

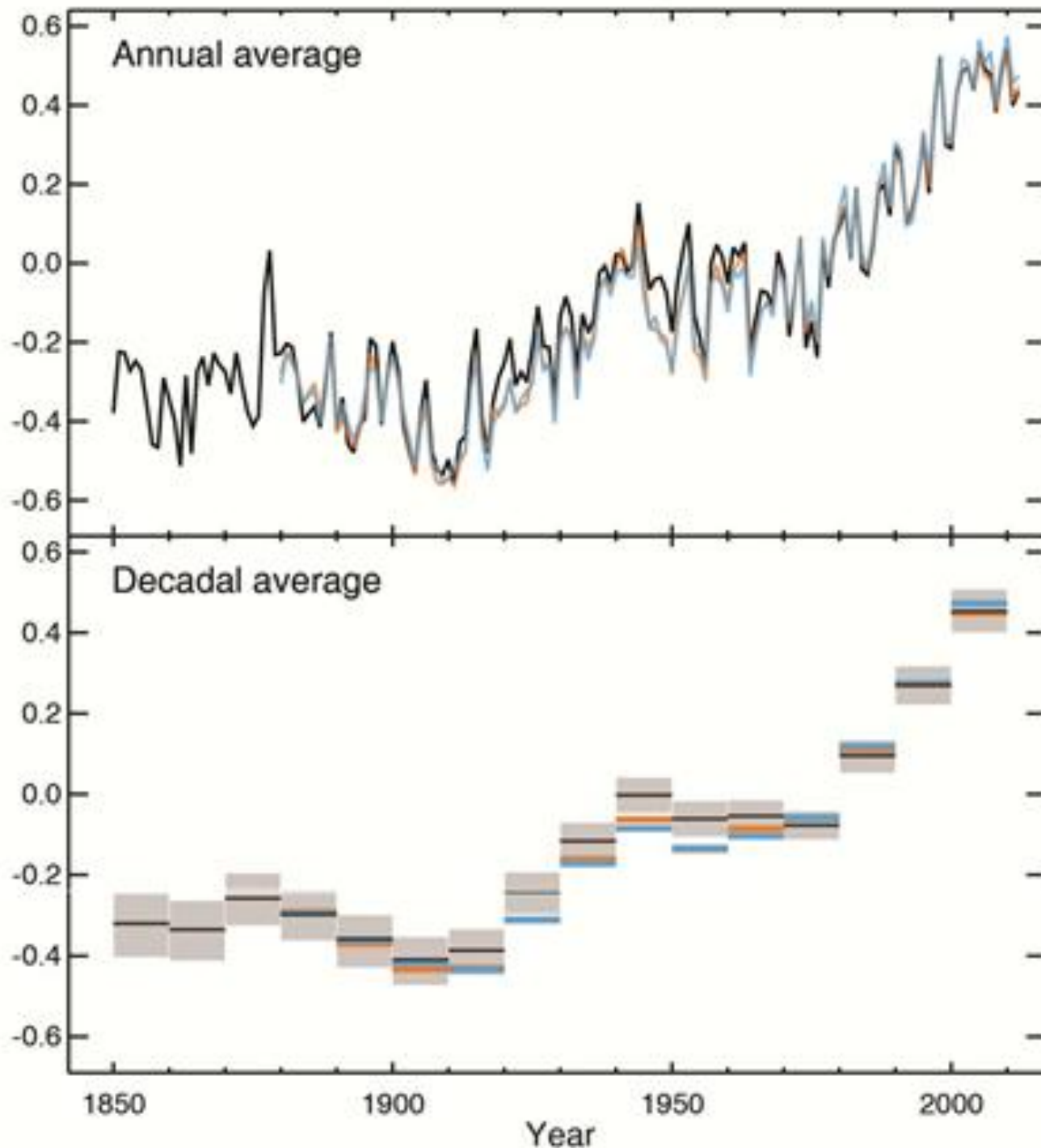
Climate Change 2013: The Physical Science Basis

Fifth Report from
Intergovernmental Panel on
Climate Change (IPCC) WG I, 2013

Observationer

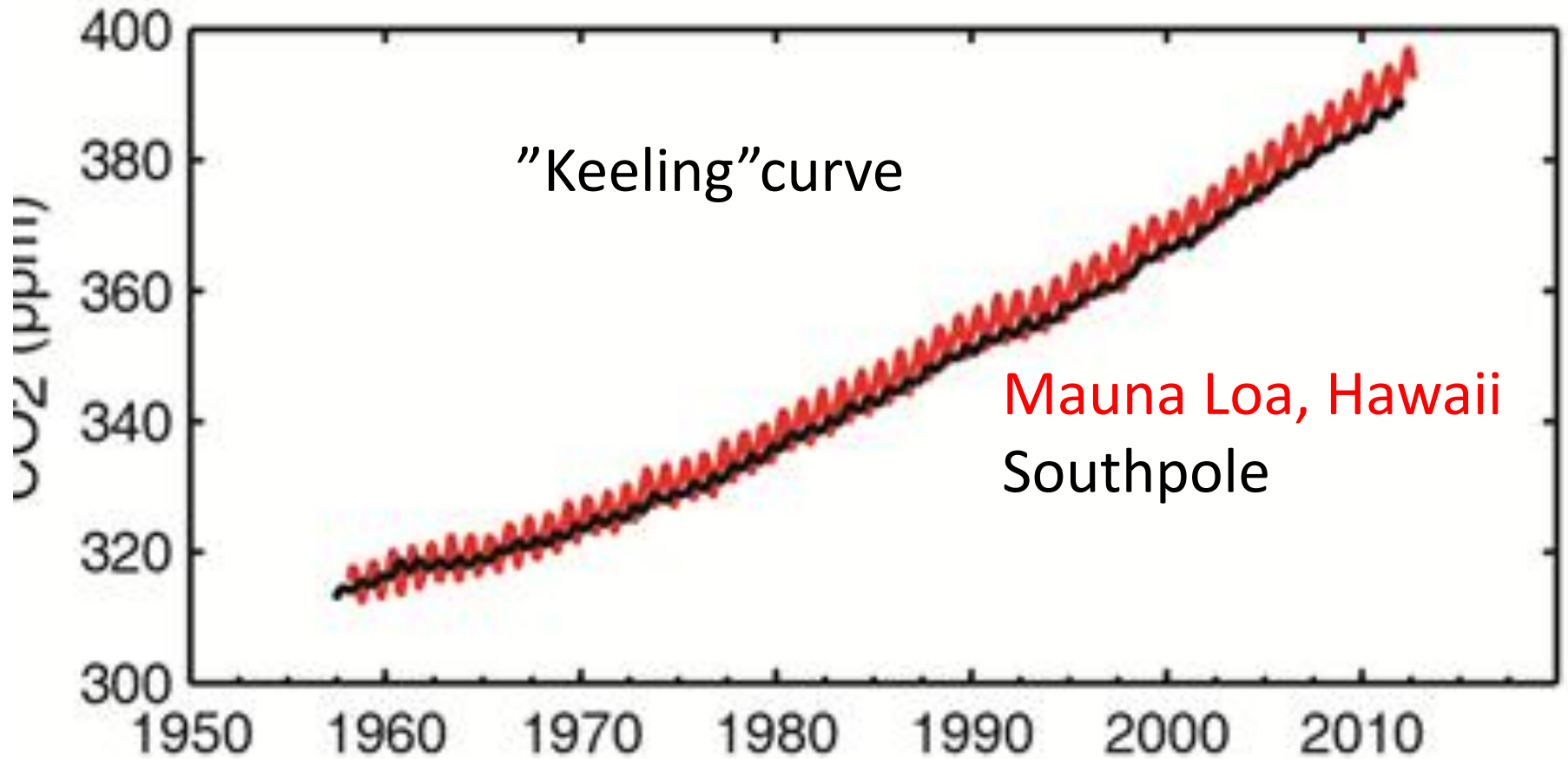
Förlängda tidsserier

Anomaly (°C) relative to 1961-1990

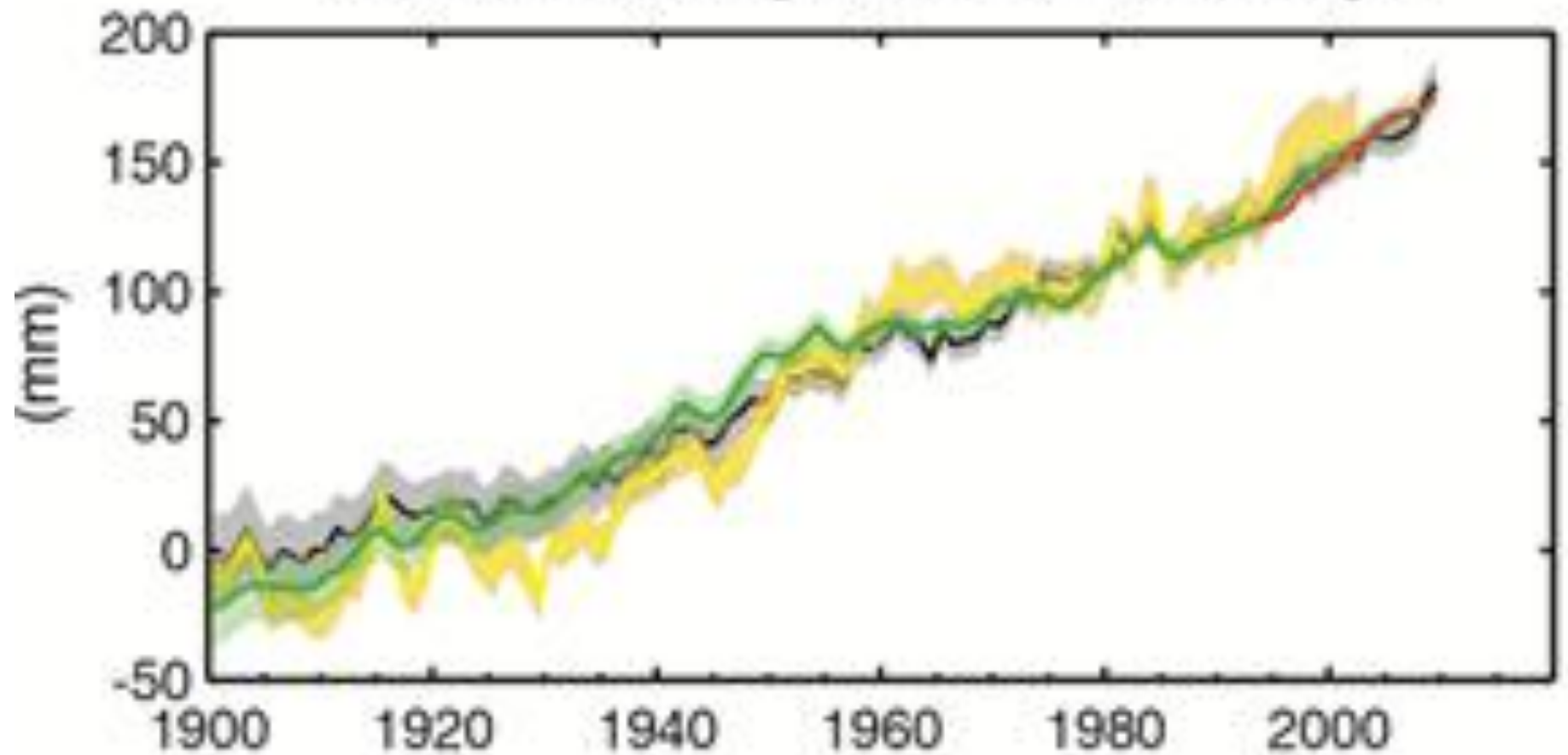


Global mean surface (land + ocean) temperature anomalies 1850-1912

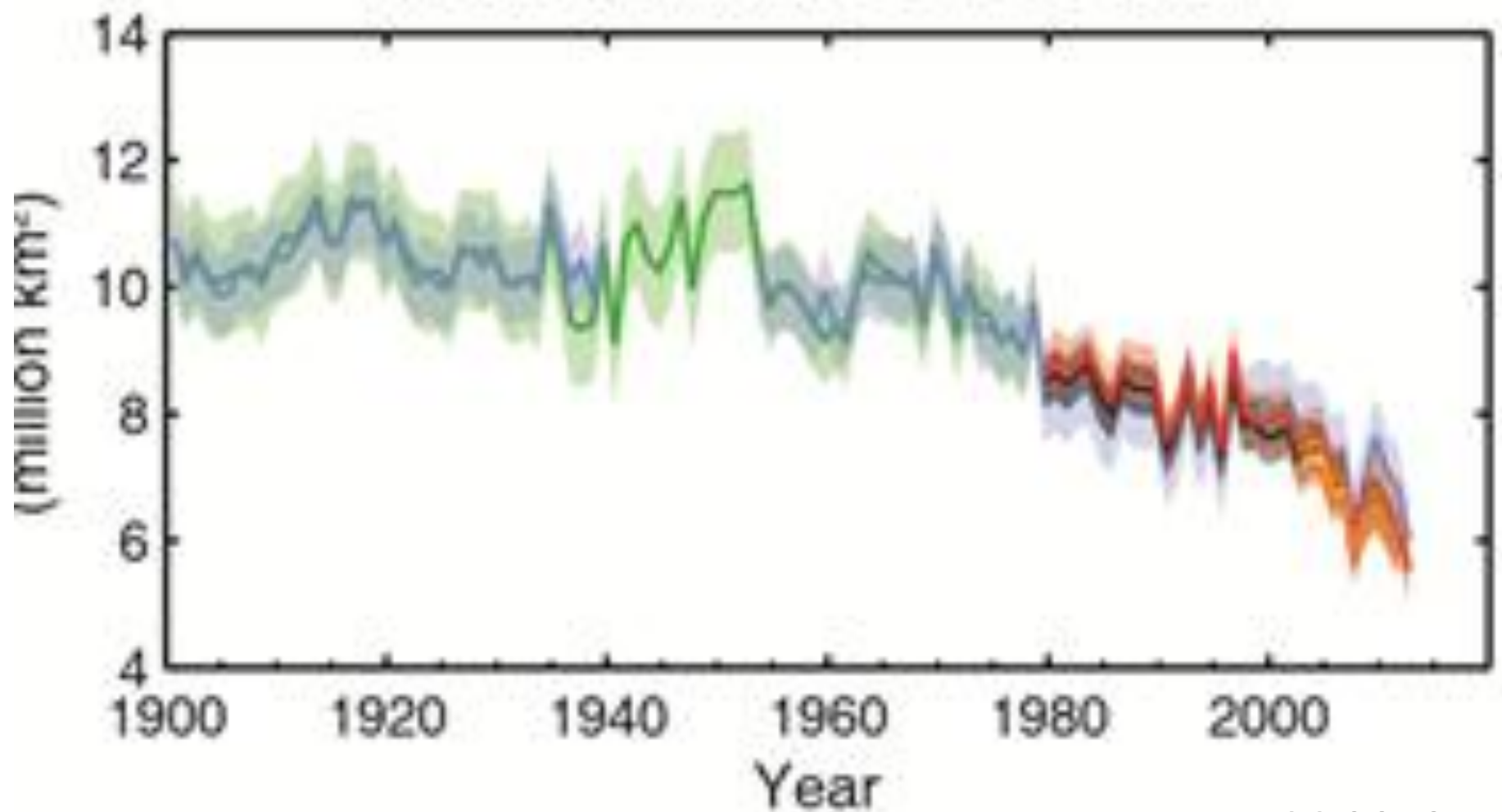
Atmospheric CO₂



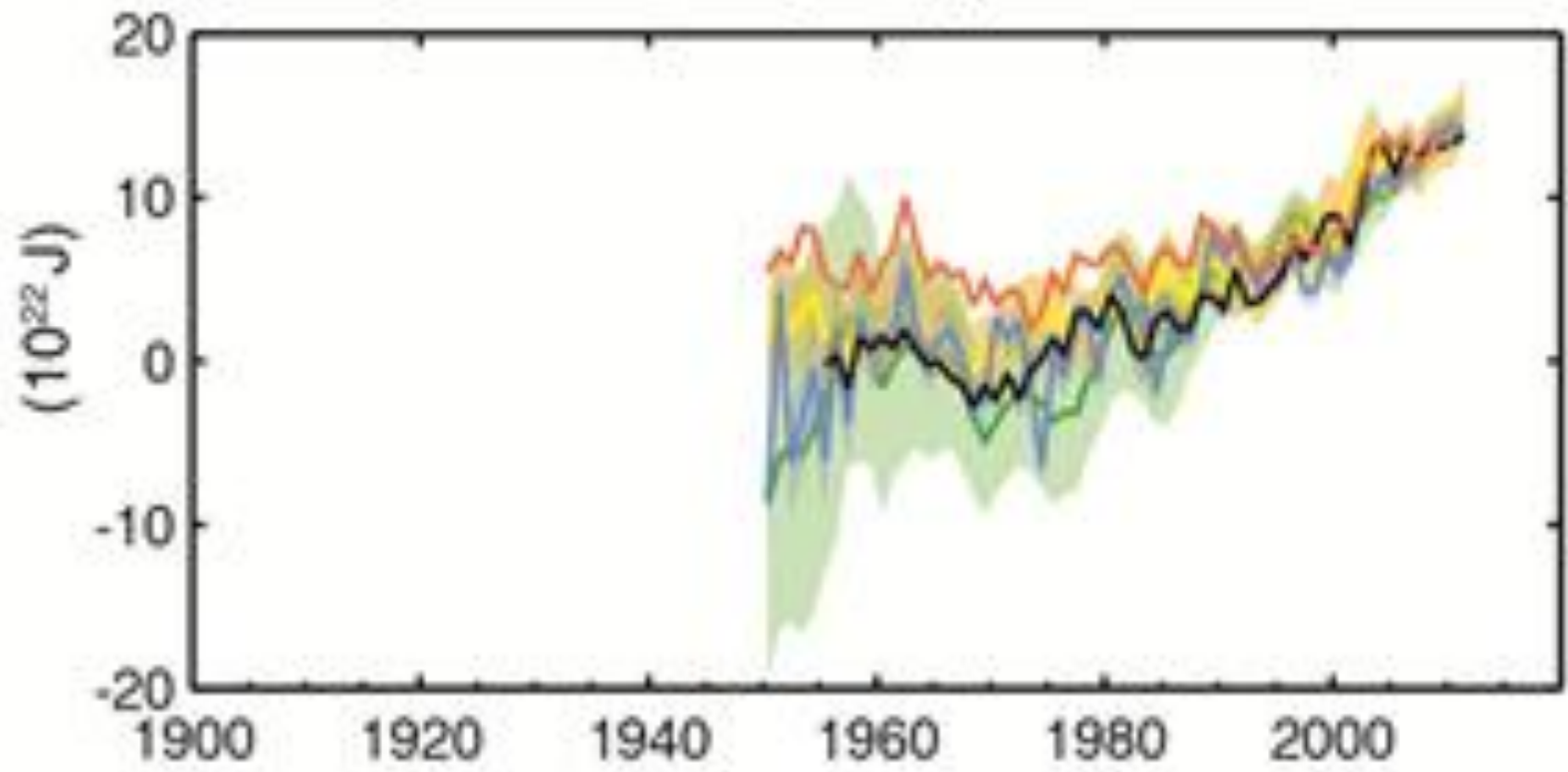
Global average sea level change



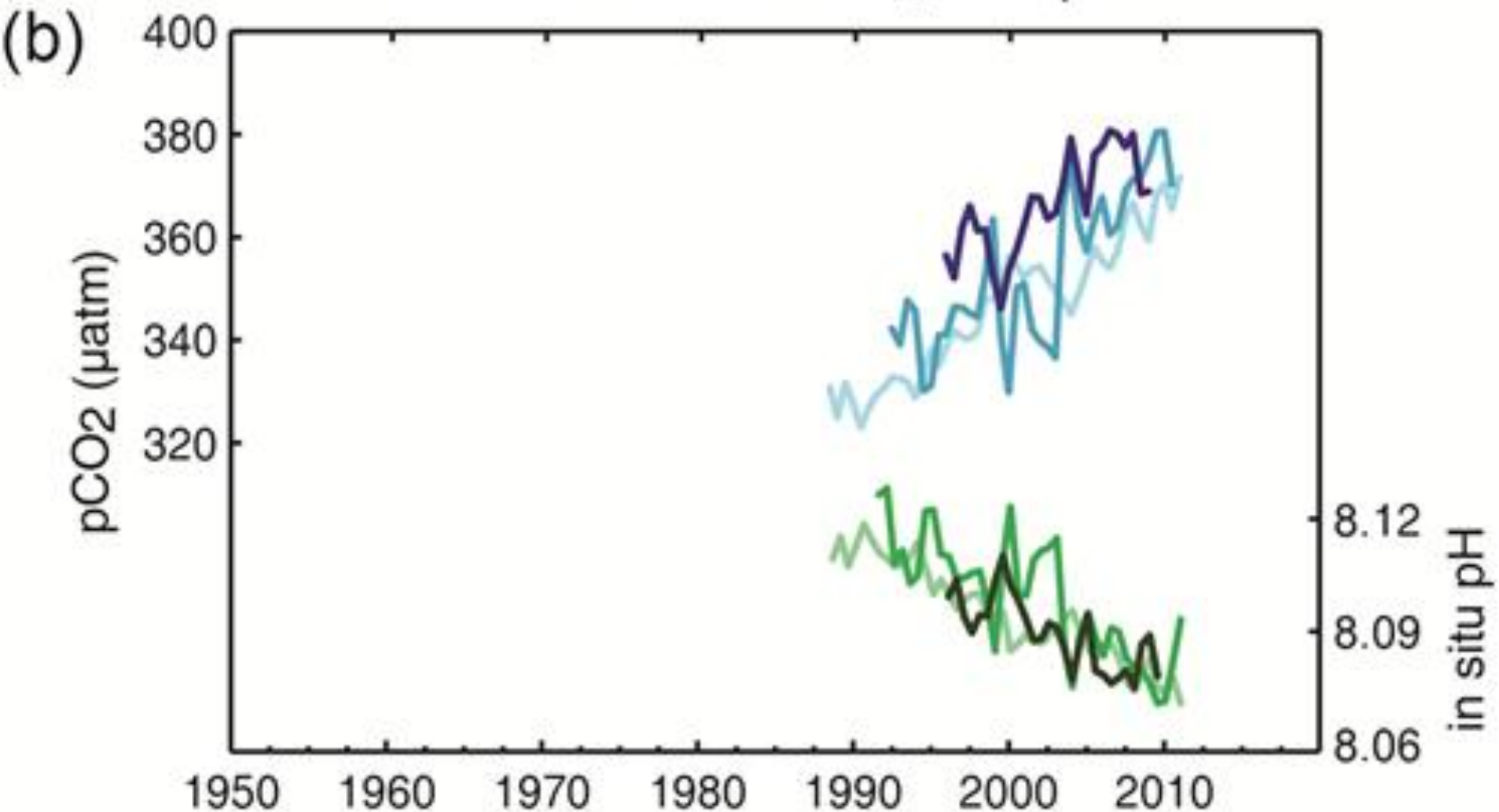
Arctic summer sea ice extent



Change in global average upper ocean heat content



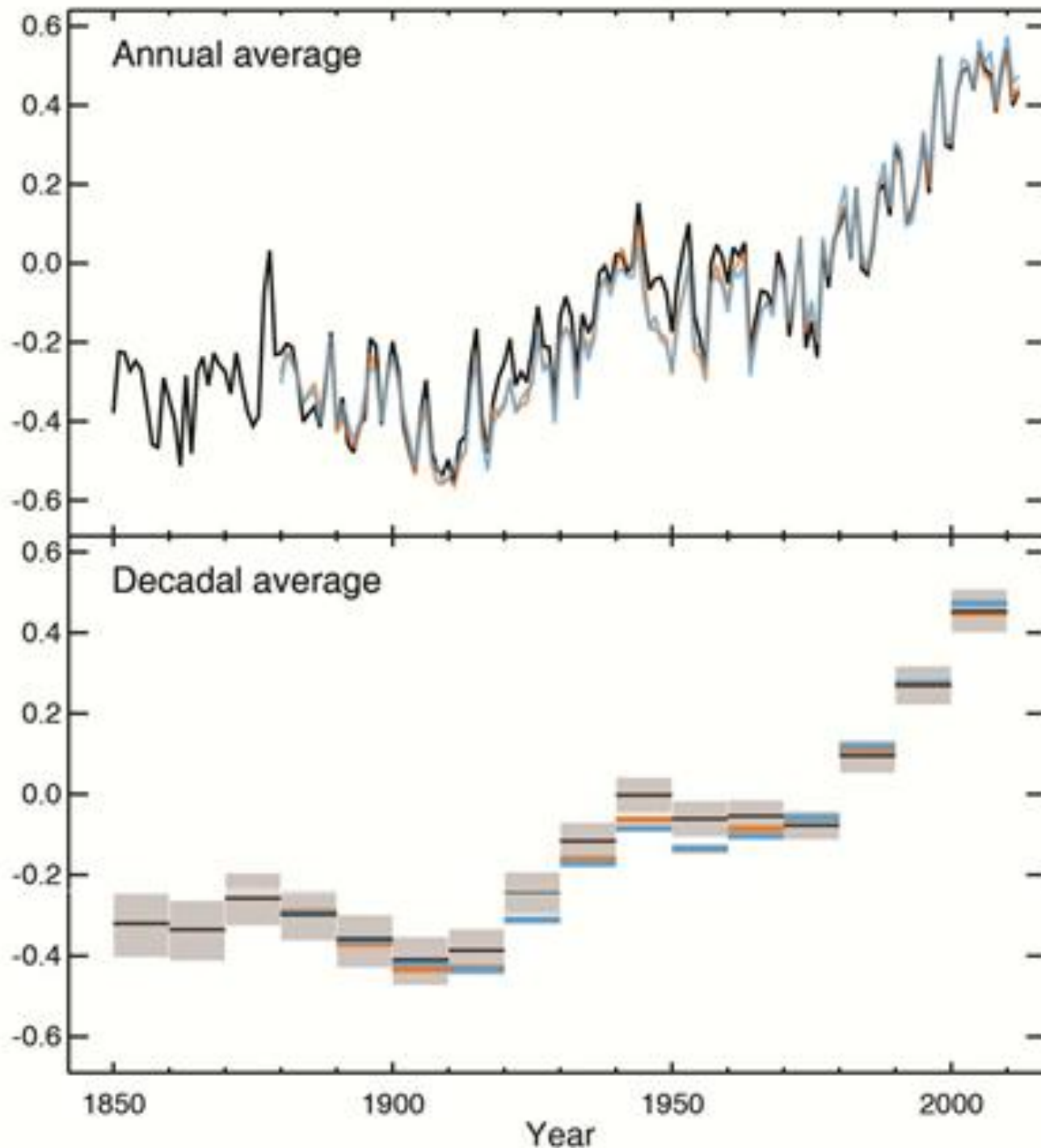
Surface Ocean CO₂ and pH



Ny!

Tolkningar

Anomaly (°C) relative to 1961-1990



Global mean surface (land + ocean) temperature anomalies 1850-1912

1995

“The balance of evidence suggests that there is a discernible human influence on global climate”

2001

“Most of the observed warming over the last 50 years is likely to have been due to the increase in greenhouse gas conc.”

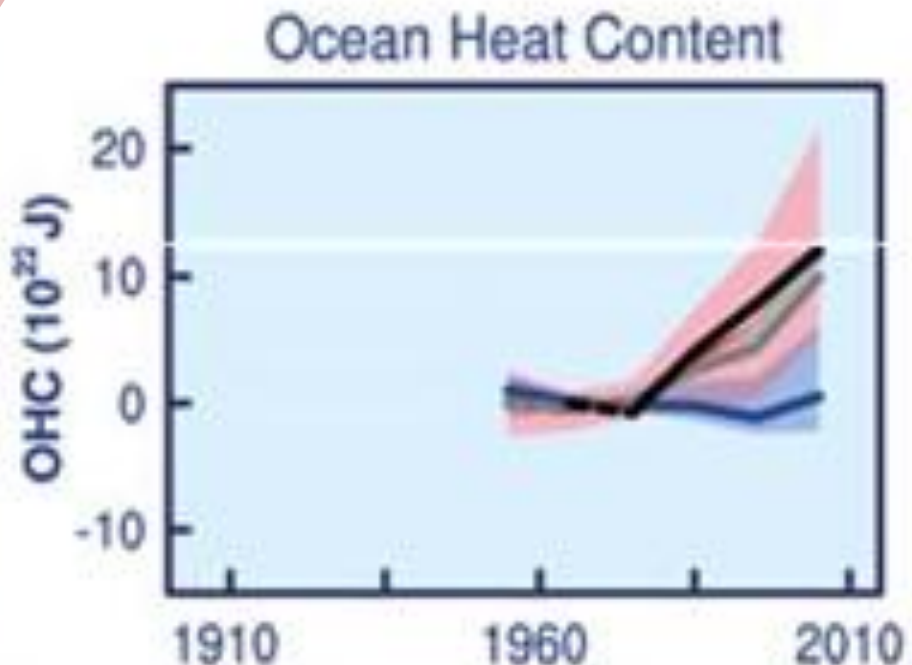
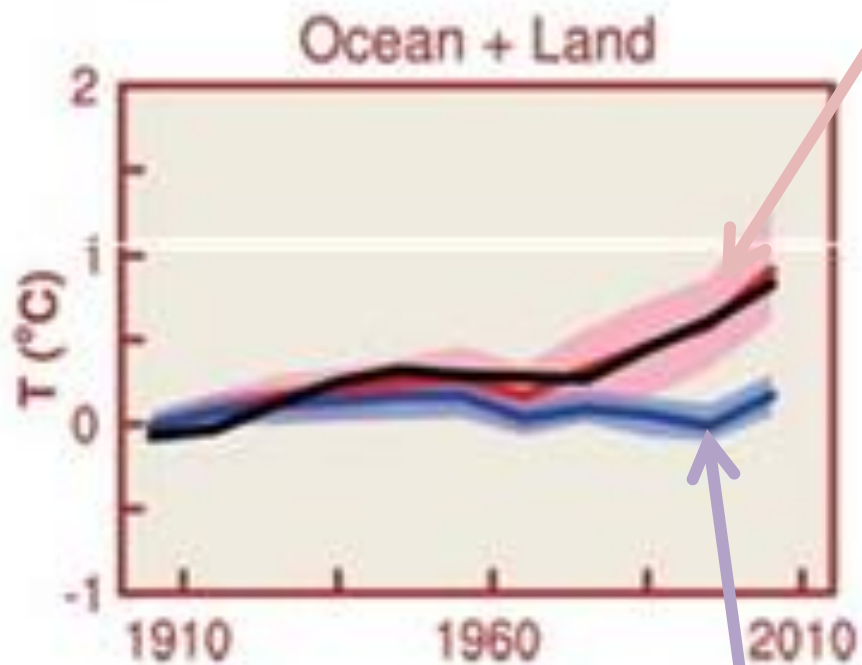
2007

“Most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations”

2013

“It is extremely likely that human influence has been the dominant cause of the observed warming since the mid-20th century”

Natural + anthropogenic forcing



Only natural forcings

CMIP 5 simulations

Heavy precip.
events

Droughts

Tropical cyclone
activity

AR4 Likely over most
land areas

Likely in many
regions

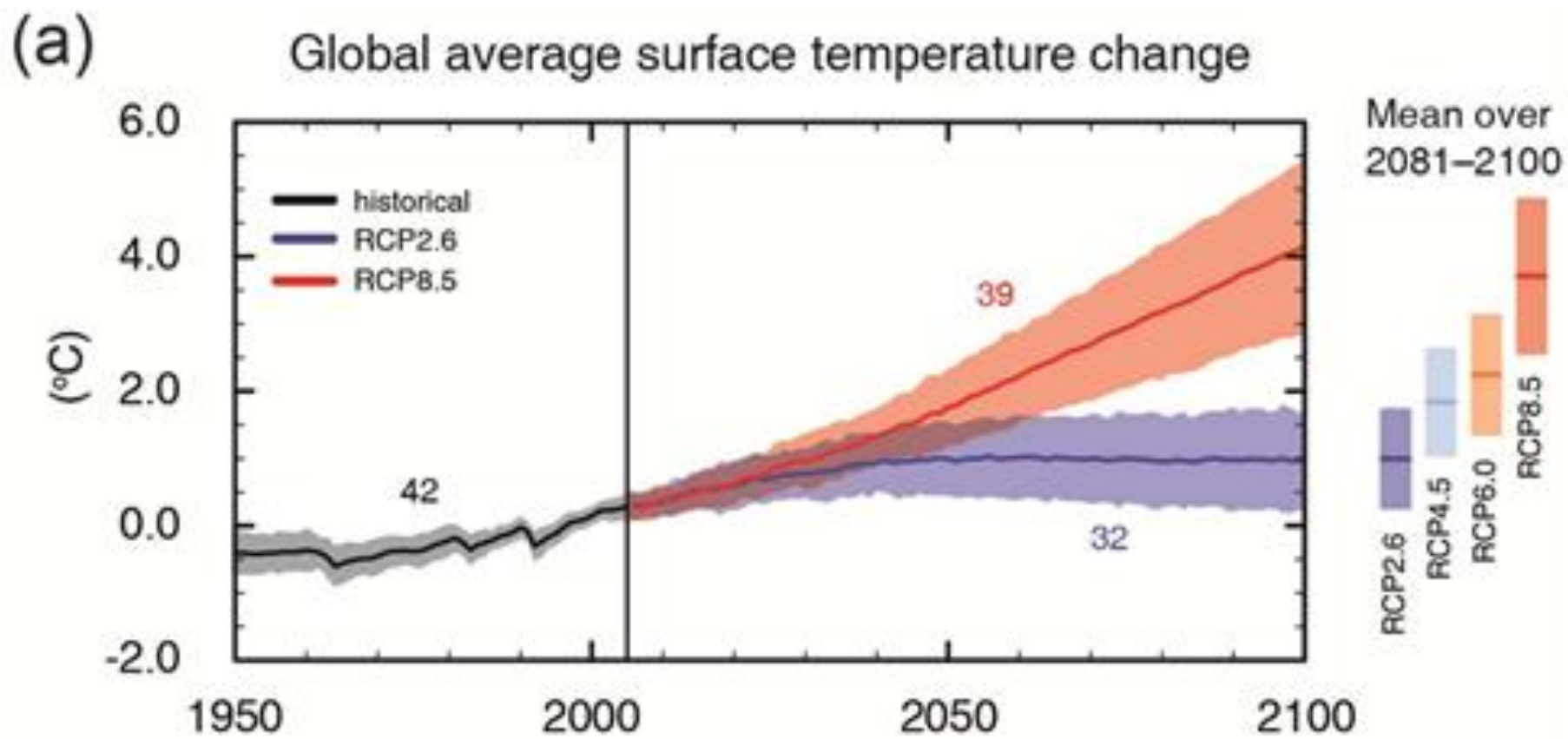
Likely in some
regions

AR5 Likely more land
areas with increases
than decreases

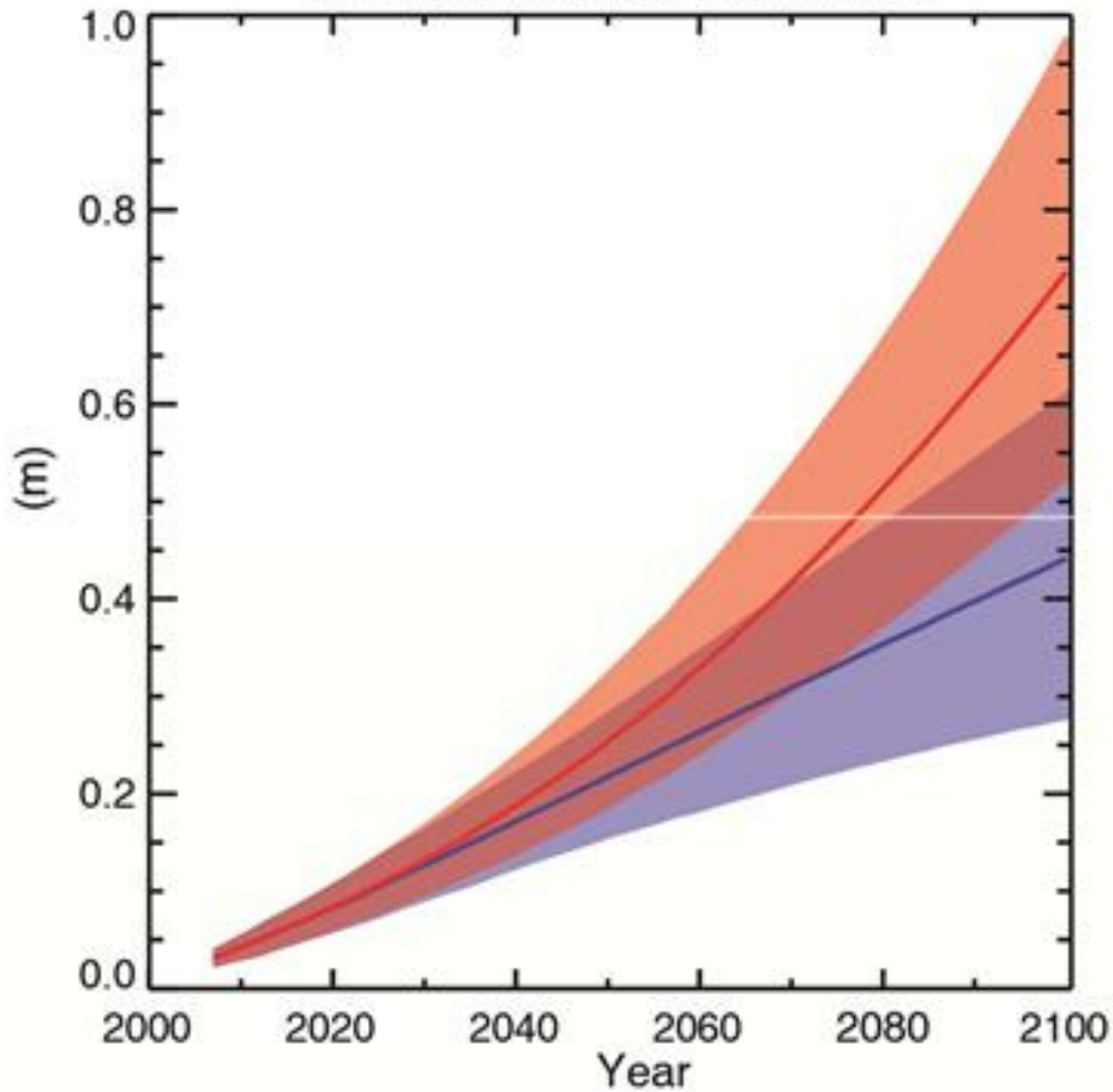
Likely in some
regions

Low confidence
in long term
changes

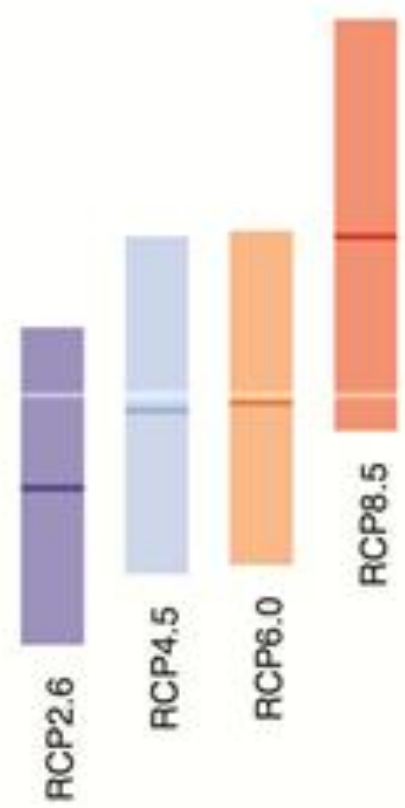
Scenarier



Global mean sea level rise



Mean over 2081–2100



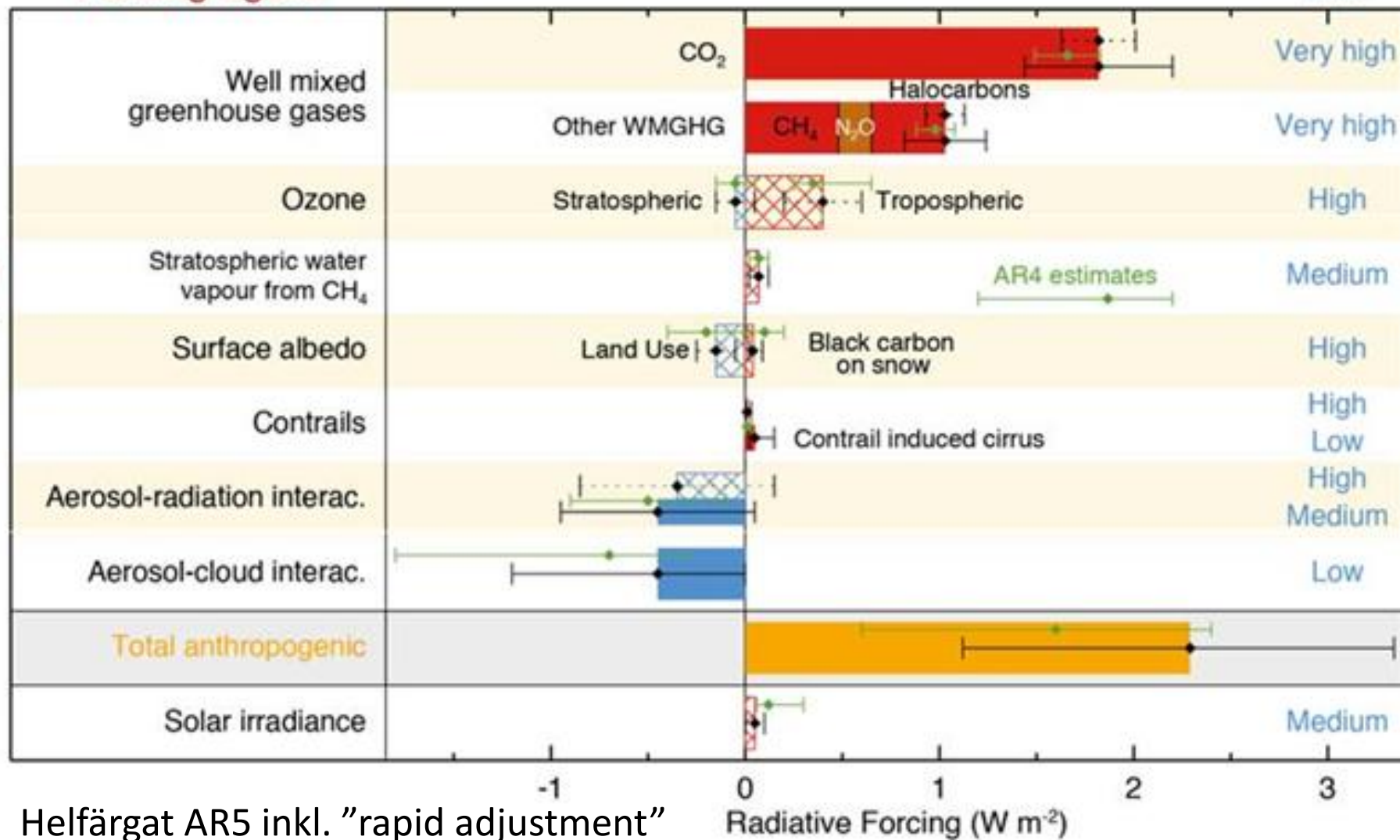
Climate forcing

Climate sensitivity

Radiative forcing of climate between 1750 and 2011

Forcing agent

Confidence level



Helfärgat AR5 inkl. "rapid adjustment"

Korsat AR5 utan

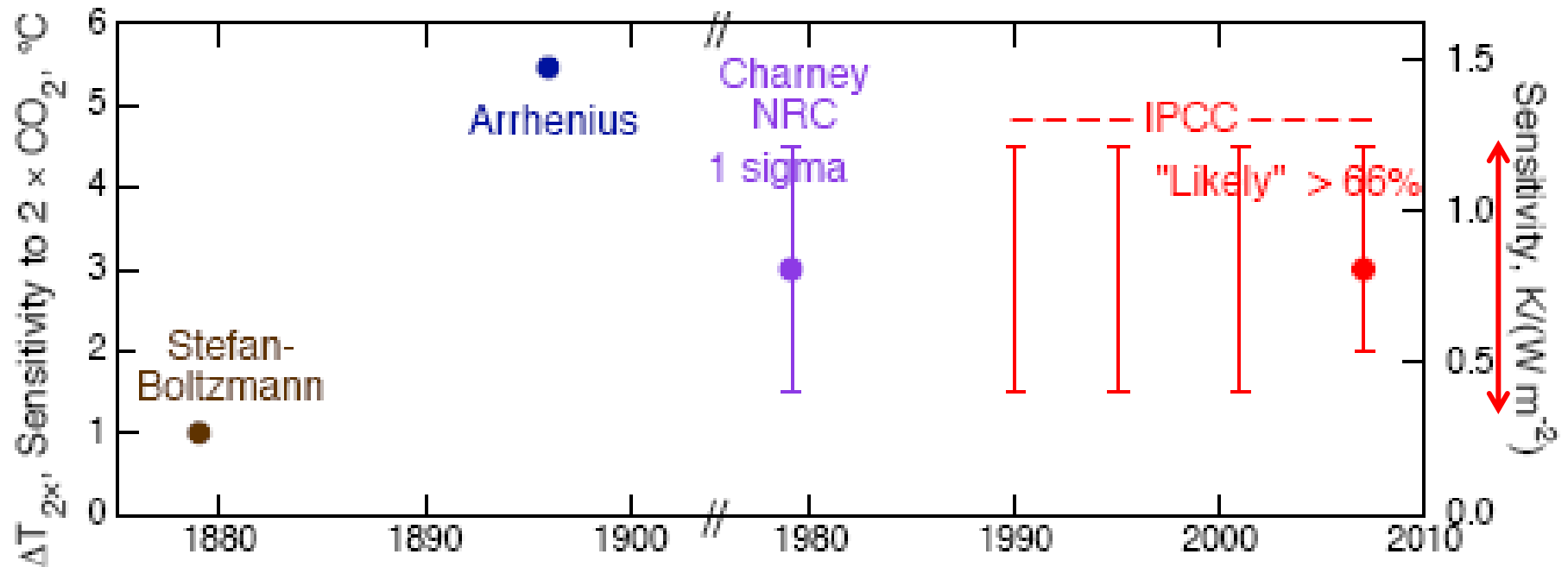
Grönt AR4

"
"
"

IPCC 2013

CLIMATE SENSITIVITY ESTIMATES THROUGH THE AGES

Estimates of central value and uncertainty range from major national and international assessments



Despite extensive research, climate sensitivity remains *highly uncertain*.

Schwartz 2008