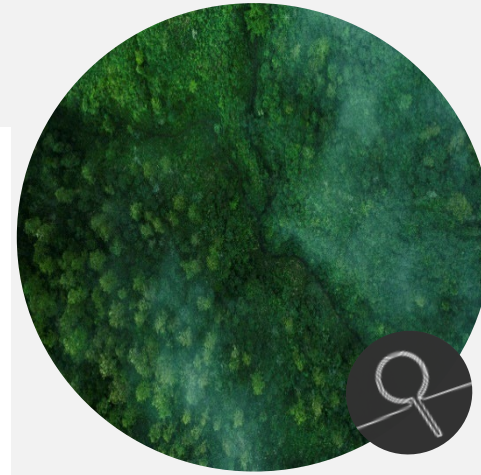
## The Limits of Climate Change

The consequences of Climate Change will affect all businesses, societies and communities, regardless of where they are located. The current rate of greenhouse gas emissions will result in a warmer world by 2100, one which will be totally different from any time previously.

- Ability to produce food and the frequency of natural disasters will be reduced.
- The UN Intergovernmental Panel on Climate Change (IPCC) have identified the leading risks referred to as the climate emergency, 2 °C and ideally, no more than 1.5 °C above pre-industrial levels (1750s). This goal was adopted by the world's Governments in the Paris Climate Agreement in 2015.
- Mainstreaming sustainable climate will require considerable investment and will be a major challenge for most countries and across the economy.
- The mass displacement of people. More than 140 million people are likely to be displaced between now and 2050.

## Additional information

You can find out more about net zero in this YouTube video provided by the [World Resources Institute](#)



The climate emergency



Implications of Climate Change



The transition required



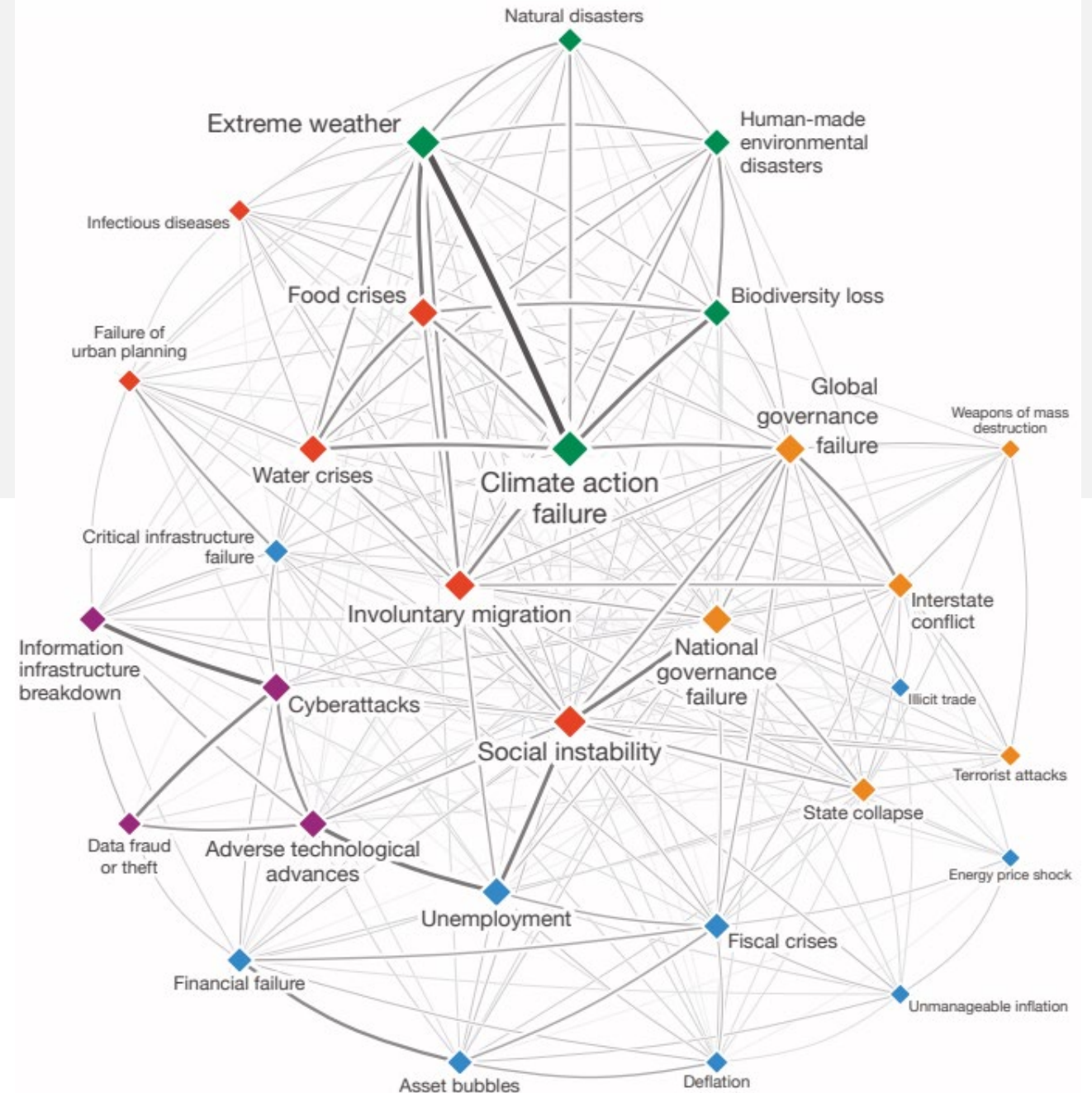
Emerging responses

## Interconnected Risks

Many of the megatrends and associated risks do not exist alone but are interconnected. Each year, the World Economic Forum provides a definitive guide to risks affecting businesses. A key graphic from the 2020 report (produced before the pandemic) highlights the likelihood and impact of risks.

Recognising this type of interconnection is increasingly important to understanding the consequences of decisions. For instance, support for a 4<sup>th</sup> Industrial Revolution may increase the need for cybersecurity services but lead to unemployment and the destabilising of societies.

The pathway to a sustainable economy will require a just transition; one which treats workers fairly, recognises community health and creates a pathway to enable all people to live sustainable lifestyles by 2050. To get this right we all need to understand the unintended consequences of our actions, and the connections between social, environmental and economic issues.





# Learning Outcomes

Our lives and our economies are being affected by an unprecedented level of change. The world is more volatile and complex than ever before, and interconnected megatrends like climate change and the 4<sup>th</sup> Industrial Revolution are just a few factors impacting the environment and society.

This is the end of module one, you should have;

- Increased your knowledge on sustainability
- Developed a wider awareness on climate change and megatrends facing the world
- Gained an insight into the global frameworks for change.



Thank you