

Social Responsibility and Sustainability

Responding To The Climate Crisis- Urgency, Embedding and Lessons Learned...

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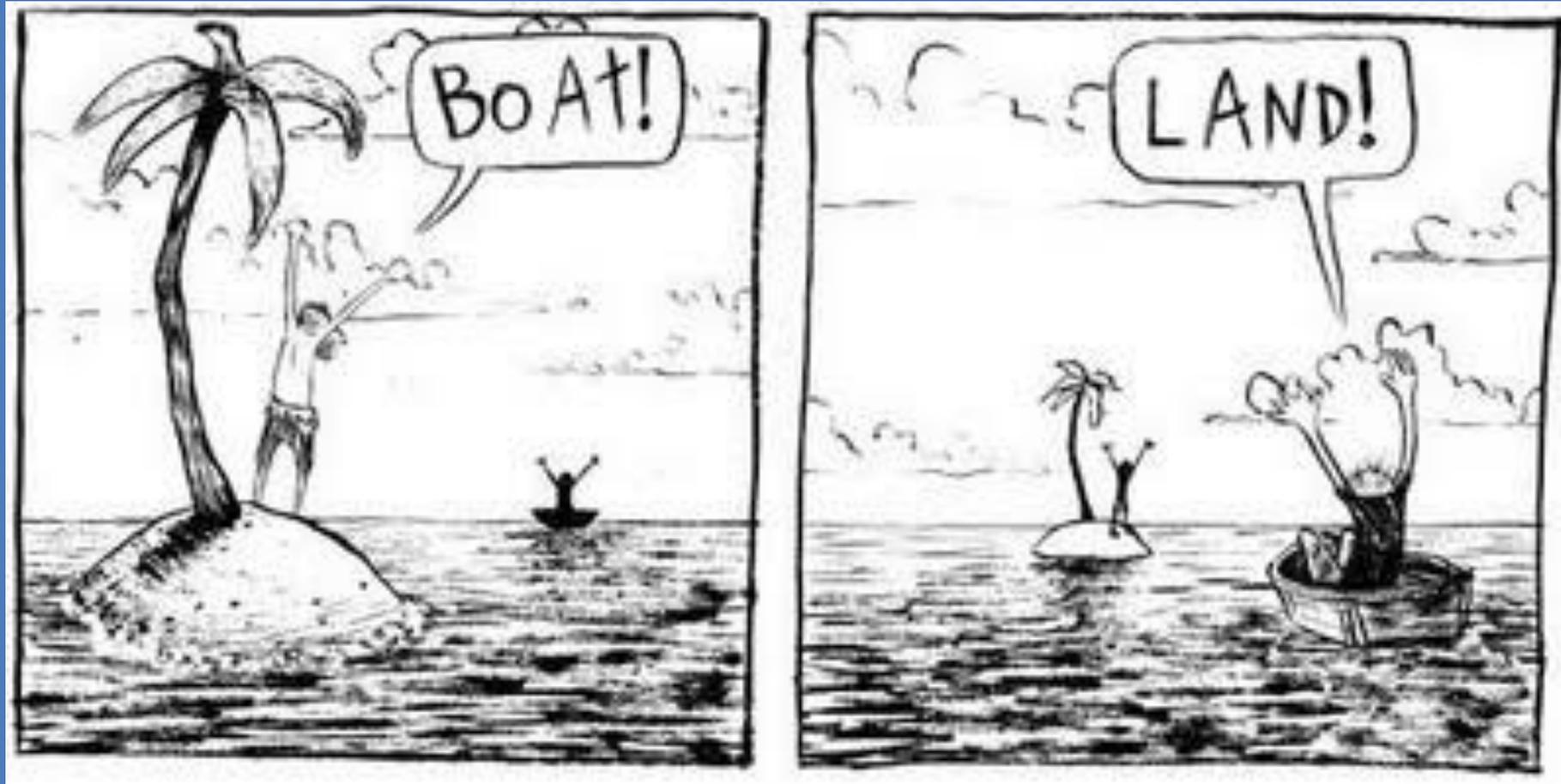
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Outline

- Some background on the science and why this really is an emergency
- Impacts (or why we should be concerned...)
- (Briefly) the Sustainable Development Goals and broader context
- The University of Edinburgh and our approach
- Leadership and Change Making for Adaptive Problems
- Questions..



Contrasting views



Australian fires...



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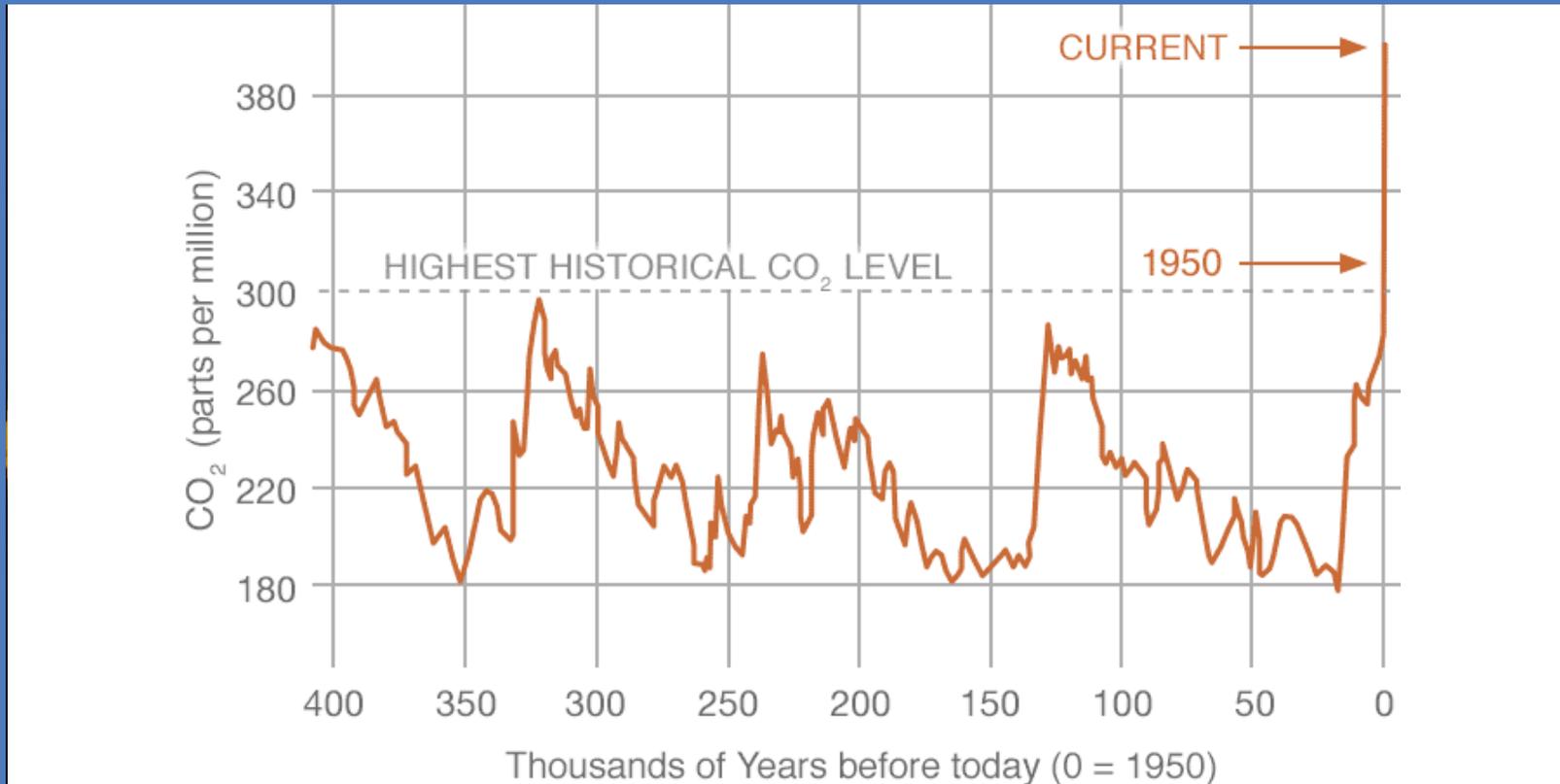
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‘Right now, we are facing a disaster of global scale. Our greatest threat in thousands of years. Climate change.’
– David Attenborough

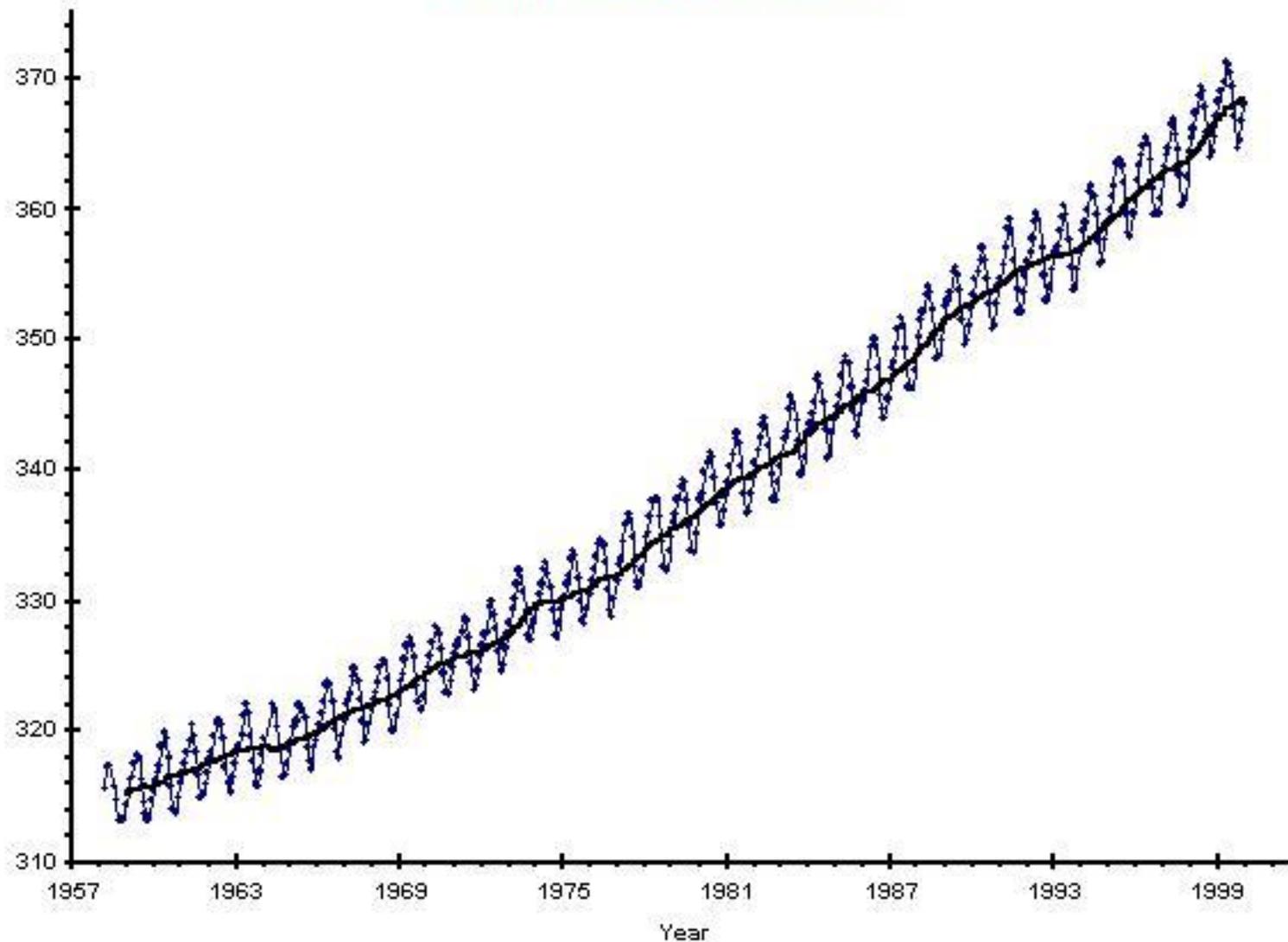


So What is it?

- ‘Weather’ is what its like outside today, tomorrow, next week, next month
- Climate is the long-term (~30 year) average
- Climate change is a significant shift in this long-term average
- Global climate change is a significant shift in the worldwide average



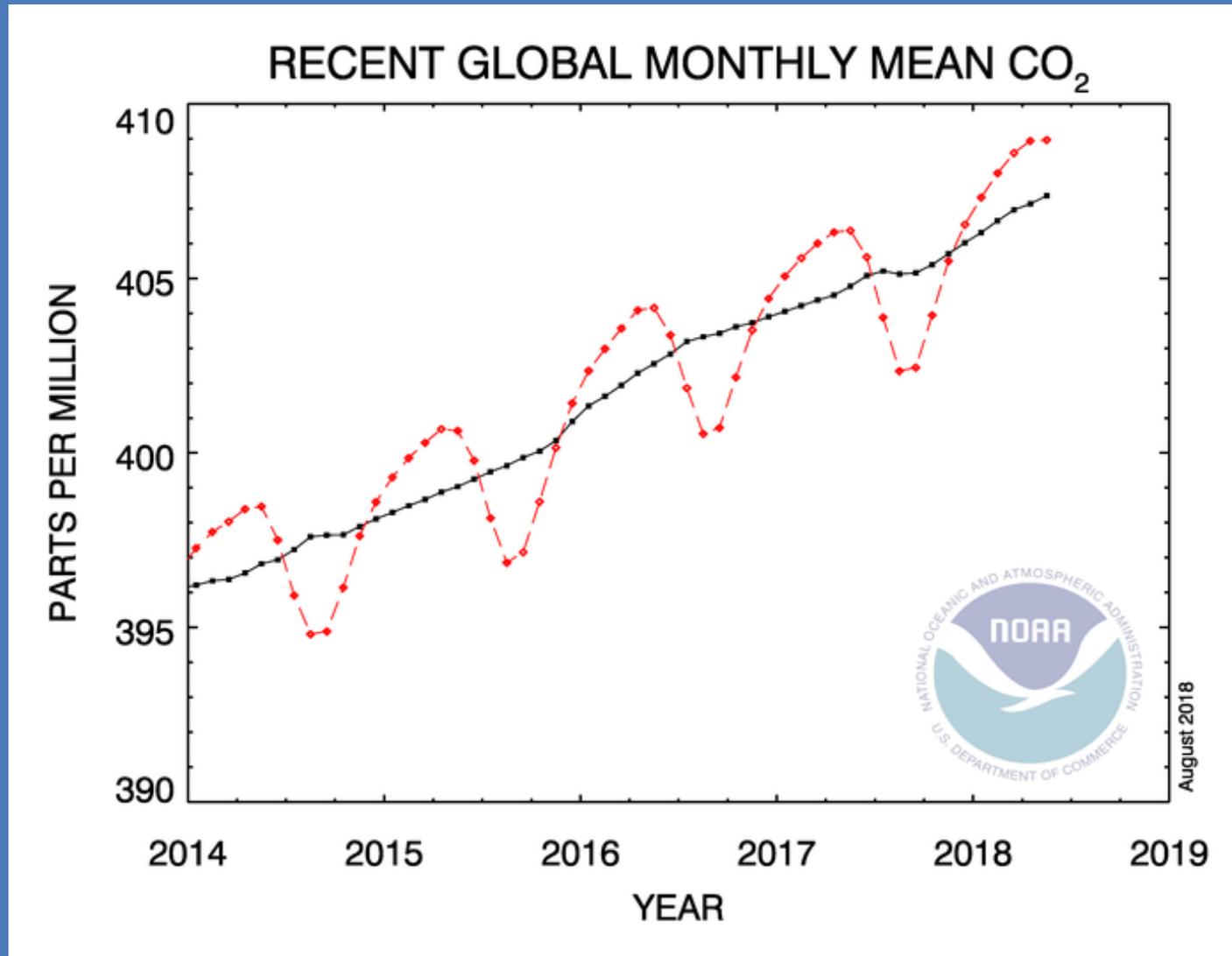
Mauna Loa Monthly Carbon Dioxide Record: Keeling Record 1958 - 1999



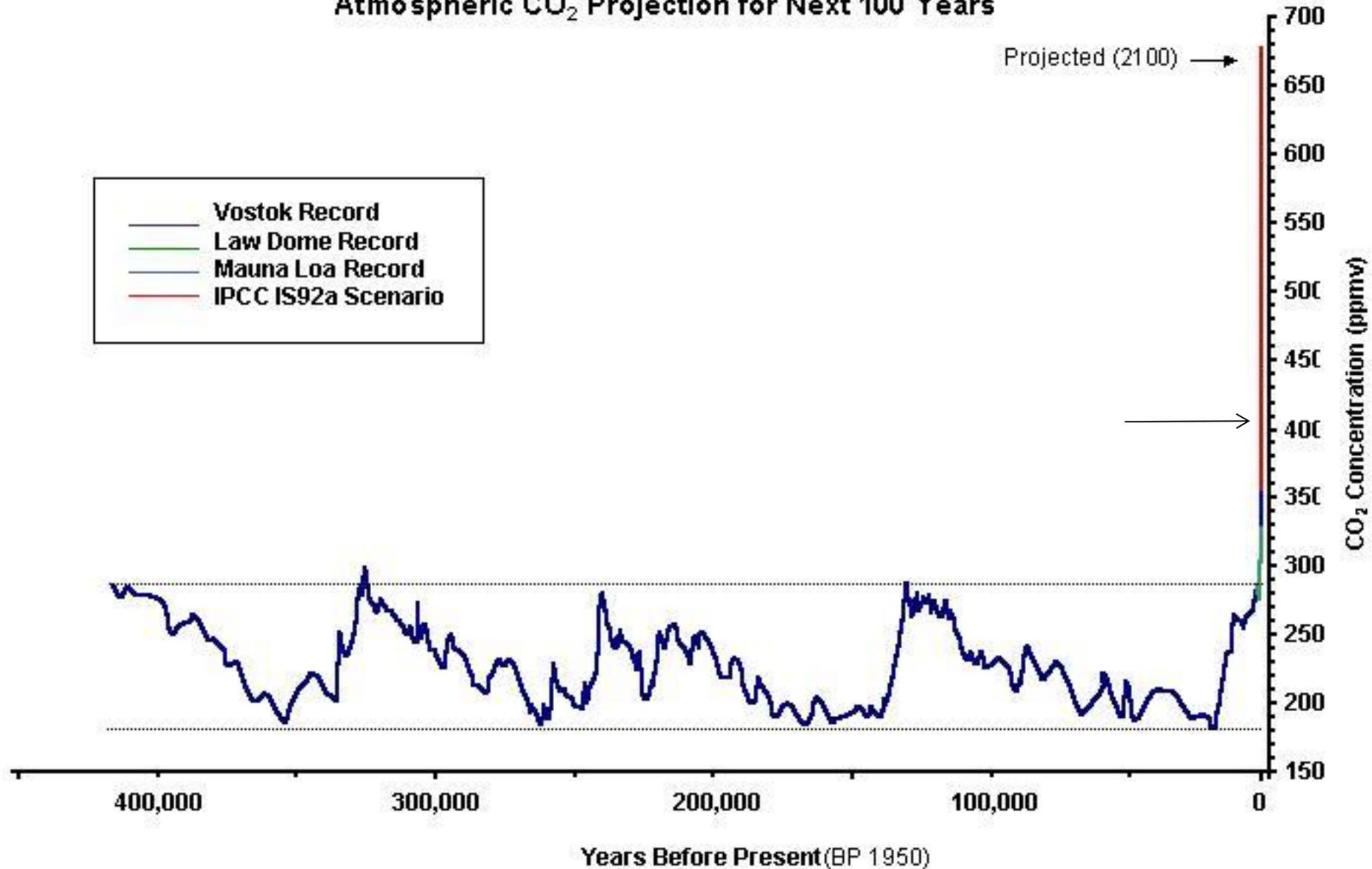
Source (with thanks from everyone): C.D. Keeling and T.P. Whorf



Mauna Loa, now Global



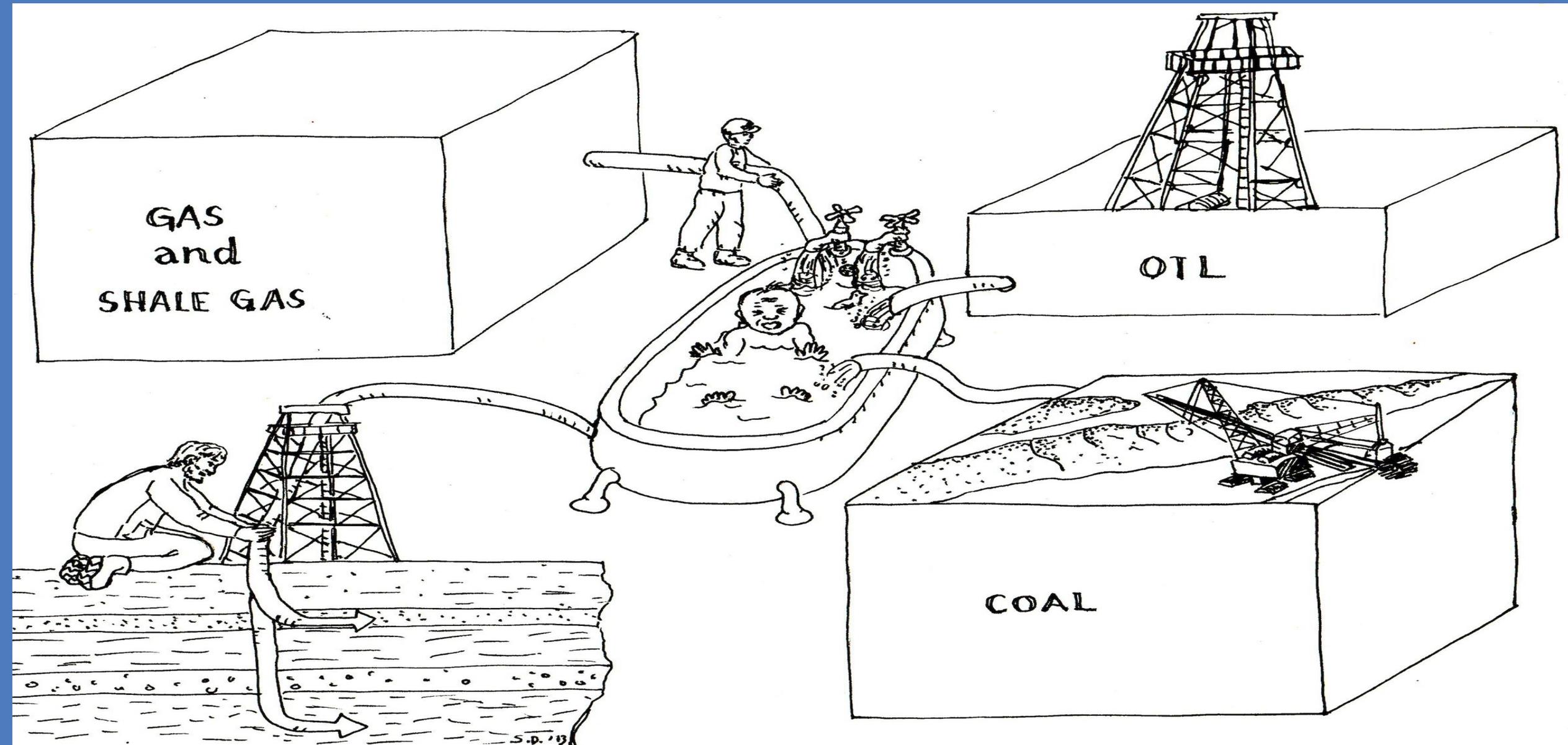
CO₂ Concentration in Ice Cores and Atmospheric CO₂ Projection for Next 100 Years



Source: C. D. Keeling and T. P. Whorf; Etheridge *et al.*; Barnola *et al.*; (PAGES / IGBP); IPCC



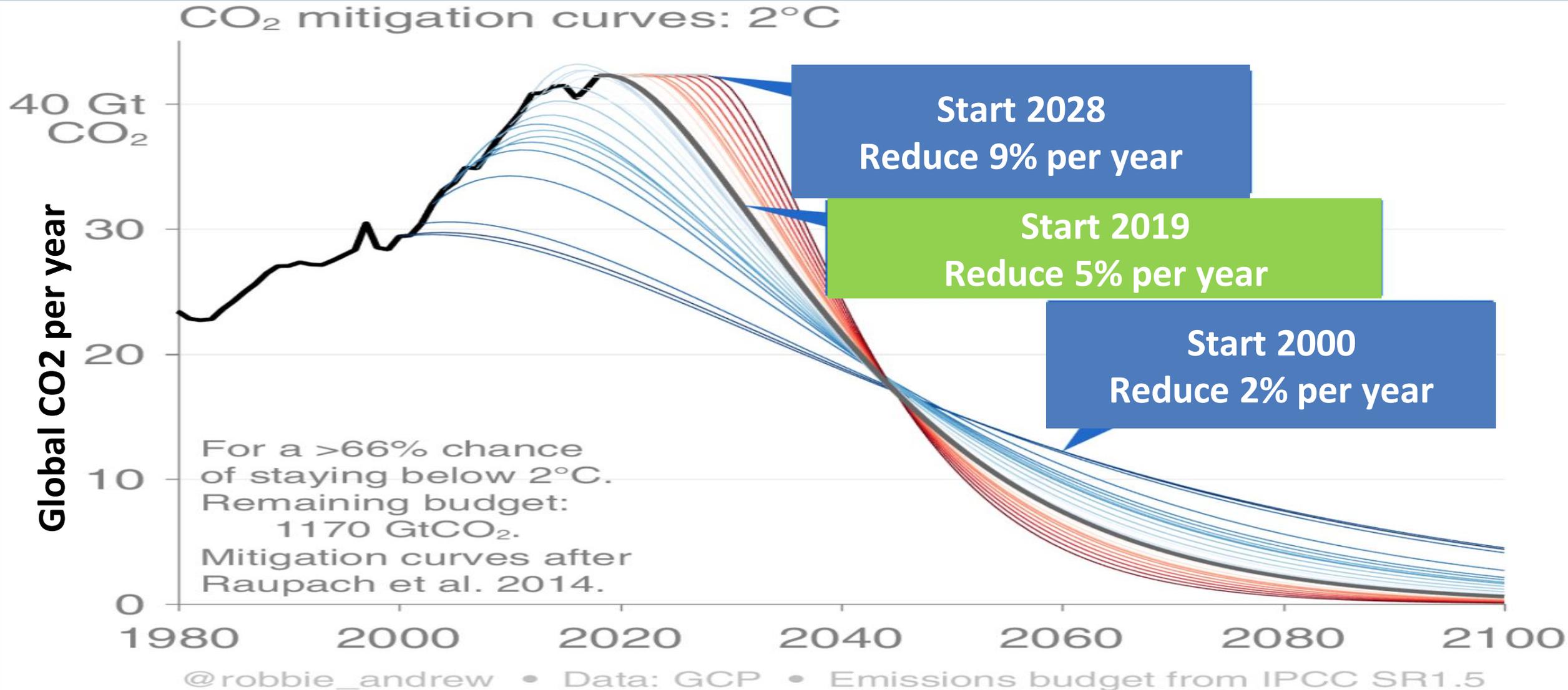
Carbon stock in the atmosphere



- <https://www.globalcarbonproject.org/carbonbudget/19/visualisations.htm>



Is a solution possible ?



'We are losing everything': Flooding in cyclone-hit Mozambique



Floodwaters triggered by Cyclone Kenneth's heavy rains rage in parts of Mozambique, causing homes to collapse.

28 Apr 2019



A woman crosses a flooded street in the aftermath of Cyclone Kenneth in Pemba [Mike Hutchings/Reuters]

California wildfires estimated to cost insurers up to \$13bn

FINANCIAL TIMES



The Camp Fire burns in the hills on November 10, 2018 near Oroville, California © Getty

Oliver Ralph NOVEMBER 19, 2018

The spate of wildfires burning across California will cost the insurance industry between \$9bn and \$13bn, according to new estimates from modelling firm RMS.

How one heatwave killed 'a third' of a bat species in Australia



By Frances Mao
BBC News, Sydney

15 January 2019

Share



Many spectacled flying foxes were found dead around Cairns, a city in Queensland

Over two days in November, record-breaking heat in Australia's north wiped out almost one-third of the nation's spectacled flying foxes, according to researchers.

The human, financial and ecological costs of the climate crisis are stacking up



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Climate change: Sir David Attenborough warns of 'catastrophe'

By Matt McGrath
Environment correspondent

18 April 2019



London climate change protests



Climate Change - The Facts is available to watch on BBC iPlayer

Sir David Attenborough has issued his strongest statement yet on the threat posed to the world by climate change.

15:56 23 Apr

'It's an existential crisis. Listen to scientists'



Climate change activist: 'Listen to climate scientists'

Teenage activist Greta Thunberg has an uncompromising message on climate change.

Support for Extinction Rebellion soars after Easter protests

The Guardian

Climate activists say pressure growing on politicians to act as donations flood in



▲ The Extinction Rebellion camp at Marble Arch in central London. Photograph: Ollie Millington/Getty

Support for **Extinction Rebellion** in the UK has quadrupled in the past nine days as public concern about the scale of the ecological crisis grows.

Awareness and visibility of environmental issues have never been higher



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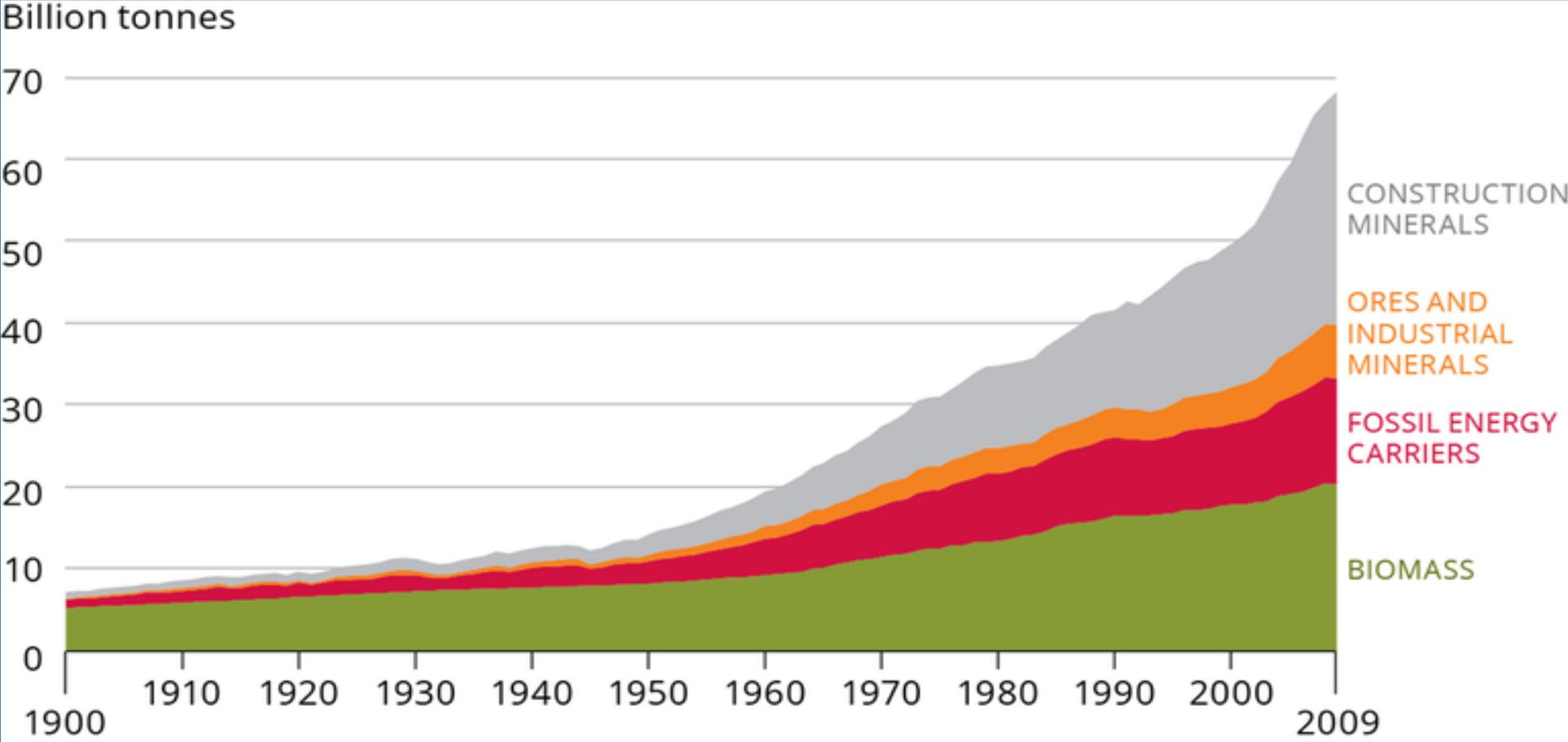


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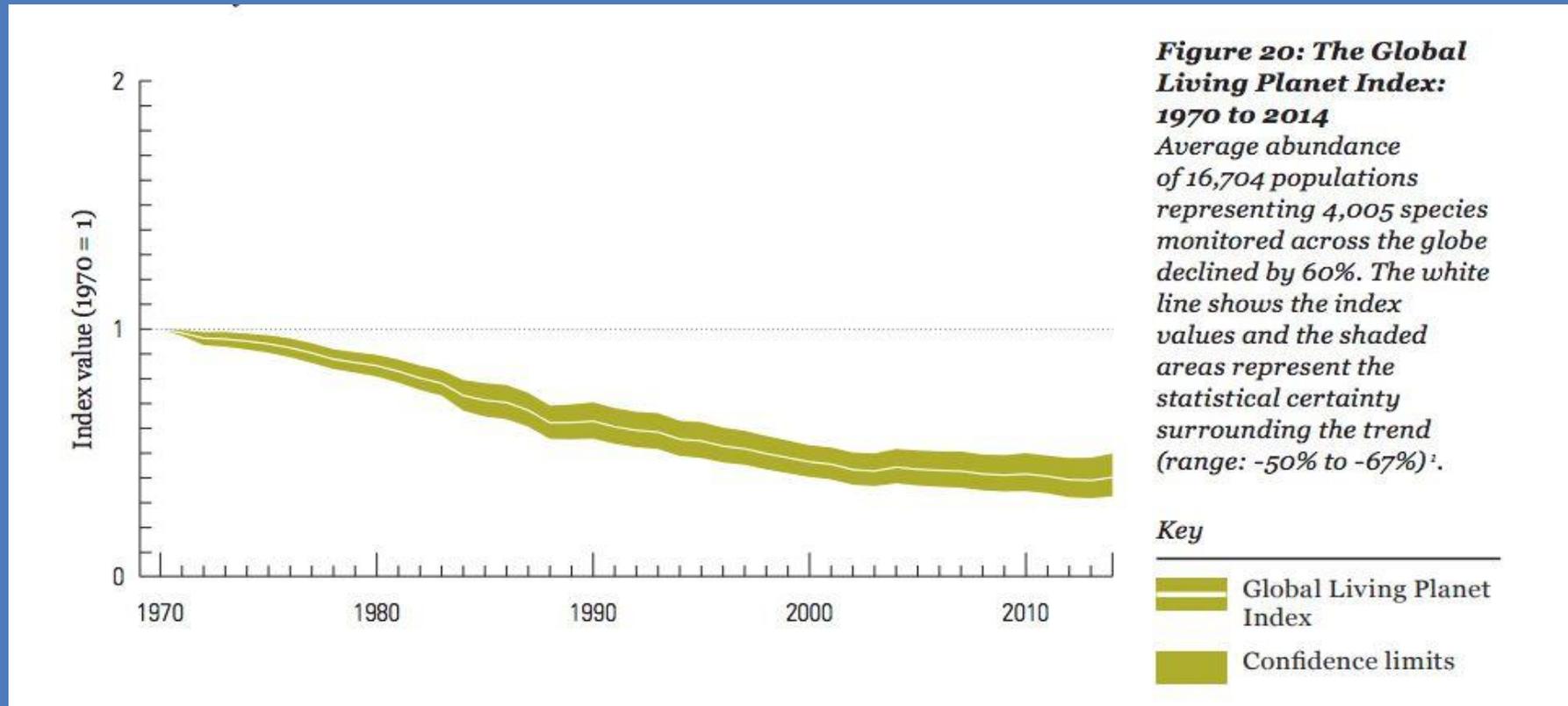


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Global Use of Resources...



Natural Index Keeps Going Down...



Ocean Plastic...

Plastic to outweigh fish in the oceans

2025
one ton of plastic
for every three tons of fish

2050
more plastic
than fish

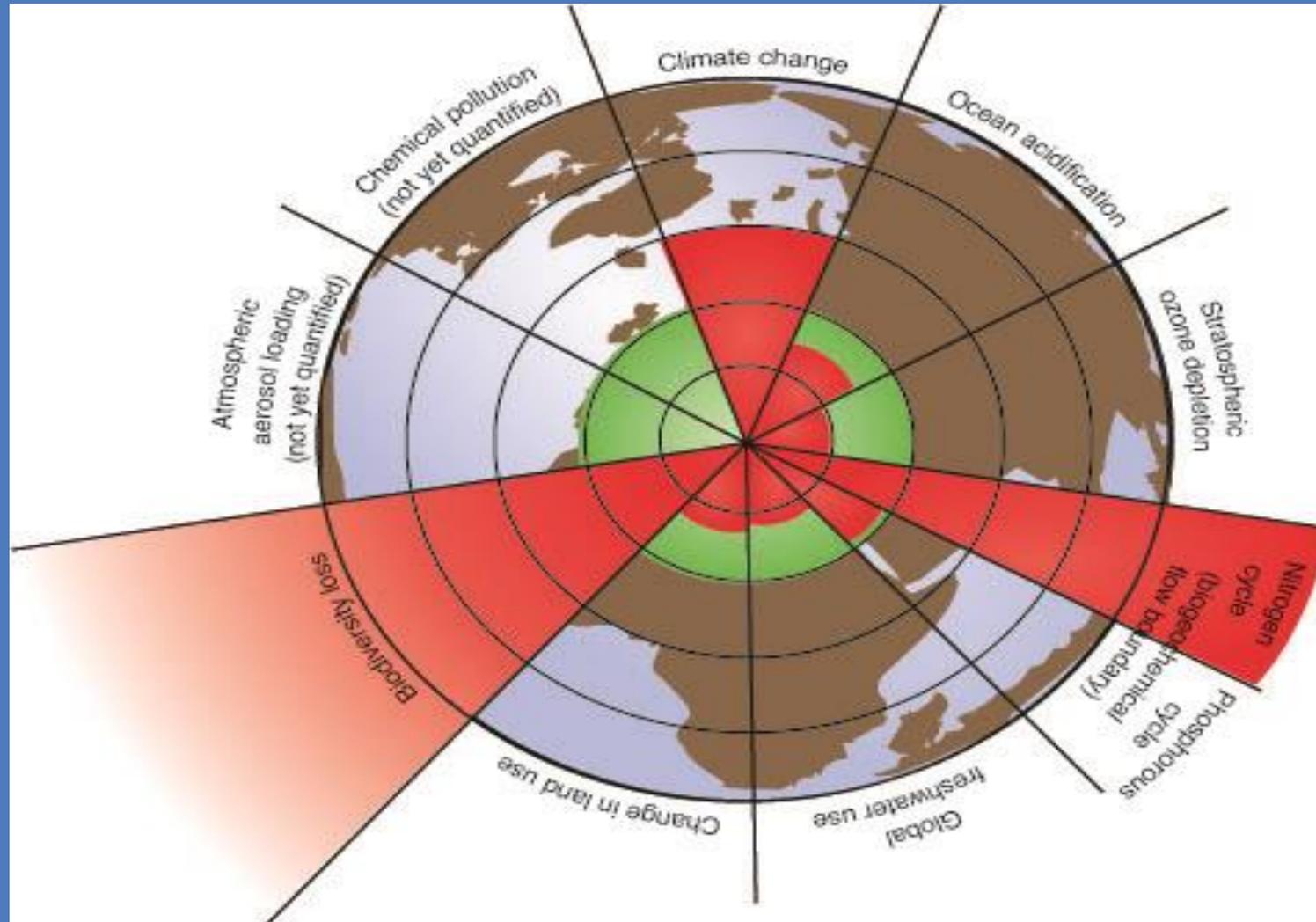


Source: Ellen MacArthur Foundation

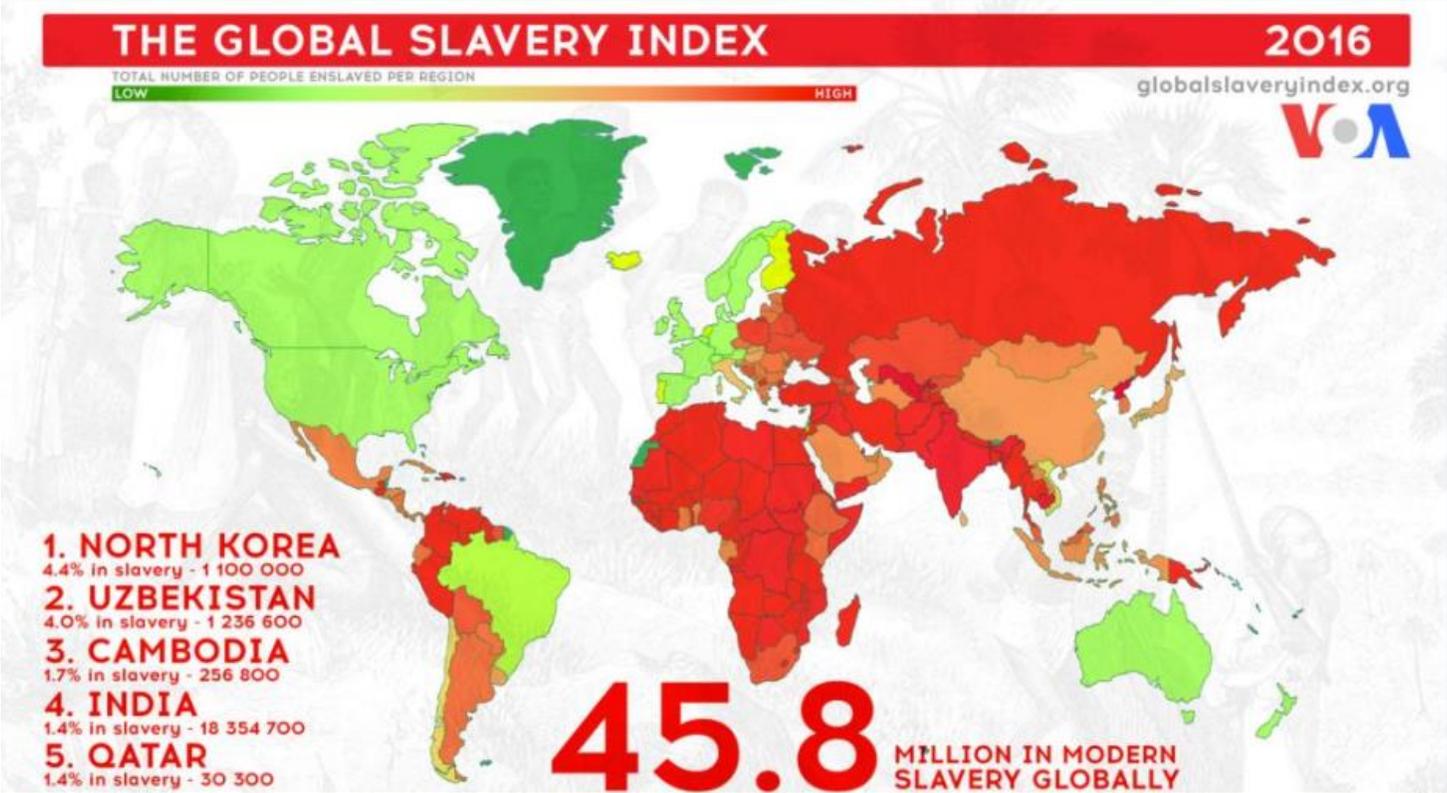
© DW



Another Way To Think Of It...



Modern Slavery



Voices > Editorials

Modern slavery is happening in the UK – we must take action to stamp out this inhumanity

The truth is that, as with much other crime, there is little that the authorities can do without the understanding and active support of the public

Editorial | @indyvoices | 2 days ago | 2 comments

39 shares

 Like
 [Click to follow Independent Voices](#)

With more support from the public, the authorities can tackle modern slavery [#ex](#)





SUSTAINABLE DEVELOPMENT GOALS



What would sustainability and social responsibility mean to these different types of companies?



An airline?



A tobacco company?



A large drinks company known for a high sugar drink sold in cans and bottles?



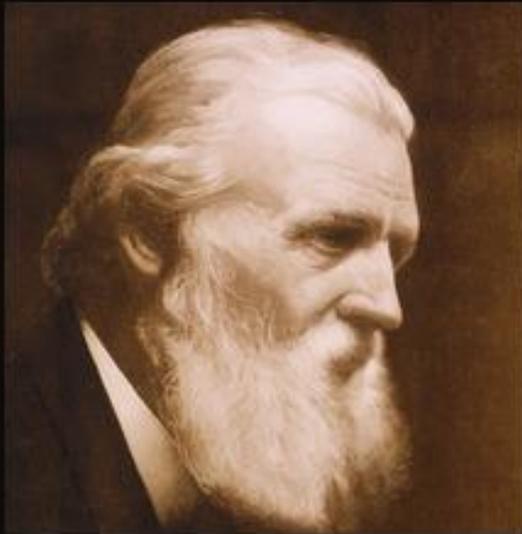
An oil and gas company?



A construction company?



Stewardship...



When one tugs at a single thing
in nature, he finds it attached to
the rest of the world.

~ John Muir

AZ QUOTES



The University of Edinburgh...



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What does the University of Edinburgh do?





Vision:

Our graduates, and the knowledge we discover with our partners, make the world a better place.

Purpose:

As a world-leading research-intensive University, we are here to address tomorrow's greatest challenges.



“4th in the UK for research power in the Research Excellence Framework”

>40,000 students

Annual turnover of more than £1000million; net assets £2500

>£360M Procurement (Professional and Campus Services)



“...associated with 20 Nobel Prize winners”

Hosted > million MOOC learners; 180+ countries studying

>13,000 staff

>700 Buildings, c1million m2

>£1000m assets invested

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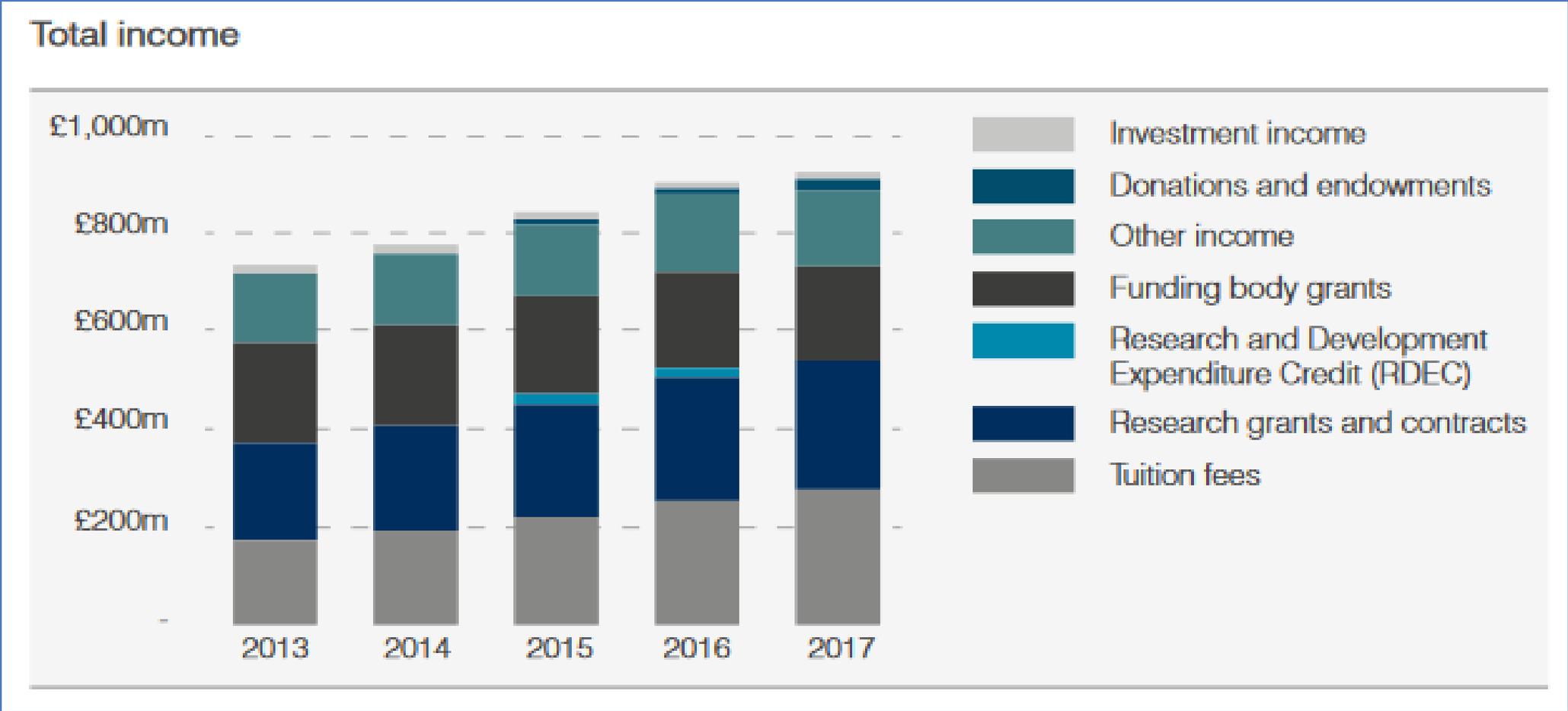


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Group income – 5 year trend (roughly double in 10 years)



Department for Social Responsibility & Sustainability

- Understanding and explaining important risks and opportunities
- Developing the University's response
- Programmes to catalyse action & collaboration



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Climate Strategy – Whole Institution Approach



Effective use of space & energy

Policy and behaviour change

Investments in, or purchase of, renewables

Changes to our investments

Learning & research into Challenges / Solutions

Whole institution approach to climate change



Targets

1 We will reduce our **emissions of carbon per £ million turnover by 50% from a 2007/8 baseline year by 2025**



2 We will return our carbon emissions to 2007/08 **baseline year levels by 2025**



3 We will become a net **zero carbon university by 2040**





SRS in Supply Chains: Fairness in Trade and Sustainable Procurement



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Responsible Investment

...incorporate environmental, social and governance (ESG) factors into investment decisions, to better manage risk and generate sustainable, long-term returns.
(Principles for Responsible Investment – PRI)



The University's carbon footprint of direct investments is increasingly lower than the relevant benchmark.

Measured in carbon intensity of millions of dollars of sales.

We're investing £1m in **social enterprise!**



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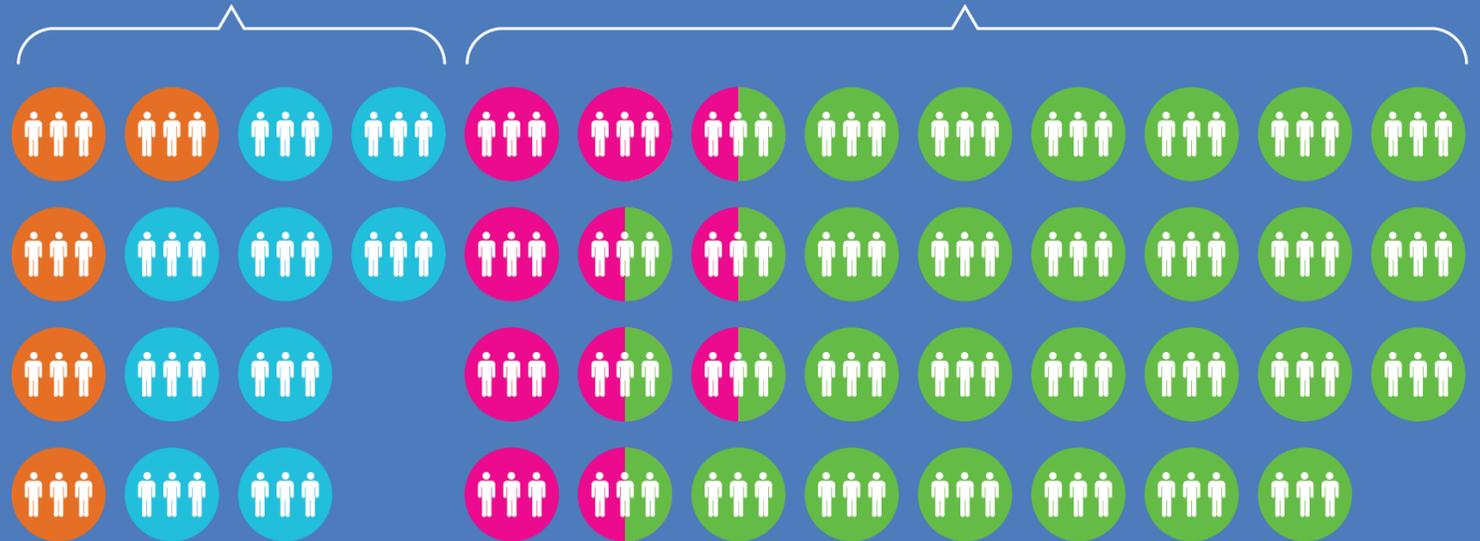


Toolkits for action, inductions and awards



16 student teams

35 departments



- 5 student groups
- 9 student residences

- 11 labs
- 30 offices

- + student volunteers



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Progress- Turning the Flywheel

- Stage 1 (2013- 2015)

Understanding the problem

Identifying opportunities

Talking and listening

Raising awareness- events; awards; small grants; experimenting..

(team of 8...)



Phase 2- Larger and Larger Commitments...(2015-2017)

- Identifying means to reduce carbon, save energy and resources, save money
- E.g. 2016- Created £5m sustainable campus fund- simple payback, 200%+ return on investment; 9% IRR
- Dealing with big, complex immediate issues e.g. divestment
- Developing credibility- track record of success; partnerships; increased senior leader interest and awareness
- (team of 12-18)



Phase 3- Flywheel spinning...(2017-2019)

- Major projects across many areas:
 - energy, solar, forests, social investment fund (£8m), new courses, new staff training courses
 - Major away days (3 hours+) with senior leaders and governing body
 - Generating income and awards (12+), £28m of bids...£20m income
 - Genuine innovation across large number of areas..(team of 18-26)



Phase 4- Breakthrough to Embedding...

6 years of work+ track record+ lessons and innovation+ external context=

(a) Commitment to embed across all areas

(b) Major further scaling of projects

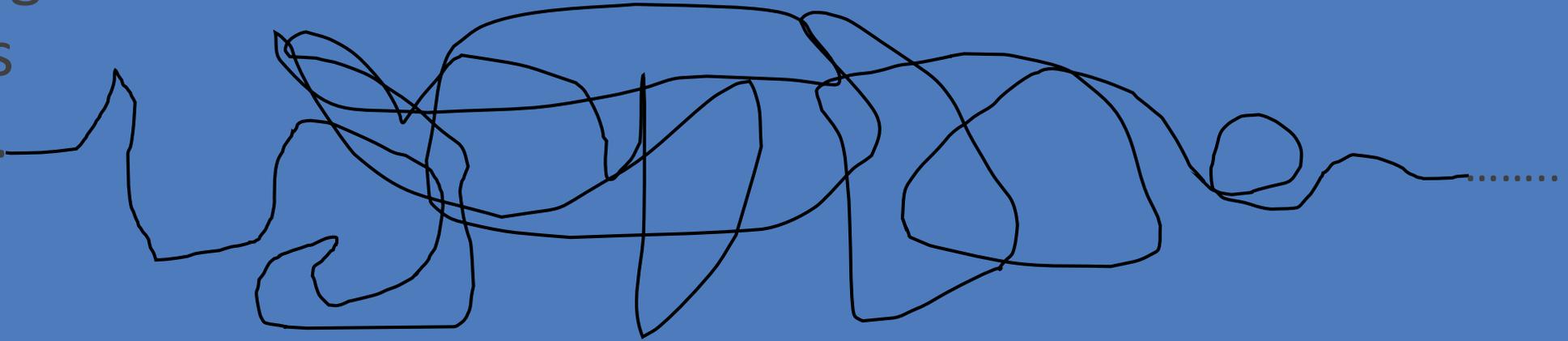
(c) Building into fundamental processes of planning, resourcing, teaching, research, recruitment and marketing, investments, spending, estates

(d) Global opportunities...



Managing change

Change
looks
like....



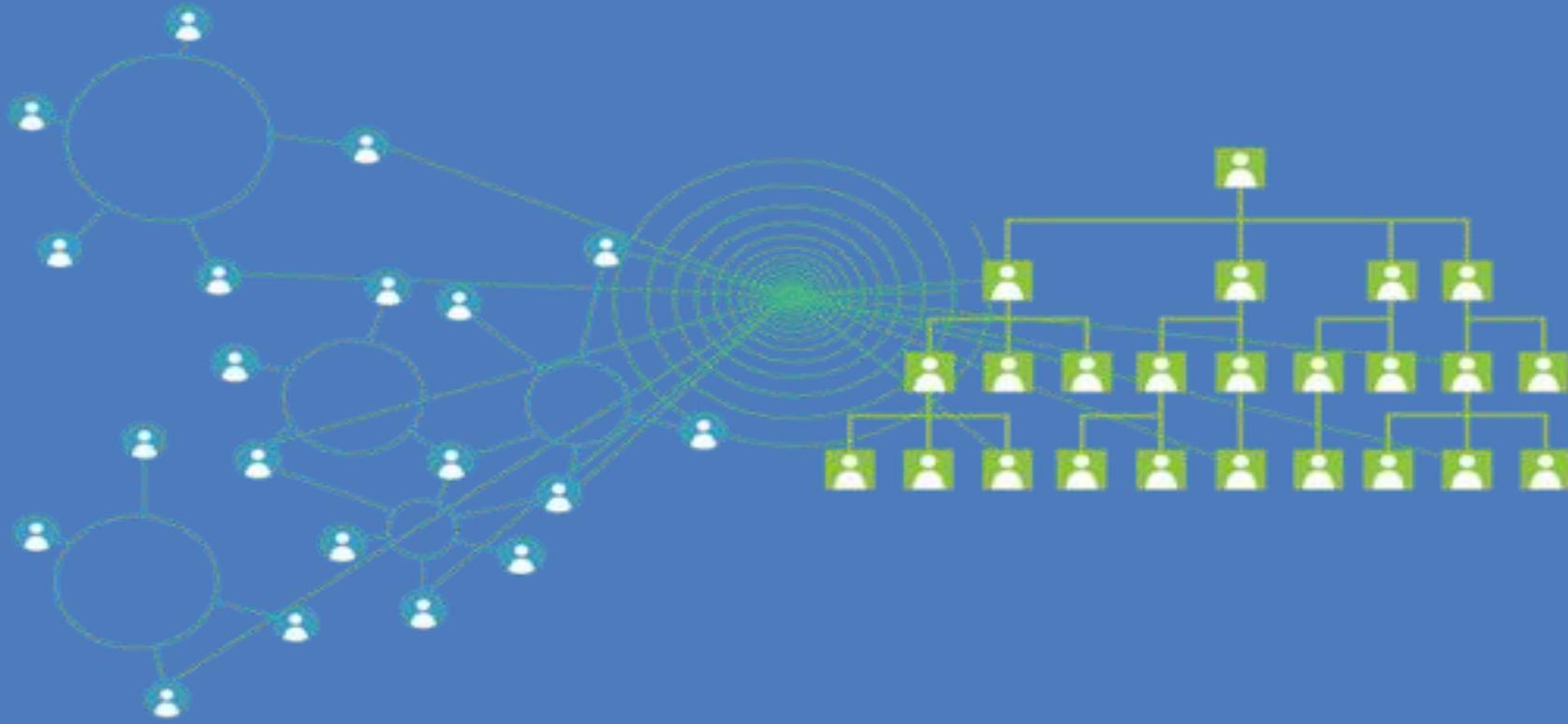
Formula for Change?

- Change Happens When...

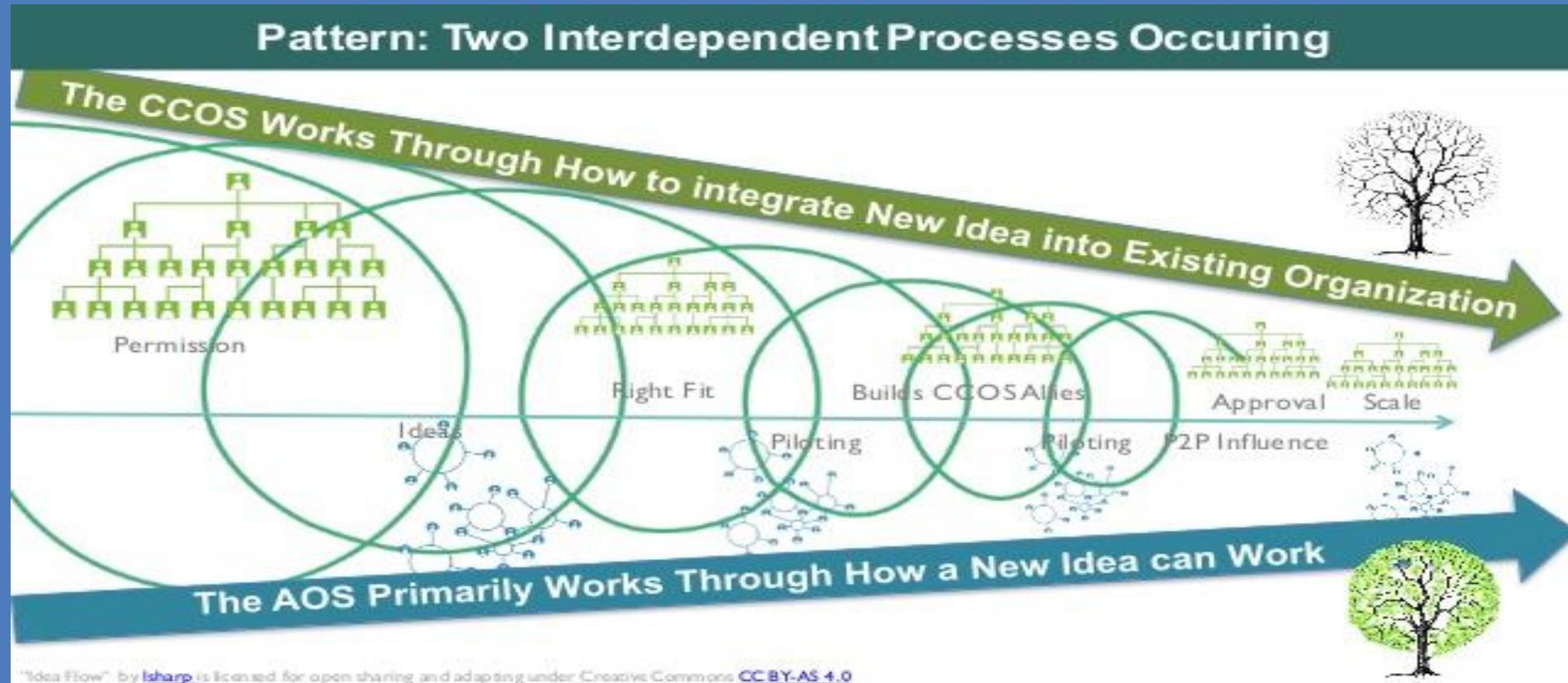
- $C = D * V * F > R$



A way of thinking about organisations – the Command and Control system (CCOS) vs the Adaptive Operating system (AOS)



AOS and CCOS...



Adaptive problems required adaptive leadership...

ADAPTIVE LEADERSHIP

Adaptive vs. Technical Challenges

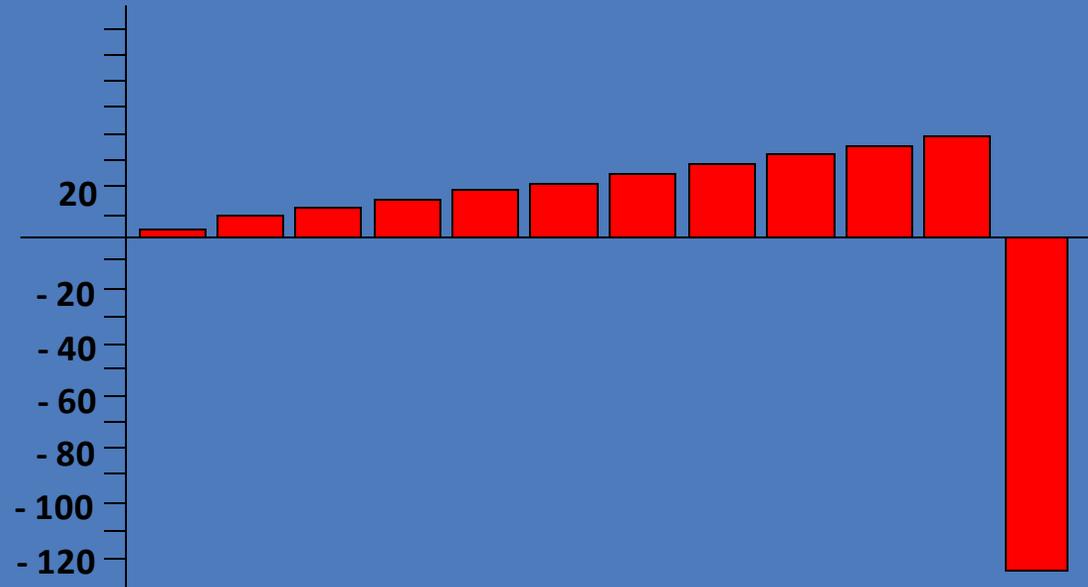
Kind of challenge	Problem definition	Solution	Locus of work
Technical	Clear	Clear	Authority
Technical & Adaptive	Clear	Requires learning	Authority & stakeholders
Adaptive	Requires learning	Requires learning	Stakeholders

Adaptive problems...

Technical Problem	Adaptive Challenge
It is easy to identify	It is difficult to identify
Most of the time has quick and easy solutions (tried and tested)	It requires changes in the way things are done (changes in approach to work)
It can be solved by expertise or authority generally	People who are working from where the problem is generated are able to solve it.
Requires small changes that also within organizational boundaries	Requires changes at lot of places which may cross organizational boundaries
People are receptive to technical solutions	People resist to acknowledge adaptive challenges
Solutions can be implemented fast and by authority	Solutions emerge from experimentation and discovery, take long time to implement



Predicting the future is a difficult and dangerous game..



**“A turkey is fed for a 1000 days - every day confirms to its statistical department that the human race cares about its welfare *‘with increased statistical significance’*.
On the 1001st day, the turkey has a surprise.”**

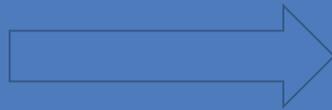
Nassim Nicholas Taleb

The Edge, Sep 15th 2008

‘The Fourth Quadrant, a map of the limits of statistics’,



Leadership Context- Red Ocean vs Blue Ocean



Blue Ocean Strategy...

Red Ocean Strategy

Compete in **existing** market space.

Beat the competition.

Exploit **existing** demand.

Make the value-cost trade-off.

Align the whole system of a firm's activities with its **strategic choice of differentiation or low cost.**

Blue Ocean Strategy

Create **uncontested** market space.

Make the competition **irrelevant.**

Create and capture **new** demand.

Break the value-cost trade-off.

Align the whole system of a firm's activities in **pursuit of differentiation and low cost.**



Provocations..?

- 'Start small, think big, move fast'
- 'Imagination is the art of seeing things invisible'
- 'Letting you have it my way'
- 'Action is eloquence'
- 'Think like a system, act like an entrepreneur'



In summary...

- Climate emergency really is an emergency- speed is of the essence
- The 21st century will undoubtedly face system change across many areas to deal with sustainability- that will therefore impact you at a system level...
- Large organisations facing many pressures face an 'adaptive leadership' challenge- it's difficult...win-win opportunities..
- At UoE we're on a journey but making progress
- 'Action is Eloquence...'



World's Shortest Poem?

- Me...We...

