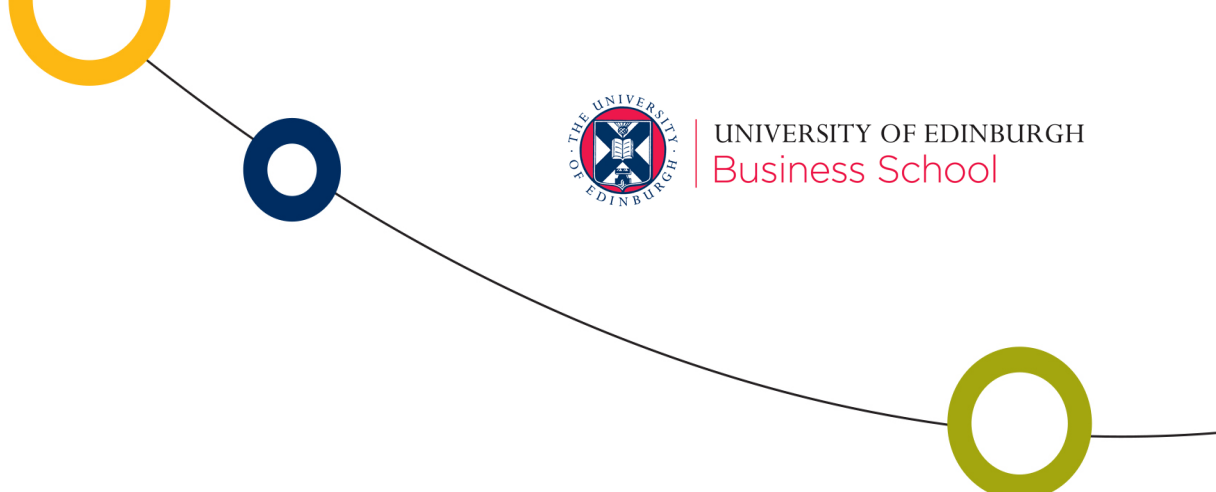




**B-CCaS**

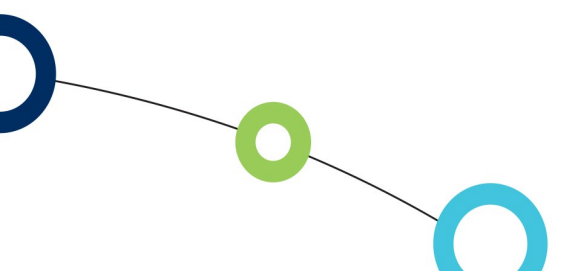
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# CASH AND PAYMENTS CONFERENCE

## YOUR JOURNEY TO CLIMATE ACTION

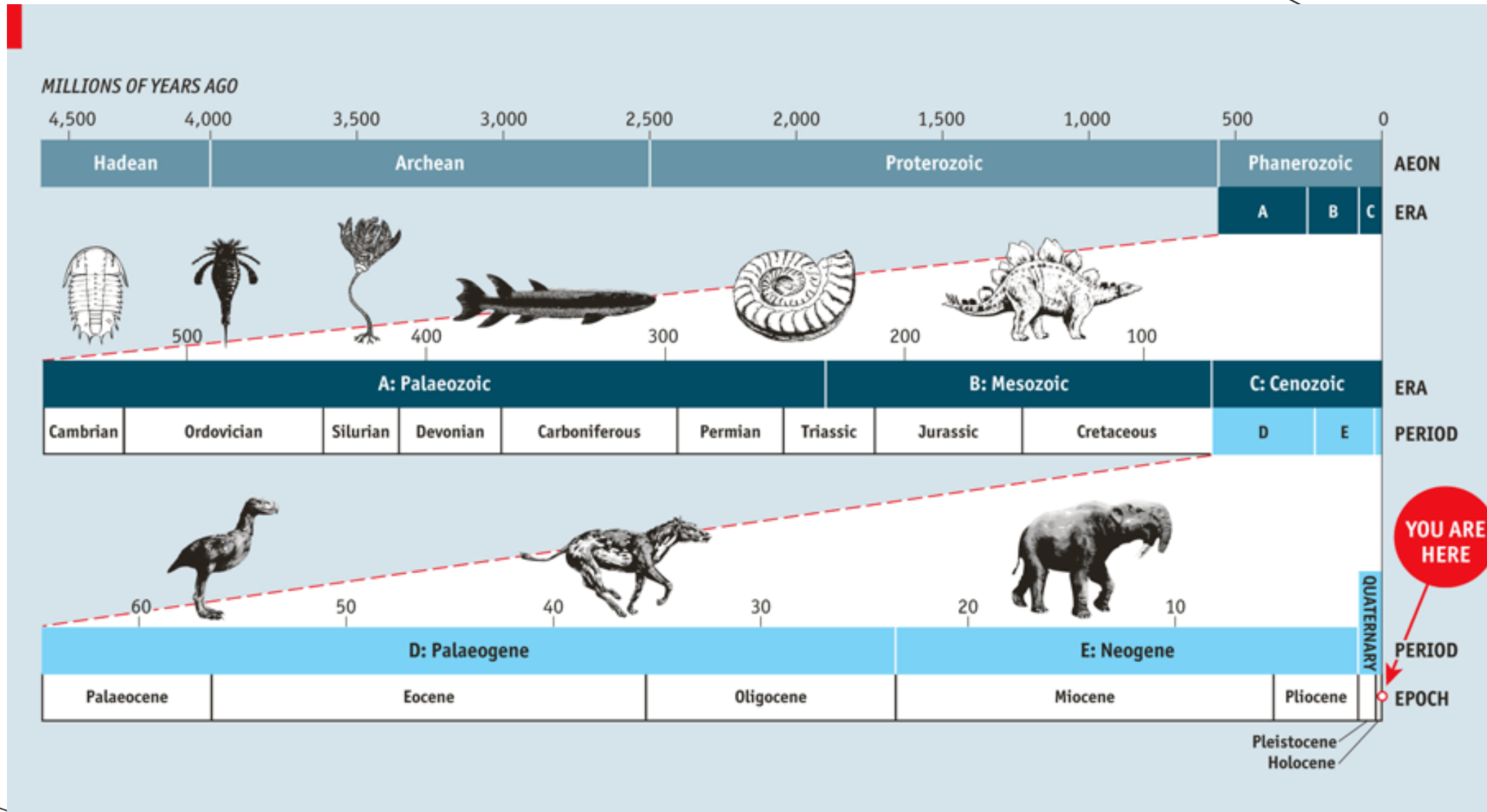


Dr Sarah Birrell Ivory  
Director, B-CCaS  
e: [sarah.ivory@ed.ac.uk](mailto:sarah.ivory@ed.ac.uk)  
Twitter: @drsarahivory  
Linked In: Sarah Ivory

# The start of the Anthropocene?



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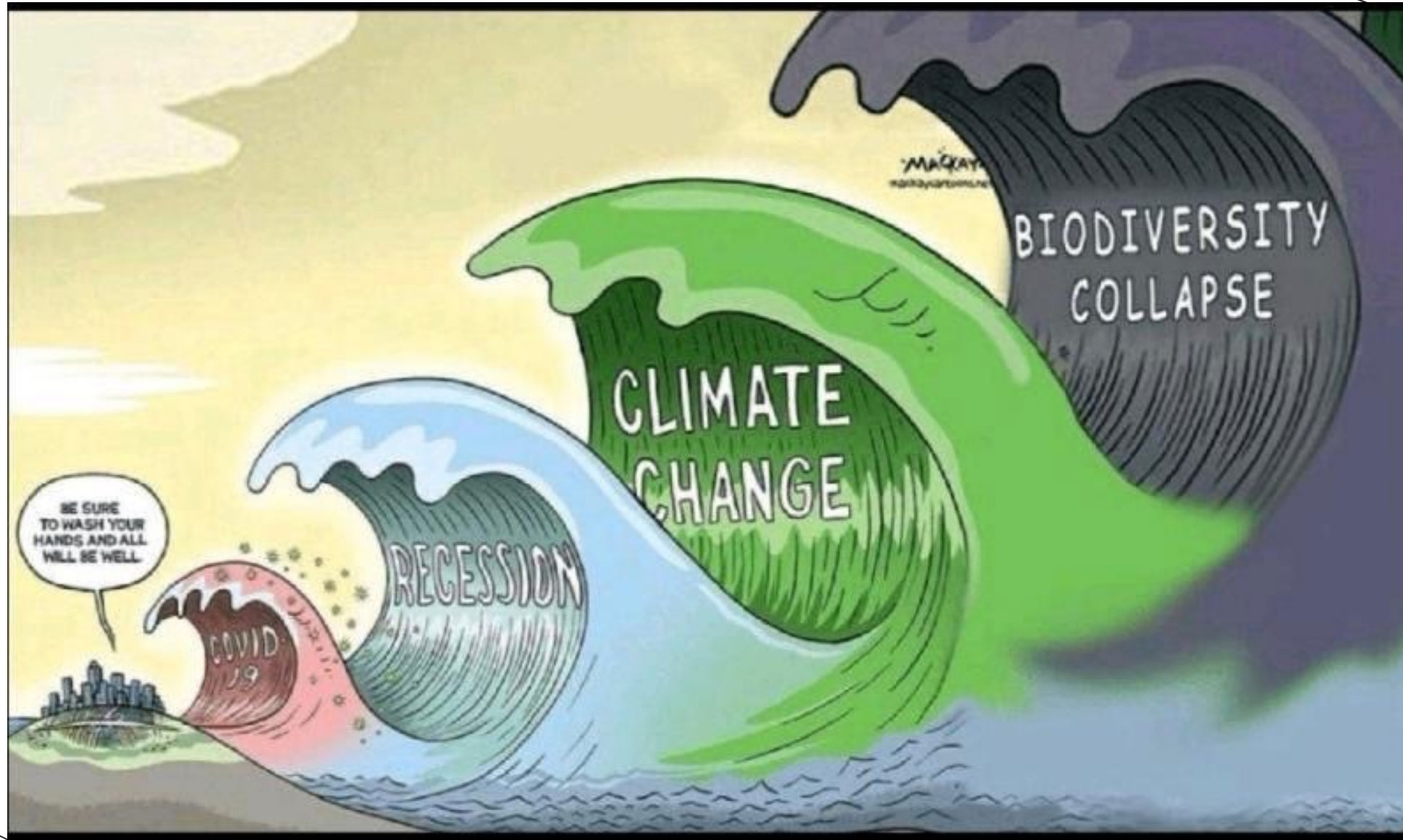
# SUSTAINABLE DEVELOPMENT GOALS



# OUR FUTURE



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# CLIMATE STRIPES AND FUTURE SCENARIOS



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Prof Ed Hawkins: "Choose your climate future..."

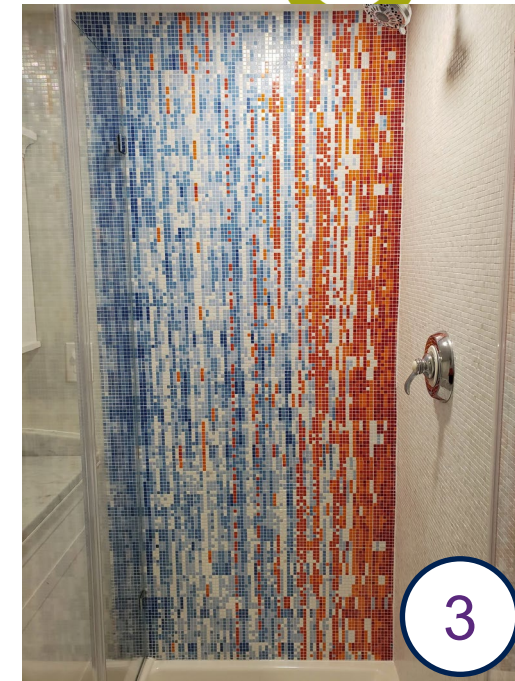
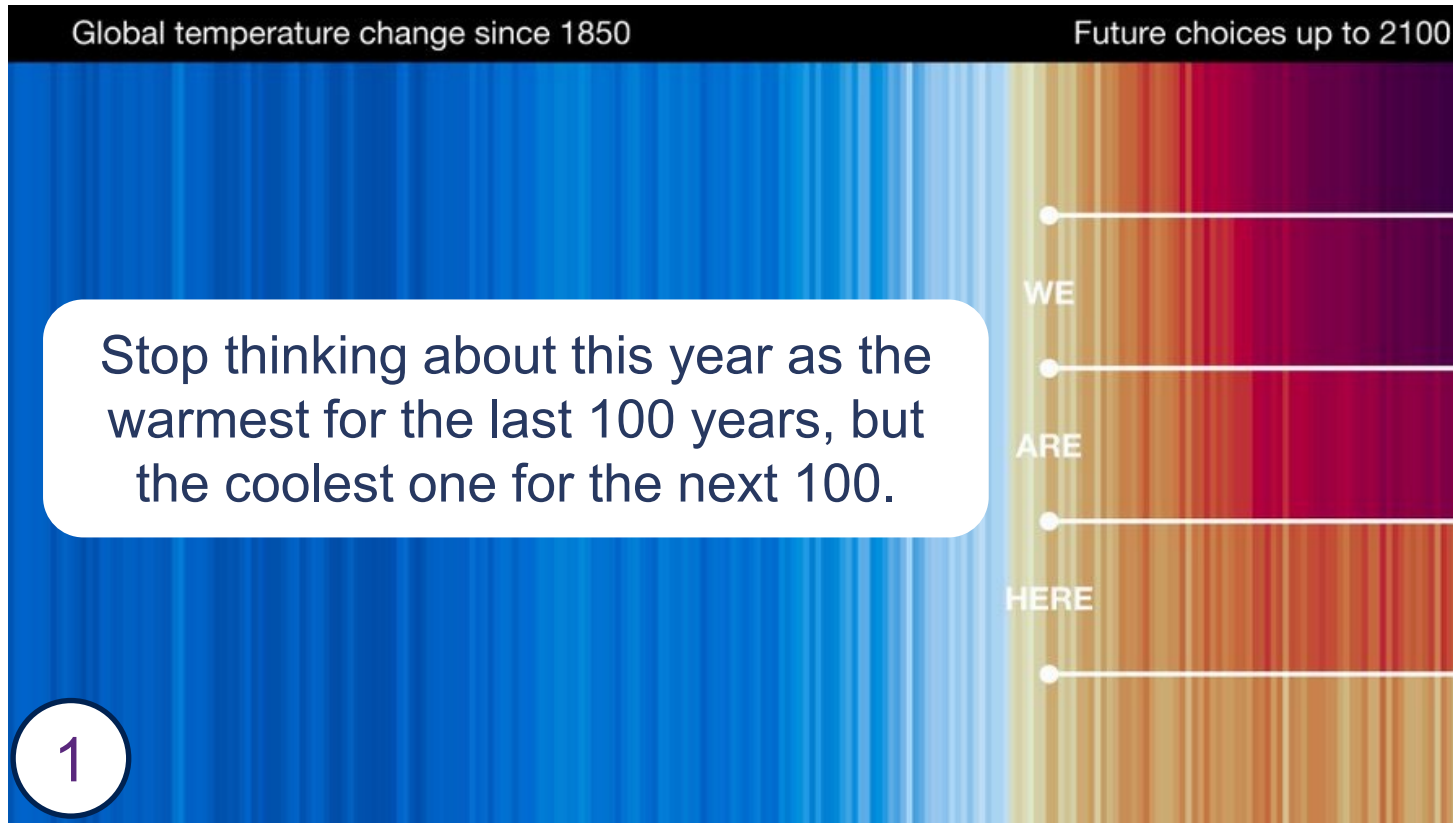


Image Credits:

1. [Climate Stripes](#)
2. [Economist](#)
3. [Car](#)
4. [Reading F.C.](#)
5. [Shower](#)

# THREE WAYS TO CHANGE THE CLIMATE



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1. **Solar Energy Influx:** the change the energy input from the sun
2. **Albedo Effect:** the change the amount of solar energy reflected
3. **Greenhouse Effect:** the change in the amount of heat absorbed by the atmosphere

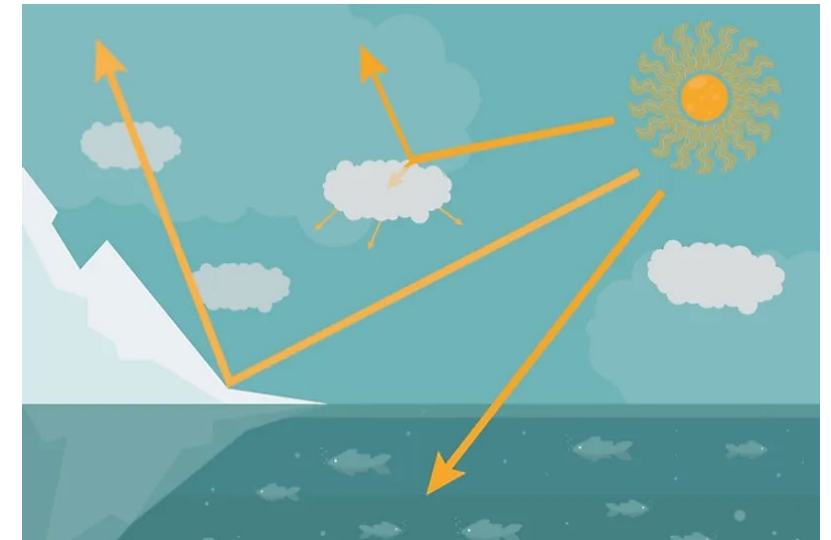
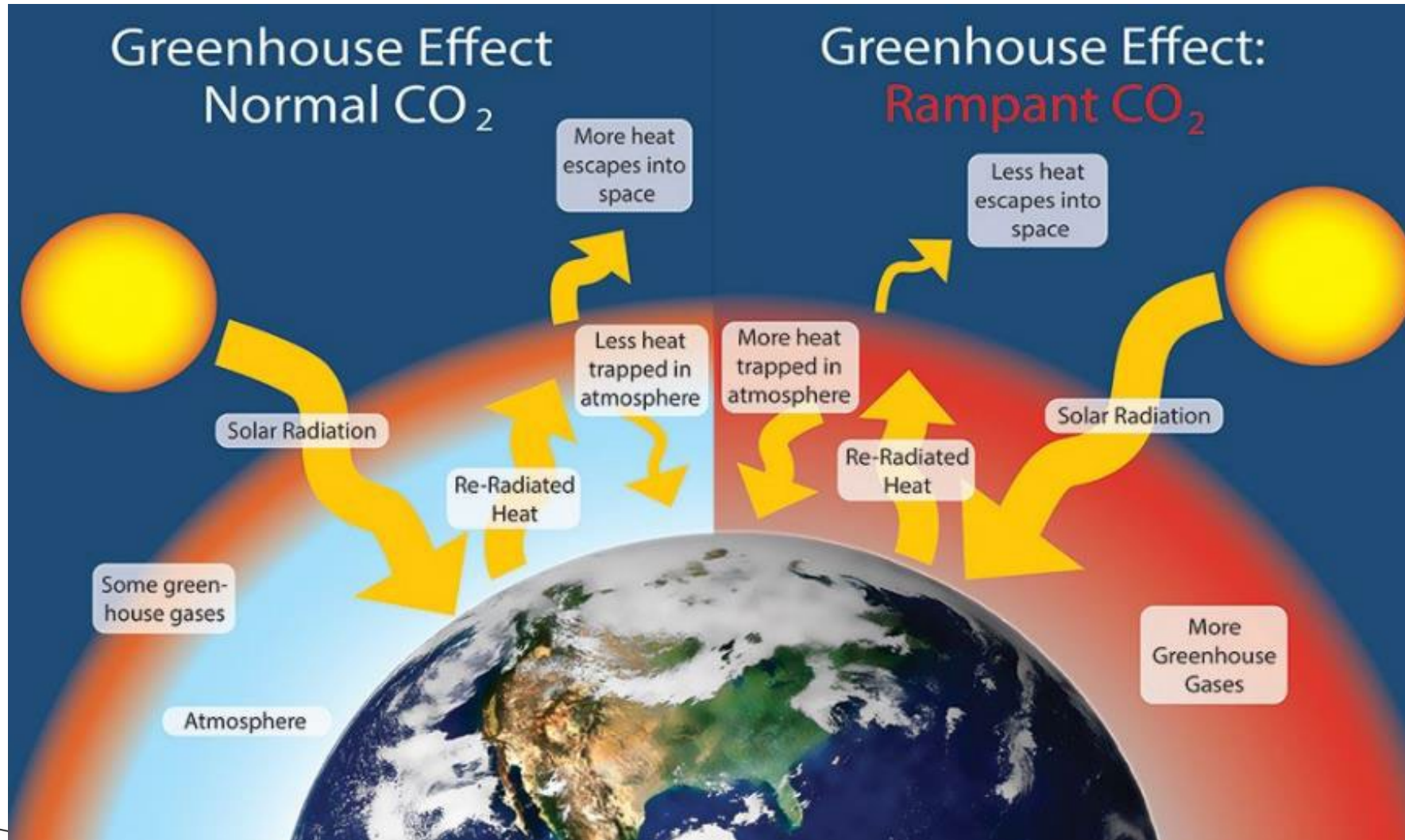


Image credit: [World Atlas](#)

# GREENHOUSE EFFECT



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**Without the  
greenhouse effect,  
Earth would have -  
18°C  
average temperature.**

# IMPORTANCE OF 1.5°

We have already warmed 1.2°



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## Big emissions cuts still needed to limit warming to 1.5C

Projected greenhouse gas emissions in 2030, gigatonnes

Pledges  
before COP26

52.4 Gt

Pledges  
at COP26  
get us to this

41.9 Gt

But we're a long  
way from where we  
need to be in 2030

26.6 Gt

Source: Energy Transitions Commission

BBC

Sources:

1. [BBC](#)

2. [Global Warming of 1.5°](#)

# THEN AND NOW...



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## Antonio Guterres, COP26 closing statement, 2021:

“Our fragile planet is hanging by a thread ... It is time to go into emergency mode — or our chance of reaching net zero will itself be zero.”

## Antonio Guterres, COP27 opening statement, 2022:

““We are in the fight of our lives and we are losing ... And our planet is fast approaching tipping points that will make climate chaos irreversible. We are on a highway to climate hell with our foot on the accelerator.”

Sources:

1. [Quote source](#),
2. [Quote source](#)
3. [Image credit](#)

# PHYSICAL AND TRANSITION IMPACTS



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## Physical Impacts

### Chronic Hazards

- Sea Rise Level
- Temperature Patterns
- Drought

### Acute Hazards

- Precipitation/ Flooding
- Extreme Wind
- Cyclone

## Transition Impacts

- Policy and Legal
- Technology
- Reputation
- Market

## Potential Financial Impacts

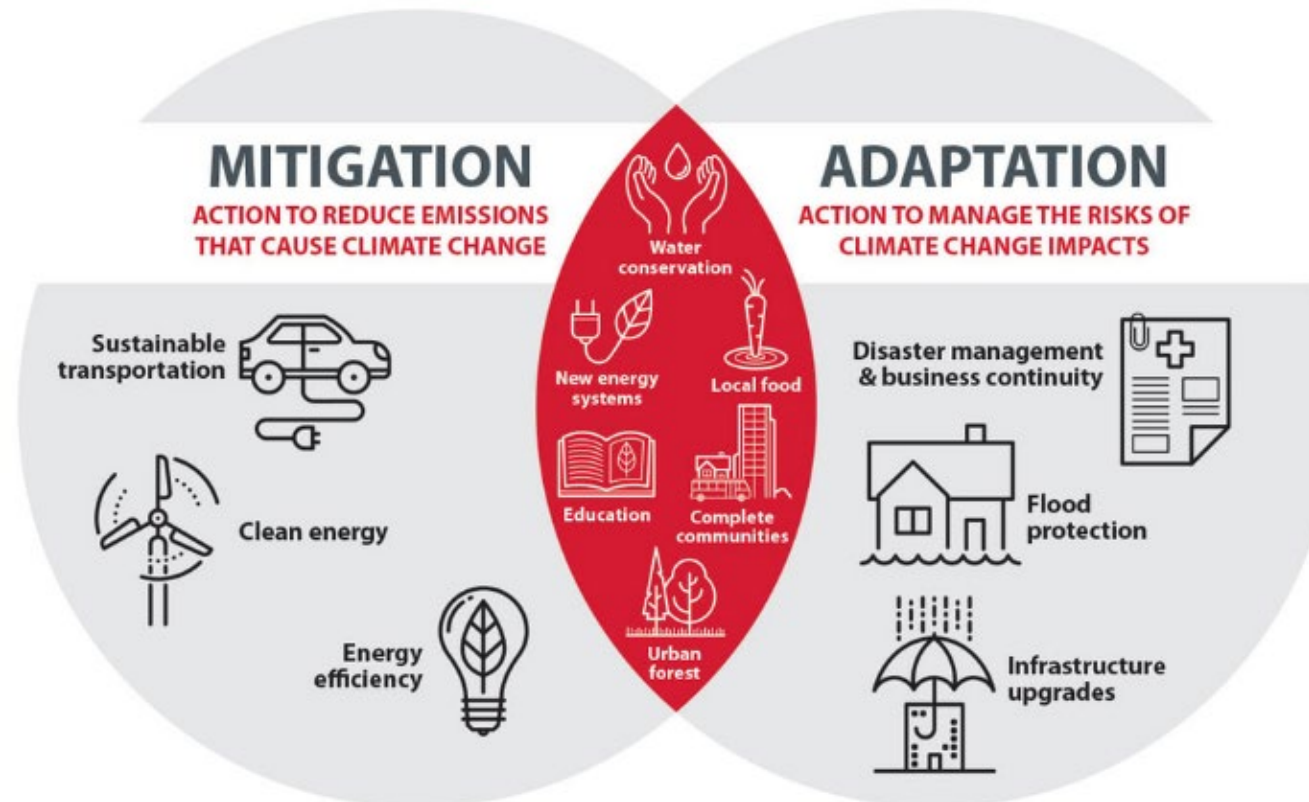
- Physical damage to assets and rising insurance costs
- Supply chain disruptions
- Changes in resource/input prices
- Production/operation disruptions (e.g. power, transport, worker availability)
- Changes in demand for products/services

# CATEGORISING ACTION

**Mitigation:** reduce emissions or enhance sinks of GHGs, to limit future climate change.

**Adaptation:** adjust to actual or expected climate changes to lessen or avoid harm or exploit beneficial opportunities.

## Building Climate Resilience



Which is  
more  
important?

# EMERGING ISSUES

## Just Transition



Commissioned by  
UK Finance, 2020



Just Transition Commission,  
Scotland, 2022

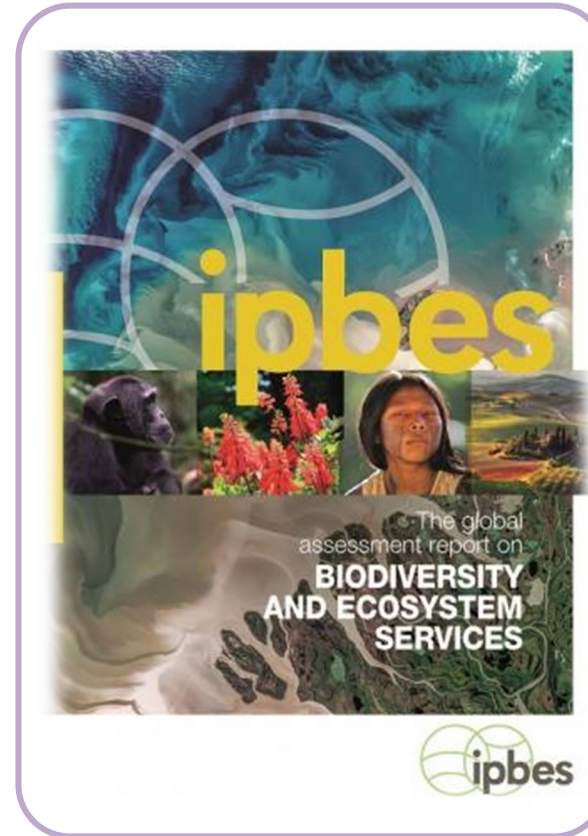
Sources:

1. [Financing climate action with positive social impact](#)
2. [Making the Future Report](#)



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## Nature and Biodiversity



Intergovernmental Science-Policy  
Platform on Biodiversity and  
Ecosystem Services, 2019

Sources:

1. [Biodiversity and Ecosystem Services Assessment Report](#)
2. [Nature in Scope Report](#)



Taskforce on Nature Related  
Financial Disclosure, 2021

# SCALE OF EMISSIONS

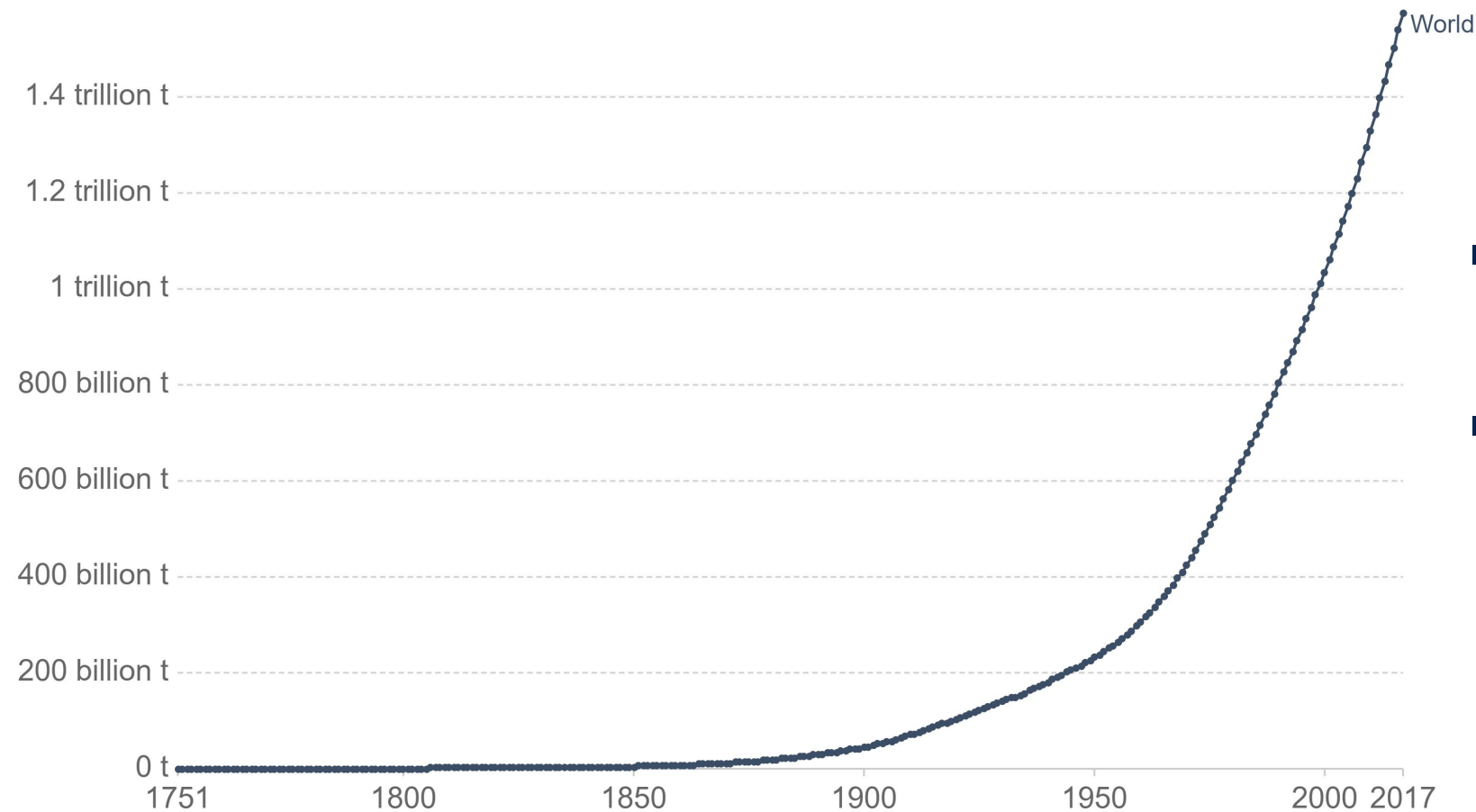


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Our World  
in Data

## Cumulative CO<sub>2</sub> emissions

Cumulative carbon dioxide (CO<sub>2</sub>) emissions represents the total sum of CO<sub>2</sub> emissions produced from fossil fuels and cement since 1751, and is measured in tonnes. This measures CO<sub>2</sub> emissions from fossil fuels and cement production only – land use change is not included.



- We have doubled the cumulative atmospheric CO<sub>2</sub> since 1990.
- What if we had acted then?

Source: Global Carbon Project (GCP); Carbon Dioxide Information Analysis Centre (CDIAC)  
[OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/](https://OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/) • CC BY



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# TOOLBOX FOR ACTION

# SCALING CLIMATE CHANGE STRATEGY

Two key words: Of and On

## Impact OF Climate Change... ON the Business



## Impact OF the Business... ON Climate Change



### How does this framing help?

- Frames analysis
- Drives conversations
- Clarifies positions
- Determines actions
- Facilitates influence
- Cope with complexity

# Of/On Climate Change Framework

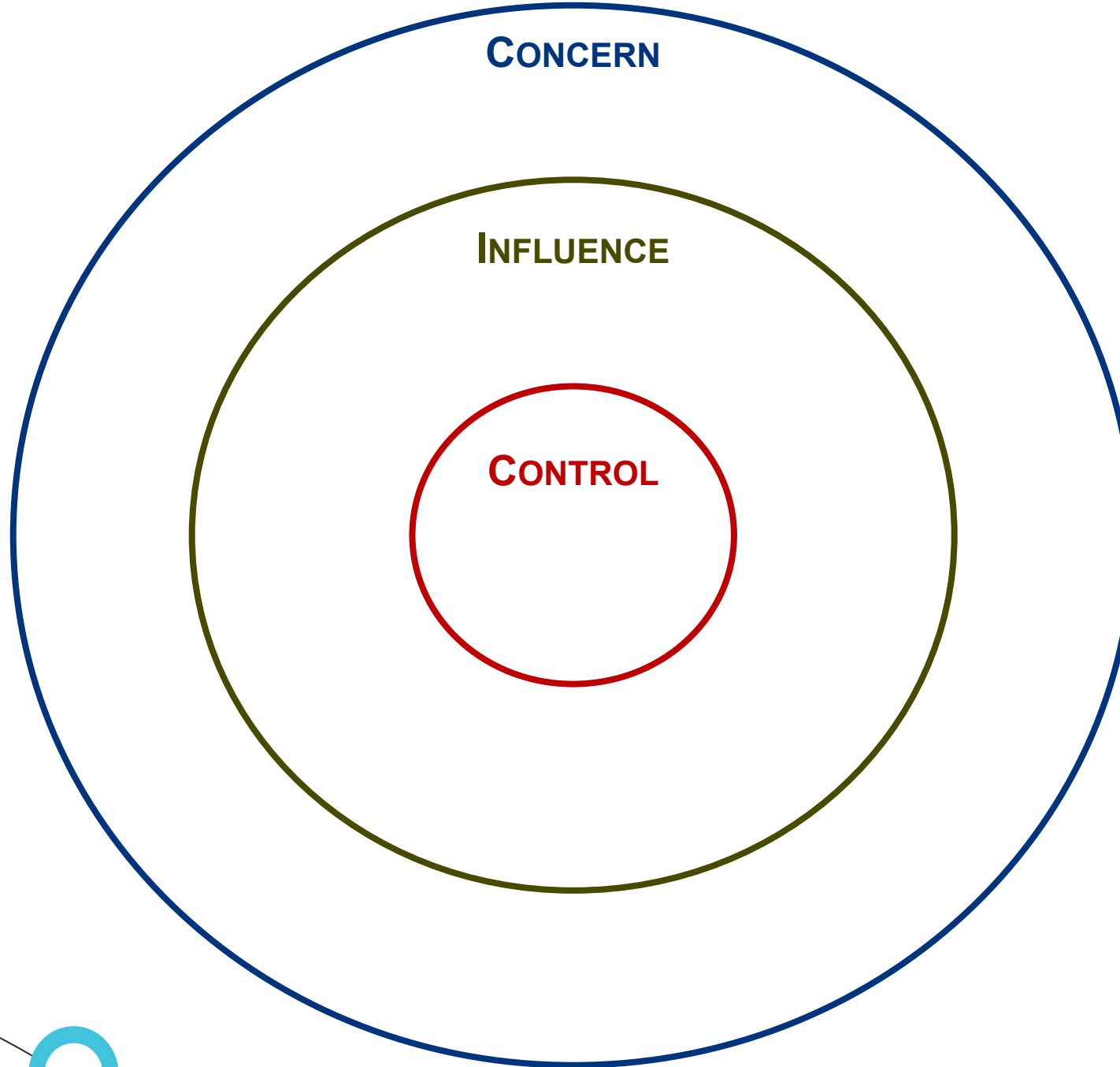
| Impact ...                           | Negative | Positive    |
|--------------------------------------|----------|-------------|
| Impact of Climate Change on Business | RISK     | OPPORTUNITY |

|                                      |                        |                           |
|--------------------------------------|------------------------|---------------------------|
| Impact of Business on Climate Change | CONTRIBUTION TO CRISIS | CONTRIBUTION TO SOLUTIONS |
|--------------------------------------|------------------------|---------------------------|

# SPHERES OF CONTROL AND INFLUENCE



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*Just because you can't do everything, doesn't mean you shouldn't do anything.*

*The person who says it cannot be done, should not interrupt the person doing it.*