

Global warming



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Suggestion

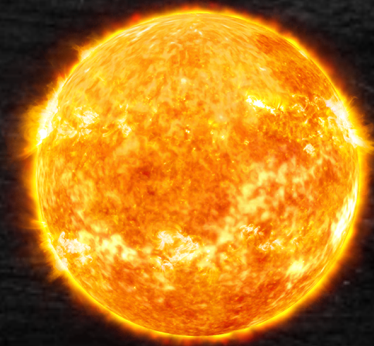
It is suggested to accompany this presentation, with the author for a better explanation of it.



Earth temperature

The temperature Earth absorbs from the sun minus the temperature Earth emits to space.

“...the planet’s temperature is basically a function of the energy the Earth absorbs from the sun (which heats it up) and the energy Earth emits to space as infrared radiation (which cools it down).” – Julia Rosen

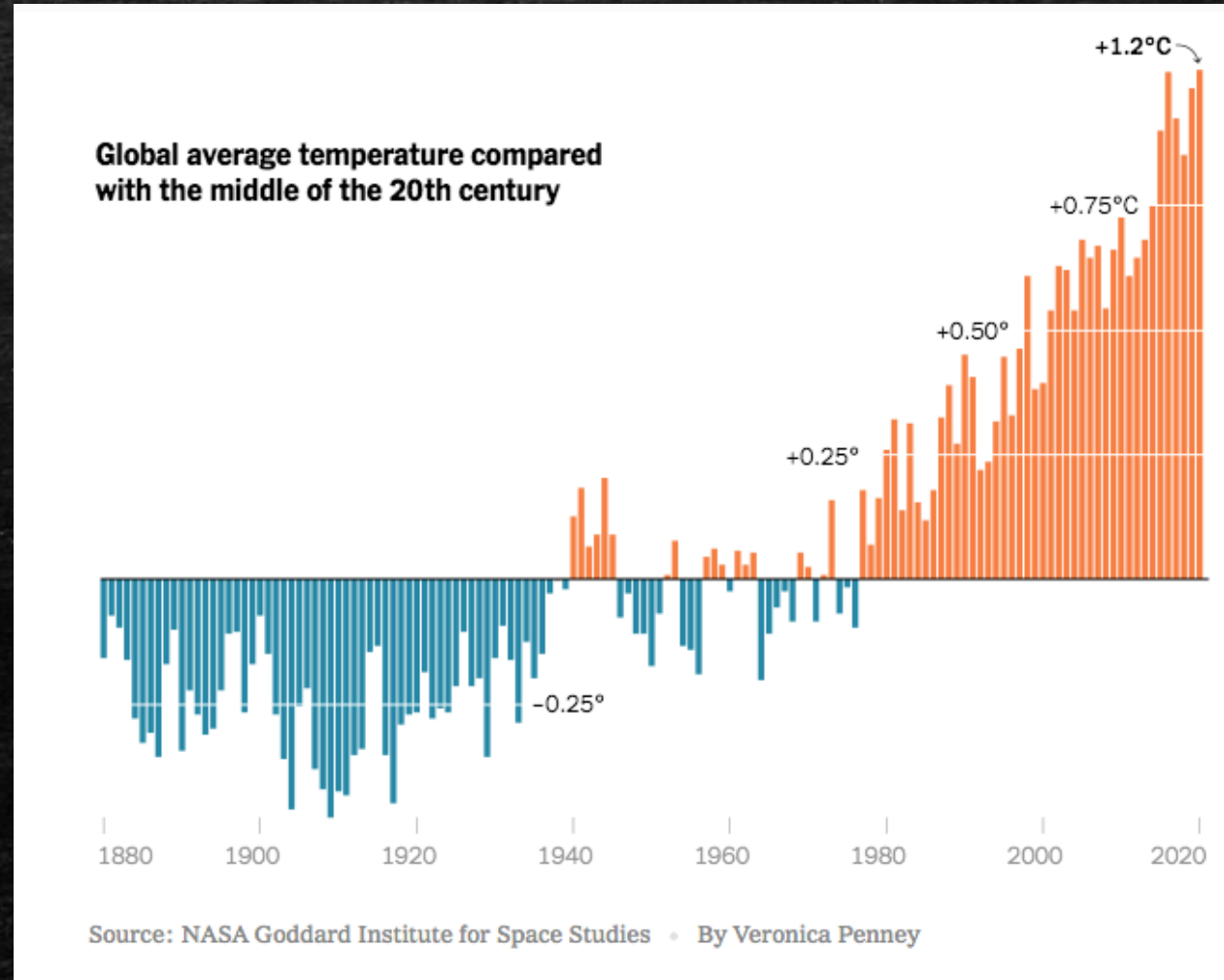


Humans and temperature

Humans, along with their crops and their livestock, evolved over the past 10,000 years in a rather narrow climate niche, centered on an annual average temperature of about 55°F (nearly 12.8°C). Our bodies readily adapt to higher temperatures, but there are limits to how much heat and humidity we can tolerate.

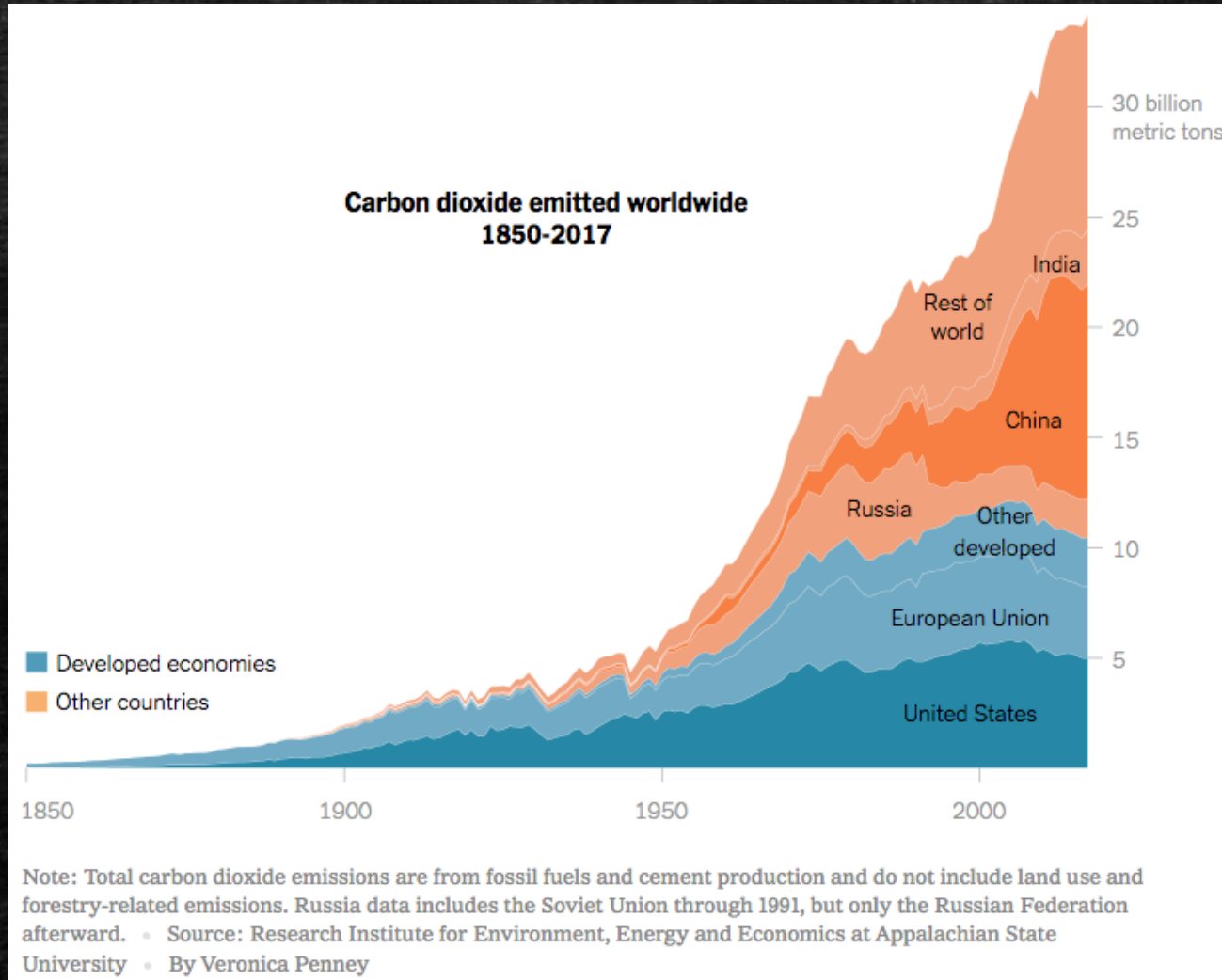


Global average temperature



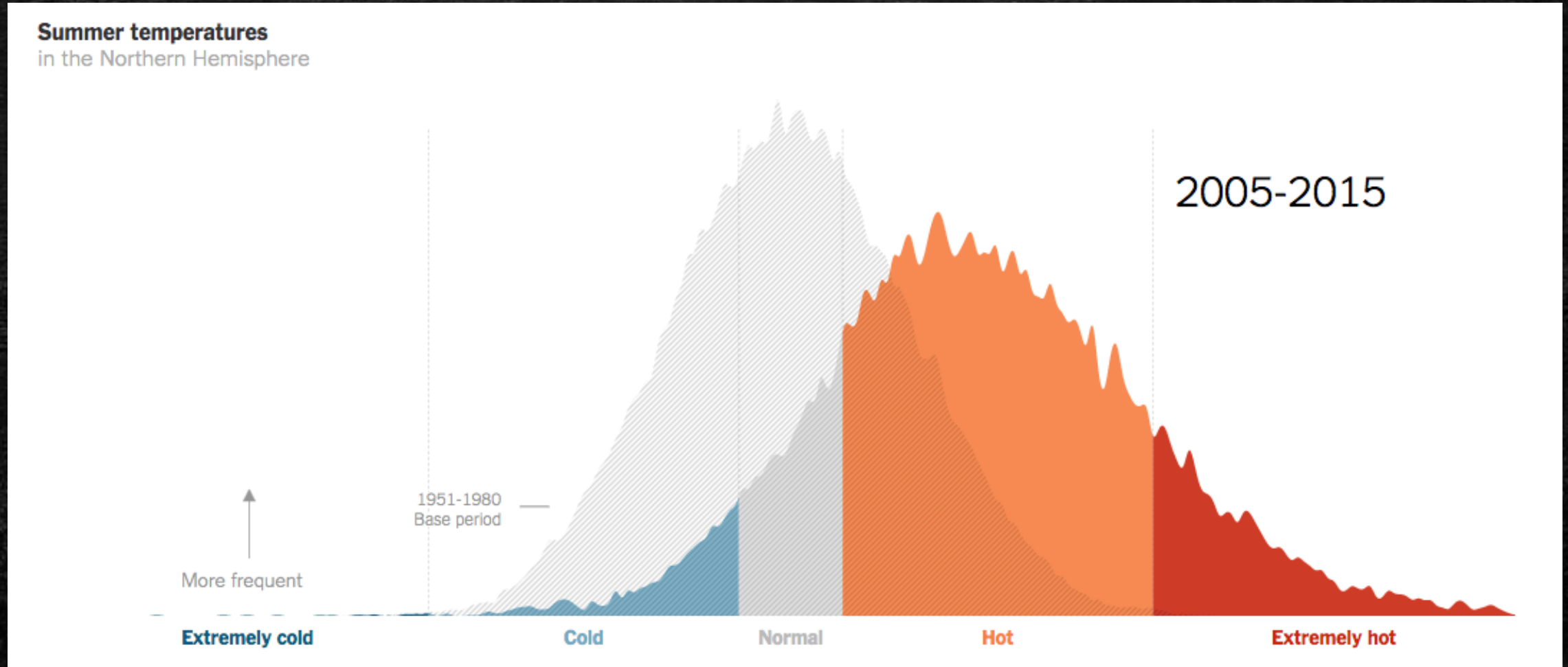
Source: The Science of Climate Change Explained: Facts, Evidence and Proof - <https://www.nytimes.com/article/climate-change-global-warming-faq.html?auth=link-dismiss-google1tap>

Carbon dioxide worldwide



Source: The Science of Climate Change Explained: Facts, Evidence and Proof - <https://www.nytimes.com/article/climate-change-global-warming-faq.html?auth=link-dismiss-google1tap>

Summer temperatures



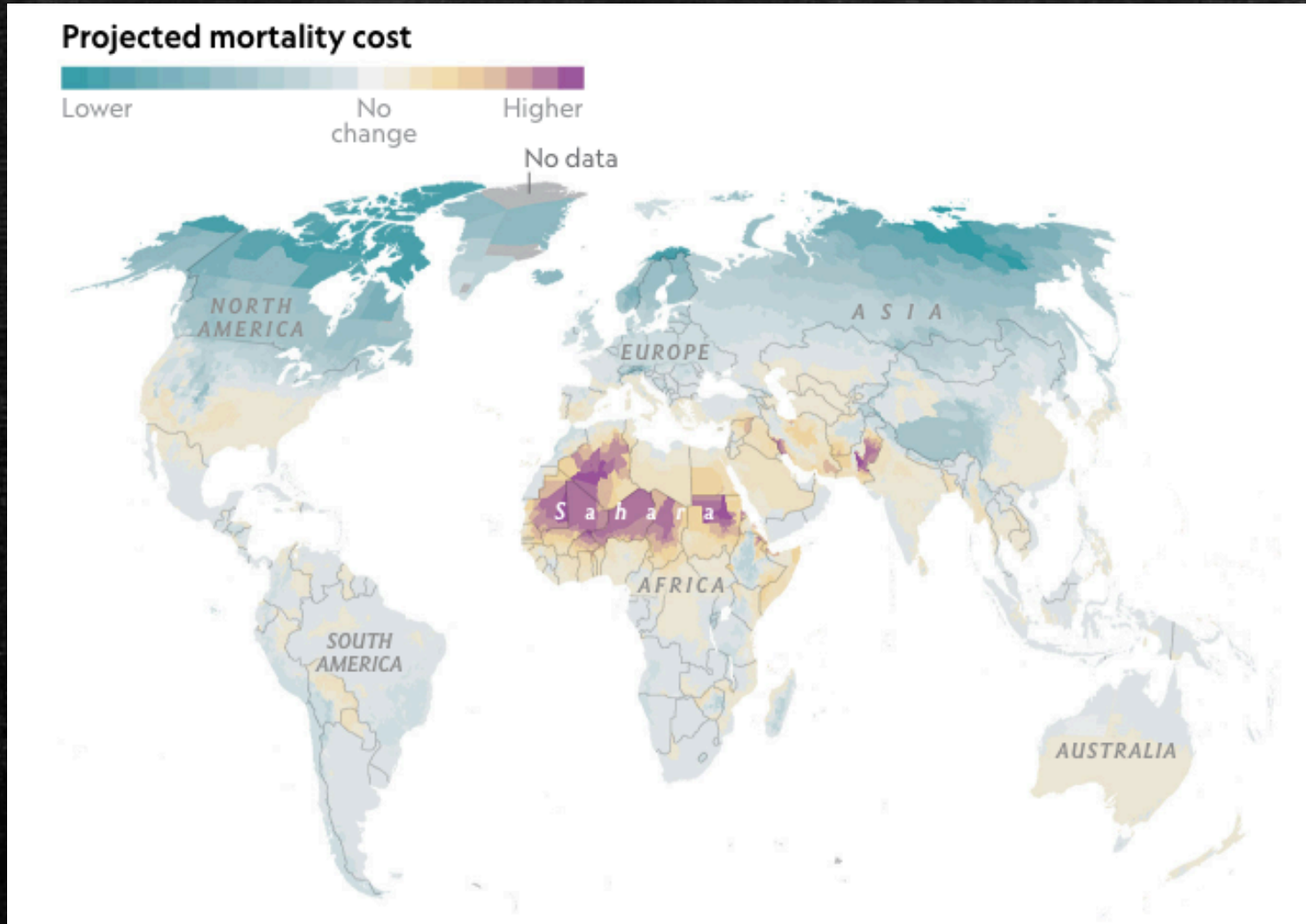
Source: The Science of Climate Change Explained: Facts, Evidence and Proof - <https://www.nytimes.com/article/climate-change-global-warming-faq.html?auth=link-dismiss-google1tap>

The high price of heat



The beginning of a city's line shows its average temperature and mortality cost in 2019; the endpoint of its line shows its projected temperature and mortality cost in 2050.

The high price of heat



The Climate Impact Lab estimates that 86 percent of the global mortality-related cost of climate change is due to deaths, mostly in poor countries.

Greenhouse gases and temperature

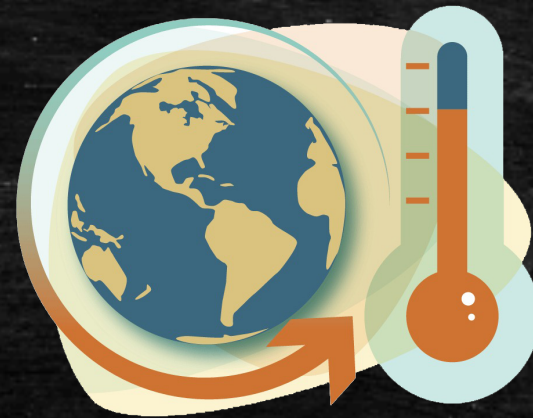
As greenhouse gases released by human activities continue to increase in the atmosphere, heat waves will become longer and individual days will become hotter.

The ultimate solution to global warming, of course, is to drastically reduce our greenhouse gas emissions.



Raising temperature and death toll

If we fail utterly to do that, by 2100 the heat-related death toll could rise above 100,000 a year in the U.S. Elsewhere the threat is far greater: In India, for example, the death toll could reach 1.5 million, according to recent research. And even if we do rein in emissions, the planet will continue to warm for decades.



How to Avoid a Climate Disaster

According to Bill Gates, in a typical year:



51 billion is the number of tons of greenhouses gases added to the atmosphere.

Zero is the number of tons of greenhouses gases we need to achieve by 2050.

Analogy from Bill Gates

"The climate is like a bathtub, that's slowly filling up with water; even if we slow the flow of water to a trickle, the tub will eventually fill up and water will come spilling out onto the floor. That's the disaster we have to prevent. Setting a goal to only reduce our emissions, but not eliminate them, won't do it

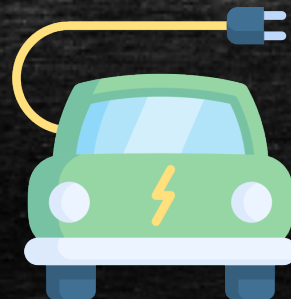
The only sensible goal is zero" – Bill Gates



Can do now, explain Gates

"The key is to be able to make things like electricity, steel, cement and meat without any emissions but at a cost equal or lower than today's cost," Gates said.

"When you buy an electric vehicle or a plant-based burger even though it costs more than the alternative, you're saying to the companies that make these products: 'There's demand for these items. Make more and we'll buy them'"



Source: Bill Gates explains what you can do now to fight climate change

- <https://www.cnn.com/2022/05/20/bill-gates-how-to-fight-climate-change-now.html#:~:text=%E2%80%9CThe%20key%20is%20to%20be,investment%20fund%2C%20Breakthrough%20Energy%20Ventures.>

What to do? Bill Gates

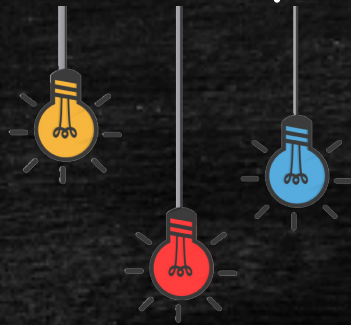
"We need to transform the way we do almost everything...entrepreneurs and investors have to create new businesses and exchange existing businesses to get this solutions deployed...government leaders have to enact new policies that drive the market to clean energy, and activist have to keep their voices loud to make us all accountable for rapid progress".



What to do? Bill Gates

"Avoiding climate disaster will be one of the greatest challenges humans have ever taken on, greater than landing on the moon, greater than eradicating smallpox, even greater than putting a computer in every desk.

My basic optimism about climate change is comes from my belief in innovation, it's our power to invent that makes me hopeful".



CREATIVE THINKING



References

The Science of Climate Change Explained: Facts, Evidence and Proof -

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How To Solve Climate Change: Bill Gates Wants You To Know Two Numbers -

<https://www.forbes.com/sites/kerryadolan/2021/02/14/how-to-solve-climate-change-bill-gates-wants-you-to-know-two-numbers/?sh=d15e4ce531fd>

My new climate book is finally here - <https://www.gatesnotes.com/Energy/My-new-climate-book-is-finally->

[here#:~:text=To%20avoid%20a%20climate%20disaster%2C%20we%20have%20to%20get%20to,the%20rest%20of%20the%20way.](https://www.gatesnotes.com/Energy/My-new-climate-book-is-finally-here#:~:text=To%20avoid%20a%20climate%20disaster%2C%20we%20have%20to%20get%20to,the%20rest%20of%20the%20way.)

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