

# Climate Data for Dummies

A Presentation for Tom Nelson

by

Latimer Alder

Twitter: @latimeralder

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# An Independent Commentator

- 'A Gentleman of Independent Means'
- No boss
- No paycheques
- No commissions
- No societies
- Thick skin. Broad Shoulders
- ==> Say what I mean. Mean what I say

# My CV



# Richard Feynman - The Key to Science

If it disagrees with experiments, it's wrong. In that simple statement is the key to science.

It doesn't make a difference how beautiful your guess is, it doesn't matter how smart you are, who made the guess or what his name is.

If it disagrees with experiments, it's wrong- that's all there is to it.



Richard Feynman

# Covid in UK





**UK's Covid Outbreak**

**1 Mar 20 to 21 March 23**

**Red = People Who Died  
'with Covid' (1 in 325)**

**Yellow = People who died  
of other things (1 in 38)**

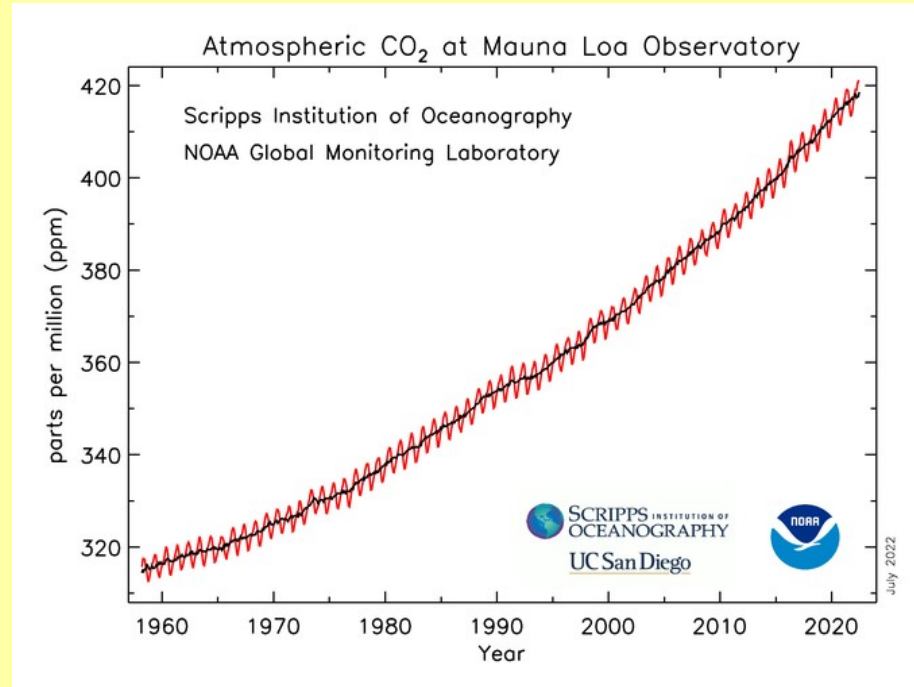
**Green = People who are  
Still Alive (97.2%)**

*Prepared by Latimer Alder*

# Carbon Dioxide



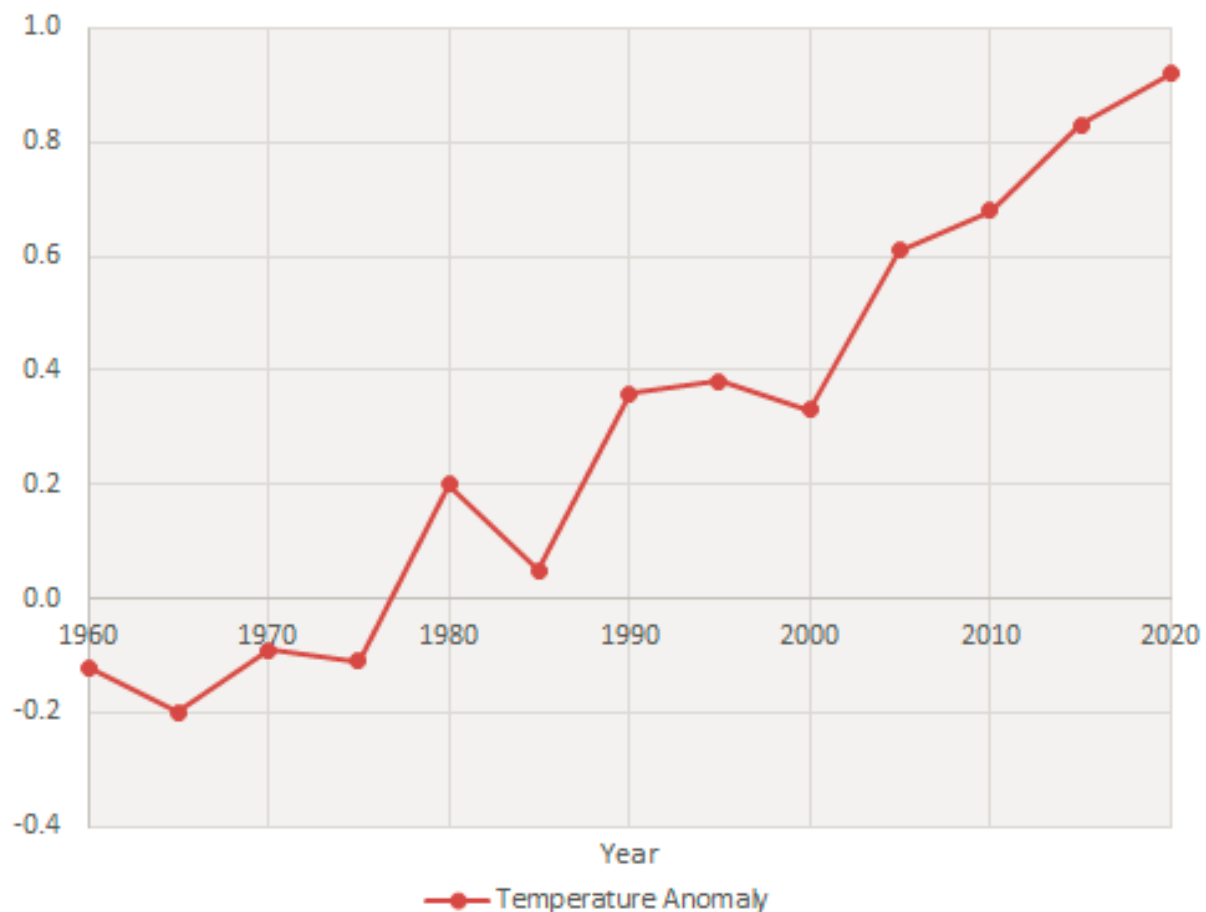
# How has CO<sub>2</sub> changed?





# 60 Years of Global Warming

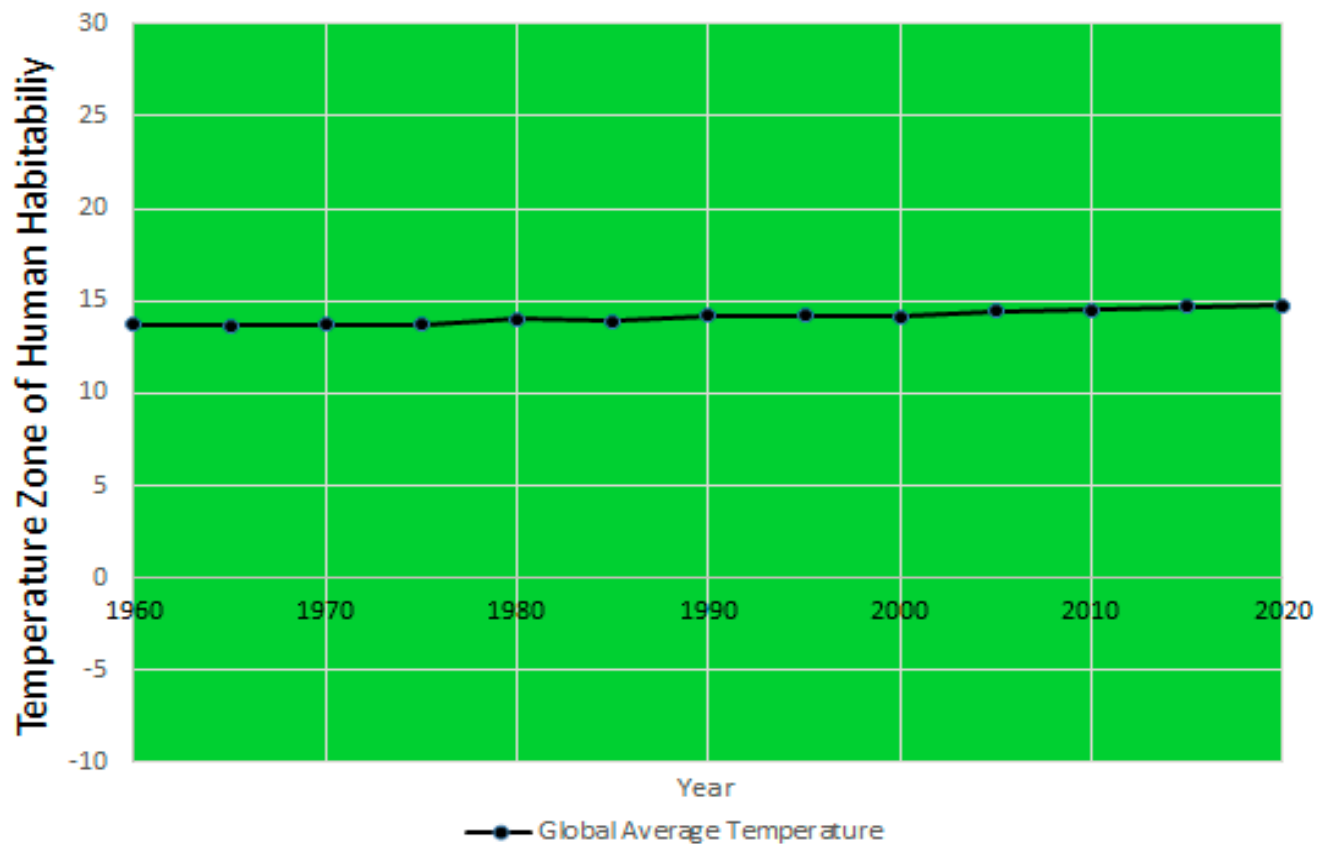
From the UK Met Office HADCRUT5 dataset



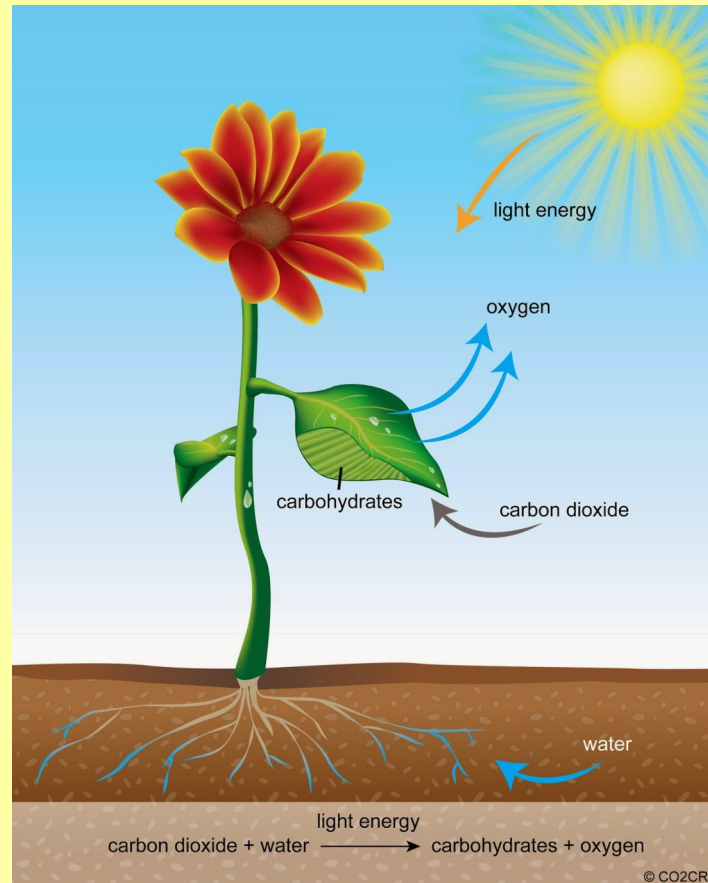
## 60 years of Global Warming in Perspective

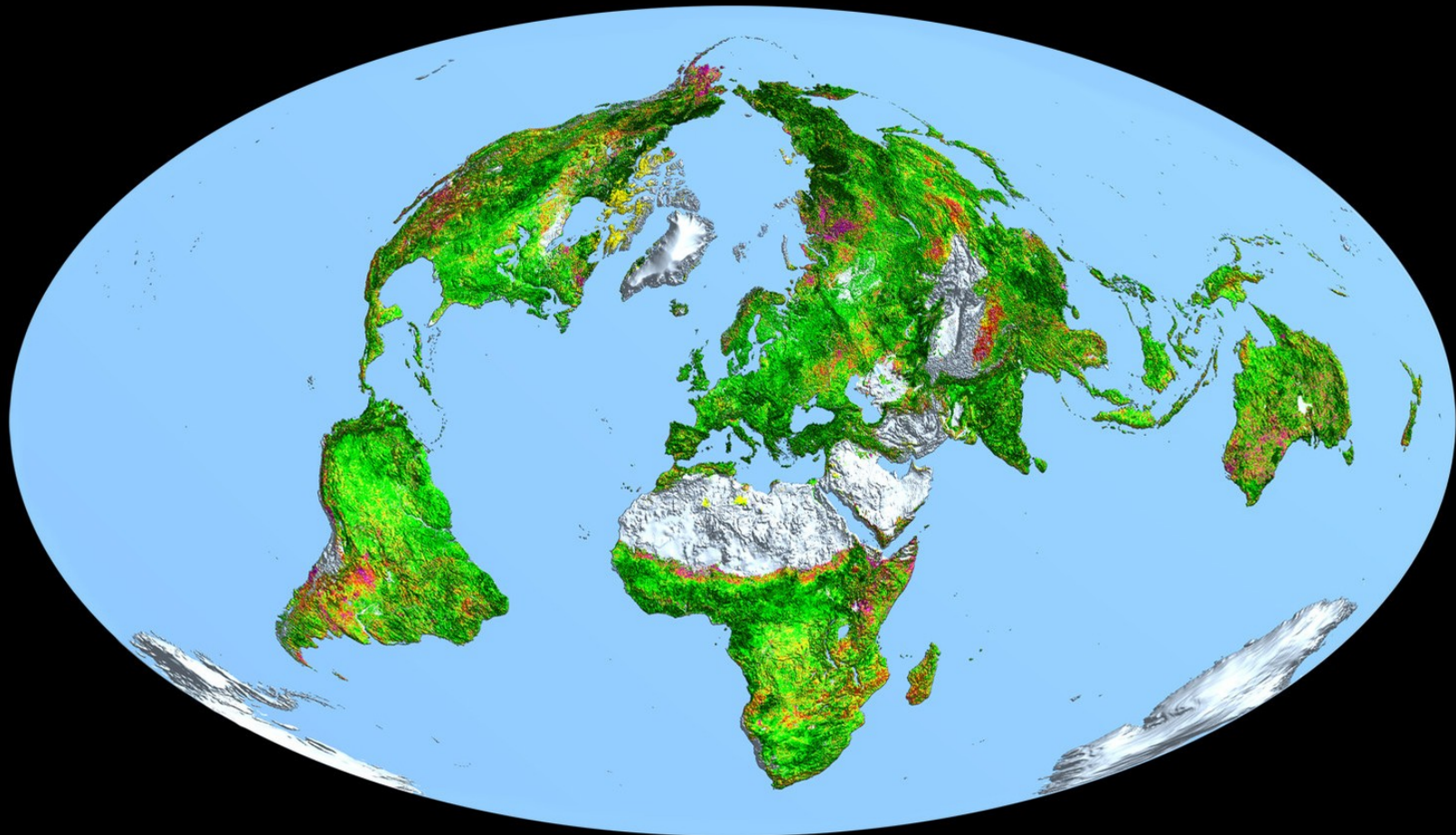
From the UK Met Office HADCRUT5 dataset

*Overall 1/20,000th of a degree C per day*



# Photosynthesis





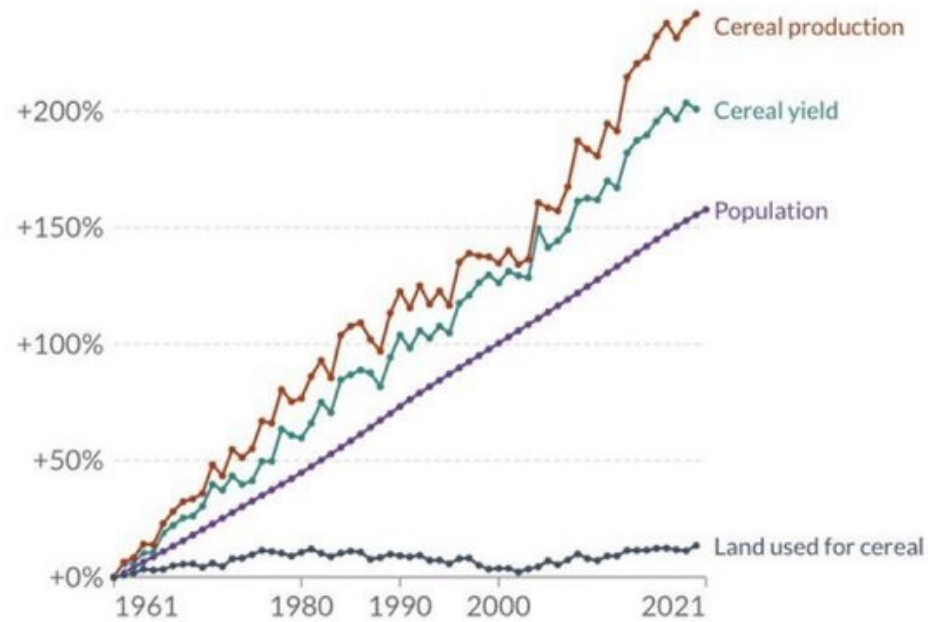
Change In Leaf Area (1982-2015)



# Change in cereal production, yield and land use, World, 1961 to 2021

Population and cereal production, yield and land use figures are indexed to the year 1961 (i.e. 1961 = 0).

↔ Change country



Source: Our World in Data based on World Bank, Food and Agriculture Organization of the United Nations  
OurWorldInData.org/crop-yields • CC BY

▶ 1961  2021

CHART

TABLE

SOURCES

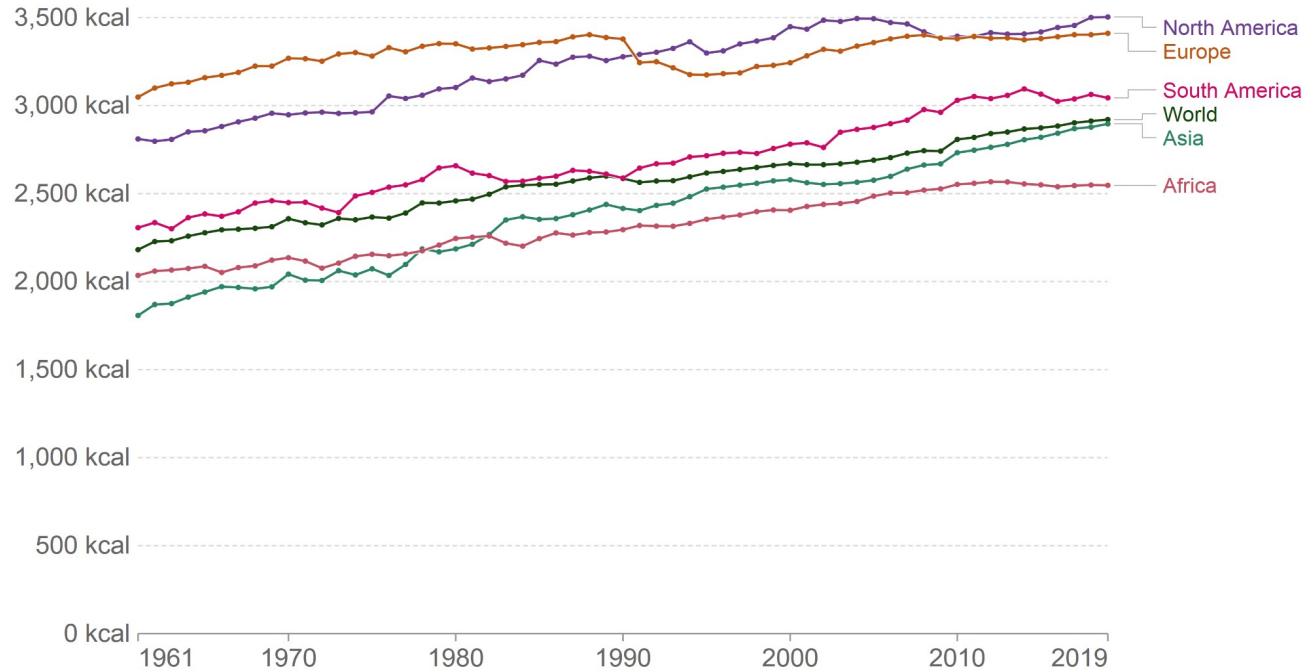
↓ DOWNLOAD



## Per capita kilocalorie supply from all foods per day, 1961 to 2019

Our World  
in Data

This measures the quantity that is available for consumption at the end of the supply chain. It does not account for consumer waste, so the quantity that is actually consumed may be lower than this value.



Source: UN Food and Agriculture Organization (FAO)

Note: This is the total of all agricultural produce – both crops and livestock.  
The FAO apply a methodological change from the year 2010 onwards

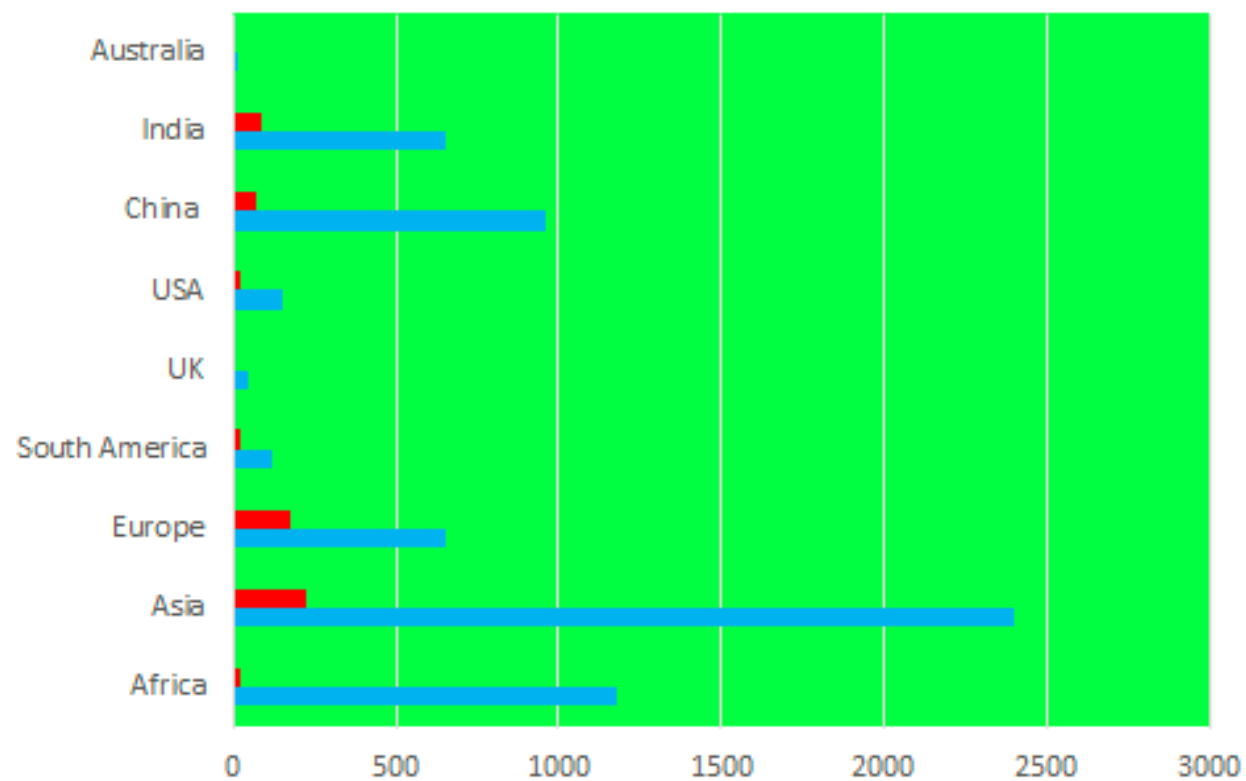
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# World wide deaths due to temperature

Thousands per year

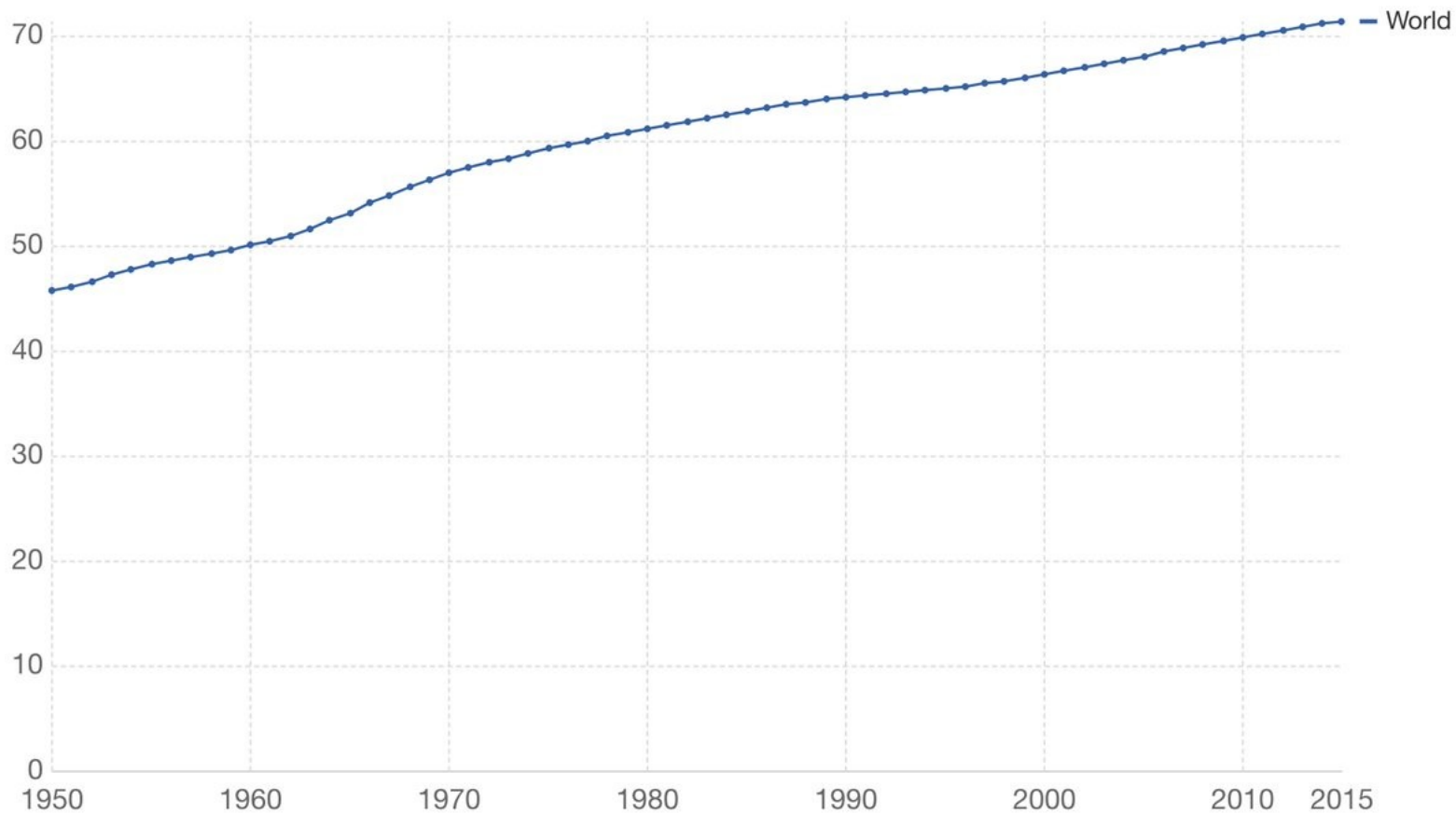
Source: Monash University, Australia

■ Too Hot ■ Too Cold



# Life expectancy

Shown is period life expectancy at birth. This corresponds to an estimate of the average number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life

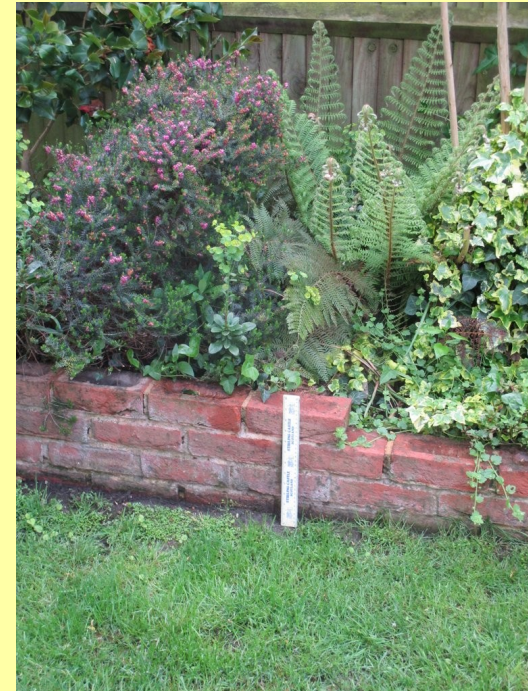
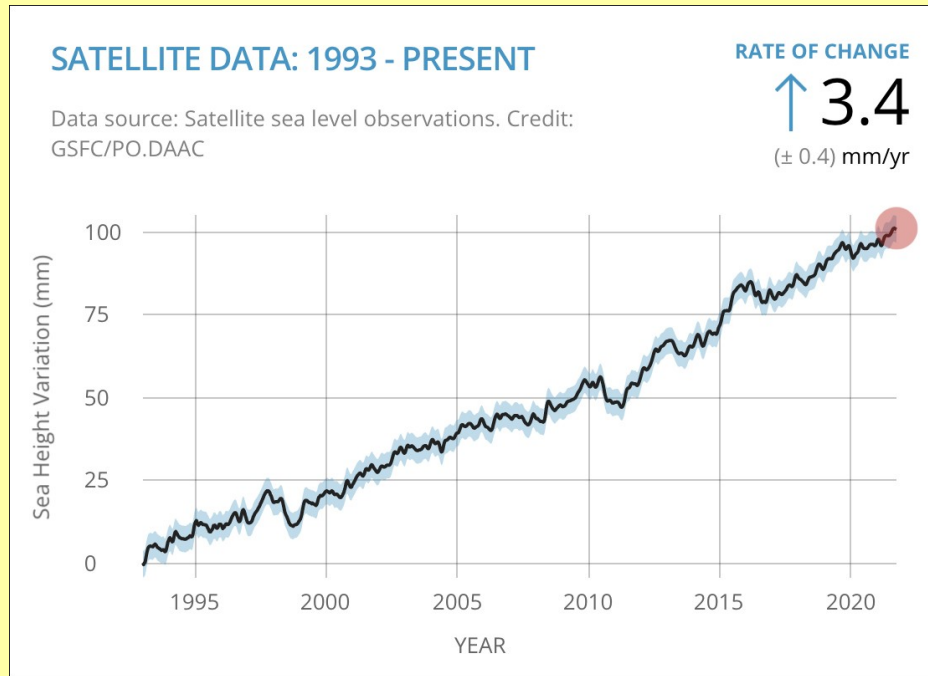


Source: Clio-Infra estimates until 1949; UN Population Division from 1950 to 2015

[OurWorldInData.org/life-expectancy-how-is-it-calculated-and-how-should-it-be-interpreted/](https://OurWorldInData.org/life-expectancy-how-is-it-calculated-and-how-should-it-be-interpreted/) • CC BY-SA



# Rising Sea Level



# Maldives



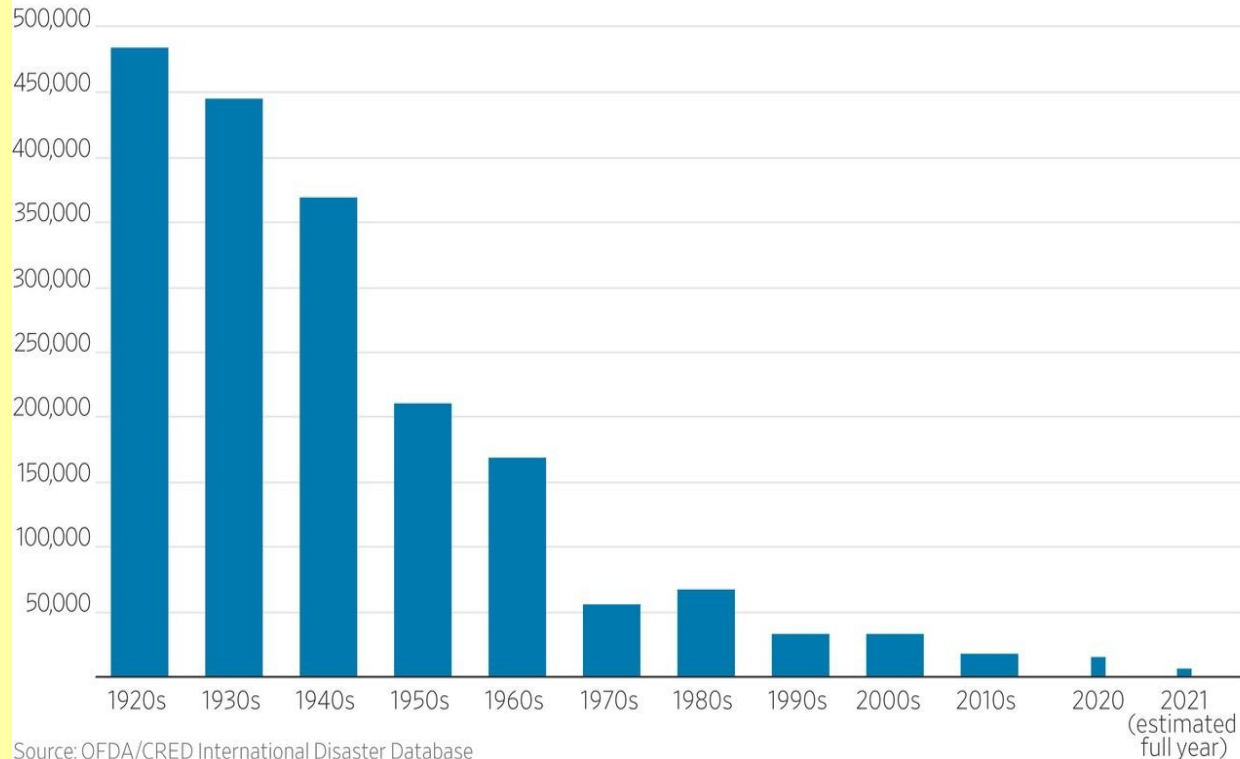
# Deaths

<b>How many People in the World?</b>	<b>8,000,000,000</b>
<b>How many Die each Year?</b>	<b>60,000,000</b>
<b>How many Die each Day?</b>	<b>165,000</b>
<b>How many Die each Hour?</b>	<b>7,000</b>
<b>How many Die each Minute?</b>	<b>115</b>

# Climate Disasters

## Climate-Related Disasters Kill Ever Fewer

Global deaths from floods, droughts, storms, wildfire and extreme temperatures, annual average by decade 1920-2019, per year for 2020 and 2021



Source: OFDA/CRED International Disaster Database

# Chance of Dying in a Climate Disaster

1920s : 2 billion people. 500,000 deaths per year

==> Your chance of dying was 1 in  $2,000,000,000/500,000$

= 1 in 4,000

2020s: 8 billion people. 20,000 deaths

==> 1 in 400,000

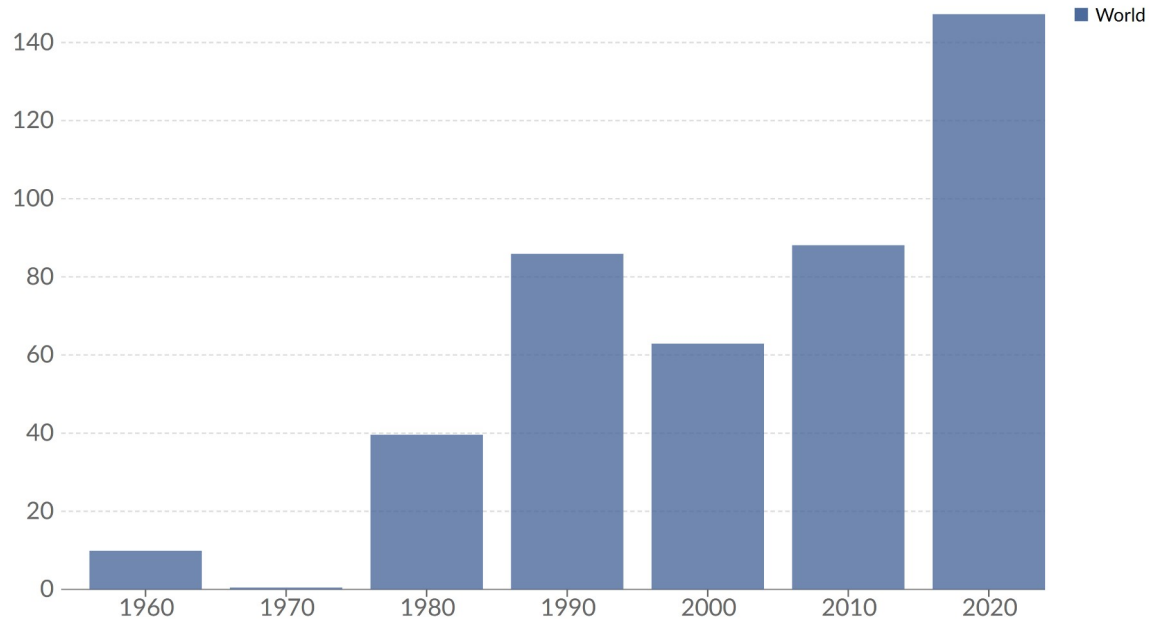
**100 times safer!**

# Wild Fires

## Decadal average: Annual number of deaths from wildfires

Our World  
in Data

Decadal figures are measured as the annual average over the subsequent ten-year period.



**Data source:** Our World in Data based on EM-DAT, CRED / UCLouvain, Brussels, Belgium – [www.emdat.be](http://www.emdat.be) (D. Guha-Sapir)

**Note:** Decadal figures are measured as the annual average over the subsequent ten-year period. This means figures for '1900' represent the average from 1900 to 1909; '1910' is the average from 1910 to 1919 etc. Data includes disasters recorded up to September 2023.

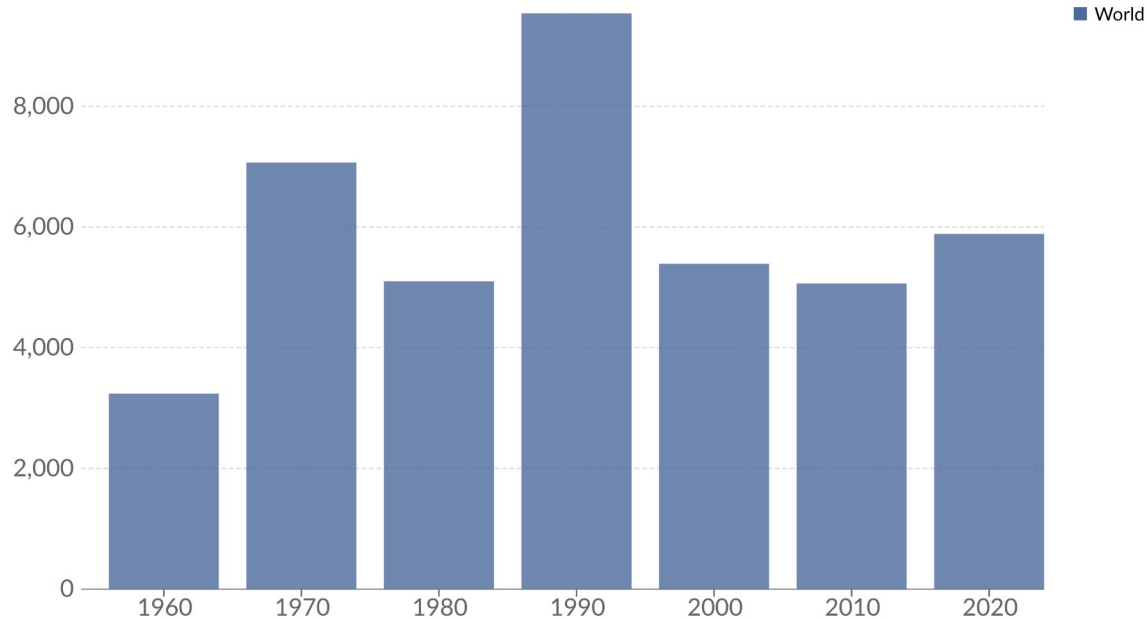
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# Floods

## Decadal average: Annual number of deaths from floods

Decadal figures are measured as the annual average over the subsequent ten-year period.

Our World  
in Data



**Data source:** Our World in Data based on EM-DAT, CRED / UCLouvain, Brussels, Belgium – [www.emdat.be](http://www.emdat.be) (D. Guha-Sapir)

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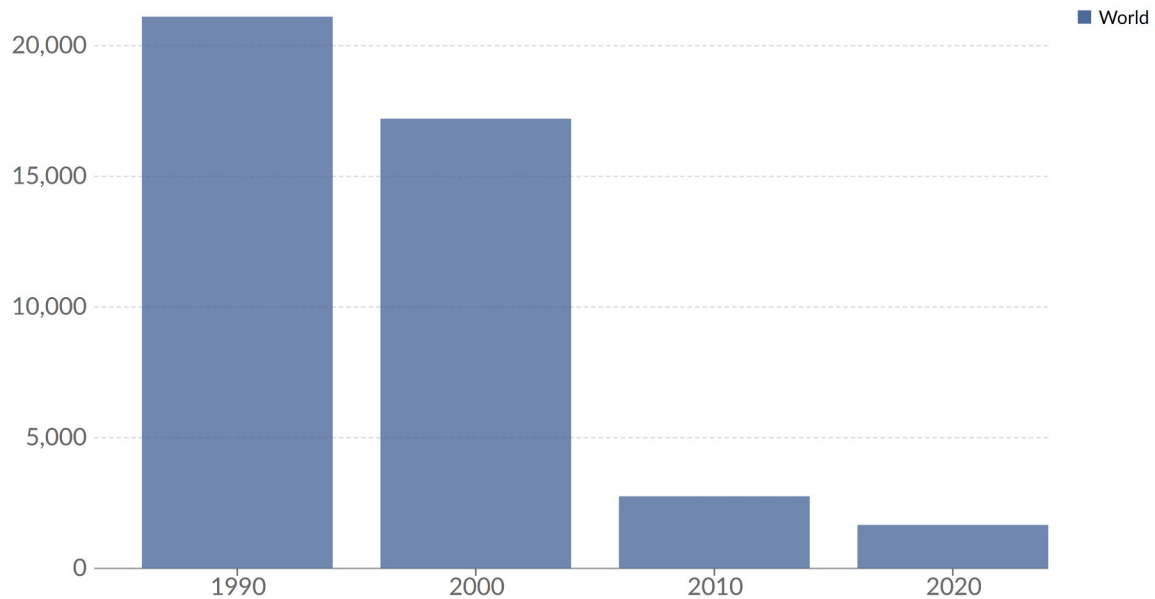
[CC BY](#)

# Storms

## Decadal average: Annual number of deaths from storms

Our World  
in Data

Storms include tornado, hail, thunderstorm, sand storm, blizzards and extreme wind events. Decadal figures are measured as the annual average over the subsequent ten-year period.



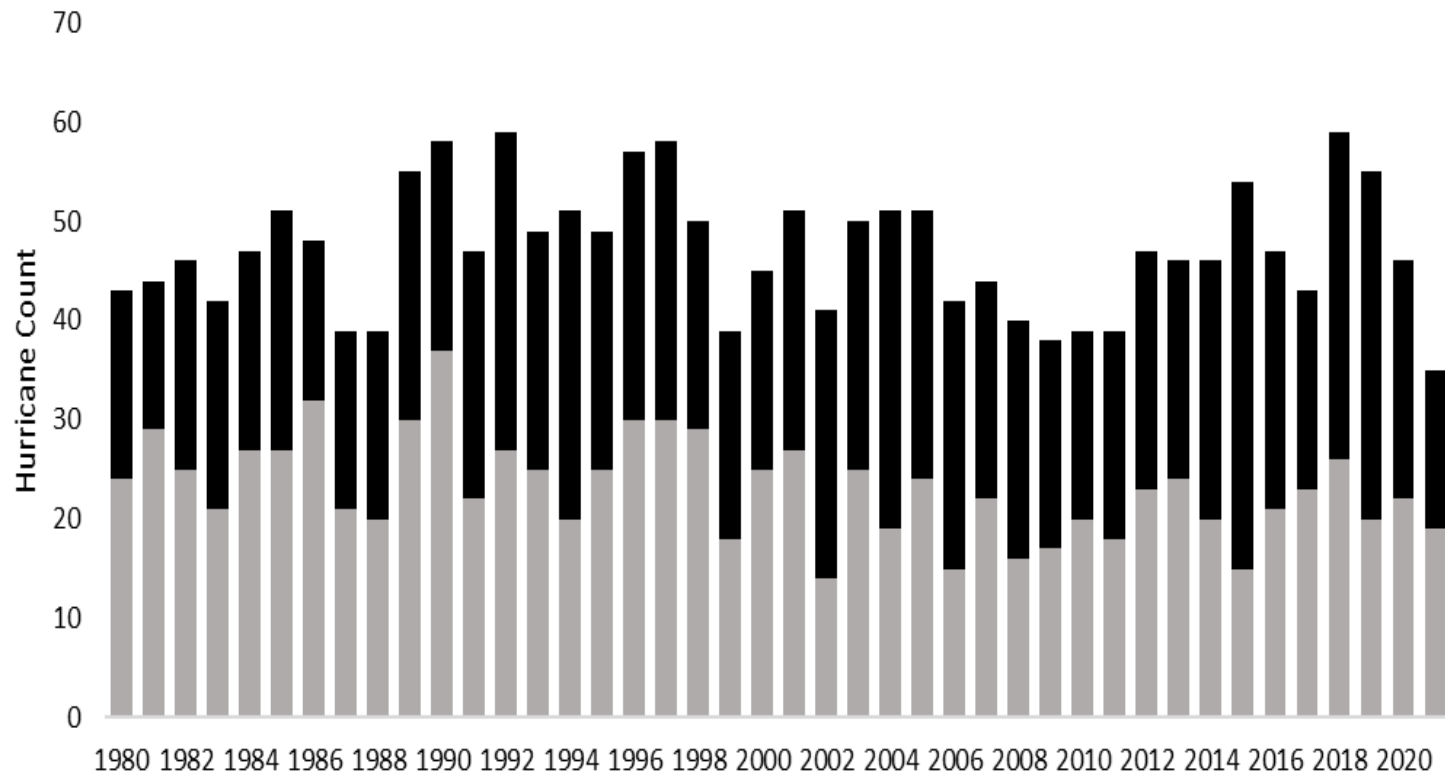
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[OurWorldInData.org/natural-disasters](https://OurWorldInData.org/natural-disasters) | [CC BY](https://creativecommons.org/licenses/by/4.0/)



# Global Hurricane Frequency 1980 - 2021



 @ChrisMartzWX

■ Hurricanes ■ Major Hurricanes

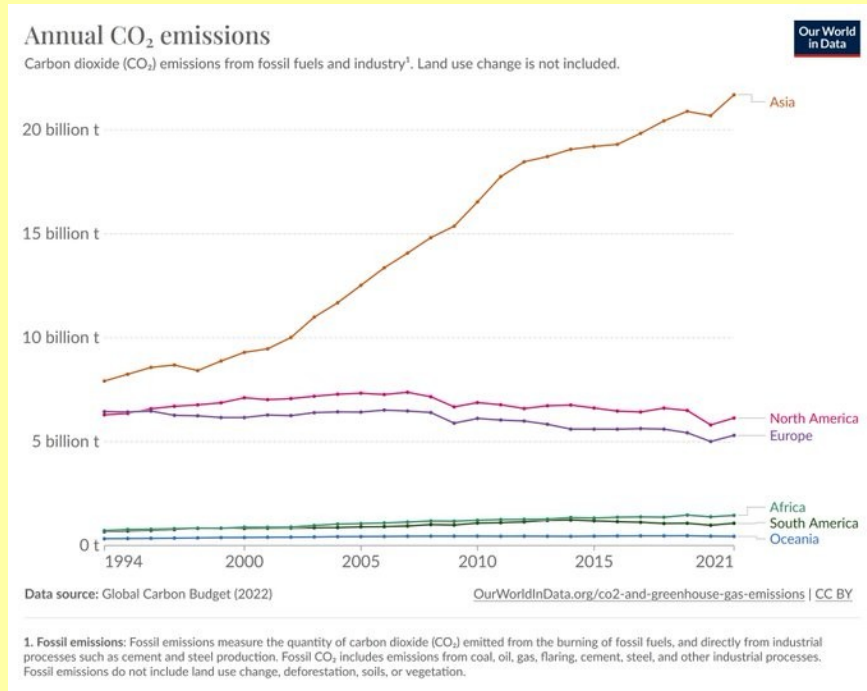
Data Source: Colorado State University

# Summary

Real data shows the world is:

- > Warmer and greener
- > People are living longer and better-fed than ever before
- > 'Climate risks' have been vastly exaggerated and are falling, not rising


# Final Slide and Homework



How many people live in Asia?

What does this chart tell us about the quest for global NetZero emissions?

# Acknowledgements



Huge thanks to all who helped me in preparing this presentation:

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- Graham Carr

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