



Vlaanderen
is zorgzaam samenleven

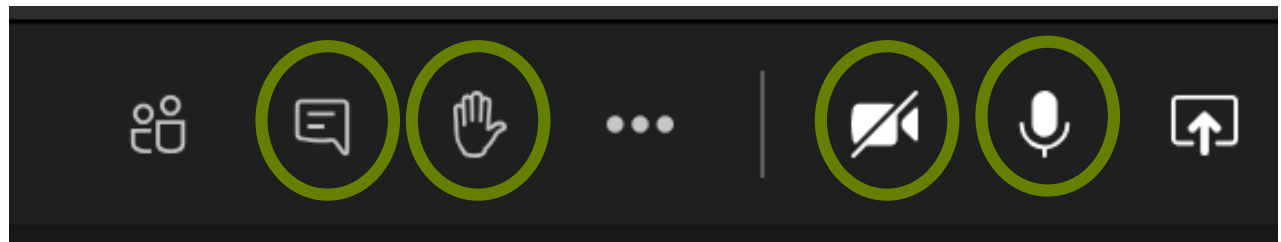
Zorg voor het klimaat

Duurzaam bouwen met VIPA



Digitale etiquette

- ▶ **Camera en microfoon uit tijdens de presentatie**
- ▶ **Vragen stellen = ok**
- ▶ **TIJDENS presentatie**
 - Via chatvenster
- ▶ **NA presentatie**
 - Via chat venster
 - Mondeling steek hand op
- ▶ **Vraag niet beantwoord**
 - Klimaat.vipa@vlaanderen.be
- ▶ **De webinar wordt opgenomen**



Programma 'ZORG Voor Klimaat'

•8 oktober

- 10.00u-10.45u: Kick Off.
- 11.00u-11.45u: Impact klimaatuitdaging op de welzijnssector

•12 oktober

- 10.00u-11.30u: Praktijkervaringen gratis energiescans en klimaatsubsidies
- 13.45u-14.45u: Europese en Vlaamse Klimaatdoelstellingen, subsidiemechanismen buiten VIPA en EPC NR

•14 oktober

- 10.00u-10.45u: Nulmeting
- 11.00u-11.45u: Raamcontracten
- 13.45u-14.30u: Burgercoöperatieven
- 14.45u-15.30u: Energieprestatiecontracten

•27 oktober

- 10.00u-10.45u: SustaCare
- 11.00u-11.45u: Klimaatvisieplan
- 13.45u-14.30u: ECG-matrix
- 14.45-15.30u: Welzijnsgroen

•29 oktober

- 10-10.45u: VIPA-criteria Duurzaamheid
- 11-11.45u: Green Deal ZORG



Impact klimaatuitdaging op de welzijnssector – 8 oktober



Lucie Blondé

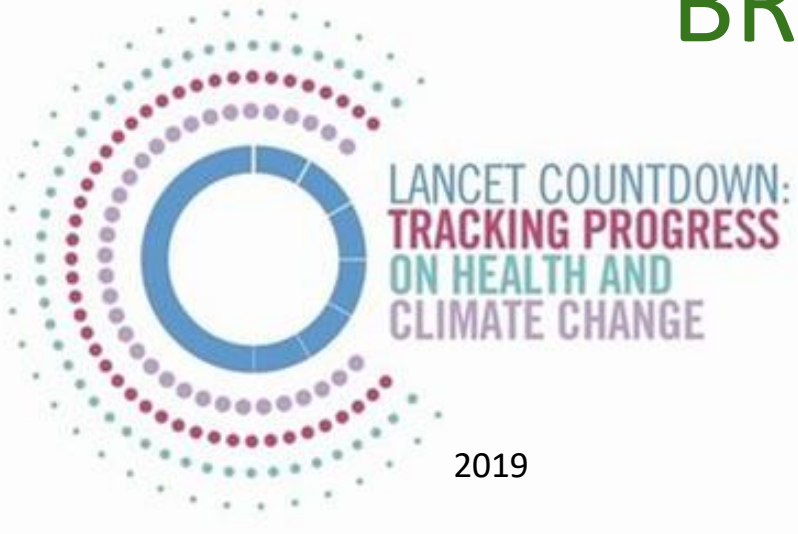
Tropenarts en woordvoerder van Doctors for Climate

A satellite view of Earth from space, showing the curvature of the planet and the blue atmosphere. The landmasses are visible in shades of brown and green, and the oceans are a deep blue. The text is overlaid on a semi-transparent hexagonal shape.

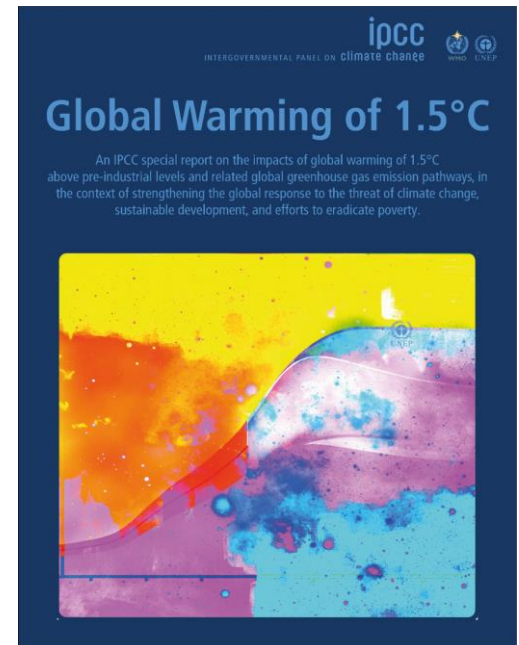
Climate Change - Challenges & Opportunities for Global Health

Lucie Blondé
2020

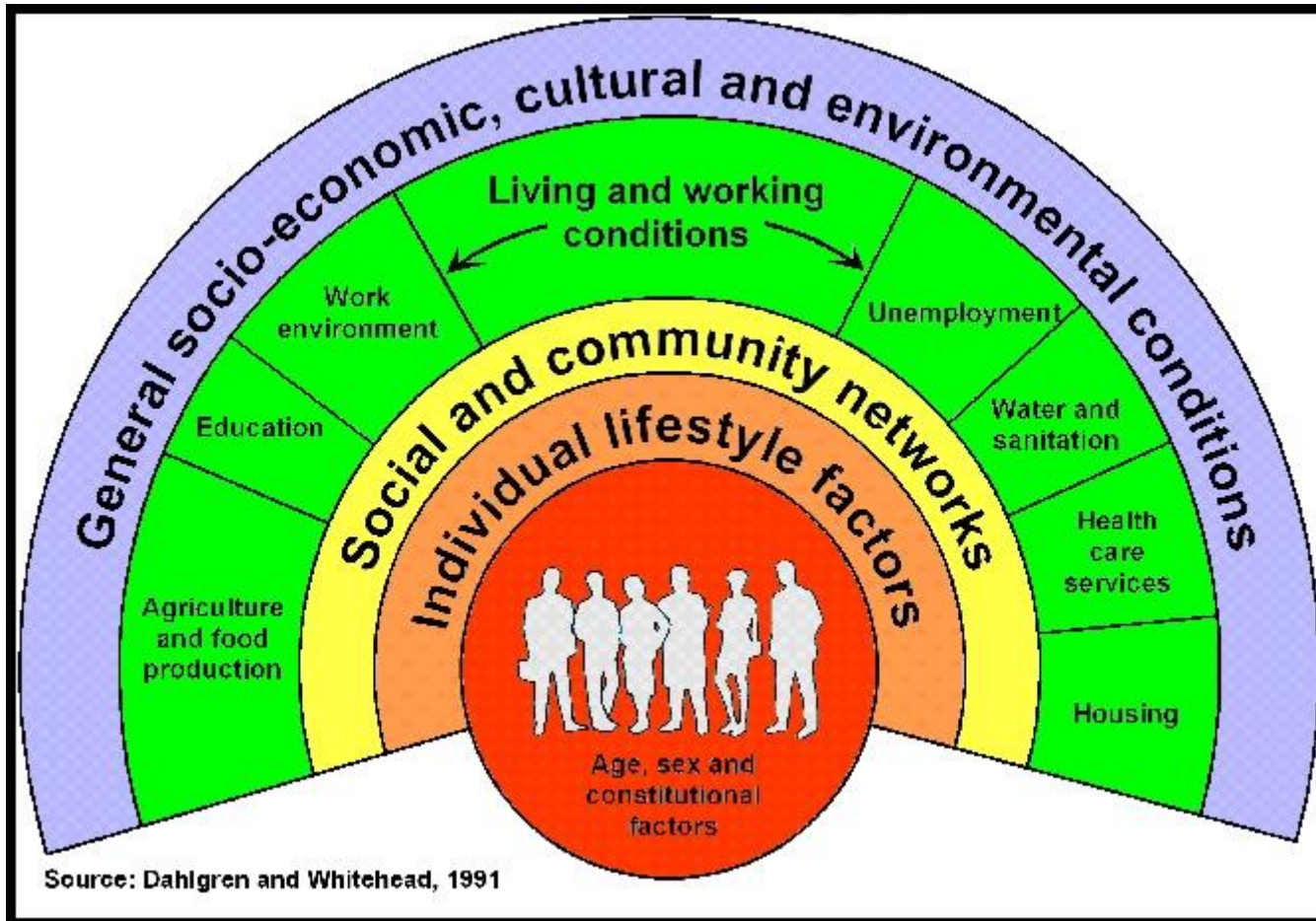
BRONNEN



**World Health
Organization**



INTRO



INTRO

These are the 10 biggest threats to global health in 2019

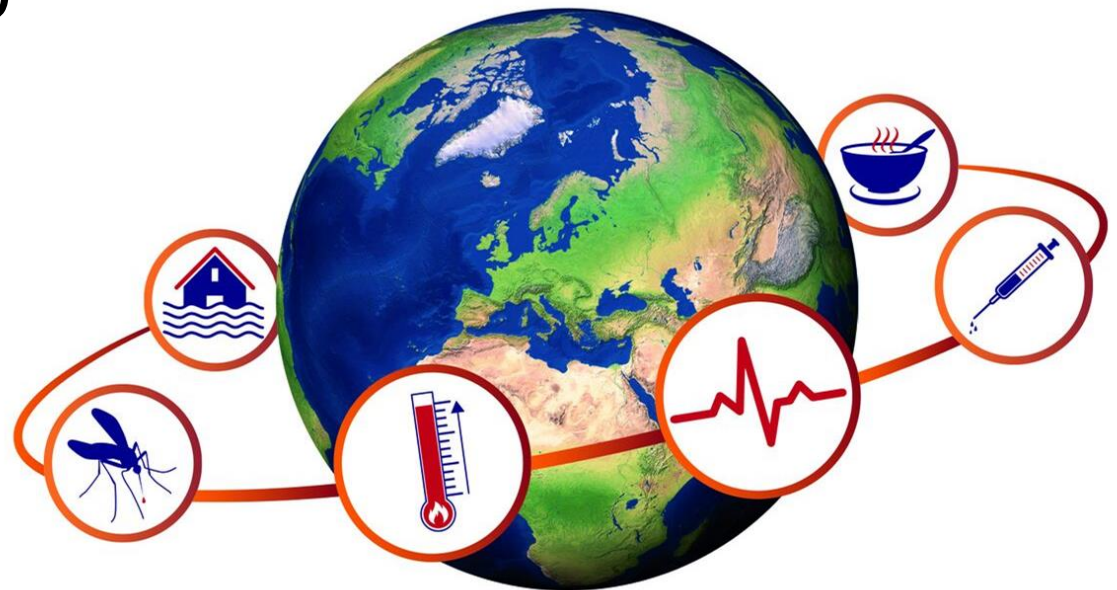
Based on rankings from the World Health Organization

1. Air pollution and climate change
2. Noncommunicable diseases
3. Global influenza pandemic
4. Fragile and vulnerable settings
5. Antimicrobial resistance
6. Ebola and other high-threat pathogens
7. Weak primary healthcare
8. Vaccine hesitancy
9. Dengue fever
10. HIV

Source: World Health Organization

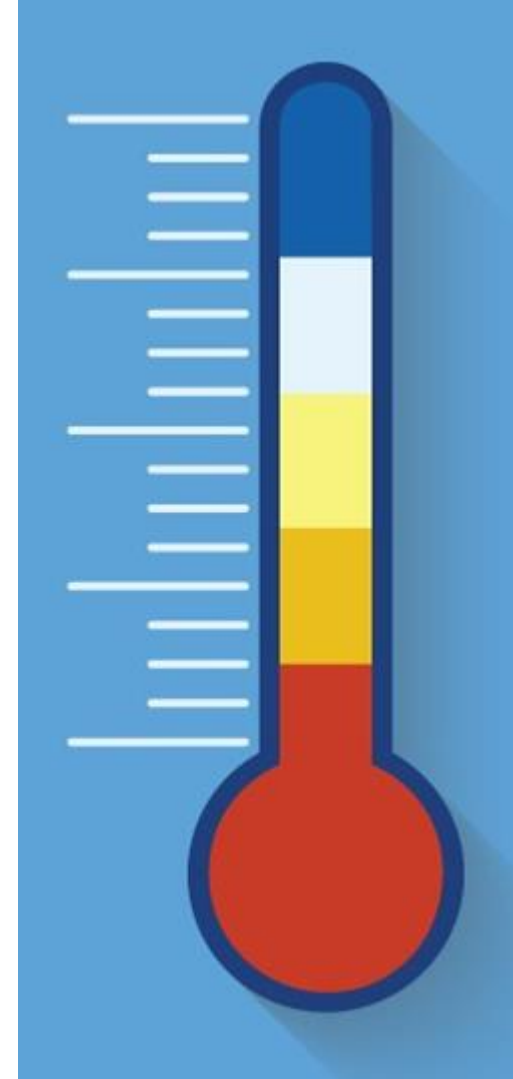
ENKELE CIJFERS

- WHO: **250,000 deaths/y** (2030-2050)
< climate change–related
- World Bank: climate change could force more than **100 million people** into extreme poverty by 2030

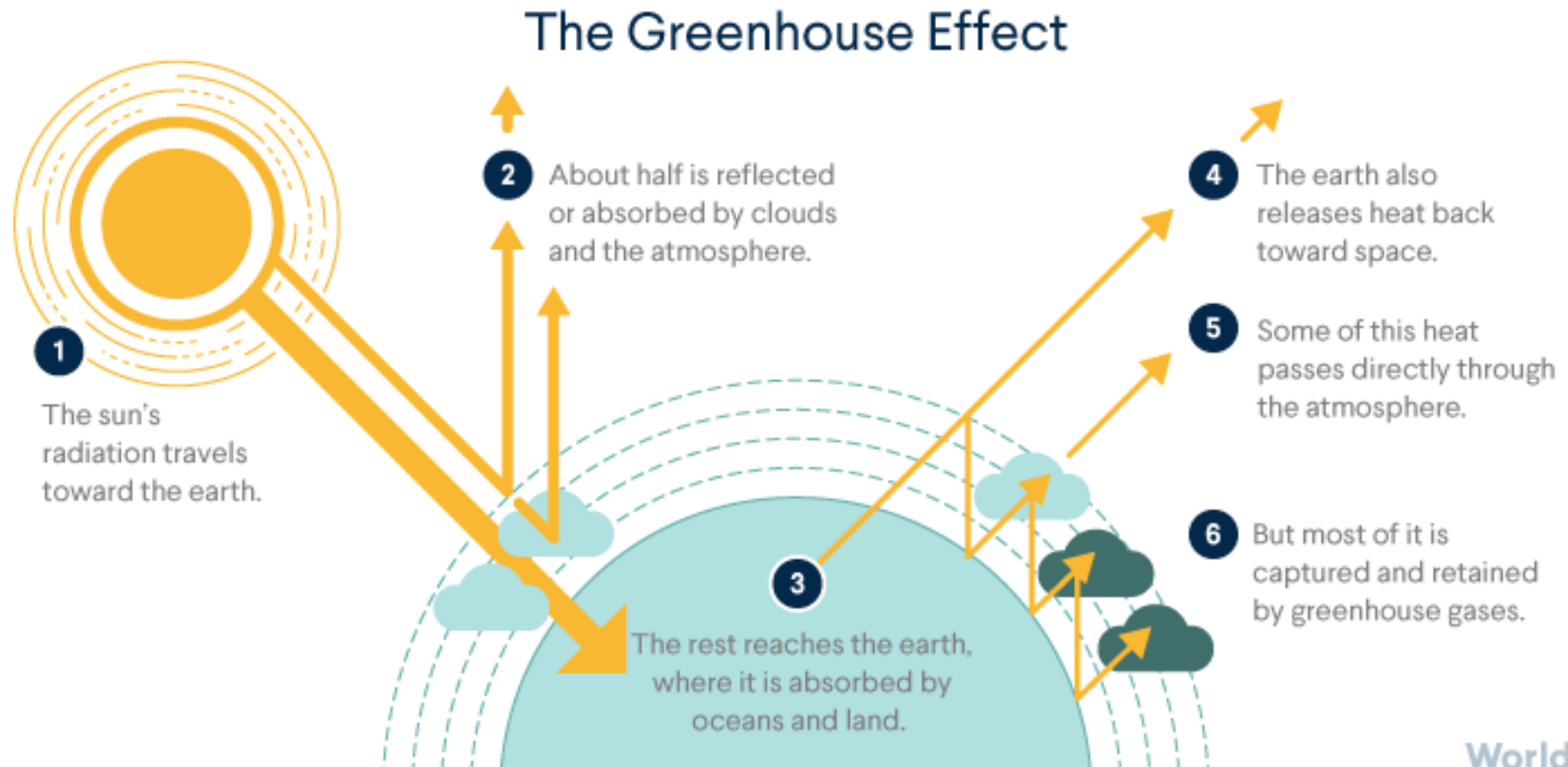


Temperature Check ...

1. Wat zou de **temperatuur** van de aarde zijn *zonder* het broeikaseffect?
1. Wat was de *gemiddelde* temperatuur van het aardoppervlak gedurende de laatste 1000 jaar?
1. Hoeveel is de temperatuur *reeds* gestegen sinds 1850 (industriële revolutie)?
1. Welke temperatuurstijging is '*the safe limit*' voor de mensheid?



VRAAG 1: Wat zou de **temperatuur** van de aarde zijn *zonder* het broeikaseffect?

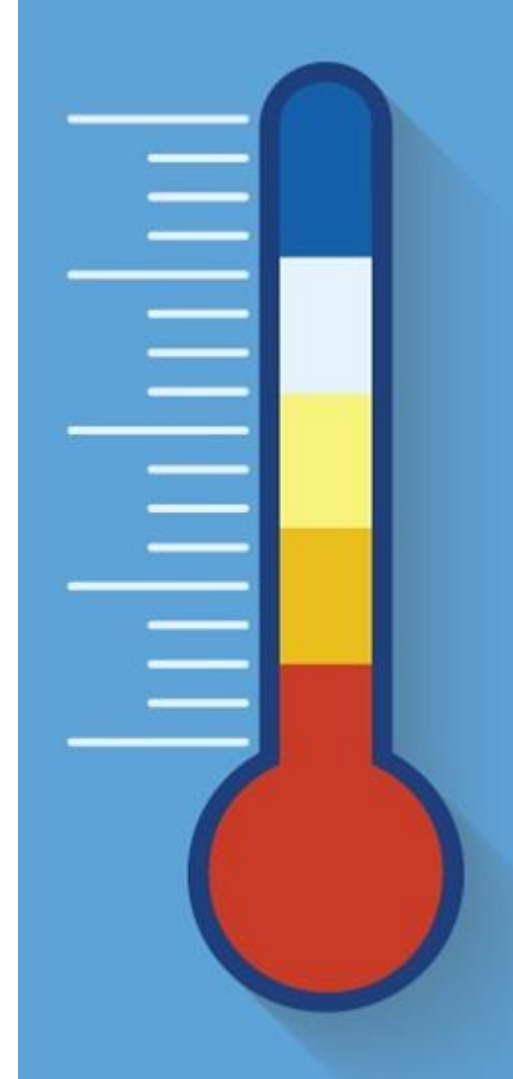


World101

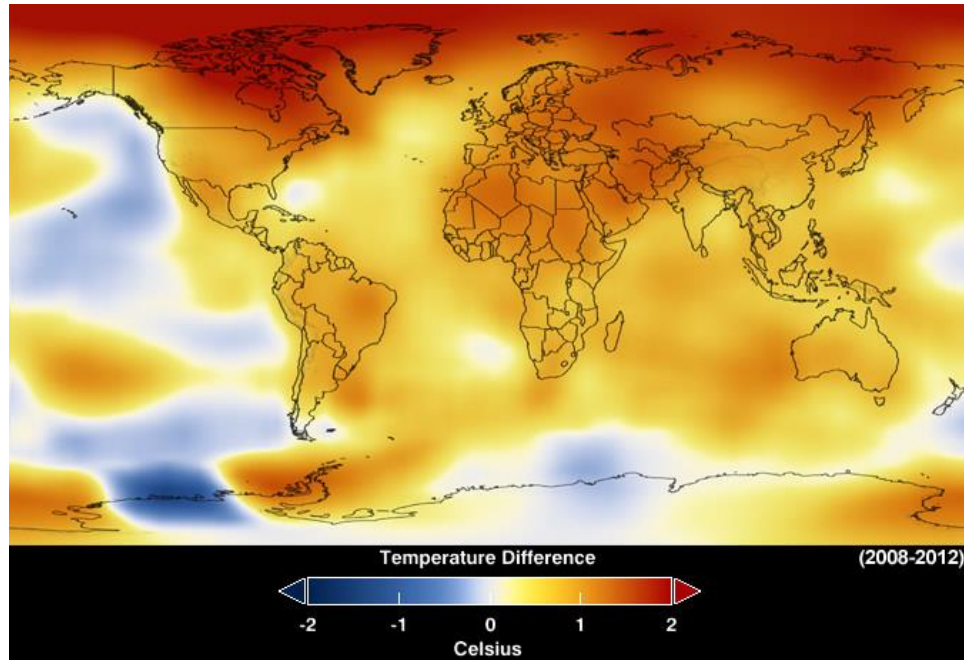
Zonder de natuurlijke broeikasgassen zou de gemiddelde temperatuur op aarde ongeveer 0°F of -18°C bedragen

Temperature Check ...

1. Wat zou de temperatuur van de aarde zijn *zonder* het broeikaseffect?
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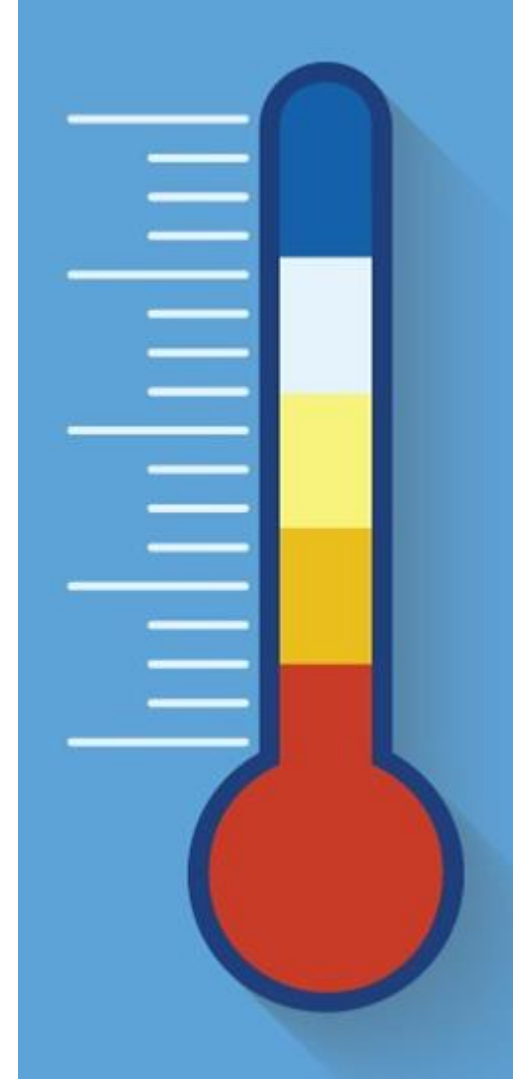
VRAAG 2: Wat was de *gemiddelde* **temperatuur** van het aardoppervlak gedurende de laatste duizenden jaren?



59°F of 15°C

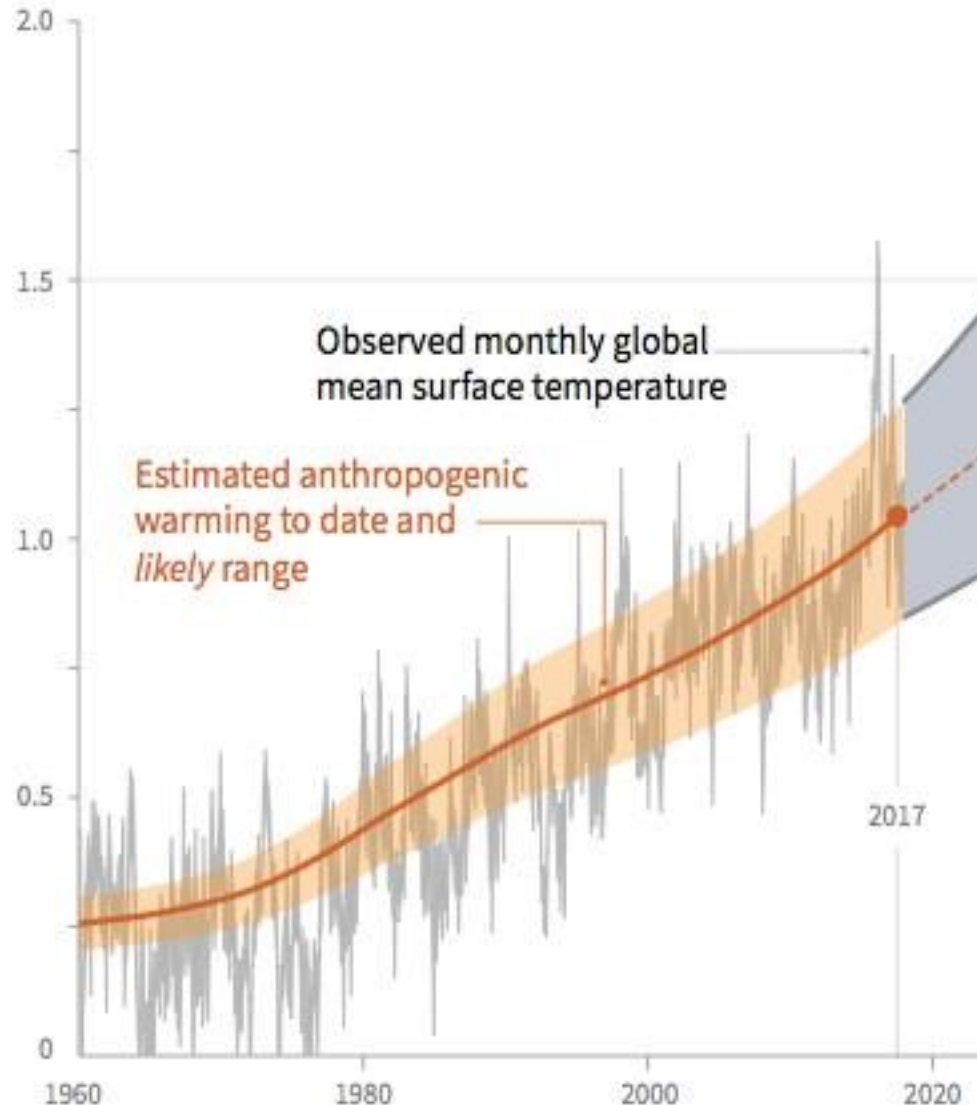
Temperature Check ...

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VRAAG 3: Hoeveel is de **temperatuur** reeds gestegen sinds 1850 (industriële revolutie)?

Global warming relative to 1850-1900 (°C)



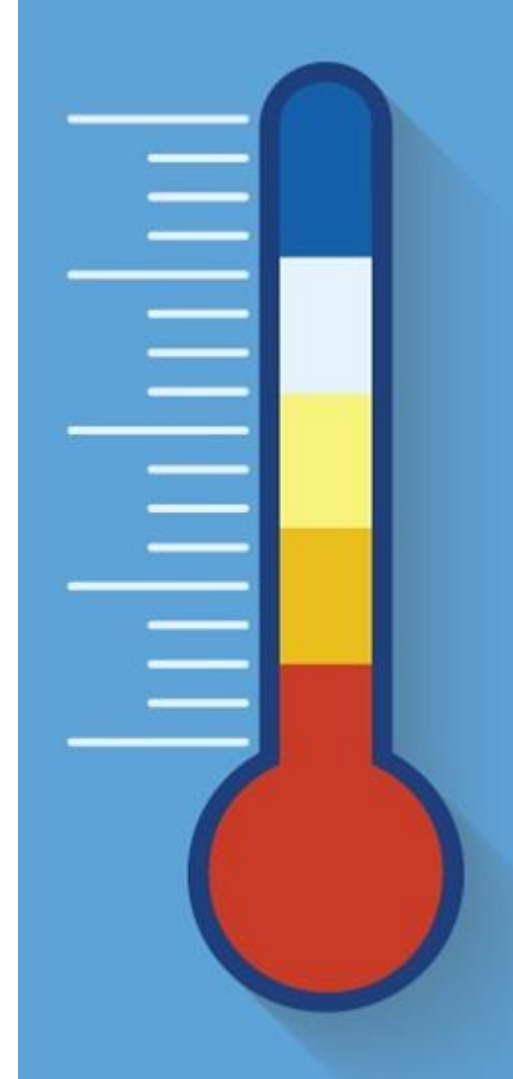
IPCC – Special report 1,5°C

A1. Human activities are estimated to have caused **approximately 1.0°C of global warming** above pre-industrial levels, with a *likely* range of 0.8°C to 1.2°C.

Global warming is *likely* to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate. (high *confidence*) {1.2, Figure SPM.1}

Temperature Check ...

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United Nations
Framework Convention on
Climate Change



PARIS2015
UN CLIMATE CHANGE CONFERENCE
COP21·CMP11

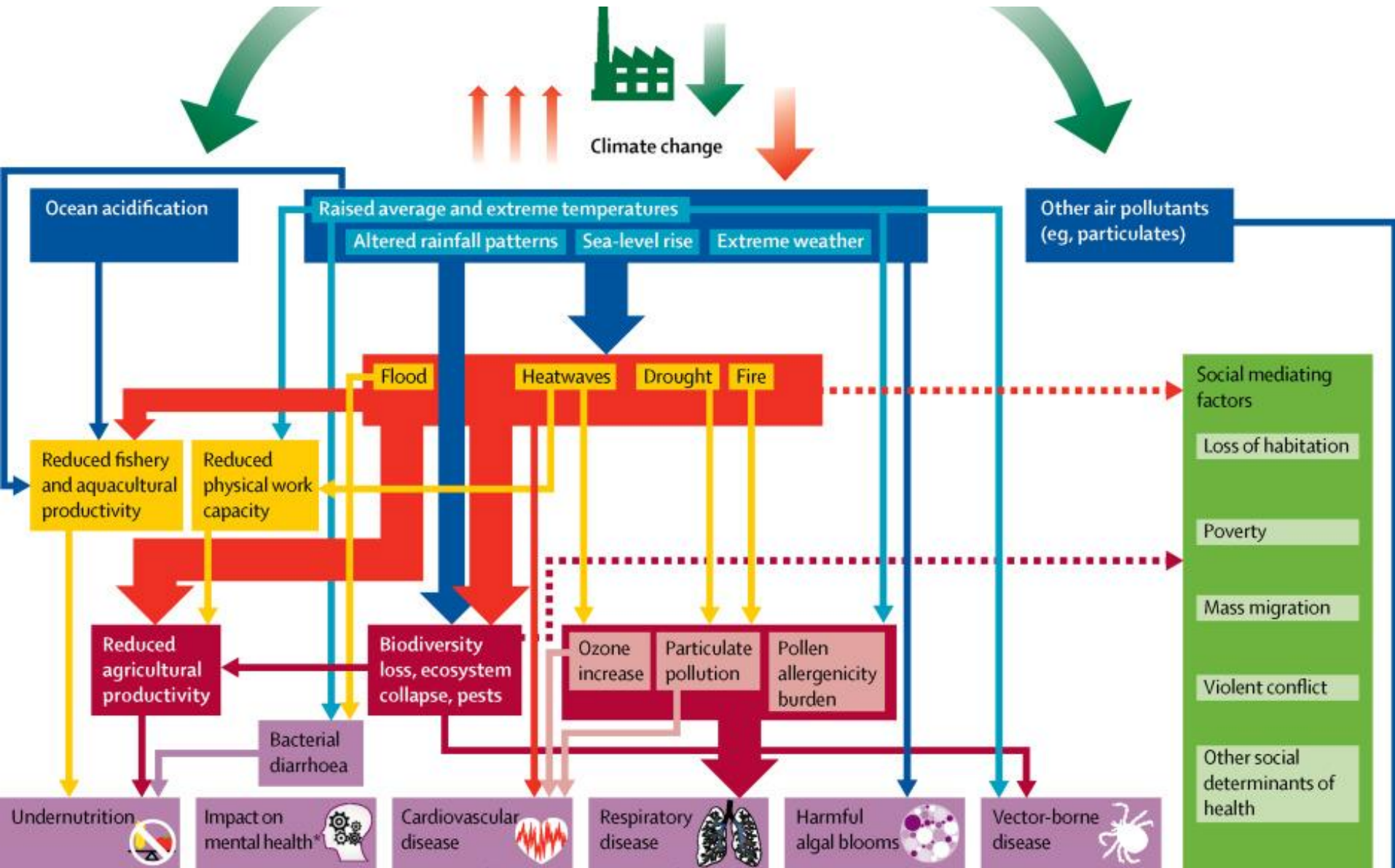
Art. 2 “Holding the increase in the global average temperature to **well below 2°C** above pre-industrial levels and to **pursue efforts** to limit the temperature increase to **1,5°C** above pre-industrial levels”

TWO DEGREES CELSIUS COULD DECIDE OUR FATE

AGENDA

- A. Gezondheid en klimaat
- B. Klimaatverandering en ongelijkheid
- C. Gezondheidsvoordelen van een koolstofarme samenleving
- D. Conclusies
- E. Actie

A. GEZONDHEID EN KLIMAAT



An aerial photograph of a residential neighborhood completely inundated with brown floodwater. The houses, mostly brick and white, are surrounded by water, with some roofs visible above the surface. A large, semi-transparent white hexagonal shape is overlaid on the center of the image, containing the text '1. Extreme weersomstandigheden'.

1. Extreme weersomstandigheden

Extreme weersomstandigheden

Impact op de gezondheid?

1. Verwondingen en overlijdens
2. Mentale gezondheidsproblemen
3. Contaminatie van water!!
4. Schade aan de infrastructuur (ziekenhuizen)
5. Schade aan de oogsten
6. Migratie en conflicten

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Cholera Vaccination Campaign Begins in Mozambique

Following Cyclone Idai devastation, nearly 900,000 people will receive the vaccine from the Gavi-funded stockpile.

GENEVA/BEIRA, 3 April 2019 – An oral cholera vaccination campaign to protect survivors of Cyclone Idai begins today in Beira, Mozambique. Funded by Gavi, the Vaccine Alliance, the campaign will be carried out by the Mozambique Ministry of Health, with support from the World Health Organization (WHO) and other partners, including UNICEF, the International Federation of the Red Cross and Red Crescent Societies (IFRC), Médecins Sans Frontières (MSF) and Save the Children.

There has already been one reported cholera death and almost 1,500 reported cases following the cyclone, which caused severe flooding in Mozambique, Zimbabwe, Malawi and Madagascar after making landfall in March. Nine cholera treatment centres, with 500-bed capacity, are already admitting patients.

“Cyclone Idai’s trail of devastation has left the city of Beira’s water and sanitation infrastructure in ruins, providing the perfect conditions for cholera to spread,” said Gavi CEO, Dr Seth Berkley. “This cyclone has already caused enough devastation and misery across south east Africa; we have to hope these vaccines will help stop a potentially major outbreak and prevent yet more suffering.”

A photograph of a multi-lane highway filled with cars, taken from an elevated perspective. The scene is bathed in the warm, golden light of a sunset or sunrise, with the sun low on the horizon behind a line of trees. A large, semi-transparent hexagonal shape is superimposed over the center of the image. Inside this hexagon, the text '2. Hitze stress' is written in a clean, white, sans-serif font. In the background, a highway sign is visible, indicating 'Haskell Ave' and '2 MILES' ahead. The overall atmosphere is one of a busy, hot day.

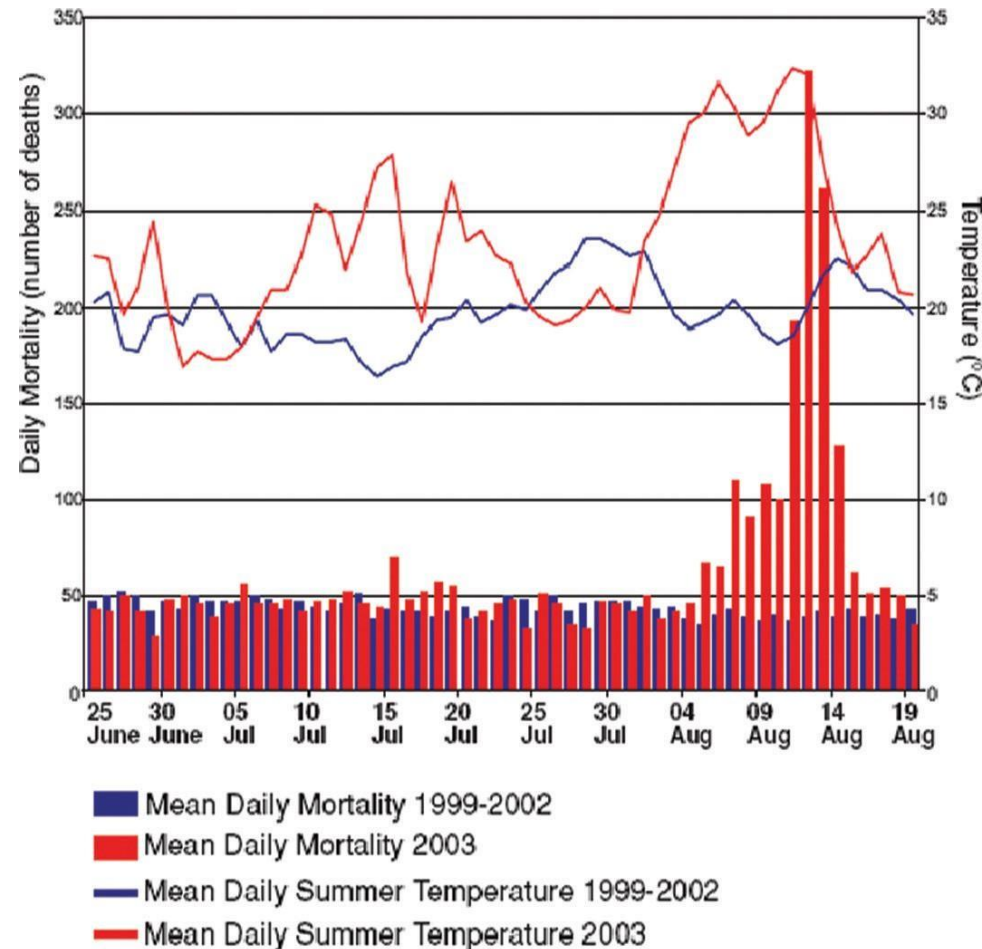
2. Hitze stress

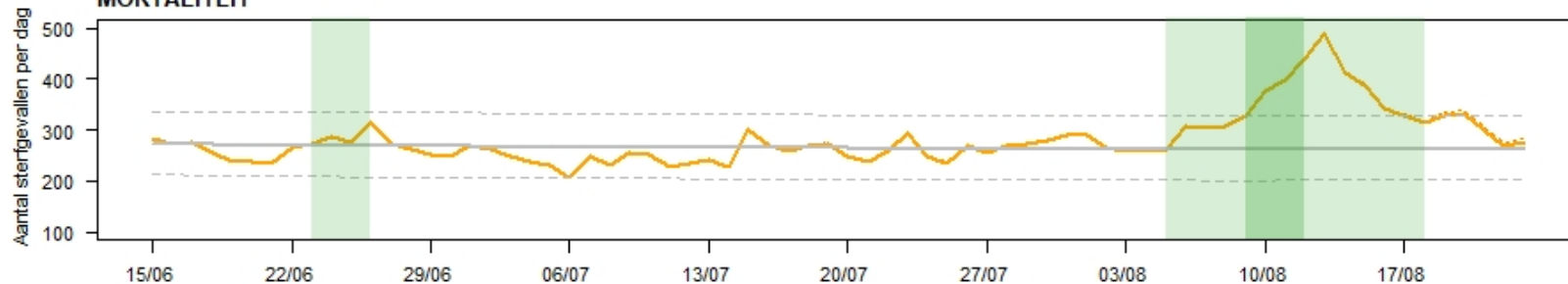
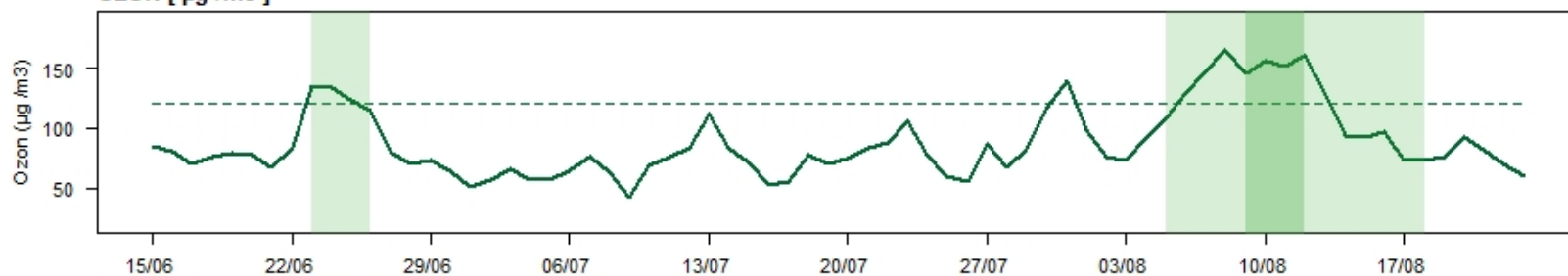
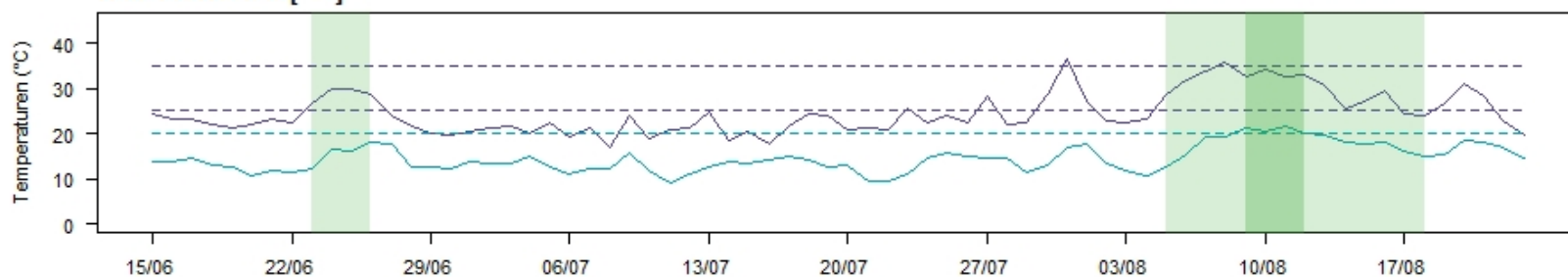
Hitte stress – Impact op de gezondheid?













- directe hittestress/stroke
- deterioratie van hartfalen
- deterioratie van CNI (dehydratie)

2003 Europese hittegolf

- 70,000 oversterfte



MORTALITEIT

OZON [$\mu\text{g} / \text{m}^3$]

TEMPERATUREN [$^{\circ}\text{C}$]


- | | | |
|--|--|---|
|  Aantal waargenomen sterfgevallen |  Ozon (belgisch gemiddelde) |  Minimale temperatuur (Ukkel) |
|  Aantal gecorrigeerd sterfgevallen |  Ozon : drempel 120 $\mu\text{g} / \text{m}^3$ |  Tmin drempel 20 $^{\circ}\text{C}$ |
|  Aantal verwachte sterfgevallen |  Maximale temperatuur (Ukkel) |  Hitte |
|  Voorspellingsinterval (boven- en ondergrens) |  Tmax drempel 25 $^{\circ}\text{C}$ & 35 $^{\circ}\text{C}$ |  Extreme hitte (Tmin > 20 $^{\circ}\text{C}$) |

The image is a composite. The top half shows a city skyline with several tall skyscrapers under a clear blue sky. The bottom half shows a young boy in a white short-sleeved shirt and blue shorts, standing in a hazy, smoggy environment. A large, dark grey hexagonal shape is overlaid on the right side of the image, containing the text '3. Lucht Kwaliteit' in white. The text is split across two lines: '3. Lucht' on the top line and 'Kwaliteit' on the bottom line.

3. Lucht Kwaliteit

Luchtvervuiling – Impact op de gezondheid?

THE **INVISIBLE KILLER**

Air pollution may not always be visible, but it can be deadly.



29%

OF DEATHS FROM
LUNG CANCER



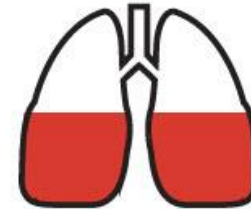
24%

OF DEATHS FROM
STROKE



25%

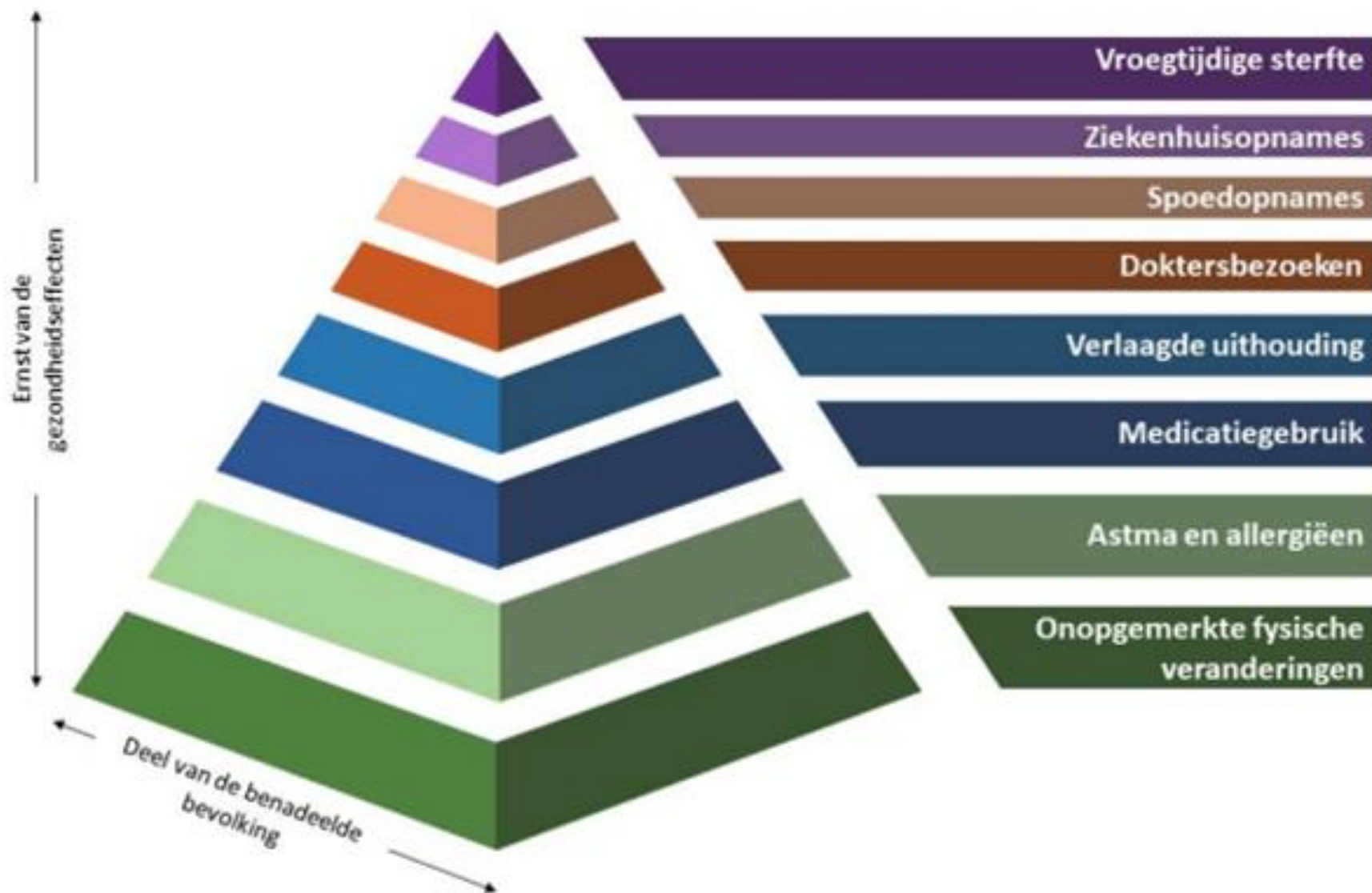
OF DEATHS FROM
HEART DISEASE



43%

OF DEATHS FROM
LUNG DISEASE

Figuur 1.11: Piramide van gezondheidseffecten door luchtvervuiling (Kunzli et al)⁴



BURDEN OF DISEASE

....

erg
onderschat!

AIR POLLUTION – THE SILENT KILLER



Air pollution is a major environmental risk to health. By reducing air pollution levels, countries can reduce:



Stroke



Heart disease



Lung cancer, and both chronic and acute respiratory diseases, including asthma

REGIONAL ESTIMATES ACCORDING TO WHO REGIONAL GROUPINGS:



- Over 2 million** in South-East Asia Region
- Over 2 million** in Western Pacific Region
- Nearly 1 million** in Africa Region
- About 500 000** deaths in Eastern Mediterranean Region
- About 500 000** deaths in European Region
- More than 300 000** in the Region of the Americas

CLEAN AIR FOR HEALTH

#AirPollution





- **Industrie en energiesector** nog steeds grootste uitstoters; hun aandeel daalt echter tov de uitstoot door **huishoudens**. Uitstoot van **transport** blijft constant.
- **Luchtkwaliteit** verbetert, met een daling van fijn stof, zwaveldioxide en zware metalen. De luchtkwaliteit is beter dan een tiental jaar terug. NO₂ is amper gedaald en haalt de Europese jaargrenswaarde niet.

- **De huidige luchtvervuiling heeft echter nog steeds belangrijke negatieve effecten op de gezondheid in België**



BURDEN OF DISEASE

Voor PM_{2,5} wordt dit geschat op zo'n 4.100 en voor ozon op een 100-tal. Voor NO₂ bedroeg dit, afhankelijk van de gehanteerde dosis-respons functie en drempel, 2.100 tot 4.400 personen.

Cijfers uit 2017

Blauwalg
contact met water
vermijden!

4. Water kwaliteit/ kwantiteit

Slechte waterkwaliteit - Impact op de gezondheid?

1. Verhoogde watertemperaturen

- afnemende waterkwaliteit
- diarree en andere ziekten

2. Stijgende zeespiegel + overstromingen

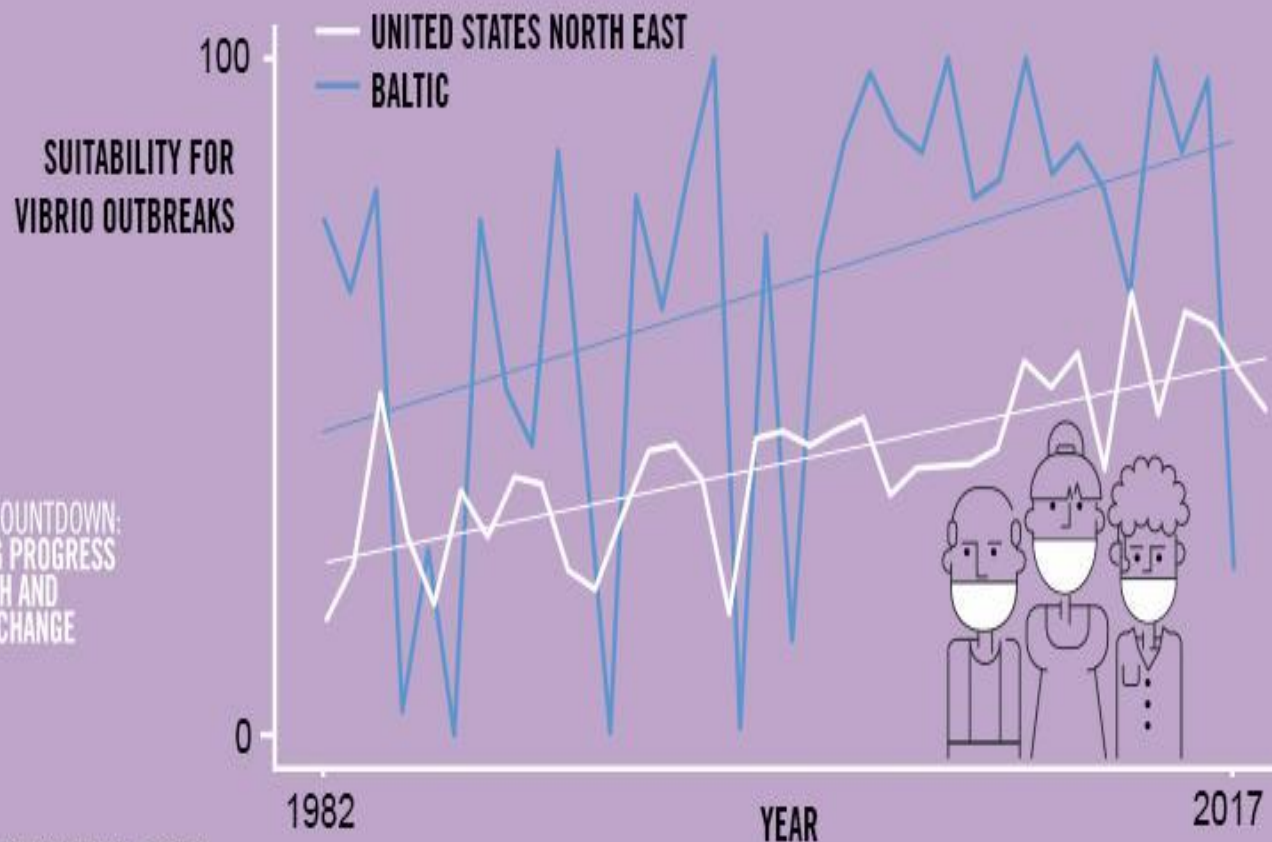
- verzilting v zoet water en grondwater
- effect op gewassen + gezondheid

3. Zware neerslag/Slechte waterafvoer

- verhoogde blootstelling ziekteverwekkers
- habitat voor muggen



Coastal areas of the Baltic and the US Northeast are now over 25% more suitable for the pathogen that transmits cholera than they were in the 1980s



LANCET COUNTDOWN:
TRACKING PROGRESS
ON HEALTH AND
CLIMATE CHANGE

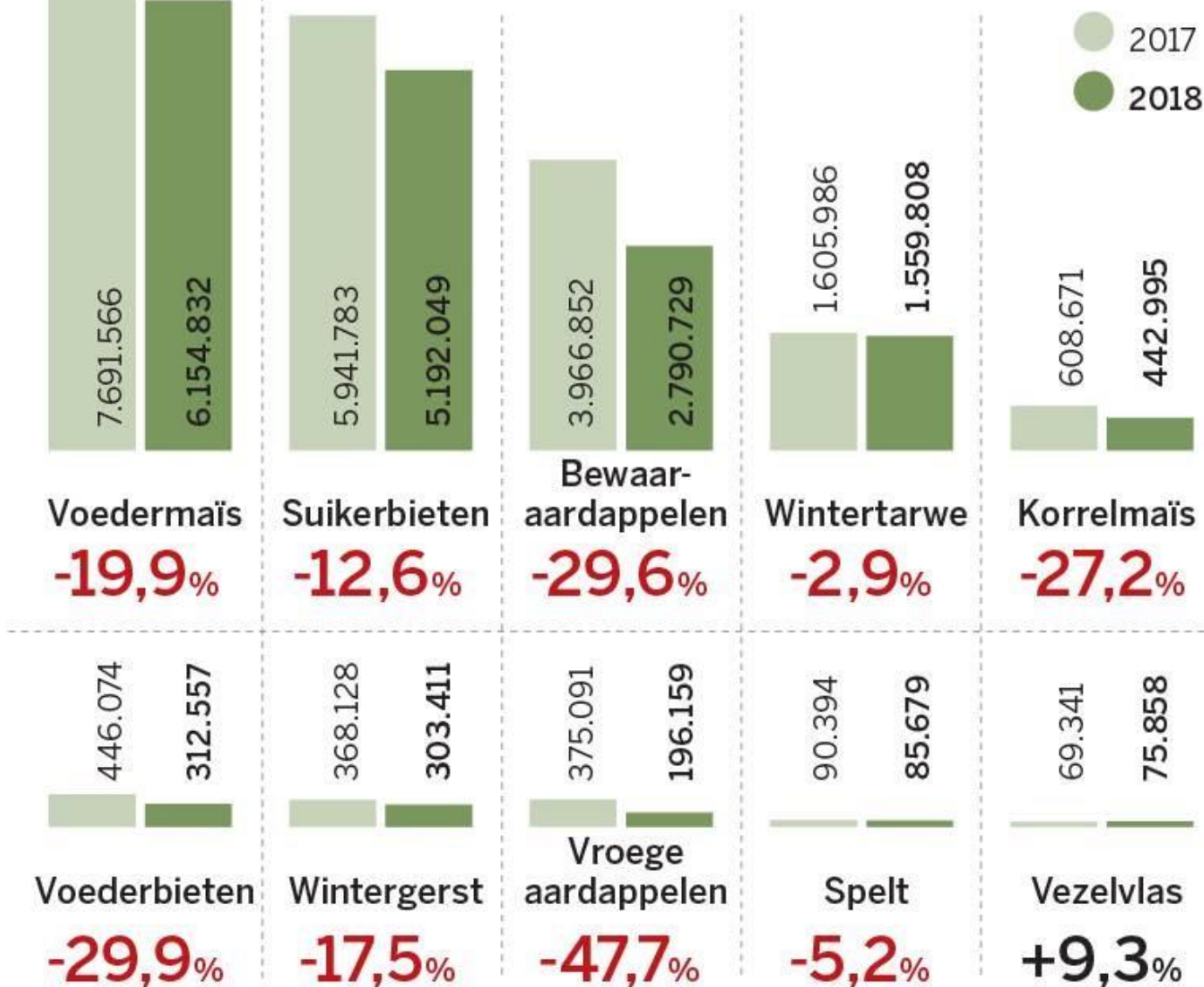
WaterkwaNtiteit

Bijna $\frac{1}{3}$ van het wereldoppervlak loopt risico op droogte/desertificatie tegen 2100



Top-10 landbouwteelten in België

Opbrengst in 2018, in ton, vergelijking met 2017





**5. Voedsel
voorziening-
en
veiligheid**

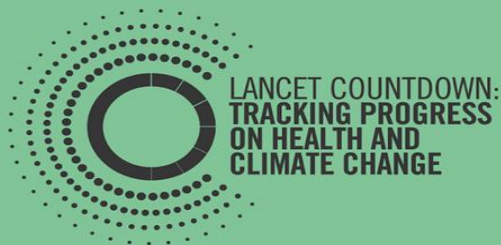
Slechte voedselvoorziening - Impact op de gezondheid?

- Ondervoeding en malnutritie
- < Lagere landbouwopbrengsten
- Aantal voedselnoodsituaties/jaar sinds 1980: 15 →> 30 (UN WFP)
- De helft van de wereldbevolking kan tegen 2100 te maken krijgen met ernstige voedseltekorten





Food security is under threat.
The crop yield potential of all major crops tracked has fallen as temperatures have risen.



Lyme

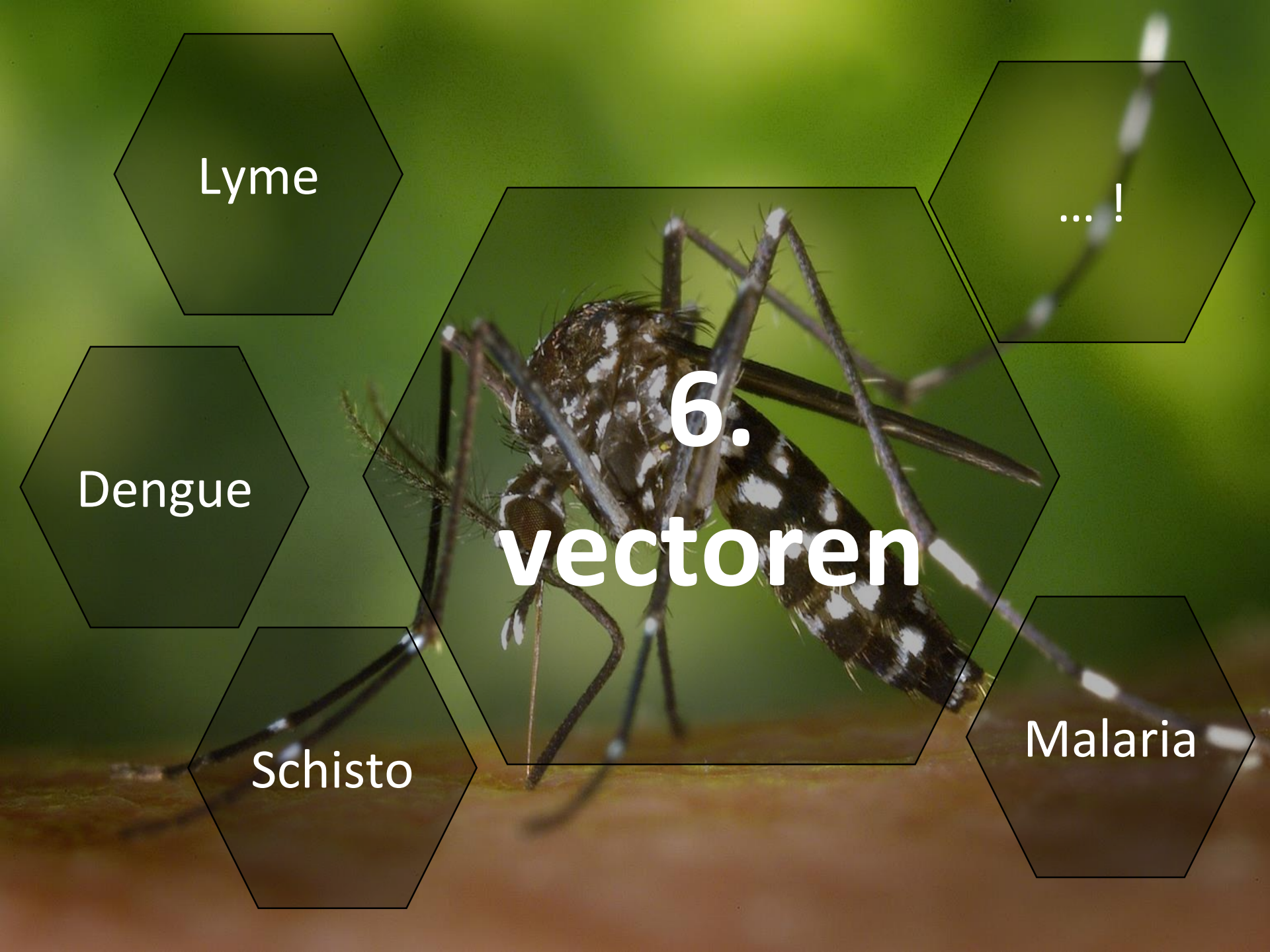
...!

Dengue

6. vectoren

Schisto

Malaria



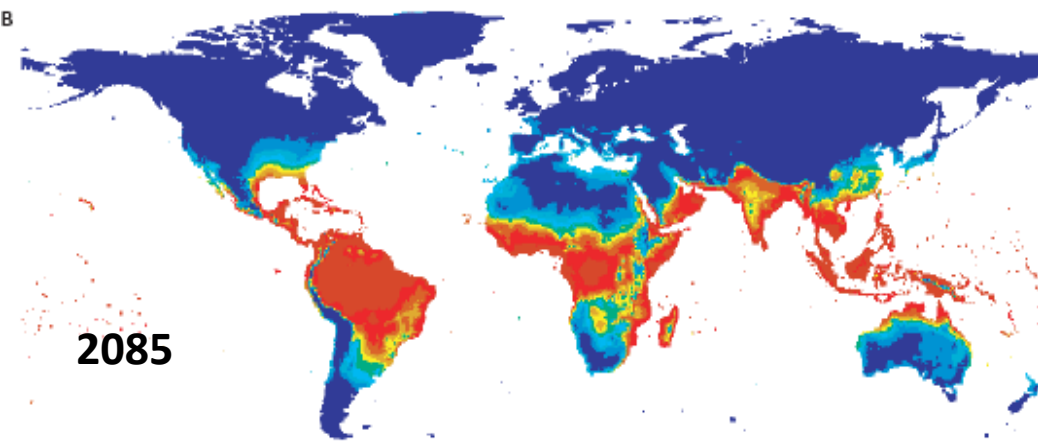
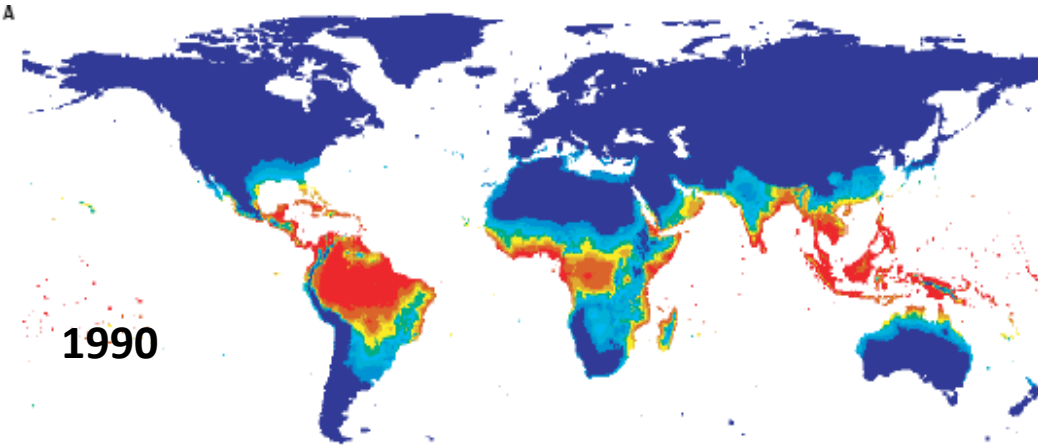
Dengue fever

Vooral in stedelijke gebieden door slechte wateropslag

Zware regenval en stijgende temperaturen doen de infectieratio stijgen

-> Transmissie is sinds 1950 al gestegen met 9,4% en met 11,1% voor A. Aegypti en A. Albopictus
Het jaarlijkse aantal gevallen is sinds 1990 elk decennium verdubbeld

In 2085 zouden 5-6 miljard mensen het risico lopen op dengue, vergeleken met 3,5 miljard bij ongewijzigd klimaat.



Hales, de Wet, Maindonald, Woodward, *The Lancet*, 2002, 360:830

7. Conflict Migratie



Quantifying the Influence of Climate on Human Conflict

Solomon M. Hsiang^{1,2,*,†,‡}, Marshall Burke^{3,†}, Edward Miguel^{2,4}

✦ See all authors and affiliations

Science 13 Sep 2013:

Vol. 341, Issue 6151, 1235367

DOI: 10.1126/science.1235367

Abstract

A rapidly growing body of research examines whether human conflict can be affected by climatic changes. Drawing from archaeology, criminology, economics, geography, history, political science, and psychology, we assemble and analyze the 60 most rigorous quantitative studies and document, for the first time, a striking convergence of results. We find strong causal evidence linking climatic events to human conflict across a range of spatial and temporal scales and across all major regions of the world. The magnitude of climate's influence is substantial: for each one standard deviation (1σ) change in climate toward warmer temperatures or more extreme rainfall, median estimates indicate that the frequency of interpersonal violence rises 4% and the frequency of intergroup conflict rises 14%. Because locations throughout the inhabited world are expected to warm 2σ to 4σ by 2050, amplified rates of human conflict could represent a large and critical impact of anthropogenic climate change.

The [Global Compact on Refugees](#), adopted by an overwhelming majority in the UN General Assembly in December 2018 recognizes that ‘climate change, environmental degradation and natural disasters increasingly interact with the drivers of refugee movements.’ (UNHCR)

31.1 million displaced people in 2016 – of which 76% consequence of weather events (UNHCR)

Table 1: Locations from which populations are migrating now only because of climate change

	Population size	Notes on causes of migration
Carteret Islands, Papua New Guinea	1200 people	Migrating due to <u>sea-level rise</u> ²⁸
Alaska*	3512 people	Changing ice conditions leading to coastal erosion and due to permafrost melt, destabilising infrastructure ^{9,10}
Isle de Jean Charles, LO, USA	25 homes	Coastal erosion, wetland loss, reduced accretion, barrier island erosion, subsidence, and saltwater intrusion were caused by dredging, dikes, levees, controlling the Mississippi River, and agricultural practices; climate change is now bringing sea-level rise

B. Klimaatverandering en ongelijkheid





EXPOSED

Energy Poverty in Europe

www.coldathome.today/exposed

1 NO POVERTY

13 CLIMATE ACTION

7 AFFORDABLE AND CLEAN ENERGY

3 GOOD HEALTH AND WELL-BEING



C. Gezondheidsvoordelen van een koolstofarme samenleving

THE LANCET



THREAT

OPPORTUNITY



“Tackling climate change could be the greatest global health opportunity of the 21st century” - June 2015

Voldoen aan de doelstellingen van het akkoord van Parijs: **1 miljoen levens/jaar redden tegen 2050**; (alleen door luchtverontreiniging te houden!)

Gezondheidswinst: ca. 2x de kosten van het beleid

Grootste winst: China en India.

De gezondheidswinst zou ook de kosten in andere regio's doen dalen: Europese Unie (17-84% daling) en VS (10-41% daling)



Table 1 Health gains of selected climate change mitigation activities

Mitigation activity	Certainty of major effect on short-lived climate pollutants	Aggregate level of potential health benefit	Main health benefits Direct benefits Indirect benefits Ancillary benefits for health	Potential level of reduction in CO ₂
TRANSPORT				
Support for active (and rapid mass) transport	High	High	Improved air quality Less crop damage and extreme weather Increased physical activity Reduced noise Fewer road traffic injuries	High
Support for active (and rapid mass) transport	High	High	Improved air quality Less crop damage and extreme weather Increased physical activity Reduced noise Fewer road traffic injuries	None
Ultra-low-sulfur diesel with diesel particle filters	Medium-high	Medium	Improved air quality Less crop damage and extreme weather	None
Higher standards for vehicle emissions and efficiency	High	Medium-high	Improved air quality Less crop damage and extreme weather	High
AGRICULTURE				
Alternate wet and dry rice irrigation	Medium-high	Low-medium	Less crop damage and extreme weather Reduced vector-borne disease	Low
Improved manure management	Low-medium	Low-medium	Reduced zoonotic disease	Low
	Medium	Medium	Improved indoor air quality	

Reduced open burning of agricultural fields	Medium	Low-medium	Improved air quality Less crop damage and extreme weather	Low
Promotion of healthy diets low in red meat and processed meats and rich in plant-based foods	High	High	Less crop damage and extreme weather Reduced obesity and diet-related non-communicable diseases	Medium-high
Reduced food waste	Medium-high	Low-medium	Less crop damage and extreme weather Reduced food insecurity/undernutrition	Medium-high
HOUSEHOLD AIR POLLUTION AND BUILDING DESIGN				
Low-emission stoves and/or reducing solid fuel use	Medium-high	High	Improved air quality Less crop damage and extreme weather Less violence and risk of injury during fuel collection Fewer burns	Medium
Better lighting to replace kerosene lamps	Medium	Medium	Improved air quality Less crop damage and extreme weather Fewer burns	Low-medium
Passive design principles	Low-medium	Medium	Thermal regulation Improved indoor air quality	Medium
ENERGY SUPPLY, ELECTRICITY				
Switch from fossil fuels to renewable energy for large-scale power production	Low	High (coal, oil) Low-medium (gas)	Improved air quality Less crop damage and extreme weather Fewer occupational injuries	High (coal, oil) Medium-high (gas)



EUROPEAN ENVIRONMENT
AND HEALTH PROCESS



Economic cost of the health impact of air pollution in Europe

*Clean air, health
and wealth*

CLIMATE RESILIENCE



CONCLUSIES

- A. Klimaatverandering veroorzaakt belangrijke morbiditeit en mortaliteit. Dit zal in de toekomst aanzienlijk toenemen en de gezondheid van vele miljoenen mensen bedreigen

- B. Sociale rechtvaardigheid is een kernaspect van duurzaam klimaatbeleid

- C. Het aanpakken van klimaatverandering is tegelijkertijd een grote kans voor een verbetering van de volksgezondheid én de economie

- D. Gezondheidswerkers en zorgcoördinatoren spelen een leidende rol bij de aanpak van klimaatverandering



Informeer

Ondersteun

**(Des)invest
eer**

Debateer

Druk

Werk Samen





“With both health and the climate crisis engaging such heightened interest, an opportunity exists for health professionals to bring the inextricable links between them into focus.”

Editorial: Health and climate change: making the link matter

THE LANCET

The best science for better lives