

Klimaatdag

Samen voor fossielvrij

2 mei 2024 | Heusden-Zolder

vvsg

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Vlaanderen
is energie en klimaat



Plenaire sessie

Plenaire sessie met Wim Thiery: de jeugd van tegenwoordig

Wim Thiery | Associate Professor

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De jeugd van tegenwoordig

Prof. Dr. Wim Thiery



Will a newborn experience more climate extremes than a 60-year old?

Yes, of course.

But how many more?

This we hadn't really quantified (yet).

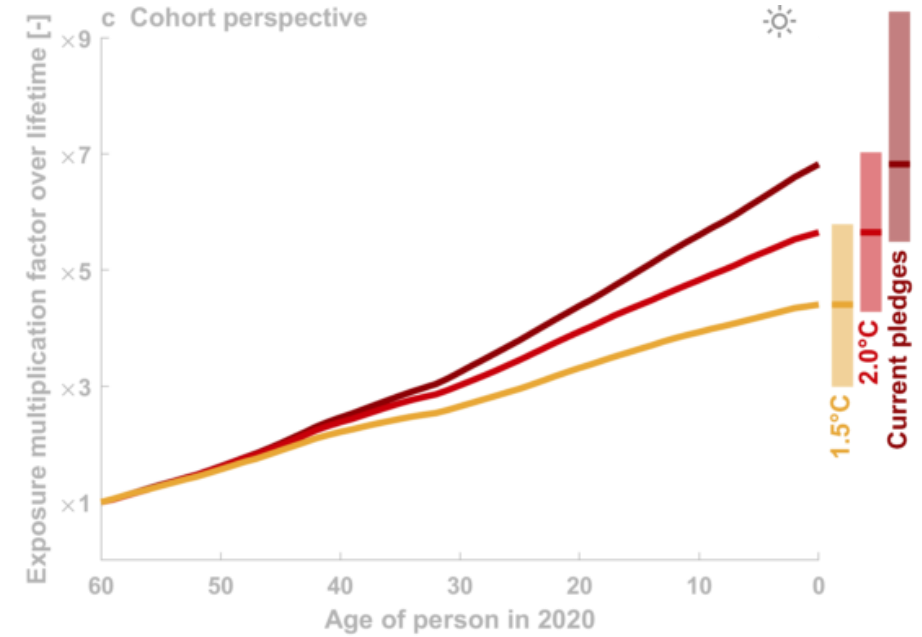
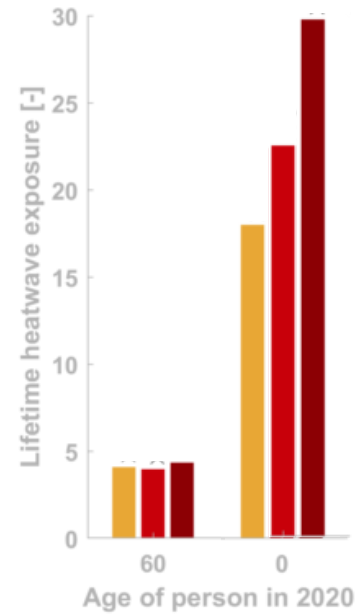
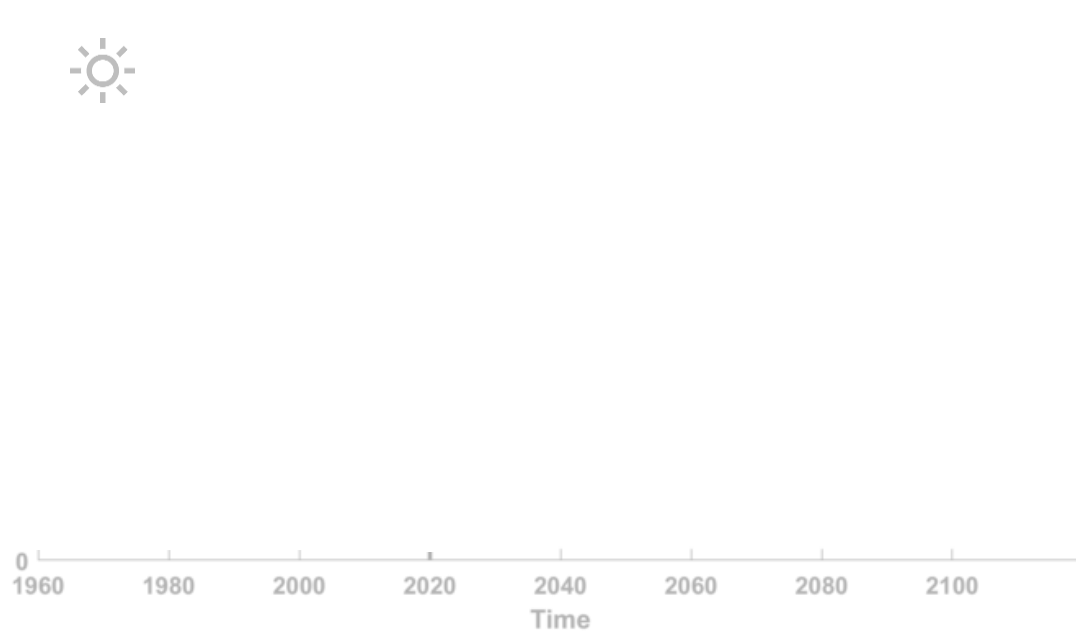
WINNER IS
NOT COMING



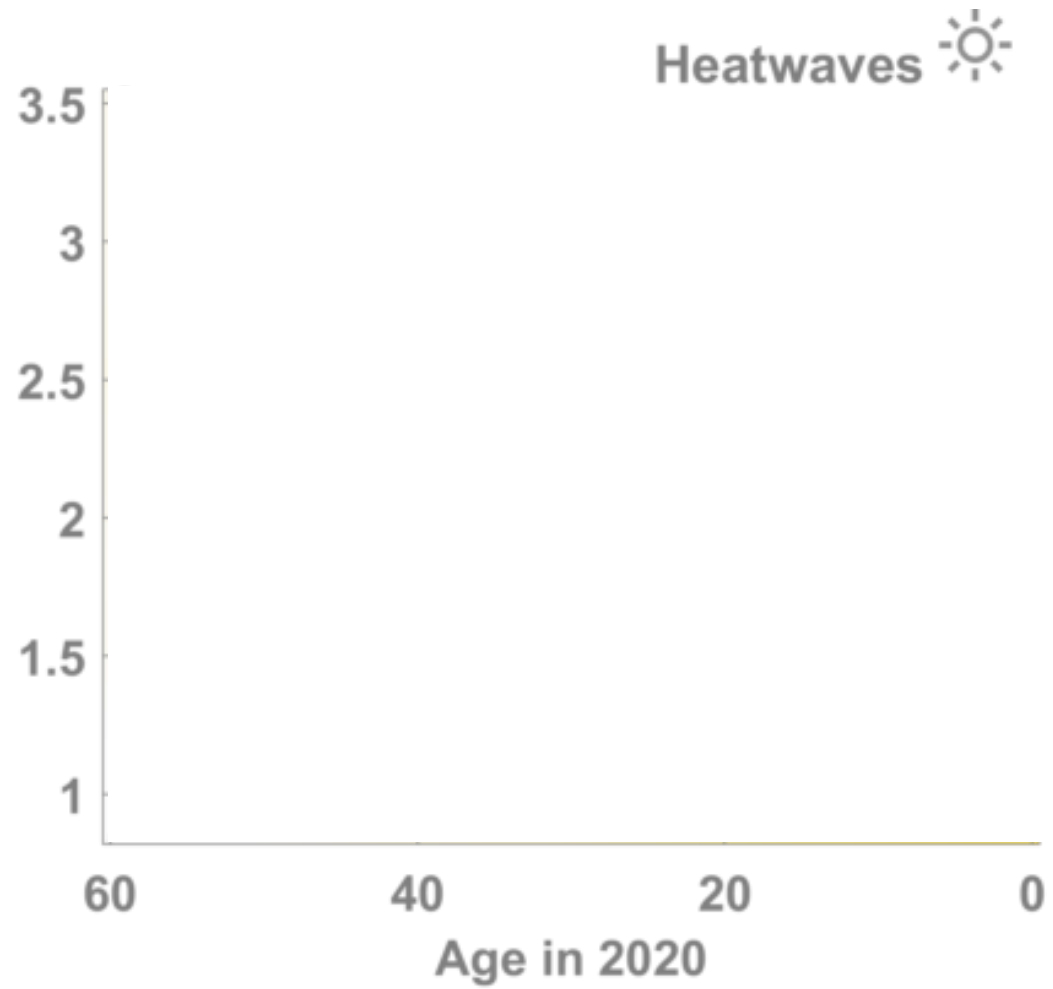


The idea

Integrate exposure of an 'average person' to extreme events across lifetime

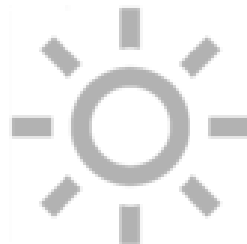
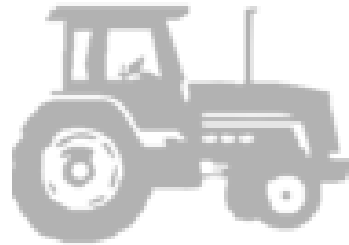


Global
warming [°C]



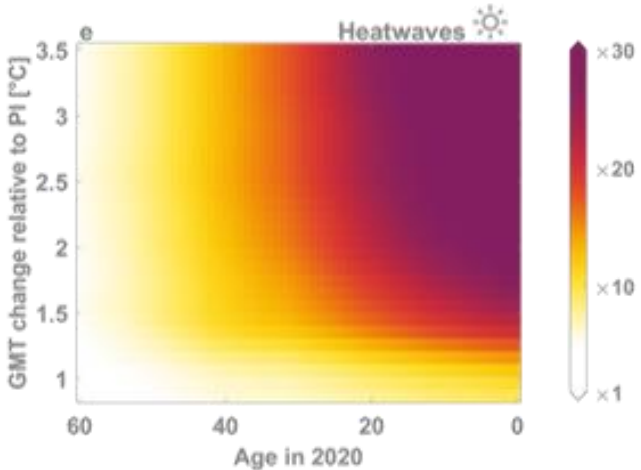
Six impact categories

15 ISIMIP2b models, 273 global-scale projections

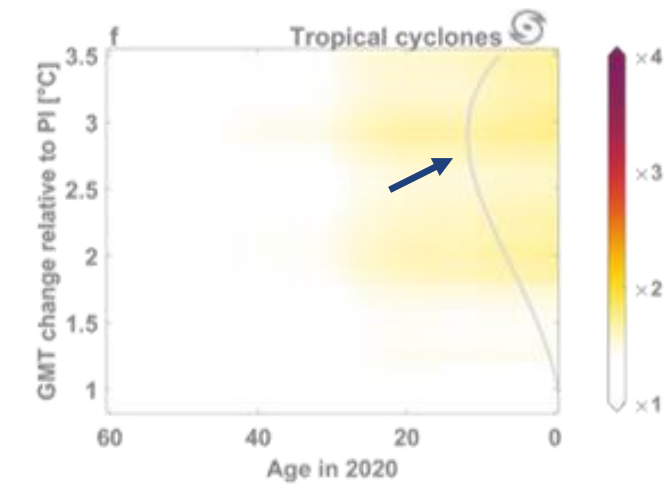
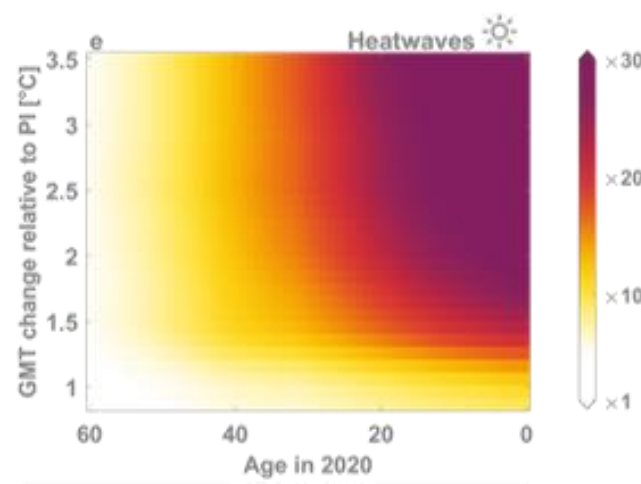
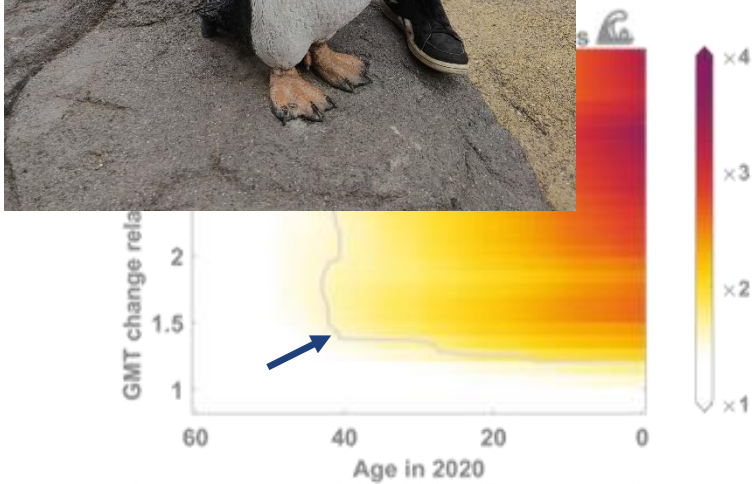
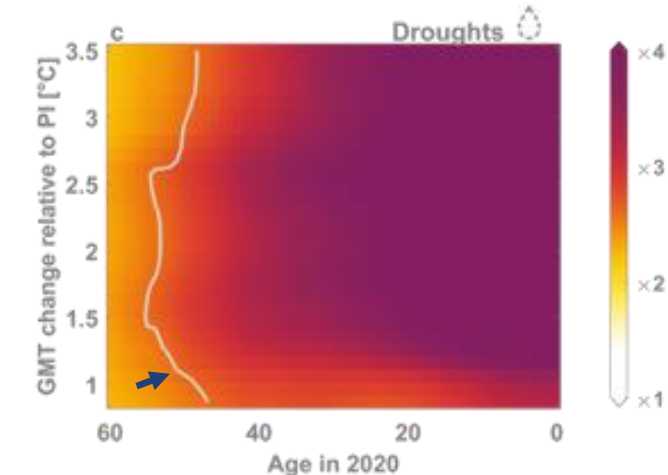
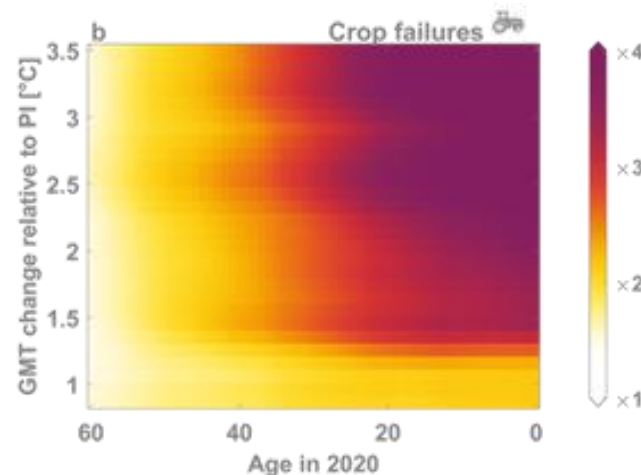
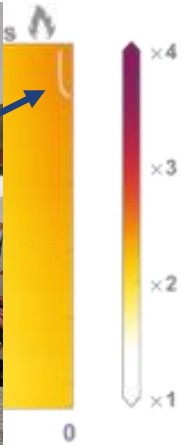


(Lange et al., 2020 EF)

Six burning embers



The youth is screwed, older generations won't face the risk



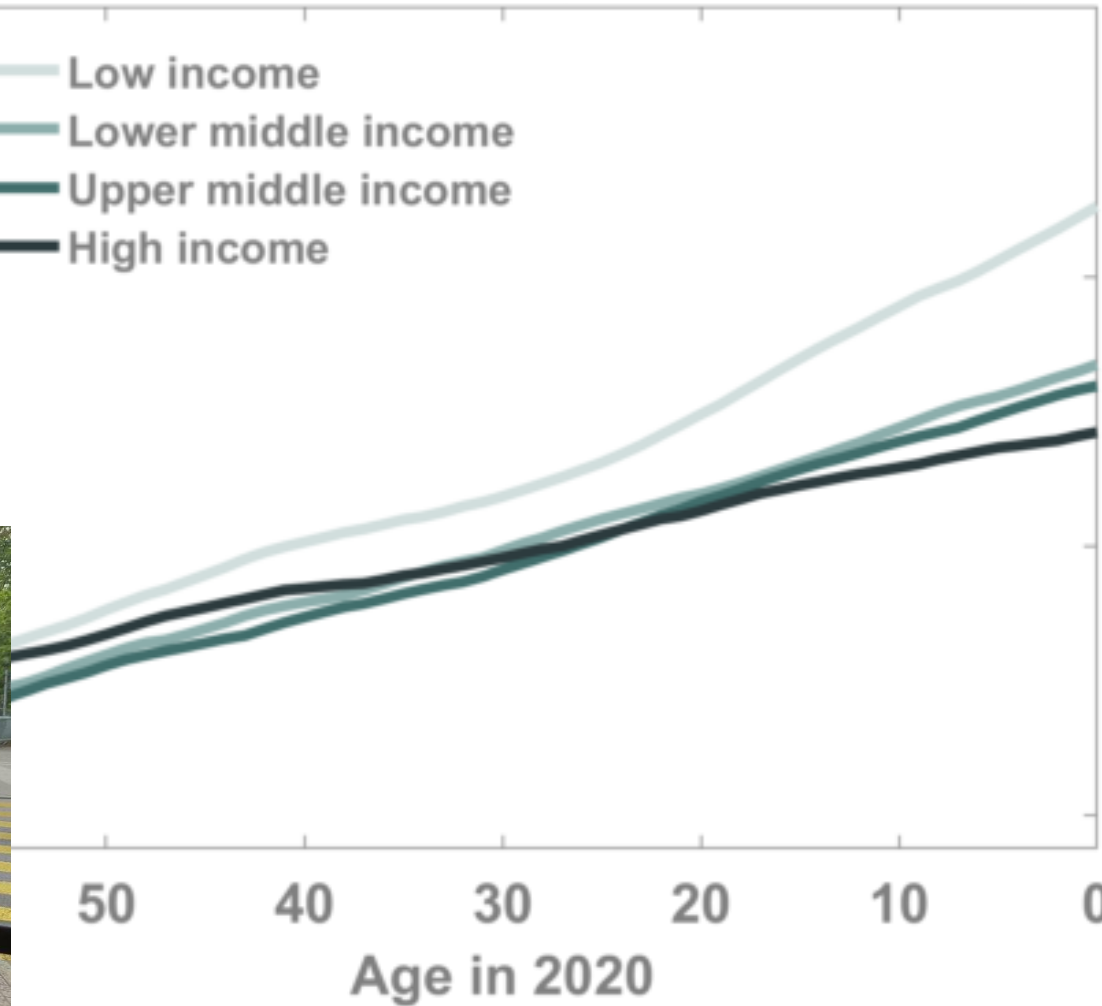
e.g. 6-yr old under 3°C: wildfires/TCs x2; river floods 3x; crop failures x4; droughts x5, heatwaves x36

Current Pledges



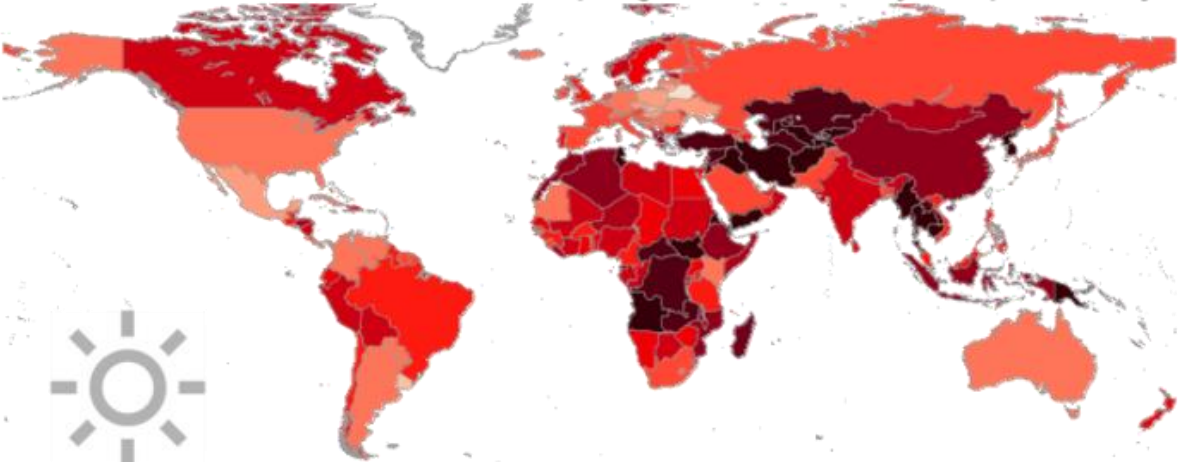
Multiplication factor [-] $\times 7$
 $\times 5$

- Low income
- Lower middle income
- Upper middle income
- High income

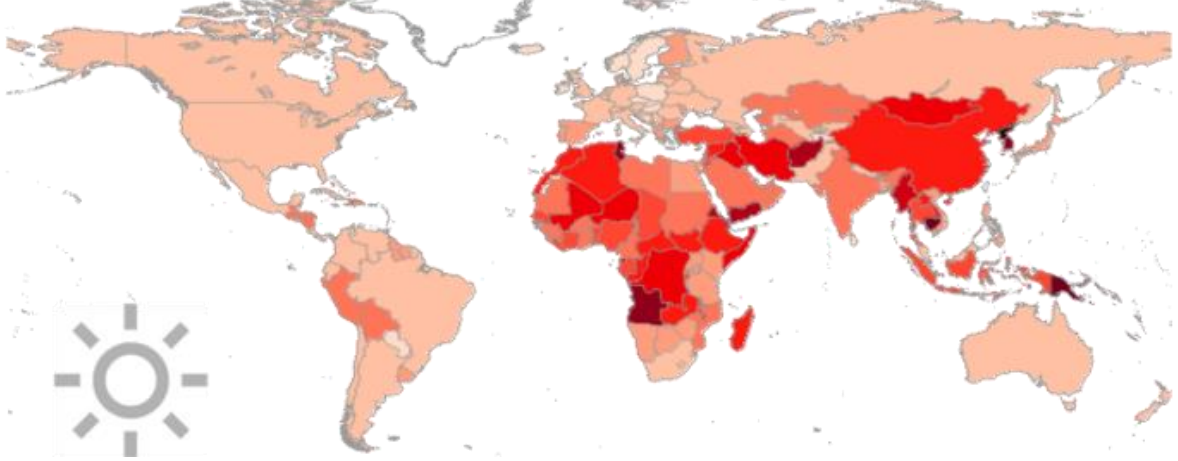


Increased climate ambition lowers burden on young generations

Current pledges - Heatwaves - 0yr compared to 60yr



1.5°C warming - Heatwaves - 0yr compared to 60yr



Science

INSIGHTS

POLICY FORUM

CLIMATE CHANGE

Intergenerational inequities in exposure to climate extremes

Young generations are severely threatened by climate change

By Wim Thiery, Stefan Lange, Joeri Rogelj, Carl-Friedrich Schleussner, Lukas Gudmundsson, Sonia I. Seneviratne, Marina Andrijevic, Katja Frieler, Kerry Emanuel, Tobias Geiger, David N. Bresch, Fang Zhao, Sven N. Willner, Matthias Büchner, Jan Volkholz, Nico Bauer, Jinfeng Chang, Philippe Ciais, Marie Dury, Louis François, Manolis Grillakis, Simon N. Gosling, Naota Hanasaki, Thomas Hickler, Veronika Huber, Akihiko Ito, Jonas Jägermeyr, Nikolay Khabarov, Aristeidis Koutroulis, Wenfeng Liu, Wolfgang Lutz, Matthias Mengel, Christoph Müller, Sebastian Ostberg, Christopher P. O. Reyer, Tobias Stacke, Yoshihide Wada

Under continued global warming, extreme events such as heat waves will continue to rise in frequency, intensity, duration, and spatial extent over the next decades (1–4). Younger generations are therefore expected to face more such events across their lifetimes compared with older generations.

waves will increase from ~15% around 2020 to ~22% by 2100 under a scenario compatible with limiting global warming to 1.5°C, and to ~46% under a scenario in line with current emission reduction pledges (see the first figure). Recent studies extended this approach, studying aspects of climate change as a function of global mean temper-

limited to 2°C or 18 ± 8 heatwaves if it is limited to 1.5°C. In any case, that is seven, six, or four times more, respectively, compared with that of a person born in 1960. Repeating this analysis for all cohorts born between 1960 and 2020 highlights clear differences in lifetime exposure to heat waves between older and younger cohorts globally (see the first figure). The effect of alternative future temperature trajectories on the lifetime exposure multiplication factor becomes discernible only for cohorts younger than 40 years in 2020, with the largest differences for the youngest cohorts.

The previous example only uses one hazard indicator and a subset of all possible future temperature pathways. We expanded this approach and considered six extreme event categories: wildfires, crop failures, droughts, river floods, heat waves, and tropical cyclones (see table S1), which we analyzed under a wide range of temperature pathways that resulted in future warming that ranges from constant present-day levels up to 3.5°C by 2100 (see materials and methods and fig. S1). To this end, we generated a total of 273 global-scale projections with 15 impact models forced by four bias-adjusted global climate models (see table S2). Inspired by the



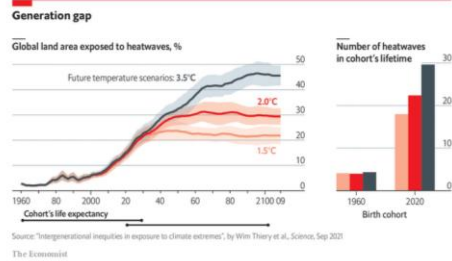
The front end

The Economist

Daily chart

Children born today are likely to face seven times more extreme weather events than their grandparents

If swift action is taken, some of the damage can be limited



Source: "Intergenerational inequities in exposure to climate extremes", by Will Theory et al., Science, Sep 2021
The Economist



Children set for more climate disasters than their grandparents, research shows

Climate crisis brings stark intergenerational injustice but rapid emission cuts can limit damage

Boy walks through a dried up agricultural field in the Saadiya area, north of Diyala in eastern Iraq.

Most viewed



Maid: how the devastating drama became a word-of-mouth smash



Live UK Covid: over 50,000 cases reported for first time since July as Johnson rejects

The Washington Post

Democracy Dies in Darkness

Climate and Environment

Today's kids will live through three times as many climate disasters as their grandparents, study says

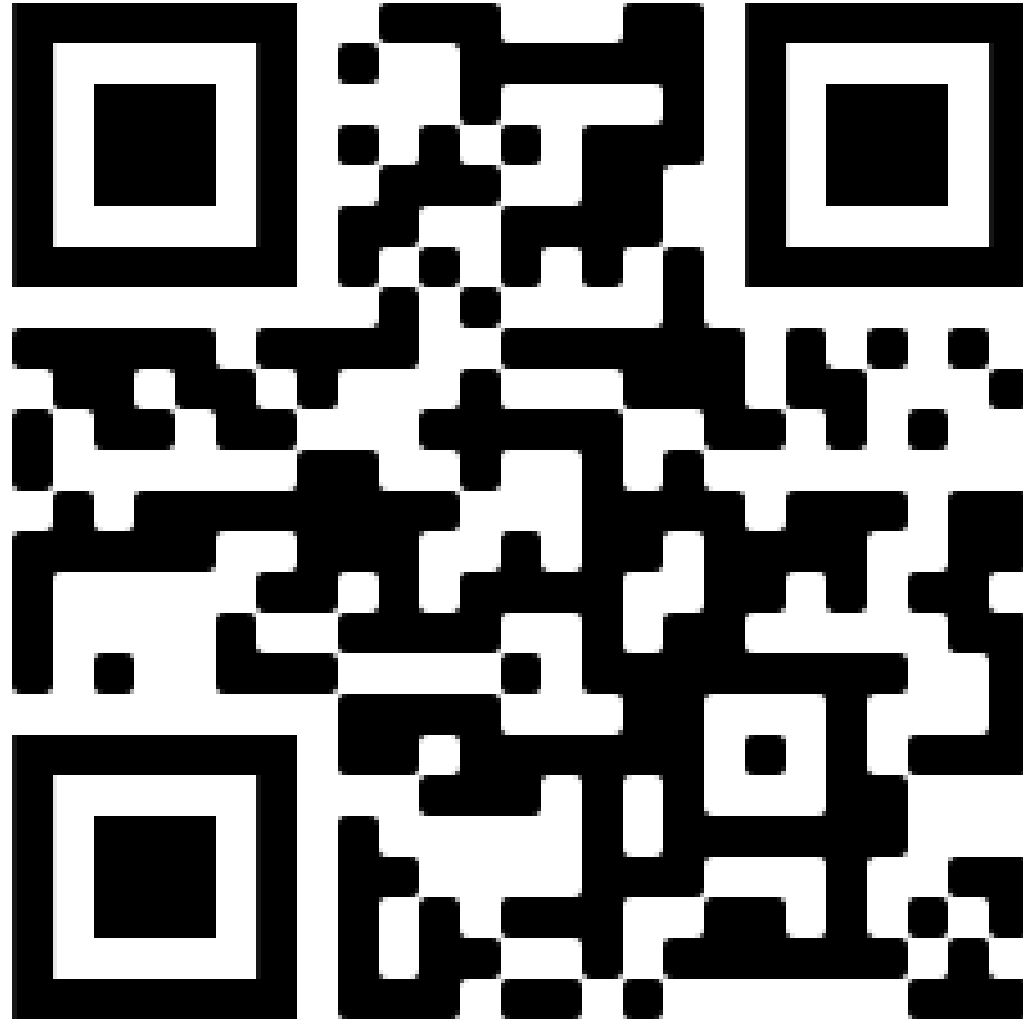
Published in the journal Science, the findings quantify the 'intergenerational inequality' of climate change

Listen to article

The back end



#myclimatefuture



<https://myclimatefuture.info/>

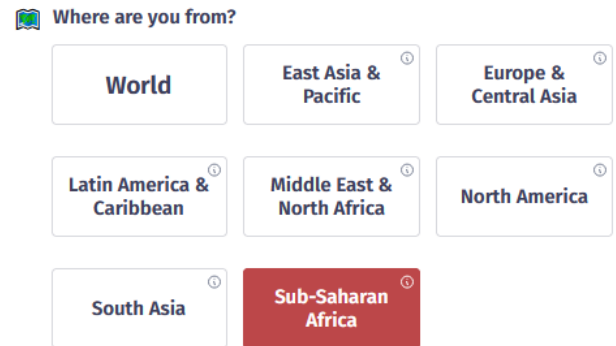
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How will I experience climate change?

Here you can find out how many more climate extremes you will face across your lifetime relative to a world without climate change. The results are based on [solid science](#).

We don't store your data.



In a 3.5°C world, I, as an 8-year-old from Sub-Saharan

Africa, will experience

- wildfires 1.4x,
- river floods 7x,
- crop failures 4.6x,
- tropical cyclones 1.6x,
- droughts 5.1x and
- heatwaves 50.9x

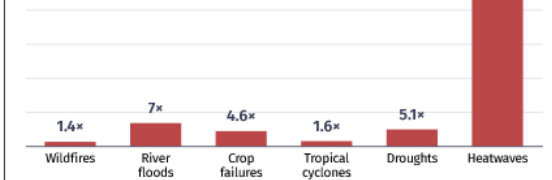
more than without climate change.

#myclimatefuture

Do the test [myclimatefuture.info](#)



In a 3.5°C world, I, as an 8-year-old from Sub-Saharan Africa, will experience these increases



Find out your climate future at [myclimatefuture.info](#)

HOW DARE U SCARE KIDS

Thanks! Questions?



@WimThiery

Bedankt voor de aandacht!

VVSG

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Vlaanderen
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