

Climate Change 2013: The Physical Science Basis

Working Group I contribution to the IPCC Fifth Assessment Report

The physical basis of climate change: Key messages of the AR5 WGI Contribution

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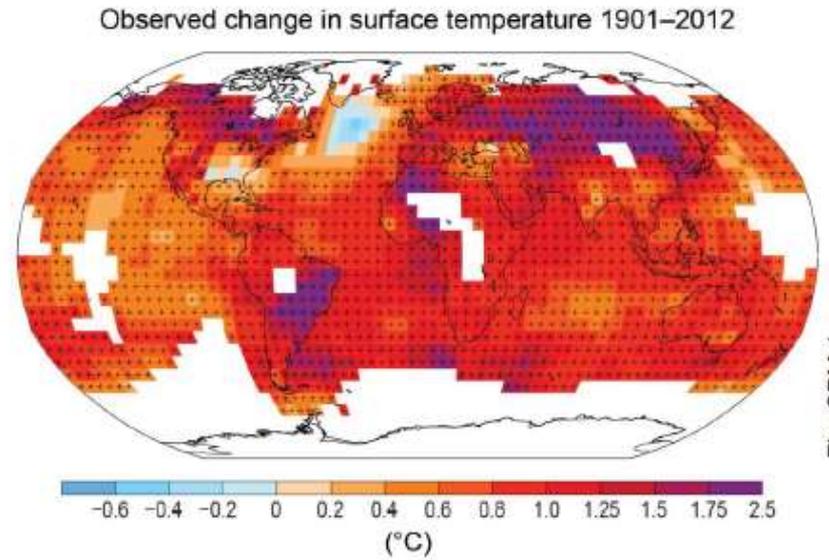
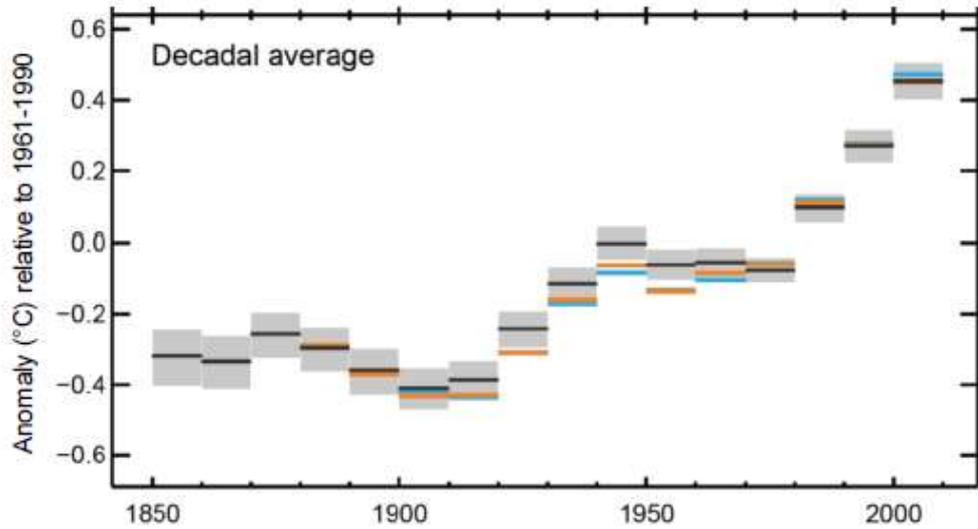
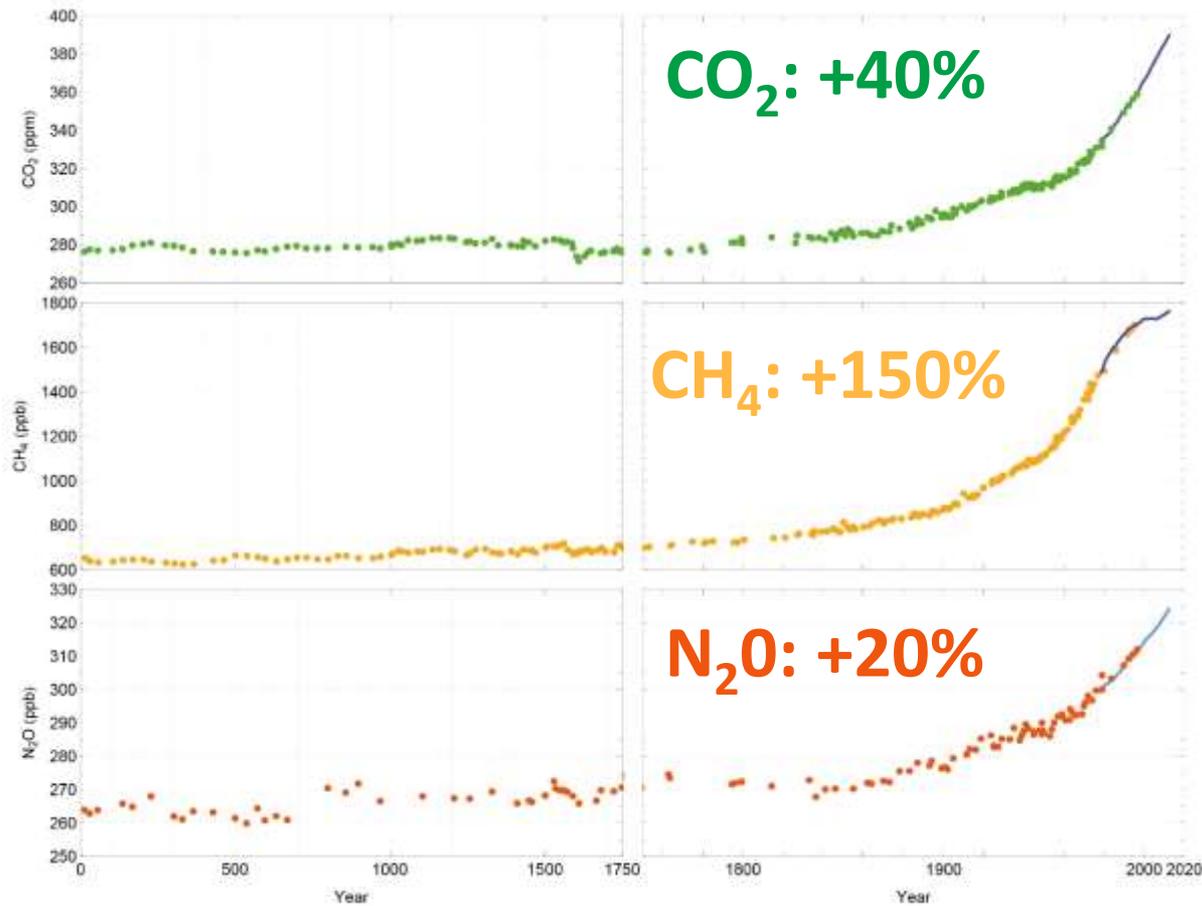


Fig. SPM.1

Warming of the climate system is unequivocal



(IPCC 2013, Fig. 6.11)

The atmospheric concentrations of carbon dioxide, methane and nitrous oxide have all increased since 1750 due to human activity

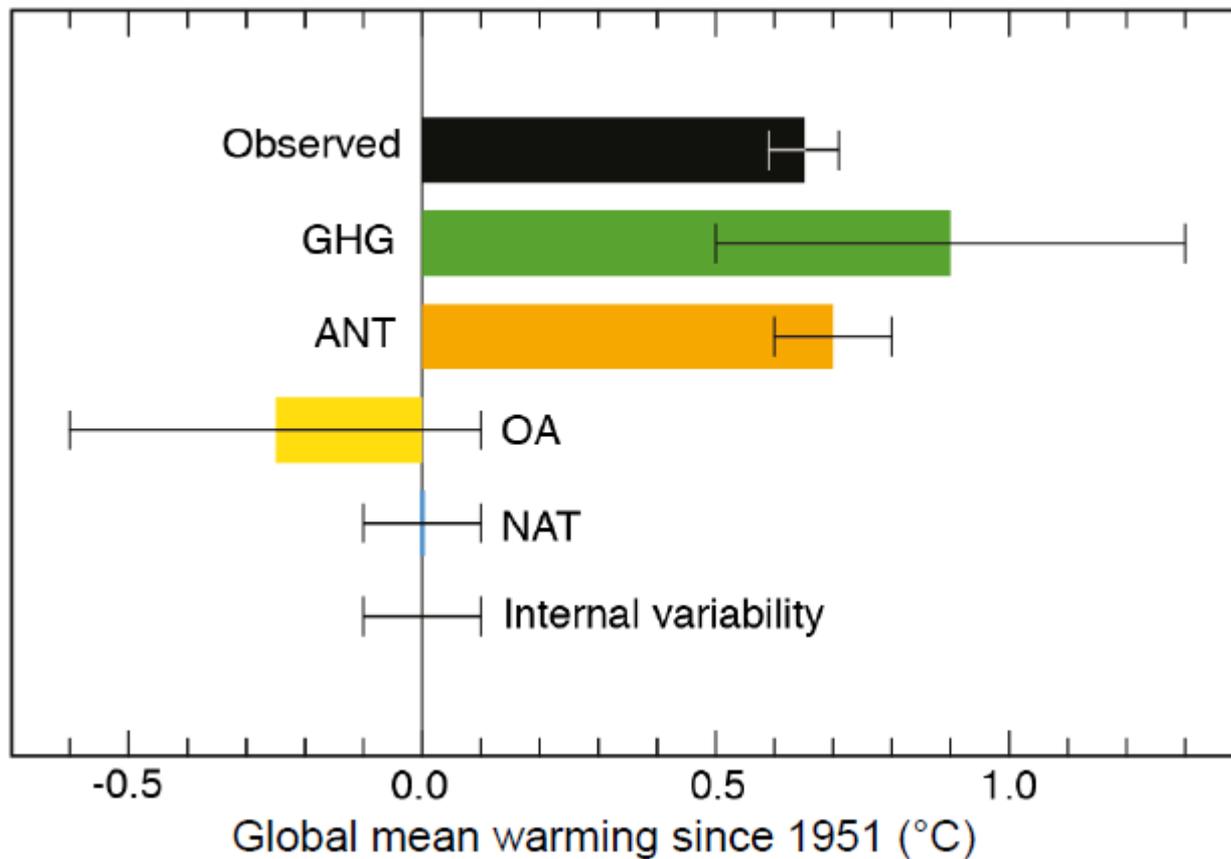
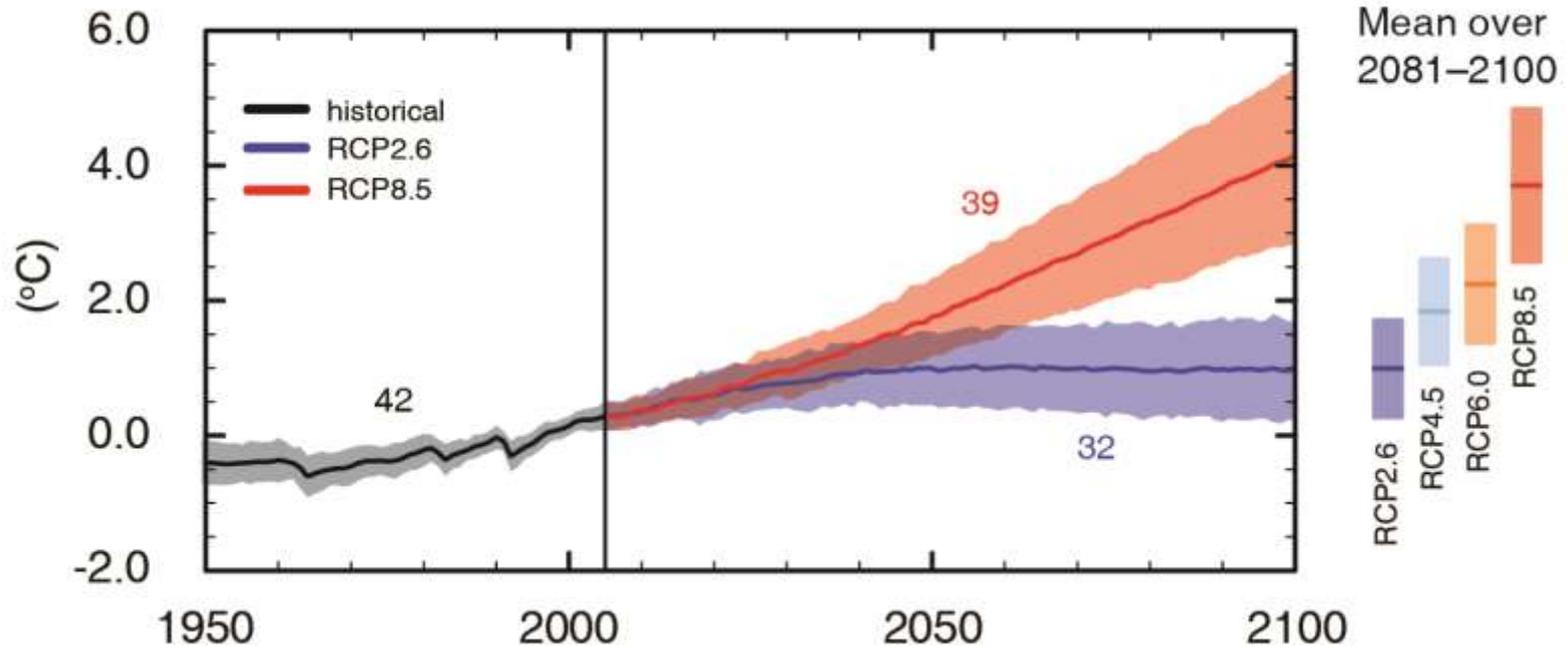


Fig. TS.10

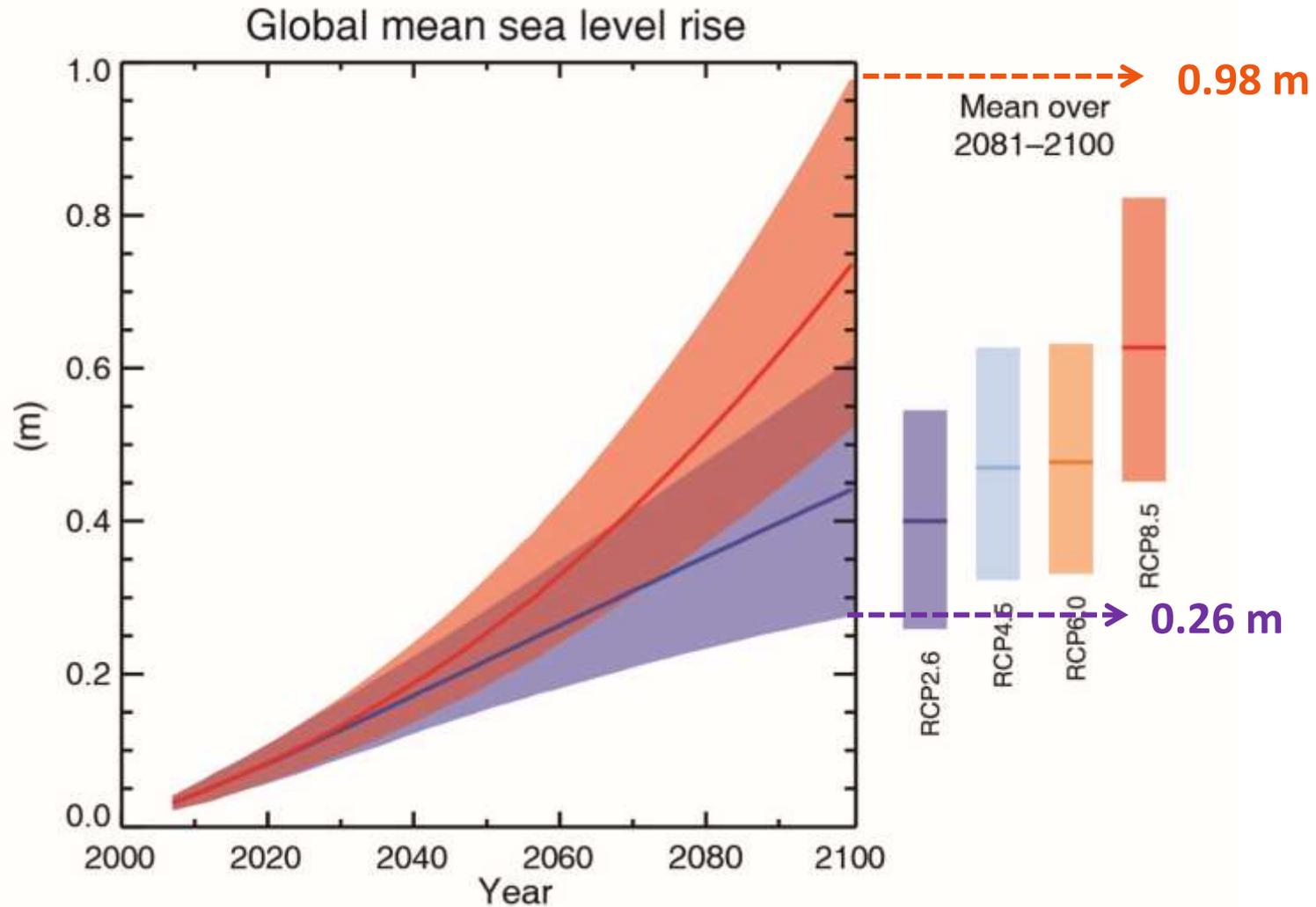
It's extremely likely that more than 50% of the warming since 1951 is due to the increase in greenhouse gases and other anthropogenic forcing together.

Global average surface temperature change



(IPCC 2013, Fig. SPM.7a)

Global temperature change for the end of the 21st century is likely to exceed 1.5°C relative to 1850 for all scenarios



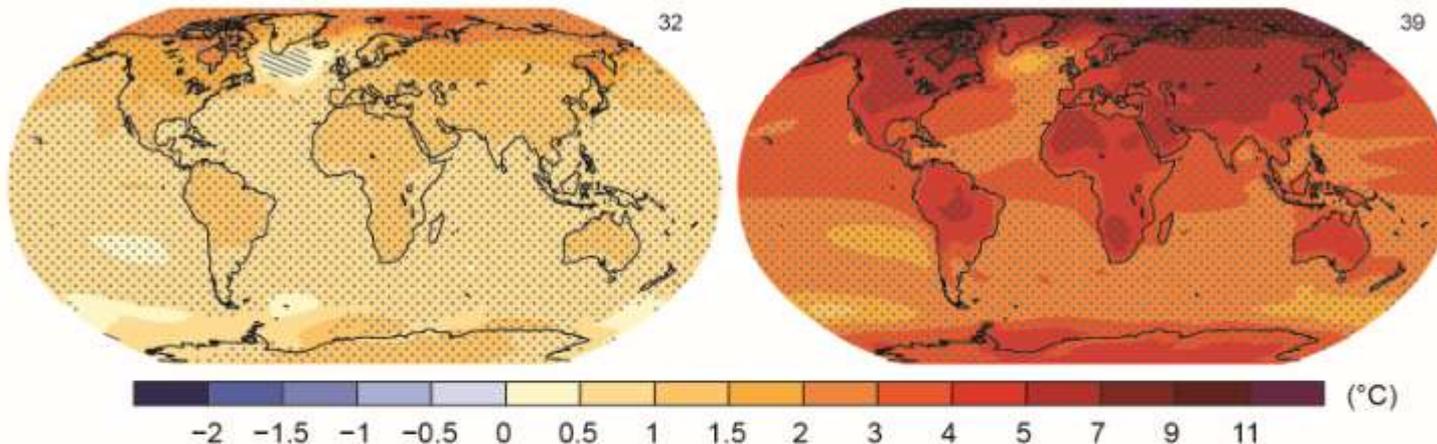
(IPCC 2013, Fig. SPM.9)

Global mean sea level will continue to rise during the 21st century

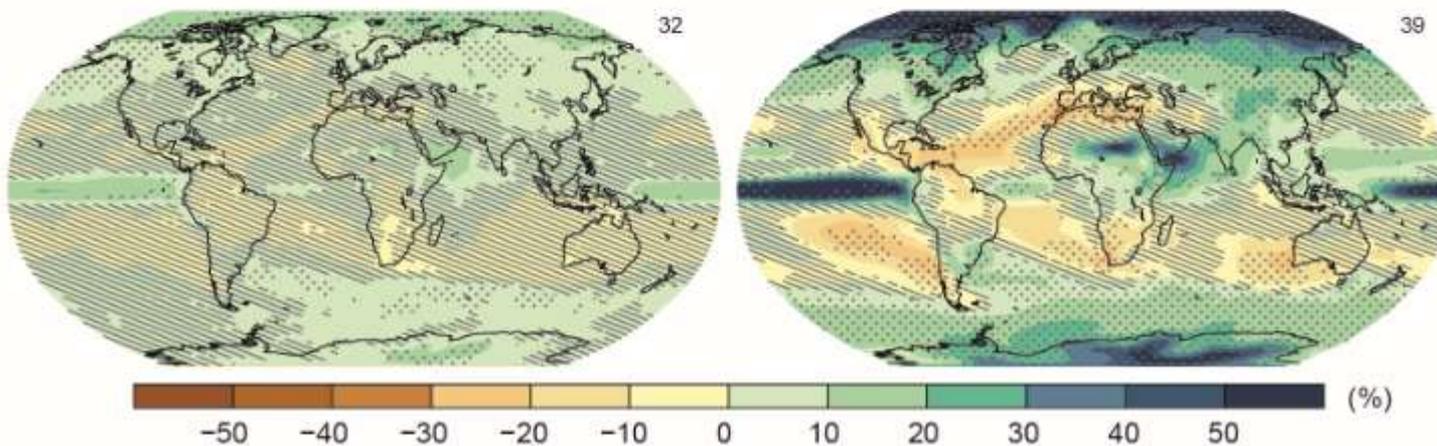
RCP 2.6

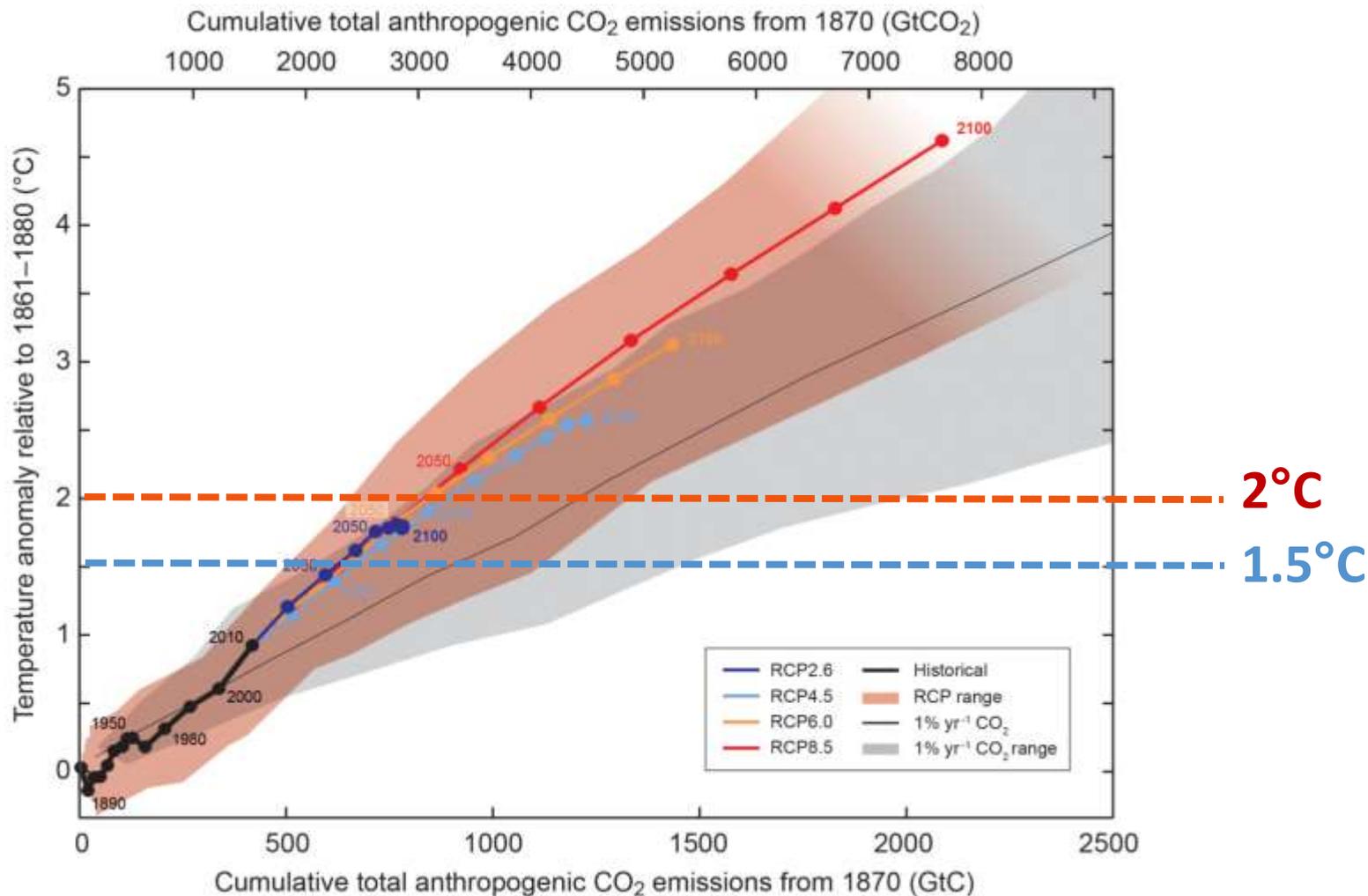
RCP 8.5

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



(b) Change in average precipitation (1986–2005 to 2081–2100)





(IPCC 2013, Fig. SPM.10)

Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions.

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Further Information
www.climatechange2013.org

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