



Webinar: Oportunidades para la **acción climática**
en base al **6to Informe del IPCC**

La ciencia del Cambio Climático

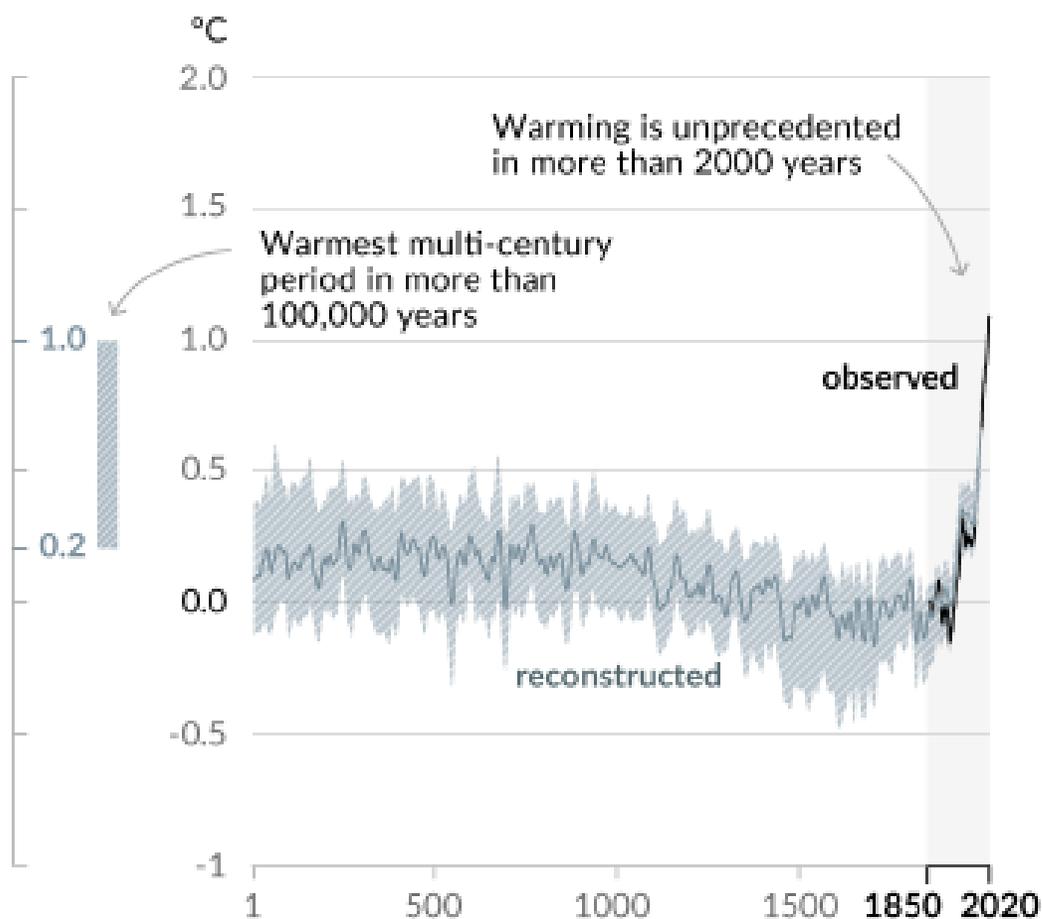
Matilde Rusticucci
DCAO Universidad de Buenos Aires / CONICET

Los cambios recientes en el clima son generalizados, rápidos e intensificándose, y sin precedentes en miles de años.

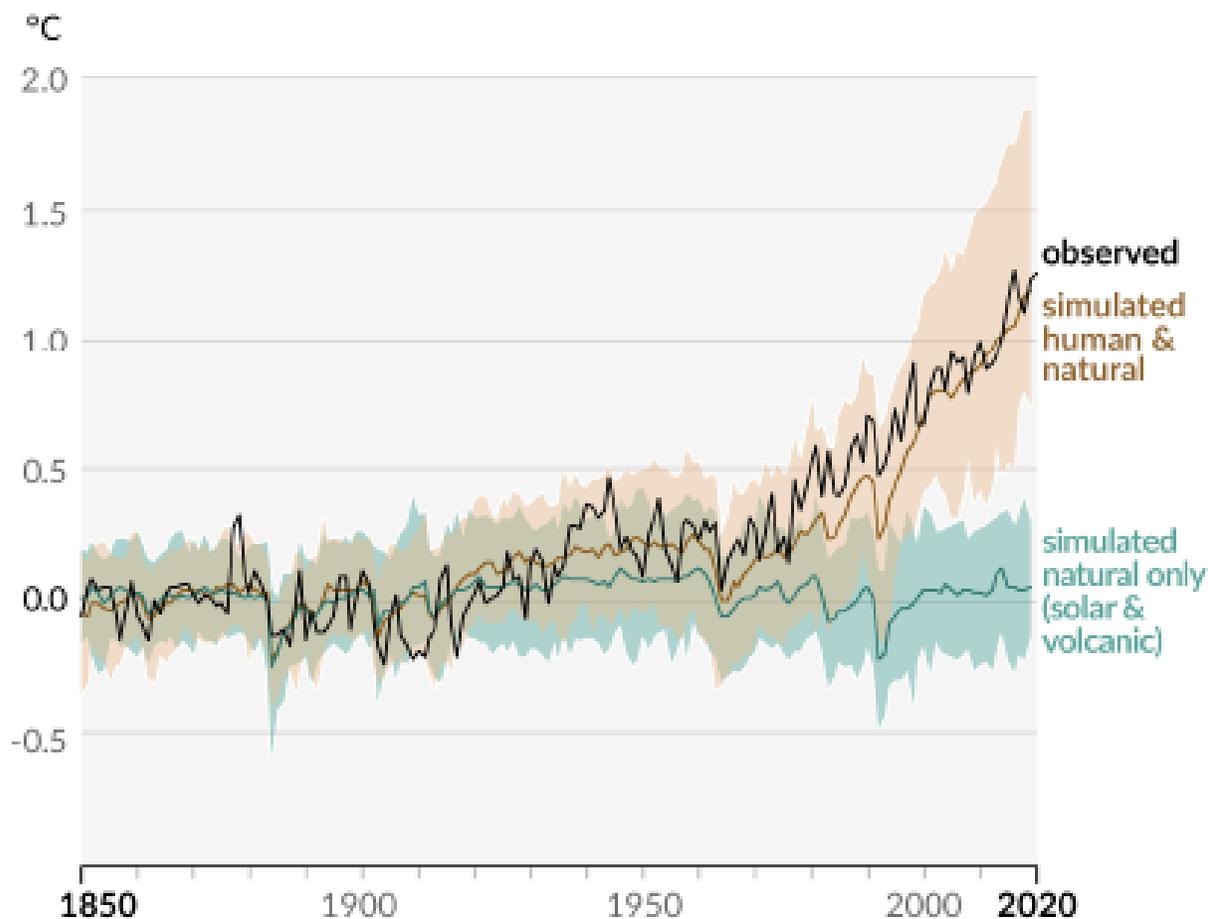


Changes in global surface temperature relative to 1850-1900

a) Change in global surface temperature (decadal average) as reconstructed (1-2000) and observed (1850-2020)



b) Change in global surface temperature (annual average) as observed and simulated using human & natural and only natural factors (both 1850-2020)



El cambio climático está ya afectando todas las regiones del planeta con gran contribución humana en muchos cambios observados en eventos climáticos extremos.

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

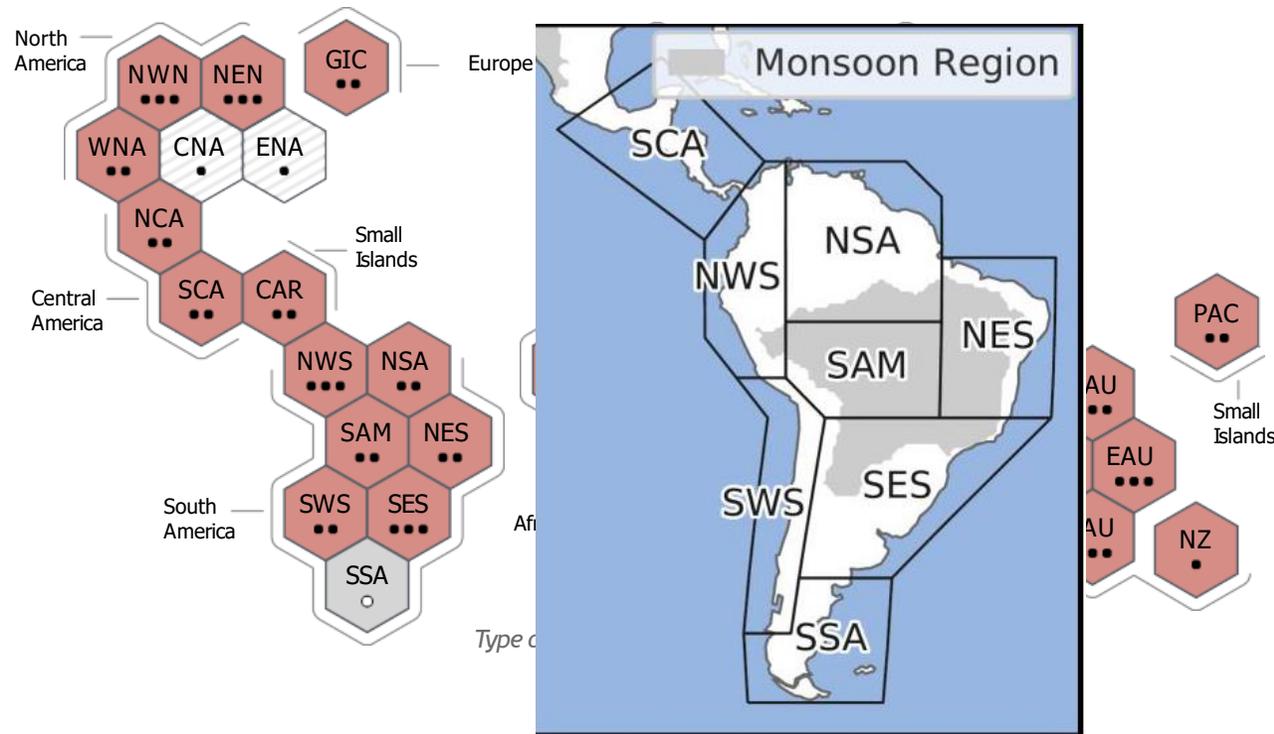
Type of observed change

in hot extremes

-  Increase (41)
-  Decrease (0)
-  Low agreement in the type of change (2)
-  Limited data and/or literature (2)

Confidence in human contribution to the observed change

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



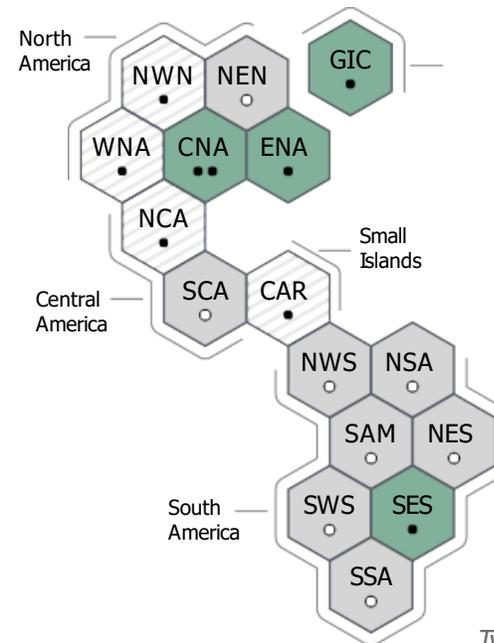
b) Synthesis of assessment of observed change in heavy precipitation and confidence in human contribution to the observed changes in the world's regions

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

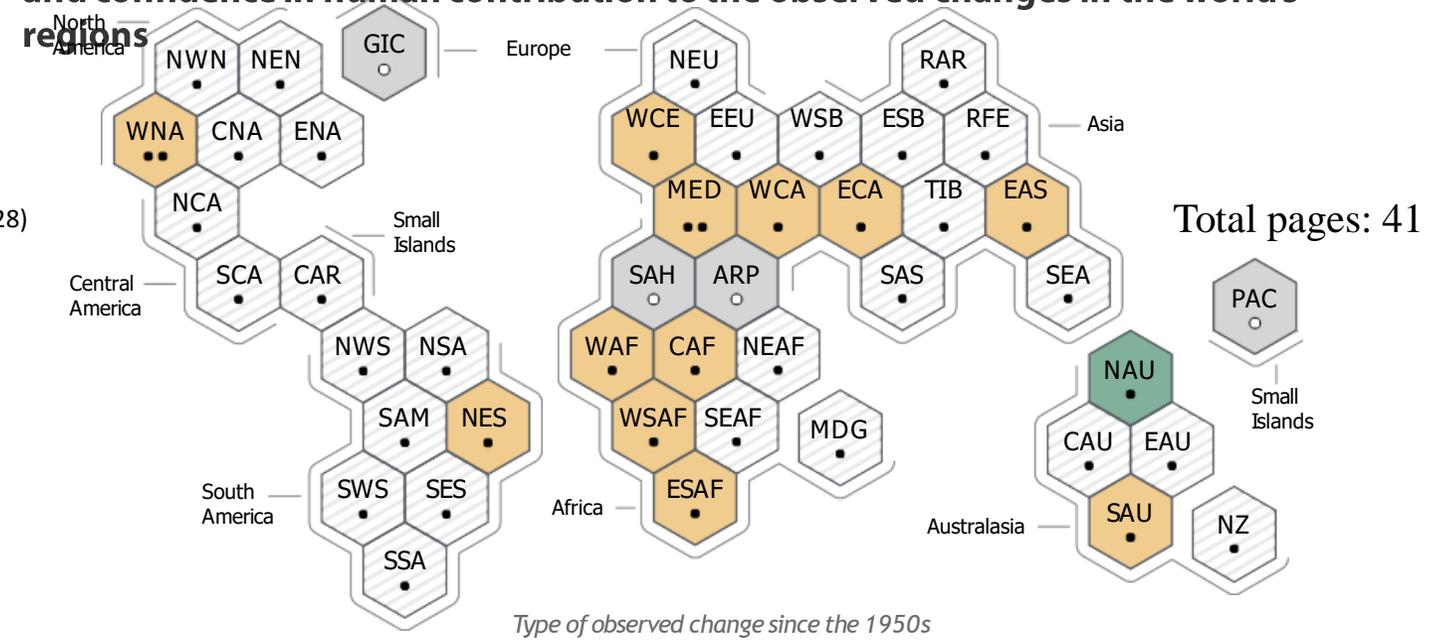
c) Synthesis of assessment of observed change in agricultural and ecological drought and confidence in human contribution to the observed changes in the world's regions

Type of observed change
in agricultural and ecological drought

- Increase (12)
- Decrease (1)
- Low agreement in the type of change (28)
- Limited data and/or literature (4)

Confidence in human contribution
to the observed change

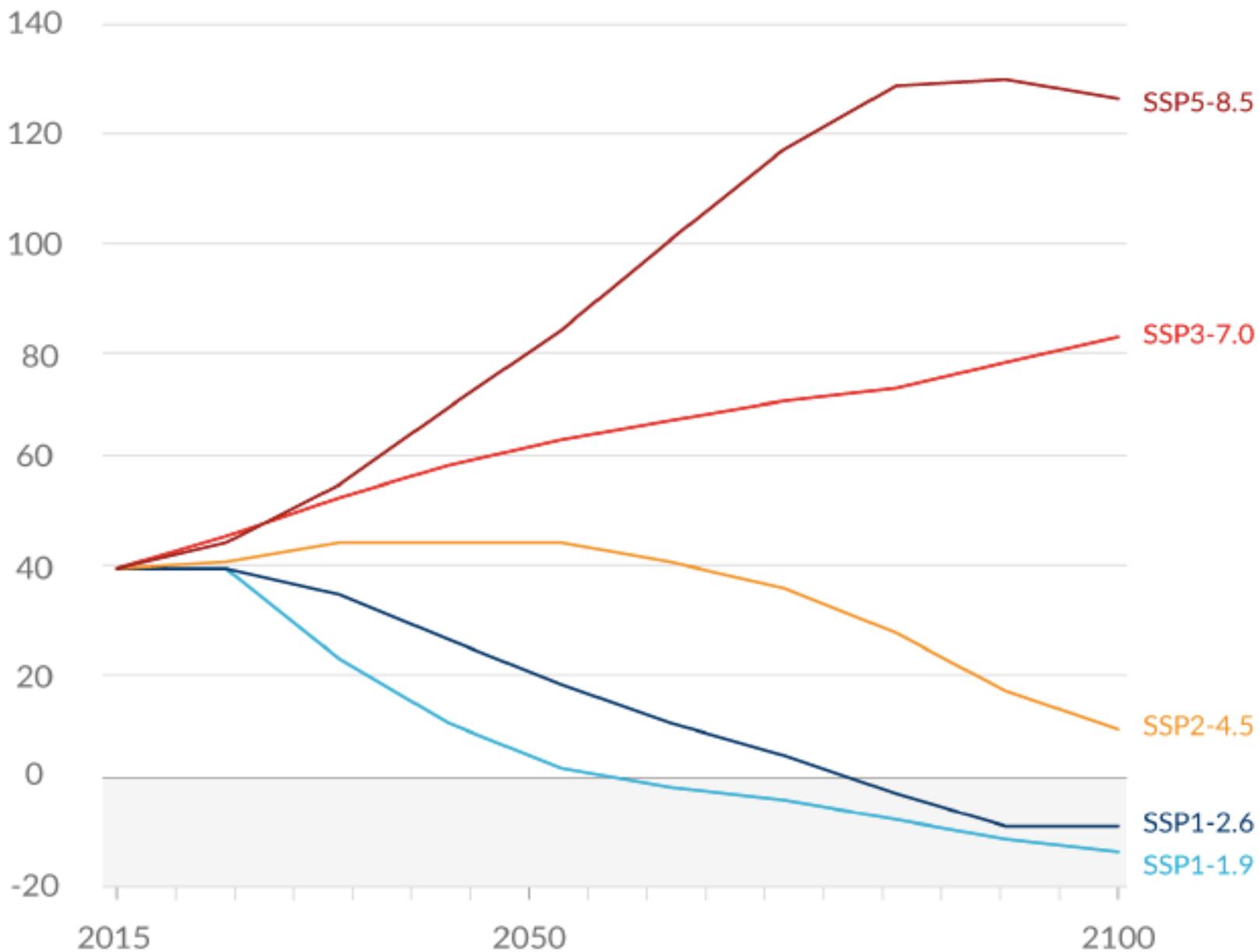
- High
- Medium
 - Low due to limited agreement
 - Low due to limited evidence



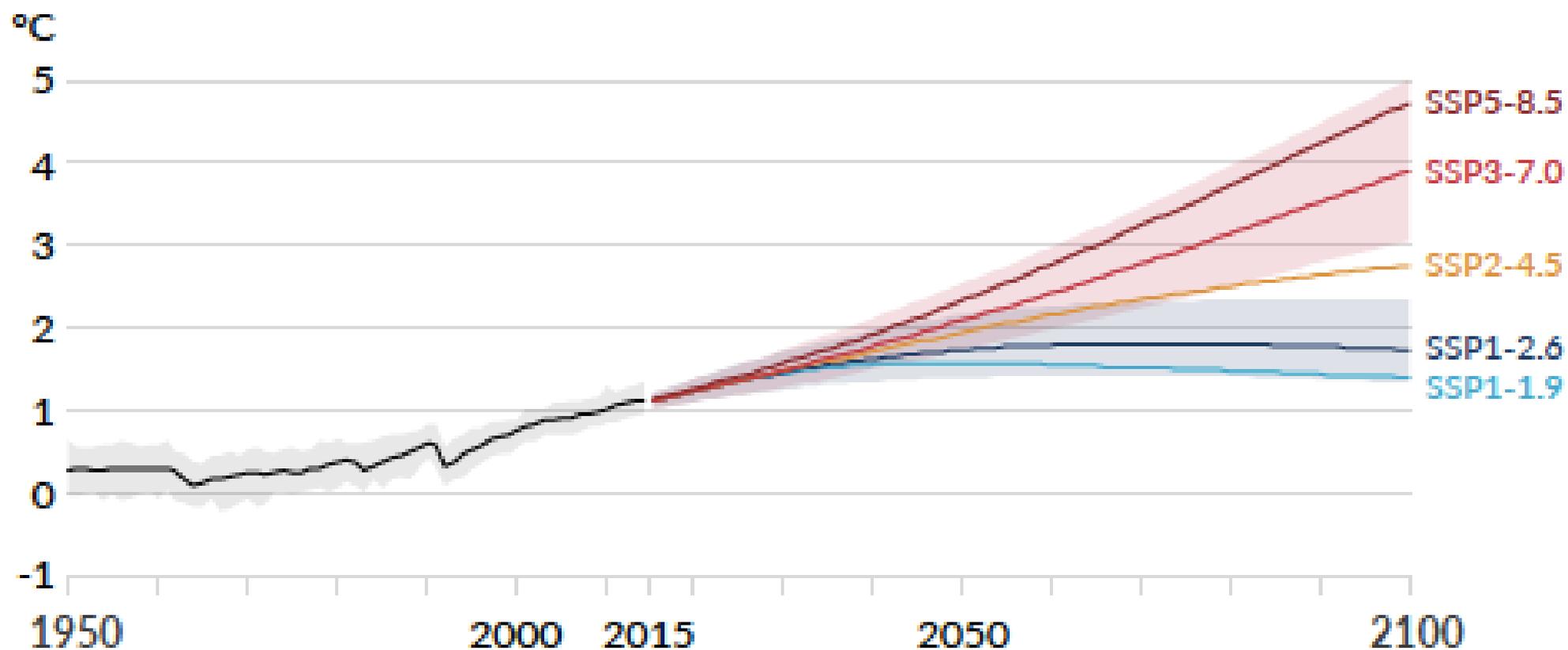
Each hexagon corresponds to one of the IPCC AR6 WGI reference regions



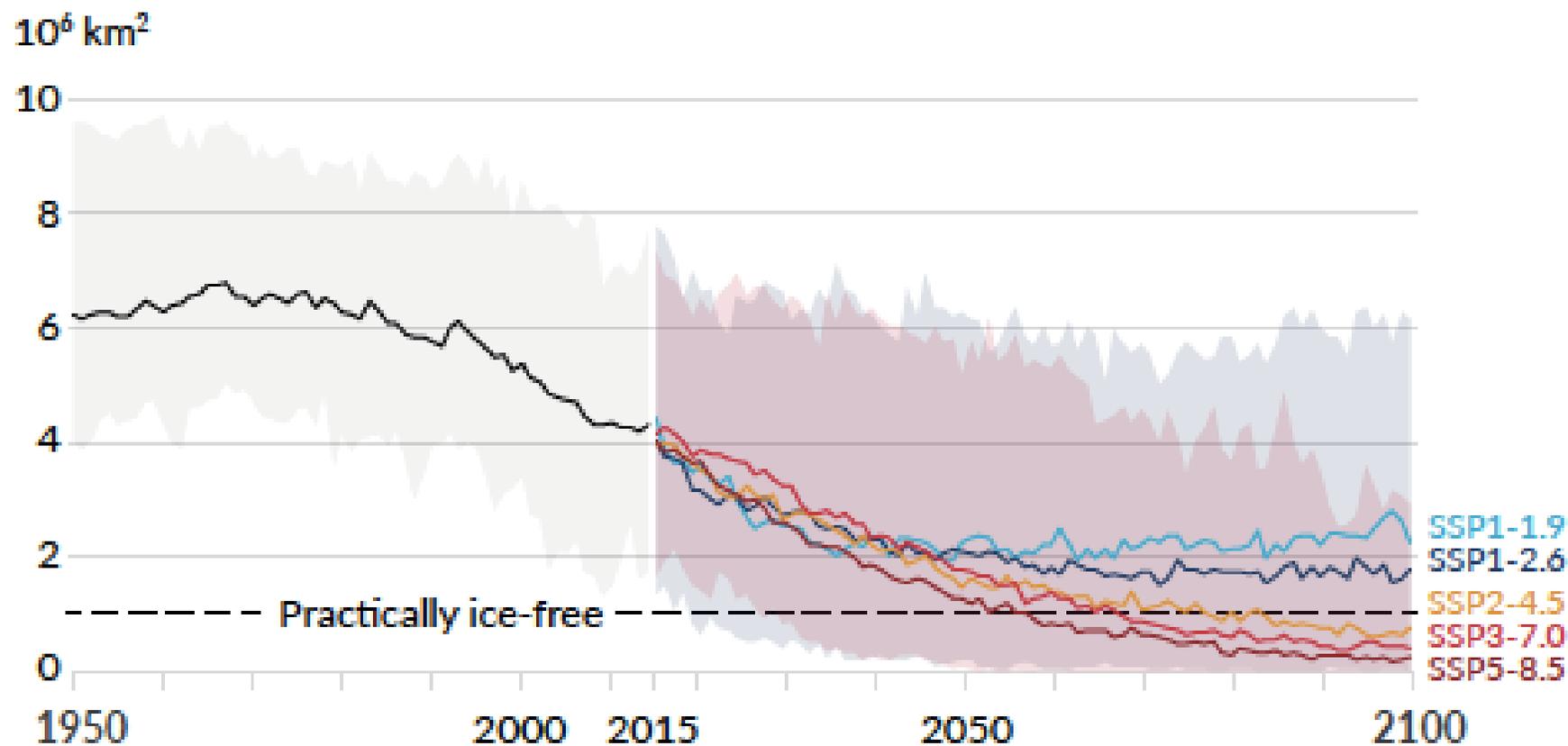
Carbon dioxide (GtCO₂/yr)



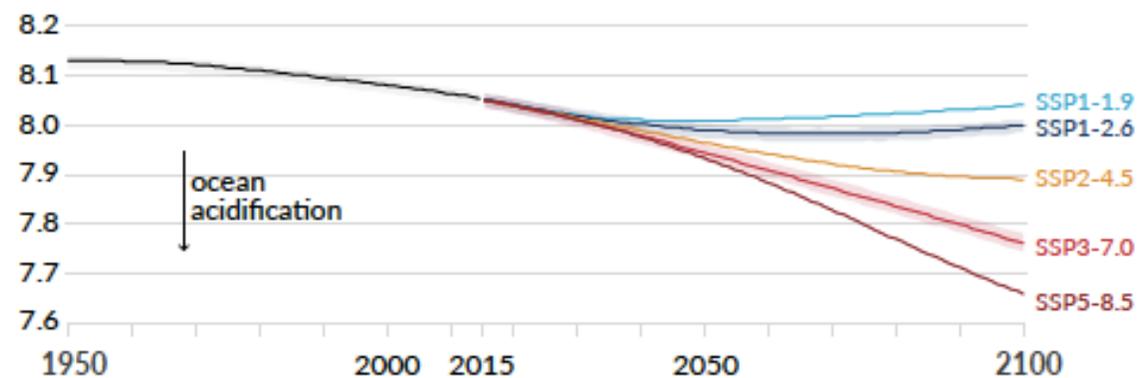
a) Global surface temperature change relative to 1850-1900



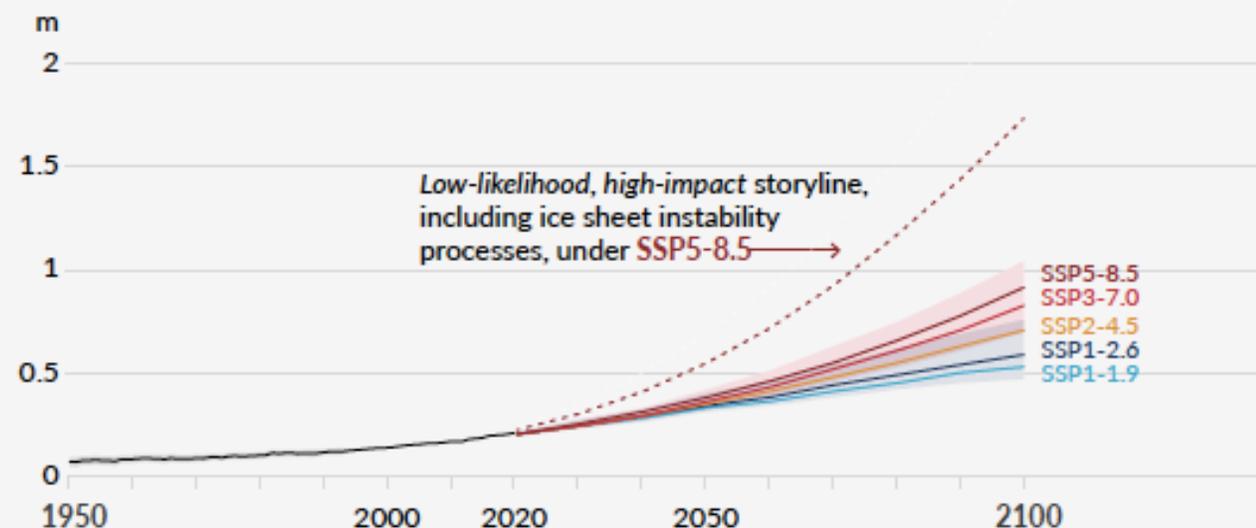
b) September Arctic sea ice area



c) Global ocean surface pH (a measure of acidity)



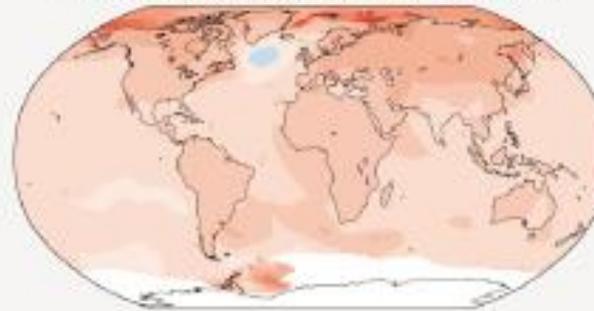
d) Global mean sea level change relative to 1900



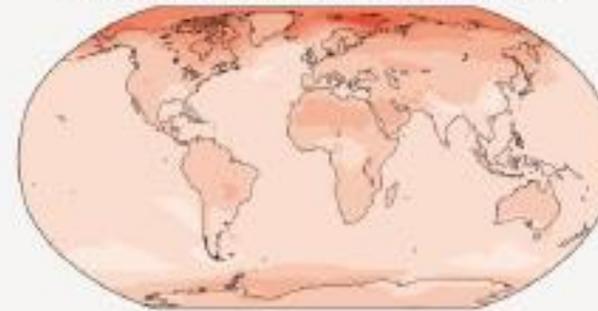
a) Annual mean temperature change (°C) at 1 °C global warming

Warming at 1 °C affects all continents and is generally larger over land than over the oceans in both observations and models. Across most regions, observed and simulated patterns are consistent.

Observed change per 1 °C global warming



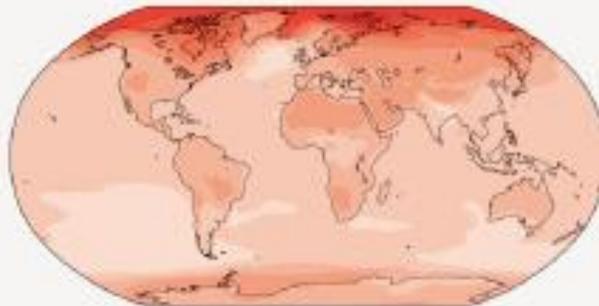
Simulated change at 1 °C global warming



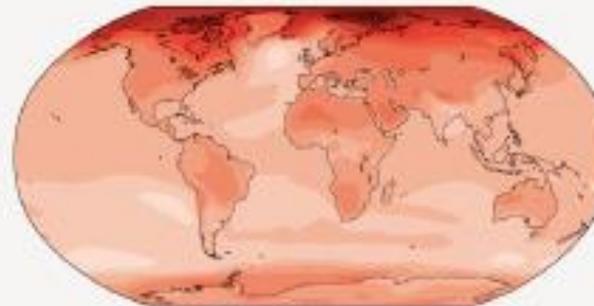
b) Annual mean temperature change (°C) relative to 1850-1900

Across warming levels, land areas warm more than oceans, and the Arctic and Antarctica warm more than the tropics.

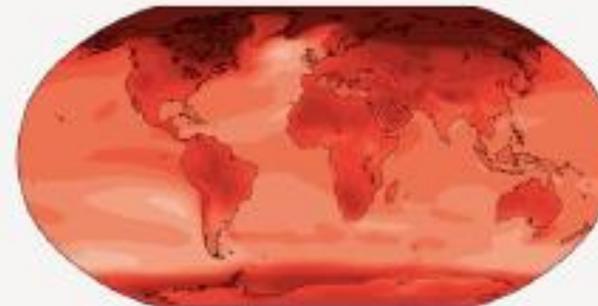
Simulated change at 1.5 °C global warming



Simulated change at 2 °C global warming



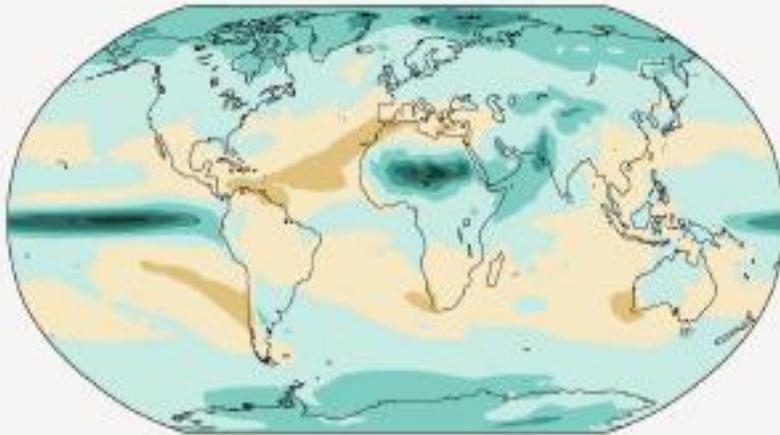
Simulated change at 4 °C global warming



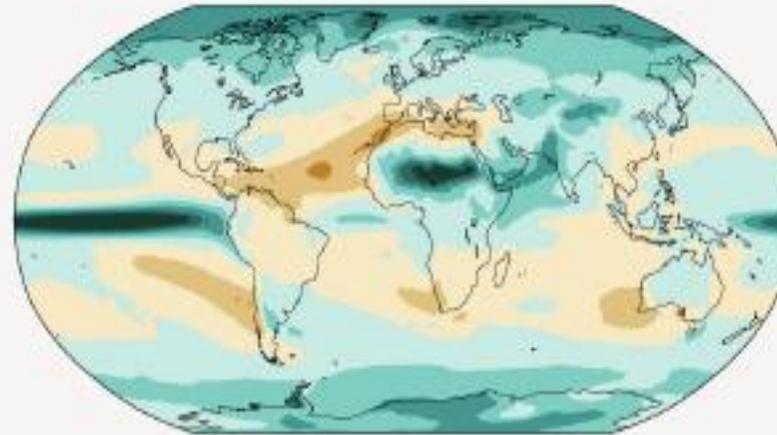
c) Annual mean precipitation change (%) relative to 1850-1900

Precipitation is projected to increase over high latitudes, the equatorial Pacific and parts of the monsoon regions, but decrease over parts of the subtropics and in limited areas of the tropics.

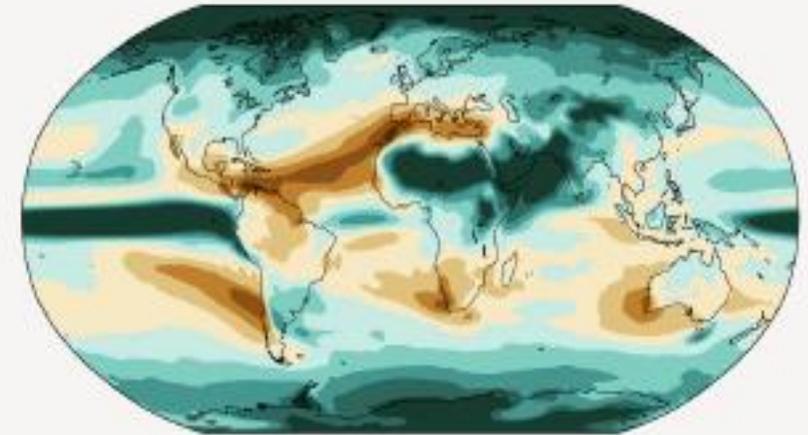
Simulated change at 1.5 °C global warming



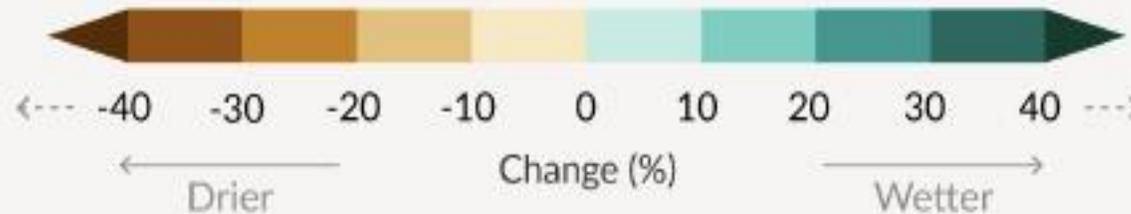
Simulated change at 2 °C global warming



Simulated change at 4 °C global warming



Relatively small absolute changes may appear as large % changes in regions with dry baseline conditions

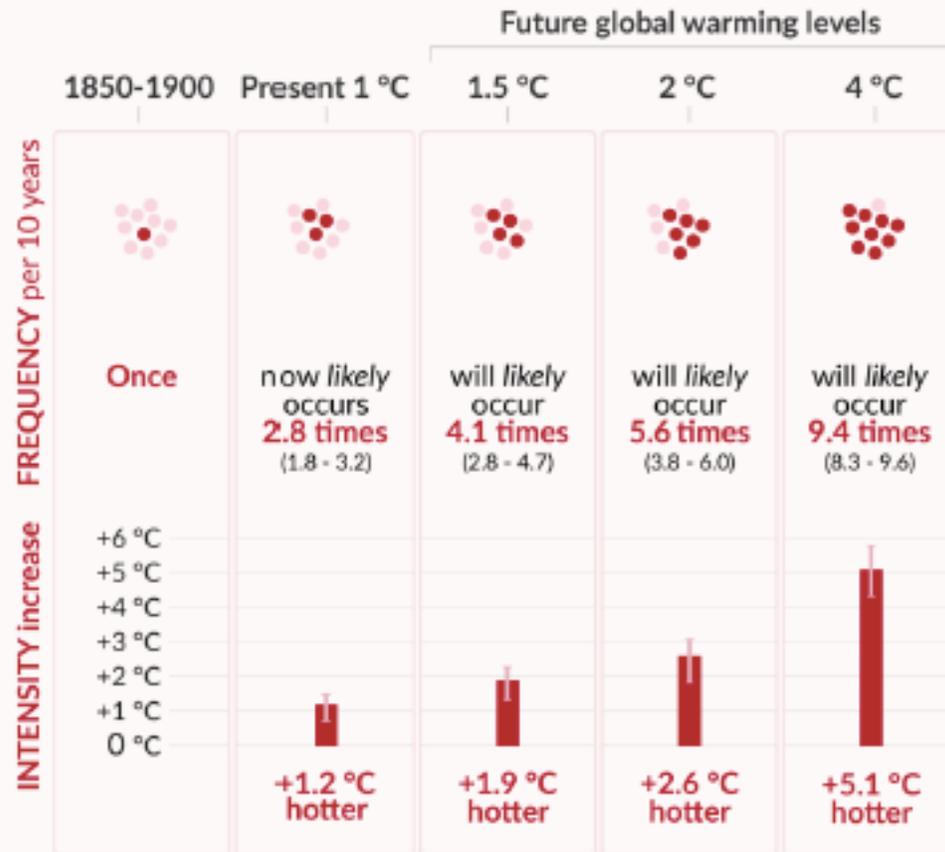


Los cambios proyectados en los extremos son mayores en frecuencia e intensidad con cada incremento adicional de calentamiento global

Hot temperature extremes over land

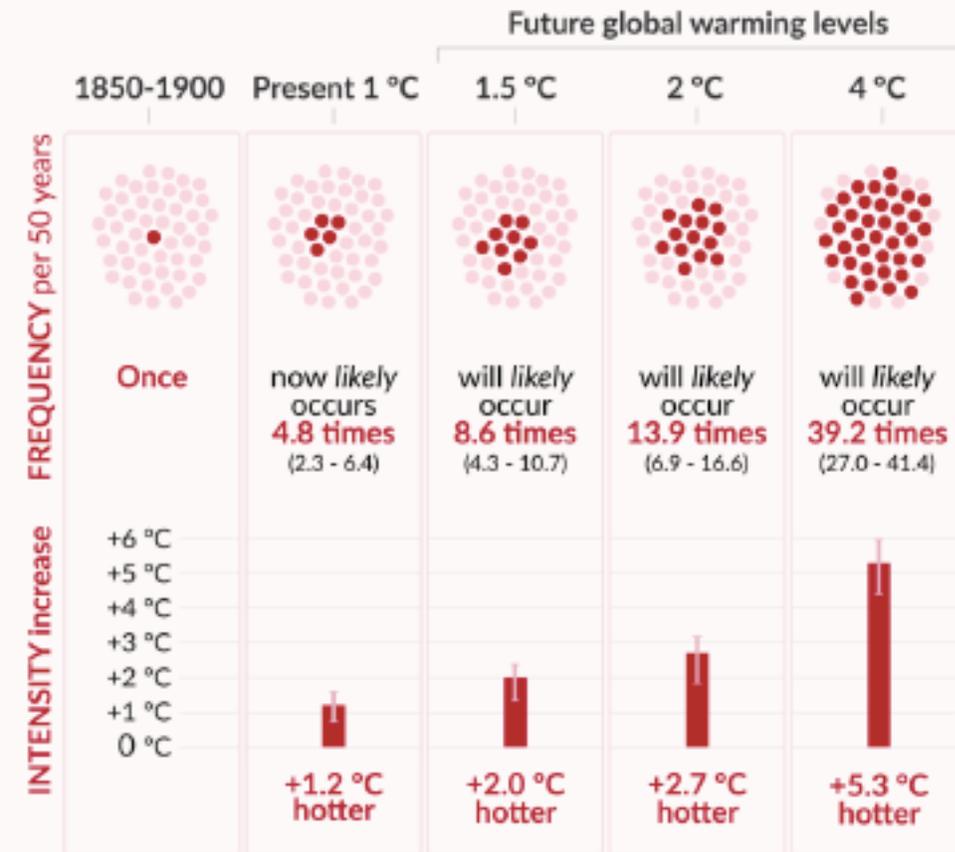
10-year event

Frequency and increase in intensity of extreme temperature event that occurred **once in 10 years** on average in a climate without human influence



50-year event

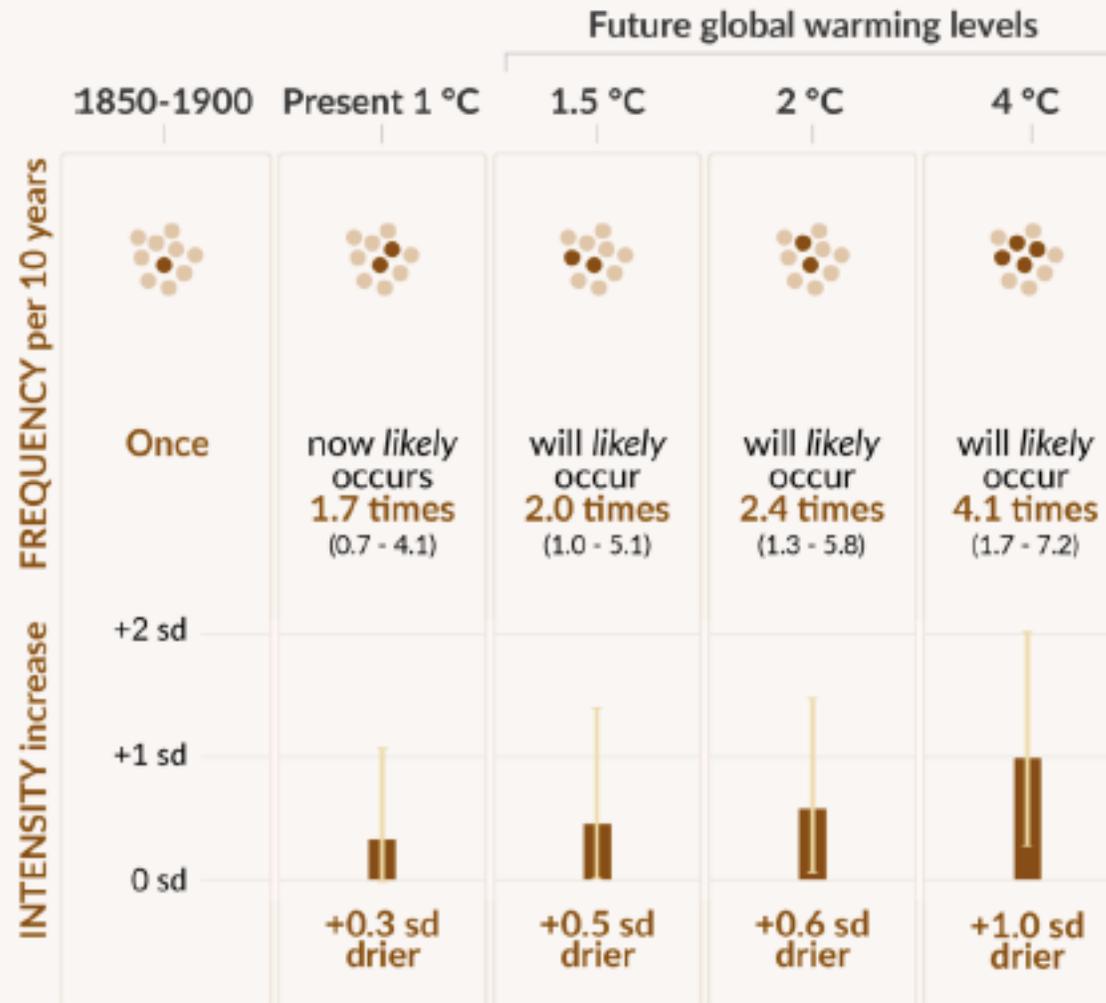
Frequency and increase in intensity of extreme temperature event that occurred **once in 50 years** on average in a climate without human influence

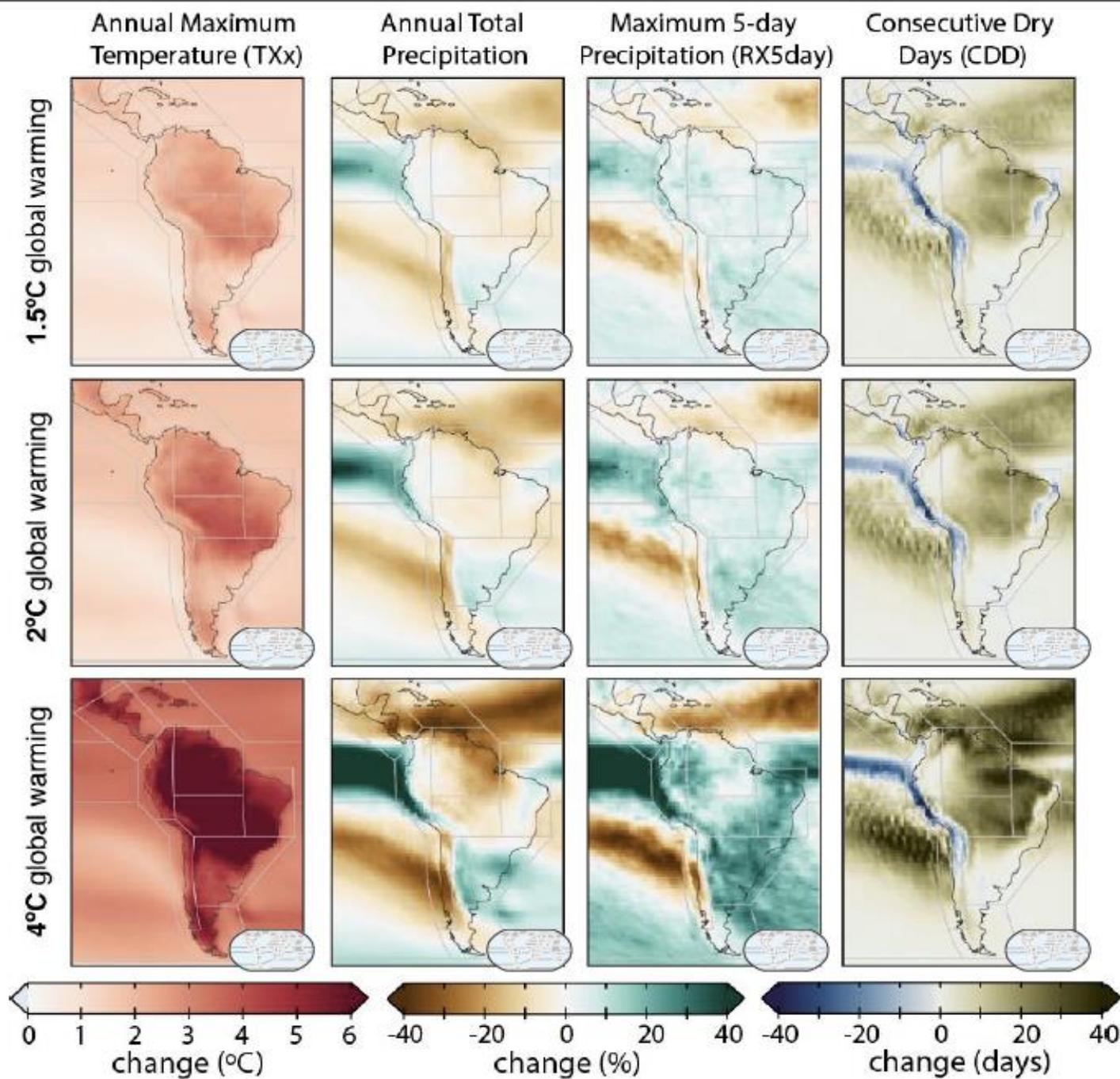


Agricultural & ecological droughts in drying regions

10-year event

Frequency and increase in intensity of an agricultural and ecological drought event that occurred **once in 10 years** on average across drying regions in a climate without human influence





Results expanded
in the Interactive
Atlas (active links)

interactive-atlas.ipcc.ch

Muchas Gracias

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