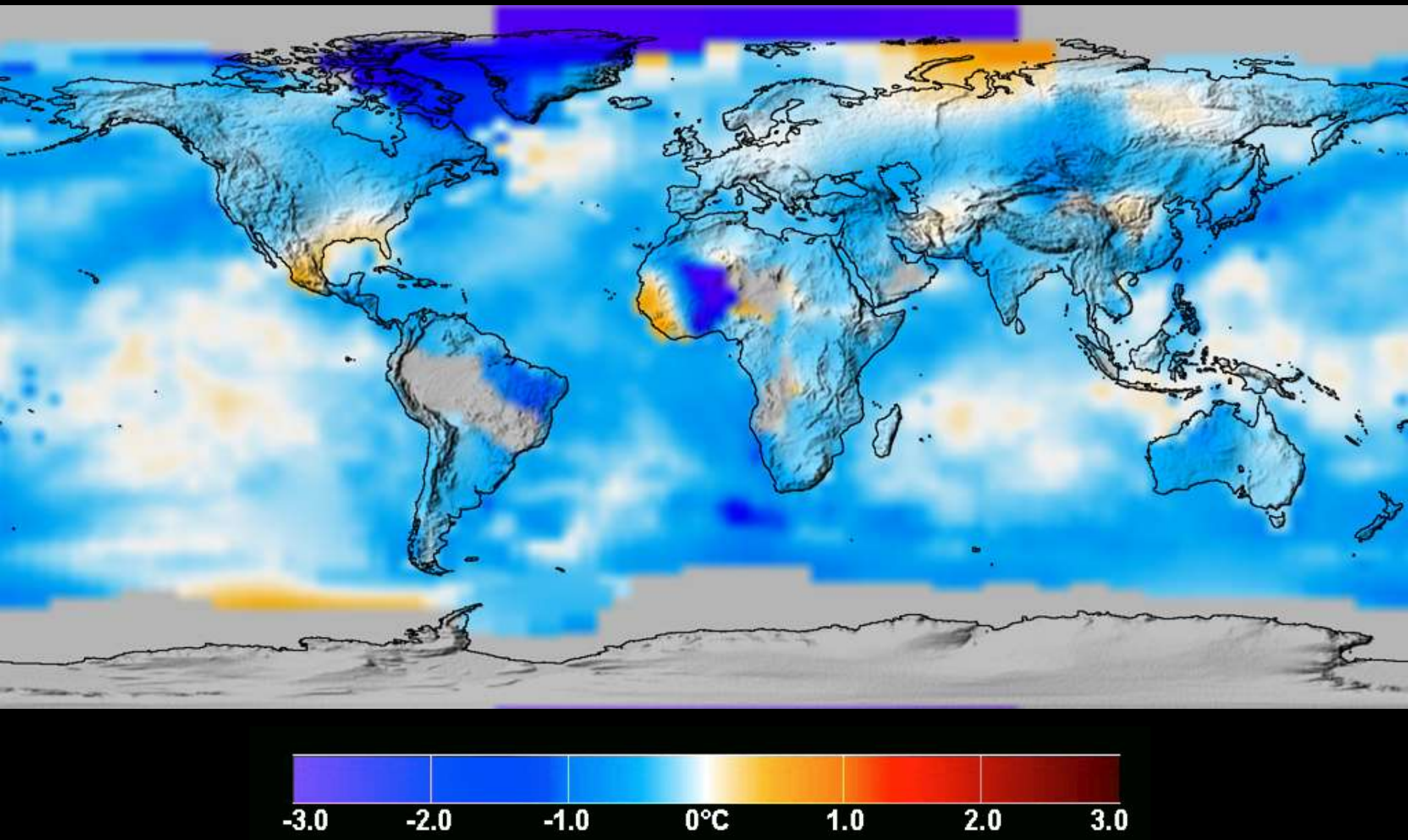
Hovedlinjer fra FNs Klimapanels 5. hovedrapport:

Hvorfor vi ikke kan vente med større klimatiltak

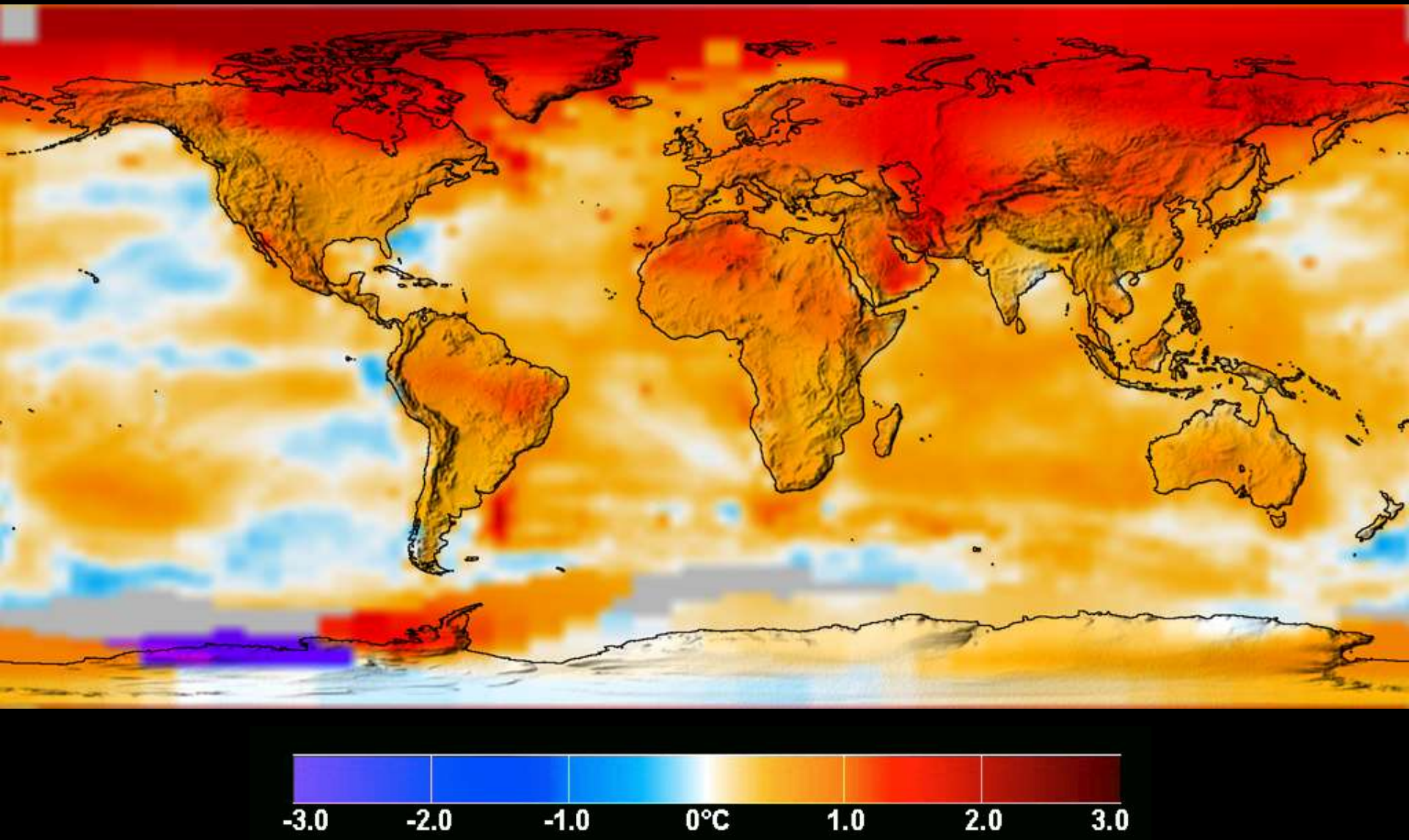
Eystein Jansen

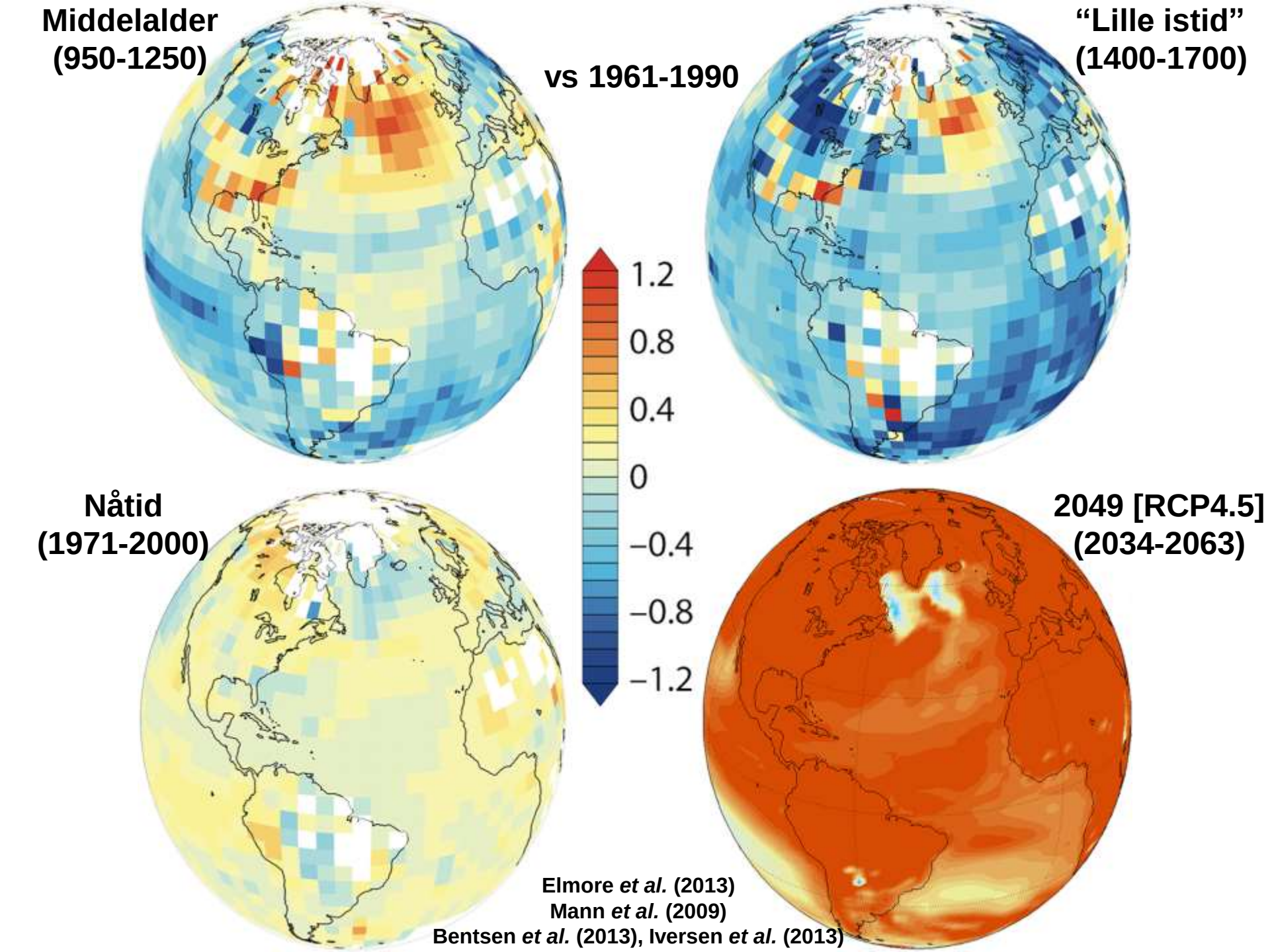
Hovedforfatter Kap. 5, Technical Summary og Summary for Policymakers

100 år siden (1903-1912)



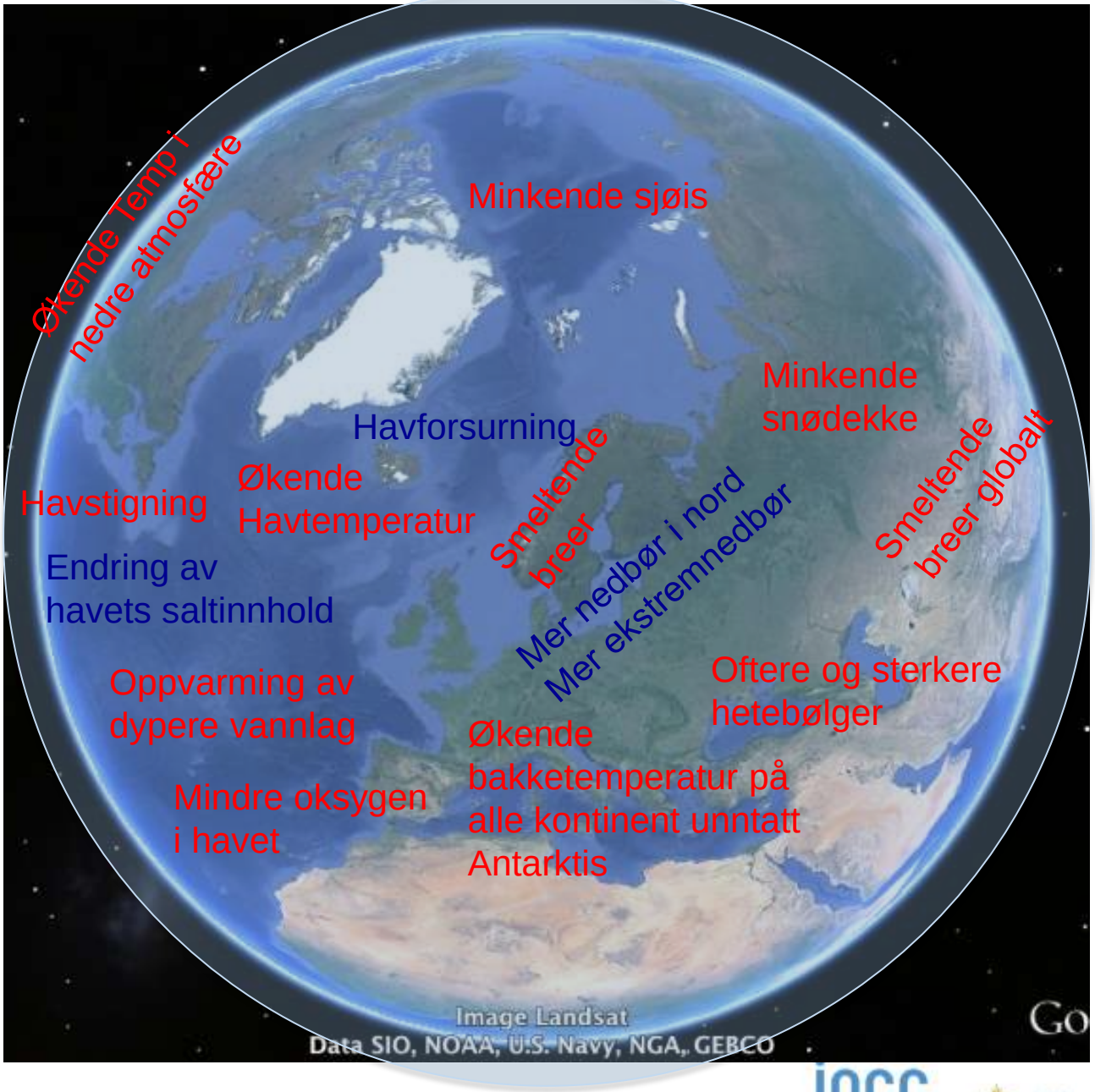
Siste 10 år (2003-2012)

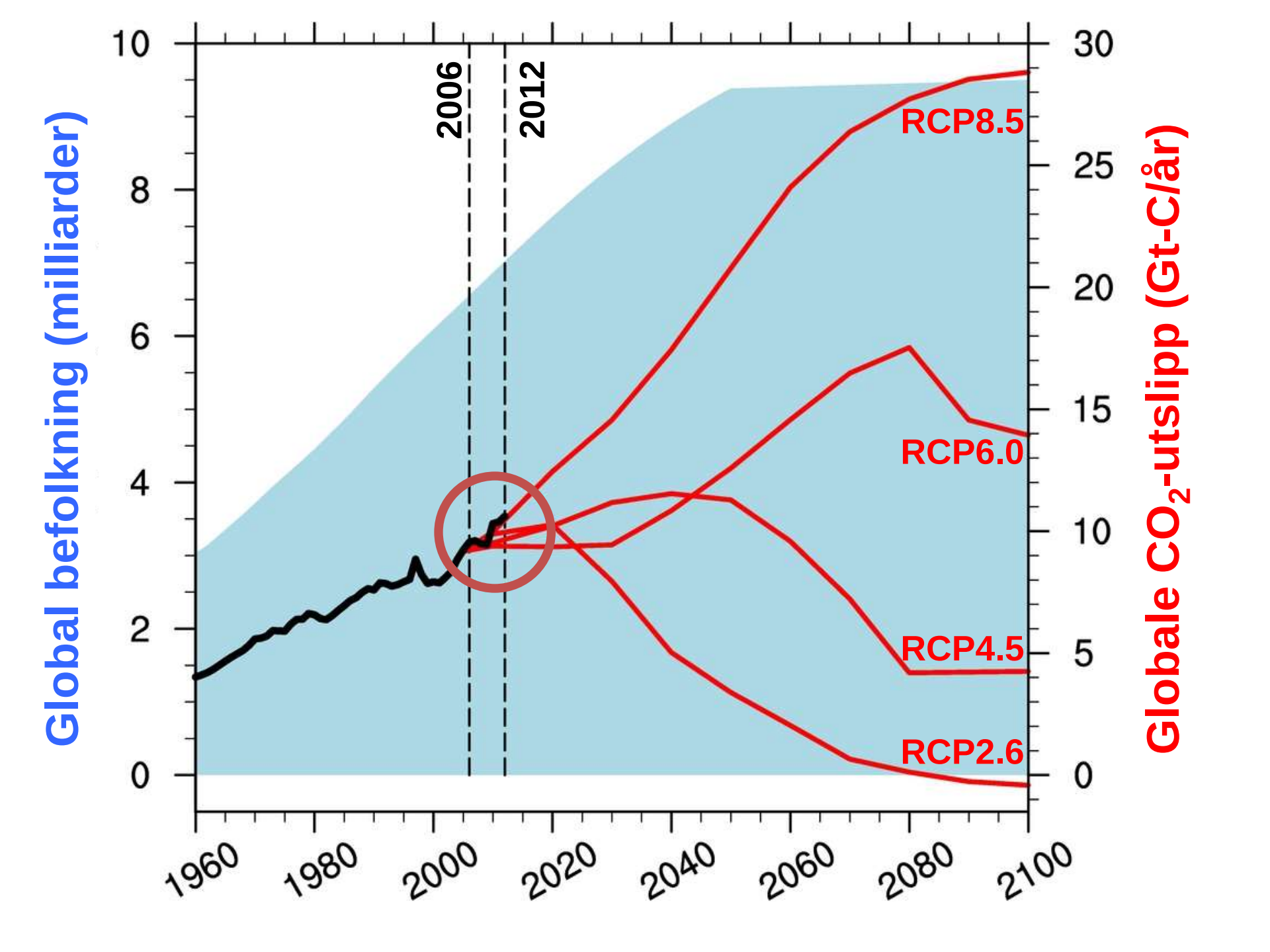




Elmore *et al.* (2013)
Mann *et al.* (2009)
Bentsen *et al.* (2013), Iversen *et al.* (2013)

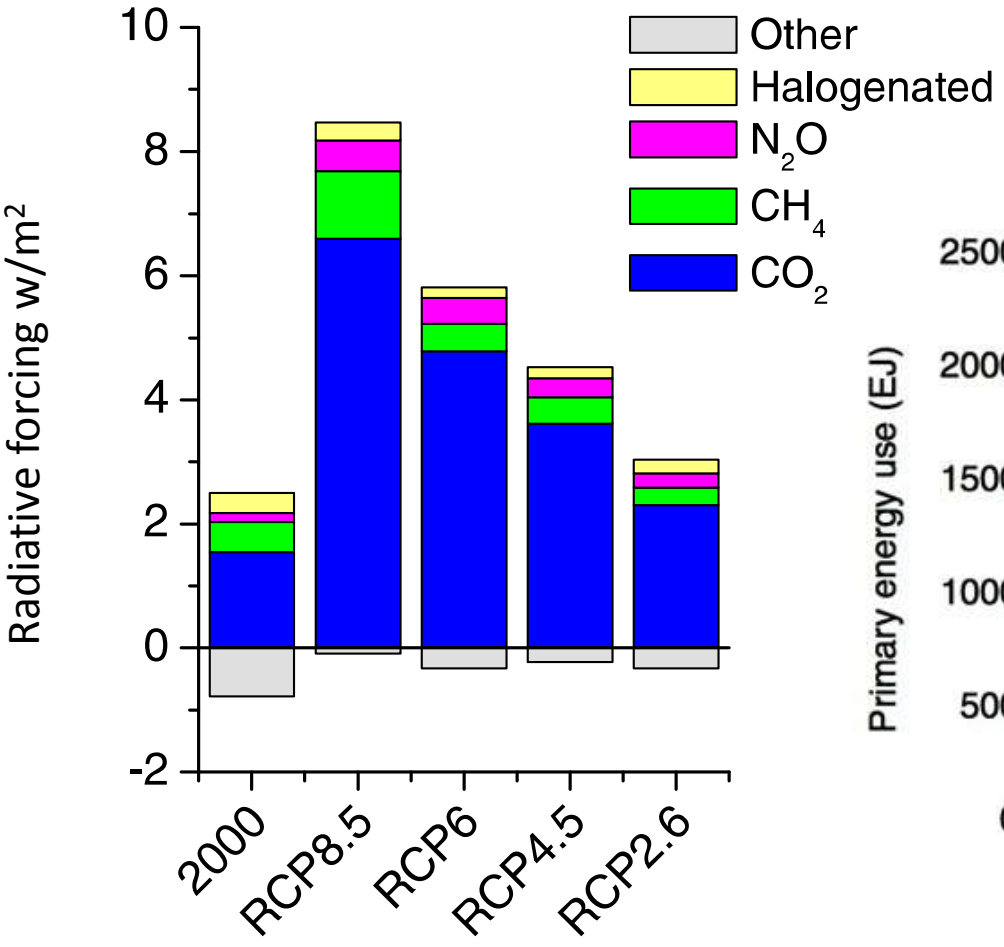
AR5:
Menneskeskapte fotavtrykk nå påvist over hele klimasystemet

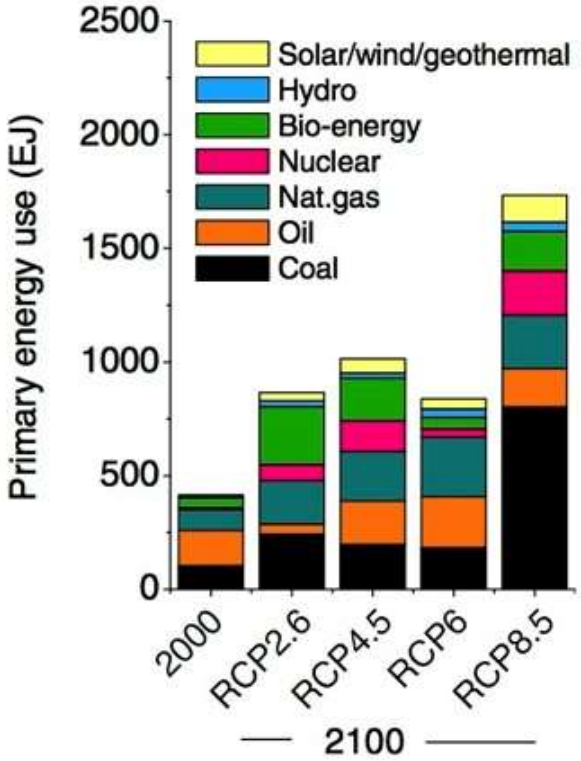



Global befolkning (milliarder)
Globale CO_2-utslipp (Gt-C/år)
2006
2012
RCP8.5
RCP6.0
RCP4.5
RCP2.6
0
2
4
6
8
10
0
5
10
15
20
25
30
1960
1980
2000
2020
2040
2060
2080
2100

Klimapådriv i 2100

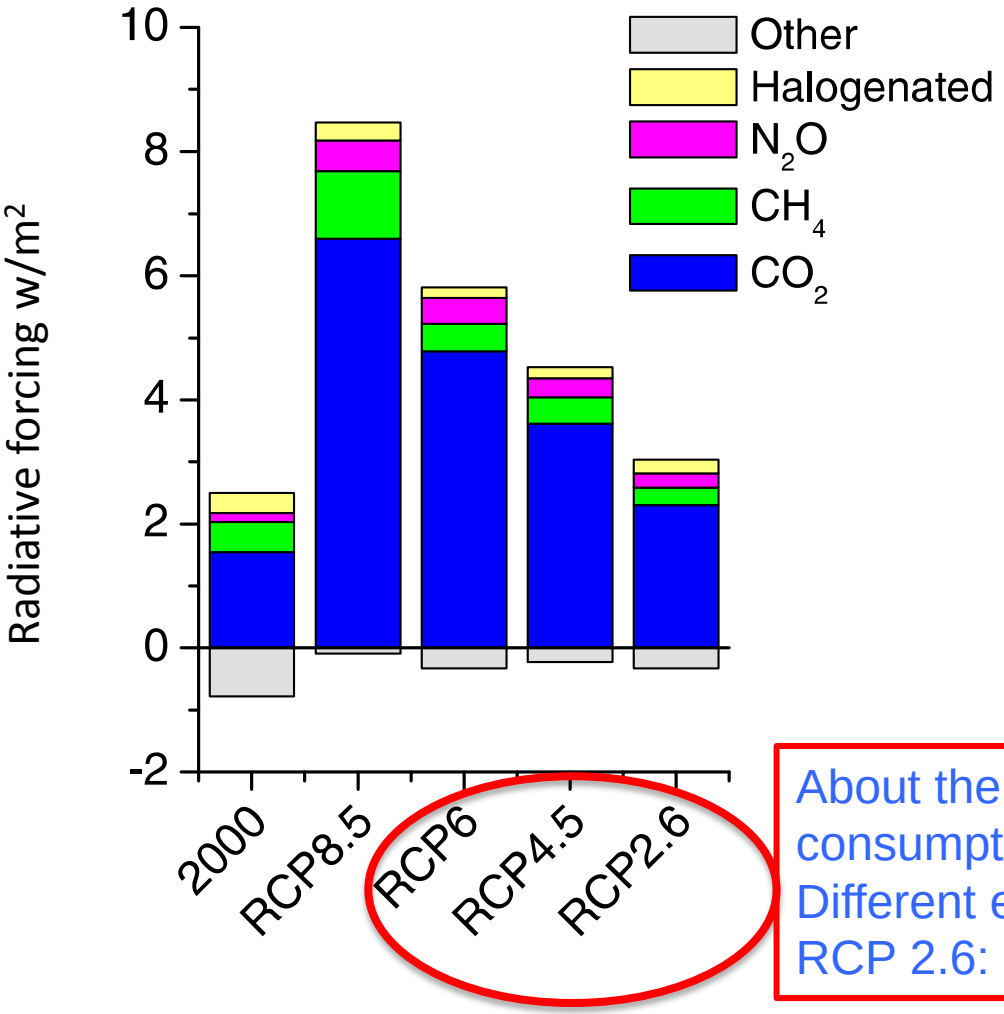
CO_2 dominerer





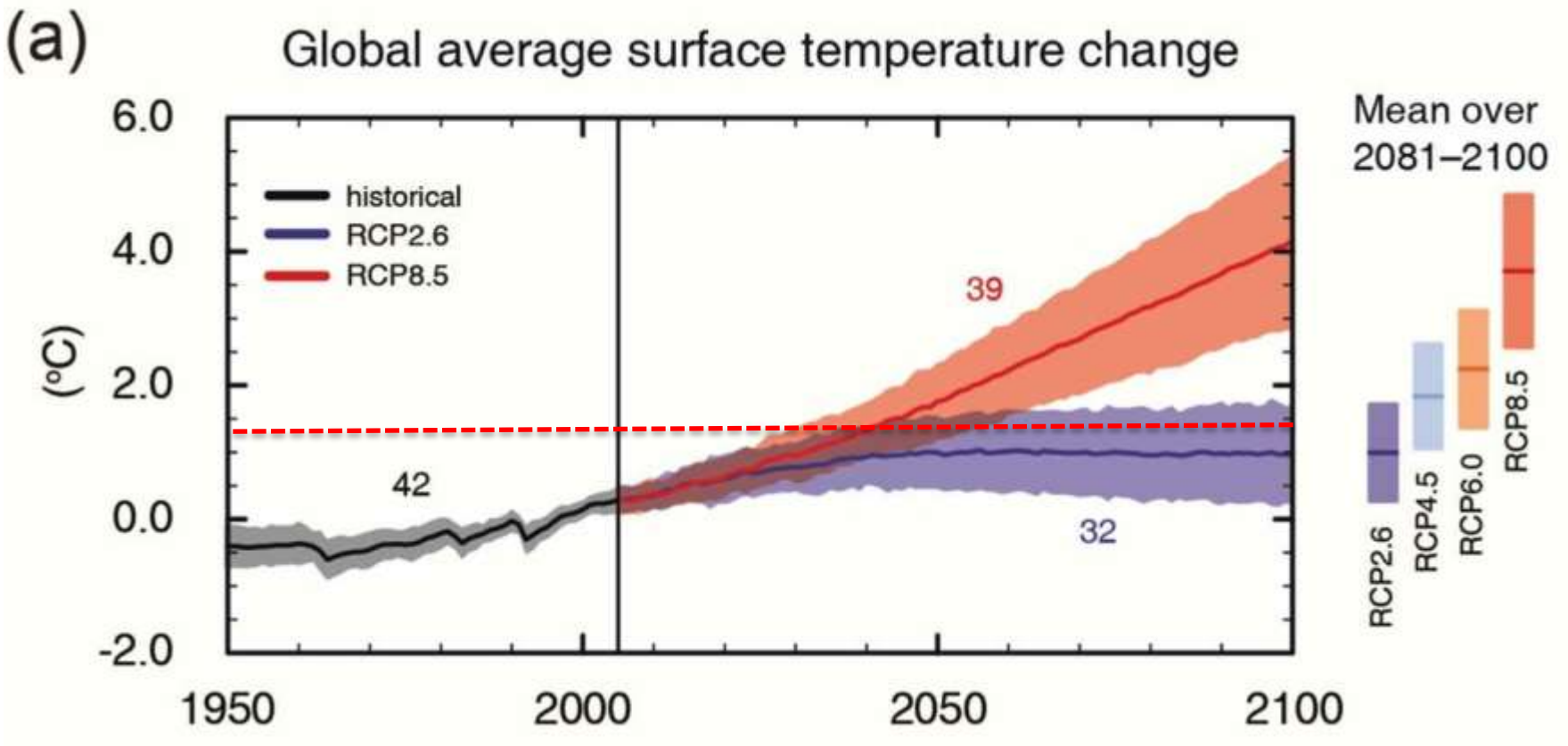
Klimapådriv i 2100

CO_2 dominerer



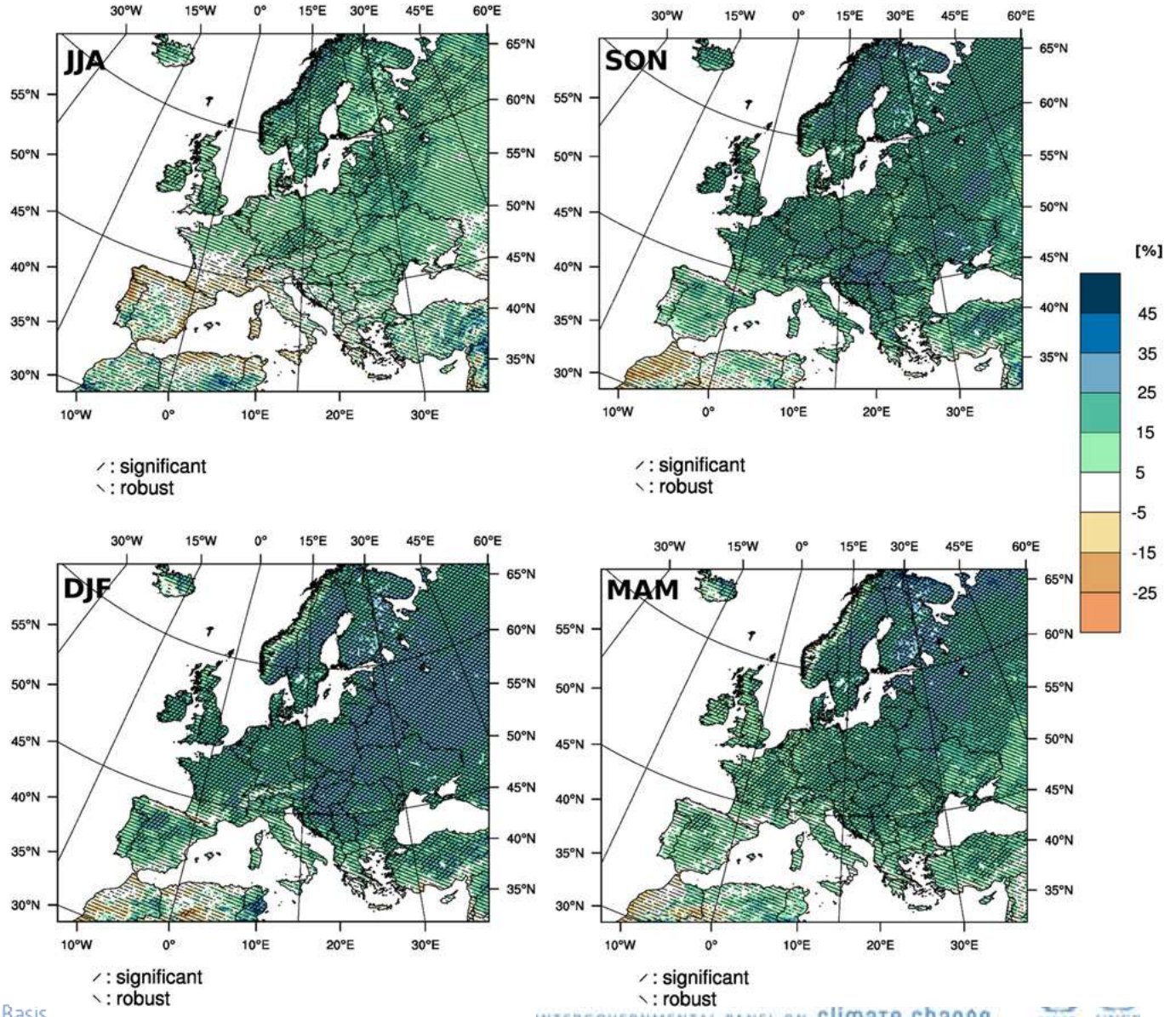
About the same energy consumption
Different energy mix
RCP 2.6: Extensive use of CCS

Fremtiden og 2-gradersmålet



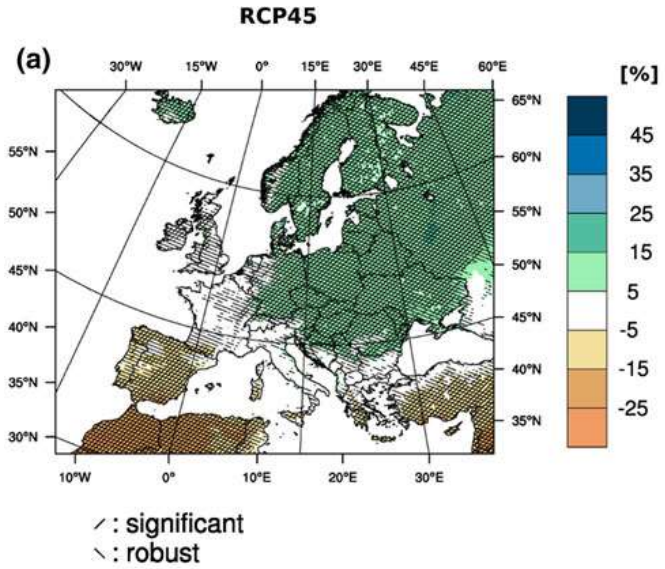
AR5 – SPM

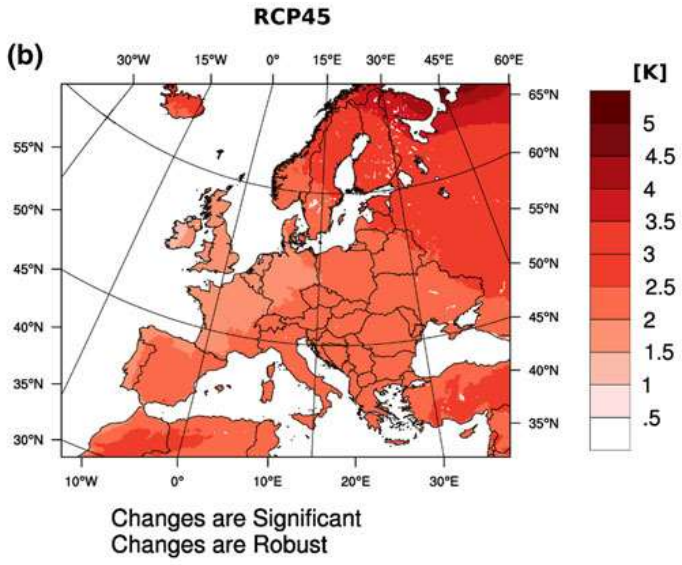
Også Europa rammes

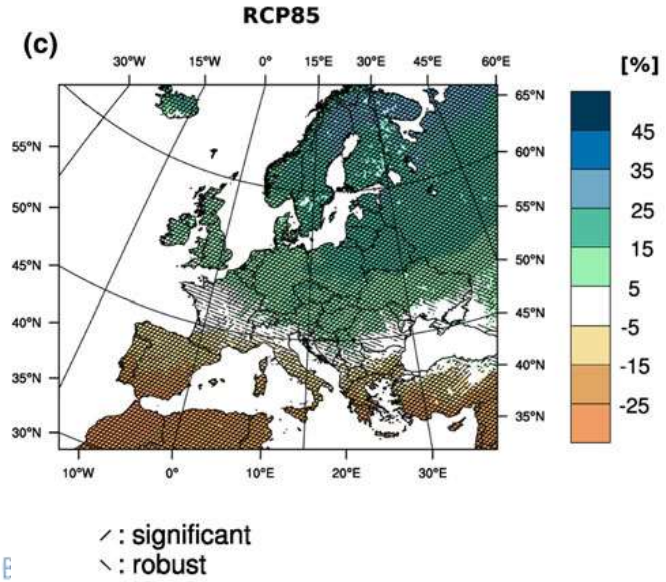


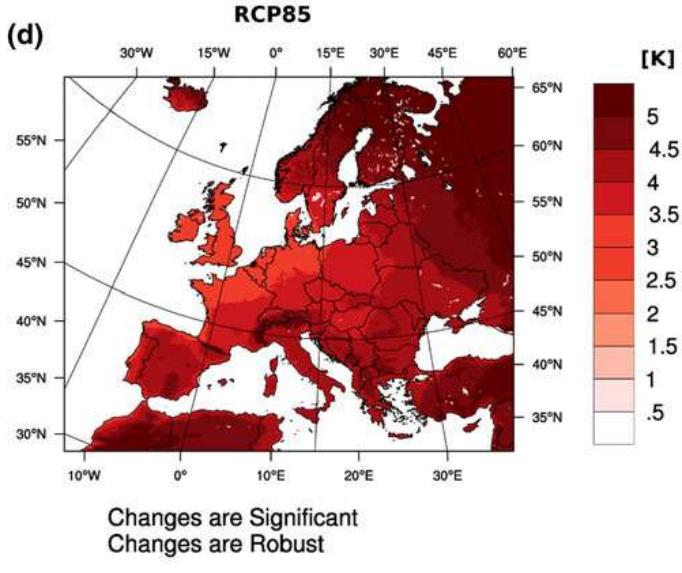
Euro-Cordex
Jacob et al. 2014

Også Europa rammes







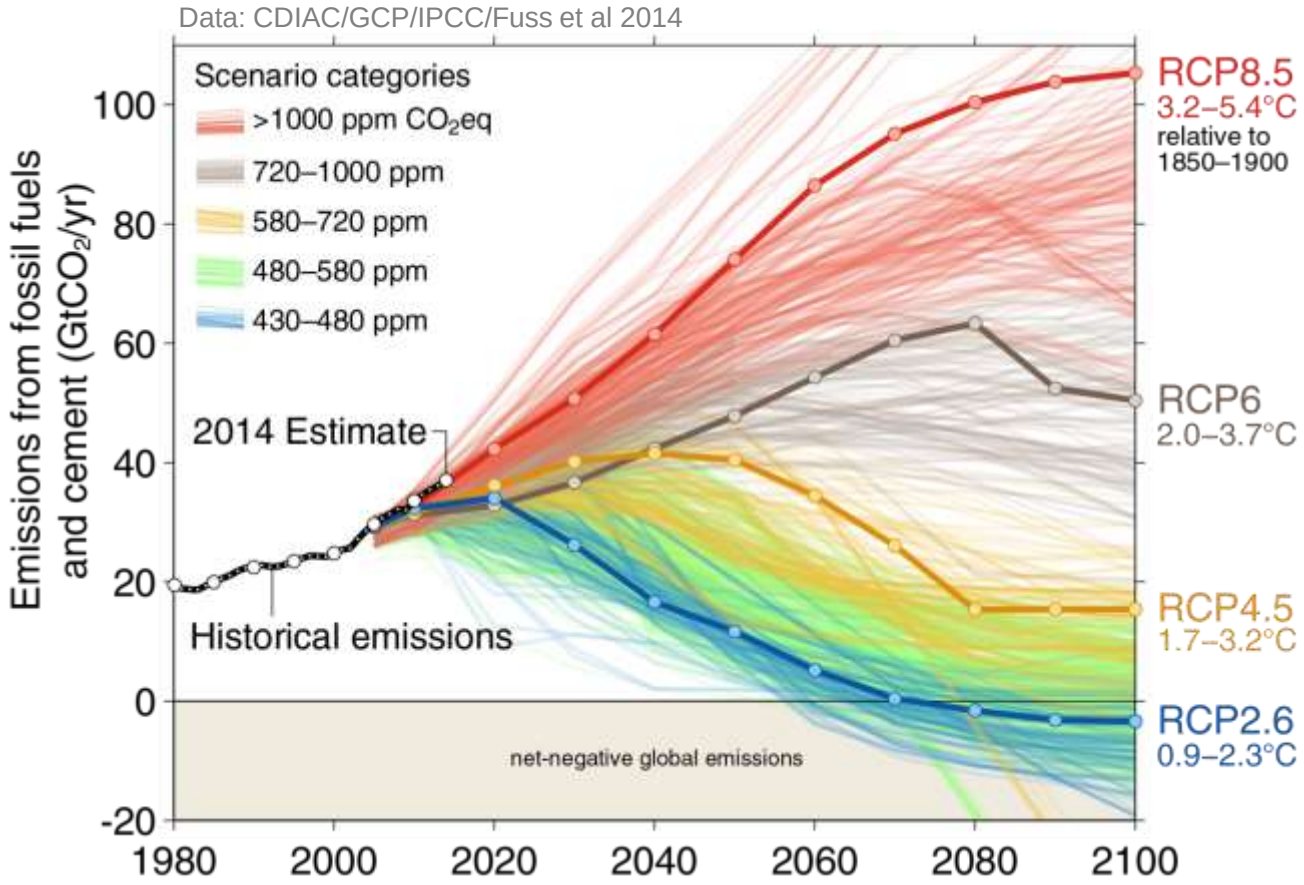


Euro-Cordex
Jacob et al. 2014

Hvor mye kan vi slippe ut?

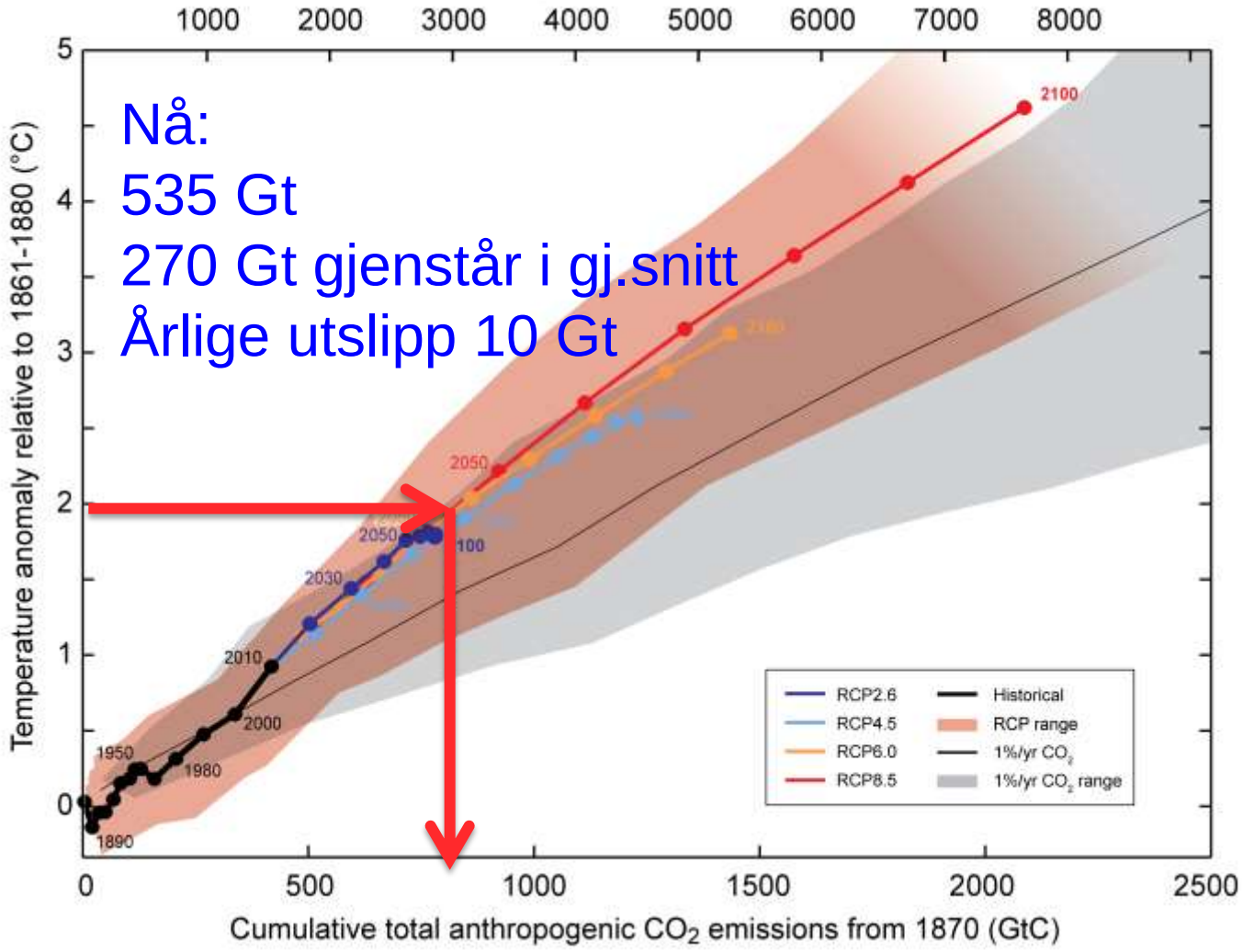
Observed Emissions and Emissions Scenarios

Emissions are on track for 3.2–5.4ºC "likely" increase in temperature above pre-industrial
Large and sustained mitigation is required to keep below 2ºC

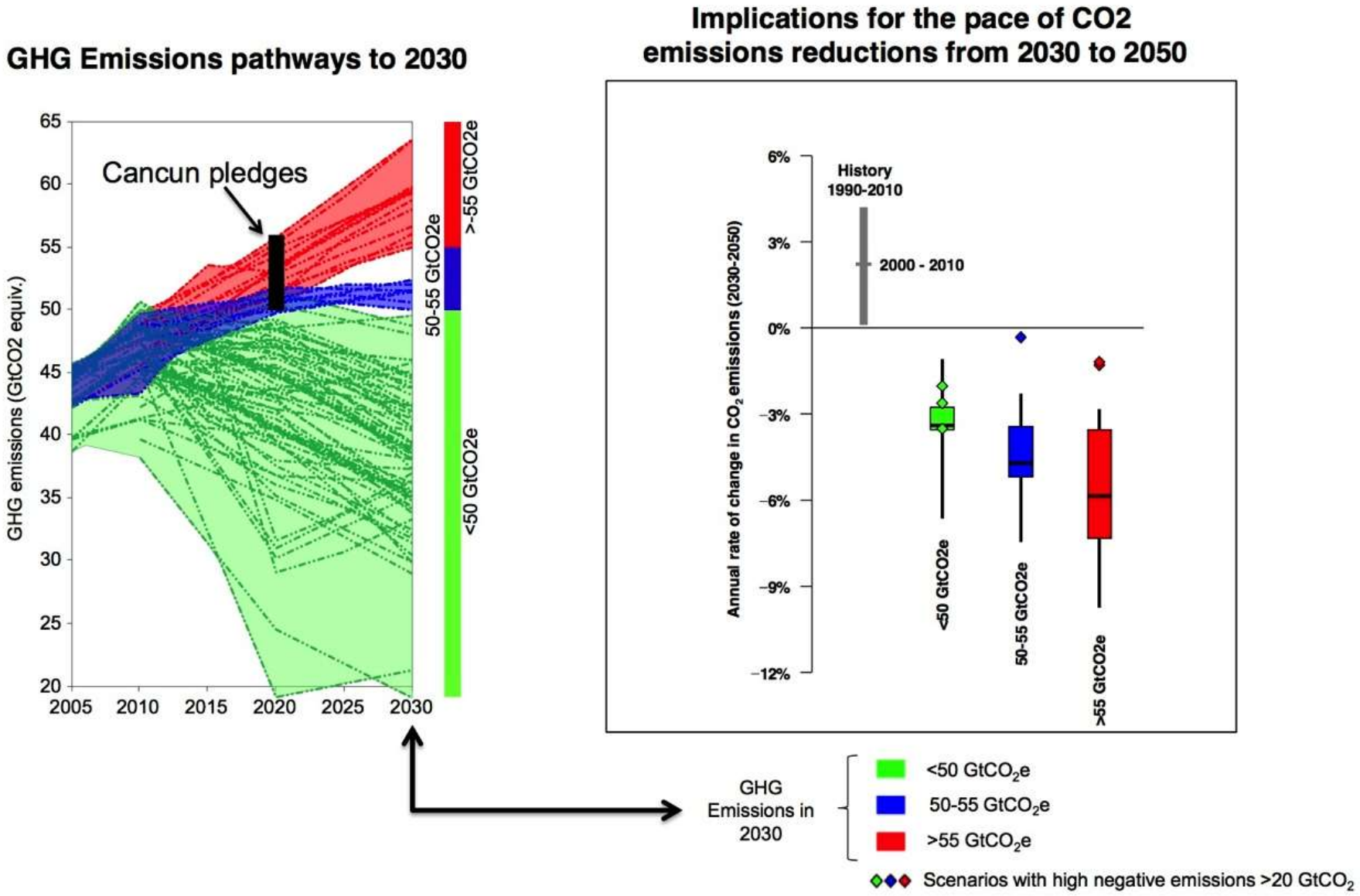


Over 1000 scenarios from the IPCC Fifth Assessment Report are shown
Source: Fuss et al 2014; CDIAC; Global Carbon Budget 2014

For å begrense menneskeskapt oppvarming til sannsynlig <2˚ C, må samlede CO_2- utslipp være under 800 GtC.



Utslippsreduksjoner som må til for å stabilisere CO_2-nivået



IPCC WG III Fig.TS9

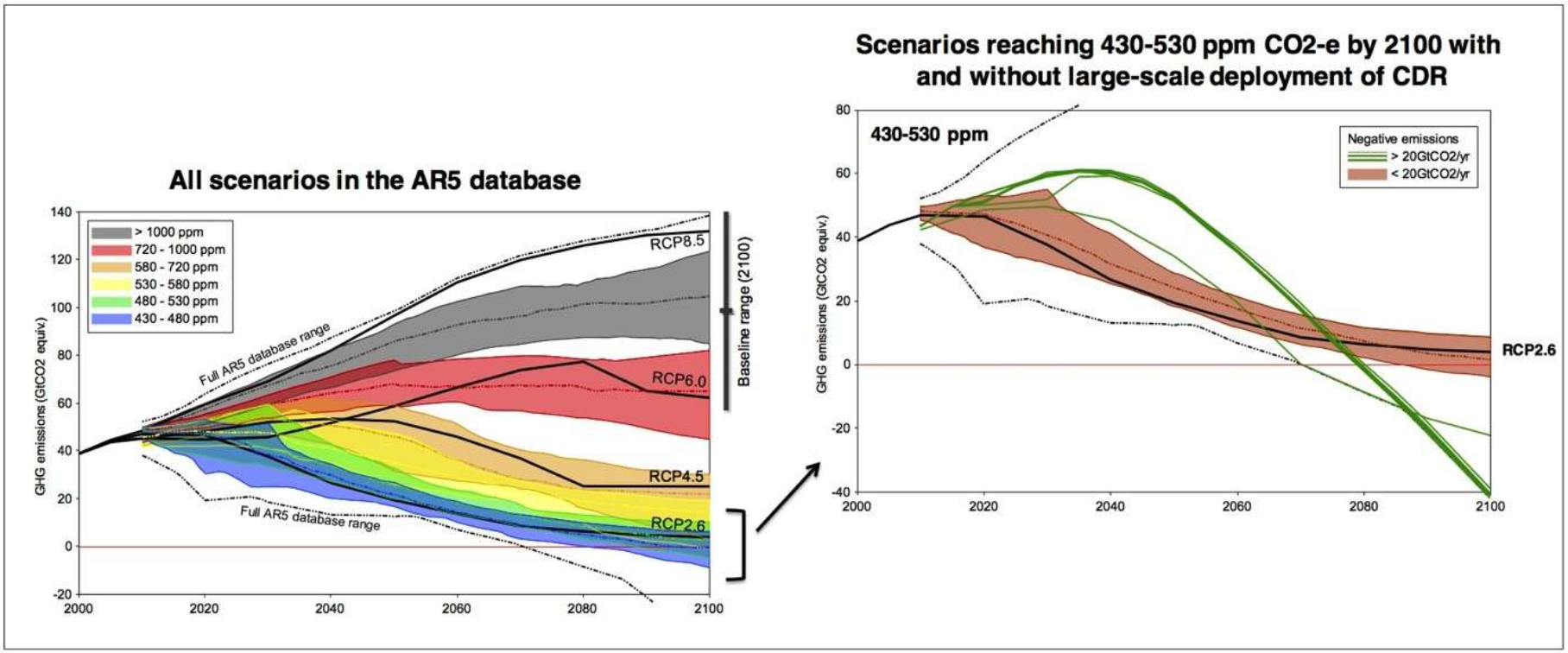
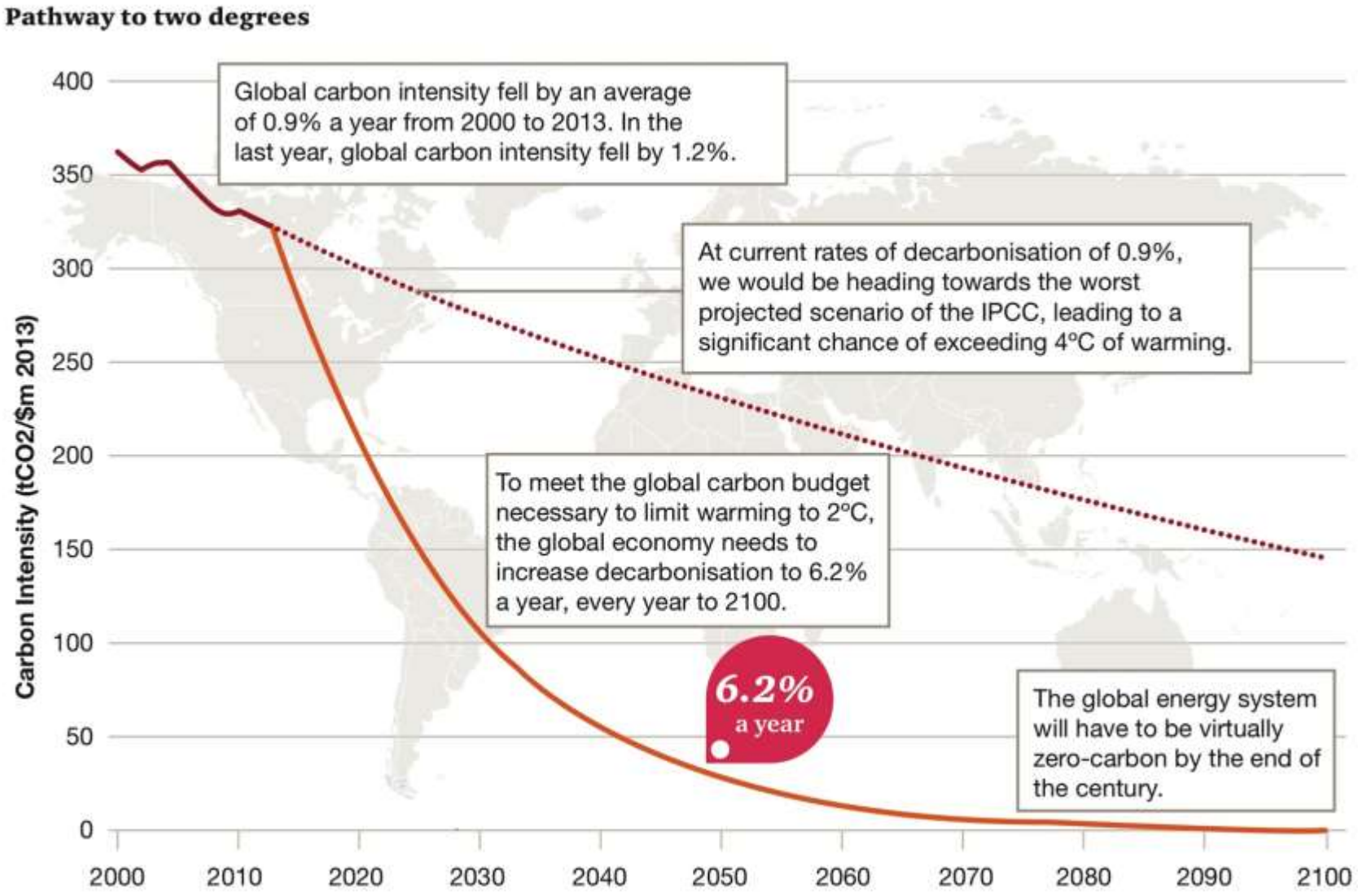


Figure TS.8. Development of global GHG emission for different long-term concentration levels (left panel) and for scenarios reaching 430-530 ppm CO_2eq in 2100 with and without negative CO_2 emissions larger than 20 $GtCO_2$/yr (right panel). Ranges are given for the 10-90th percentile of scenarios [Figure 6.7]


Pathway to two degrees
Global carbon intensity fell by an average of 0.9% a year from 2000 to 2013. In the last year, global carbon intensity fell by 1.2%.
At current rates of decarbonisation of 0.9%, we would be heading towards the worst projected scenario of the IPCC, leading to a significant chance of exceeding 4°C of warming.
To meet the global carbon budget necessary to limit warming to 2°C, the global economy needs to increase decarbonisation to 6.2% a year, every year to 2100.
6.2% a year
The global energy system will have to be virtually zero-carbon by the end of the century.
Carbon Intensity (tCO2/$m 2013)
400
350
300
250
200
150
100
50
0
2000
2010
2020
2030
2040
2050
2060
2070
2080
2090
2100

PWC 2014