

“Political reality must be grounded in physical reality or it’s completely useless.”

— Prof. Hans Joachim Schellnhuber

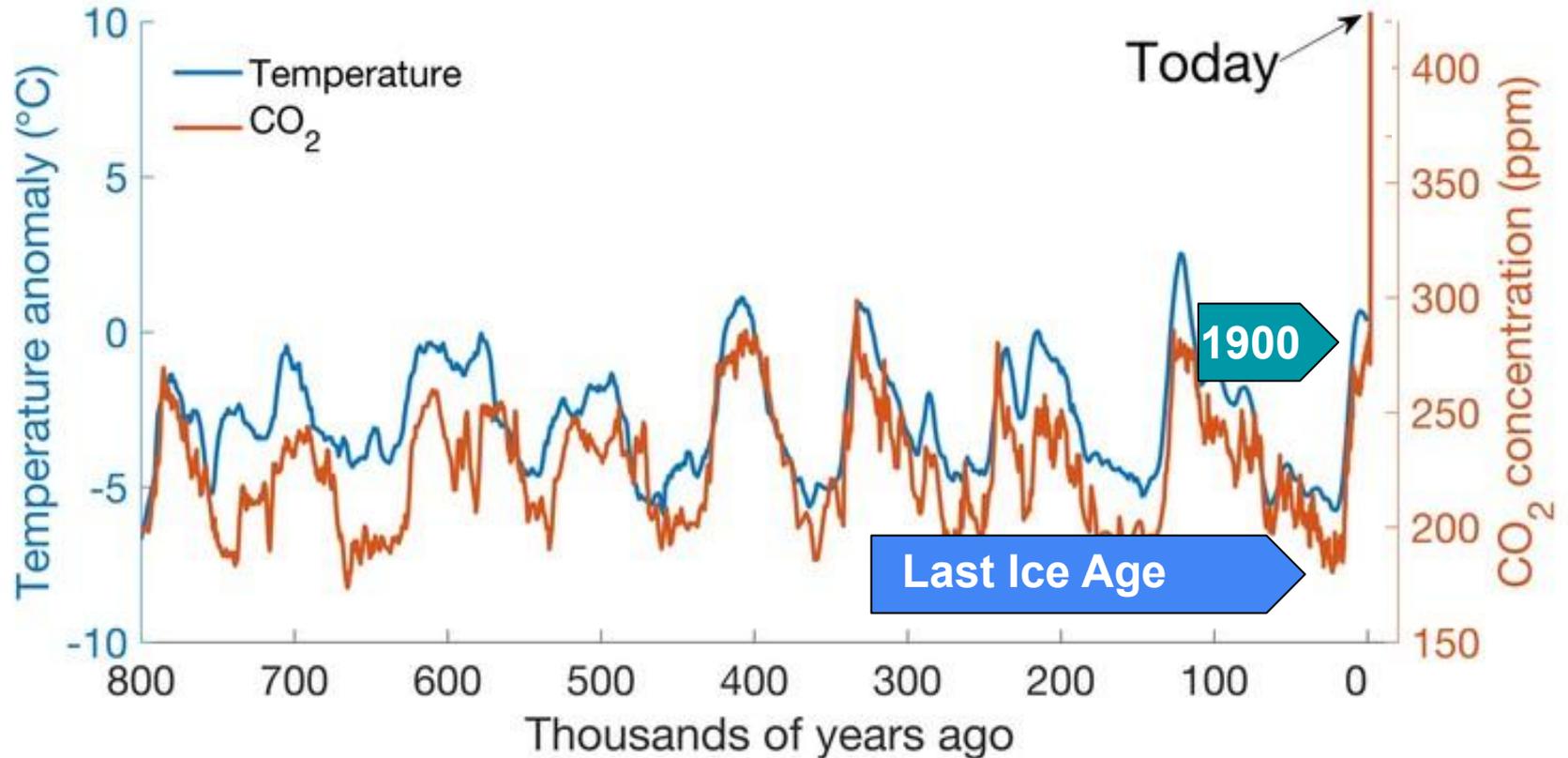
WHY POLITICIANS DON'T

WANT TO

GET THAT THE CLIMATE CRISIS MAY

LEAD TO SOCIETAL COLLAPSE

CLIMATE HISTORY



CLIMATE HISTORY

- ▶ The last time the air contained 420 ppm of CO₂ was between 14–16 million years ago, when the ancestors of humans were just transitioning from forests to grasslands.
- ▶ In Pliocene 3-4 million years ago, with less CO₂ (~400ppm) than today, temperatures were 3–4°C above pre-industrial, sea levels were 15–20 metres higher, there was no

Greenland ice sheet and beech trees grew in Antarctica.

[science.org/doi/10.1126/science.1205977](https://www.sciencemag.org/doi/10.1126/science.1205977);

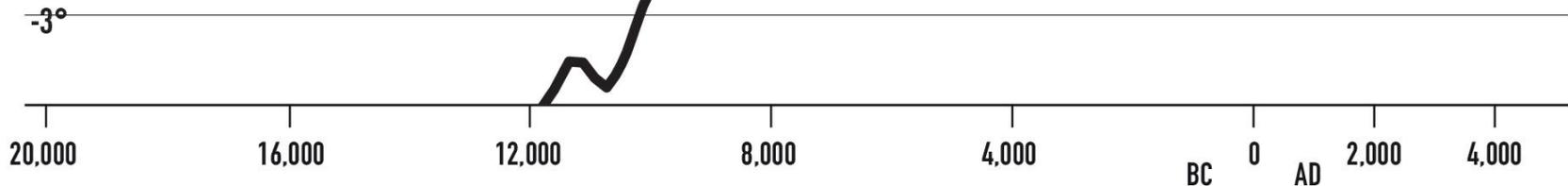
[theguardian.com/science/2019/apr/03/south-pole-tree-fossils-indicate-impact-of-climate-change](https://www.theguardian.com/science/2019/apr/03/south-pole-tree-fossils-indicate-impact-of-climate-change)

Warming is now 1.5°C

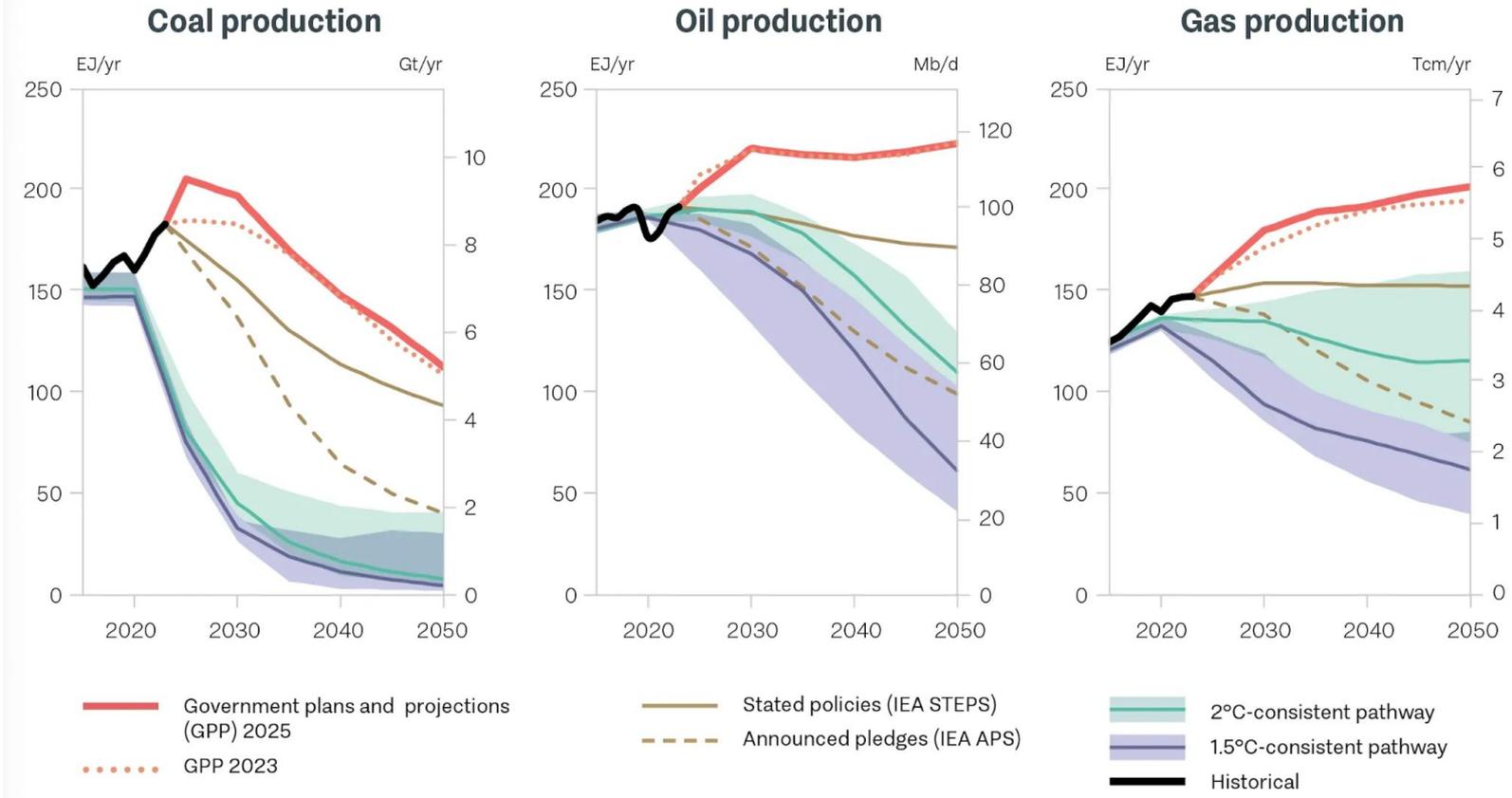
Now 1.5°C

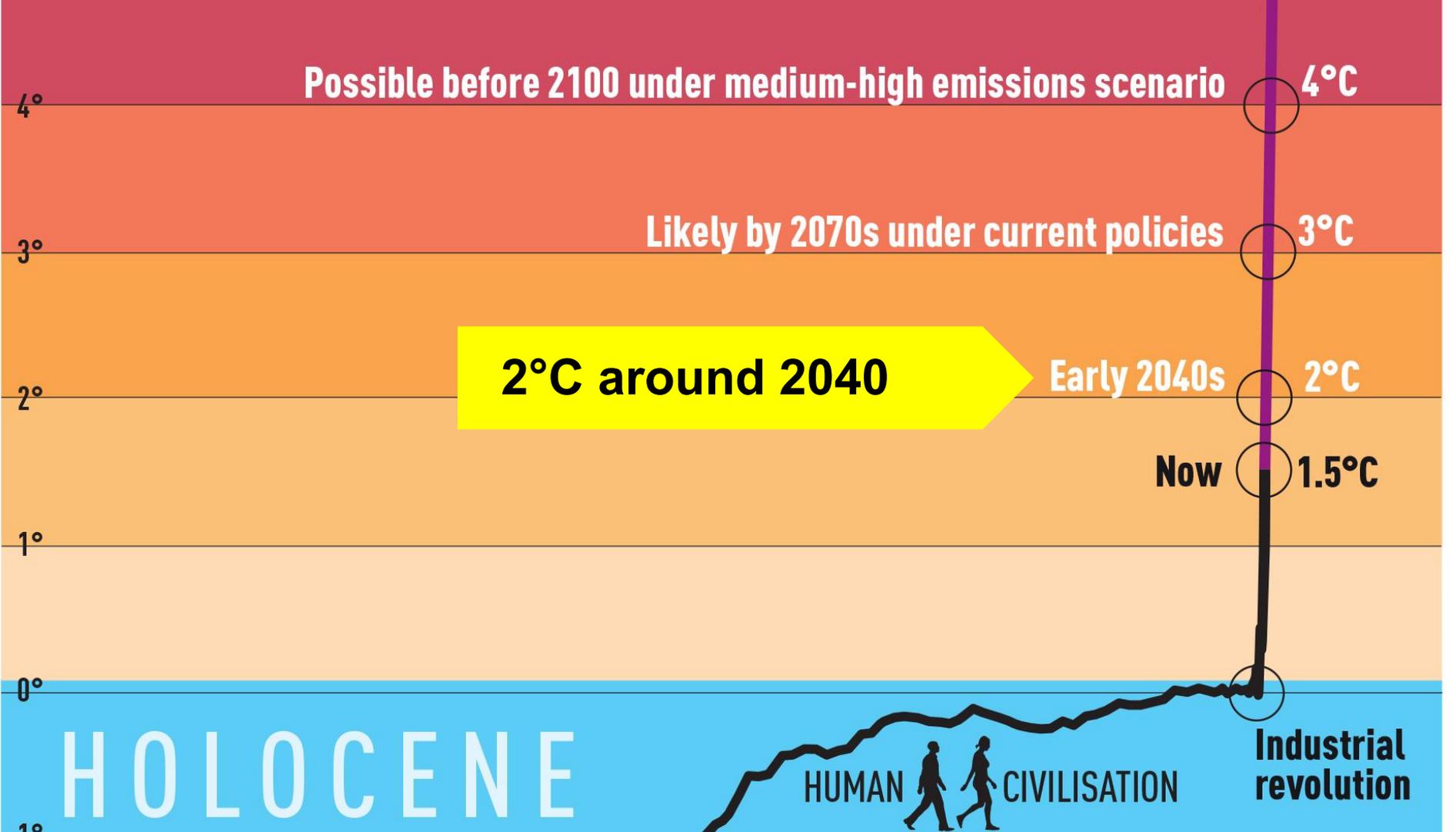
- ▶ Warming has already reached 1.5°C.
- ▶ 15 years ahead of 2018 IPCC projections.
- ▶ Rate increased 0.2°C to 0.3°C/decade.
- ▶ Aerosols explain acceleration.

Industrial
revolution



OIL & GAS EXPANSION TO 2050





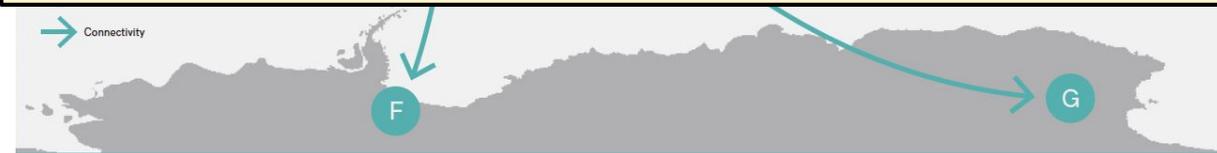
WHERE IS THE **TIPPING POINT?**



TIPPING POINTS



▶ At 1.5°C: “We're at risk of crossing irreversible thresholds on unique and threatened systems.” — Johan Rockström, Director, Potsdam Institute for Climate Impact Research.



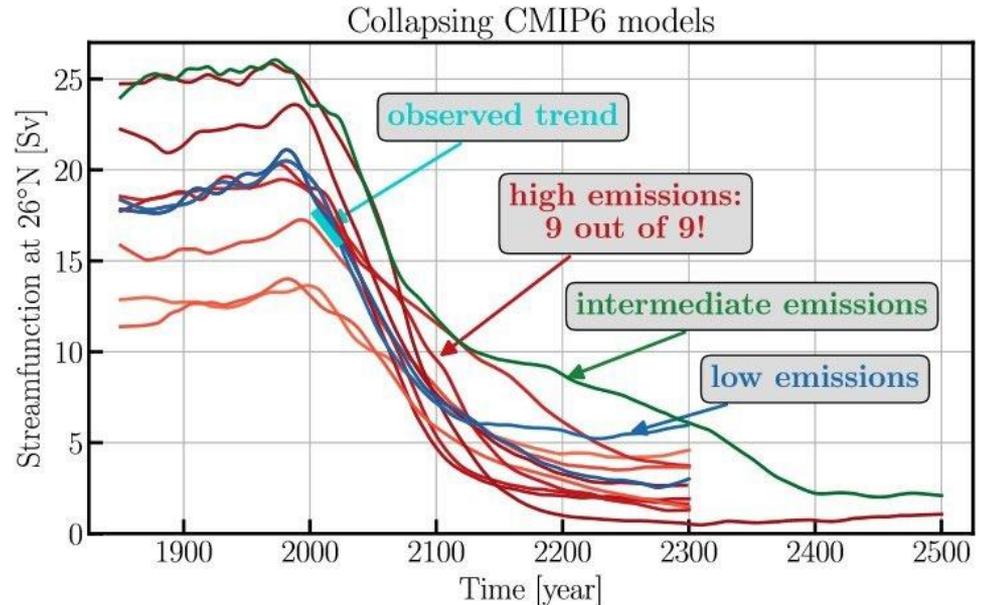
- A Arctic sea ice ■
- B Greenland ■
- C Boreal forest ■
- D AMOC ■
- E Amazon ■
- F West Antarctica ■
- G East Antarctica ■
- H Coral reefs ■
- I Permafrost ■



ATLANTIC CIRCULATION (AMOC) TIPPING POINT

For standard climate models with high emissions, AMOC shuts down in all 9 models that ran past 2100, and is well on the way by 2100.

Rahmstorf: “The **tipping point where the shut-down becomes inevitable** is probably in the next 10 to 20 years or so.”



HOTHOUSE EARTH?

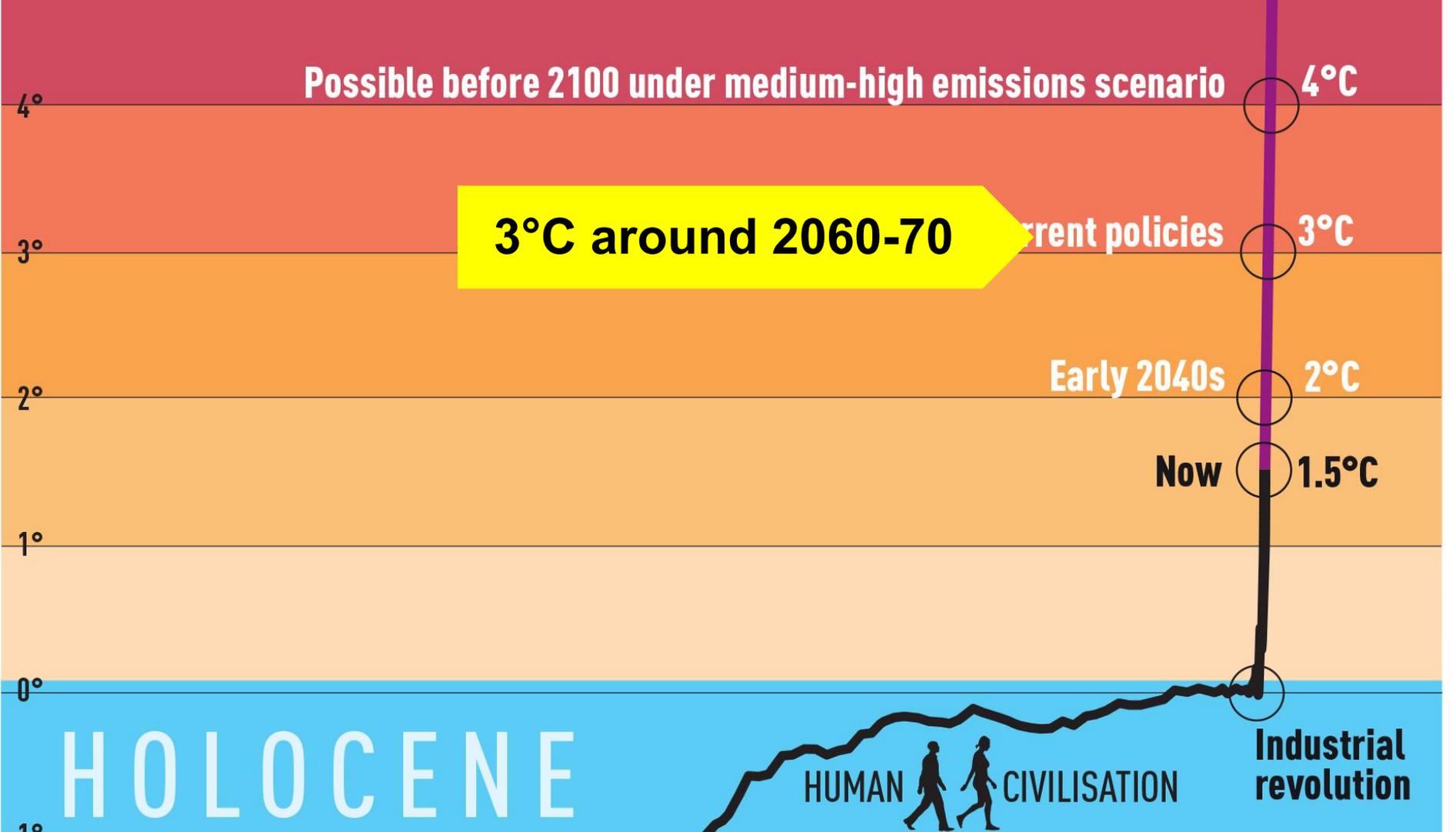
▶ Prof. Will Steffen and coauthors of 2018 “Hothouse Earth” paper warned that:

“Even if the Paris Accord target of a 1.5°C to 2°C rise is met, we cannot exclude the risk that a cascade of feedbacks could push the Earth System irreversibly onto a ‘Hothouse Earth’ pathway” (or further, warming self-sustaining).

NGOS: “1.5 DEGREES IS THE **MORAL AND SCIENTIFIC** BASIS OF OUR ADVOCACY” ??

“1.5°C is too high for polar ice sheets... even the current level of climate forcing if sustained over decades and centuries is likely to generate several meters of rapid sea-level rise.”

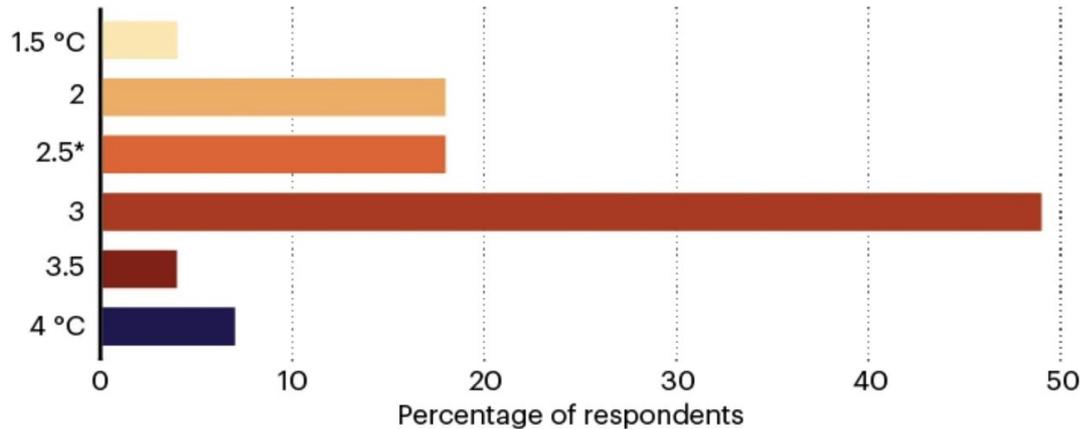
— State of the Cryosphere 2025 <https://iccinet.org/statecryo25/>



WE ARE HEADING TOWARDS 3 DEGREES

Survey of IPCC scientists

How much warming above pre-industrial times do you think is likely by 2100?



*Includes 2 responses between 2.7 °C and 2.75 °C; 2.5 °C and 3.5 °C were write-in answers.

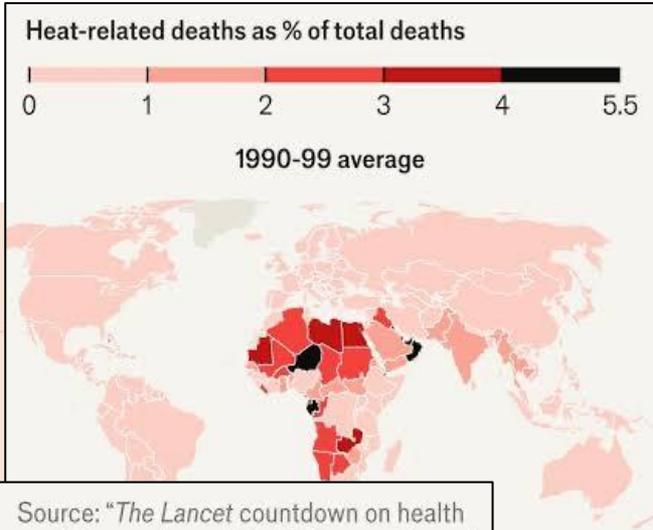
©nature

[nature.com/articles/d41586-021-02990-w](https://www.nature.com/articles/d41586-021-02990-w)

“We are potentially headed towards 3°C of warming by 2100 if we carry on with the policies we have at the moment.”

— Prof. Jim Skea,
IPCC Chair, 6 October
2024

[telegraph.co.uk/business/2024/10/06/too-late-save-britain-overheating-climate-chief-jim-skea/](https://www.telegraph.co.uk/business/2024/10/06/too-late-save-britain-overheating-climate-chief-jim-skea/)



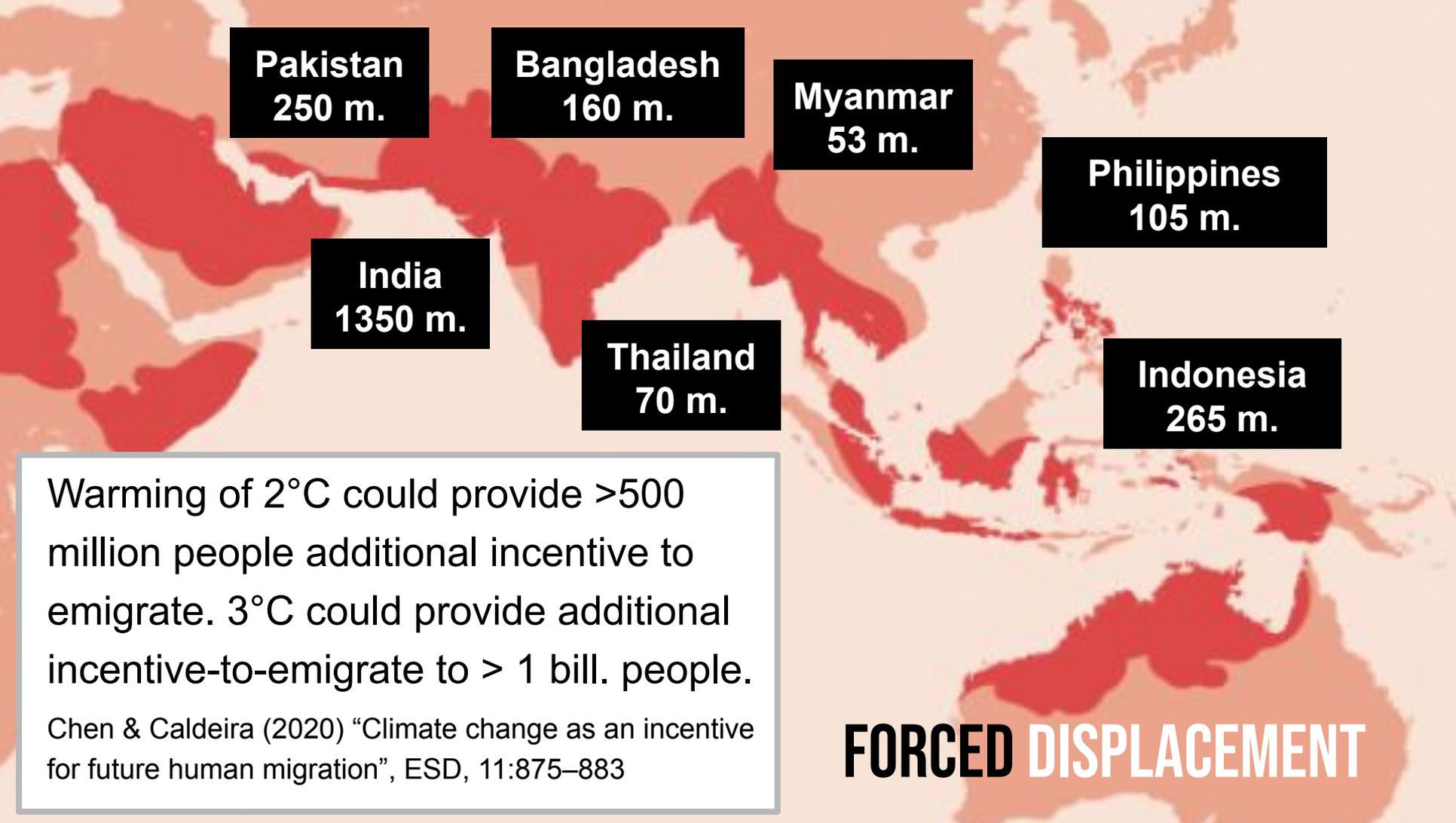
At 2.7°C, those parts of the world that will exhibit levels of heat beyond that ever experienced in human history resulting in “near-unlivable conditions”, currently found on only 0.8% of the planet’s surface, mostly in Sahara.

Source: “The Lancet countdown on health and climate change”, by M. Romanello et al., *The Lancet*, October 2025



Projected zone of heat of “near-unlivable conditions” at 2.7°C global average warming.

Lenton, Xu et al (2023) “Quantifying the human cost of global warming”, *Nature Sustainability* 6:1237–1247



Pakistan
250 m.

Bangladesh
160 m.

Myanmar
53 m.

Philippines
105 m.

India
1350 m.

Thailand
70 m.

Indonesia
265 m.

Warming of 2°C could provide >500 million people additional incentive to emigrate. 3°C could provide additional incentive-to-emigrate to > 1 bill. people.

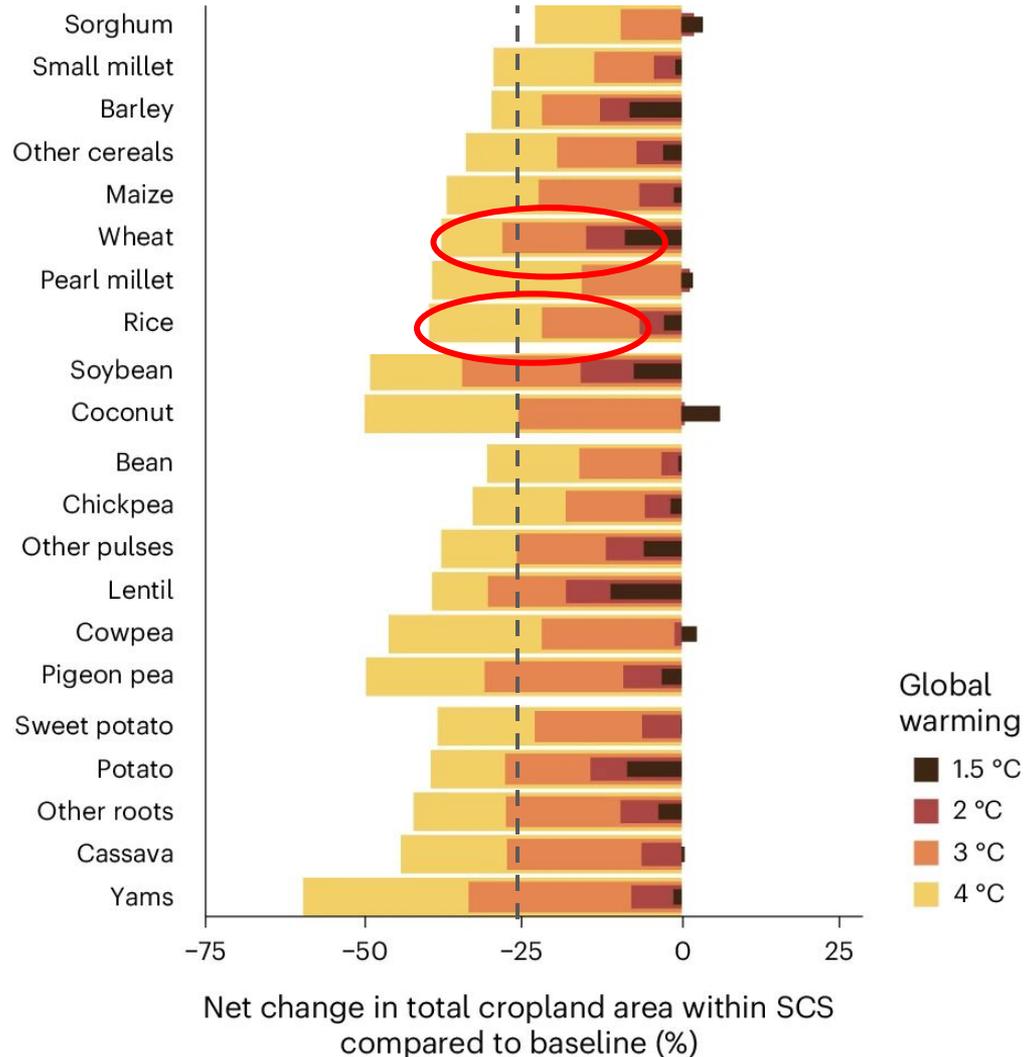
Chen & Caldeira (2020) "Climate change as an incentive for future human migration", ESD, 11:875–883

FORCED DISPLACEMENT

CROP YIELDS

“Beyond 2°C warming, the declines in suitable areas for the 30 crops become more pronounced – in some cases approaching and passing 50%.”

carbonbrief.org/half-of-global-croplands-could-see-a-drop-in-suitable-crops-at-2c-of-warming/



VIETNAM **INUNDATION** & RICE

- By 2050, sea-level rise plus typhoons of increasing intensity and storm surges may inundate 90% of Vietnam's Mekong Delta and 50% of Red River Delta.
- The land will salinate and no longer be suitable for rice production. Vietnam is the world's third-largest rice exporter.



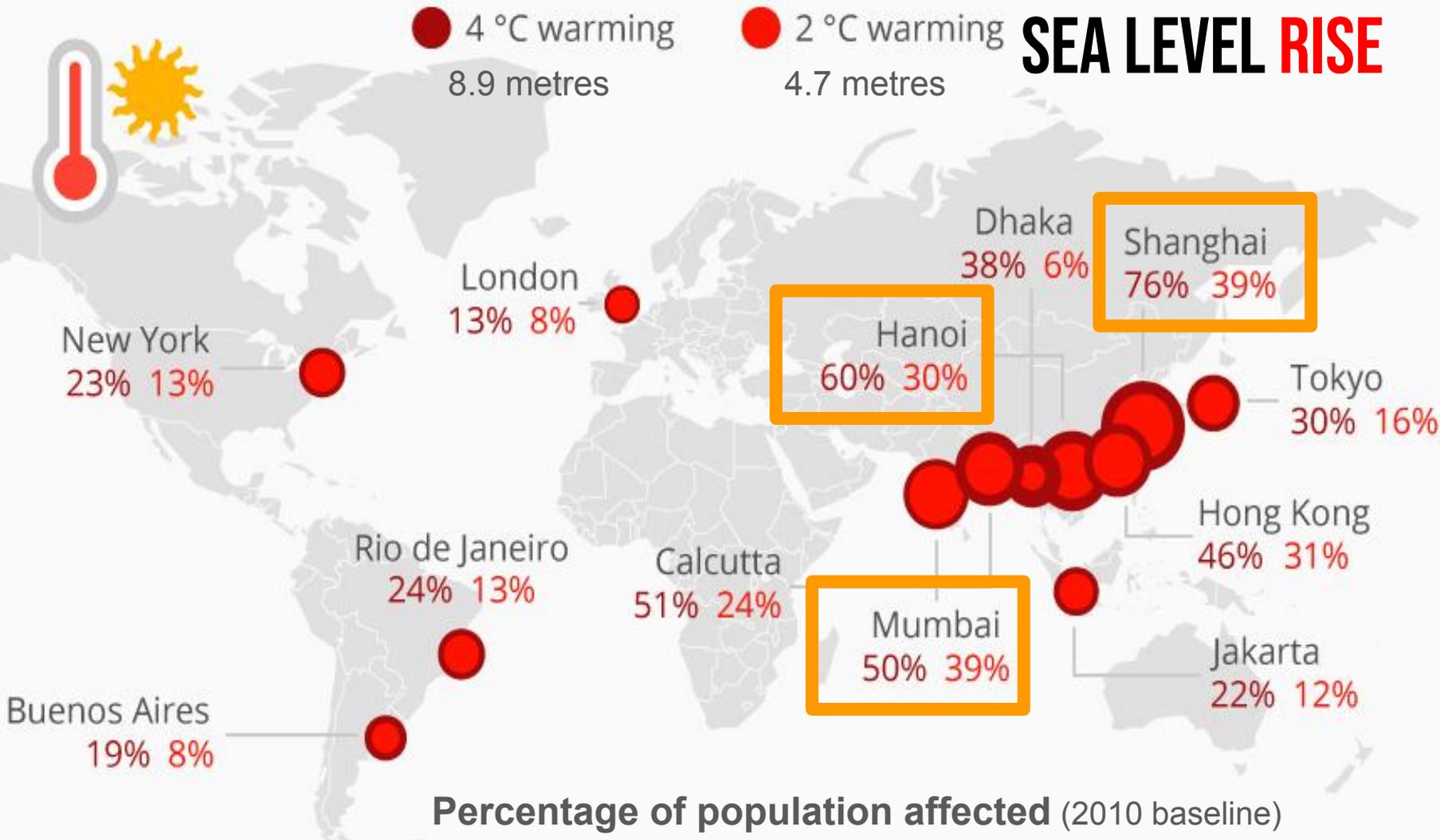
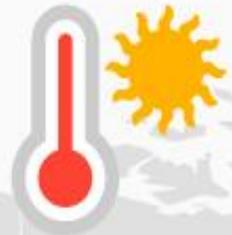
The Impact of Sea Level Rise on Developing Countries: A Comparative Analysis. World Bank Policy Research Working Paper 4136, February 2007

Strauss, Kulp & Levermann (2015). *Mapping Choices: Carbon, Climate, and Rising Seas, Our Global Legacy*. Climate Central Research Report; Statistica

SEA LEVEL RISE

● 4 °C warming
8.9 metres

● 2 °C warming
4.7 metres



Percentage of population affected (2010 baseline)

2040-2050 CHATHAM HOUSE 2021 RISK ASSESSMENT

- ▶ Without a sharp emissions decline before 2030, impacts likely to be locked in for the period 2040-50 include:
- ▶ A 30% drop in crop yields by 2050.
- ▶ Food demand will be 50% higher.
- ▶ One-third cropland affected by severe drought each year.
- ▶ Cascading climate impacts will “drive political instability & greater national insecurity, & fuel regional & international conflict”.

WILL CIVILISATION **COLLAPSE?**

▶ **Sir David King**, former UK Chief Scientist:

“On our current path, civilisation as we know it will disappear. If we meet current commitments only – NZ2050 – perhaps some form of humanity will survive.”

▶ **Prof. Hans Joachim Schellnhuber**:

“A very big risk that we will just end our civilisation. The human species will survive somehow but we will destroy [most that we have] built up over the last 2000 years.”

**WHAT'S THE
EVIDENCE
FOR THAT?**

THE **POLITICAL** SILENCE

Examples

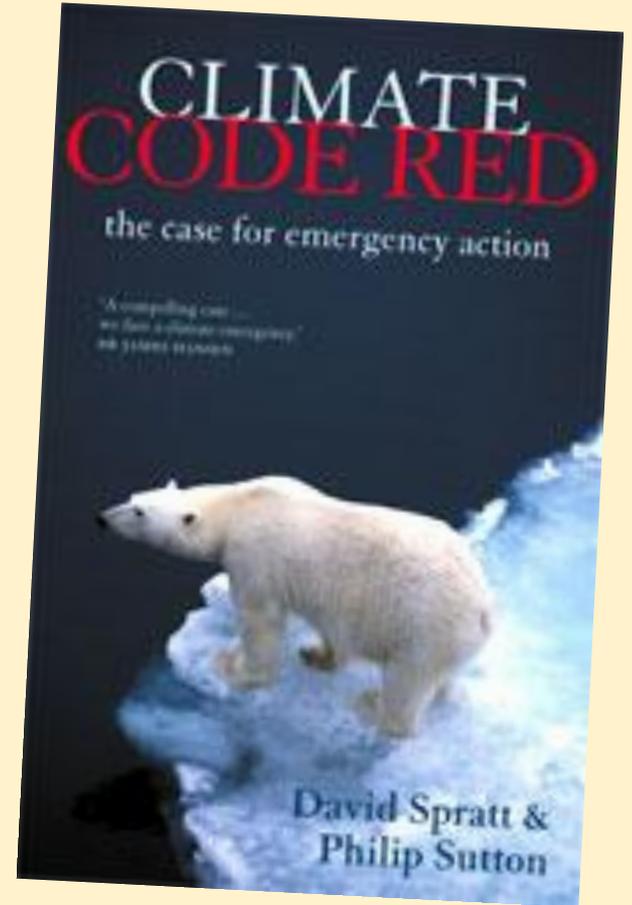
- ONI report securitised
- Govt climate comms: all energy & no impacts
- National Climate Risk Assessment understated
- Professional NGO advocacy

Causes

- Ignorance
- “Knowing and not knowing”
- Self-interest
- Moral cowardice
- Lack of leadership capacity

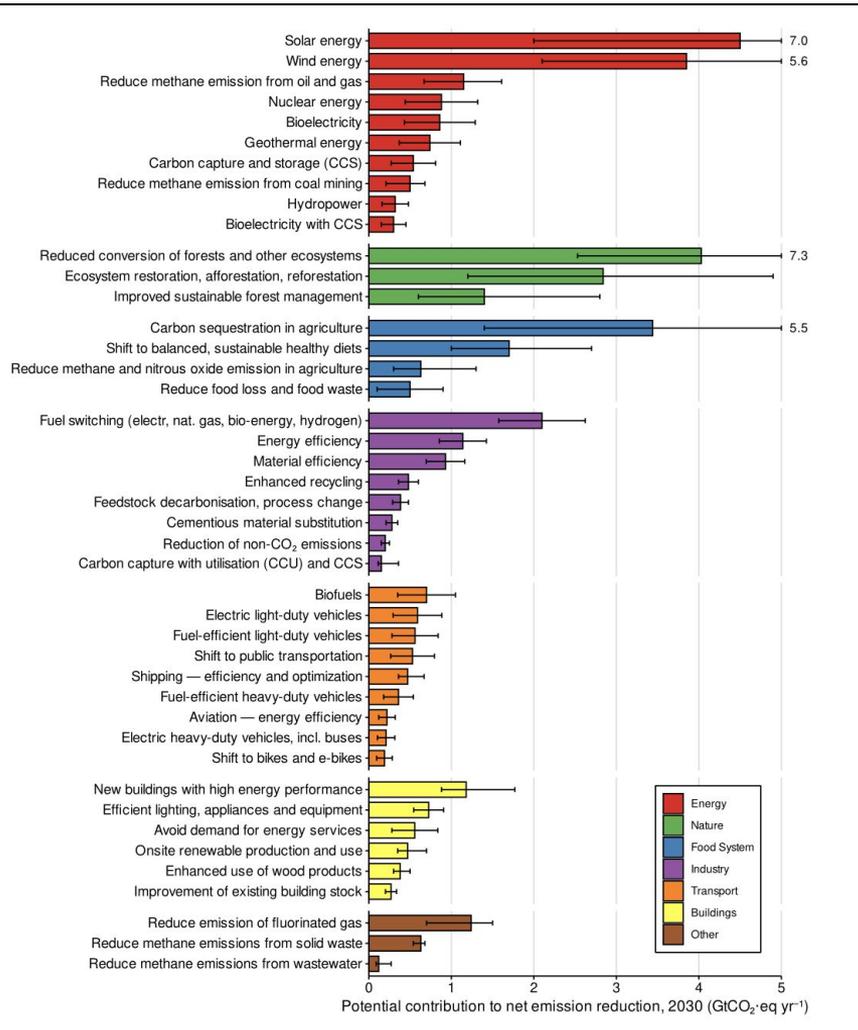
CLIMATE **CODE RED** (2008)

- The scientific reality is worse than either the IPCC portrays or policymakers admit.
- 2°C is wrong target. The safe zone is <math><0.5^{\circ}\text{C}</math>
- Climate breakdown now manifests as a climate emergency that requires absolute political priority.

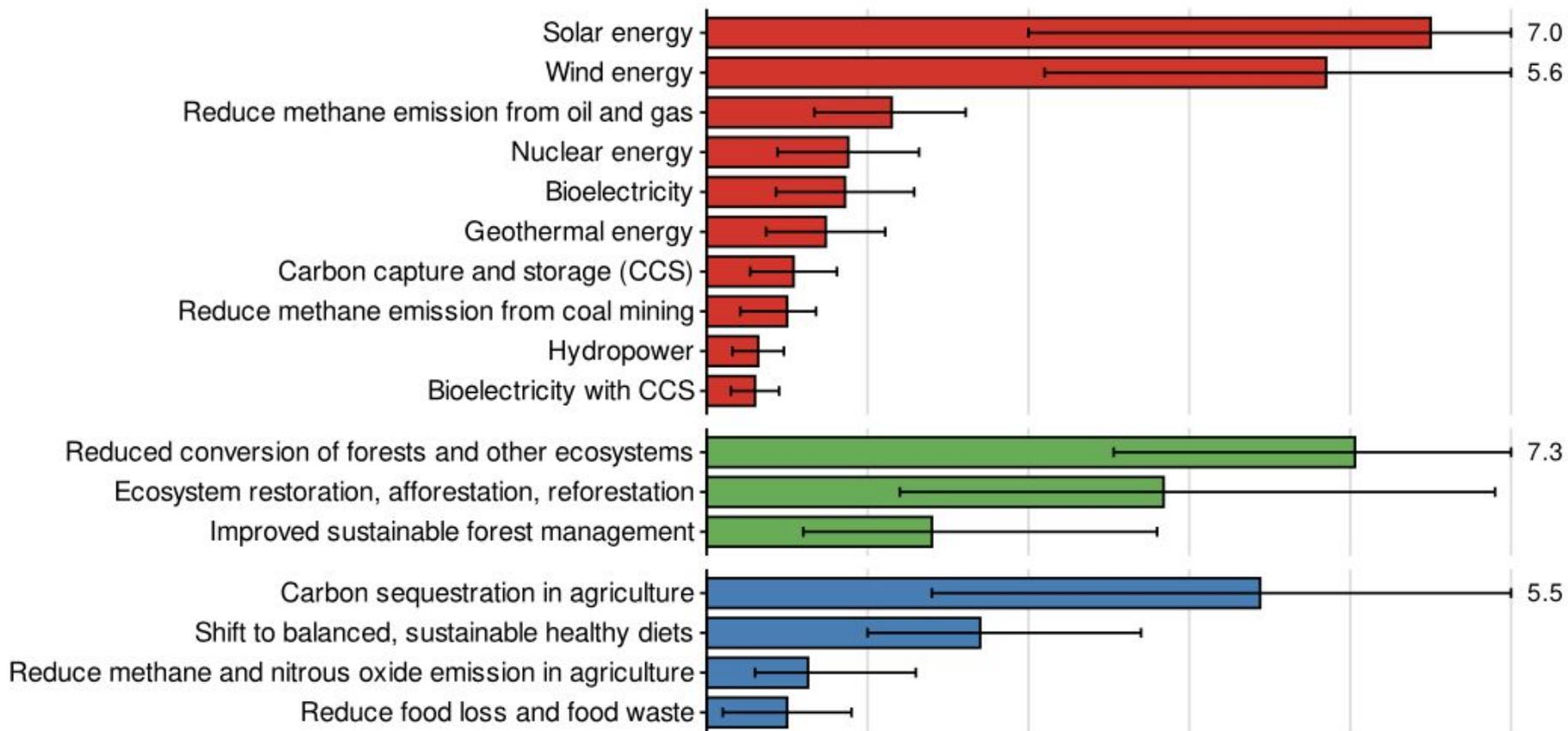


WHAT IS TO BE DONE?

- “Tell the truth” on coming climate impacts.
- Confront the self-interest and moral cowardice.
- Advocate for a “first priority” emergency response.
- End new coal and gas licences, tax concessions, subsidies and plan a phase out.
- Strengthen all natural drawdown systems, esp. protecting and restoring forests and wetlands.
- Support research and testing of cooling options.



The 2025 state of the climate report: a planet on the brink, William J. Ripple et al, <https://doi.org/10.1093/biosci/biaf149>



FORESTS AND WETLANDS RESTORATION

“The conservation of intact ecosystems with high carbon stocks, especially primary forests, provides particularly large benefits, while allowing forests to continue growing further increases long-term carbon storage. Carefully implemented large-scale reforestation, afforestation, and the rehabilitation of degraded habitats, can add substantial capacity to absorb carbon. Nature-based solutions could potentially achieve emission reductions/removals of 10 Gt CO₂/year by 2050, equivalent to roughly 25% of current emissions.”

David Spratt

Research Director

breakthroughonline.org.au

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