ipcc

INTERGOVERNMENTAL PANEL ON climate change

CLIMATE CHANGE 2014

Synthesis Report

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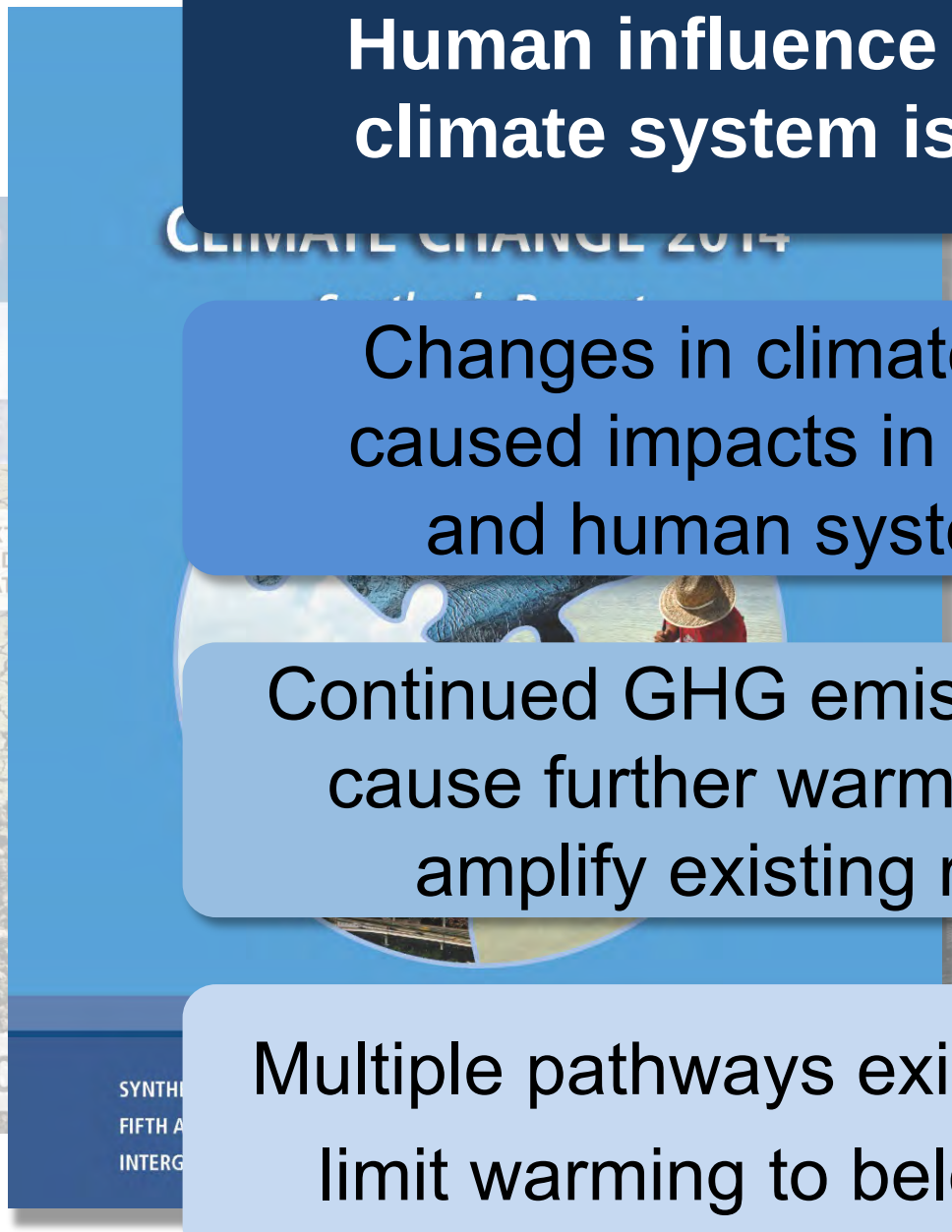
IPCC 5th Assessment Cycle (2008-2014):

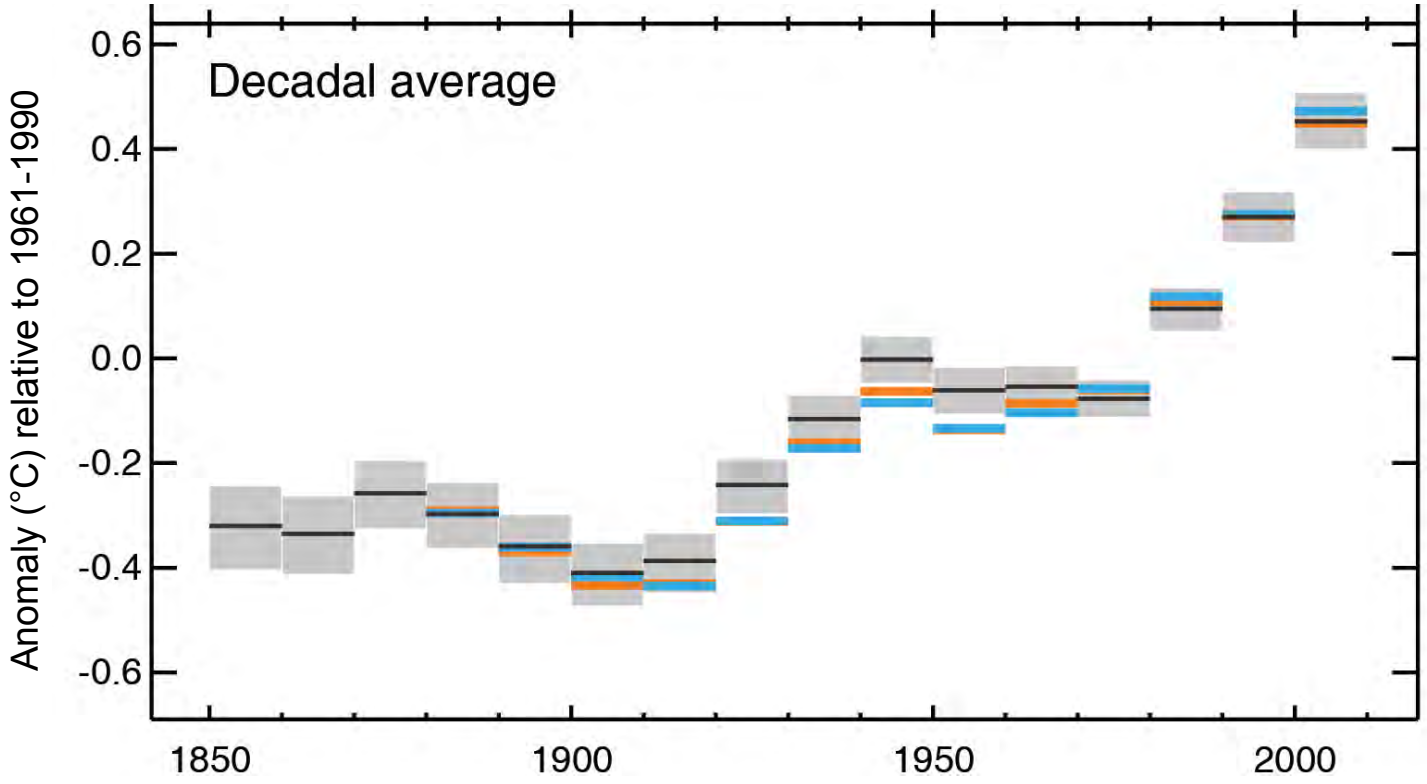
Human influence on the climate system is clear.

Changes in climate have caused impacts in natural and human systems.

Continued GHG emissions will cause further warming and amplify existing risks.

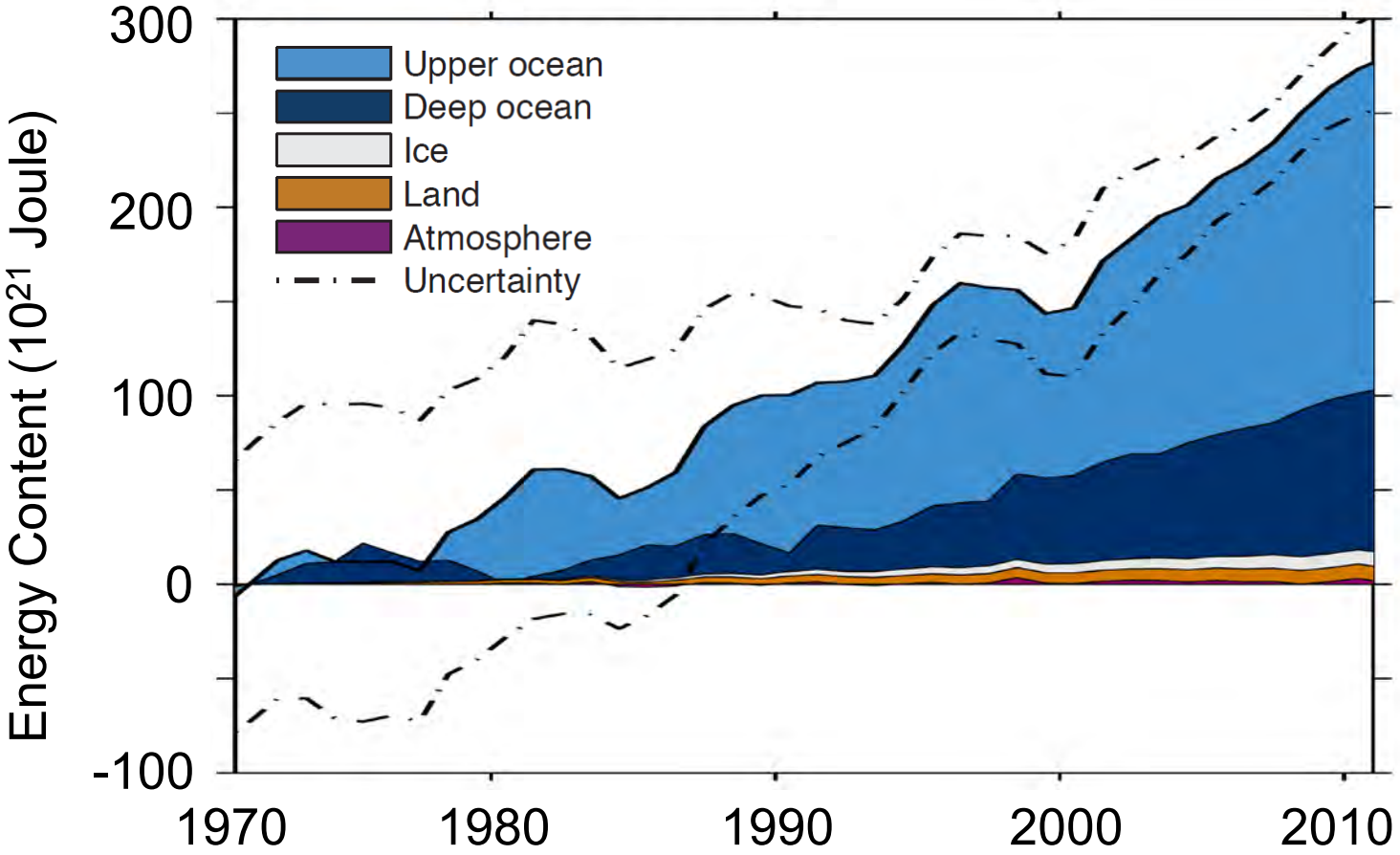
Multiple pathways exist to *likely* limit warming to below 2°C.





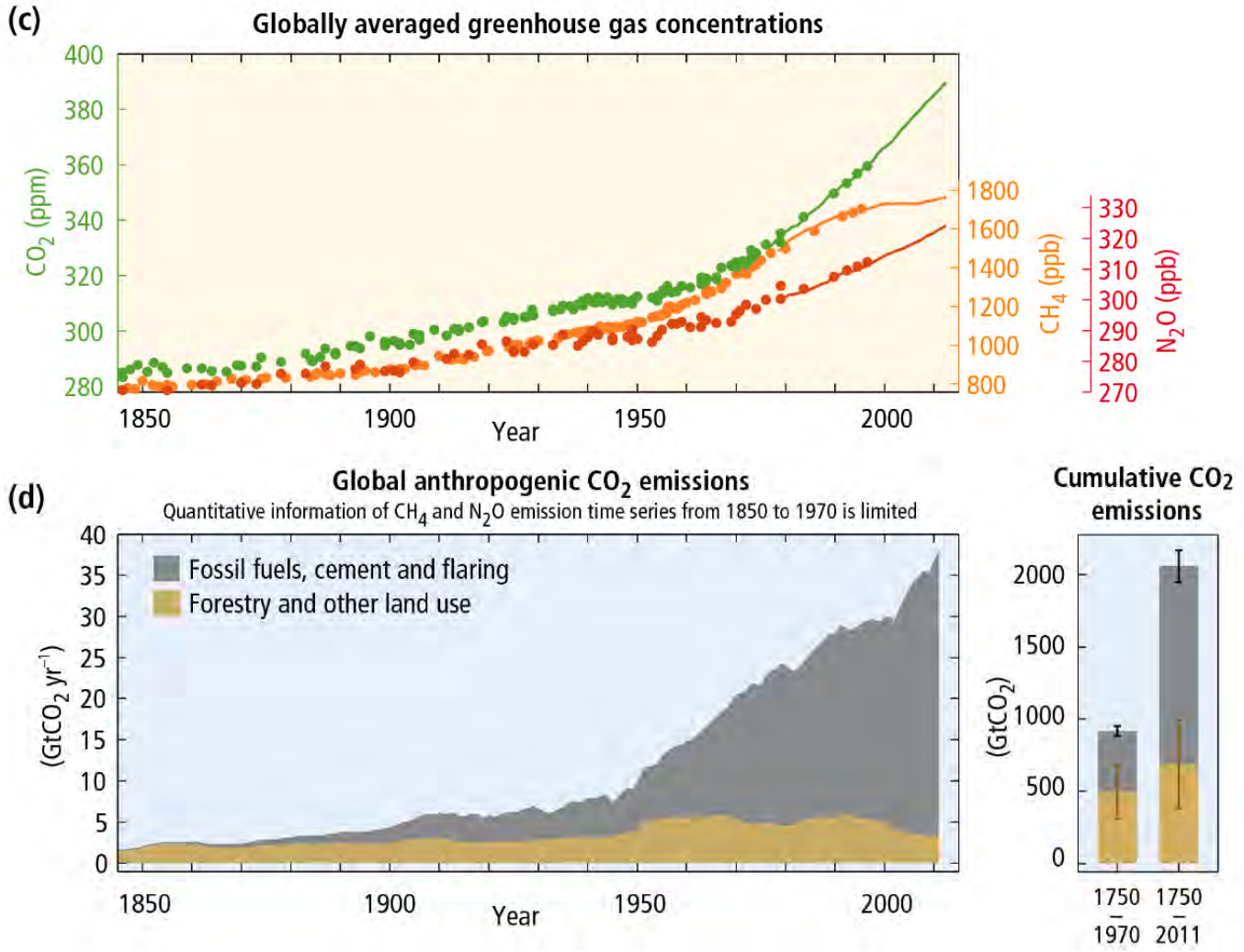
IPCC 2013, Fig. SPM.1b; IPCC 2014, Fig. 1.1

Warming of the climate system is unequivocal



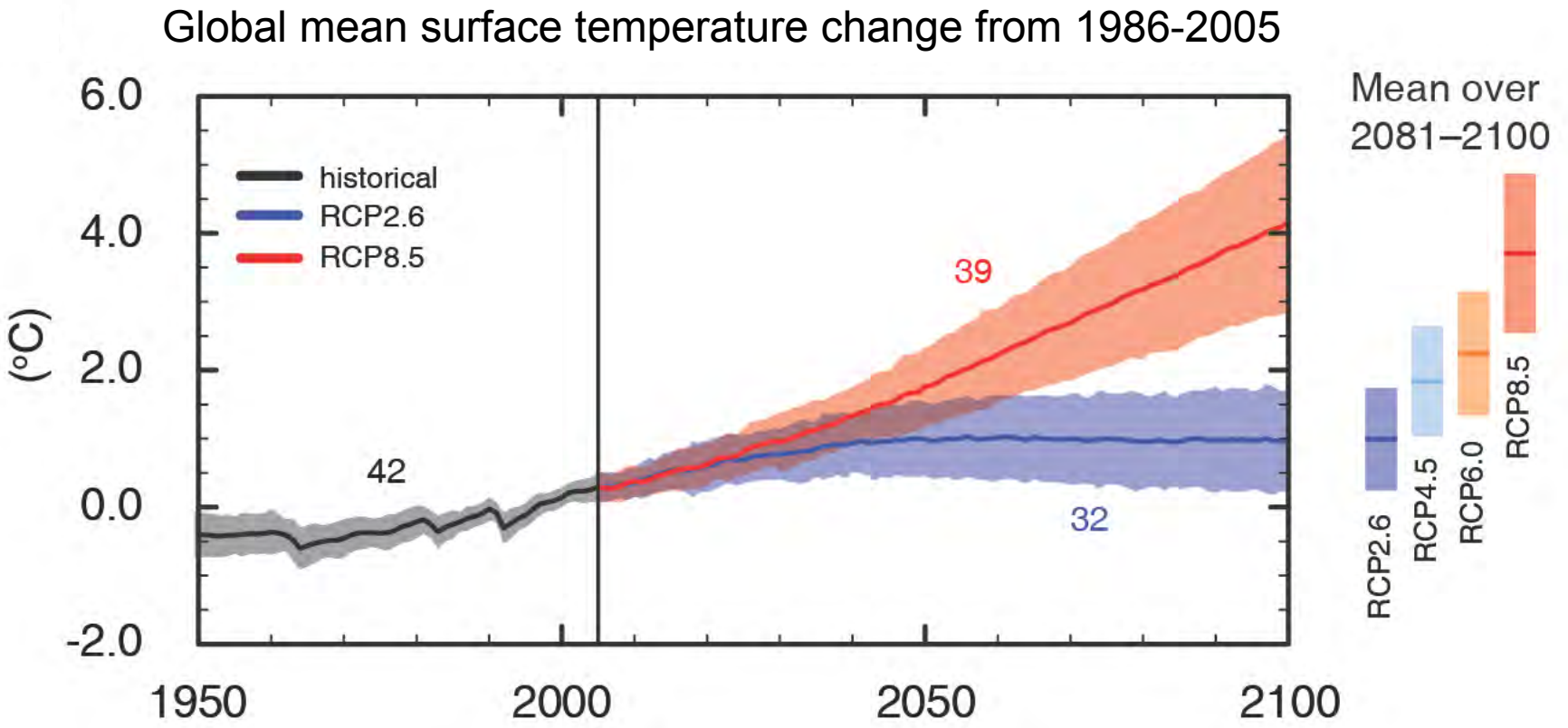
IPCC 2013, Box 3.1 Fig. 1; IPCC 2014, Fig. 1.2

Ocean warming dominates the increase in energy stored in the climate system



IPCC 2014, Fig. SPM.1c, d

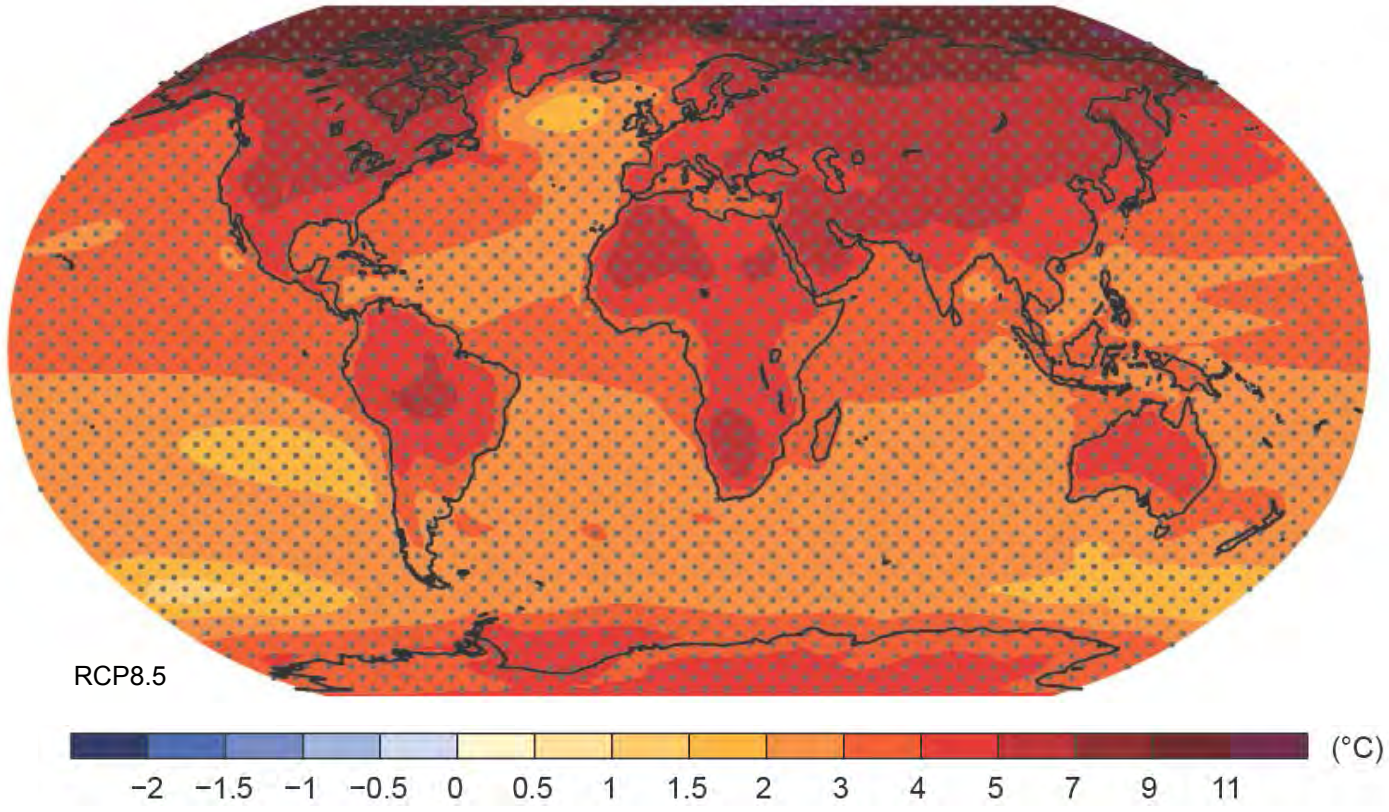
Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history.



IPCC 2013, Fig. SPM.7; IPCC 2014, Fig. SPM.6

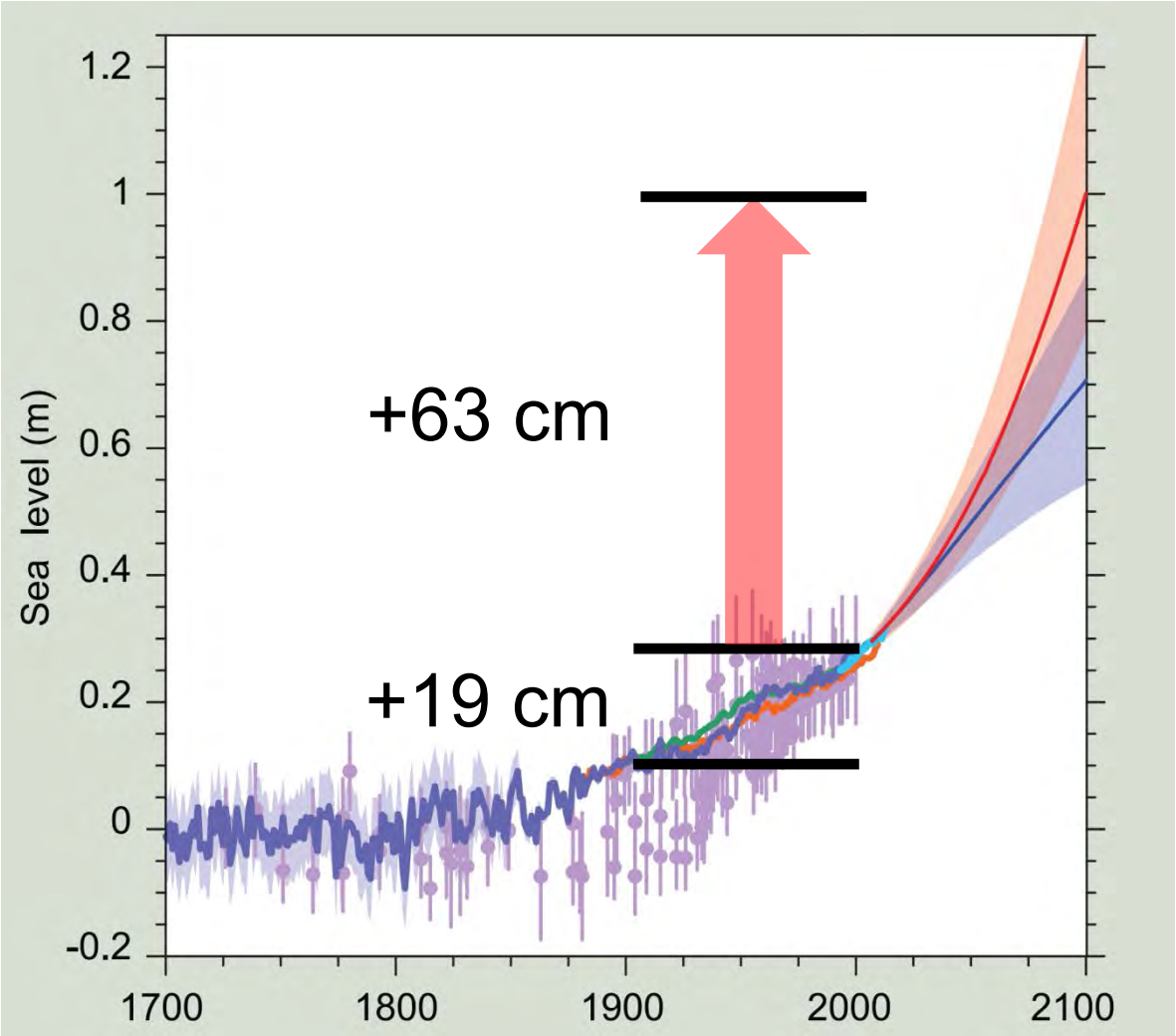
Global surface temperature change for the end of the 21st century is *likely* to exceed 1.5°C relative to 1850−1900 for all scenarios except RCP2.6.

Change in average surface temperature (1986-2005 to 2081-2100)



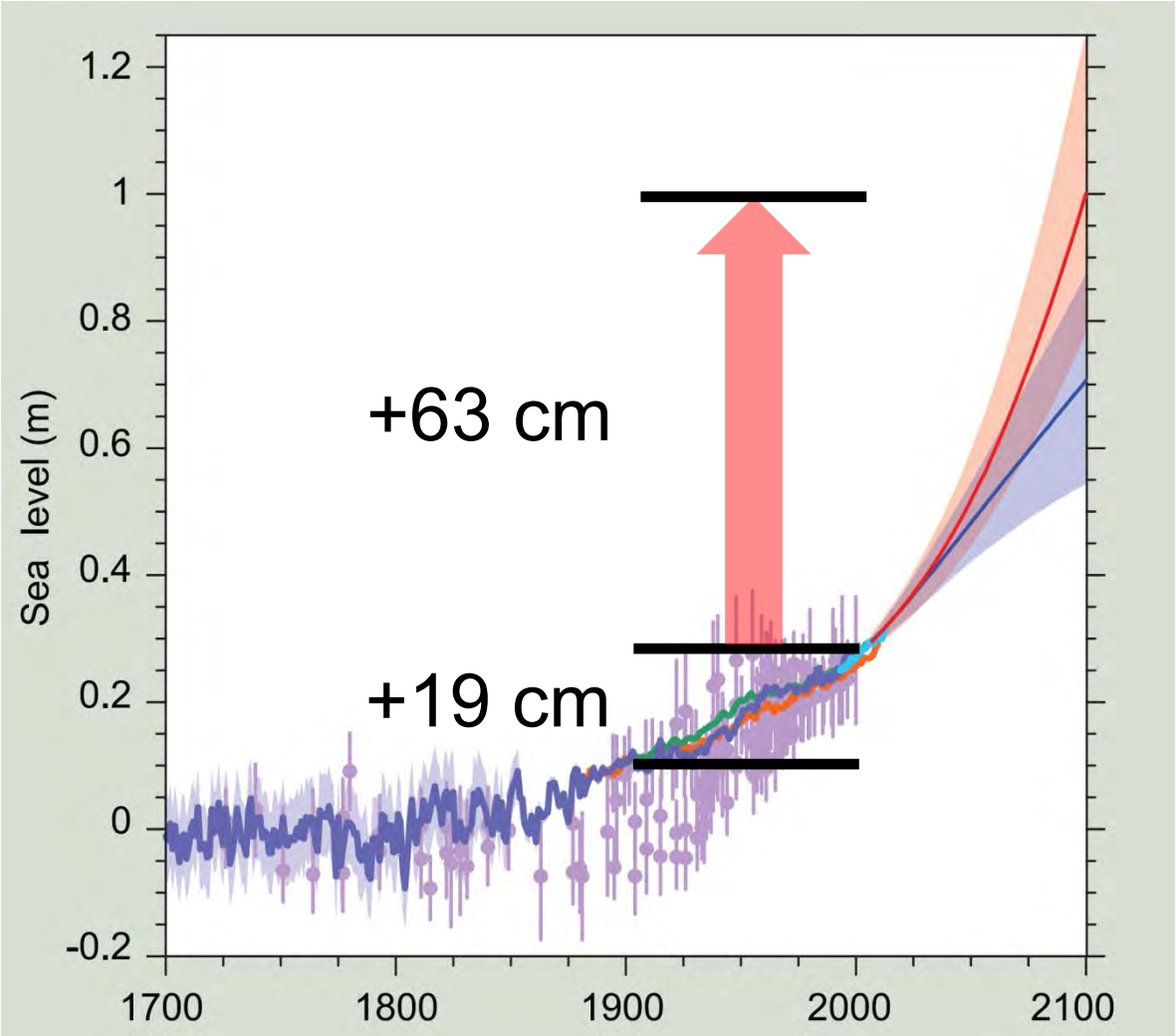
IPCC 2013, Fig. SPM.8, IPCC 2014, Fig. SPM.7

Further warming will increase the likelihood of severe, pervasive and irreversible impacts for people and ecosystems.



IPCC 2013, TFE.2, Fig. 2

Global mean sea level will continue to rise over the 21st century... and beyond..



IPCC 2013, TFE.2, Fig. 2

Climate change will amplify existing risks and create new risks for natural and human systems.

Global mean warming

All CO_2 emissions since 1750

Global mean warming

All CO_2 emissions since 1750

Warming of 0.8 to 2.5°C

Any **climate target** implies a limited **carbon budget**

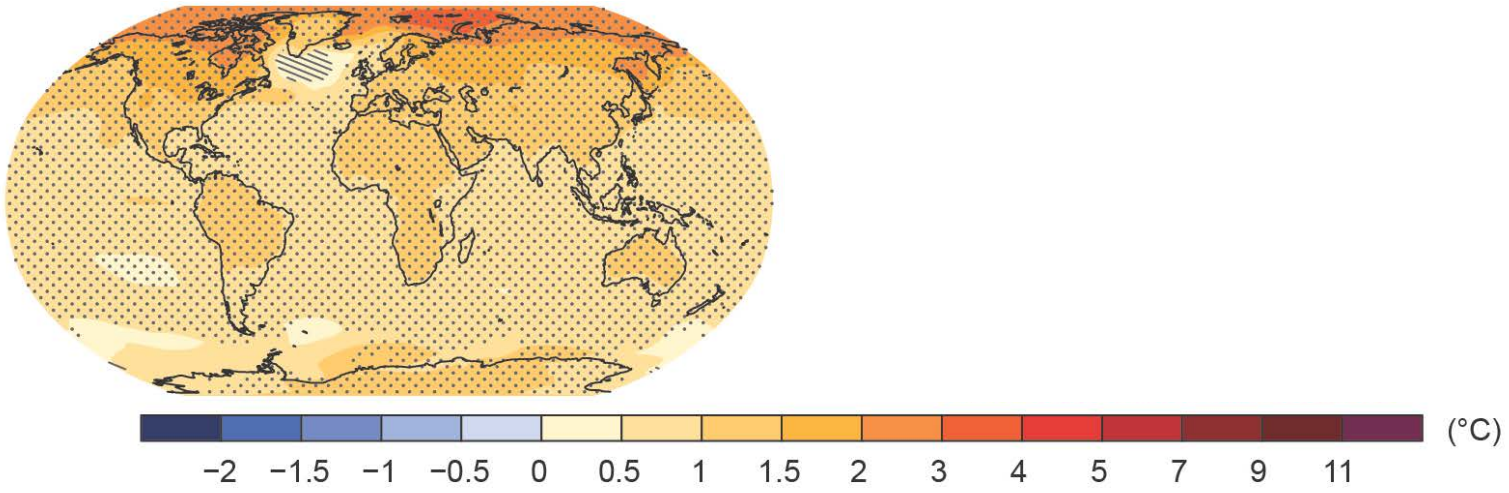
1000 billion tons of carbon

Budget for the 2°C target:	790 bill t C
CO_2 emissions until 2014*:	−545 bill t C
Remaining emissions:	**245 bill t C**
CO_2 emissions in 2014*:	**10.1 bill t C**

* updated from IPCC 2013, WGI SPM

Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks.

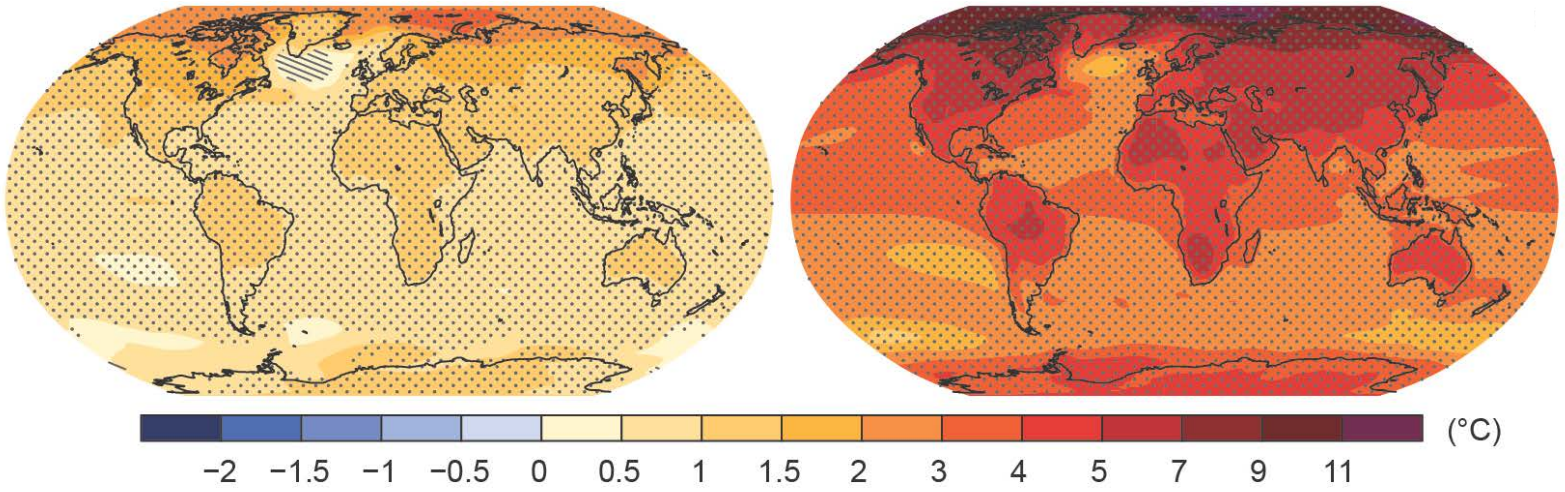
2°C world

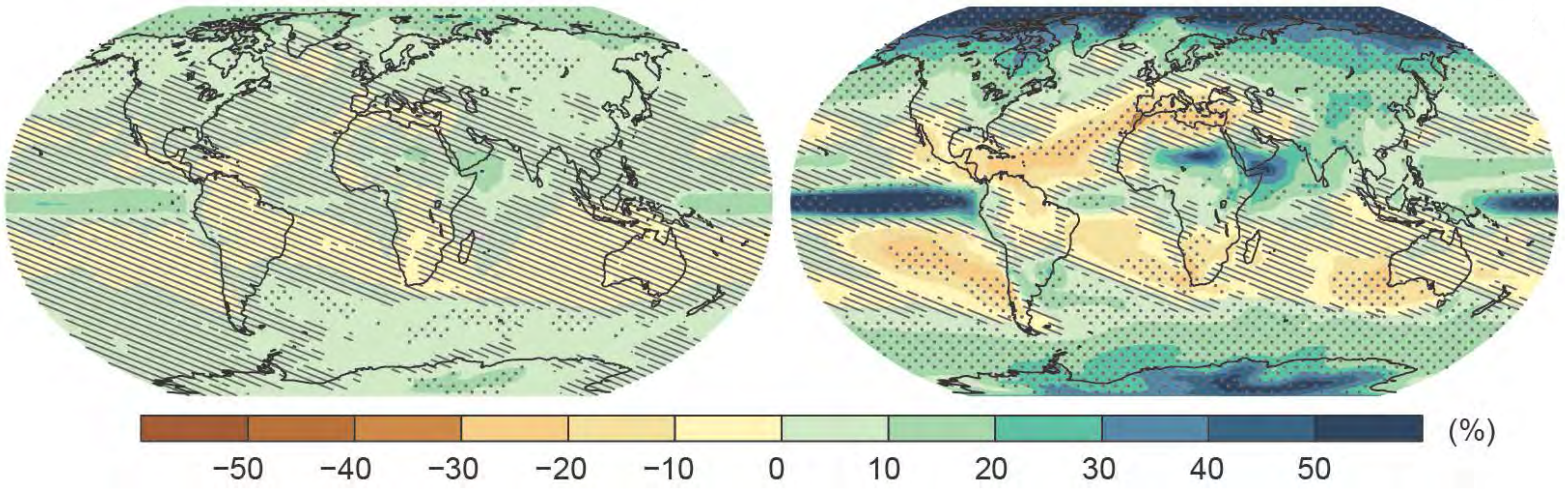


IPCC 2013, Fig. SPM.8; IPCC 2014 Fig. SPM.7

2°C world

4.5°C world

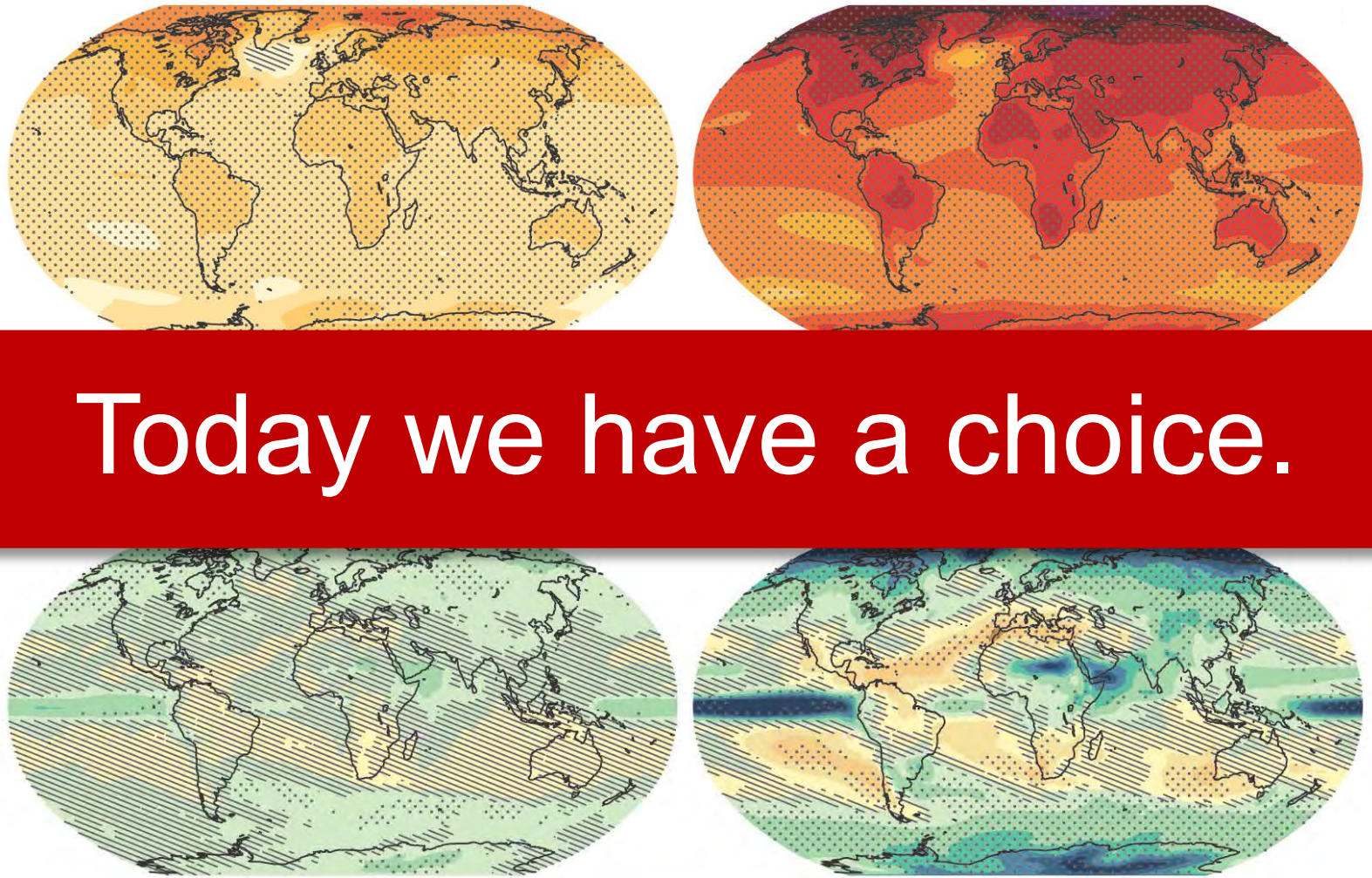




IPCC 2013, Fig. SPM.8; IPCC 2014 Fig. SPM.7

2°C world

4.5°C world



Today we have a choice.