



## Spectacular progress in the world due to prosperity, technology and adaptation

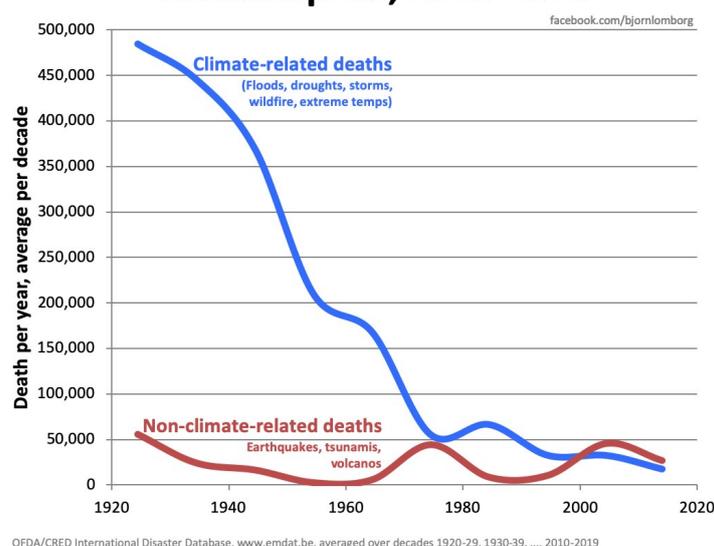
Two recently published graphs show beautifully that mankind has become much less vulnerable for climate change in the past century.

### Less casualties

The first graph below shows the spectacular decline in the number of victims in the world due to extreme weather events like heat, cold, floods, drought, hurricanes and wildfires. A century ago, when global population was 2 billion, 500,000 people on average died each year as a result of weather disasters. Last year 'only' 8200 people died in such disasters, while the global population now is 7.6 billion. This is an absolute decline of 98% and a relative decline of more than 99%.

Of course we can still do better we should proud and open about this huge performance which is largely the result of increasing wealth and technological improvements. The richer countries become, the better they can protect their citizens against weather extremes. But note, the huge improvement in the past century also took place in the poorest countries of the world!

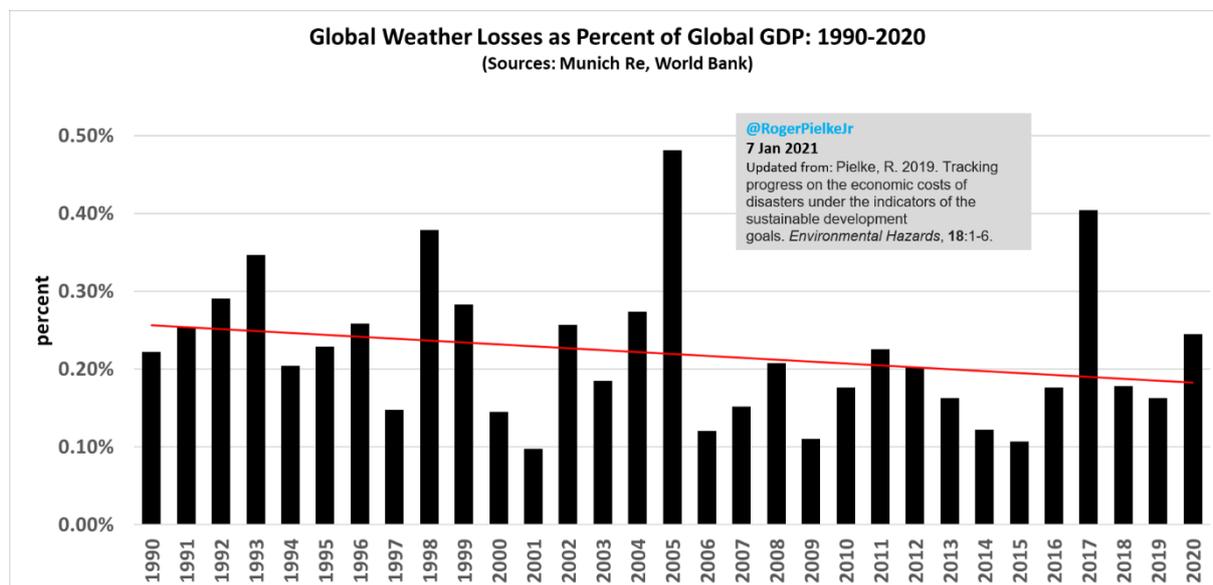
### Deaths from Climate and non-Climate Catastrophes, 1920-2019



Source: [Lomborg, Bjorn, \(2020\)](#), Welfare in the 21st century: Increasing development, reducing inequality, the impact of climate change, and the cost of climate policies, *Technological Forecasting and Social Change*, 156, issue C, number S0040162520304157

## Less damage

The second graph shows the global weather related losses as a percentage of global GDP.



Source: [Roger Pielke Jr](#)

Again a remarkable result if you think up how often during this Climate Summit people claimed there is an ever increasing cost due to disasters. Because in reality the cost due to disaster, as a percentage of GDP, has declined. This happened in a period during which CO<sub>2</sub> emissions grew faster than ever before, regardless of the 25 international climate conferences that took place, in which they tried to limit these emissions.

The story that these two graphs tells us is not that climate change is not happening or that it is irrelevant, but that a richer mankind is getting better and better in dealing with these changes. So adaptation!

Of course the richer a country is the more it will invest in adaptation. The Netherlands can afford to build dikes that guarantee extreme levels of safety (a 1 in 10.000 years risk of flooding).

