

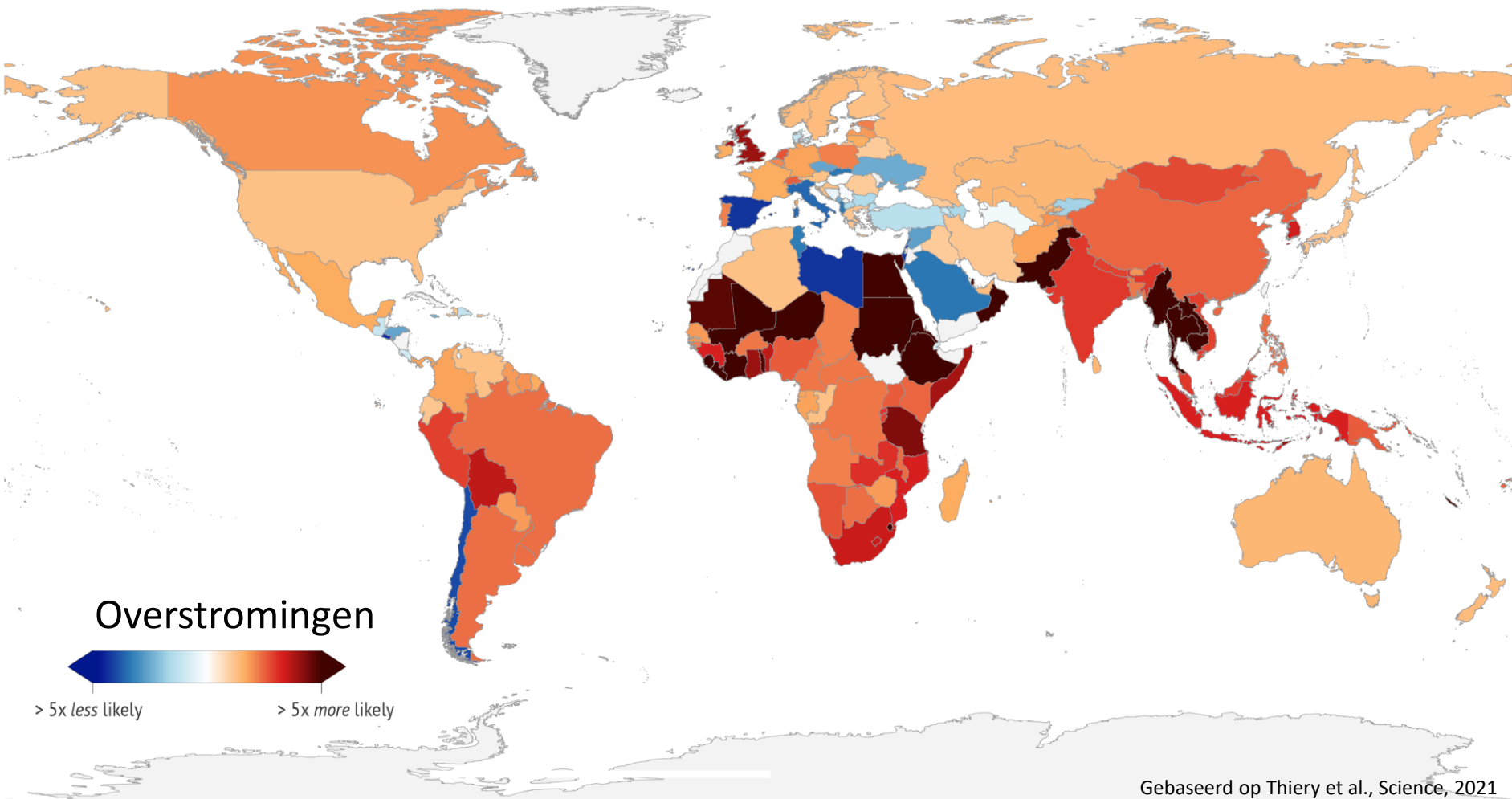
KNAG Onderwijsdag

Peter Kuipers Munneke

Wereldverhalen

Extreem weer in een opwarmende wereld



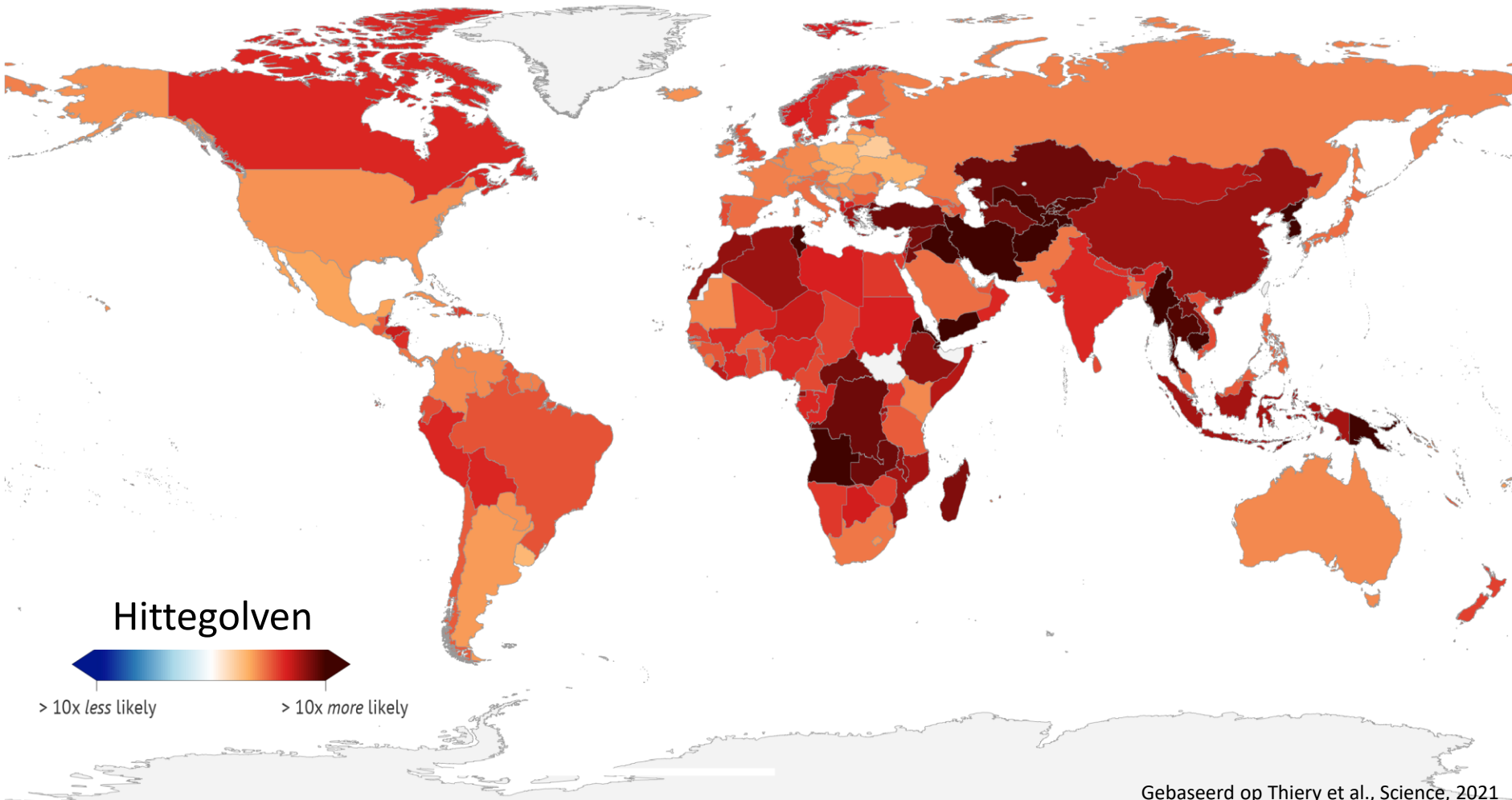


Overstromingen



Gebaseerd op Thiery et al., Science, 2021

<https://www.carbonbrief.org/todays-youth-will-face-unmatched-climate-extremes-compared-to-older-generations>



Hittegolven

> 10x less likely > 10x more likely

Gebaseerd op Thiery et al., Science, 2021

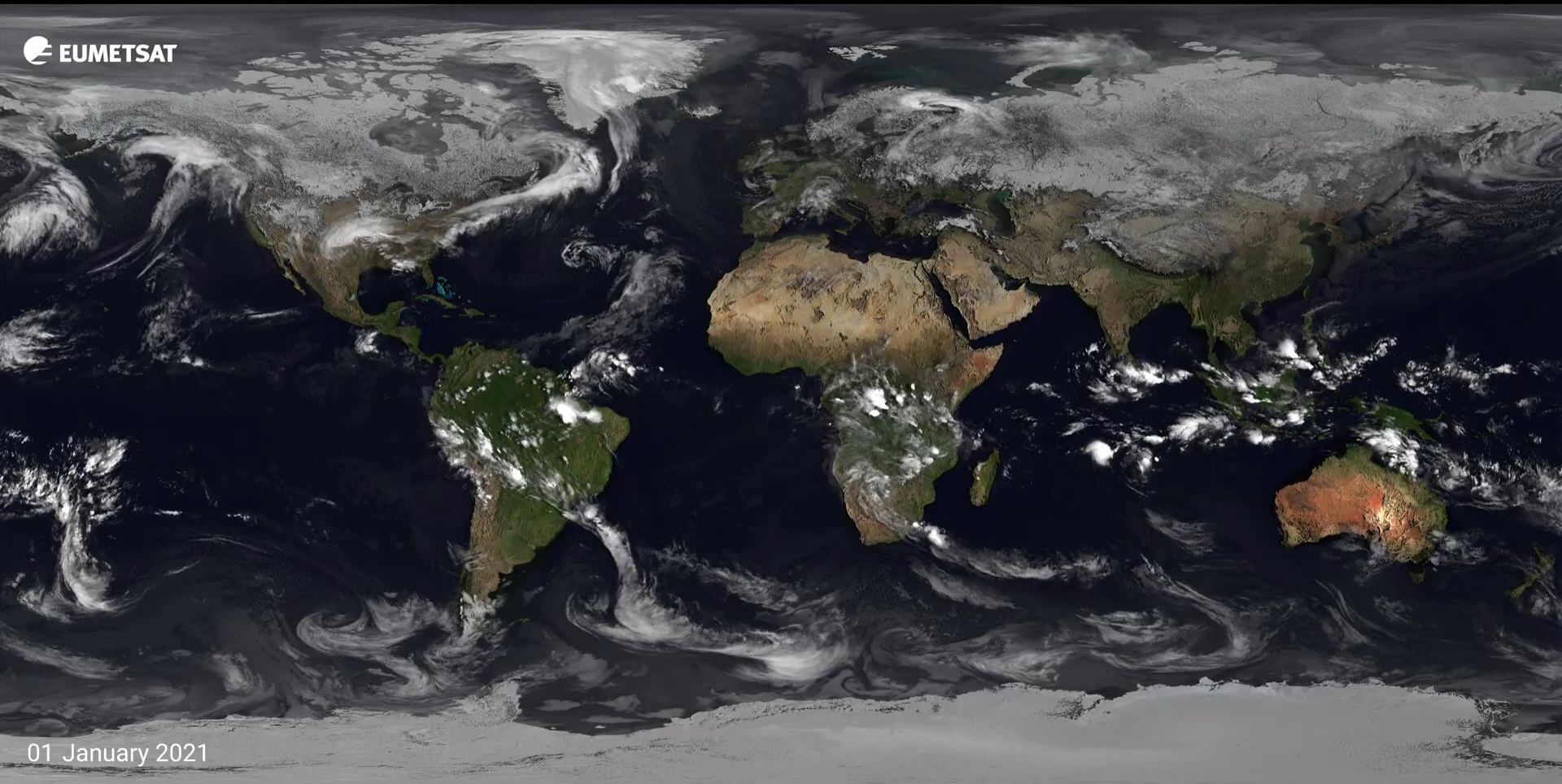
<https://www.carbonbrief.org/todays-youth-will-face-unmatched-climate-extremes-compared-to-older-generations>

Alle klimaatextremen

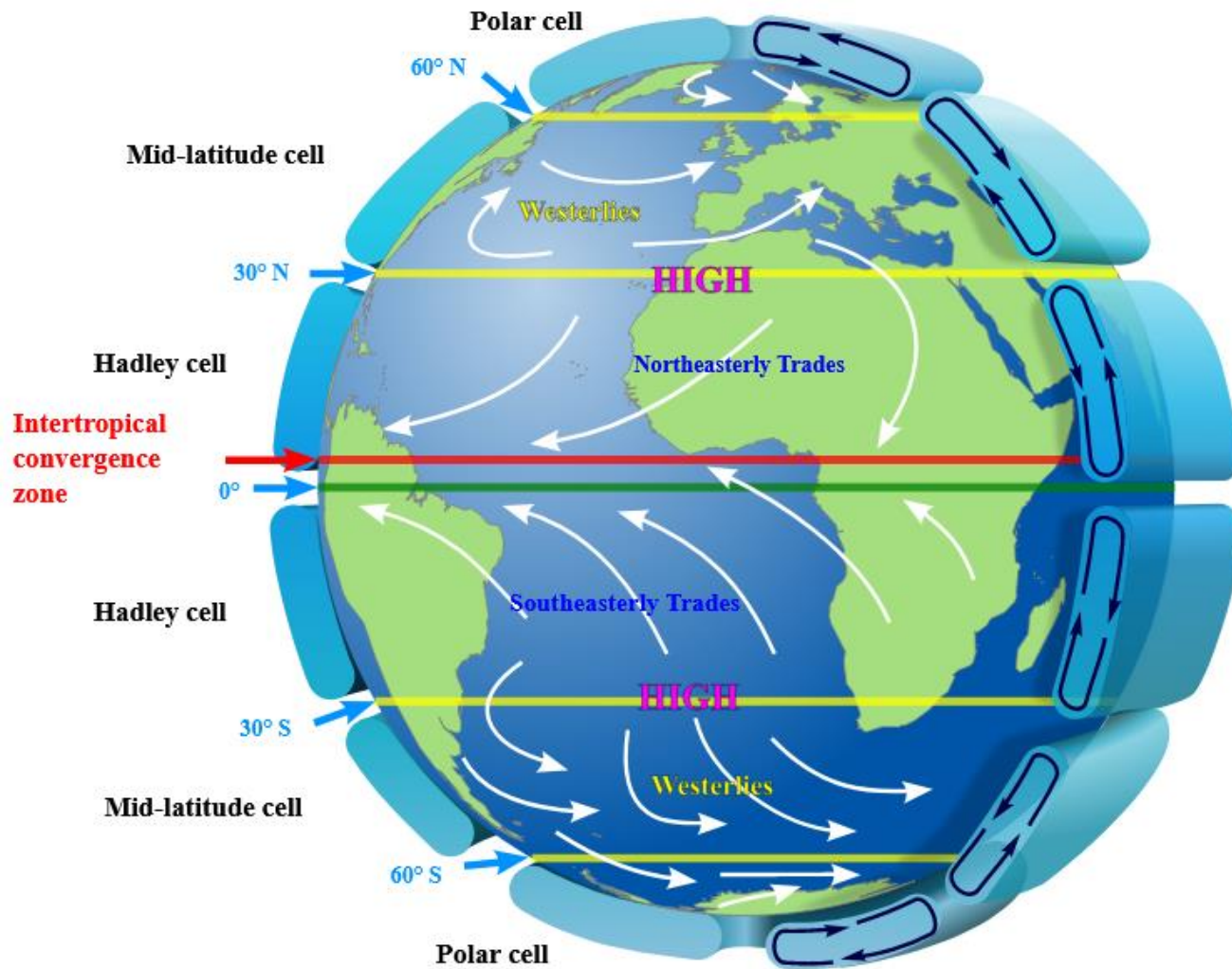


Gebaseerd op Thiery et al., Science, 2021

<https://www.carbonbrief.org/todays-youth-will-face-unmatched-climate-extremes-compared-to-older-generations>



01 January 2021



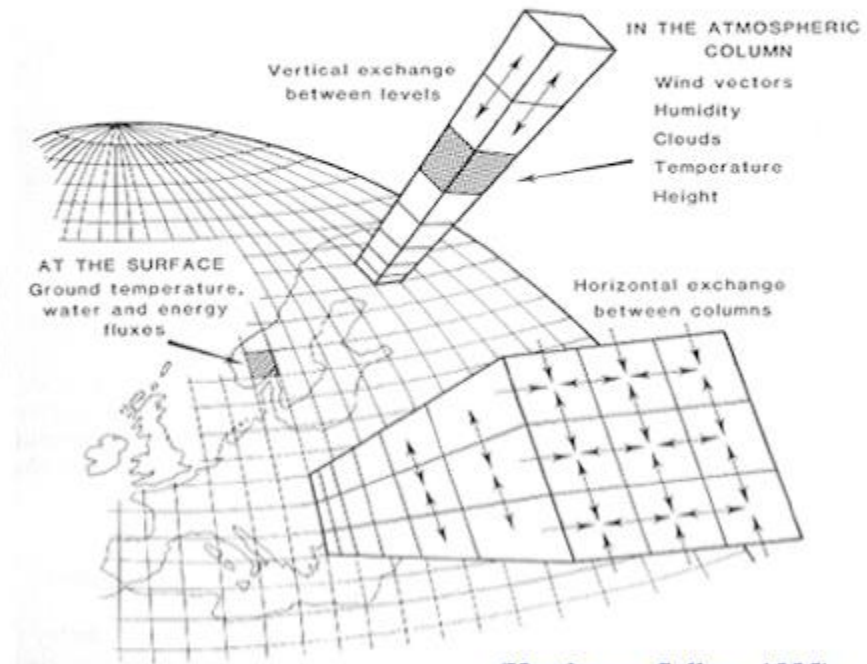
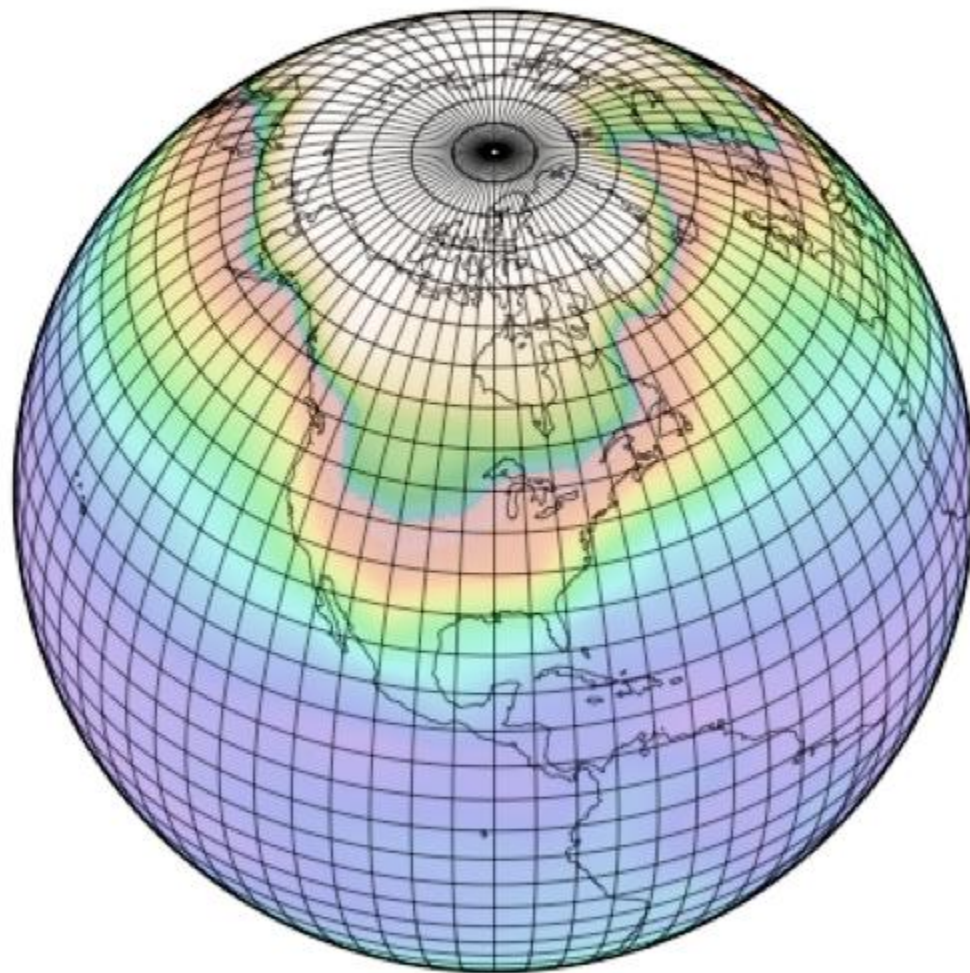


spoor
1

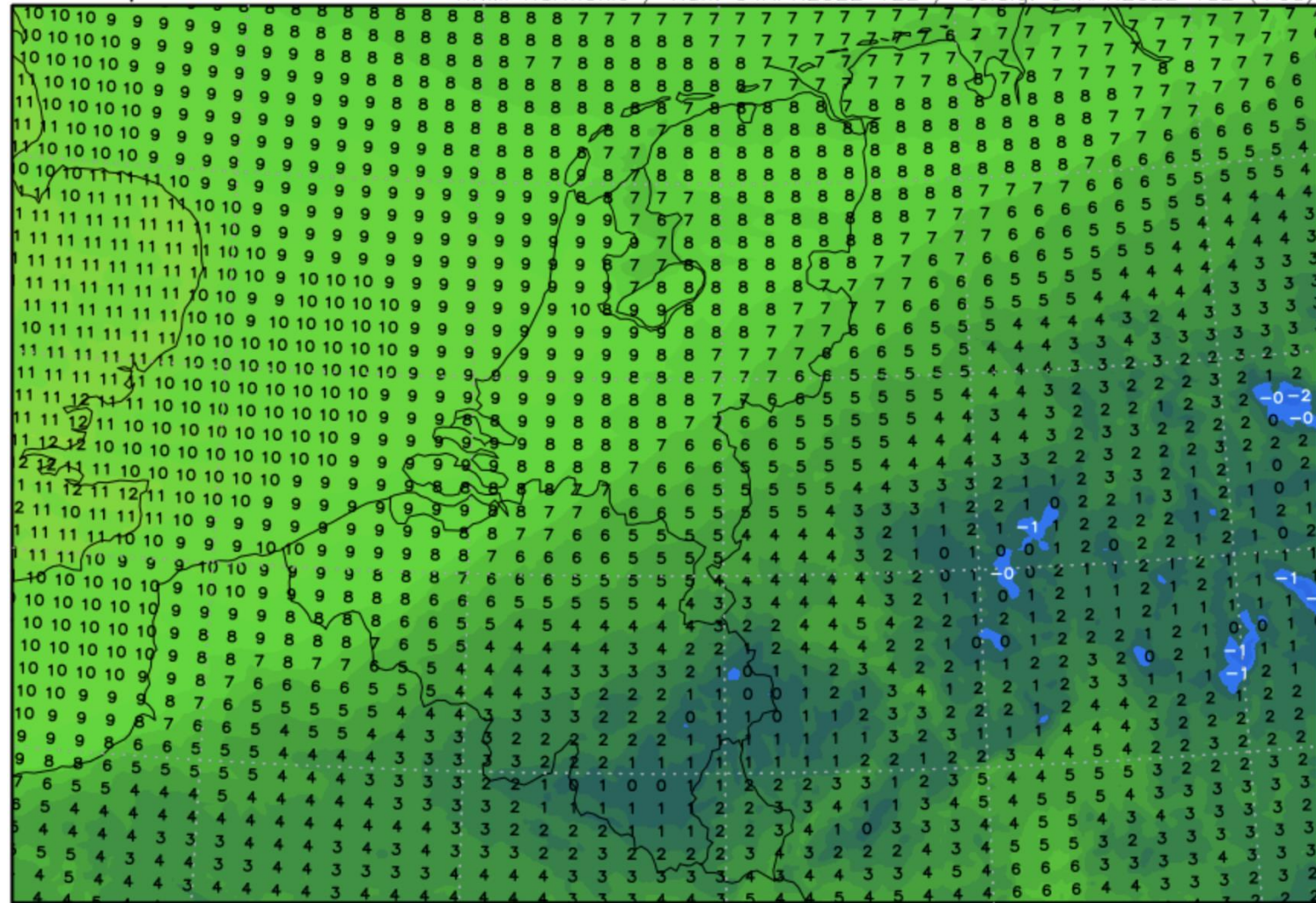
2
12:23 Spoor
Amsterdam Centraal

NOS





(Henderson-Sellers, 1985)



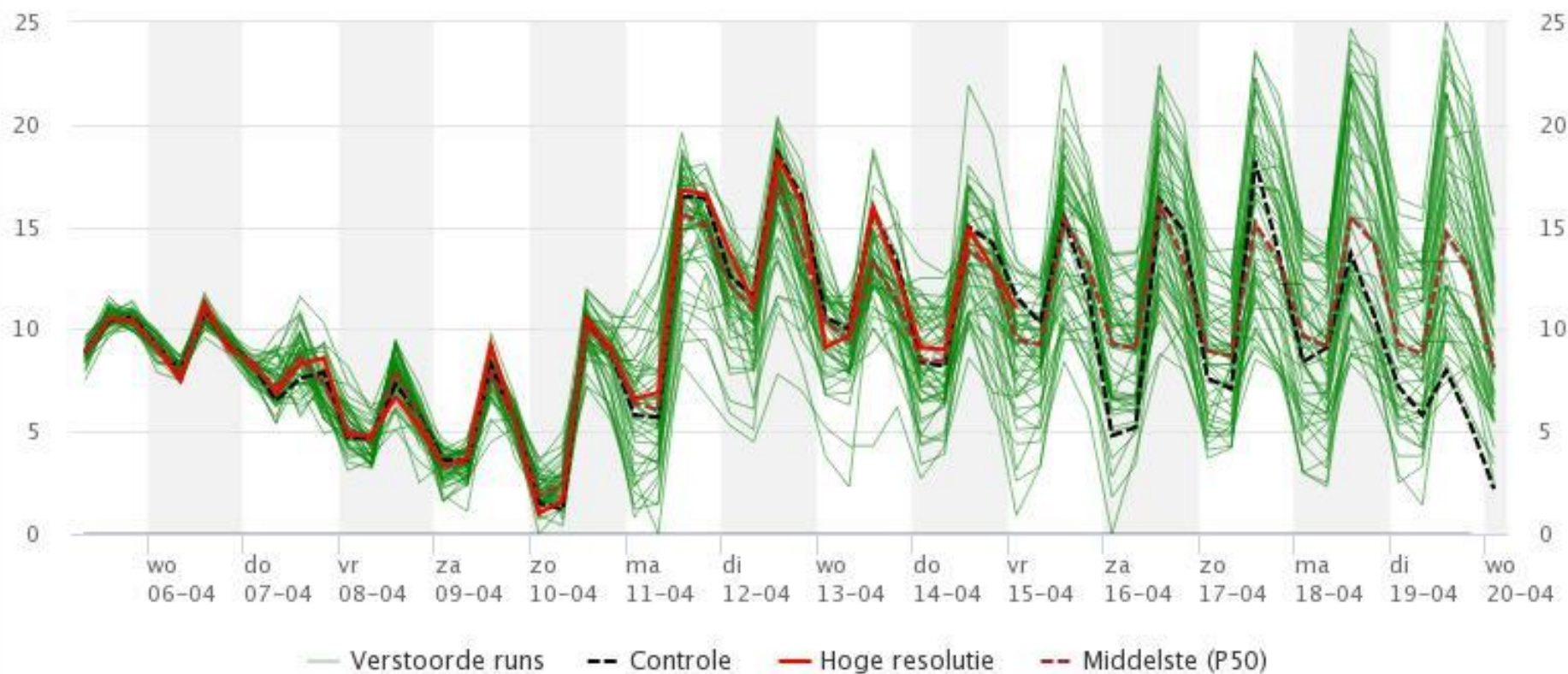
Temperatuur 2 meter
(graden Celsius)



-18 -15 -12 -9 -6 -3 0 3 6 9 12 15 18 21 24 27 30 33 36

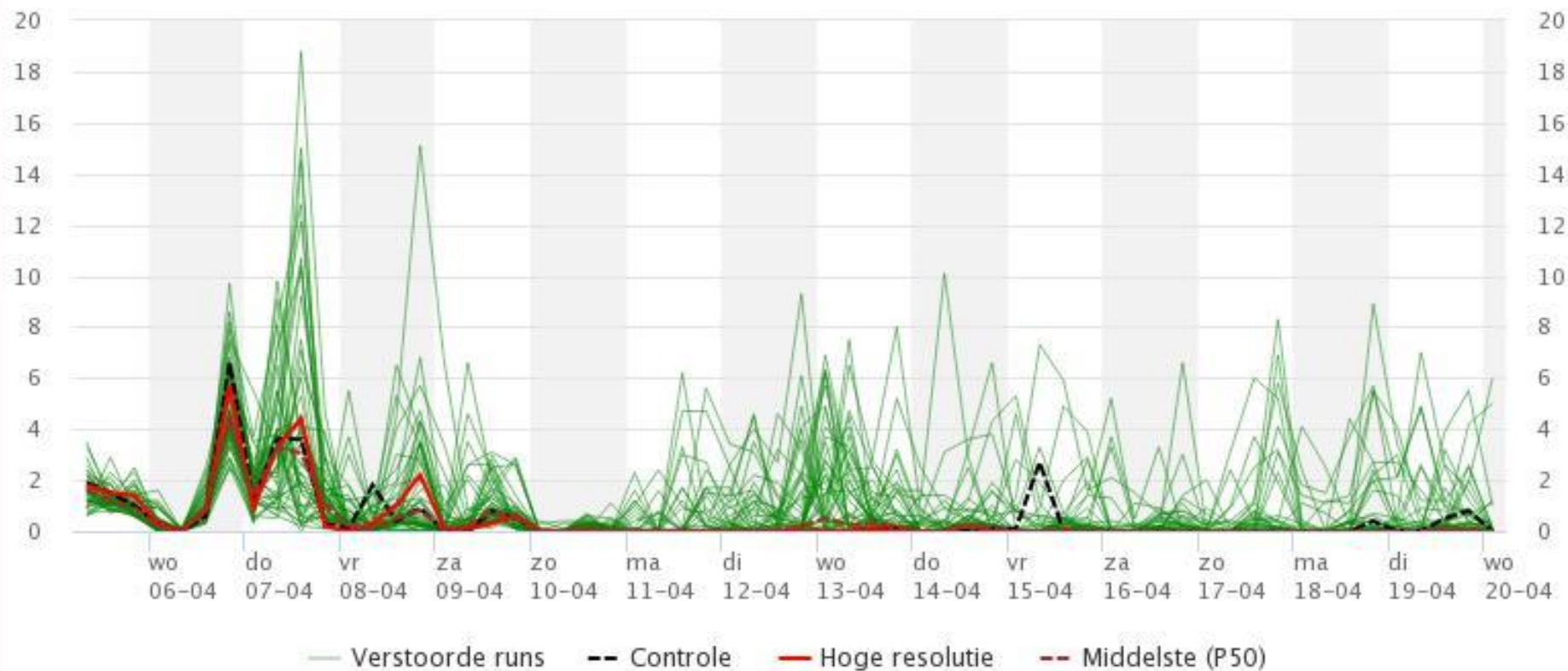
Temperatuur (°C)

De Bilt, dinsdag 5 april 2022 (Versie di 00 uur)



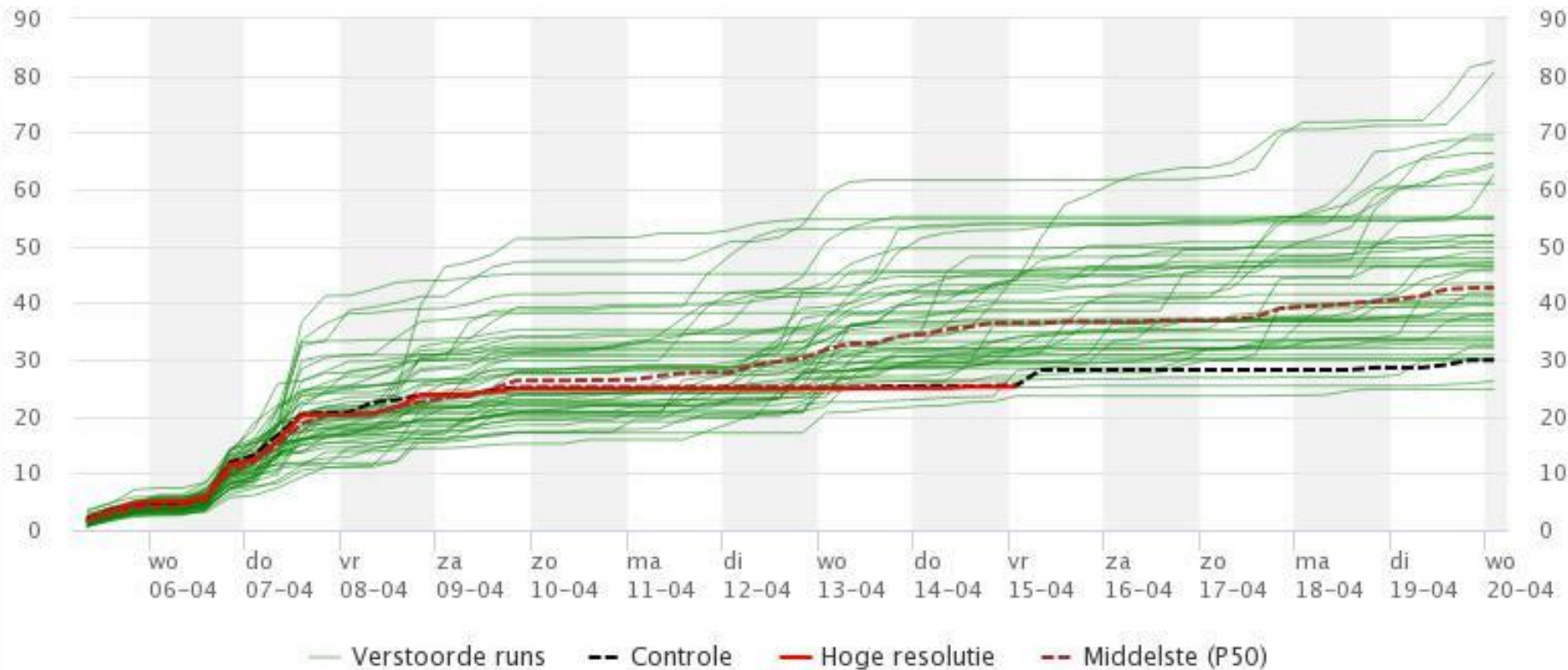
Neerslag (mm, 6 uurlijks)

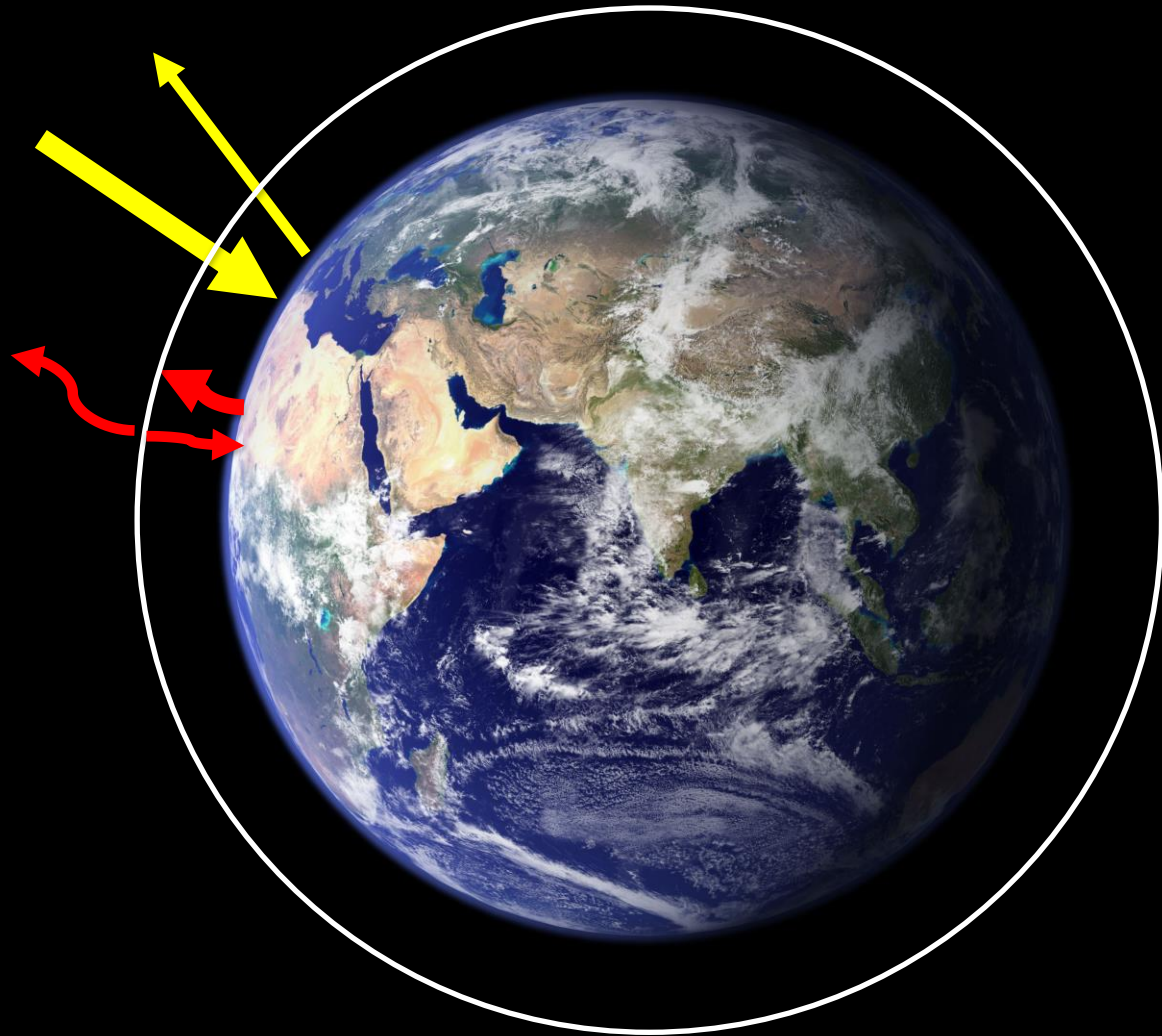
De Bilt, dinsdag 5 april 2022 (Versie di 00 uur)



Neerslagsom (mm)

De Bilt, dinsdag 5 april 2022 (Versie di 00 uur)







Zon

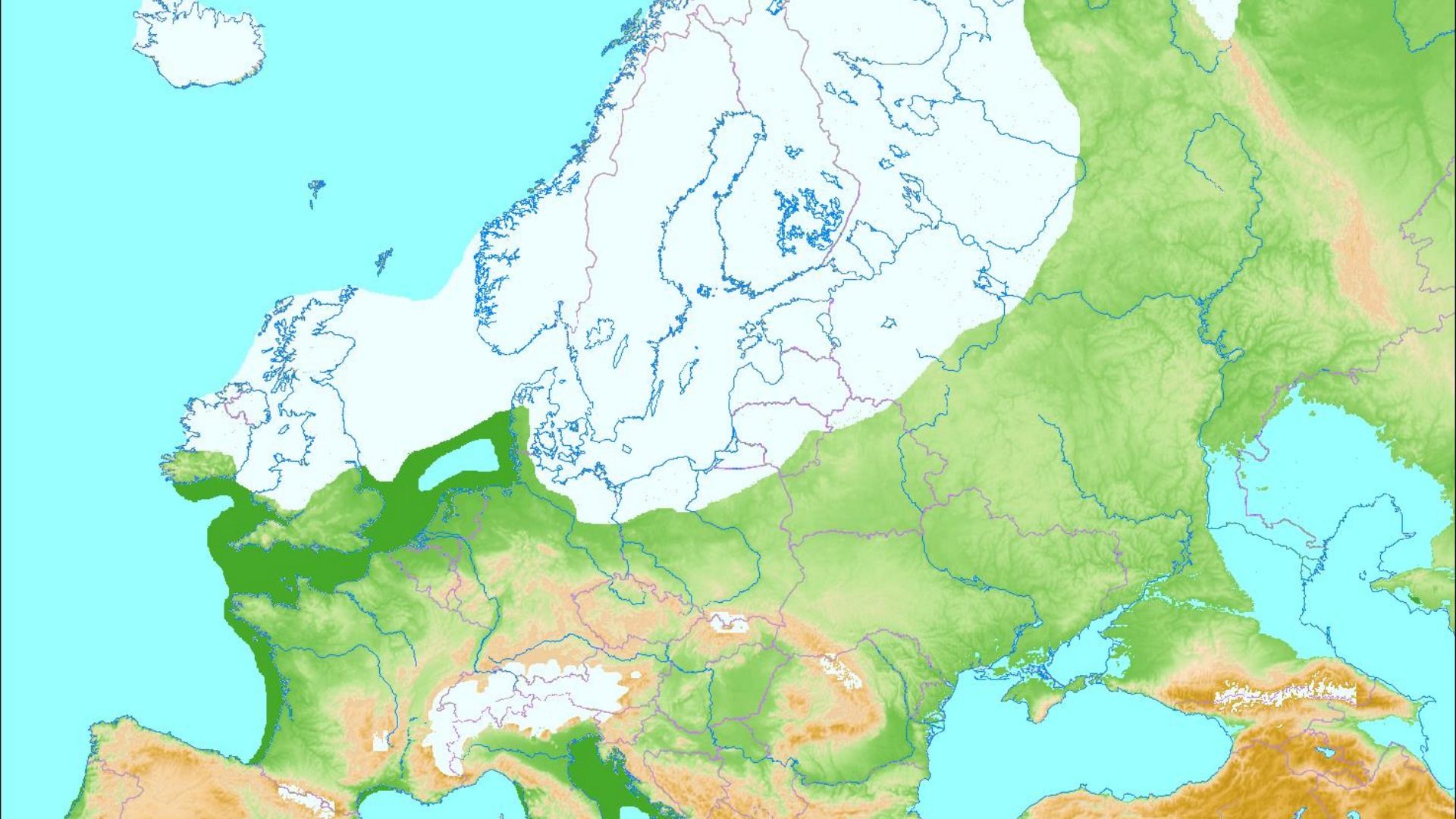


Witheid



CO₂

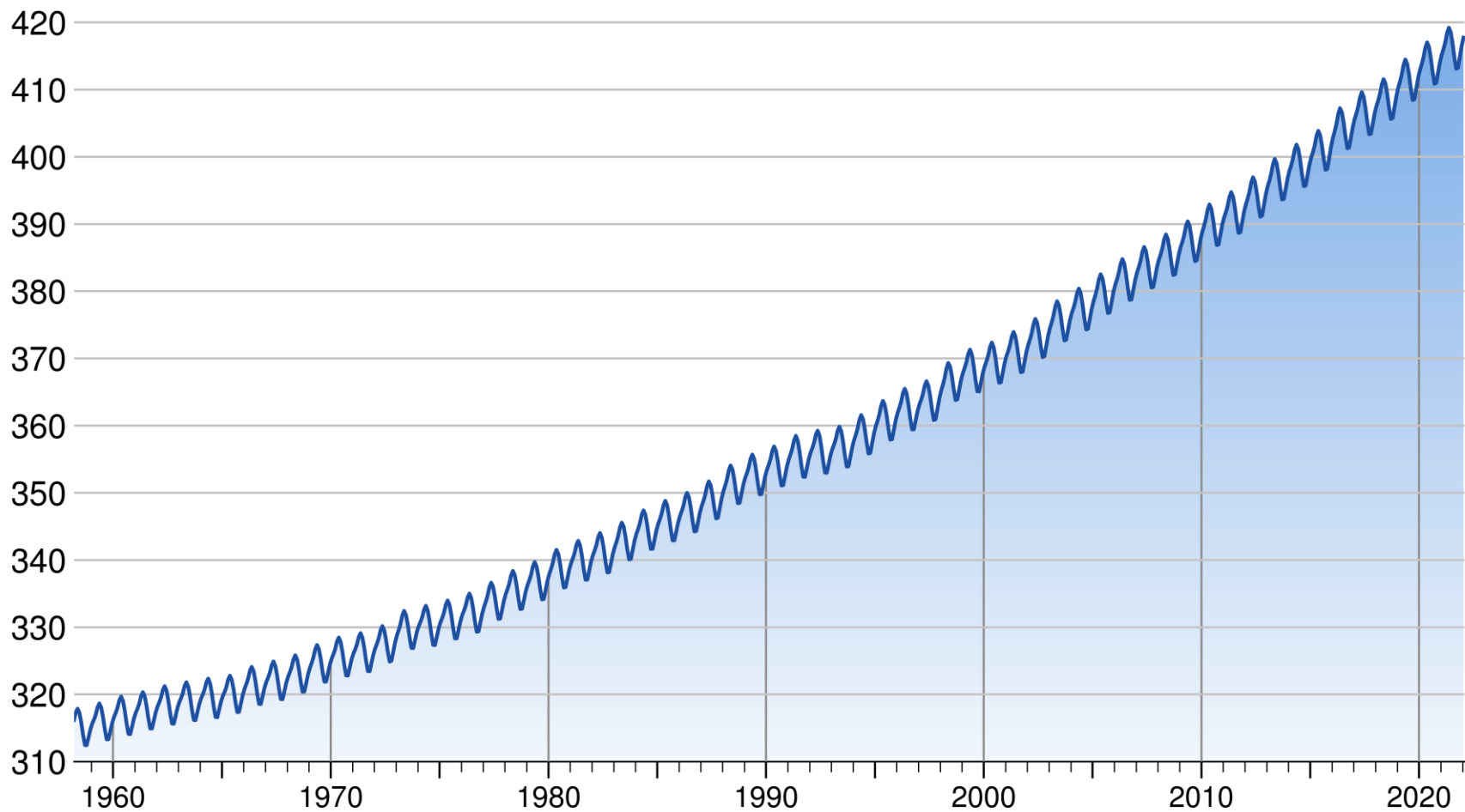


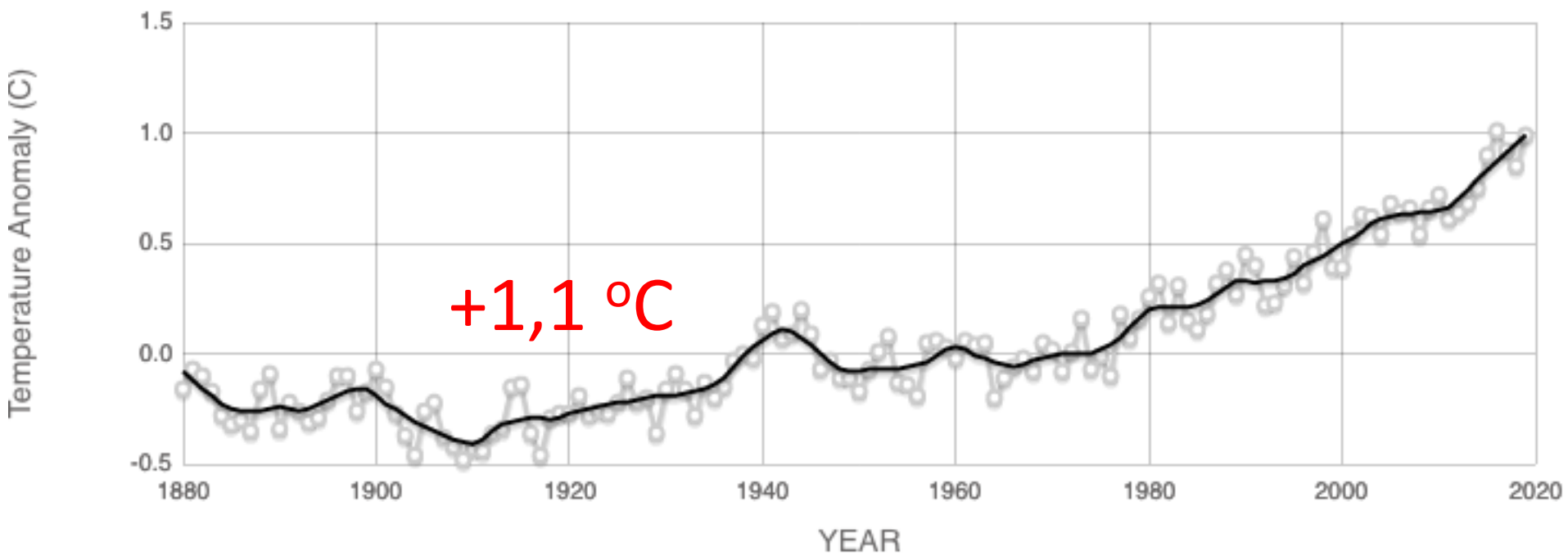




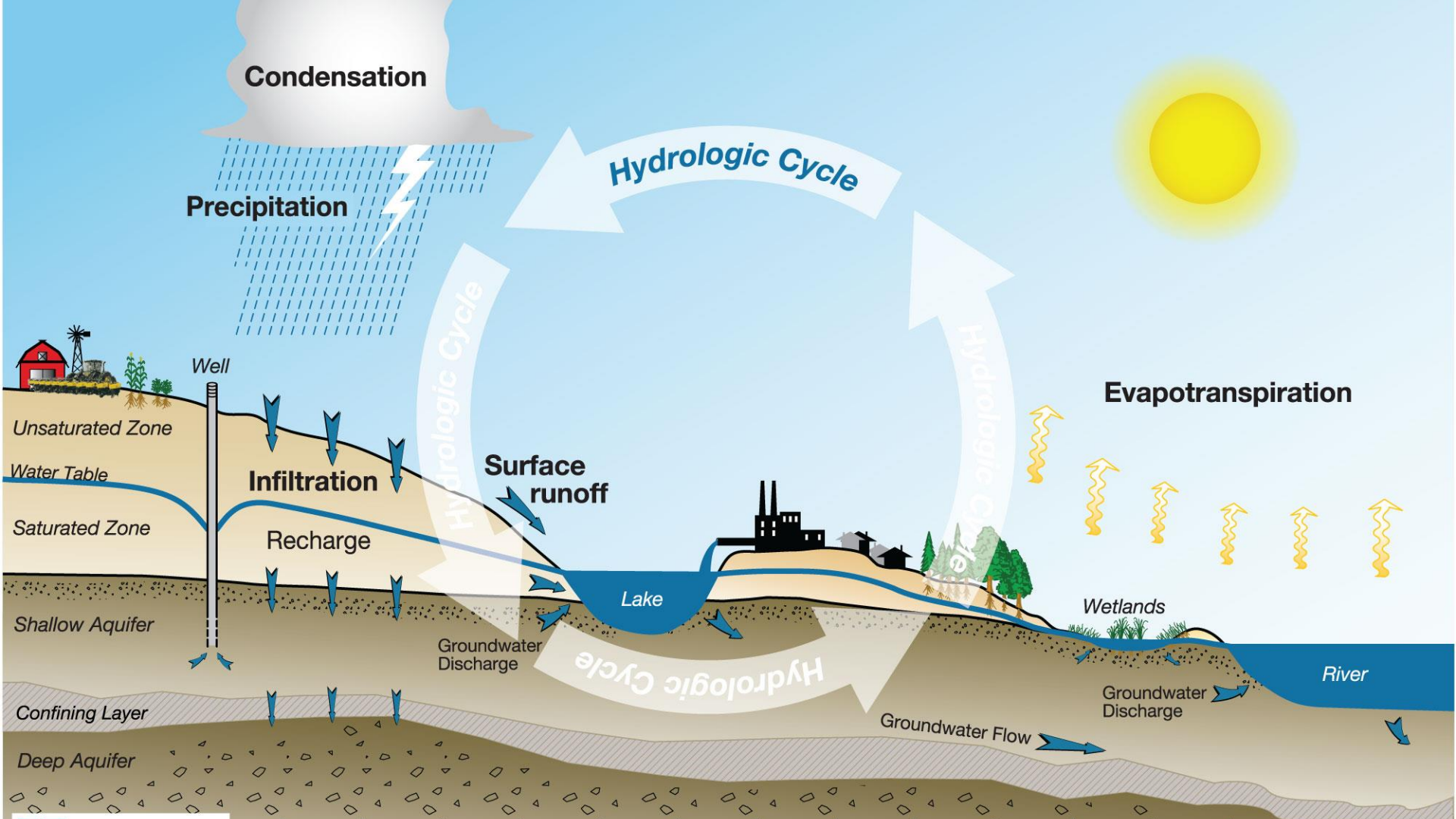
Monthly Carbon Dioxide Concentration

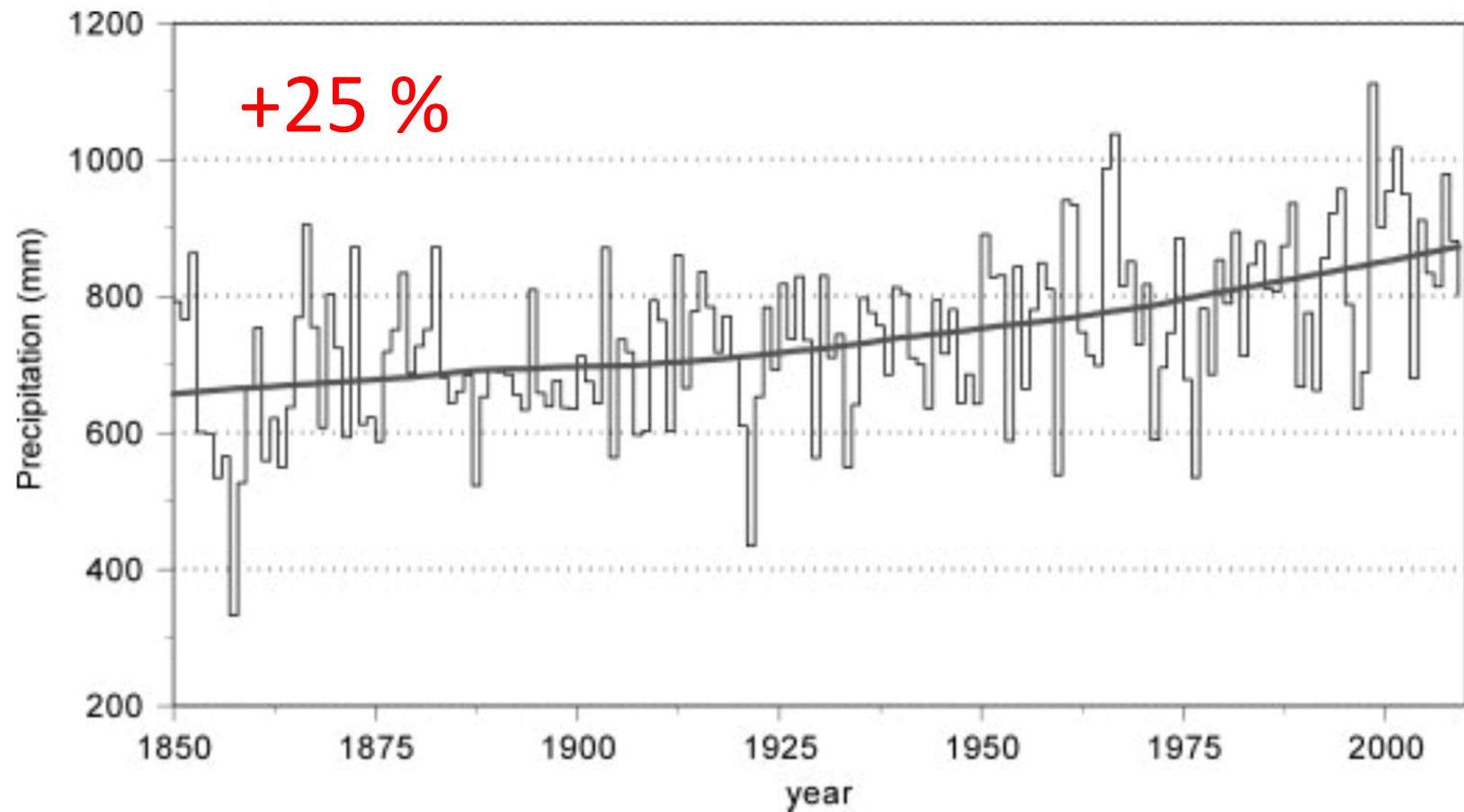
parts per million



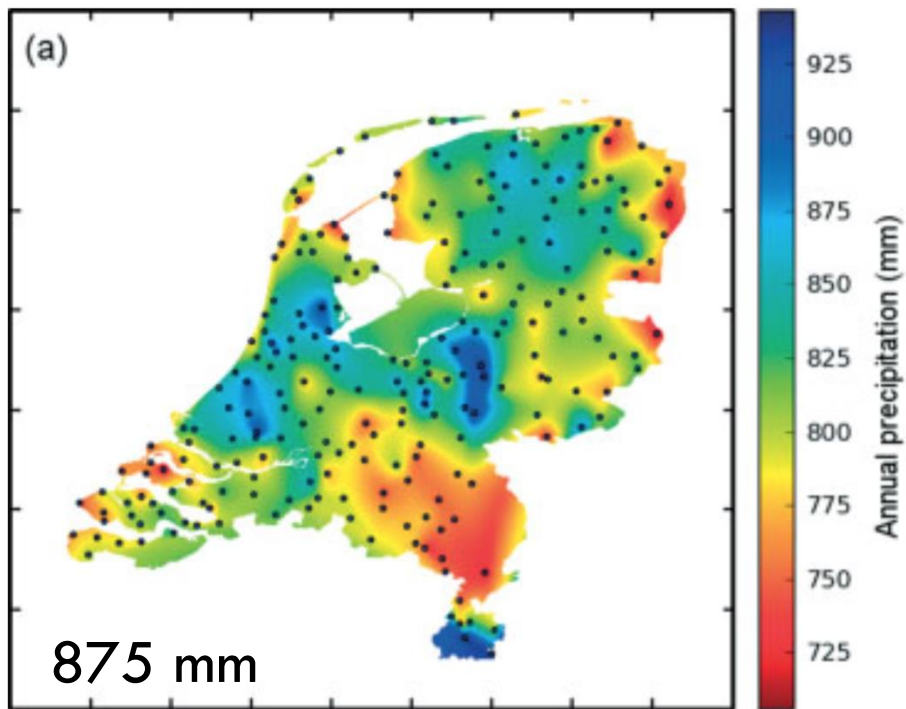


Source: climate.nasa.gov

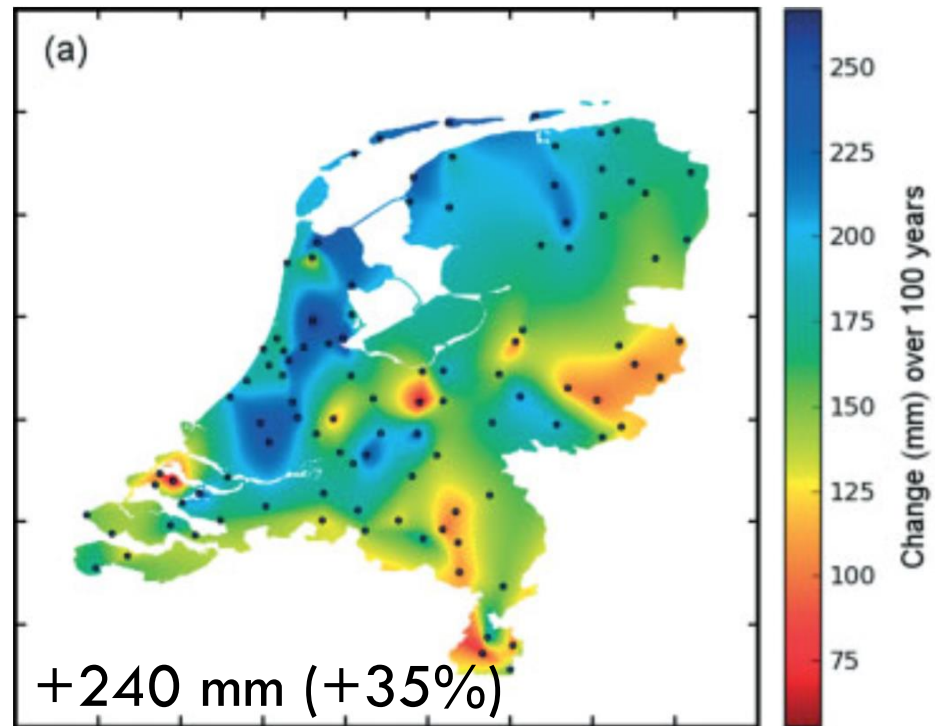




Jaarlijkse neerslag nu



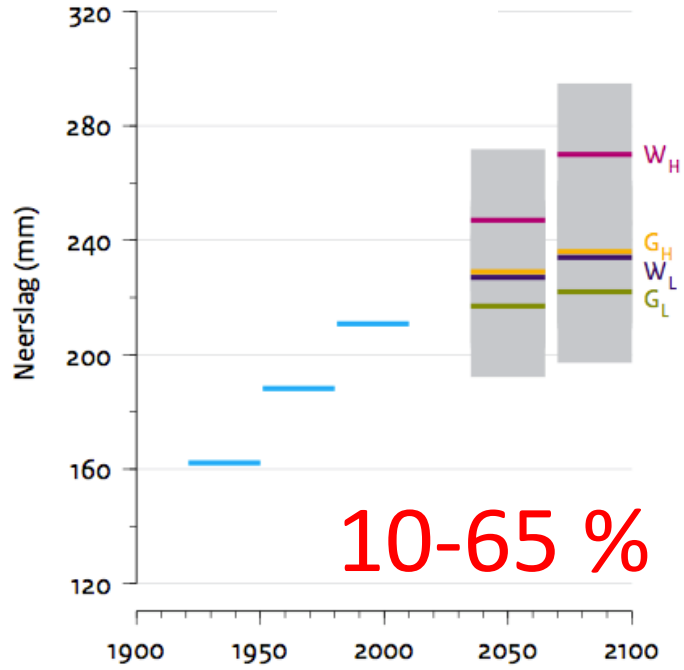
Toename 20^e eeuw



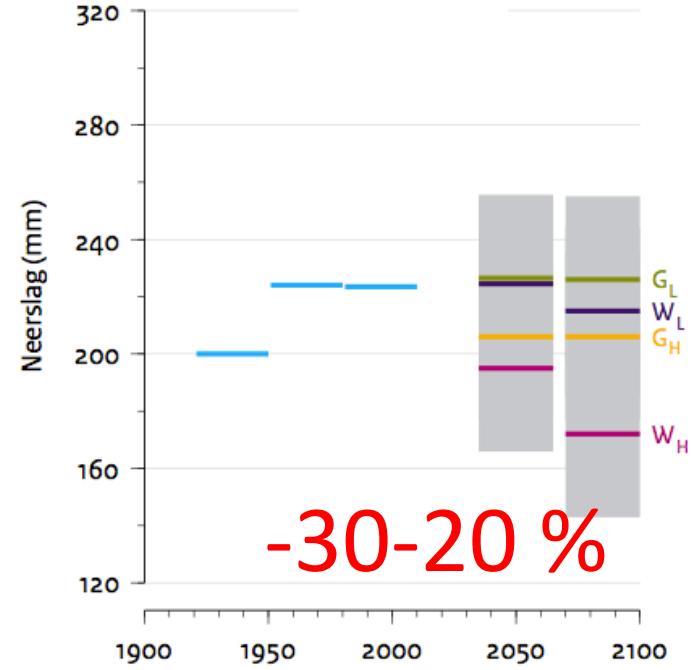


Komende eeuw

Winter



Zomer



1981-2010



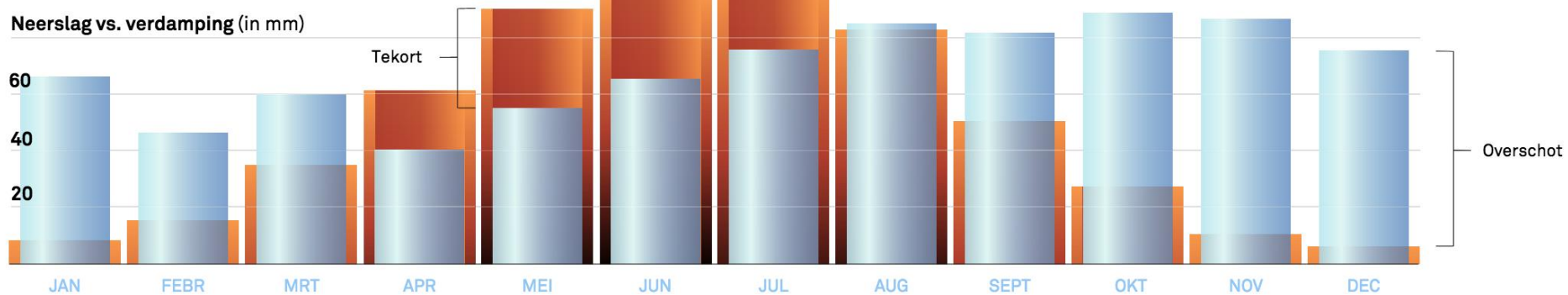
Neerslag

1981-2010

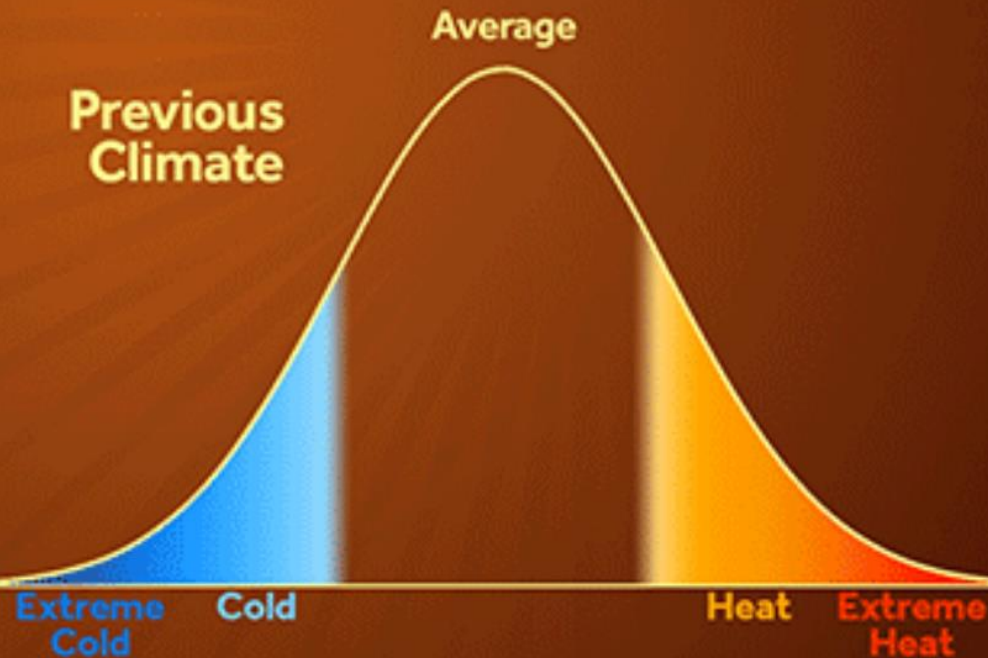


Verdamping

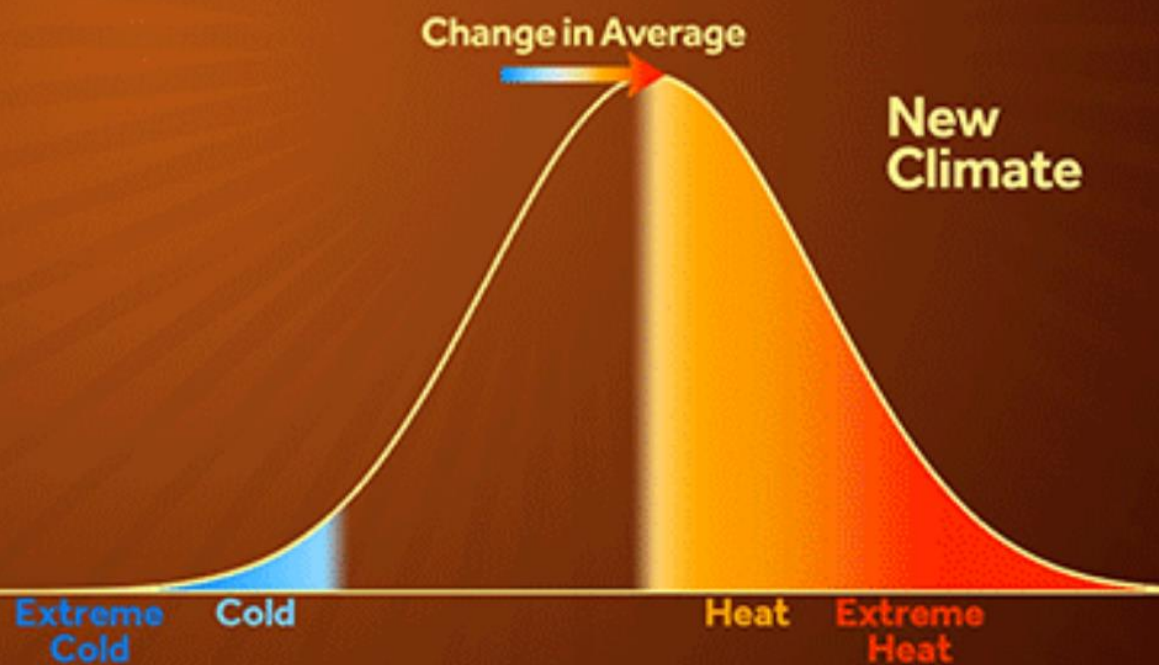
Neerslag vs. verdamping (in mm)



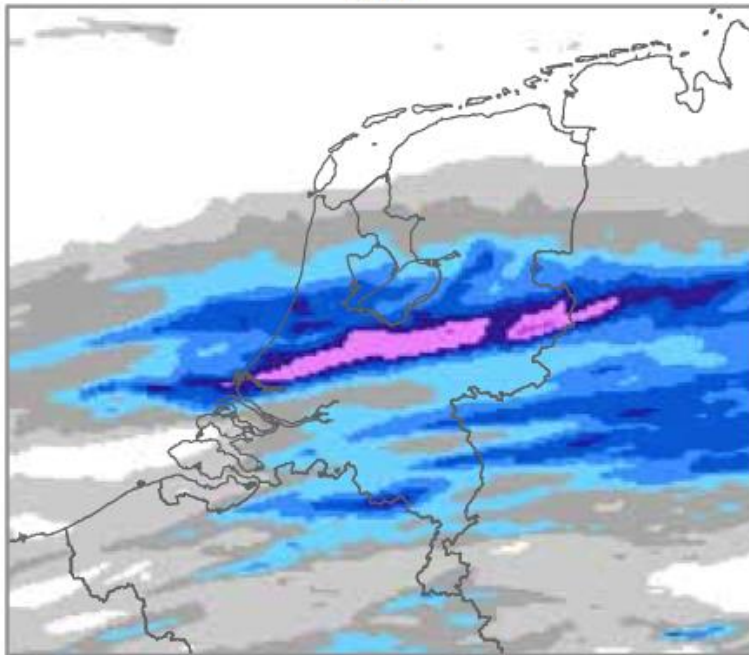
SMALL CHANGE IN AVERAGE BIG CHANGE IN EXTREMES



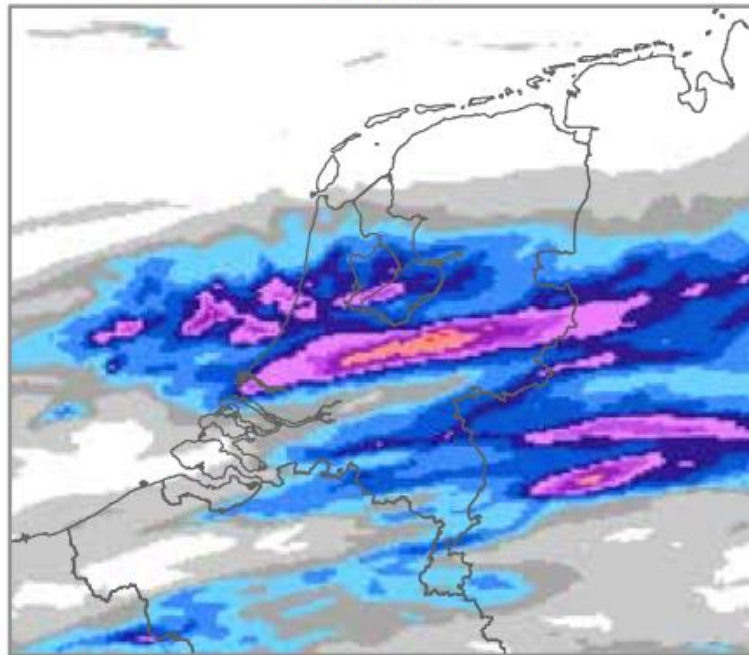
SMALL CHANGE IN AVERAGE BIG CHANGE IN EXTREMES



2010



Toekomst



mm

165 - 180

150 - 165

135 - 150

120 - 135

105 - 120

90 - 105

75 - 90

60 - 75

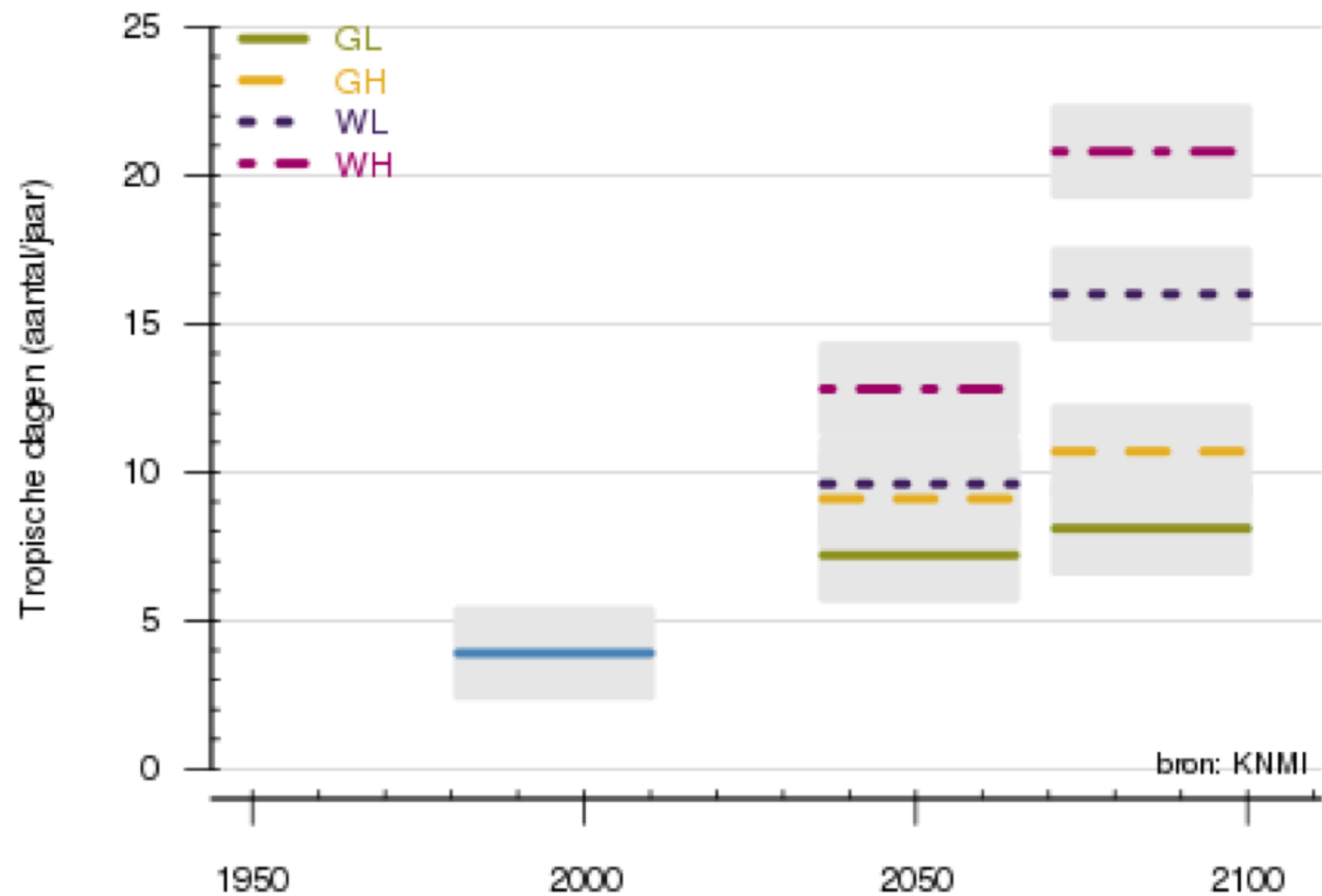
45 - 60

30 - 45

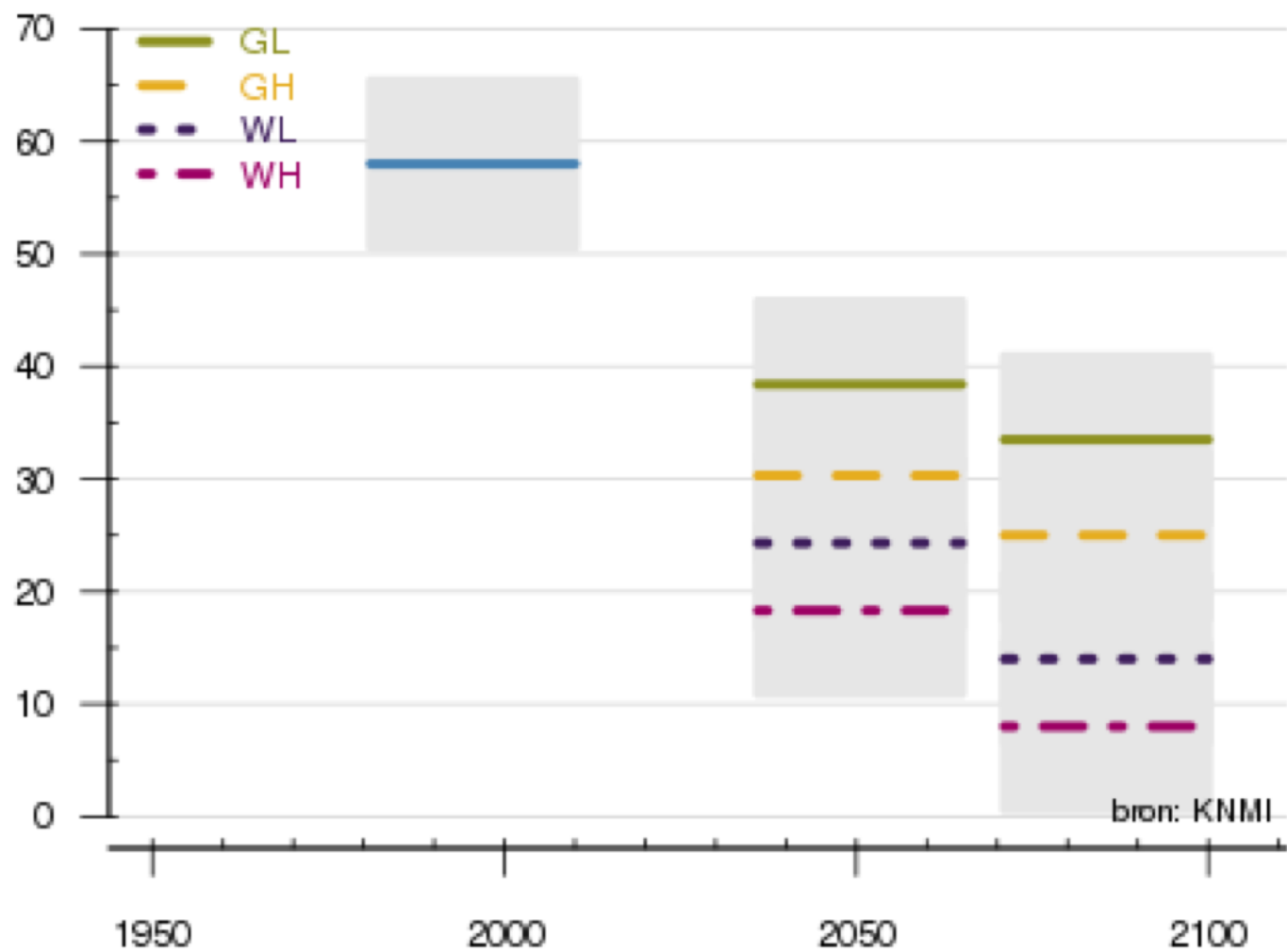
15 - 30

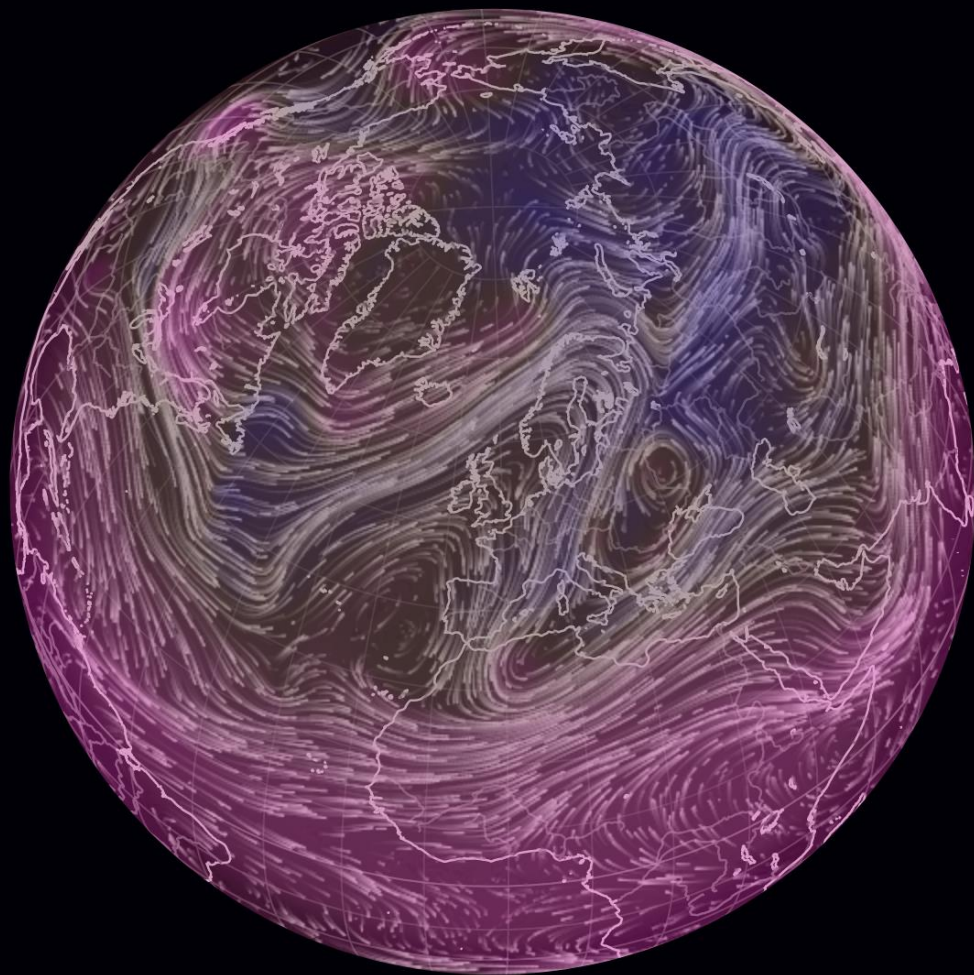
0 - 15

	Nu	2100
Dagen met regen	136	131
Meer dan 20 mm	5	8



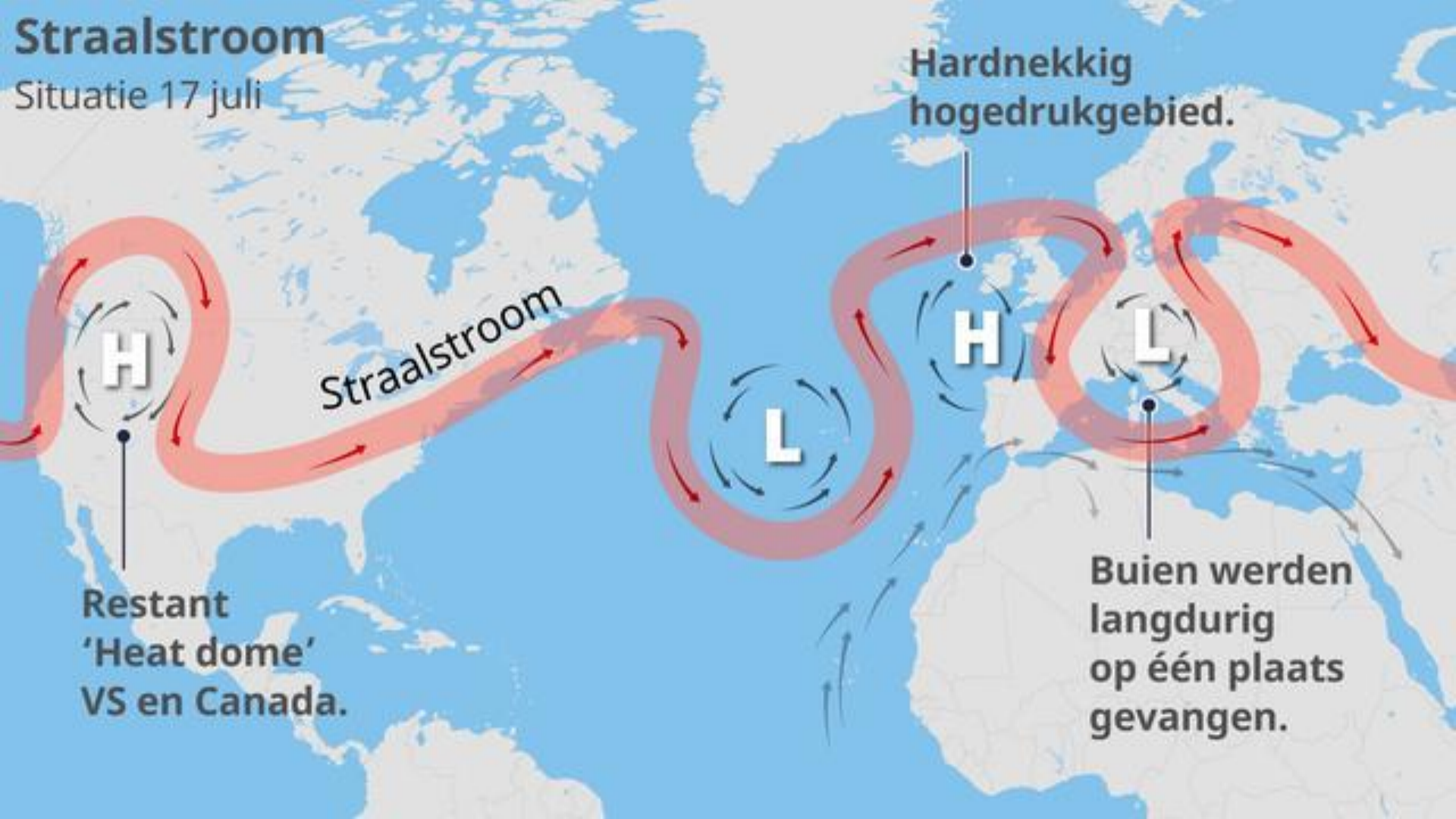
Vorstdagen (aantal/jaar)

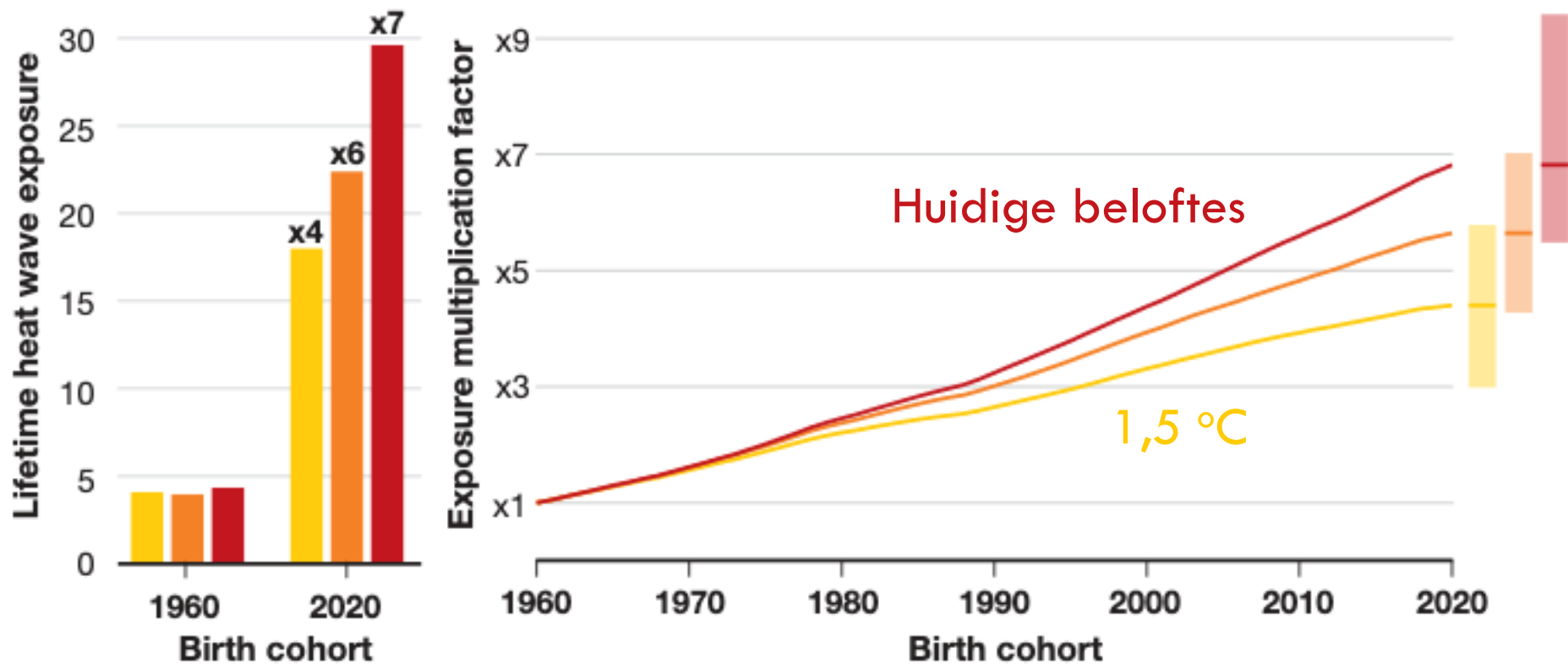




Straalstroom

Situatie 17 juli





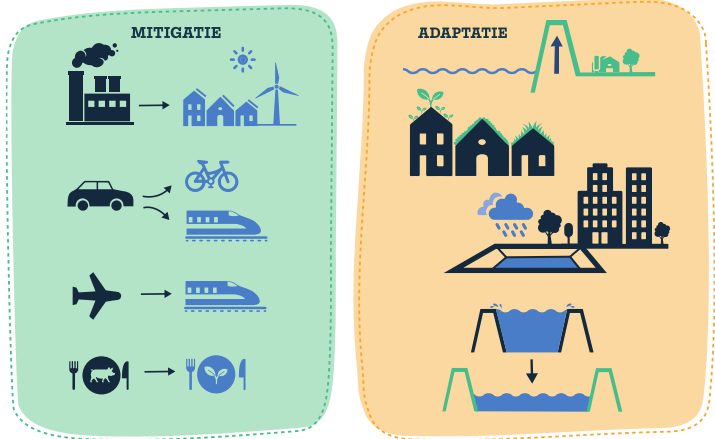
Kuipers Munneke: 'In Nederland is het verband tussen risico en huizenprijzen ontkoppeld. Het is bij ons eerder andersom: in de laaggelegen delen zijn de prijzen het hoogst. Maar er komt een moment dat dat niet meer opgaat. Dan wil opeens iedereen in het oosten wonen.'

WONEN

Wat klimaatverandering gaat doen met de huizenmarkt: 'Als je ver onder NAP bouwt, zeg er dan bij dat die huizen maar vijftig jaar meegaan'

Lancering Module 1 'Klimaatcrisis'

- Nieuwe geografische lesmethode
- Drie actuele modules + lessnacks
- Duurzaamheid centraal
- Onderbouw VO
- Gratis
- Kom naar de workshop of onze stand!
- www.tippingpointahead.nl



DE BOSATLAS VAN WEER EN KLIMAAT



Ministerie van Volksgezondheid,
Welzijn en Sport

Wereldverhalen

Extreem weer in een opwarmende wereld