Our climate is changing rapidly – action is needed….

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IPCC Contributing Author, AR5 (2013)

IPCC Lead Author, AR6 (2021–2023)

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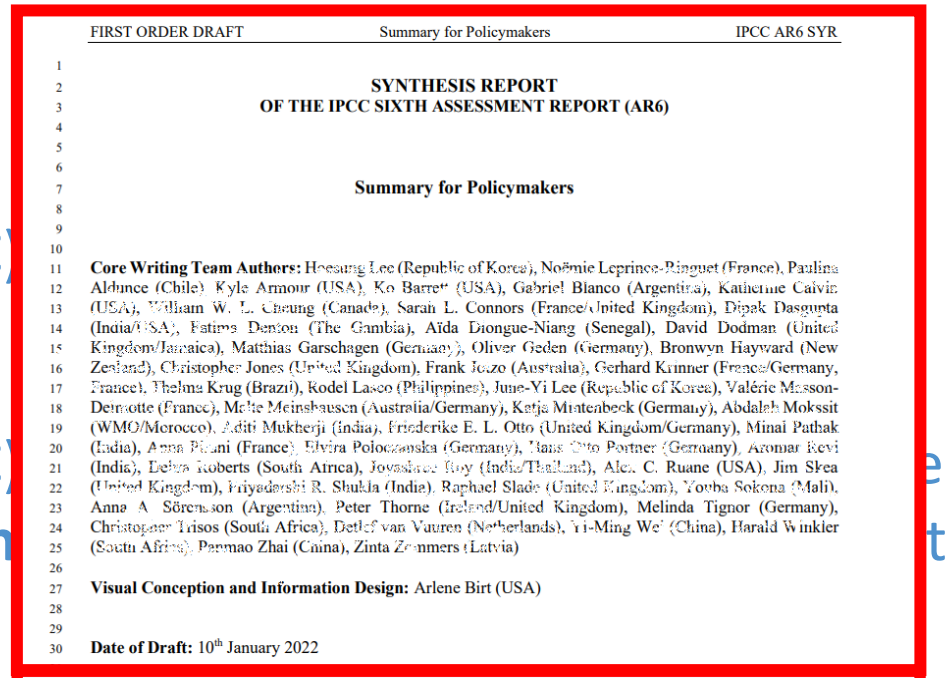
The Intergovernmental Panel on Climate Change (IPCC)
assessing the science related to climate change.

The Intergovernmental Panel on Climate Change (IPCC)
policymakers with regular **scientific assessments on th**
climate change.

Year of publication of IPCC assessment reports:
1990: The First IPCC Assessment Report (FAR)
1995: The Second Assessment Report (SAR)
2001: The Third Assessment Report (TAR)
2007: The Fourth Assessment Report (AR4)
2013/14: The fifth Assessment report (AR5)
2021/22: The sixth Assessment report (AR6)


FIRST ORDER DRAFT Summary for Policymakers IPCC AR6 SYR

SYNTHESIS REPORT
OF THE IPCC SIXTH ASSESSMENT REPORT (AR6)

Summary for Policymakers

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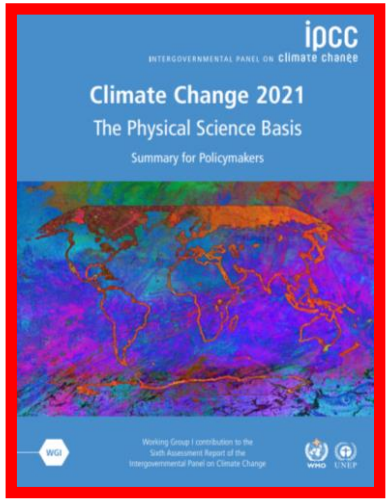
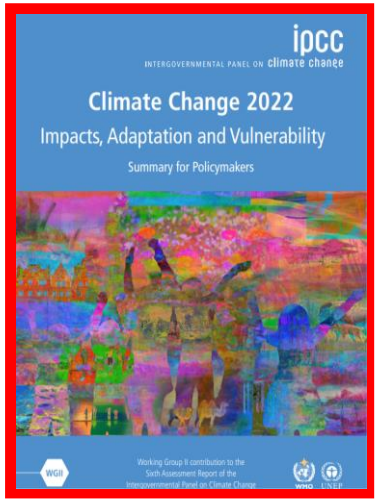
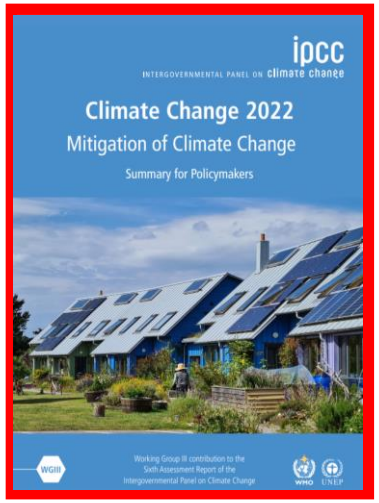
Visual Conception and Information Design: Arlene Birt (USA)

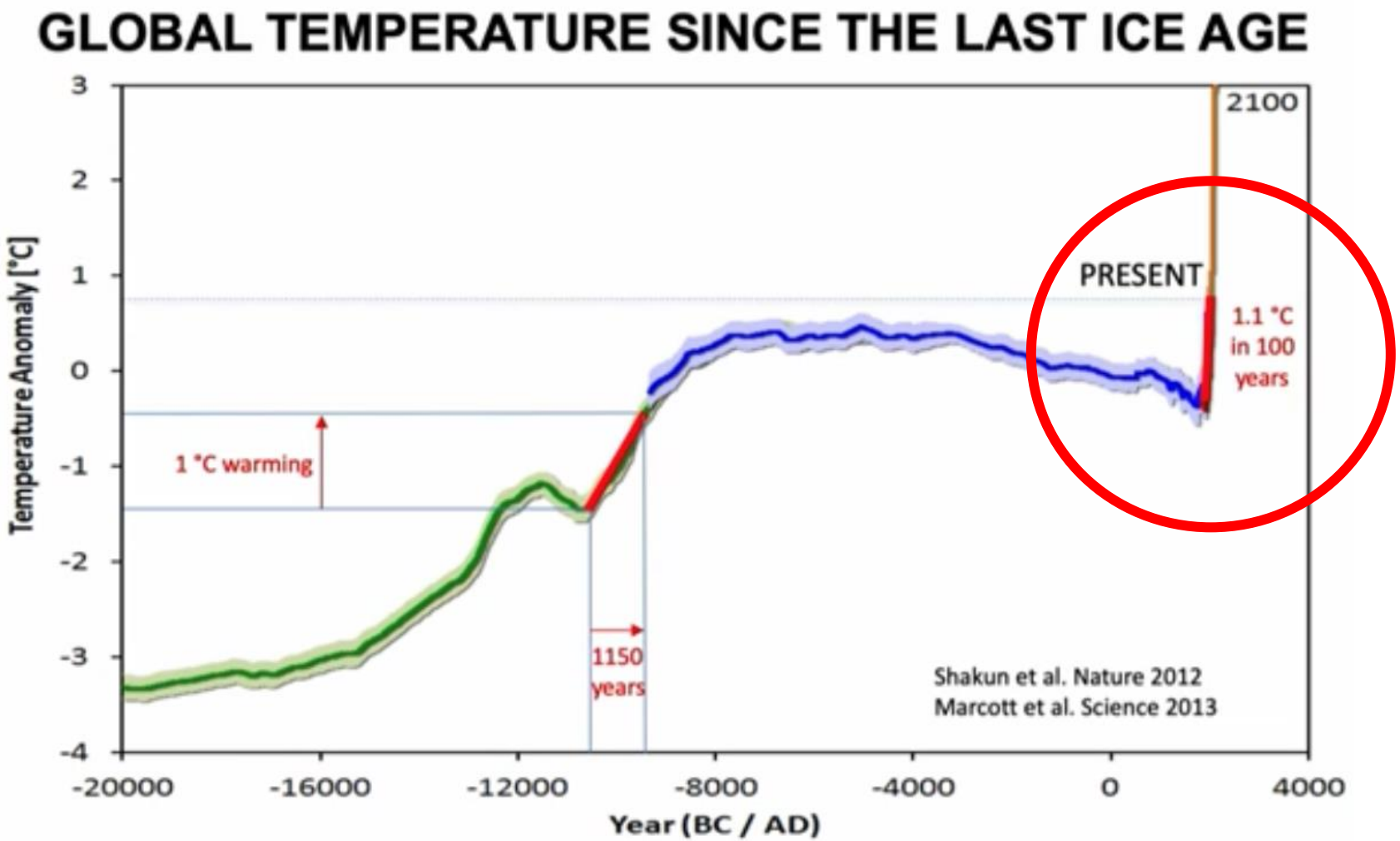
Date of Draft: 10th January 2022

AR6 Synthesis Report (SYR)

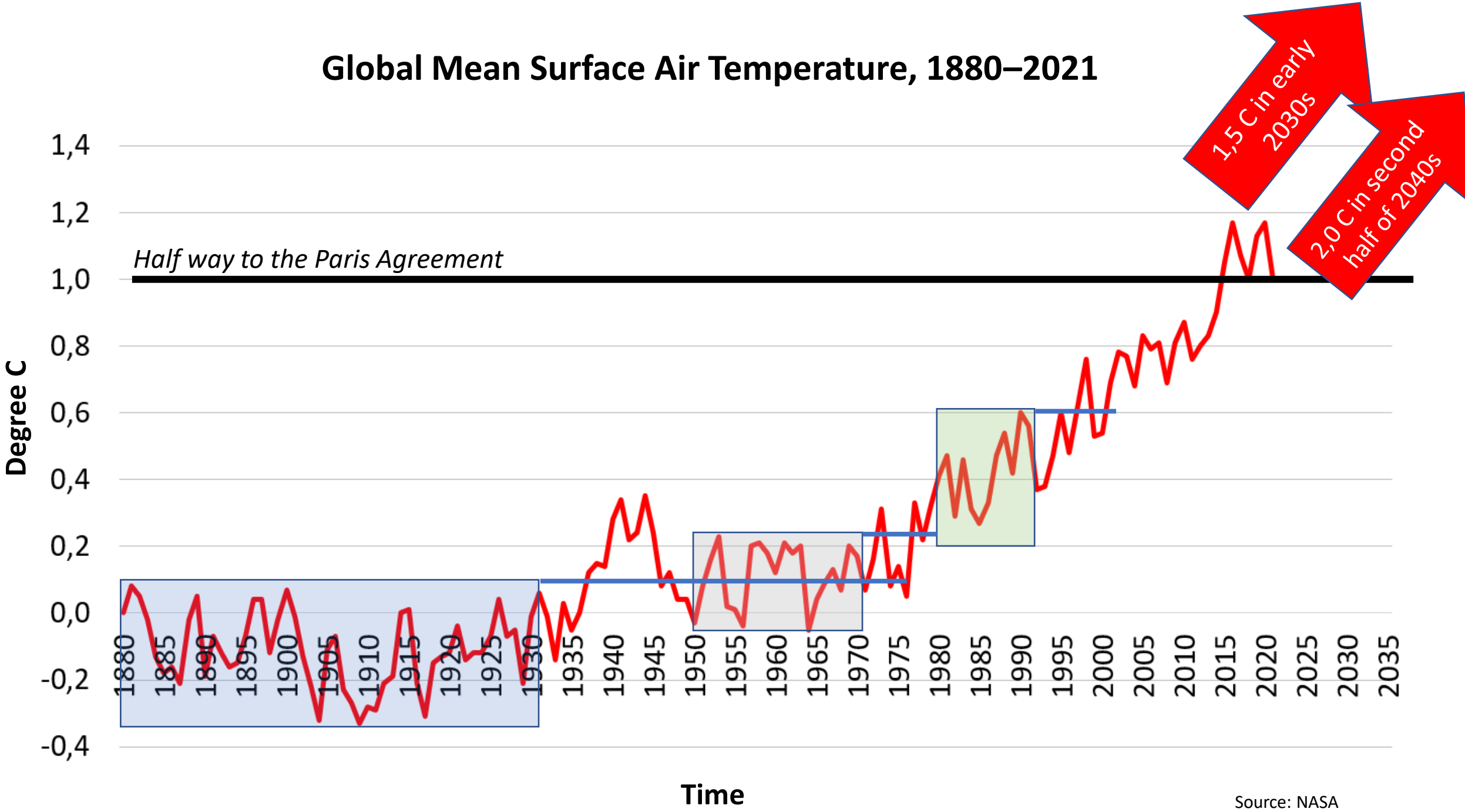






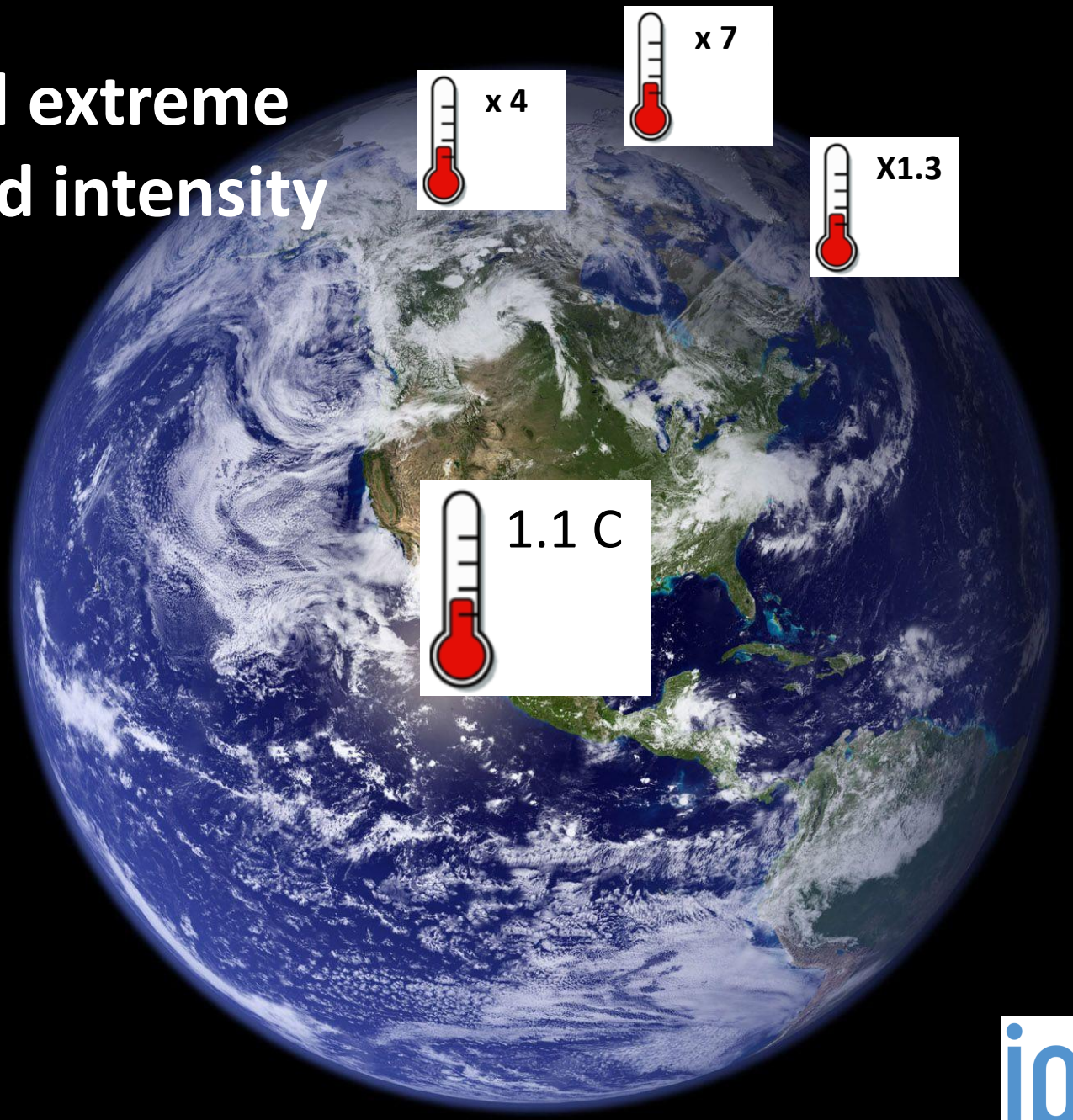

GLOBAL TEMPERATURE SINCE THE LAST ICE AGE
Temperature Anomaly [°C]
3
2
1
0
-1
-2
-3
-4
-20000
-16000
-12000
-8000
-4000
0
4000
Year (BC / AD)
2100
PRESENT
1.1 °C
in 100
years
1 °C warming
1150
years
Shakun et al. Nature 2012
Marcott et al. Science 2013

Global Mean Surface Air Temperature, 1880–2021



Source: NASA

Warm, wet, and extreme in frequency and intensity



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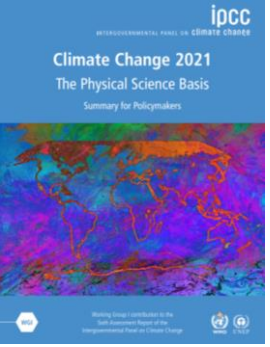

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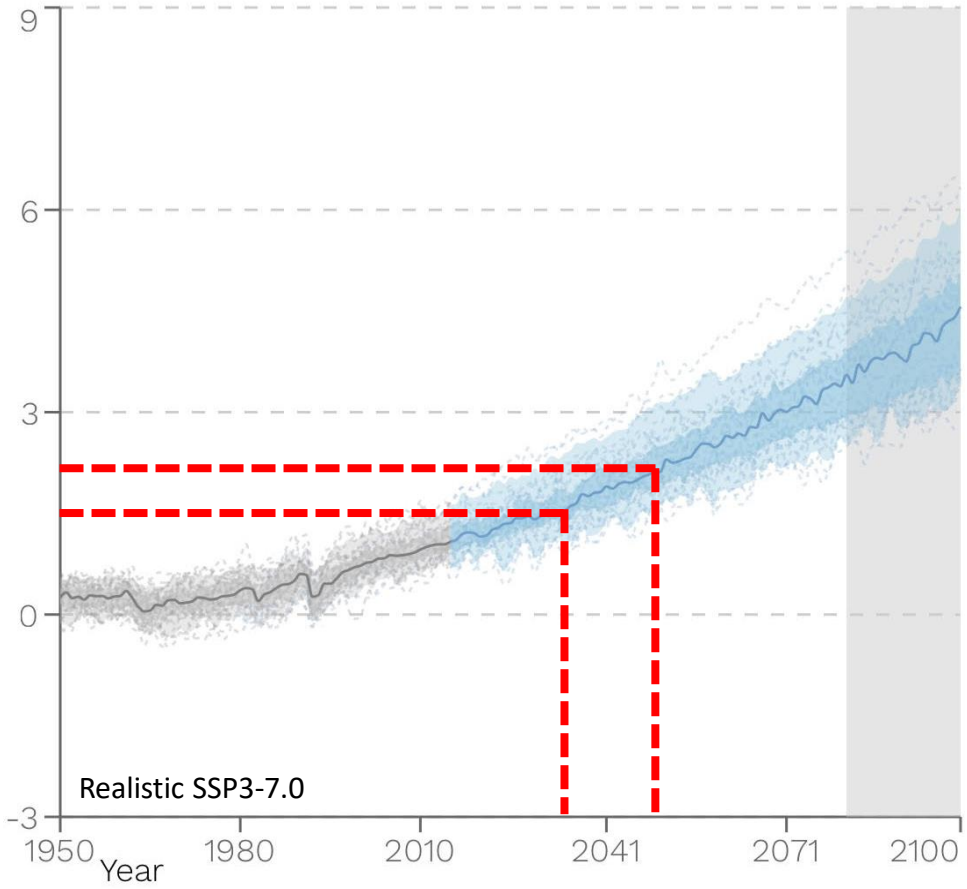
IPCC WGI Interactive Atlas:
Regional information
(Advanced)



Dotted line: Model
Solid line: P50 (Median)
Gray shading: Selected period
Light / dark area: Spread P10-P90 / P25-75

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climate change
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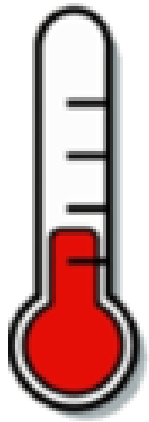
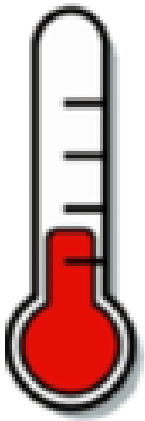


1.5°C



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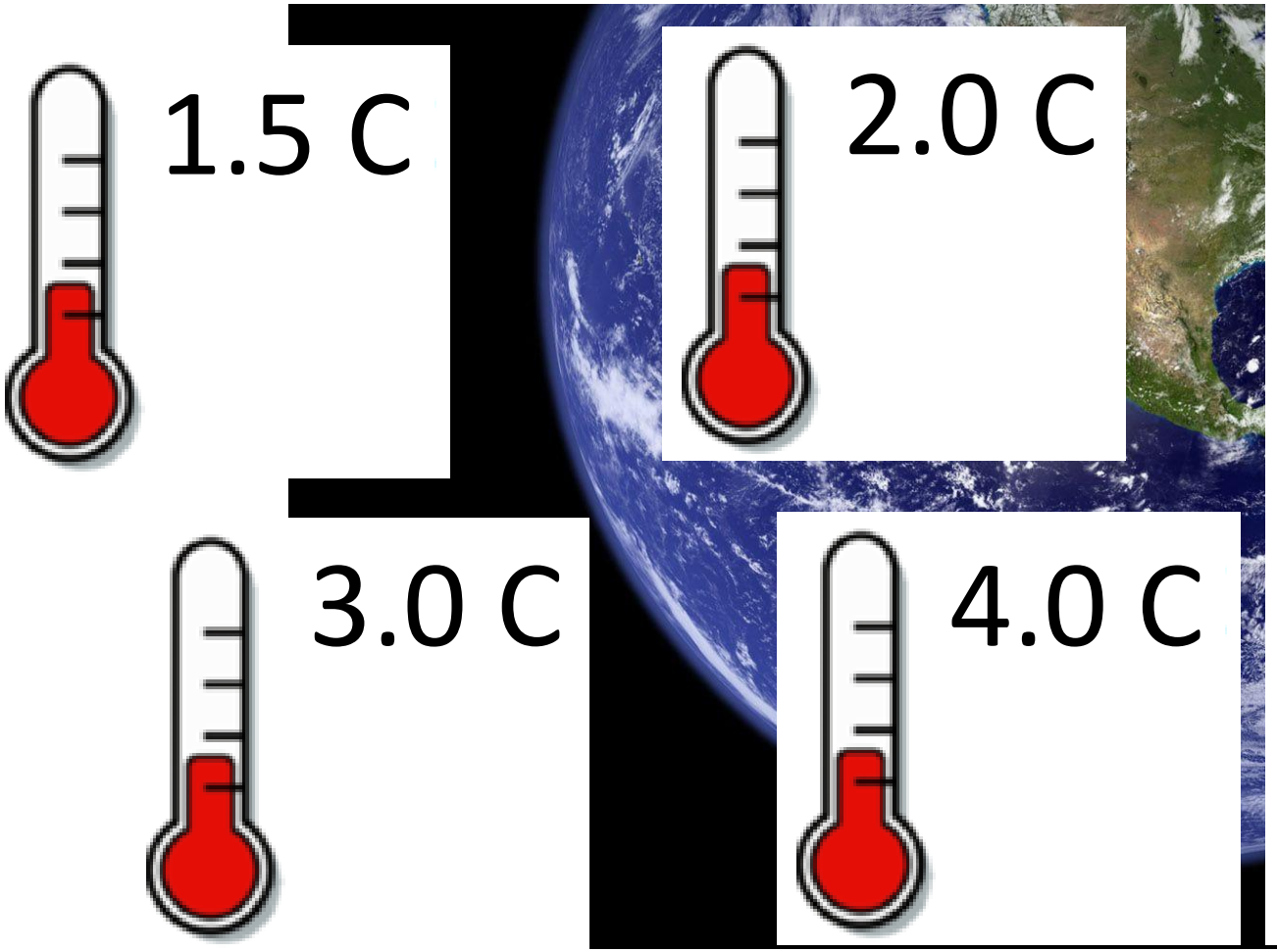
FIRST JOINT SESSION OF WORKING GROUPS I, II AND III
Incheon, Republic of Korea, 1 - 5 October 2018

WG-I, WG-II & WG-III: 1st/Doc. 2a, Rev. 2
(6.X.2018)
Agenda Item: 4
ENGLISH ONLY

Special Reports



IPCC SPECIAL REPORT ON GLOBAL WARMING OF 1.5°C

An IPCC special report on the impacts of global warming of 1.5ºC above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty.

Revised Final Draft Summary for Policymakers

(Submitted by the Co-Chairs of Working Groups I, II and III)

Confidential - This document is being made available in preparation of the First Joint Session of Working Groups I, II and III only and should not be cited, quoted, or distributed

Note:

The Final Draft Summary for Policymakers is submitted to the First Joint Session of Working Groups I, II and III for approval. The approved Summary for Policymakers will be forwarded to the Forty-Eighth Session of the IPCC (Incheon, Republic of Korea, 1 - 5 October 2018) for acceptance.

IPCC Secretariat

c/o WMO • 7bis, Avenue de la Paix • C.P. 2300 • 1211 Geneva 2 • Switzerland
telephone : +41 (0) 22 730 8208 / 54 / 84 • fax : +41 (0) 22 730 8025 / 13 • email : IPCC-Sec@wmo.int • www.ipcc.ch

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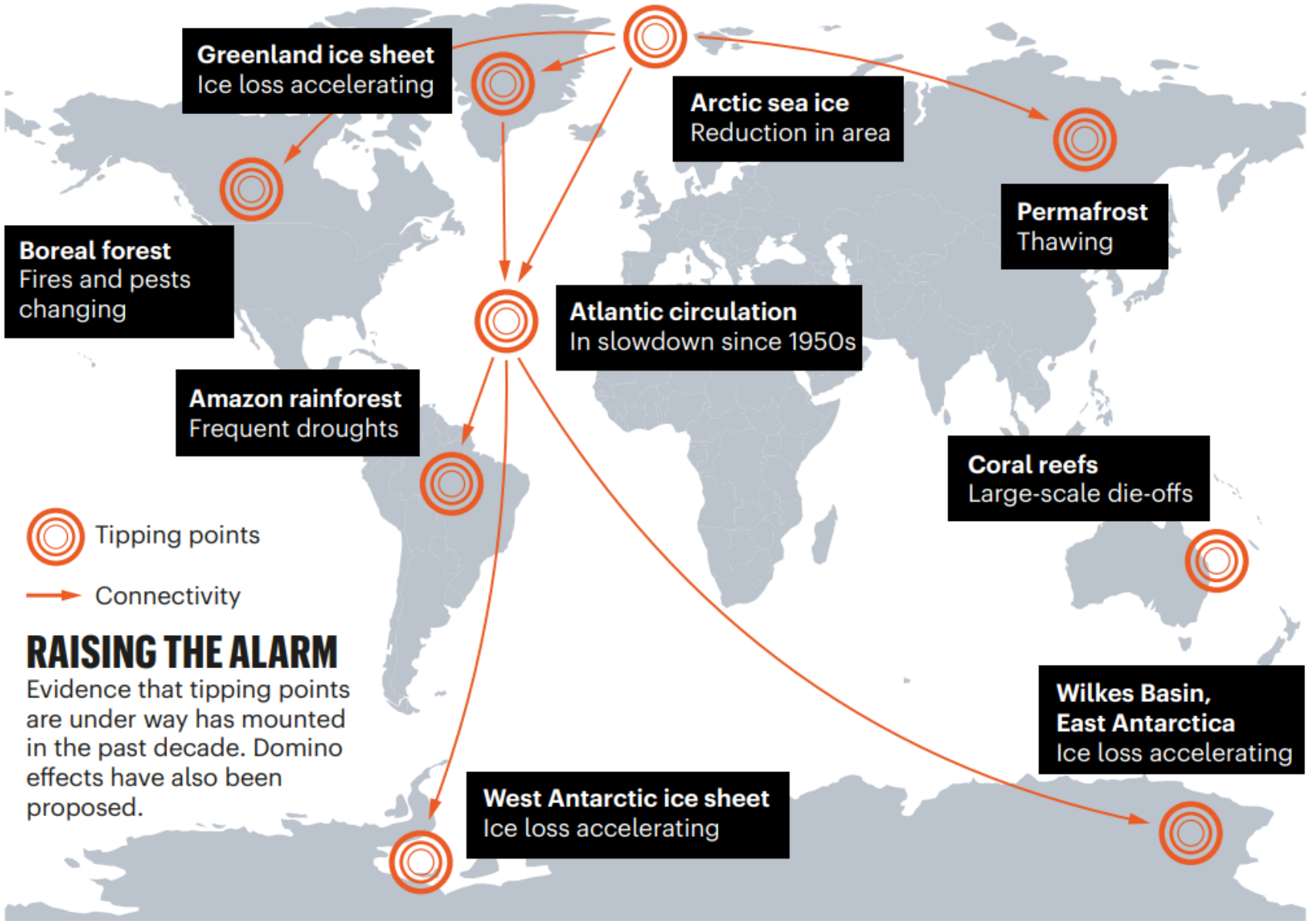
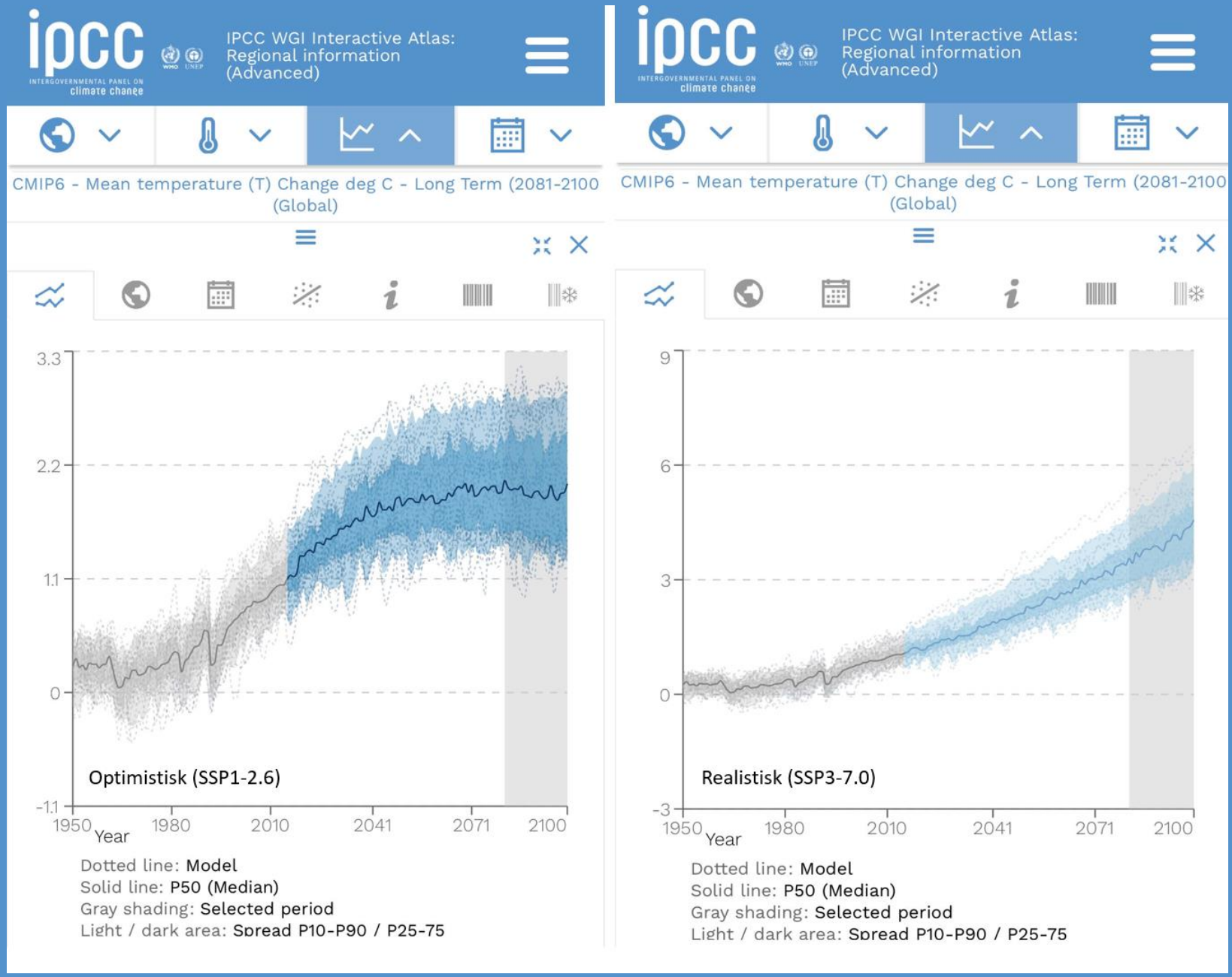
Evidence that tipping point are under way…



Mean Temperature Change (C)



IPCC WGI Interactive Atlas: Regional information (Advanced)

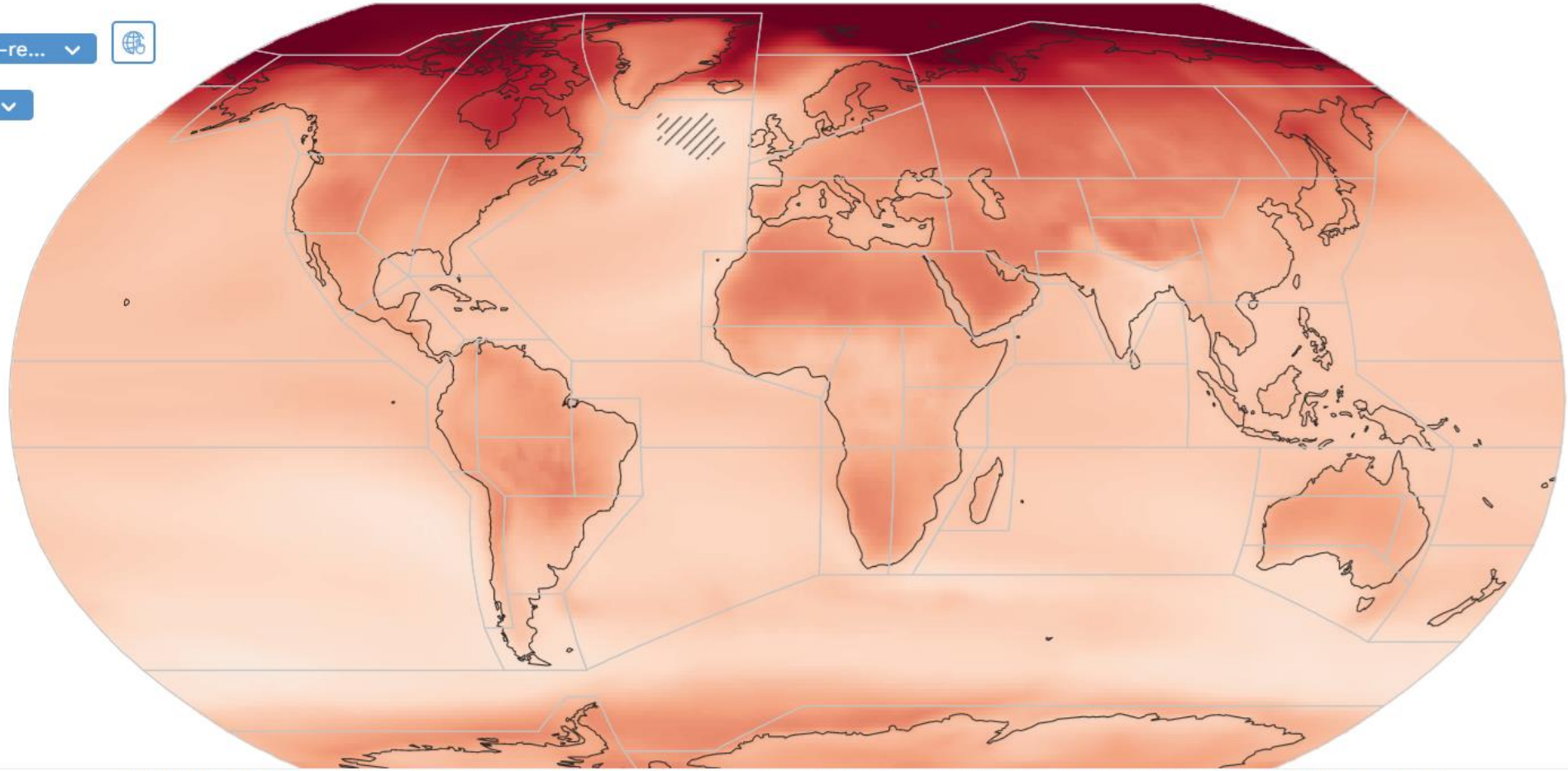
Home About Guidance License

DATASET VARIABLE QUANTITY & SCENARIO SEASON

Region Set:
WGI reference-re...

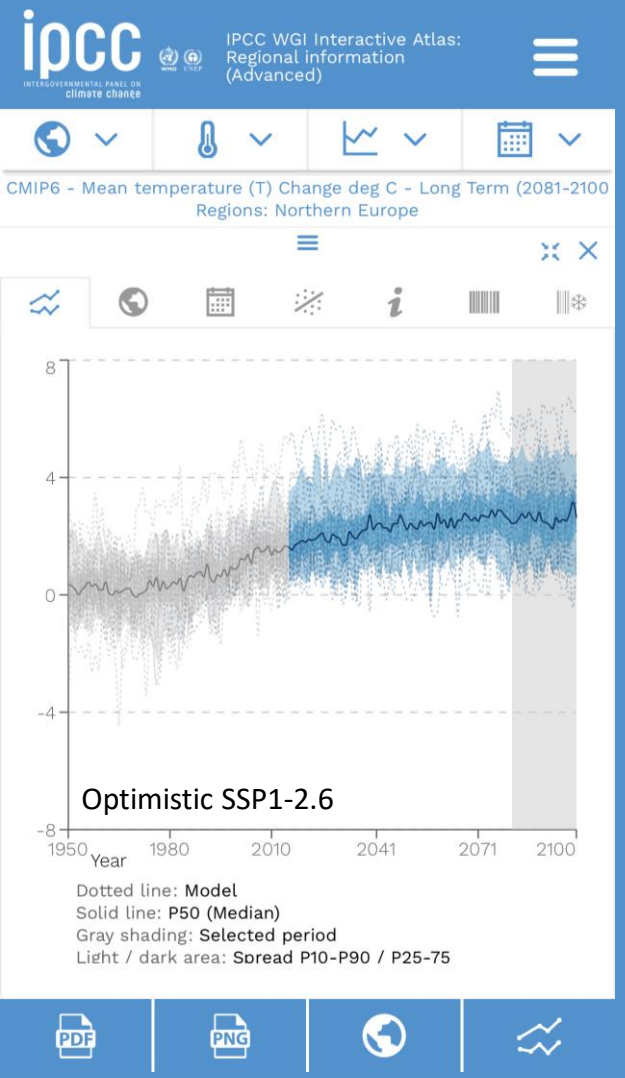
Uncertainty:
Simple

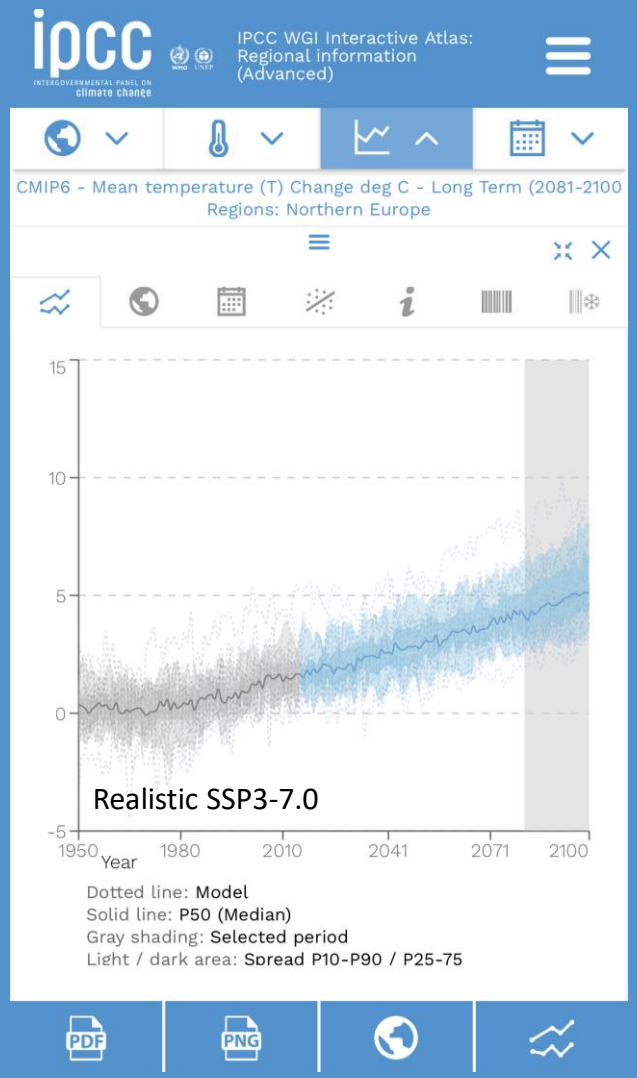
deg C
> 6
5
4
3
2
1
0
−1
−2
−3
−4
−5
< -6
C



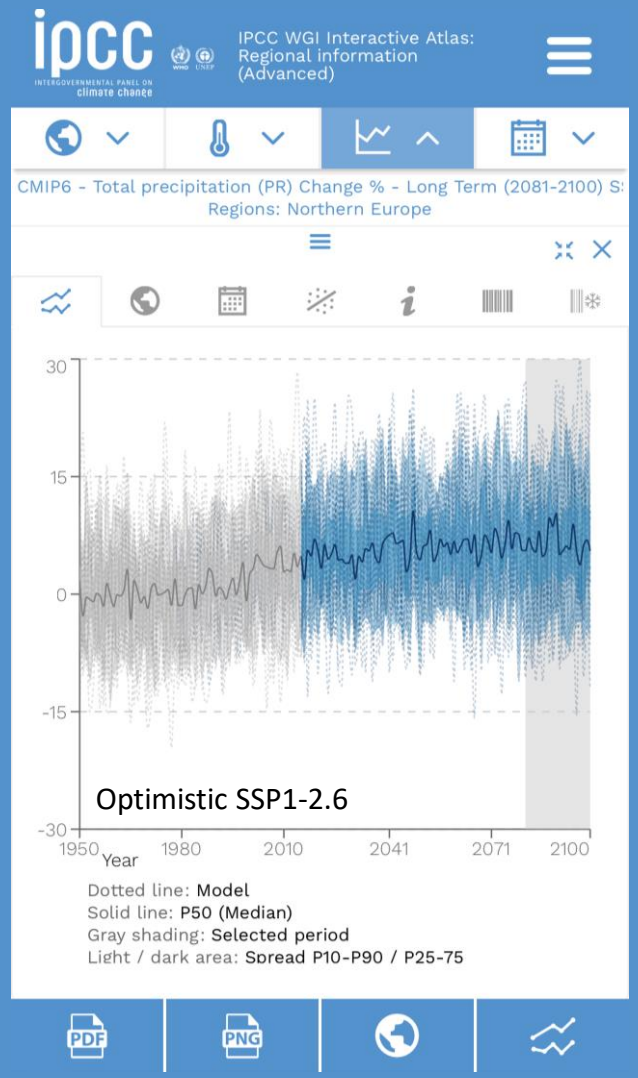
CMIP6 - Mean temperature (T) Change deg C - Warming 2°C SSP5-8.5 (rel. to 1850-1900) - Annual (34 models)

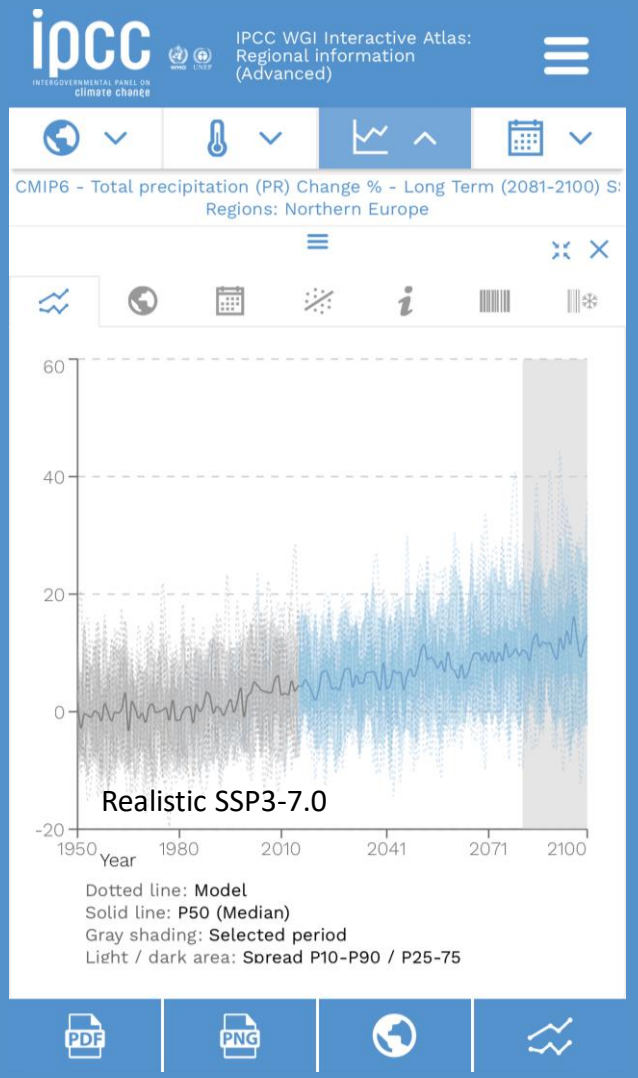
Mean Temperature Change (C)

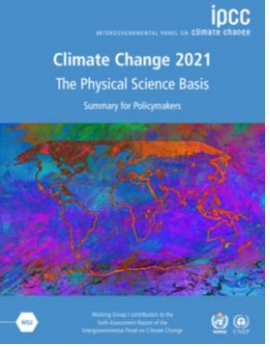




Total Precipitation Change (%)







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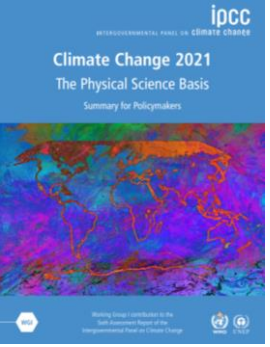
It is **unequivocal** that **human influence has warmed the atmosphere**, ocean and land. Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred.

Global surface temperature was **1.09°C** higher in 2011–2020 than 1850–1900 (pre-industrial).

The *likely* range of total human-caused global surface temperature increase from 1850–1900 to 2010–2019, with a best estimate of **1.07°C.**



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Global surface temperature has increased faster since 1970 than in any other 50-year period over at least the last 2000 years.

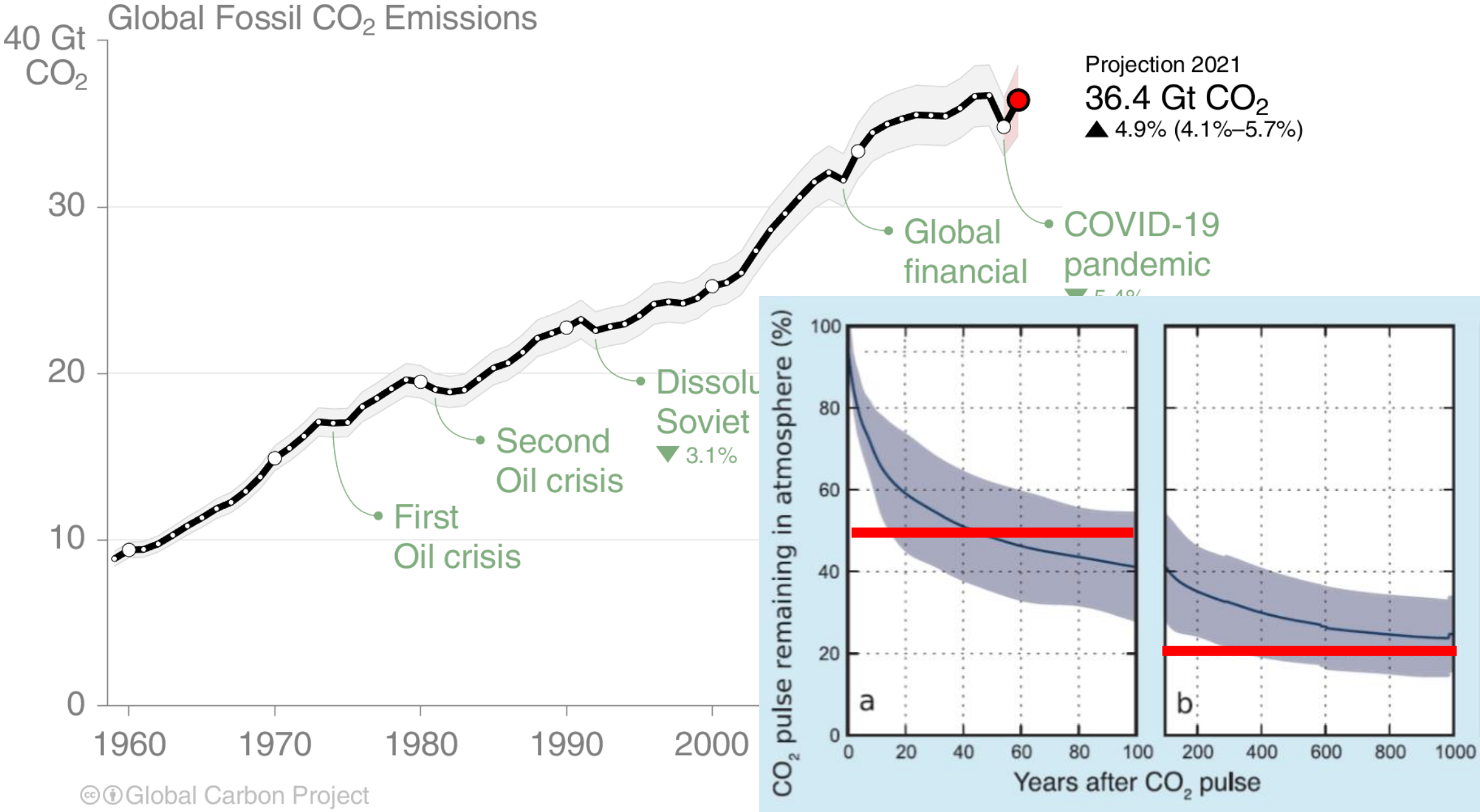
It is *virtually certain* that **hot extremes have become more frequent and more intense** across most land regions since the 1950s, while cold extremes have become less frequent and less severe.

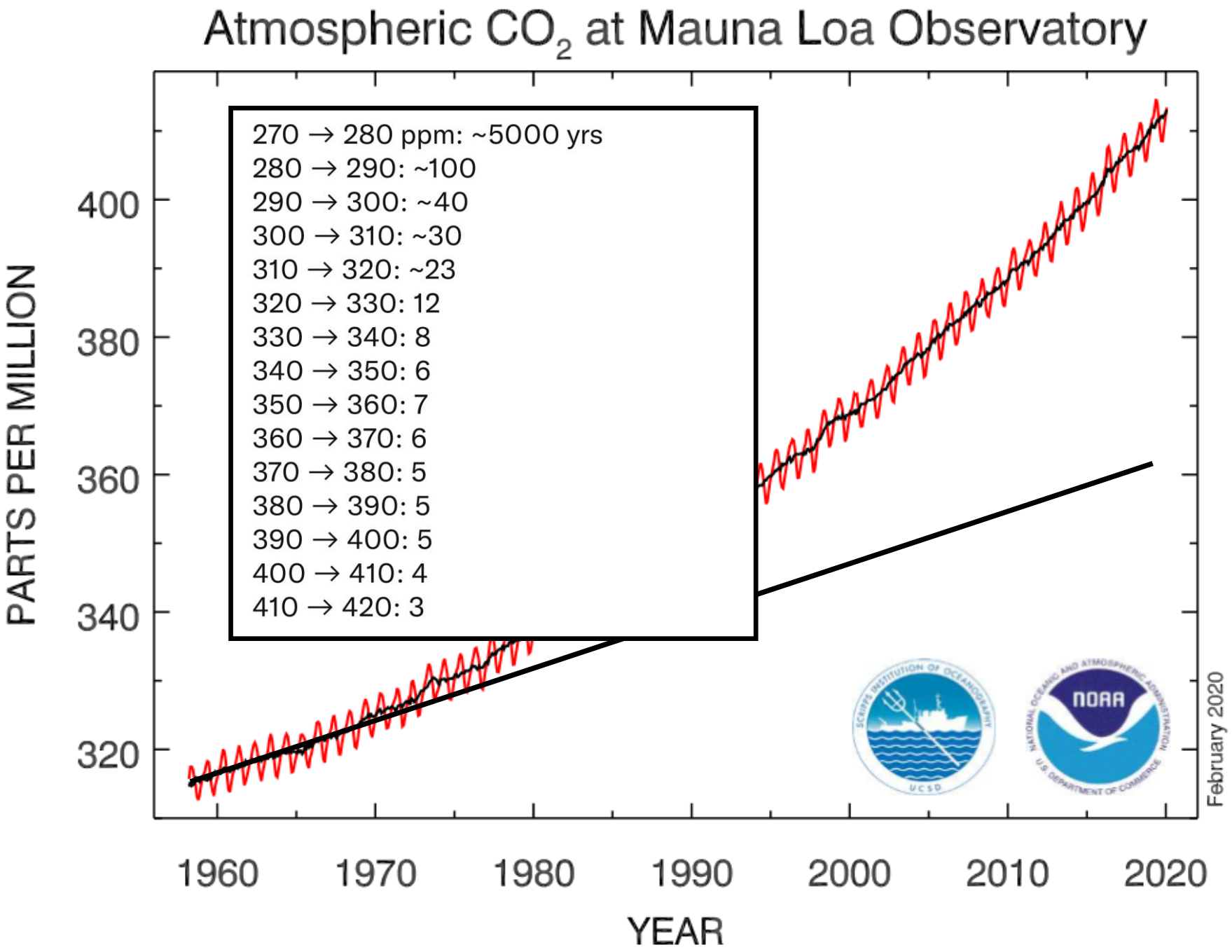
Some recent hot extremes observed over the past decade would have been *extremely **unlikely*** **to occur without human influence** on the climate system.

AR6, WG1 (2021):

Estimated remaning carbon budgets from the beginning of 2020 (GtCO2).....it is about likelihood!

Approximate global warming relative to 1850–1900 until temperature limit (°C)[a]	Estimated remaining carbon budgets from the beginning of 2020 ($GtCO_2$)				
	Likelihood of limiting global warming to temperature limit[b]				
	17%	*33%*	*50%*	*67%*	*83%*
1.5	900	650	500	400	300
2.0	2300	1700	1350	1150	900

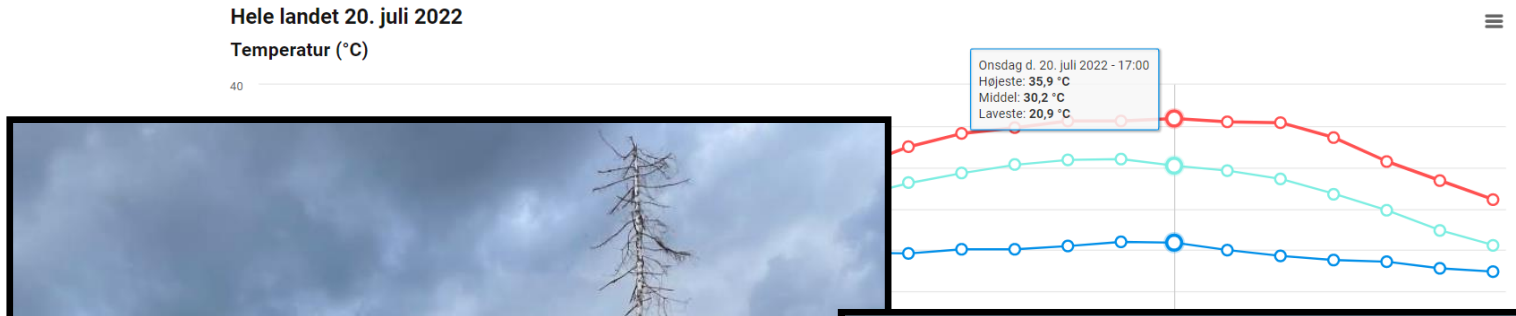

Global Fossil CO_2 Emissions
40 Gt CO_2
30
20
10
0
1960
1970
1980
1990
2000
Projection 2021
36.4 Gt CO_2
▲ 4.9% (4.1%–5.7%)
Global financial
COVID-19 pandemic
Dissolu
Soviet
▼ 3.1%
Second Oil crisis
First Oil crisis
© Global Carbon Project
CO_2 pulse remaining in atmosphere (%)
100
80
60
40
20
0
a
b
0
20
40
60
80
100
200
400
600
800
1000
Years after CO_2 pulse

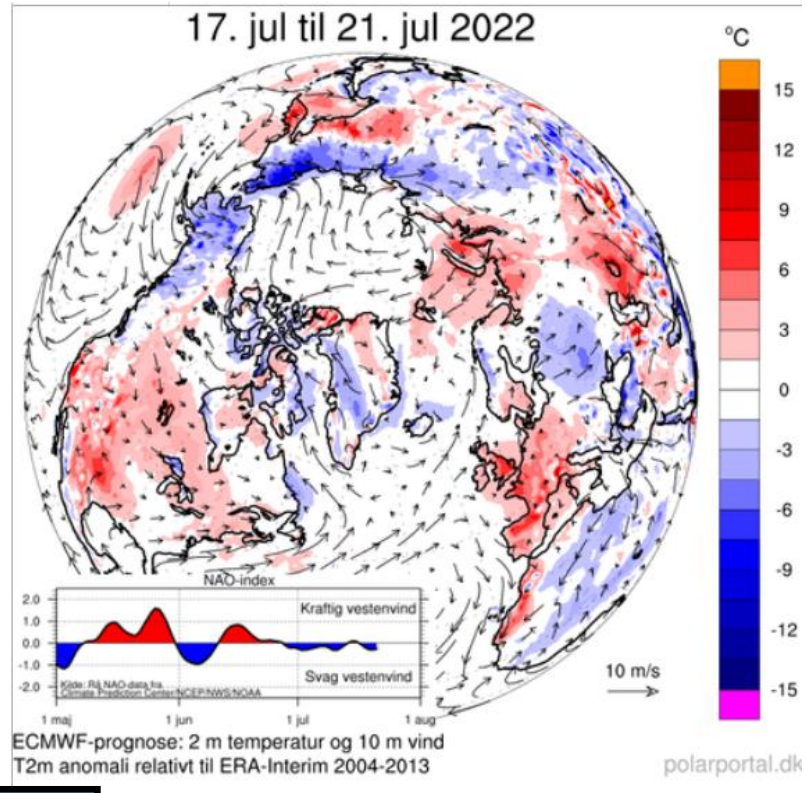

Atmospheric CO_2 at Mauna Loa Observatory
270 → 280 ppm: ~5000 yrs
280 → 290: ~100
290 → 300: ~40
300 → 310: ~30
310 → 320: ~23
320 → 330: 12
330 → 340: 8
340 → 350: 6
350 → 360: 7
360 → 370: 6
370 → 380: 5
380 → 390: 5
390 → 400: 5
400 → 410: 4
410 → 420: 3
PARTS PER MILLION
400
380
360
340
320
1960
1970
1980
1990
2000
2010
2020
YEAR
NOAA
February 2020

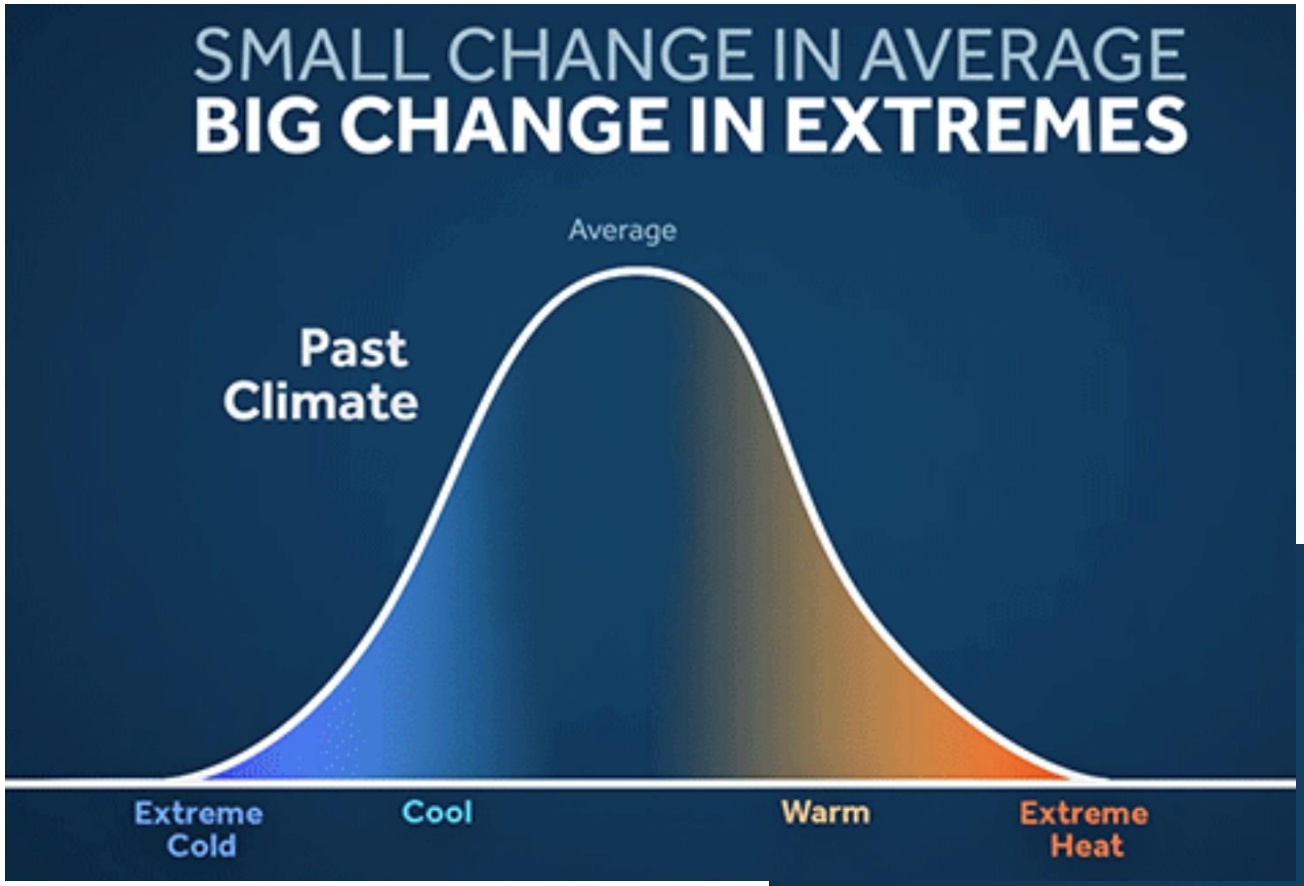
20/07/2022 KL. 17:25

Varmeste dag i juli og Danmarks næsthøjeste temperatur nogensinde - her slog varmen rekorder

Selvom Danmarks varmerekord fra 1975 stadig står, blev dagens høje temperaturer stadig historiske. I Abed på Lolland blev der målt den højeste temperatur for en juli-dag nogensinde. En måling, som samtidig er den andenhøjeste nogensinde i Danmark.







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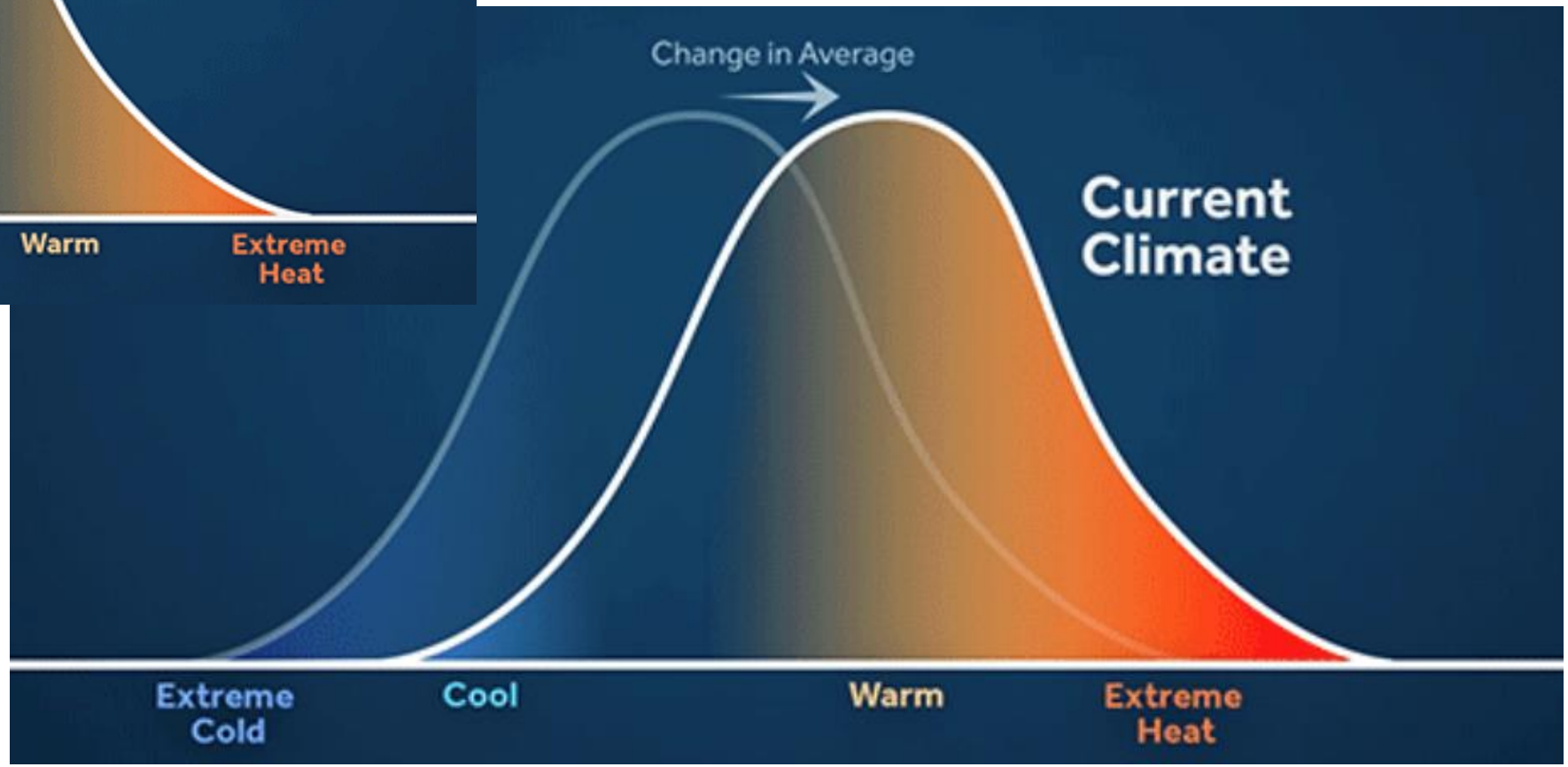
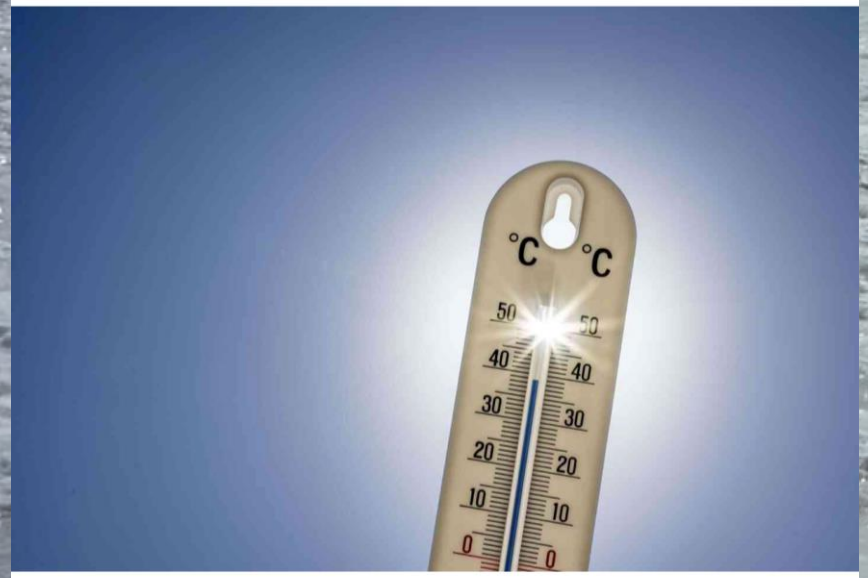
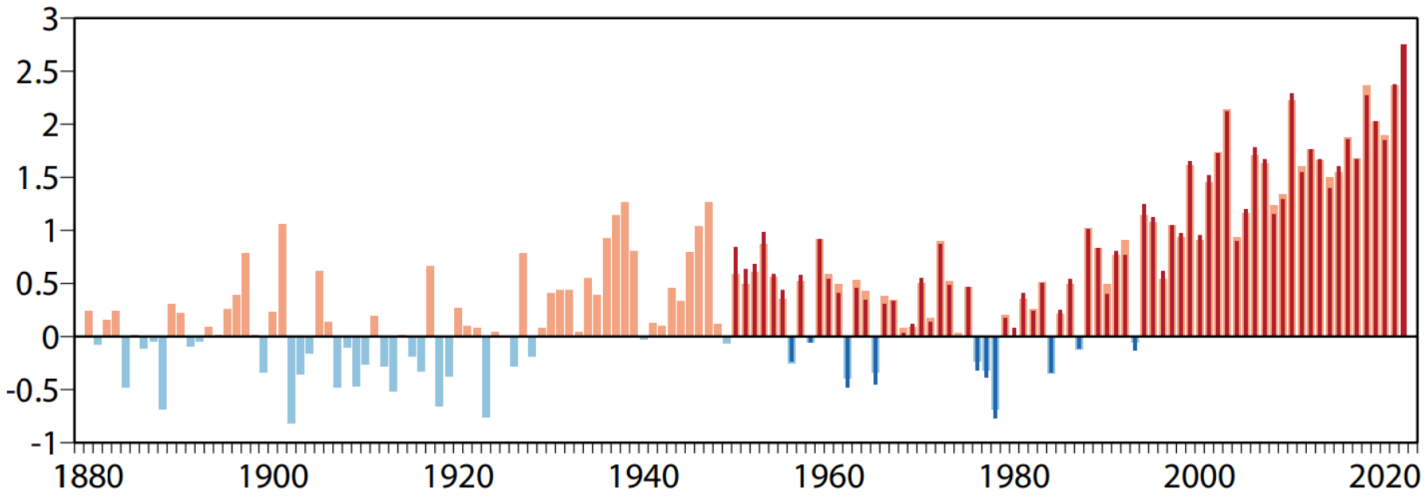


Ny rekord: Europa fik den varmeste sommer i over 140 år

"Ikke overraskende - men bekymrende," siger dansk klimaprofessor.



Flere hedebølger med temperaturer omkring 40 grader ramte Europa i sommeren 2022. (Foto: RUT / SplashNews.com)



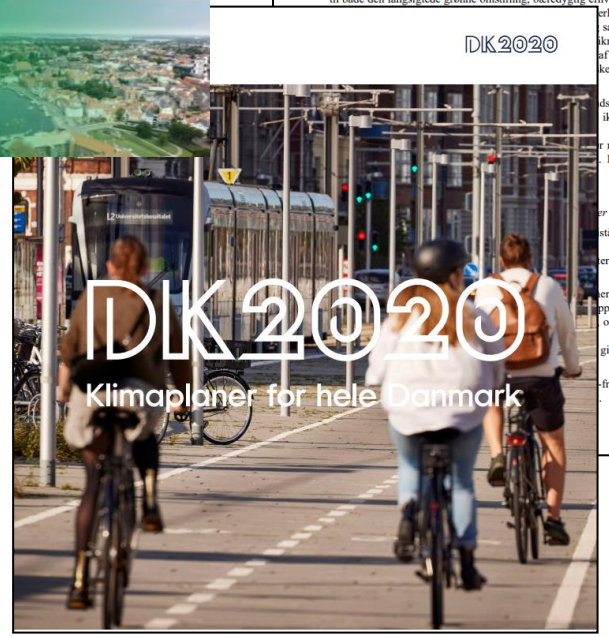
Sommerens temperatur i Europa siden 1880 i forhold til klimanormalen for den 30-årige periode fra 1880-1910. (© Copernicus)

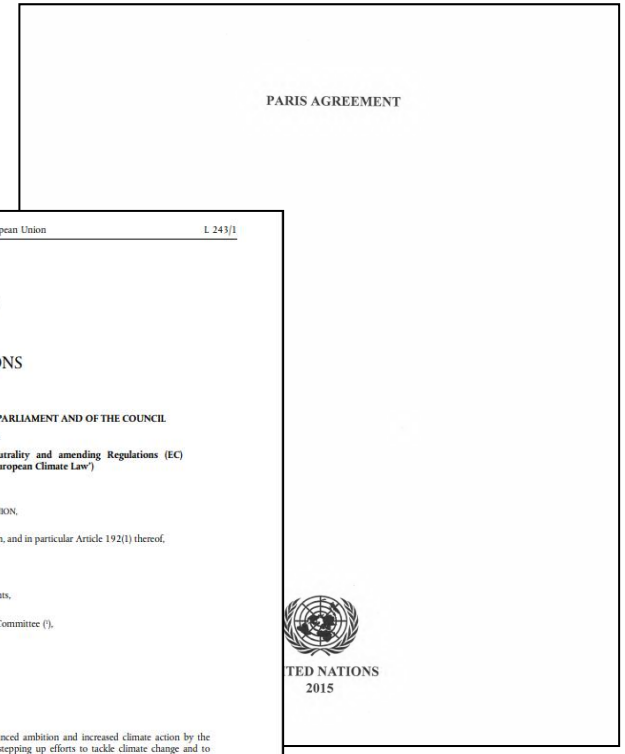
How to act among strategies?

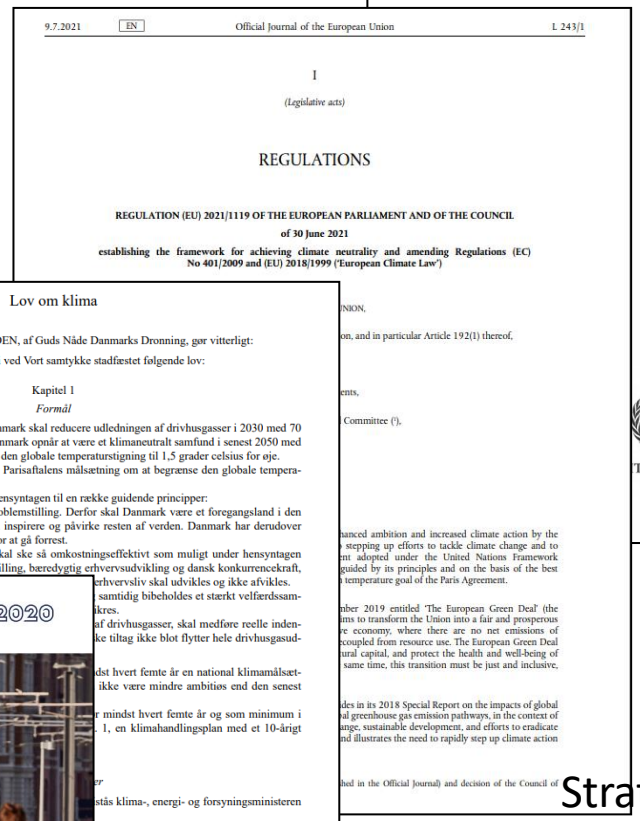
- Paris Agreement (Global)
- EU Regulations ‘Fit for 55’ (Union)
- Climate Law (National)
- DK2020 Plan (KL-regi)
- Examples (Municipalities)

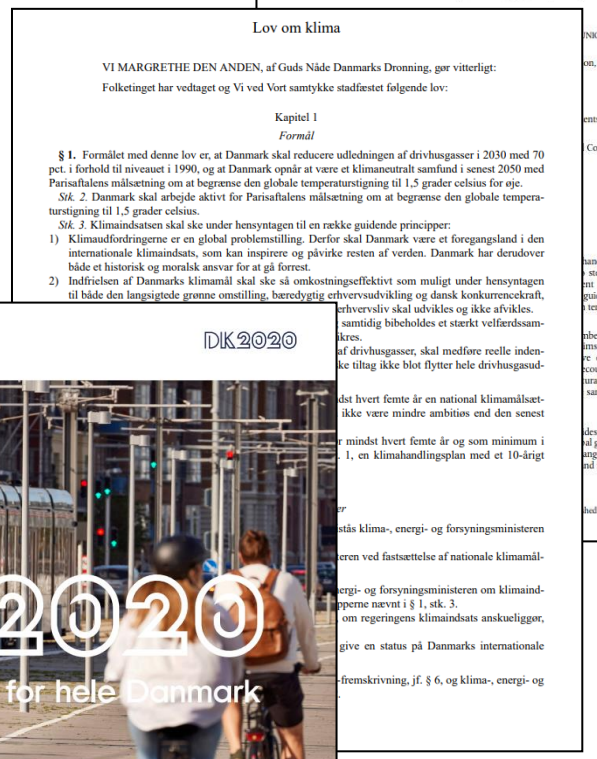
Klimakommune i ti år: Skive har halveret deres CO2-udledning

Skive Kommune har reduceret deres CO2-udledning med 63,3 procent på ti år med projektet Klimakommuner, som 71 af landets kommuner frivilligt er en del af.







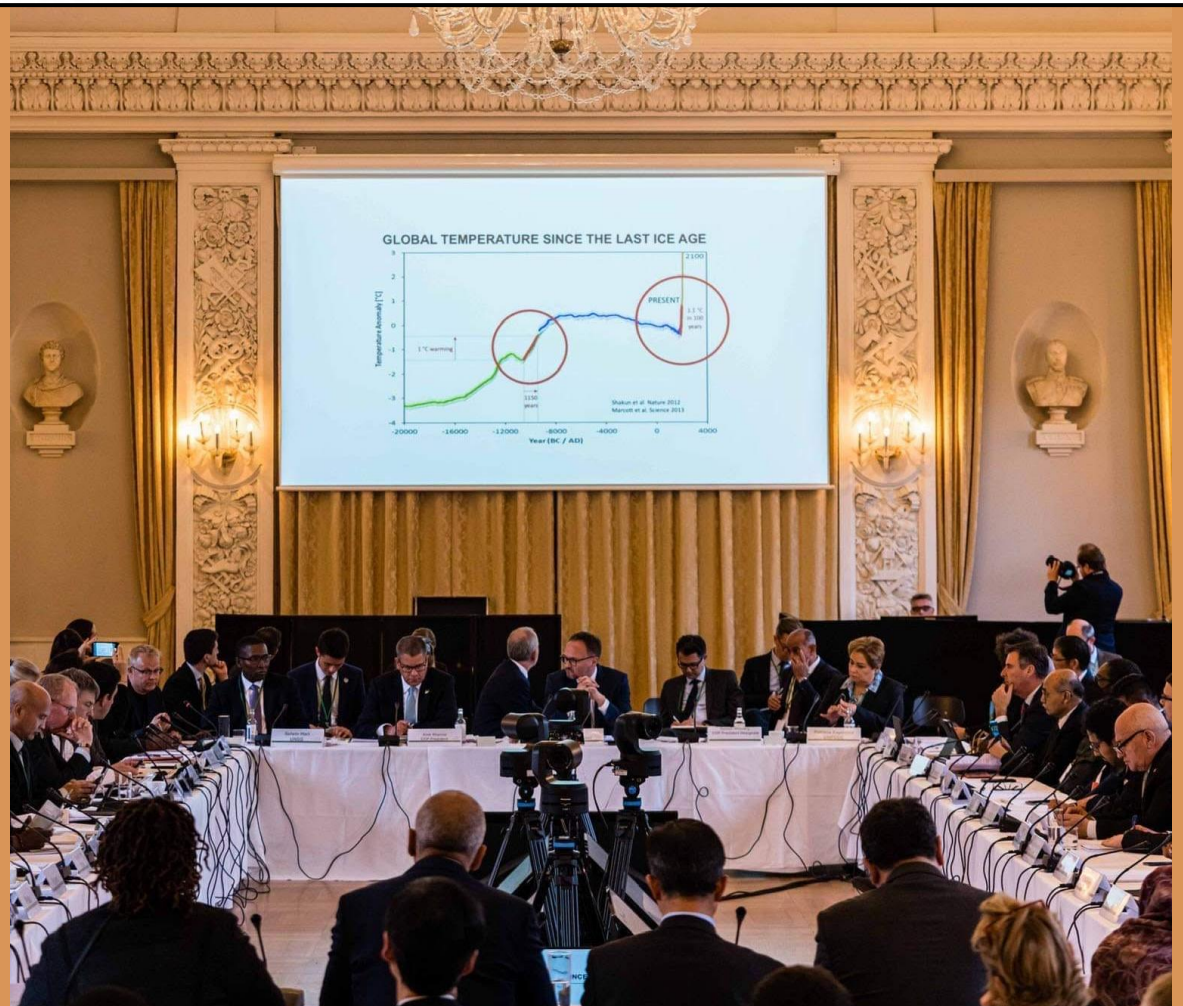


Applied conditions

Bring knowledge to the table

(a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

Recognizing the need for an effective and progressive response to the urgent threat of climate change on the basis of the best available scientific knowledge,




Thank you…