

A bit about me.

extinction rebellion

BEng Mechanical Engineering
MSc Renewable Energy Systems Technology

Joined the construction industry in 2018

Main contractor MEP Consultancy

Joined XR in August 2019

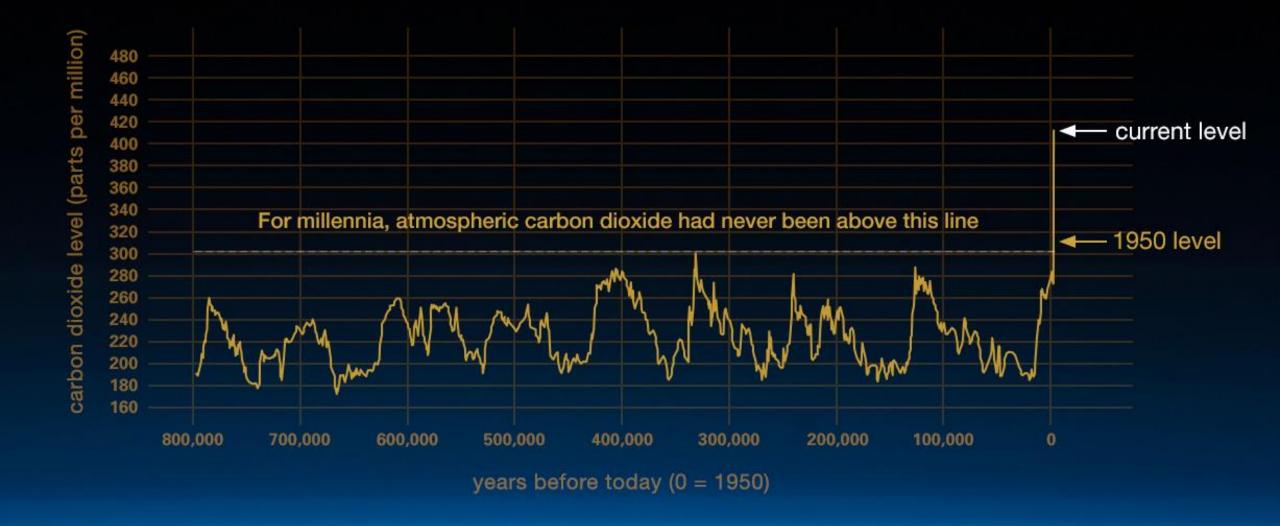


TELL THE TRUTH AND ACT AS IF THE TRUTH IS REAL



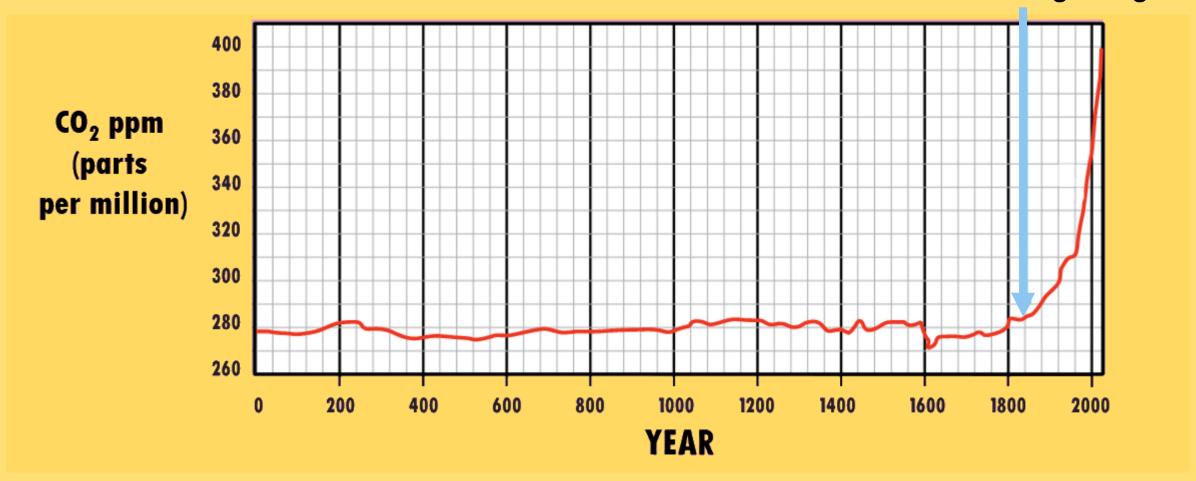
Life on earth is dying...



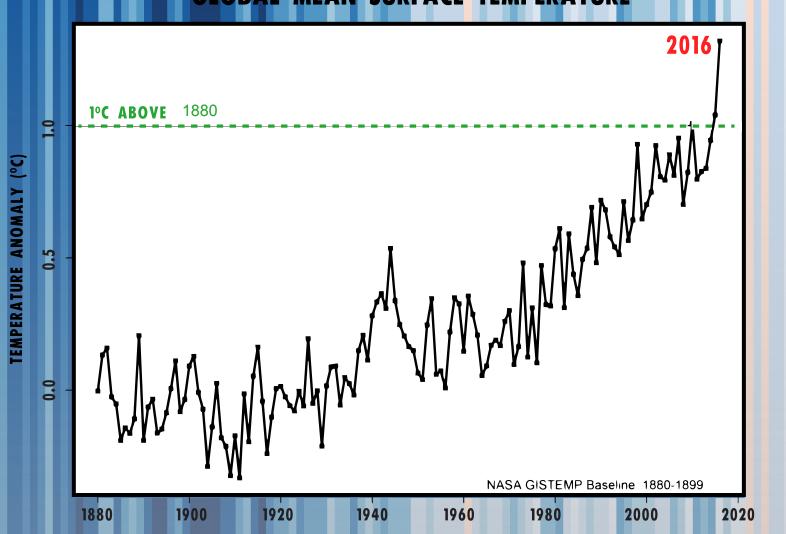


GREENHOUSE GAS EMISSIONS ARE SKYROCKETING

Industrial age began



GLOBALTEMPERATURES ARE SKYROCKETING.



YEAR

1.10C

"Warming stripes" 1850-2017

by Ed Hawkins

What is this month's CO₂ level?



Weekly averages

2 February 2020: 414.33 ppm

This time last year: 411.11 ppm

10 years ago: 390.67 ppm

Pre-industrial base: 280

Safe level: 350

Atmospheric CO2 reading from Mauna Loa, Hawaii (part per million).

Source: NOAA-ESRL



THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (IPCC)





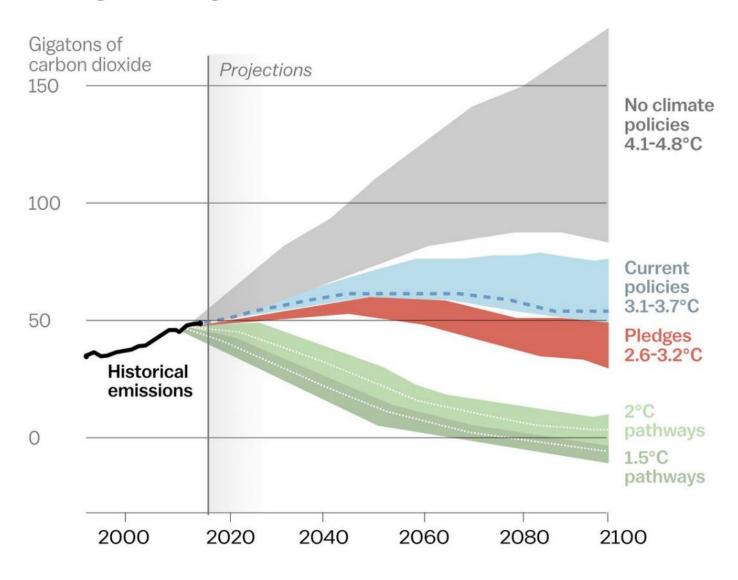
NEWS • 08 OCTOBER 2018

IPCC says limiting global warming to 1.5 °C will require drastic action

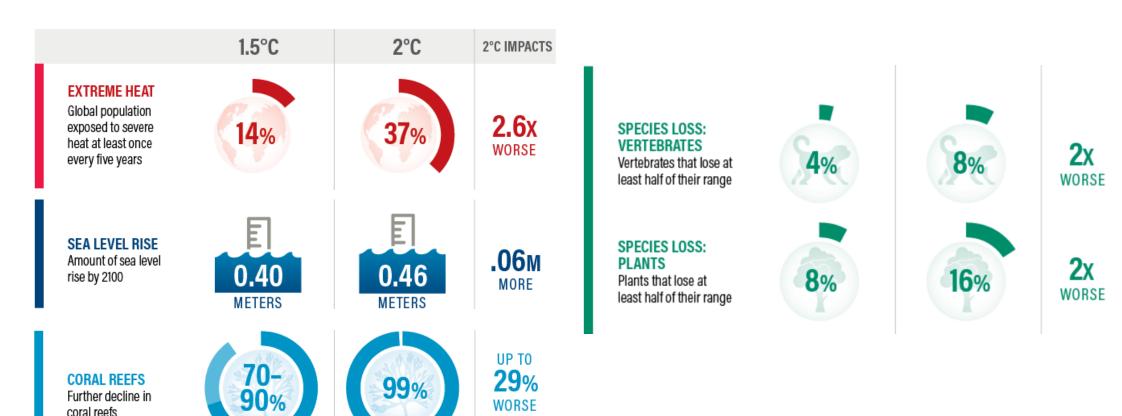
Humanity has a limited window in which it can hope to avoid the worst effects of climate change, according to climate report.

Effect of current pledges and policies

Global greenhouse gas emissions

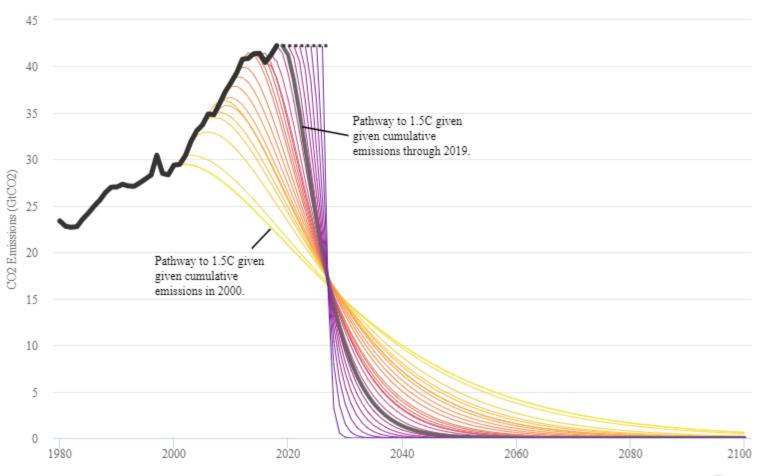


What is the difference between 1.5°C and 2°C





UNEP: 1.5C climate target 'slipping out of reach'







IMPACTS ALREADY BEING FELT IN THE UK



- 2003 Heatwave killed 70000
 Europe-wide
- 2014 Worst rainfall in 248 years
- 2050s Welsh village of Fairbourne to be decommissioned due to sea level
- 2018: Hottest summer onrisecord in UK
- Accident & emergency saw record numbers
- Rise in heart failure, kidney failure and dehydr
- Vegetable yields down by 50% in parts of UK











CONSEQUENCES FOR "BUSINESS

AS USUAL"

• Accelerating sea level rise due to melting ice and thermal expansion; coastal flooding & storm surges

 Stronger atmospheric weather systems with strong storms, droughts, wildfires, desertification

& crop failureDeaths due to heat stress

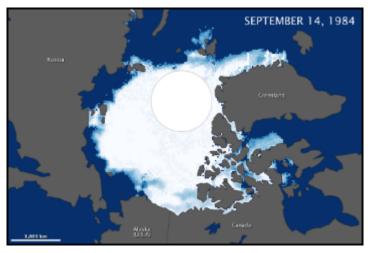
 Famine, water shortages, displacement of people from their homes

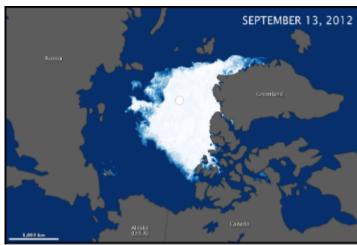
War



AMPLIFIERS THAT MAY TRIGGER FURTHER HEATING

Ice loss reducing cooling





Methane release from frozen stores







Biodiversity loss •

Decreased rainfall .

Sea level rise (5m) •

Nine climate "tipping points" where rising global temperatures could push parts of the Earth system into irreversible change

Greenland ice sheet Irreversible retreat of the ice sheet Sea level rise (2-7m) disintegration caused by rising temperatures Abrupt increase in emissions of Permafrost-loss • CO2 and methane through the Amplified warming Greenhouse gas release thawing of frozen carbon-rich soils Atlantic meridional Shutdown of the AMOC caused by Regional cooling overturning circulation • an increased influx of freshwater breakdown into the North Atlantic Sea level rise A shift in boreal forests, seeing **Boreal forest** Ecological shift expansion into tundra to the north · Regional warming and dieback to the south Melting Deforestation and hotter, drier conditions Amazon rainforest causing dieback of the rainforest and a . dieback Biome shift shift towards savannah Circulation change Collapse of the ice sheet triggered by West Antarctic ice persistent grounding-line retreat in one . sheet disintegration sector, cascading to other sectors An abrupt change in Sahel rainfall, caused by West African a shift northwards (wetter) or southwards . Ecosystem change . monsoon shift (drier) in the West African monsoon The monsoon system could be weakened Decreased carrying capacity . by higher aerosol emissions or • Indian monsoon shift Drought . strengthened by rising CO2 emissions Rising temperatures pushing corals beyond tolerable levels of thermal stress into an • Coral reef die-off Ecological change .

alternative state dominated by macroalgae

WE HAVE BEGUN EARTH'S 6th MASS



Science & Environment

Nature crisis: Humans 'threaten 1m species with extinction'

By Matt McGrath Environment correspondent, Paris

() 6 May 2019

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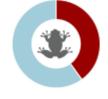














40%



Species assessed by the IUCN Red List

Conifers

34%



Reef corals

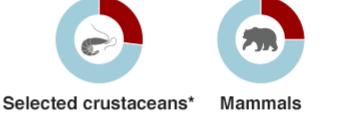
33%



Sharks and rays

31%





27%

25%



Birds

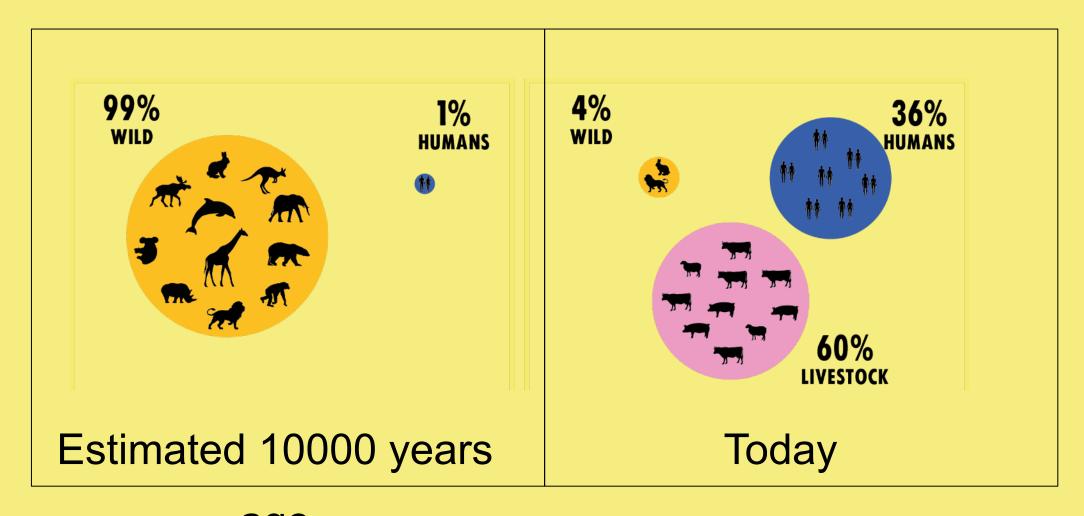
14%

Source: IUCN Red List of Threatened Species



^{*}Assessed species include lobsters, freshwater crabs, freshwater crayfishes and freshwater shrimps

MOST MAMMALIAN BIOMASS (FLESH) IS NO LONGER WILD

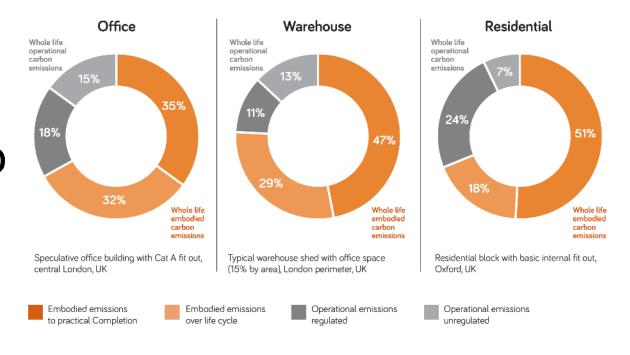




ago Data from Bar-On YM, Phillips R, Milo R (2018) PNAS 115:6506–6511.

What are the construction industry's impact?

40% CO2 emissions 28% Operational emissio







March 2009

Making the case for a

Code for Sustainable Buildings

CAMPAIGN FOR A SUSTAINABLE BUILT ENVIRONMENT





- New homes to be zero carbon from 2016
- All new non-domestic buildings should be zero carbon by 2019



Climate Emergency Declarations

Businesses

May 2019 Architects Declare

June 2019 Building Services Declare

June 2019 Structural Engineers Declare

Local Councils Net-Zero Pledges

Warwick District Council 2025 Net-Zero

Nottingham City Council 2028 Net-Zero

Birmingham City Council 2030 Net-Zero

West-Midlands Combined 2041 Net-Zero













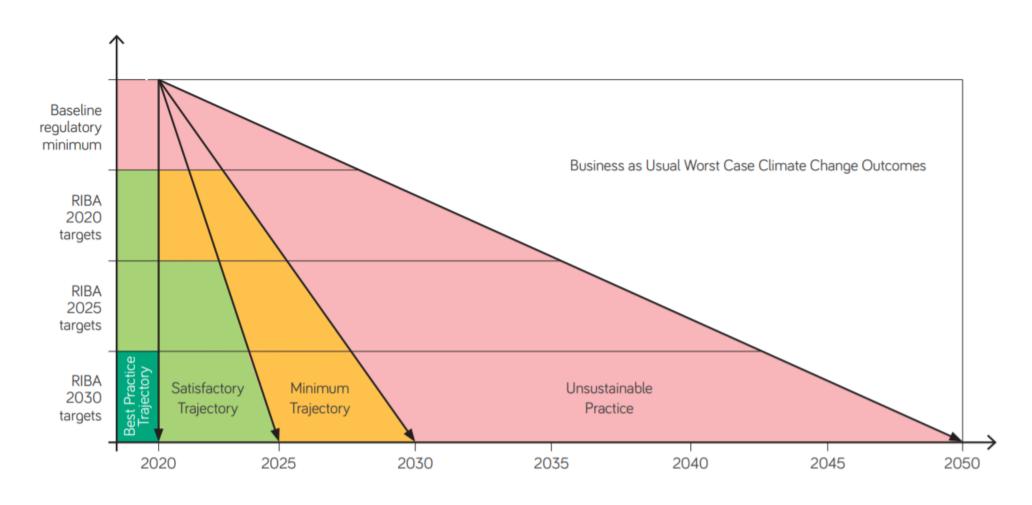
Sign up to take the RIBA 2030 Climate Challenge at www.architecture.com/2030challenge





RIBA 2030 Climate Challenge Trajectories







"You only talk about moving forwards with the same bad ideas that got us into this mess"

- Greta Thunberg





We must:

- Tell everyone the truth
- Overcome collective denial of the climate and ecological crisis
- Make fighting this crisis out top priority
- Decarbonise our industry
- Stop relying on fossil fuels
- Switch to green energy
- Put people and planet first



We need to:

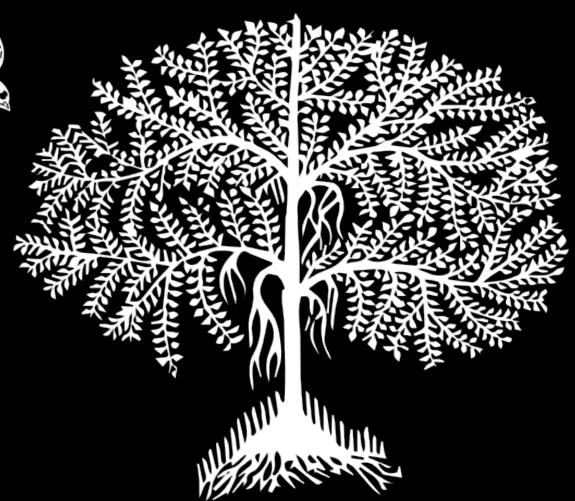
- Accept this new reality
- Stop 'Business as usual'
- Aim for Net-zero by 2025
- Transition to a circular economy
- Become carbon neutral
- Unite and support each other
- Adapt





Thank you for listening! ♥







https://rebellion.earth/act-now/join-us/