

# **How can we accelerate action to stay below 1.5 degrees C?**

**Jim Skea**

**Chair**

**Intergovernmental Panel on Climate Change**

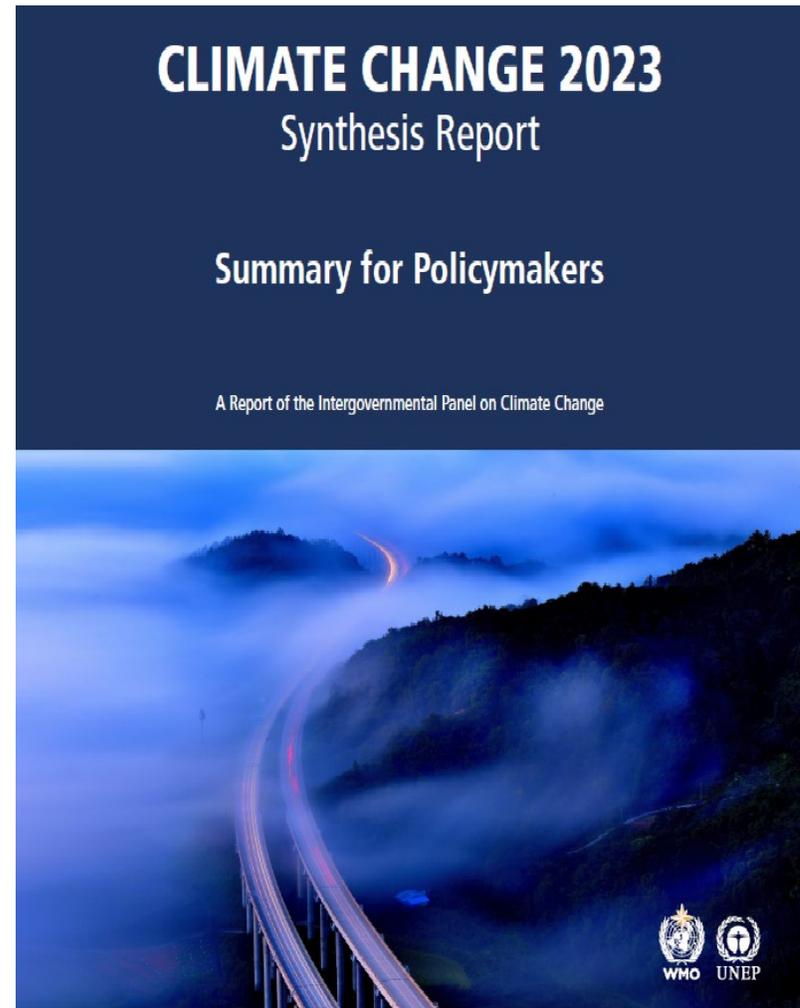
**LCS-RNet 15th Annual Meeting**

**19 December 2024**

# The three goals of the Paris Agreement

1. Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and **pursuing efforts to limit the temperature increase to 1.5°C** above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
2. Increasing the ability **to adapt to the adverse impacts of climate change** and **foster climate resilience** and low greenhouse gas emissions development, in a manner that does not threaten food production
3. **Making finance flows consistent** with a pathway towards low greenhouse gas emissions and climate-resilient development.

.....in the context of **sustainable development** and **efforts to eradicate poverty**

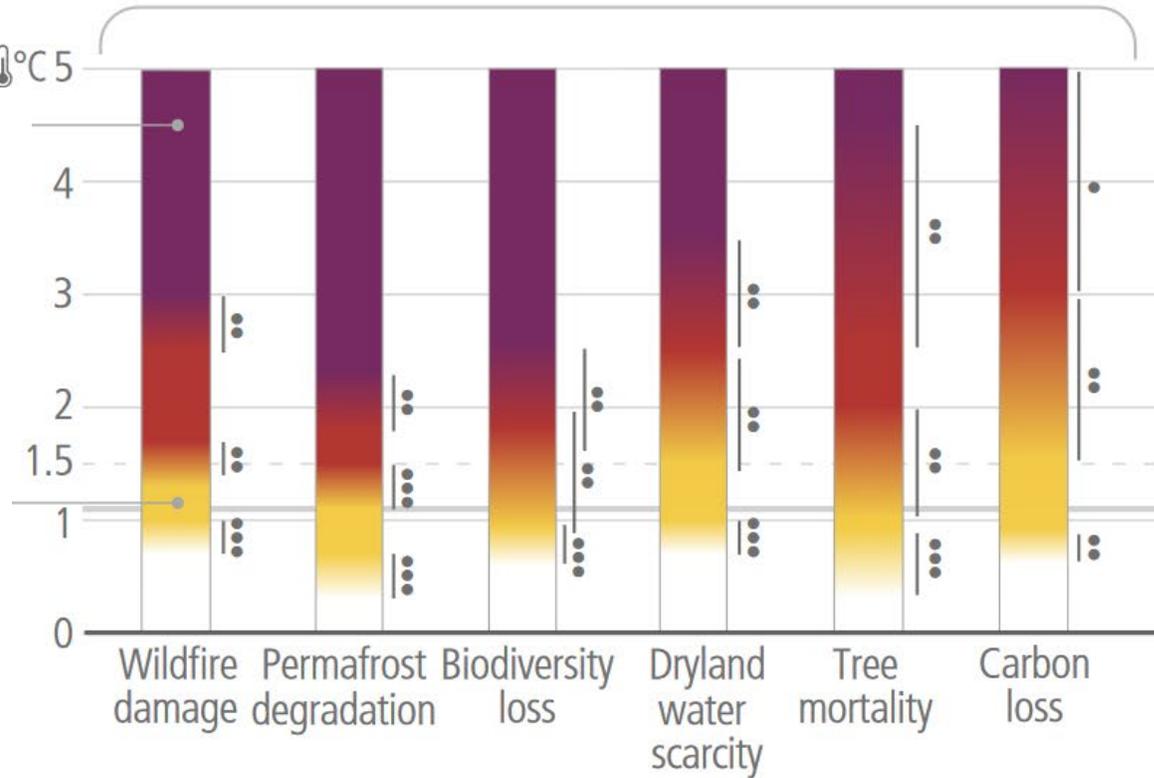




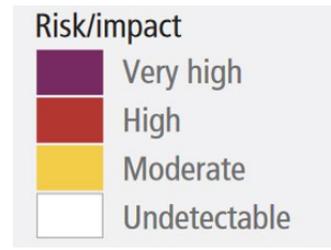
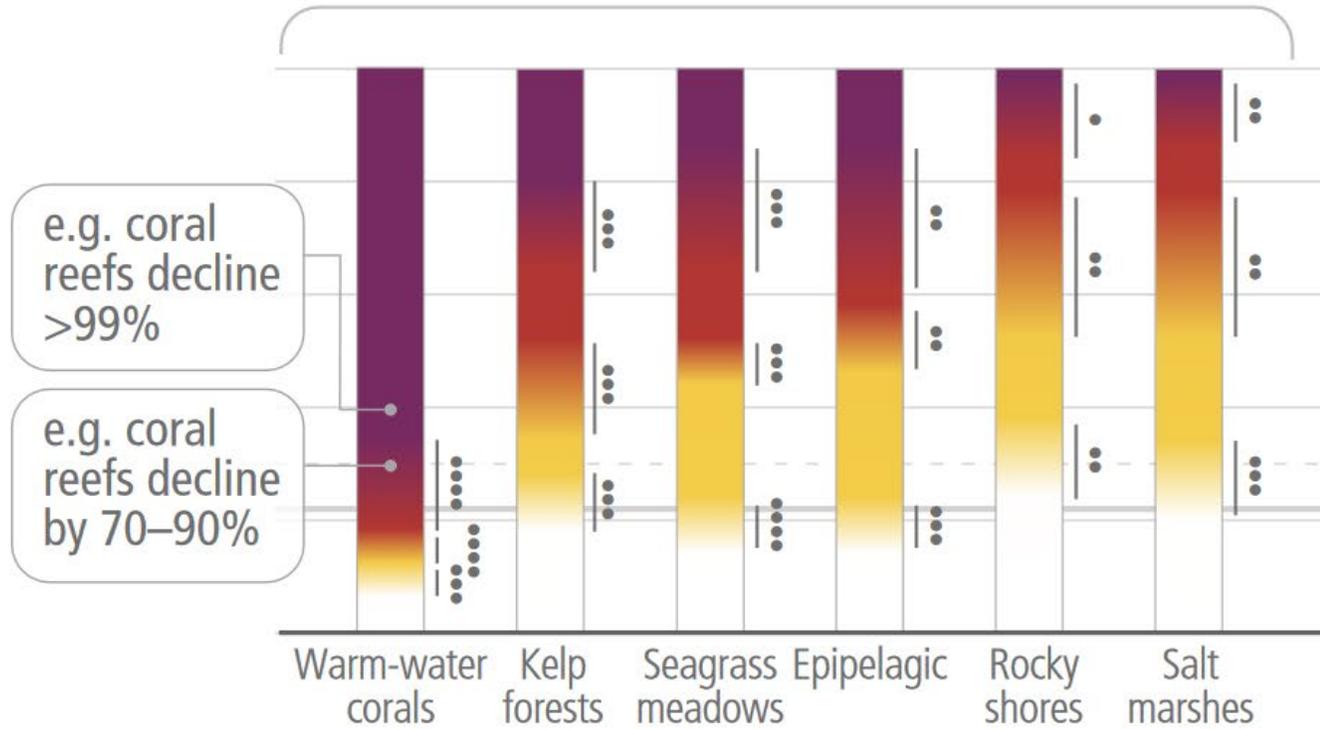
# Adaptation and resilience

# Risks differ by system

Land-based systems

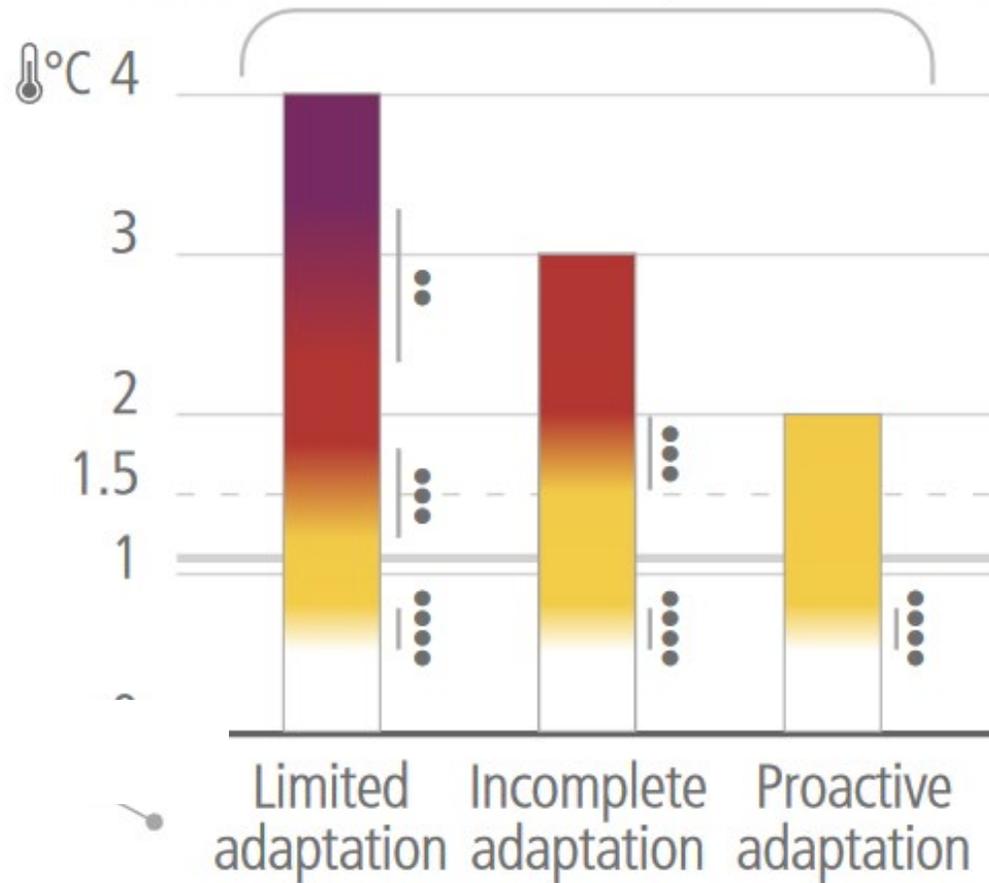


Ocean/coastal ecosystems

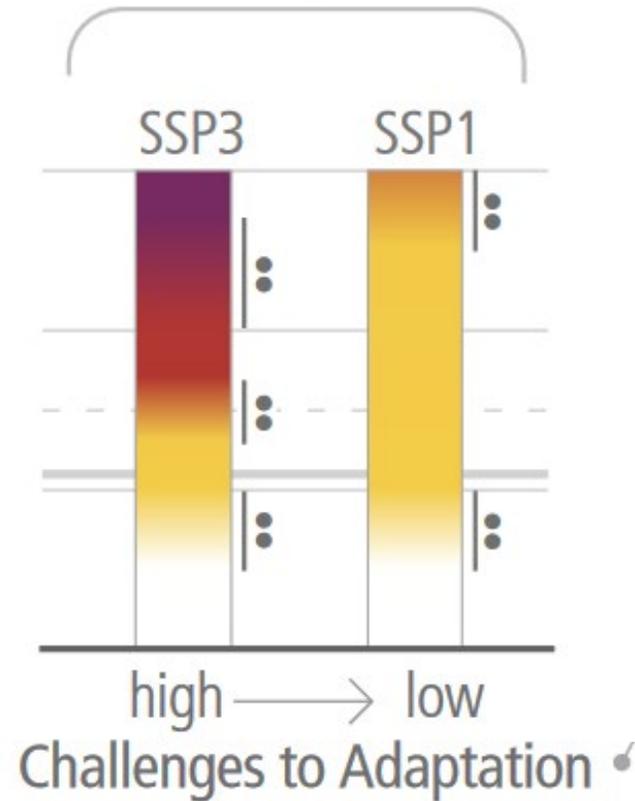


# Adaptation and socio-economic pathways affect levels of climate related risks

## Heat-related morbidity and mortality



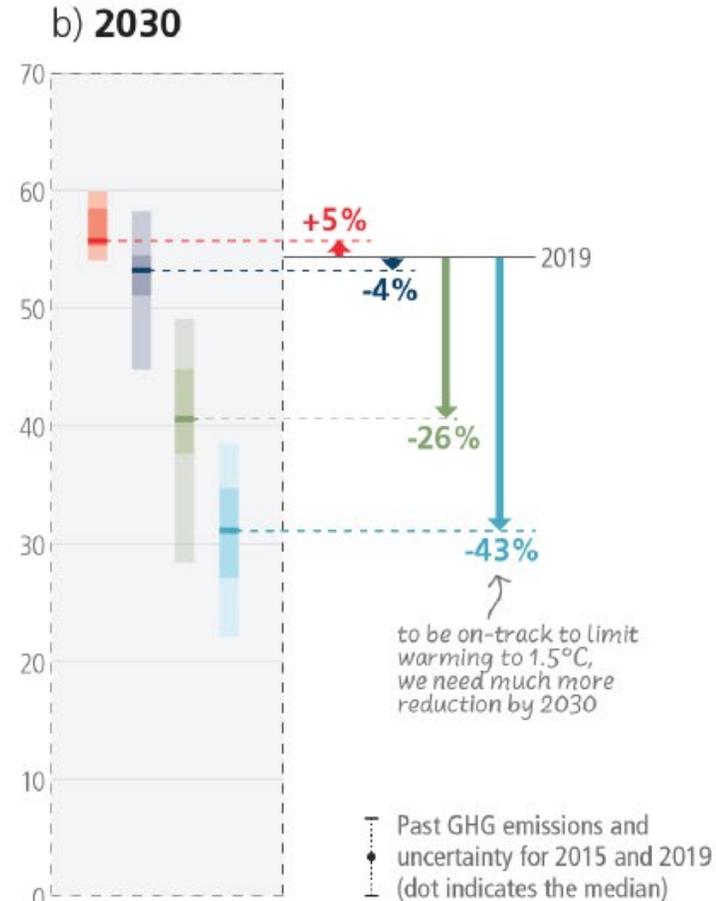
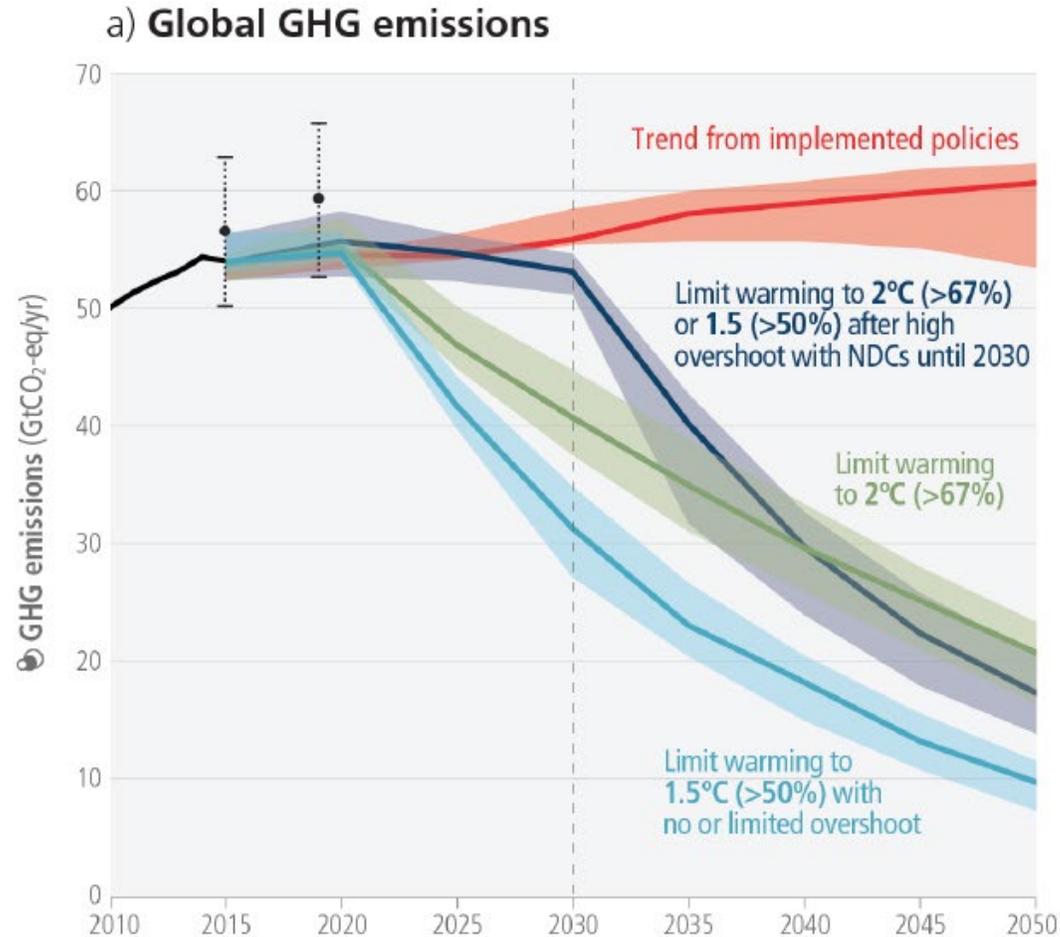
## Food insecurity (availability, access)



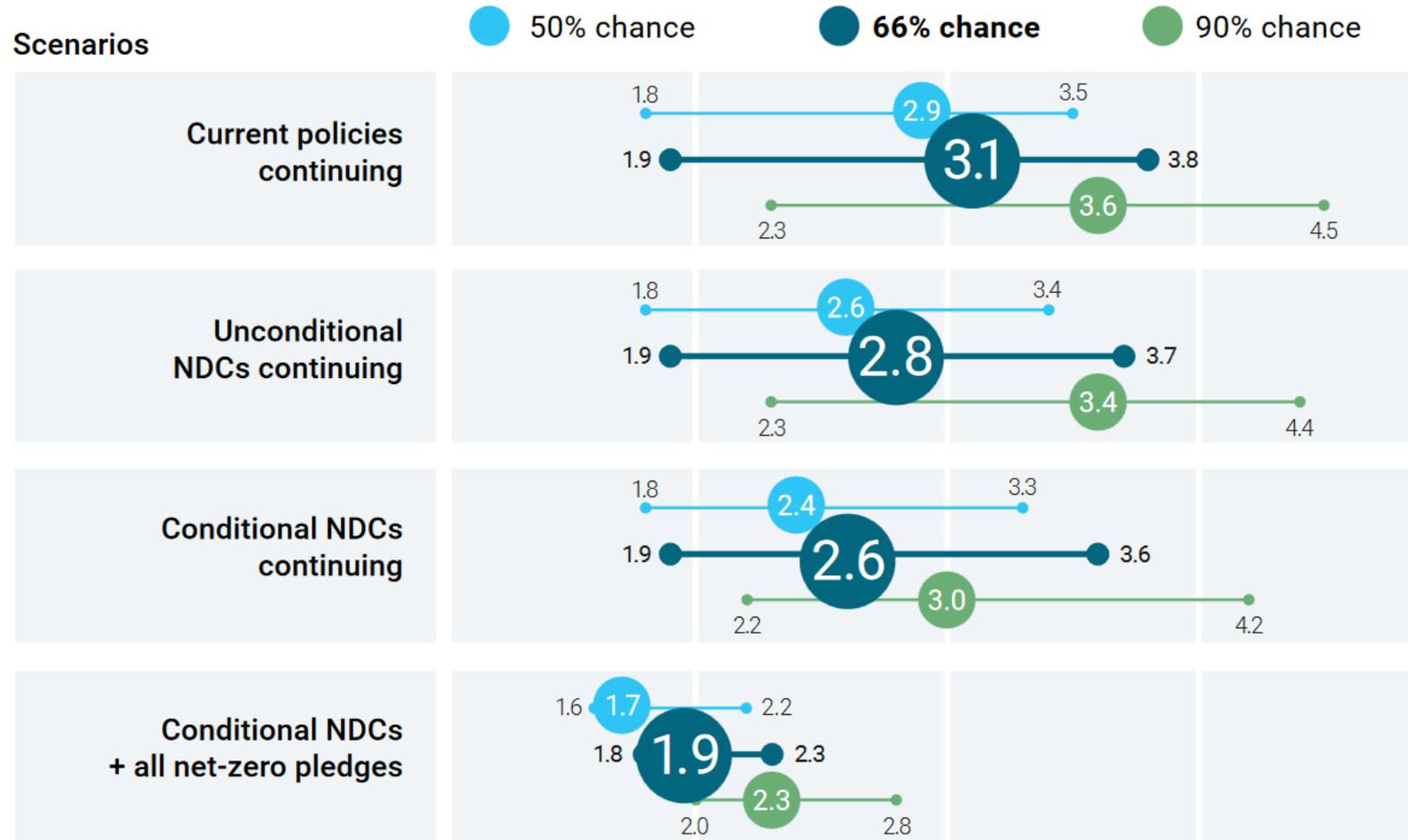


# Current Status and Trends

# Projected global emissions from NDCs make it likely that warming will exceed 1.5°C

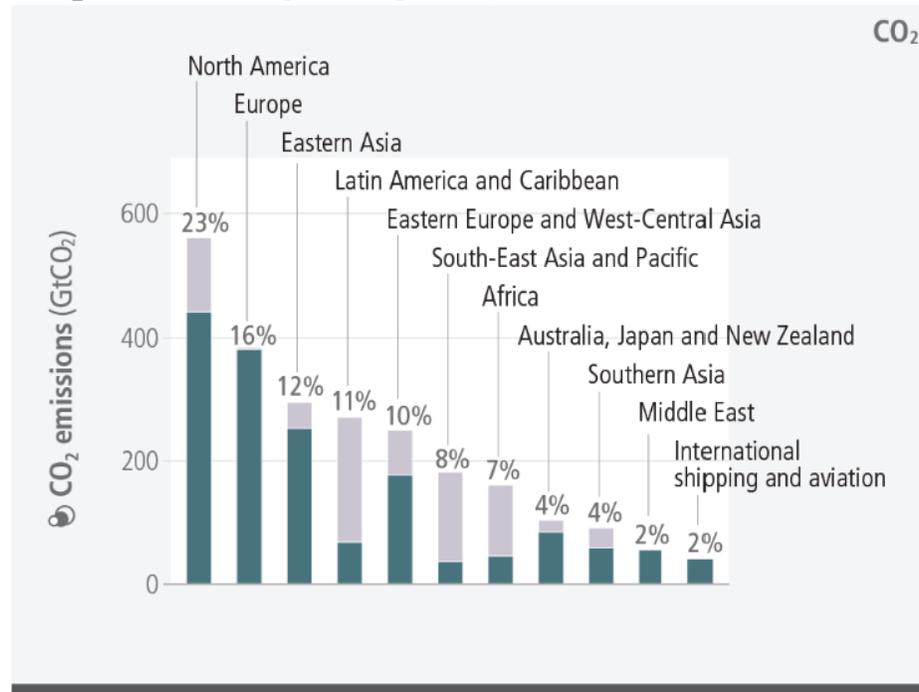


# Emission scenarios and global warming

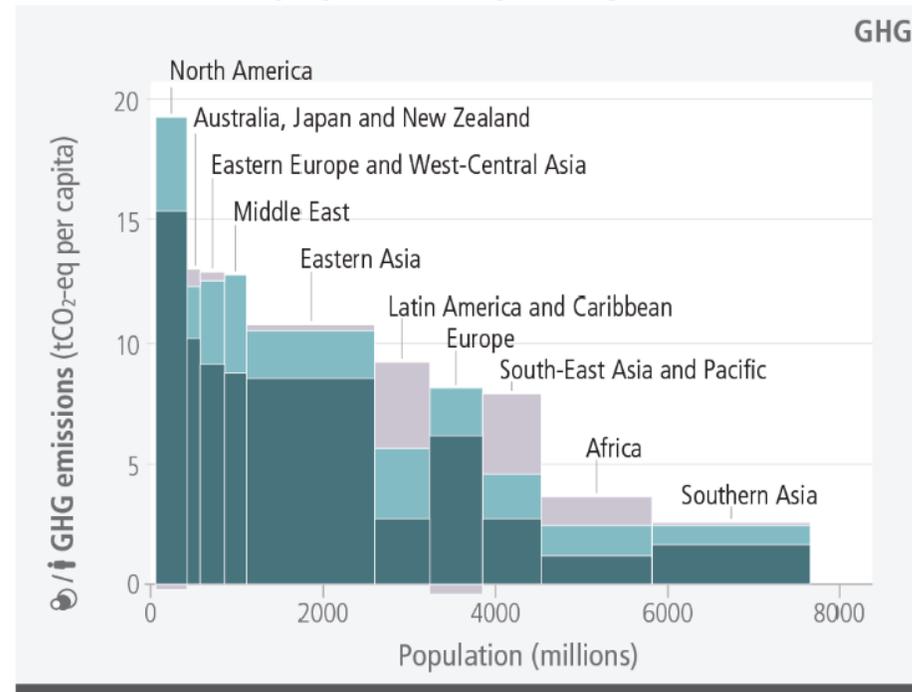


# Emissions are distributed unevenly, both in the present day and cumulatively since 1850

a) Historical cumulative net anthropogenic CO<sub>2</sub> emissions per region (1850–2019)



b) Net anthropogenic GHG emissions per capita and for total population, per region (2019)



Key

Timeframes represented in these graphs

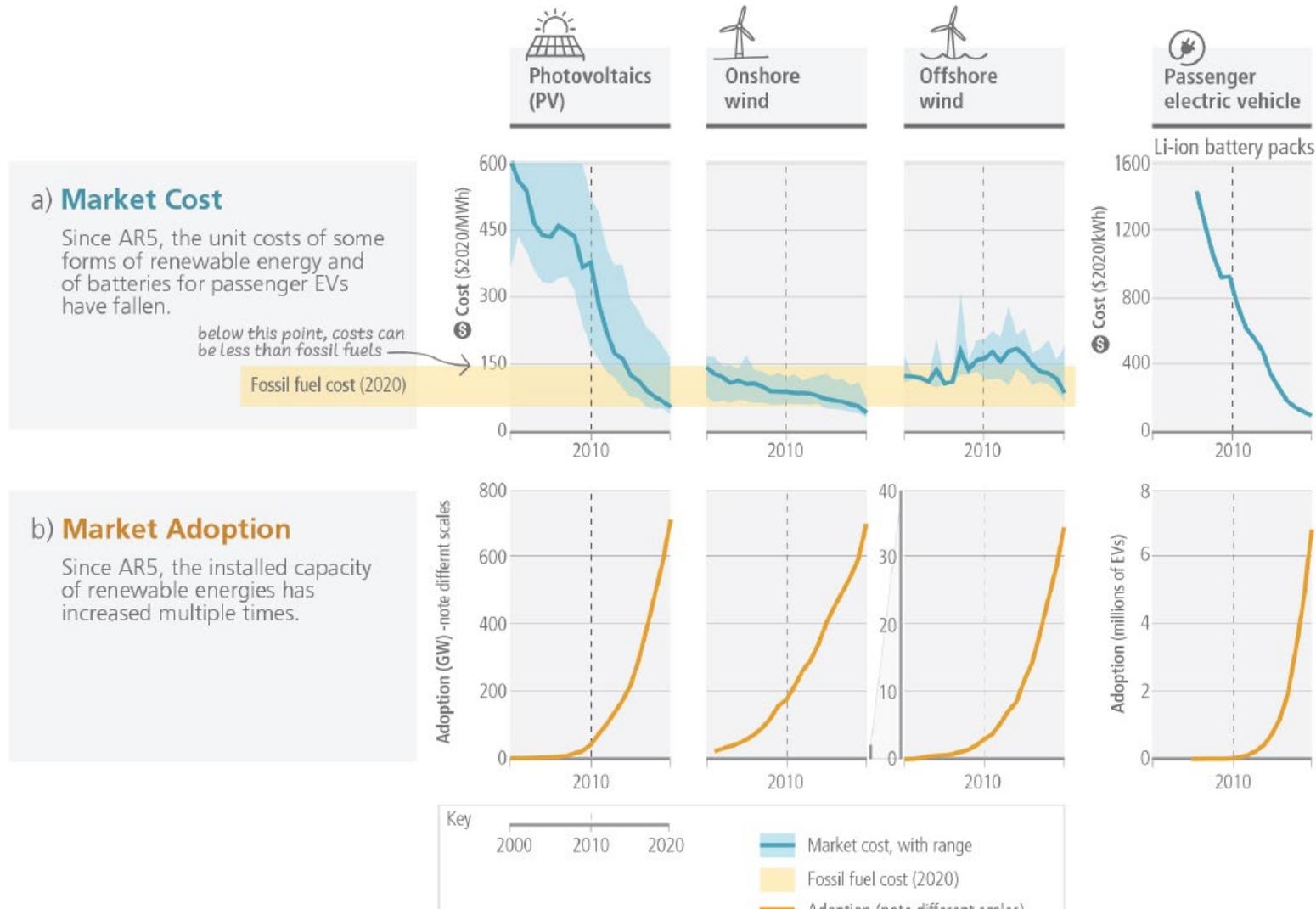
1850

1990

2019

- Net CO<sub>2</sub> from land use, land use change, forestry (CO<sub>2</sub>LULUCF)
- Other GHG emissions
- Fossil fuel and industry (CO<sub>2</sub>FFI)
- All GHG emissions

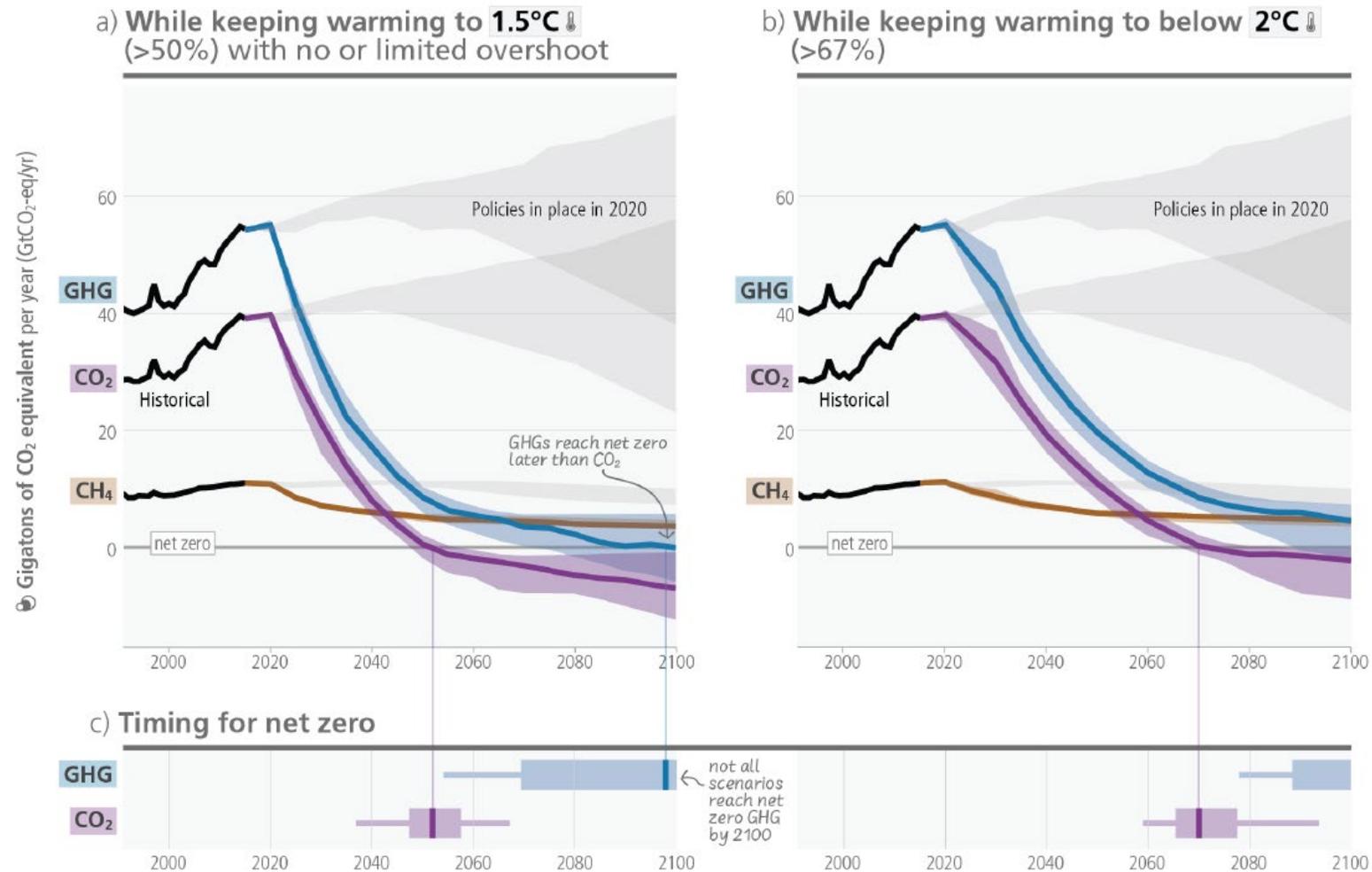
# Renewable electricity generation is increasingly price-competitive and some sectors are electrifying



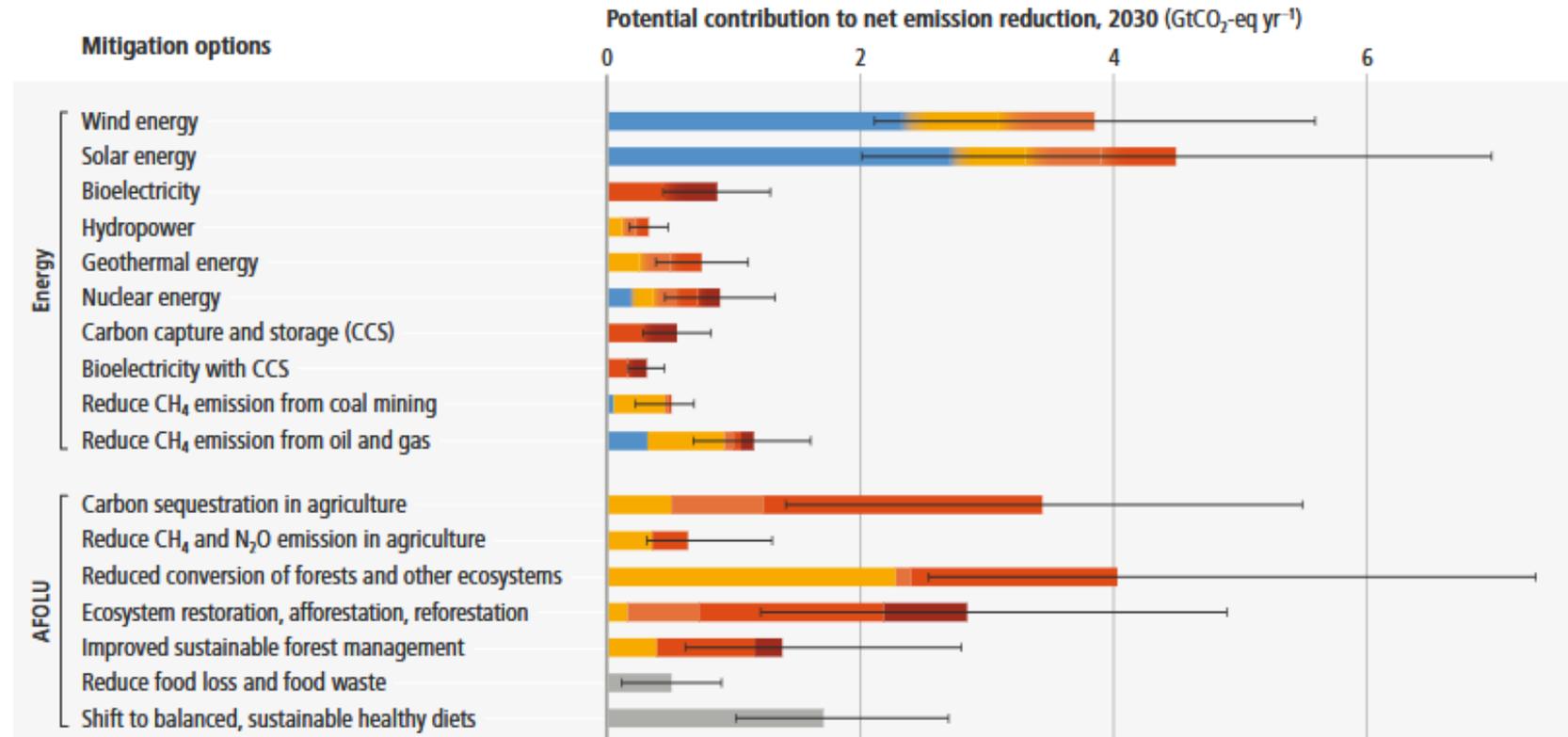


# The long-term temperature goal

# Global modelled pathways that limit warming to 1.5°C reach net zero CO<sub>2</sub> emissions around 2050



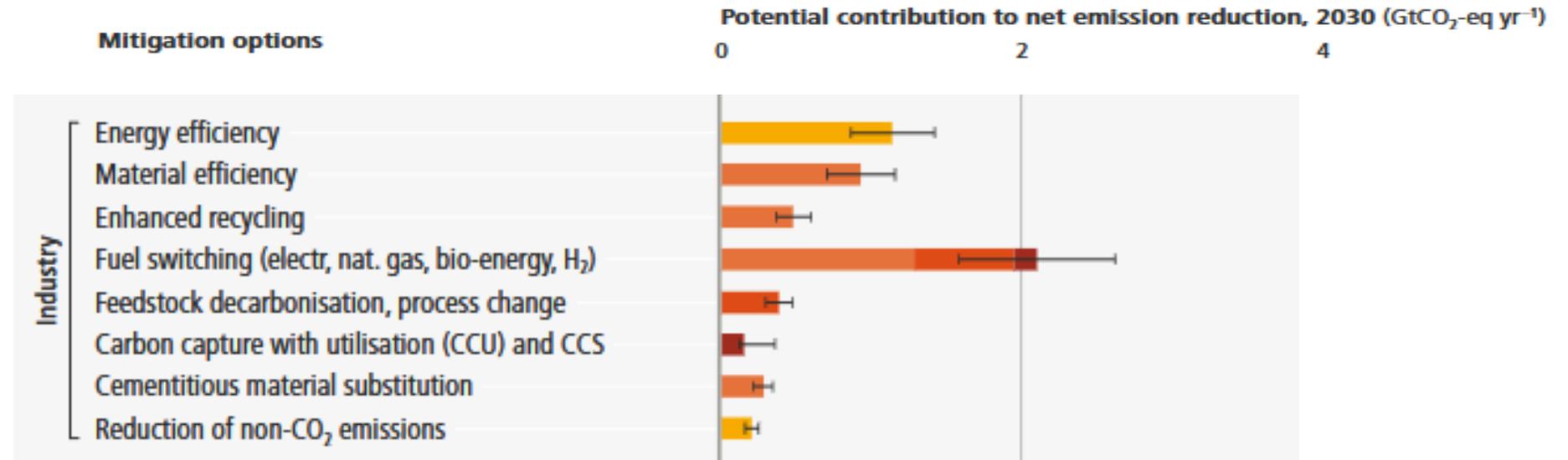
# Energy and Agriculture, Forestry and Other Land Use (AFOLU)



## Net lifetime cost of options:



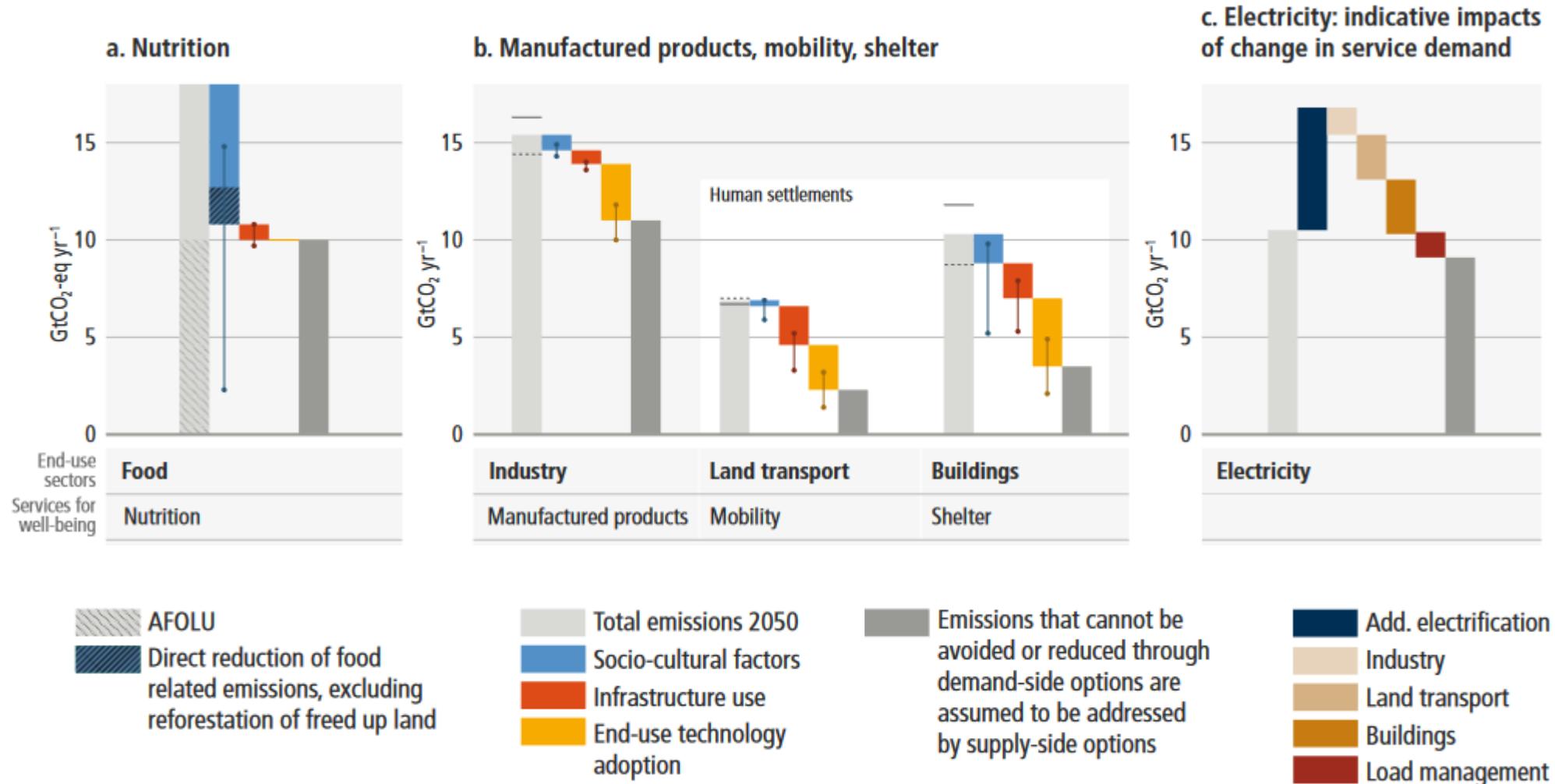
# Industry



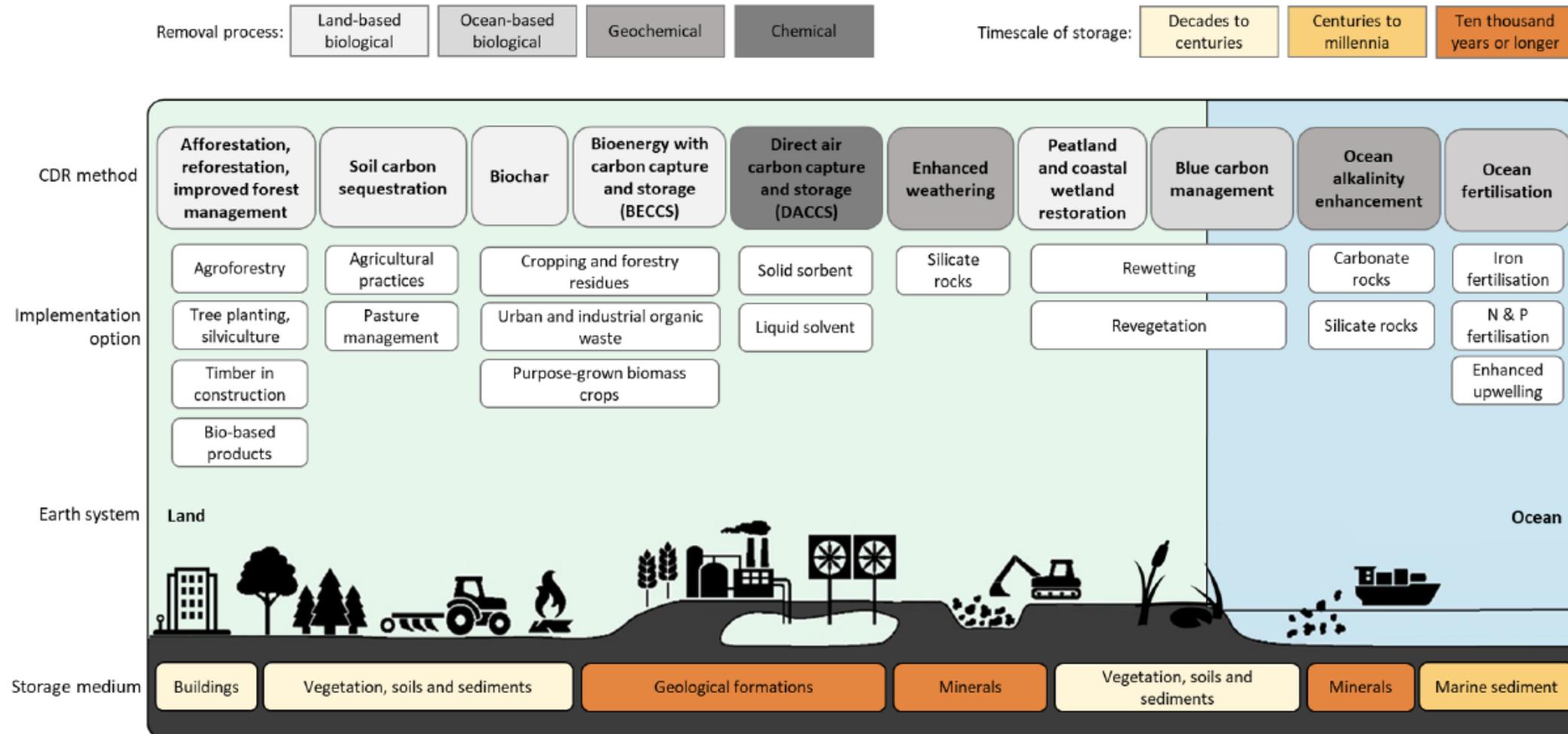
## Net lifetime cost of options:



# The range of demand-side GHG emission reduction potential by 2050 is 40-70% in end-use sectors



# Carbon Dioxide Removal: Can counterbalance hard- to-eliminate emissions



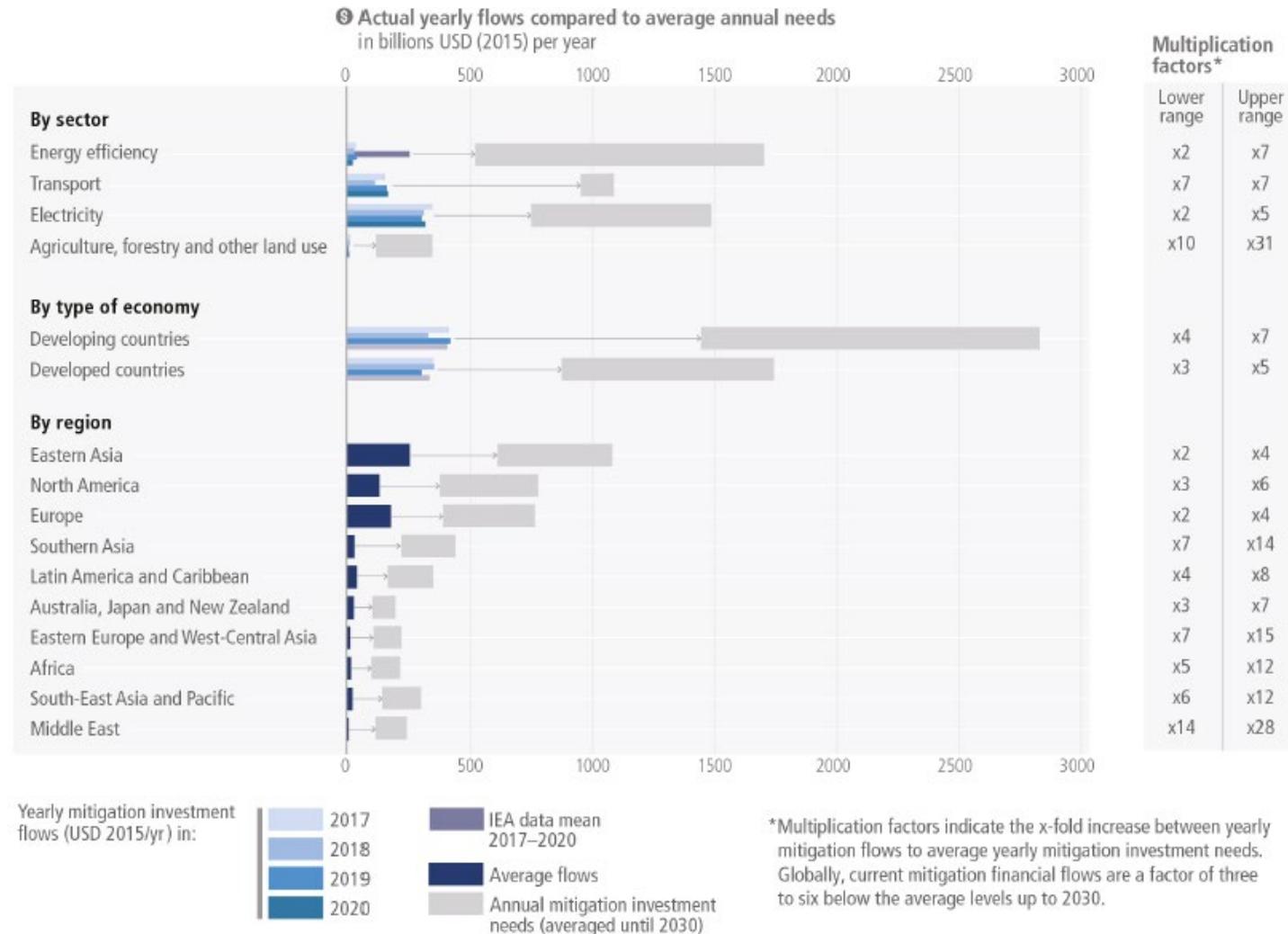
# We have the tools

- Gigatonnes of greenhouse gas emissions have already been avoided
- Climate legislation covers more than half of global emissions; 20% of emissions covered by carbon pricing
- The toolset includes: carbon pricing; regulation; standards; sunset requirements; information and advice; skills, training and supply chain development; technology cooperation; finance



# Consistent finance flows

# Higher mitigation investment flows required for all sectors and regions to limit global warming





# Plans for the Seventh Assessment Cycle

## Work under way

- The outline of a ***Special Report on Climate Change and Cities*** has been agreed, and author selection is in its final stages. The report is due to be approved in early 2027.
- The outline of a ***Methodology Report on Short Lived Climate Forcers*** has been agreed, and author selection is in its final stages. The report is due to be approved in late 2027.
- The Scoping Meeting for a ***Methodology Report on Carbon Dioxide Removal Technologies and Carbon Capture, Utilisation and Storage*** has been held, and the Panel is set to agree the outline in early 2025. The report is due to be approved in late 2027.

# The Working Group Reports

9. The Panel decides that during the Seventh Assessment Cycle the IPCC will provide a ***comprehensive Assessment Report consisting of three Working Group contributions*** in the following sequence unless the Panel decides otherwise:

- a) WG I – The Physical Science Basis
- b) WG II – Impacts, Adaptation and Vulnerability
- c) WG III – Mitigation of Climate Change

and requests the Bureau to prepare a document outlining the month and year of delivery on the basis of an AR7 strategic plan... and present it to the Panel at its next meeting for consideration and decision.



*The Scoping Meeting was held in Kuala Lumpur, 9-13 December 2024 and produced draft outlines for the three Working Group Reports.*

# IPCC's Work Programme for the Seventh Cycle

- Alongside the Working Group II report, there will be a ***distinct product revising and updating the 1994 IPCC Technical Guidelines on impacts and adaptation***, including adaptation indicators, metrics and methodologies. *This was also scoped in Kuala Lumpur.*
- ***The Synthesis Report*** for the Seventh Assessment Cycle will be produced by late 2029, after the completion of Working Group reports.

# THANK YOU

## FOR YOUR ATTENTION

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