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Klimaendringer og klimarisiko:
Status og resultater fra FNs klimapanel (++)

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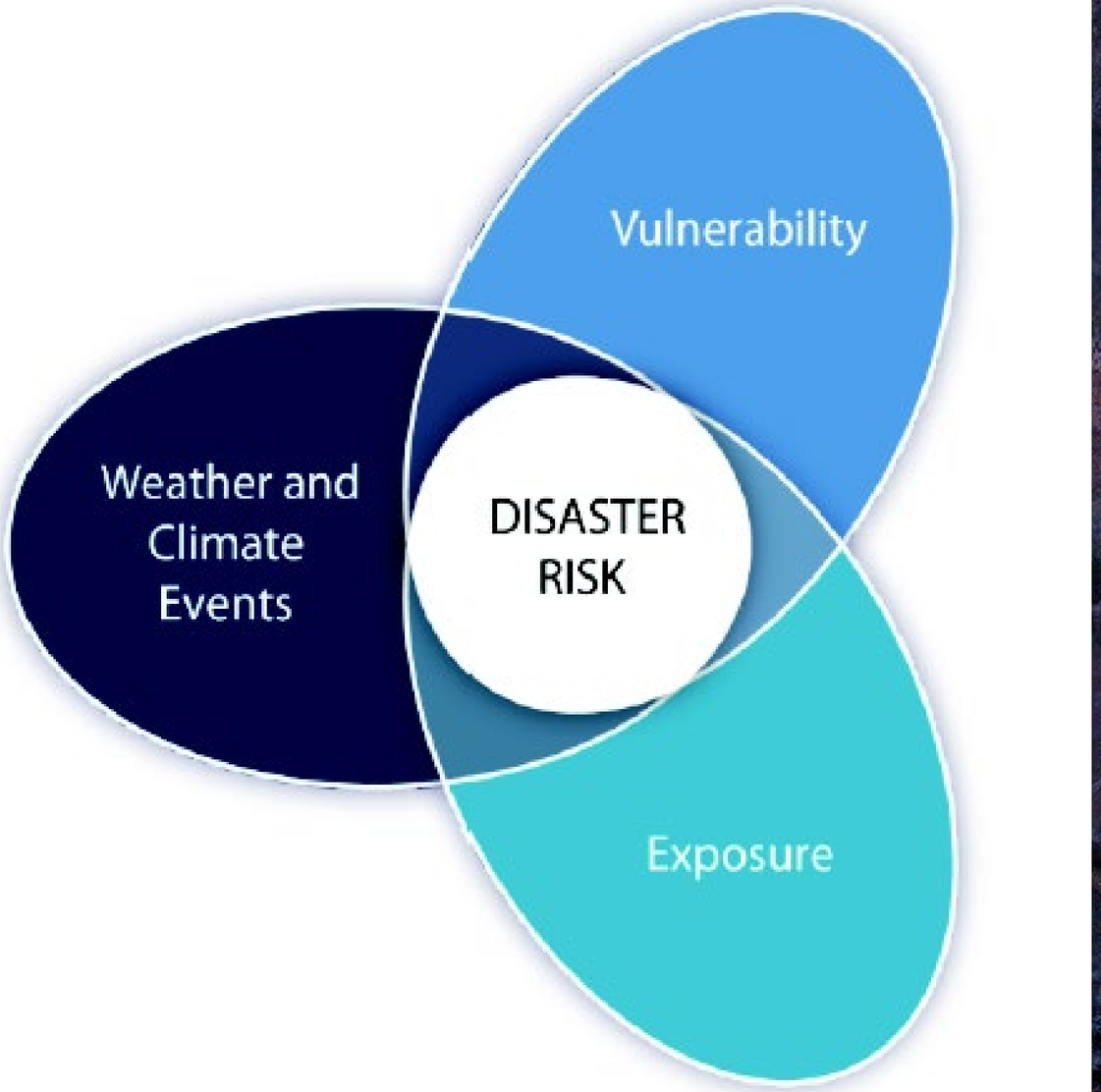
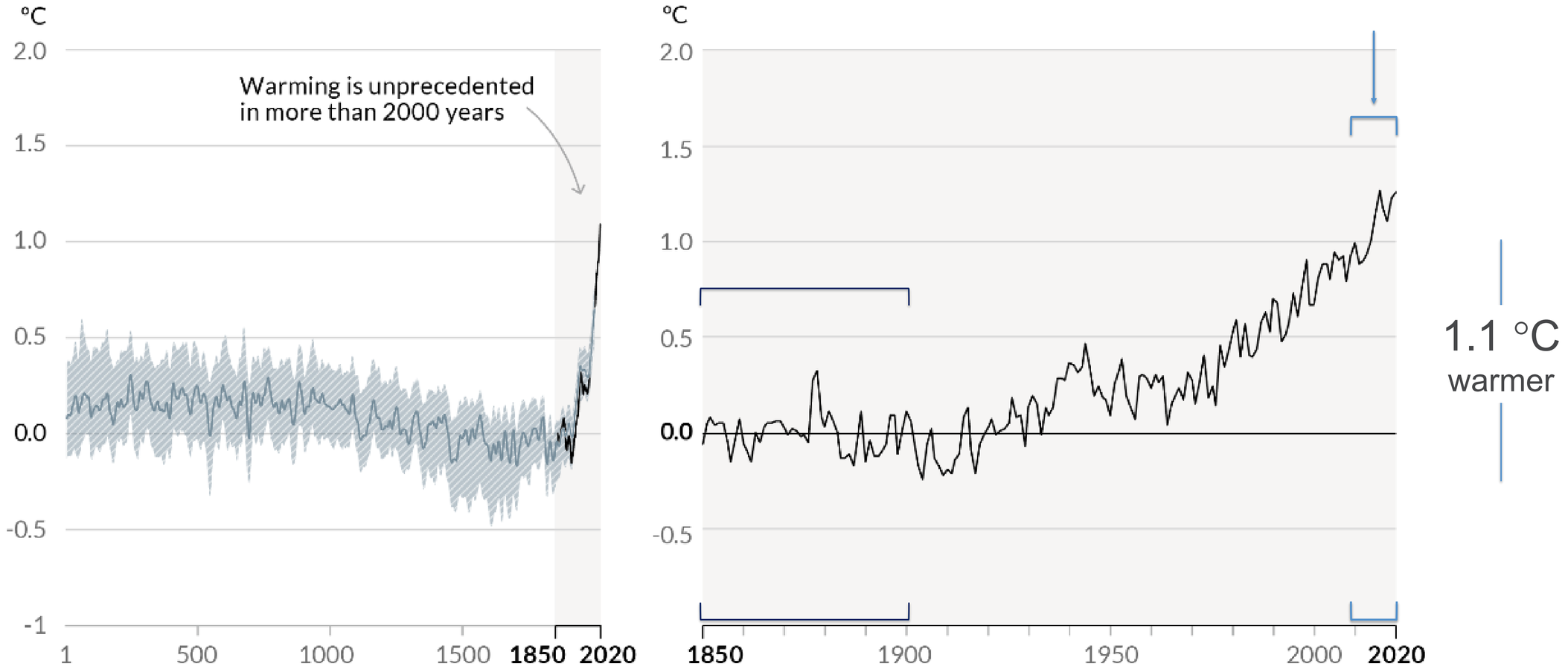
Koordinerende hovedforfatter, IPCC AR6, WG1, Kapittel 1


Vulnerability
Weather and Climate Events
DISASTER RISK
Exposure

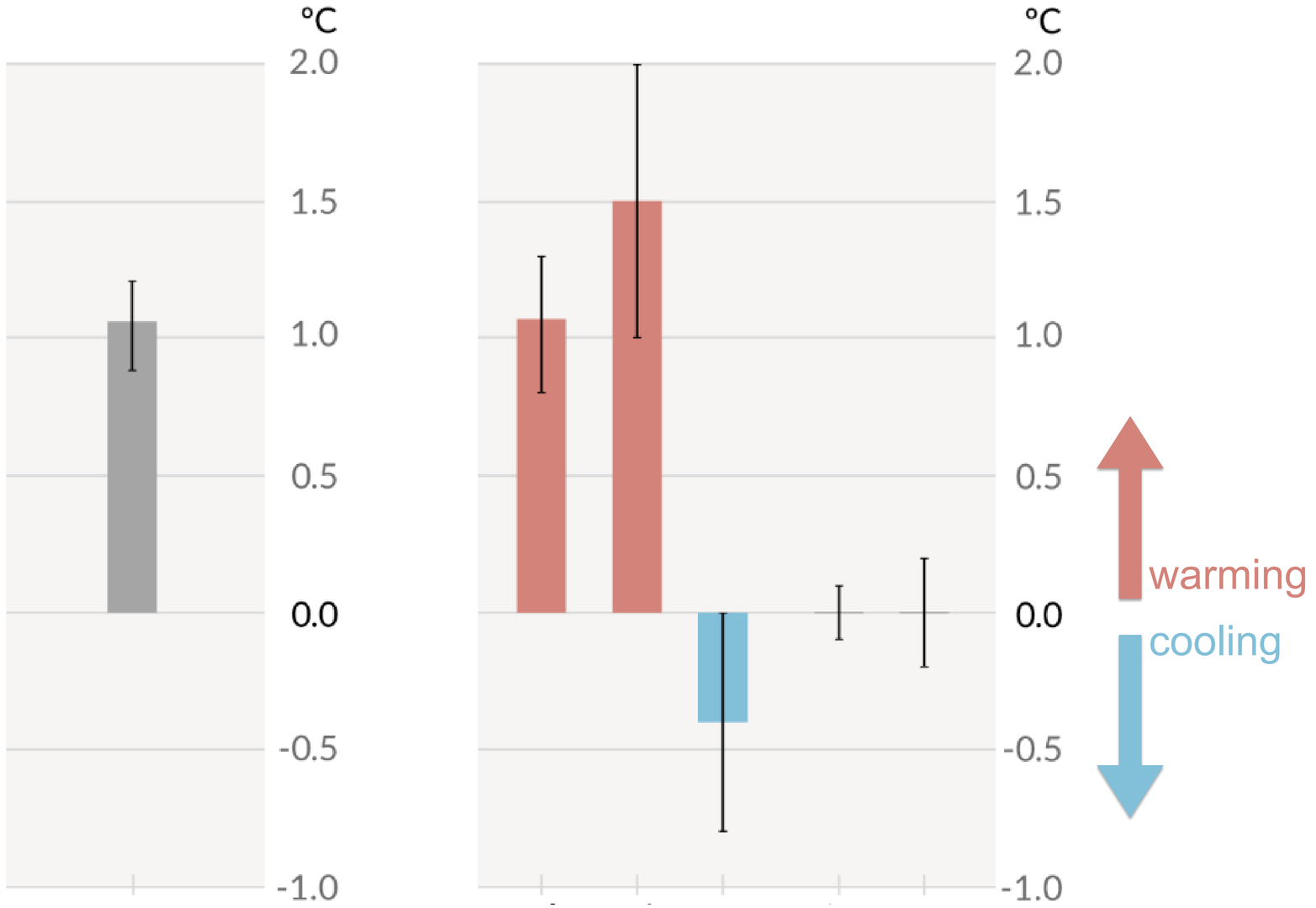
Klimaet på jorden endrer seg svært raskt

Changes in global surface temperature relative to 1850-1900



Klimaendringene skyldes så å si utelukkende våre utslipp

Observed warming is driven by emissions from **human activities**, with **greenhouse gas** warming partly masked by **aerosol cooling**



Det er langt mer enn bare temperaturen som endres

Extreme heat

More frequent

More intense

Heavy rainfall

More frequent

More intense

Drought

Increase in some regions

Fire weather

More frequent

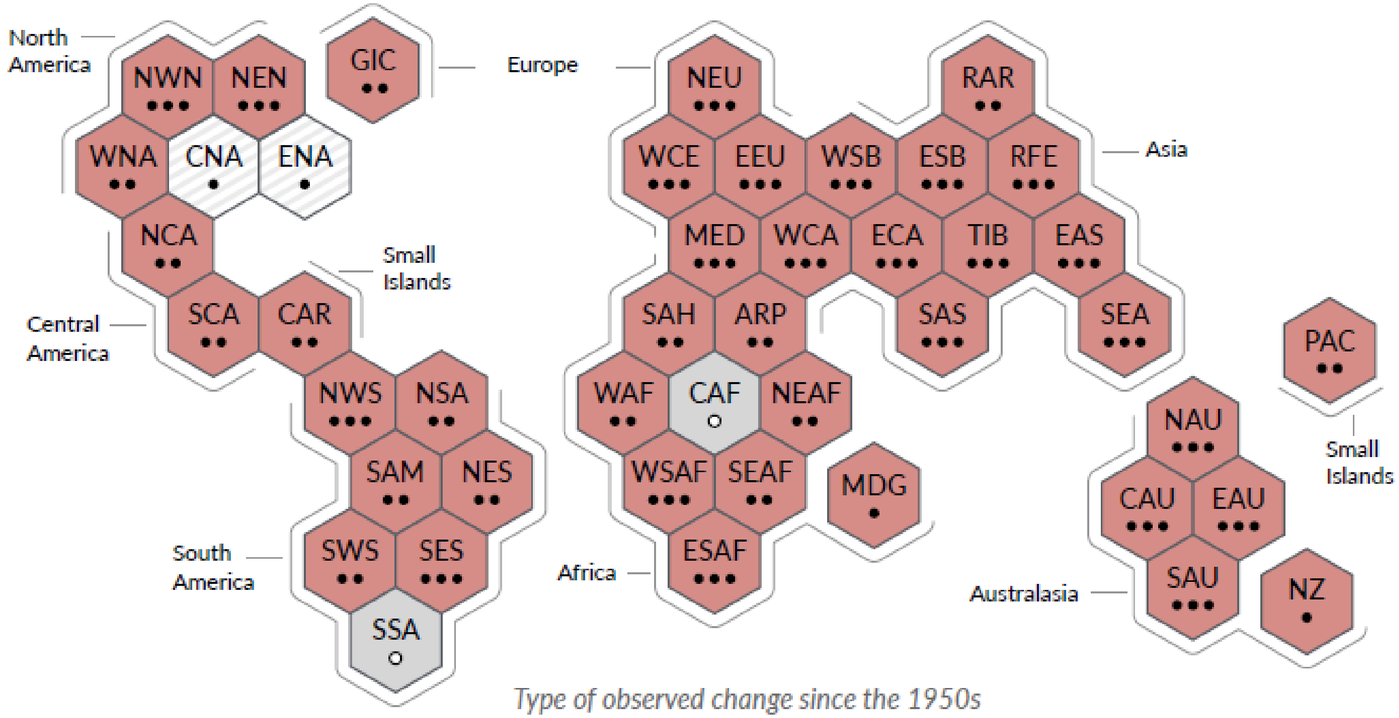
Ocean

Warming
Acidifying
Losing oxygen

Klimaendringene arter seg ulikt forskjellige steder på jorden, men alle områder er allerede påvirket.

Hetebølger:

a) Synthesis of assessment of observed change in **hot extremes** and confidence in human contribution to the observed changes in the world's regions



Klimaendringene arter seg ulikt forskjellige steder på jorden, men alle områder er allerede påvirket.

Ekstremregn:

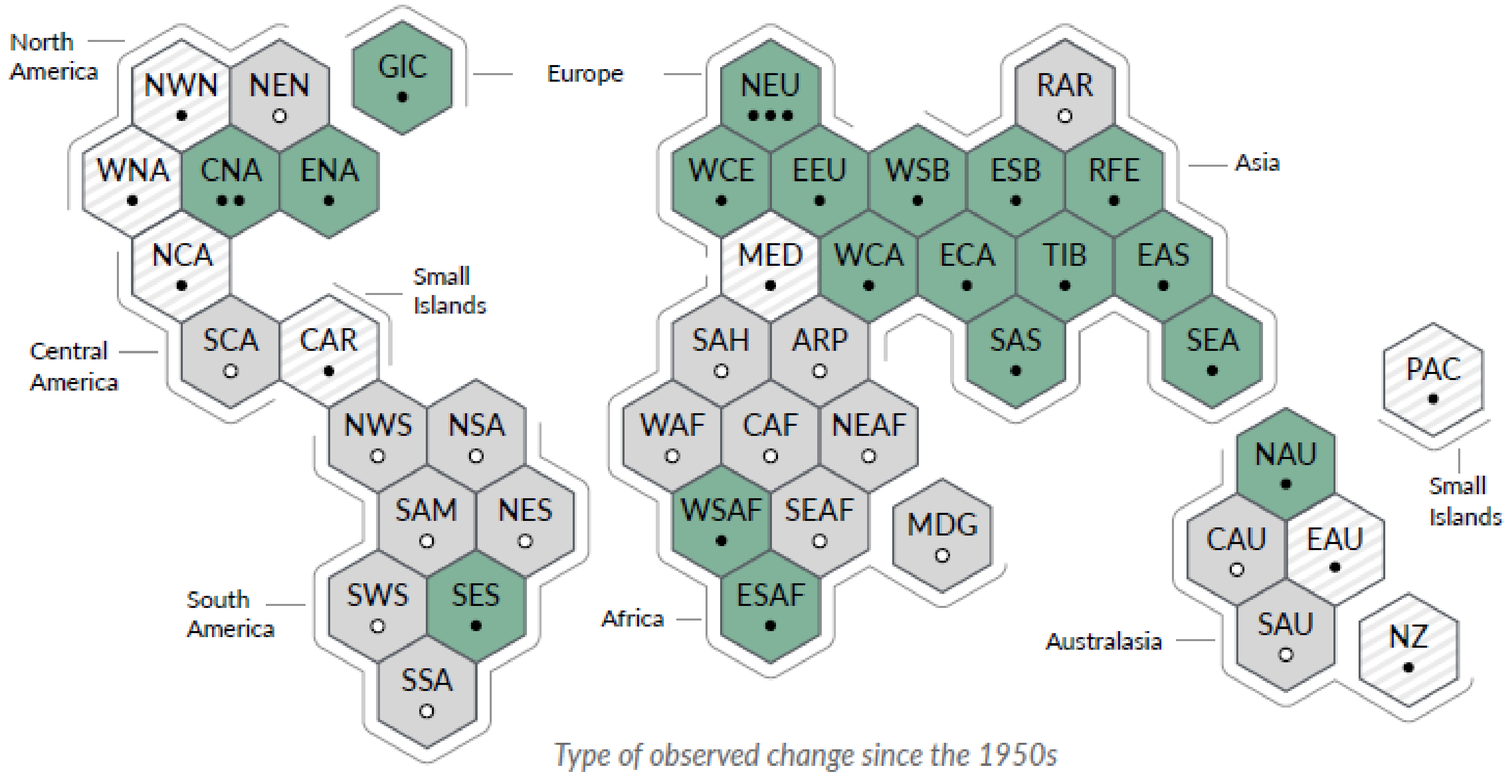
b) Synthesis of assessment of observed change in **heavy precipitation** and confidence in human contribution to the observed changes in the world's regions

Type of observed change
in heavy precipitation

- Increase (19)
- Decrease (0)
- Low agreement in the type of change (8)
- Limited data and/or literature (18)

Confidence in human contribution
to the observed change

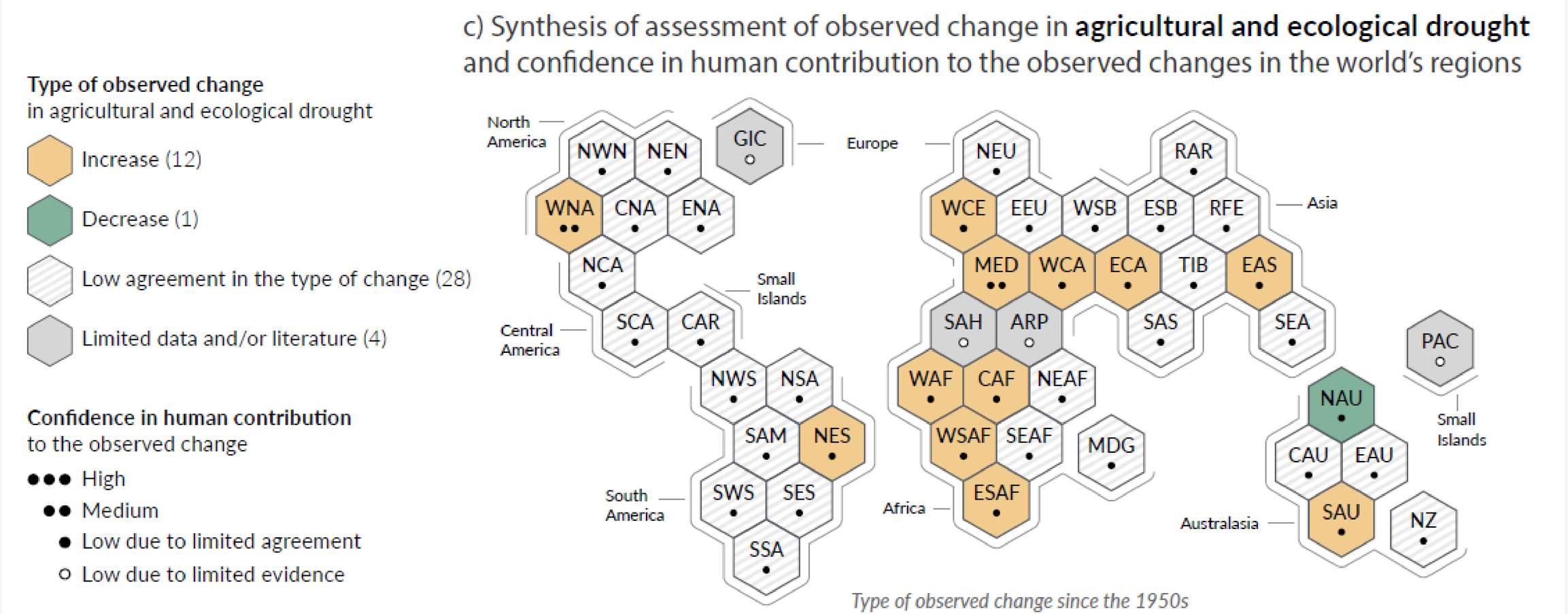
- ●●● High
- ●● Medium
- ● Low due to limited agreement
- ○ Low due to limited evidence



Type of observed change since the 1950s

Klimaendringene arter seg ulikt forskjellige steder på jorden, men alle områder er allerede påvirket.

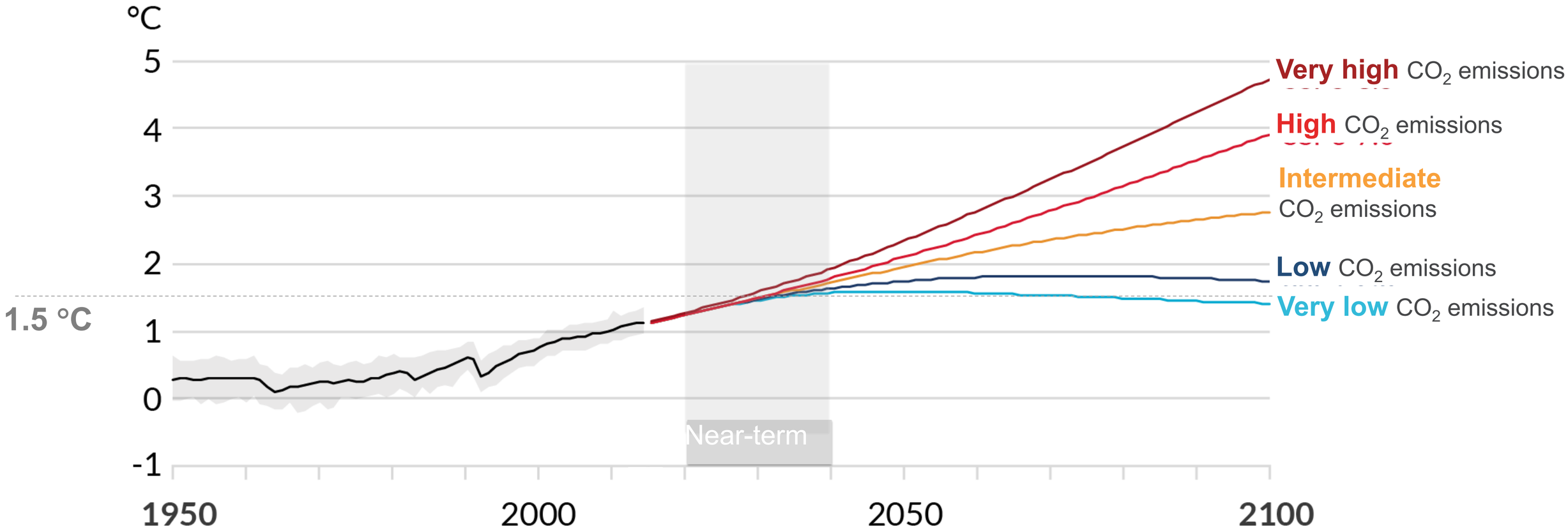
Tørke:



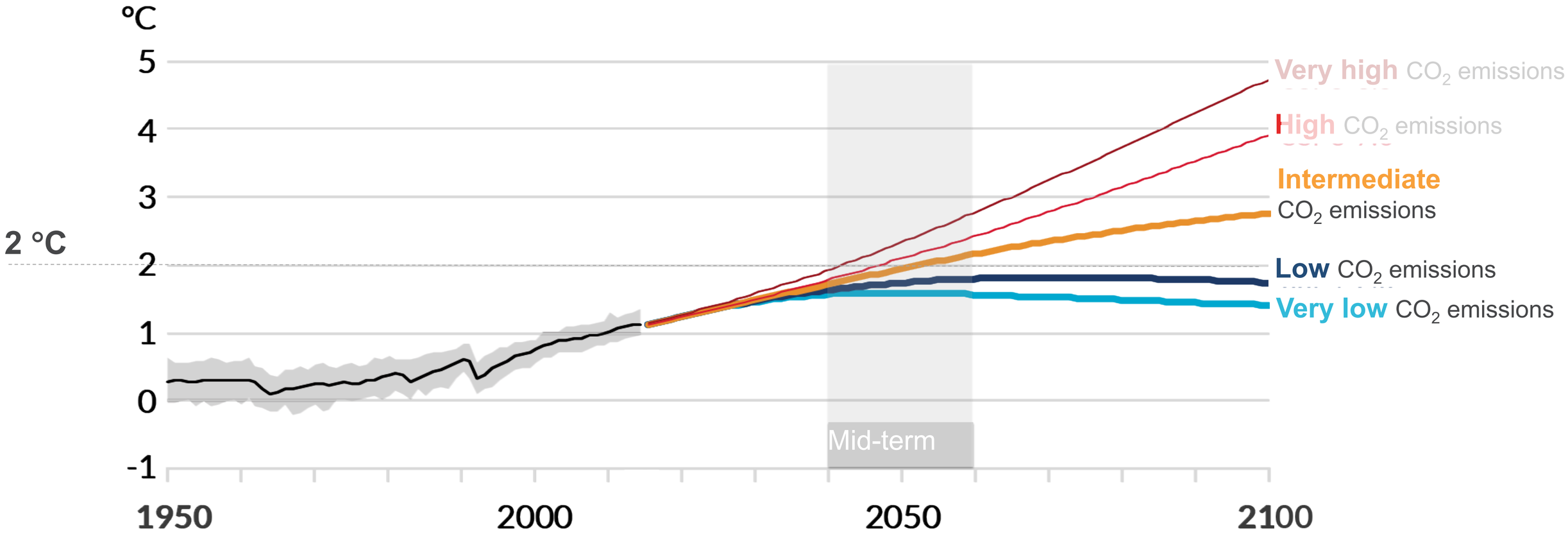
Klimaendringene har allerede store konsekvenser, og de vil ikke stanse med det første.

Og, kort oppsummert: Jo varmere, jo verre!

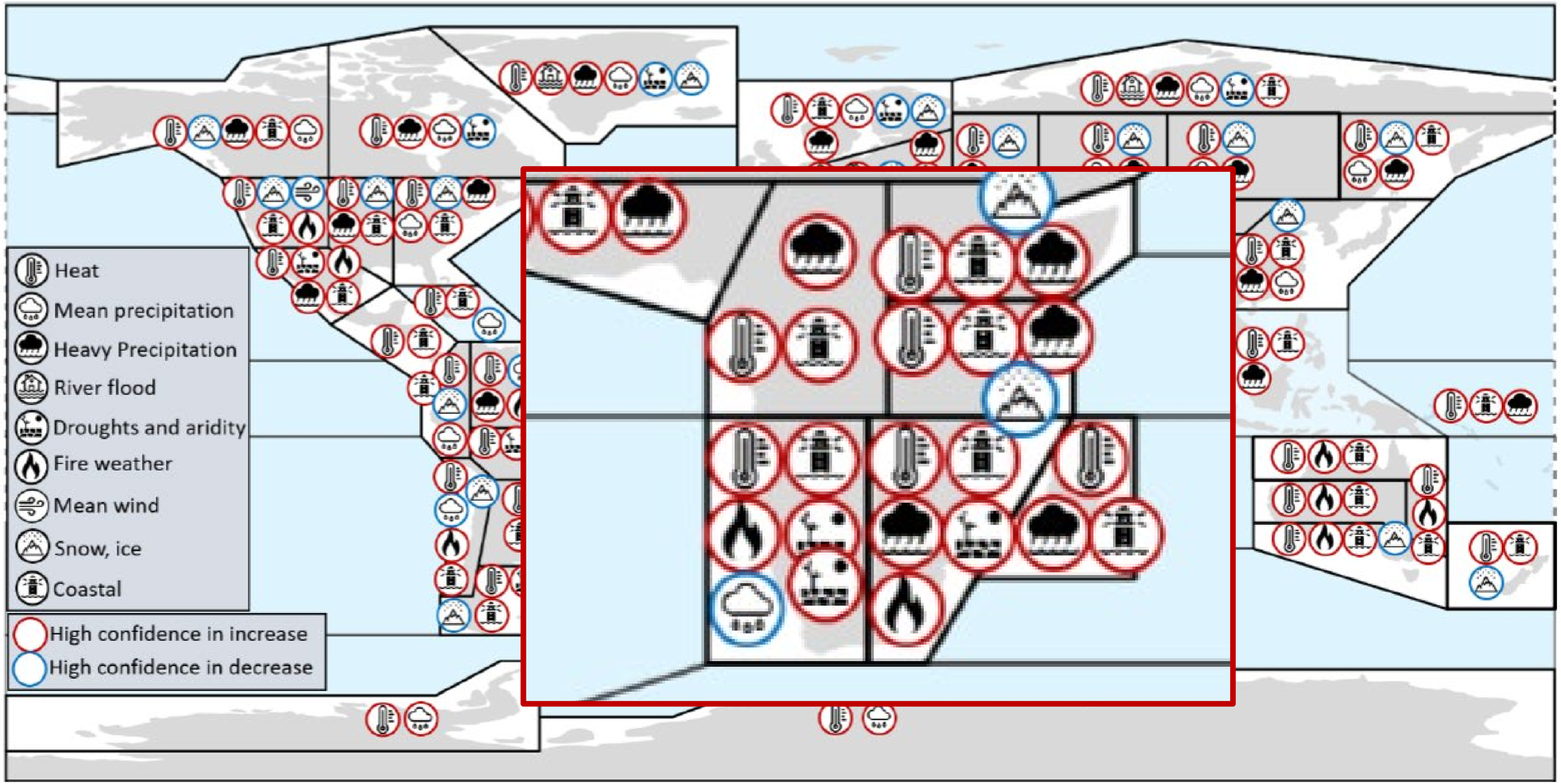
Future emissions cause future additional warming



Future emissions cause future additional warming

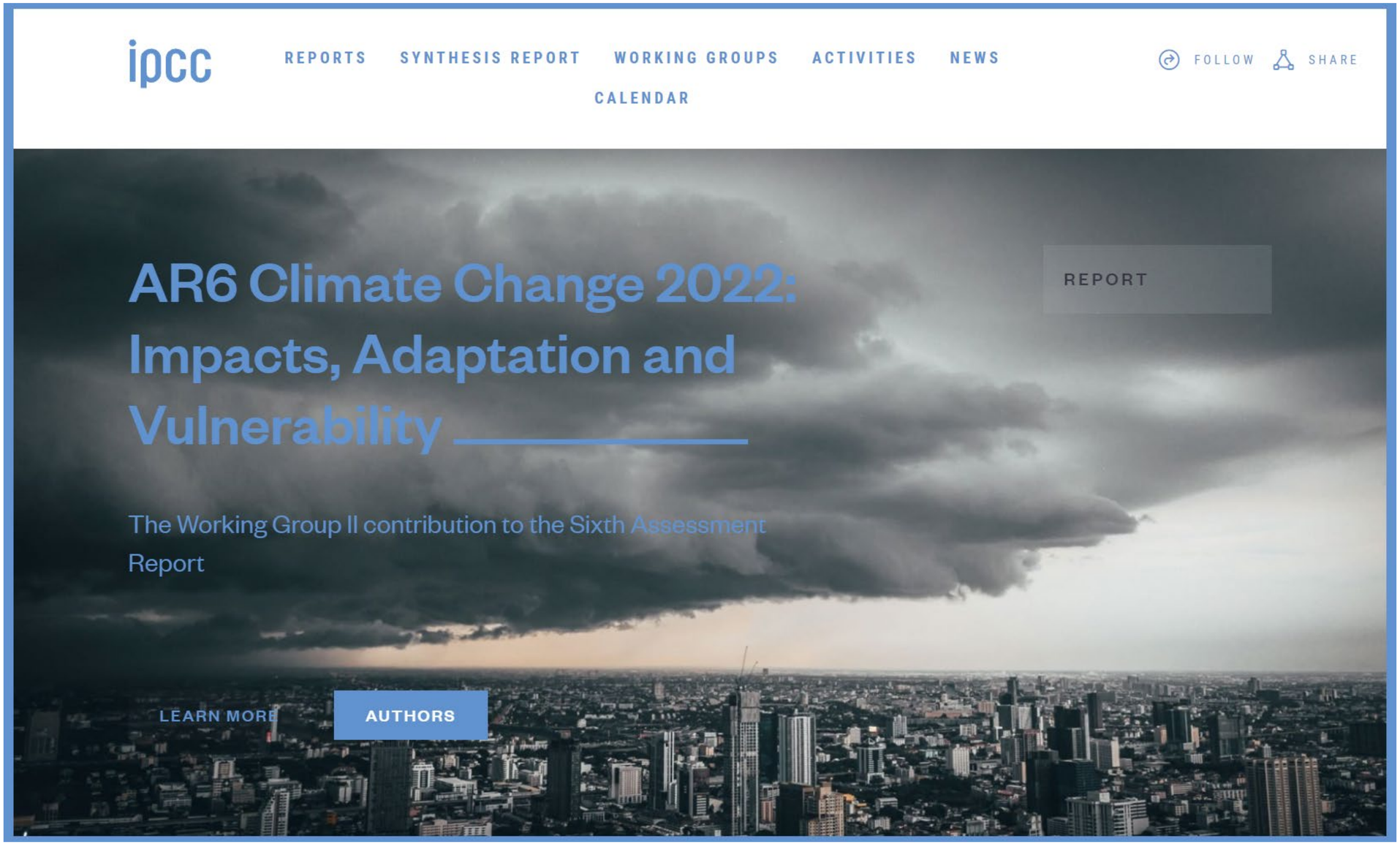


Fysiske endringer forverres frem mot 2050

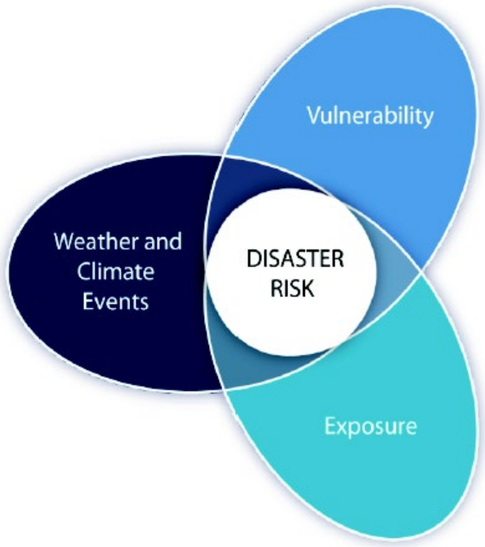


IPCC AR6, WG1, Kapittel 12

WG2: 21. februar 2022 (antakelig)

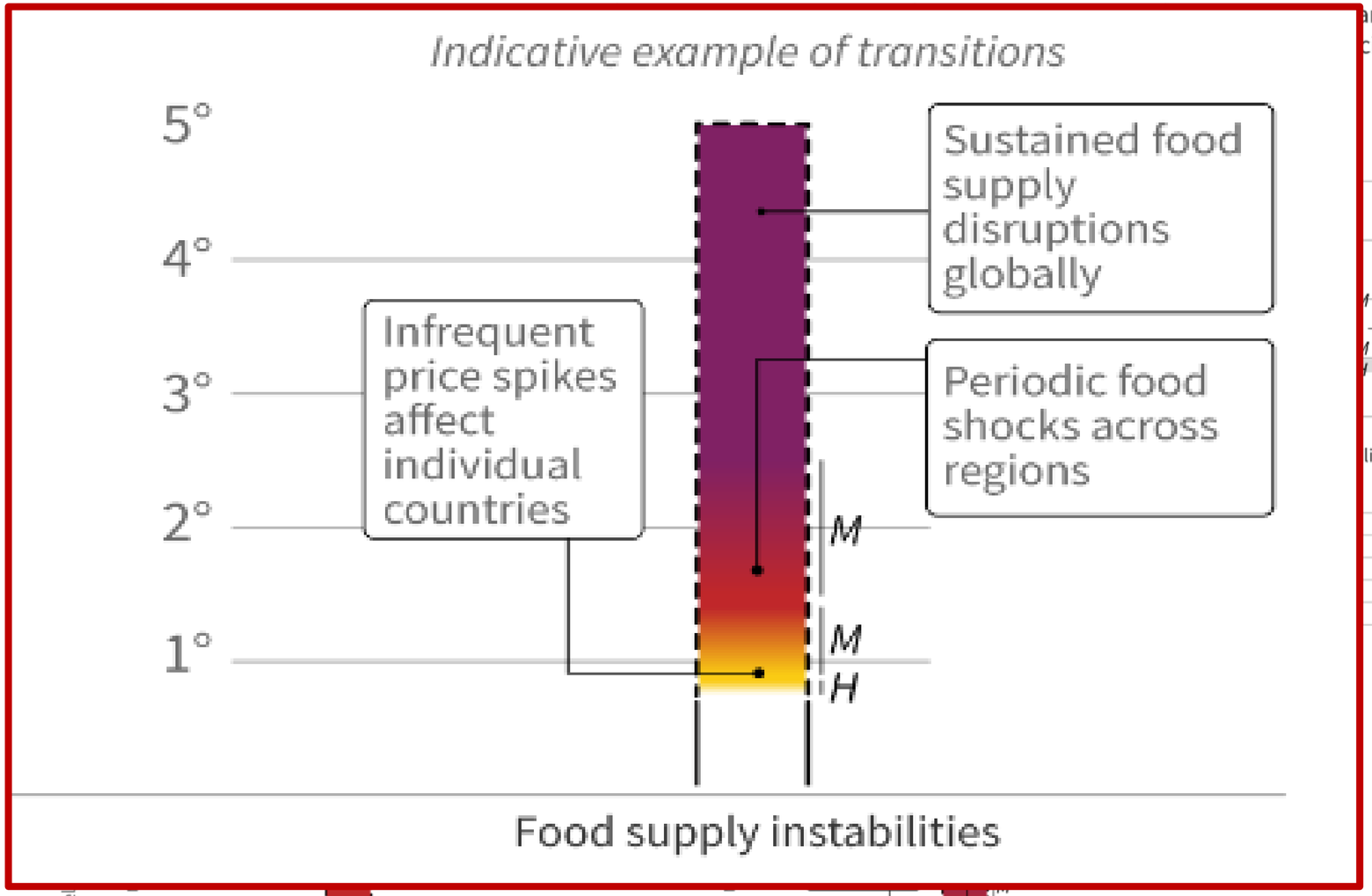


IPCC Special Report on Climate Change and Land (2019)



A. Risks to humans and ecosystems from changes in land-based processes as a result of climate change

Increases in global mean surface temperature (GMST), relative to pre-industrial levels, affect processes involved in **desertification** (water scarcity), **land degradation** (soil erosion, vegetation loss, wildfire, permafrost thaw) and **food security** (crop yield and food supply



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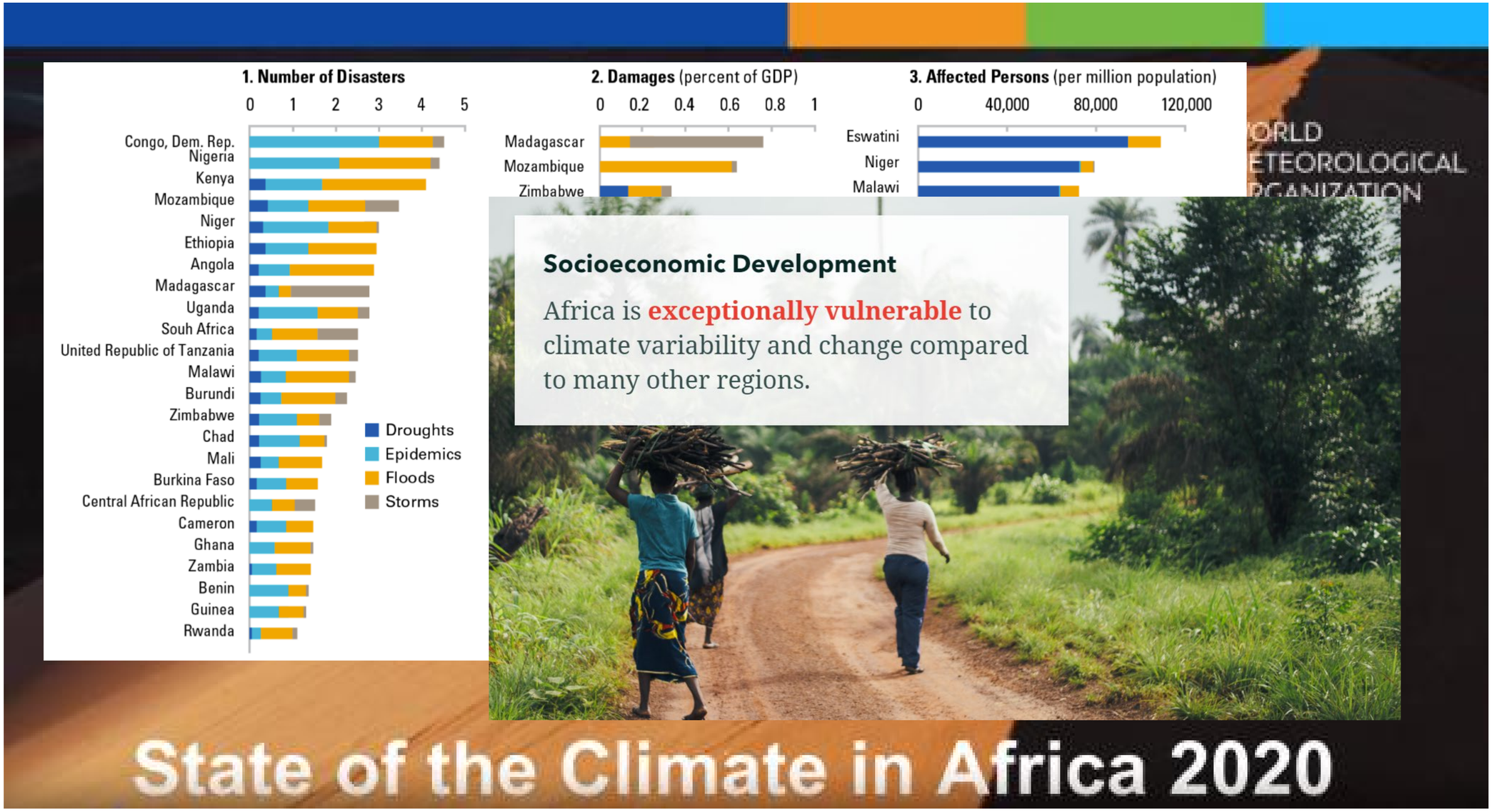
WMO, October 2021

https://public.wmo.int/en/our-mandate/climate/wmo-statement-state-of-global-climate/Africa



Chatham House, October 2021

https://www.chathamhouse.org/2021/10/what-near-term-climate-impacts-should-worry-us-most

- The near-term impacts of greatest concern are:
  - Cascading impacts on food security, migration and global supply chains, originating in the most vulnerable countries and affecting regional country groups and the wider global community.
  - Food security impacts in South and Southeast Asia, and Australasia

The 10 hazard-impact pathways of greatest near-term concern all relate to regions of Africa and Asia. The impacts of greatest concern – food security and migration and displacement of people – may arise from hazards such as drought, changing rainfall patterns or heatwaves. Impacts will be greatest where communities are already most vulnerable, but will also set off interacting, compounding cascades of secondary impacts that cross borders and continents.

  - Drought and crop failure driving displacement and migration of people from East Africa and the Sahel into Southern Europe.
  - Drought directly creating conditions for conflict in Africa, with particular vulnerability in East Africa.
  - Changing rainfall patterns and drought impacting livelihoods and income in Africa.

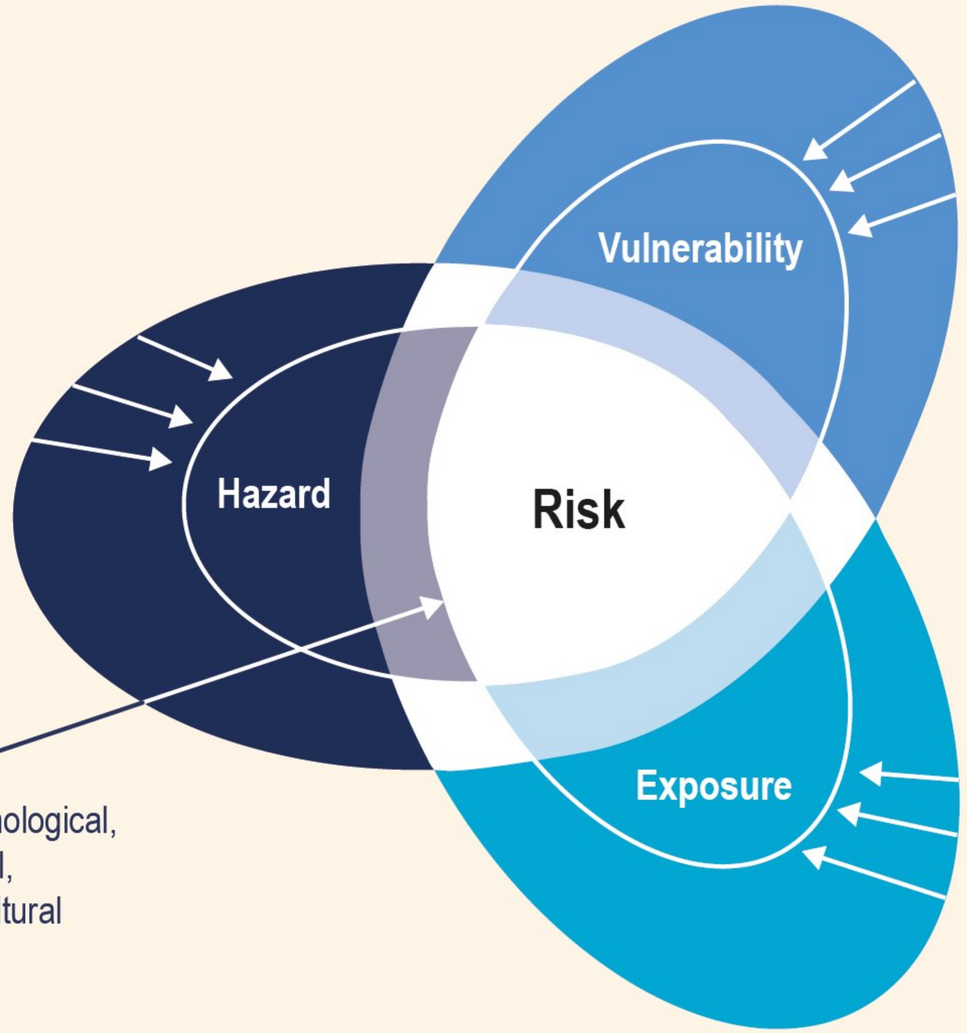

BJØRN H. SAMSET
2070
ALT DU LURER PÅ OM KLIMAKRISEN, OG HVORDAN VI KAN KOMME OSS FORBI DEN
CAPPELEN DAMM

Fig 1… + klimarisiko-greie

Actions to reduce Hazards

Examples include:

- Ecosystem-based measures to reduce coastal flooding
- Mangroves to alleviate coastal storm energy
- Water reservoirs to buffer low-flows and water scarcity



Actions to reduce Vulnerability

Examples include:

- Social protection
- Livelihood diversification
- Insurance solutions
- Hazard-proof housing and infrastructure

Actions to reduce Exposure

Examples include:

- Coastal retreat and resettlement
- Risk sensitive land use planning
- Early warning systems and evacuations

Limits to Adaptation

- E.g. physical, ecological, technological, economic, political, institutional, psychological, and/or socio-cultural

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