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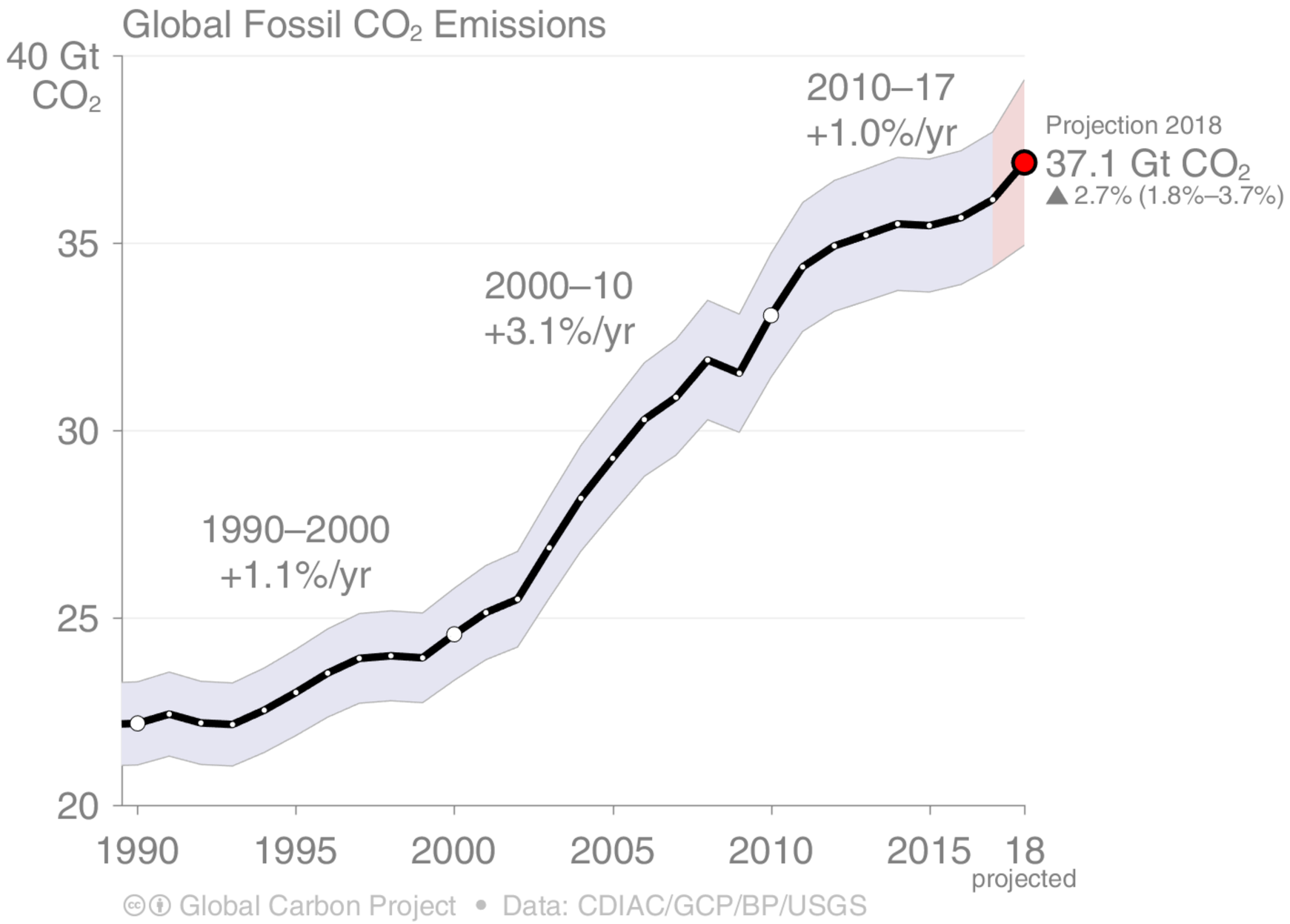
Klimaendringene:
Siste nytt

Bjørn H. Samset
Seniorforsker, CICERO Senter for klimaforskning

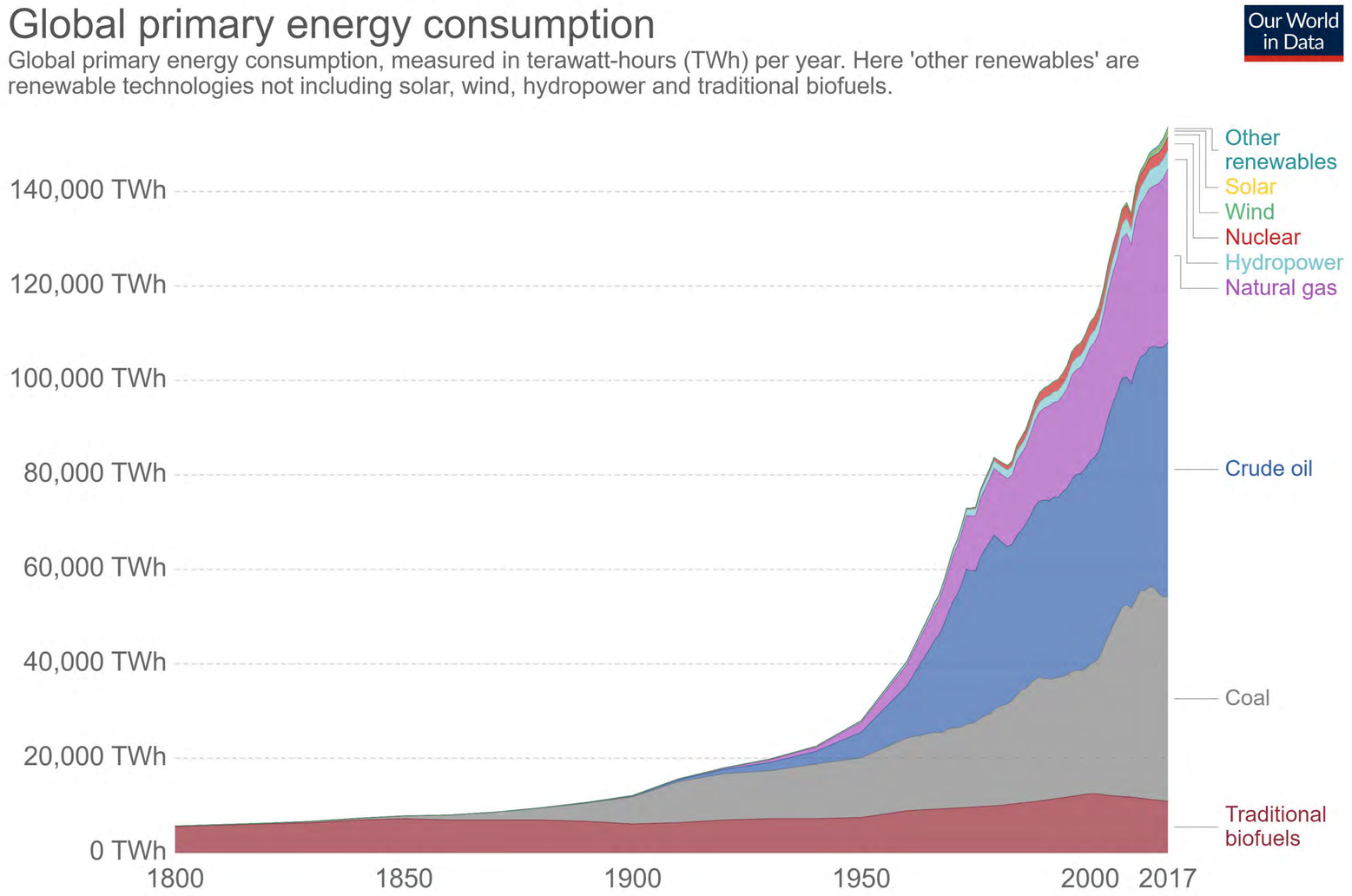
Alle delene av klimasystemet er i rask endring. Hav, land, is, vind, regn, orkaner, …

Fremskrivinger av hvor raskt jorden blir varmere har stort sett slått til

Konsekvensene av oppvarmingen kommer raskere enn de fleste forutså


Global Fossil CO_2 Emissions
40 Gt CO_2
35
30
25
20
1990
1995
2000
2005
2010
2015
18
projected
1990–2000
+1.1%/yr
2000–10
+3.1%/yr
2010–17
+1.0%/yr
Projection 2018
37.1 Gt CO_2
▲2.7% (1.8%–3.7%)
Global Carbon Project • Data: CDIAC/GCP/BP/USGS

Samfunnets energibruk har økt dramatisk siden 1900 – gjort mulig av fossile brensler



Ønske	Handling	Virkning	Konsekvenser
Bygge samfunnet	Bruke av oljefondet	Inflasjon	Priser Sparing Valutakurs Handel ...
	Bruke energi fra fossile brensler	Klimaendringer	Matproduksjon Naturskade Migrasjon Helse Dødsfall ....

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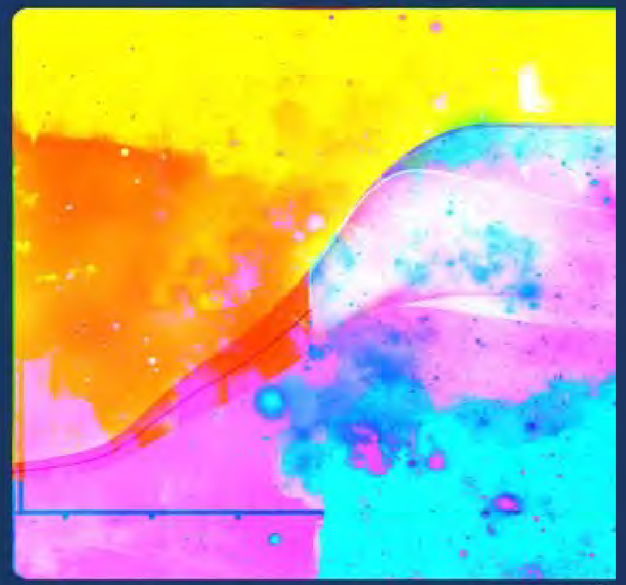
INTERGOVERNMENTAL PANEL ON climate change

Global Warming of 1.5°C

An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission path in the context of strengthening the global response to the threat of climate c sustainable development, and efforts to eradicate poverty



WG I WG II WG III

WMO

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INTERGOVERNMENTAL PANEL ON climate change

The Ocean and Cryosphere in a Changing Climate

This Summary for Policymakers was formally approved at the Second Joint Session of Working Groups I and II of the IPCC and accepted by the 51th Session of the IPCC, Principality of Monaco, 24th September 2019

Summary for Policymakers

WG I WG II

WMO UNEP

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INTERGOVERNMENTAL PANEL ON climate change

Climate Change and Land

An IPCC Special Report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems

Summary for Policymakers

WG I WG II WG III

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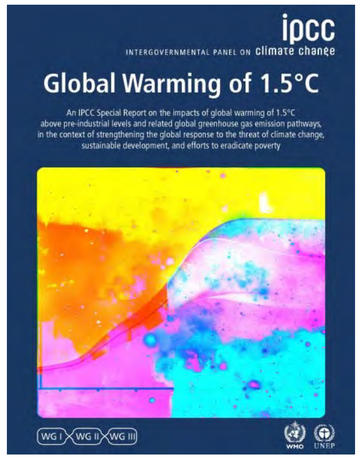
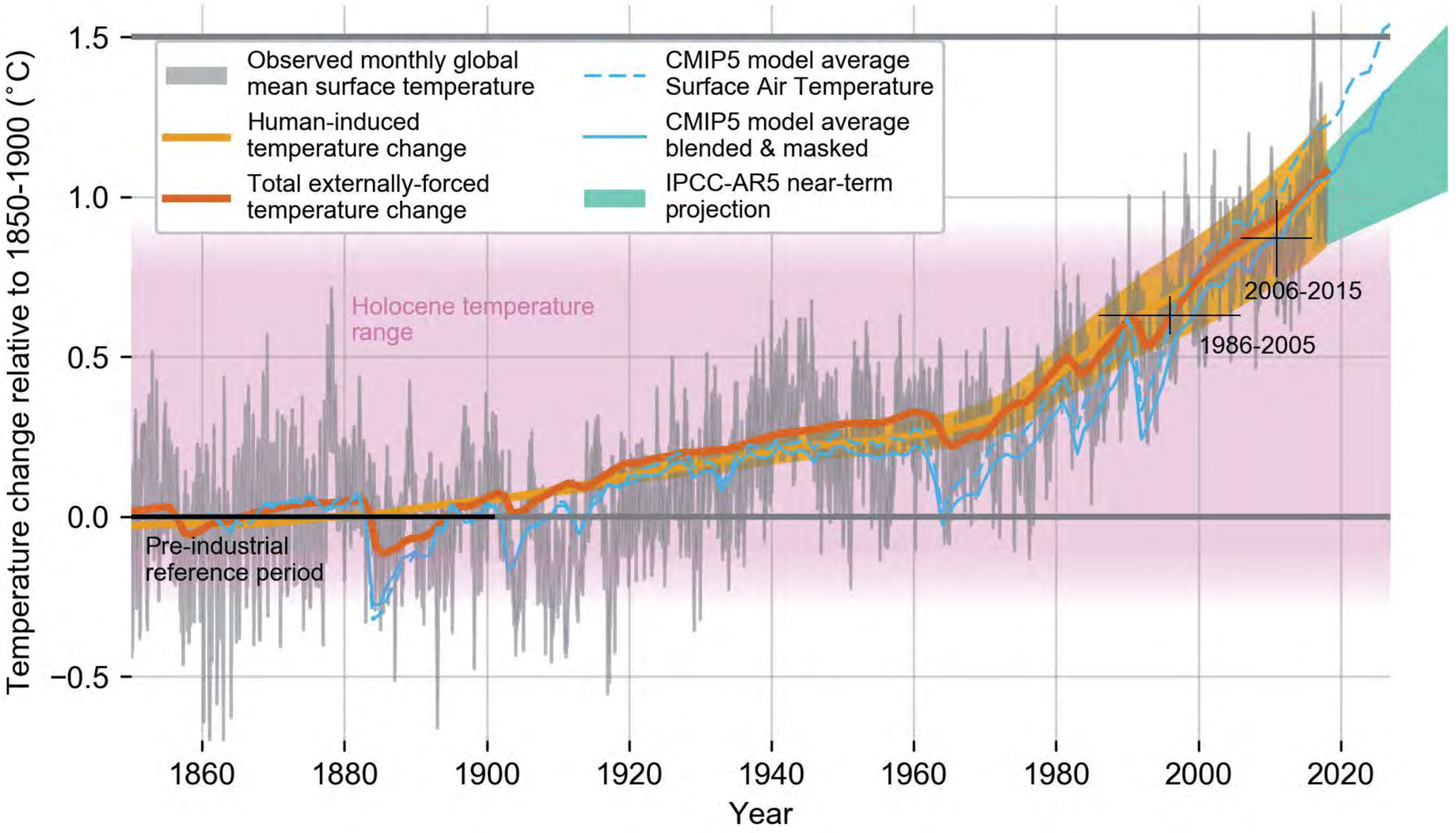
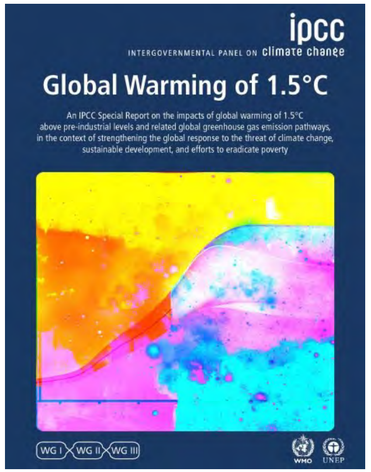
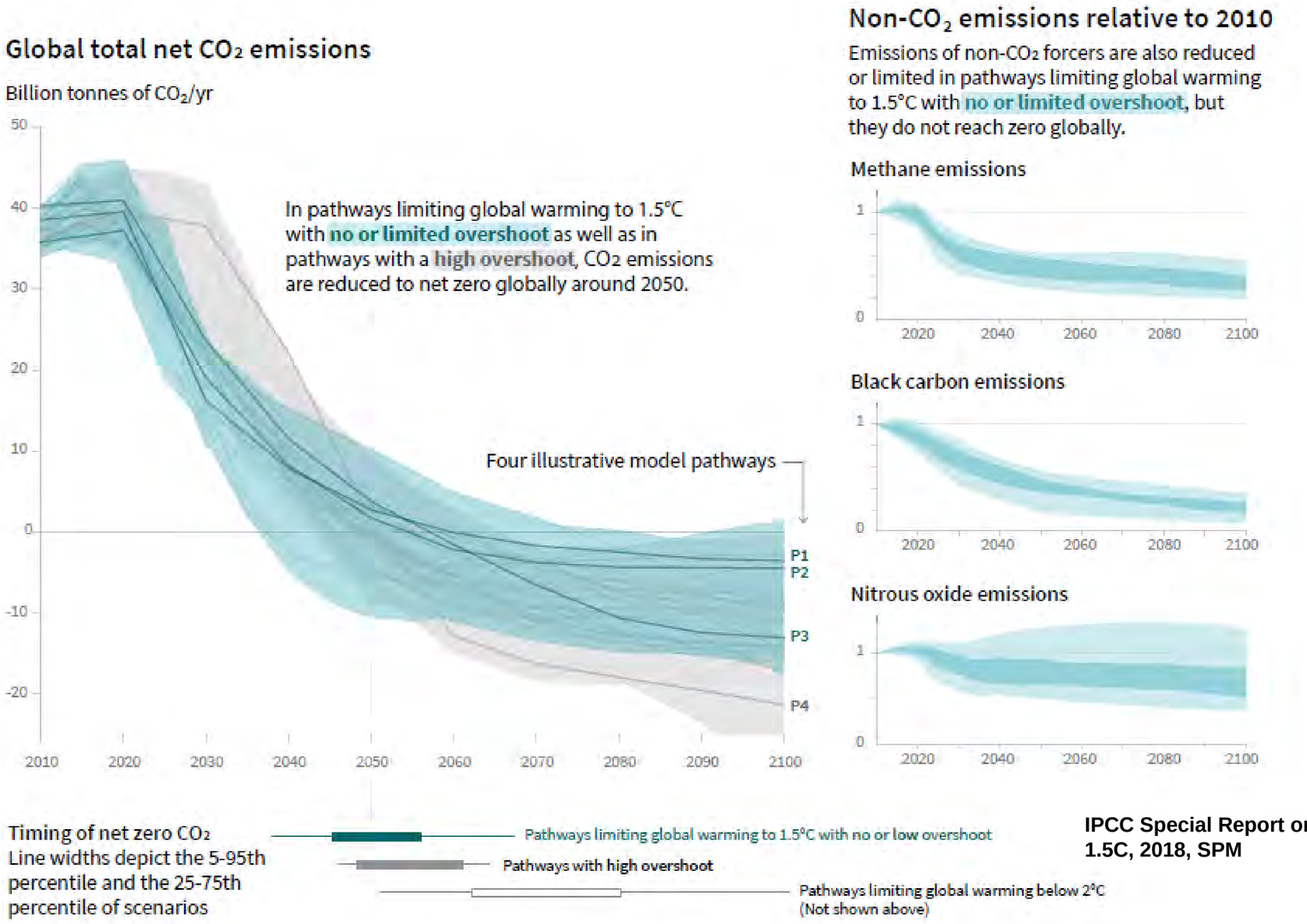
En grad global oppvarming – til nå



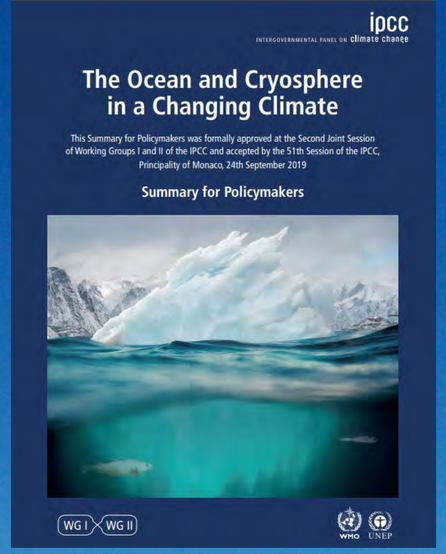


Utslippene av drivhusgasser må til null – raskt!





IPCC Special Report on Global Warming of 1.5C, 2018, SPM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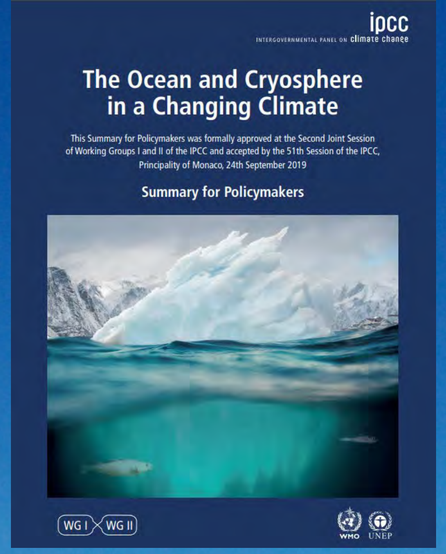
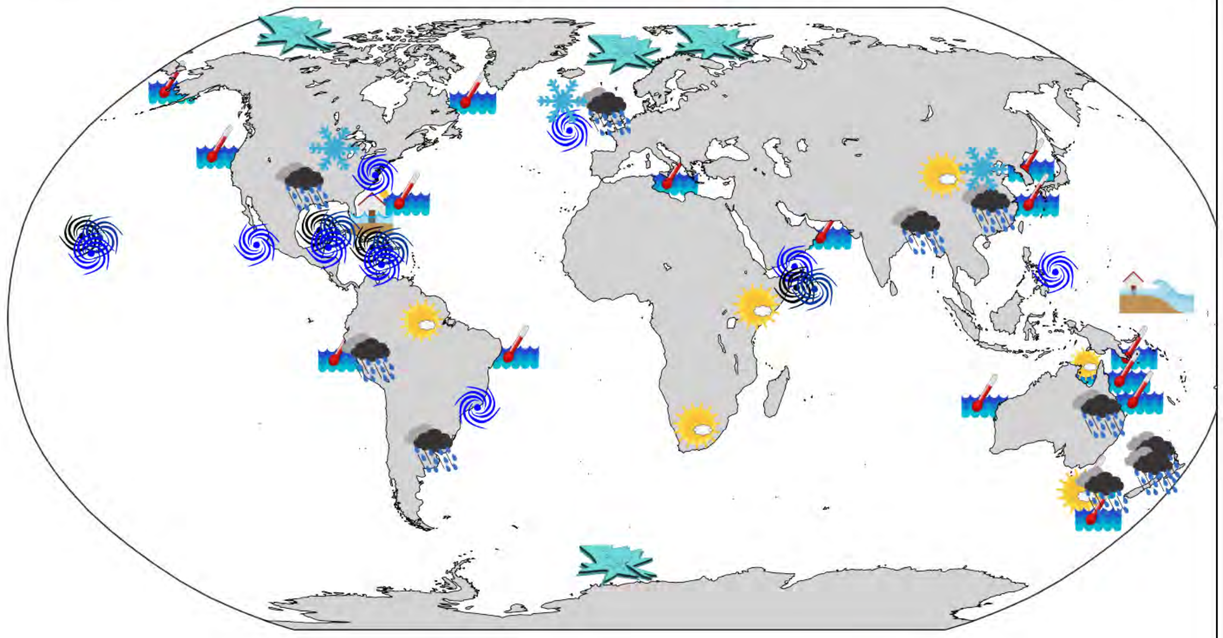
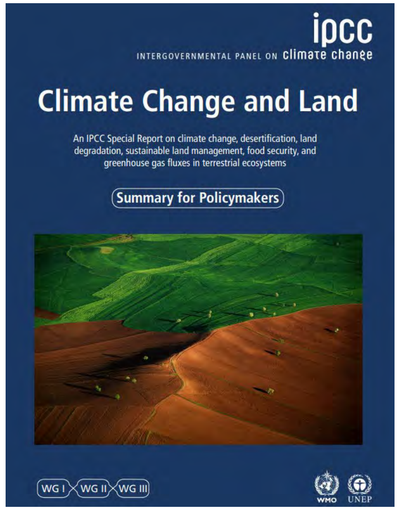




Cyclone	Extreme rainfall	Drought	Marine heatwave	Tidal flooding	Wave-induced flooding
Cold or Snowstorm	Sea-ice minimum	Compound Event: Multiple cyclones	Compound Event: drought, rainfall, MHW	Compound Event: drought, low sea levels	

Figure 6.2: Locations where extreme events with an identified link to ocean changes have been discussed in Table 6.2.



Kilma og land, hand i hand

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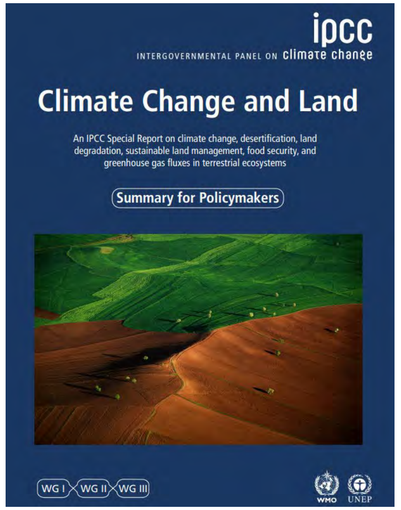
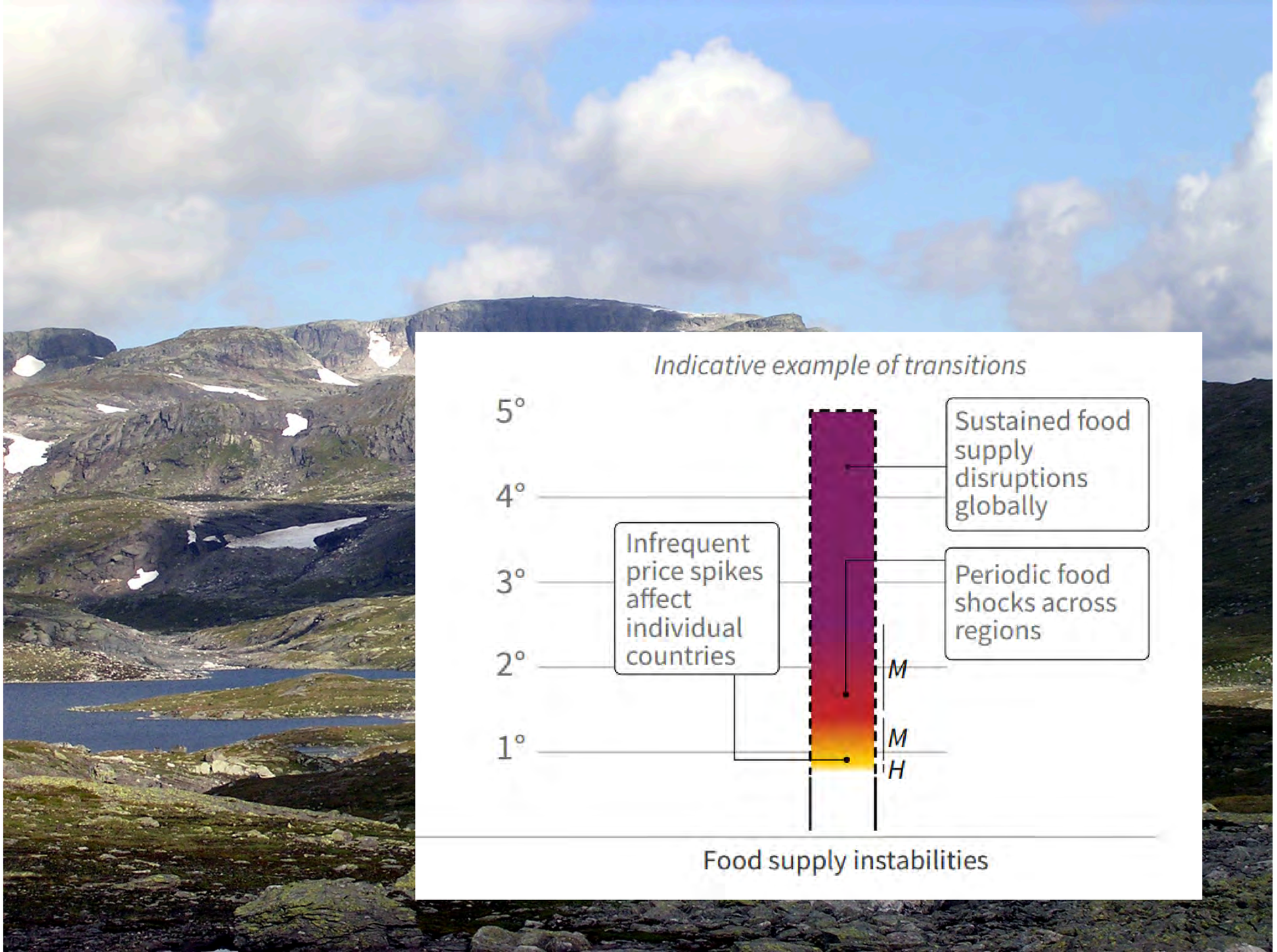


Kilma og land, hand i hand



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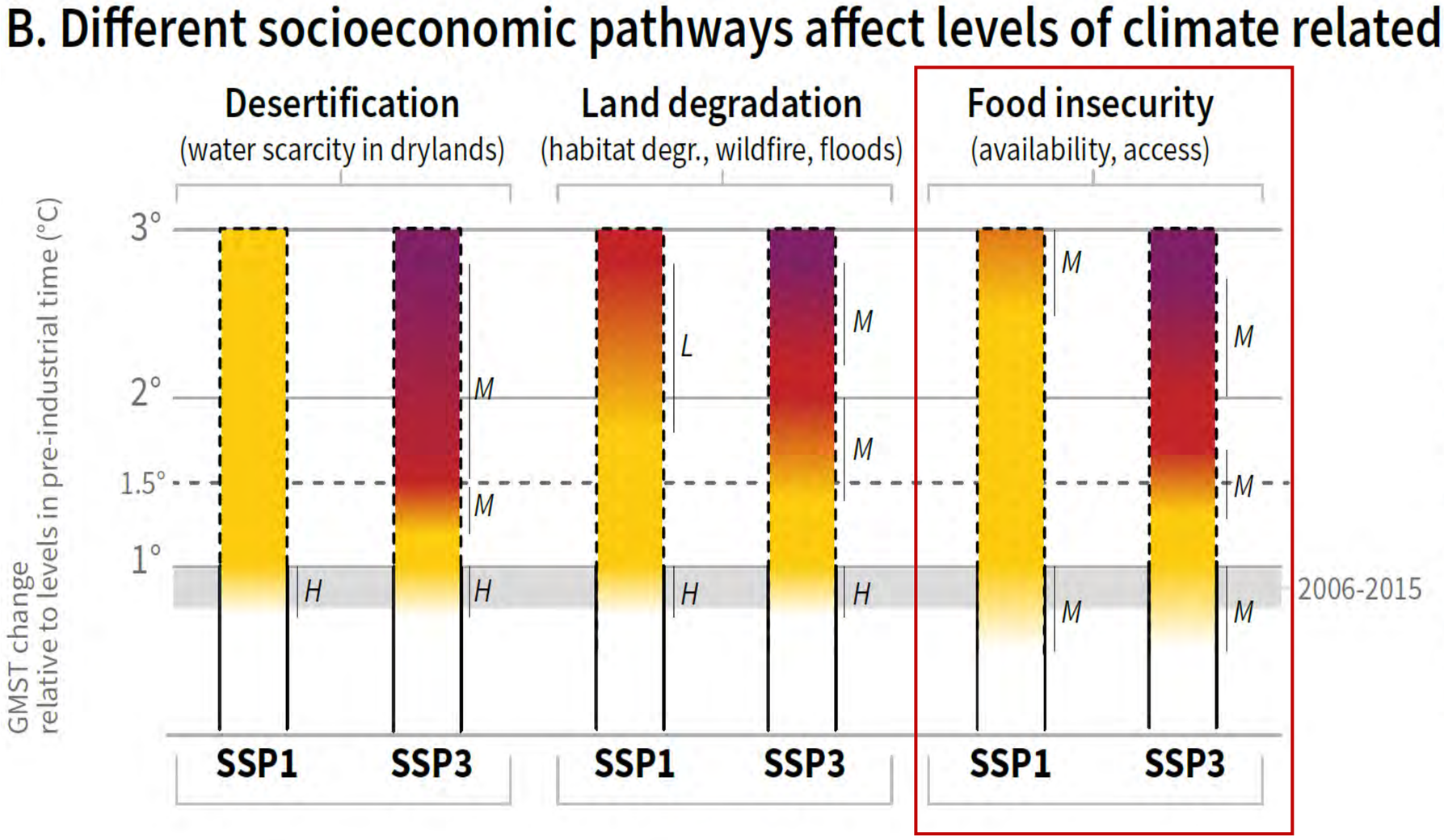
Samfunnsutviklingen er med på å avgjøre hvilen risiko land-endringer utgjør



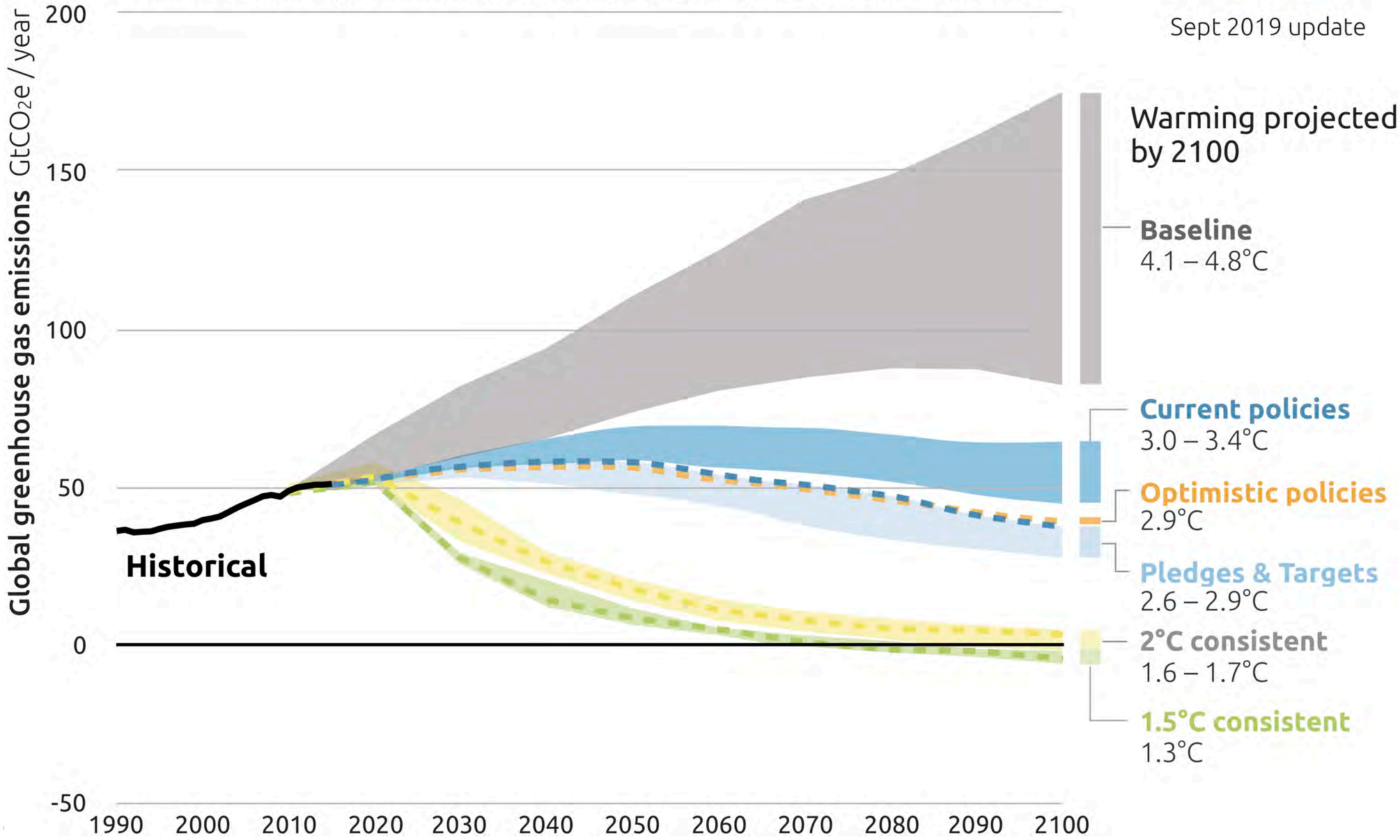
Socio-economic choices can reduce or exacerbate climate related risks as well as influence the rate of temperature increase. The **SSP1** pathway illustrates a world with low population growth, high income and reduced inequalities, food produced in low GHG emission systems, effective land use regulation and high adaptive capacity. The **SSP3** pathway has the opposite trends. Risks are lower in SSP1 compared with SSP3 given the same level of GMST increase.

2100 WARMING PROJECTIONS

Emissions and expected warming based on pledges and current policies

Climate Action Tracker

Sept 2019 update



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National Geographic