Sixth Assessment Report
WORKING GROUP III – MITIGATION OF CLIMATE CHANGE

ipcc
INTERGOVERNMENTAL PANEL ON climate change

WMO UNEP

Climate Change 2022

Mitigation of Climate Change

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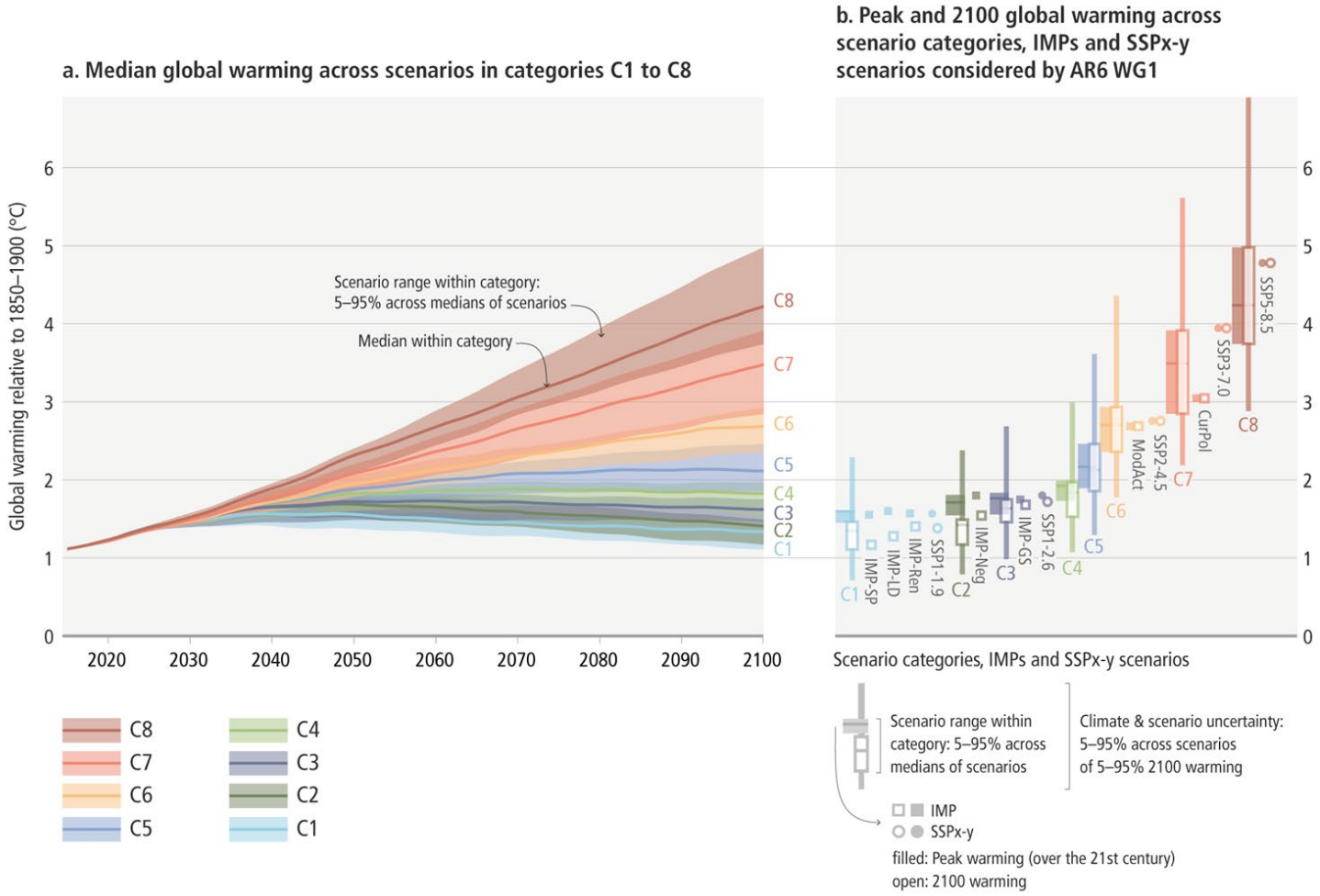
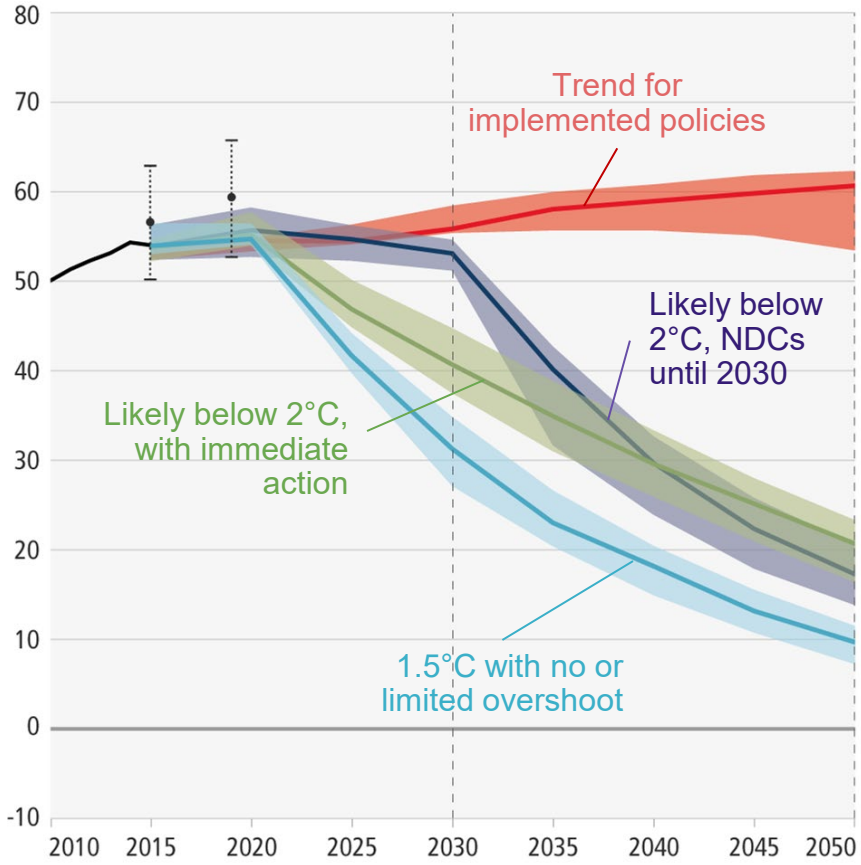
[Matt Bridgestock, Director and Architect at John Gilbert Architects]

The range of assessed scenarios results in a range of 21st century projected global warming.



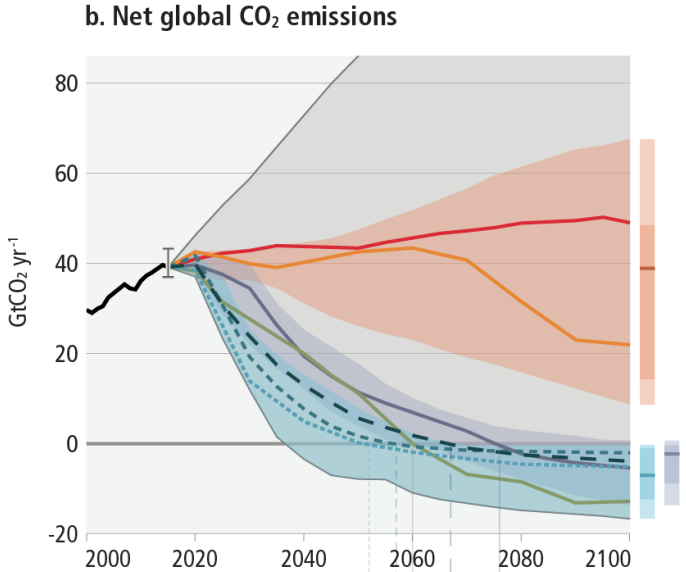


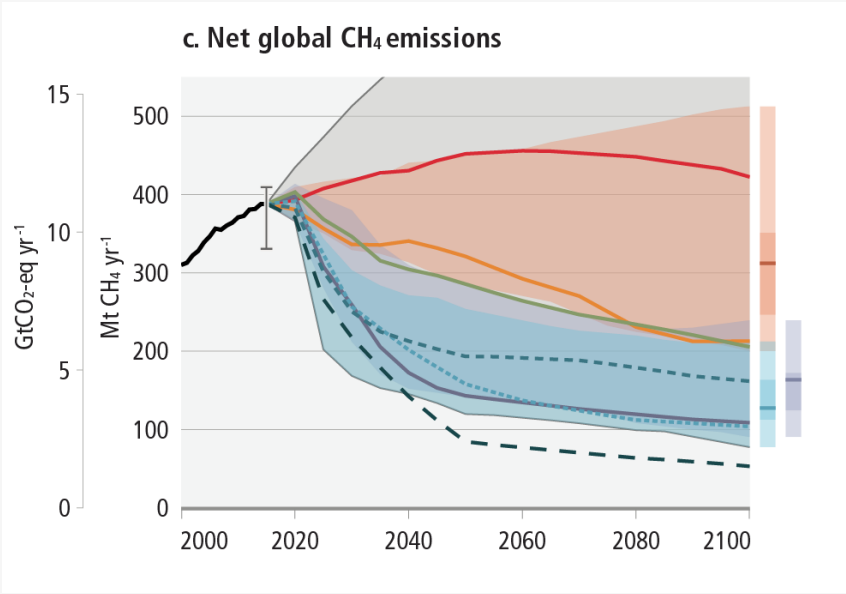
Limiting warming to 1.5 °C

- Global GHG emissions peak before 2025, reduced by 43% by 2030.
- Methane reduced by 34% by 2030

Limiting warming to around 2°C

- Global GHG emissions peak before 2025, reduced by 27% by 2030.





All climate categories (*very likely range*)

Implemented policies and 2030 pledges (*very likely range*)

Limit warming to 2°C (>67%) (C3) (*very likely range*)

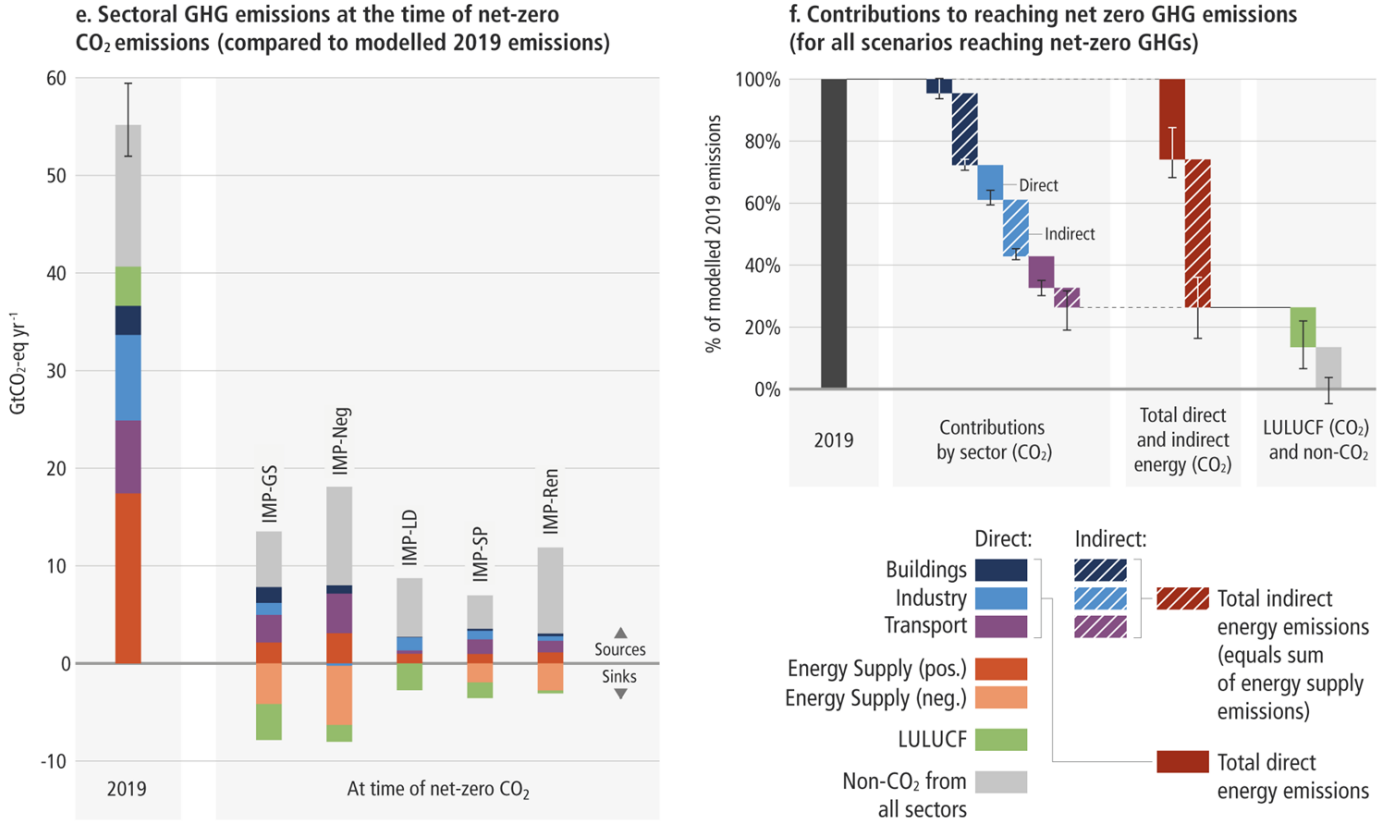
Limit warming to 1.5°C (>50%) with no or limited overshoot (C1) (*very likely range*)

CurPol (C7)
ModAct (C6)
IMP-GS (C3)
IMP-Neg (C2)
IMP-LD (C1)
IMP-Ren (C1)
IMP-SP (C1)

Past emissions (2000–2015)
Model range for 2015 emissions
Past GHG emissions and uncertainty for 2015 and 2019 (dot indicates the median)

Percentile of 2100 emission level:
95th
75th
Median
25th
5th

Net zero CO_2 and net zero GHG emissionsare possible through different modelled mitigation pathways.



Carbon Dioxide Removal

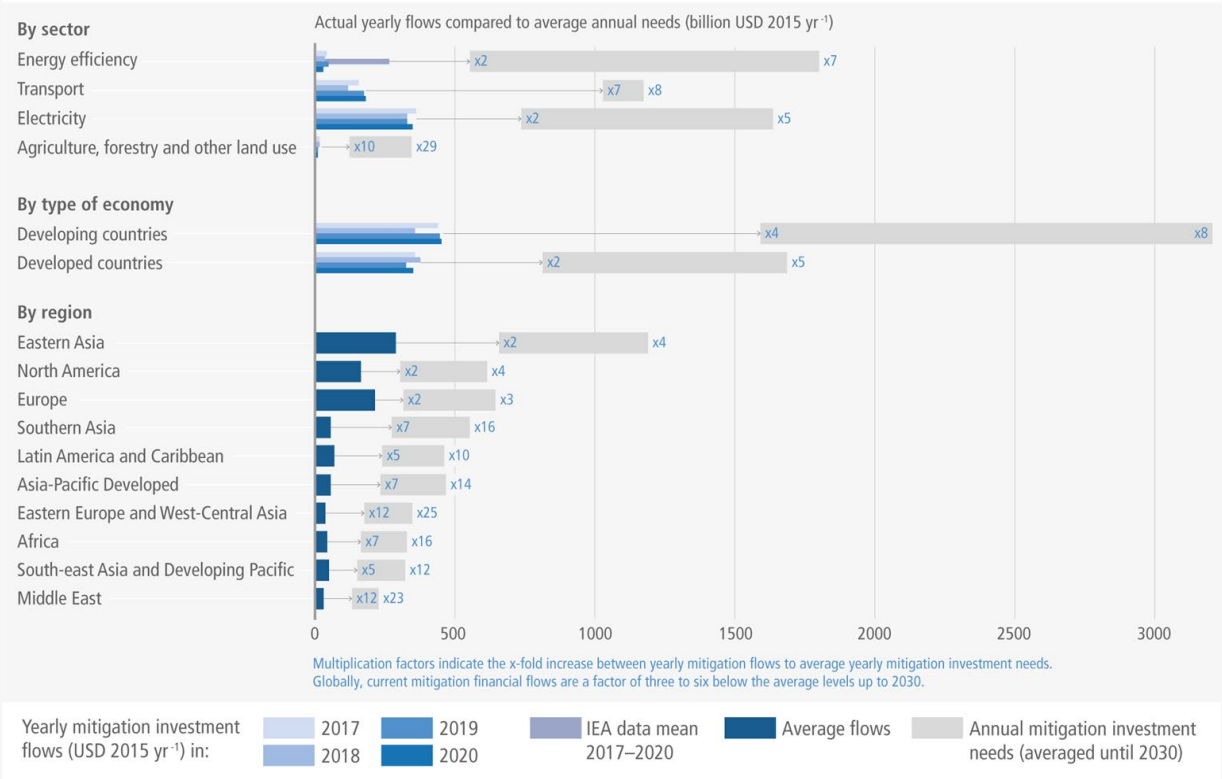
- required to **counterbalance hard-to-eliminate** emissions
- through **biological** methods: reforestation, and soil carbon sequestration
- **new technologies** require more **research**, up-front **investment**, and proof of concept at **larger scales**
- **essential** to **achieve net zero**
- **agreed methods** for measuring, reporting and verification required

[Forest Service Northern Region CC BY 2.0, Fiston Wasanga/CIFOR CC BY-NC-ND 2.0, Climeworks]



Closing investment gaps

- financial flows: **3-6x lower** than levels needed **by 2030** to limit warming to below 1.5°C or 2°C
- there is **sufficient global capital** and liquidity to close investment gaps
- challenge of closing gaps is widest for developing countries



Technical summary figure 25