



THE MORAL CASE FOR FOSSIL FUELS

by Alex Epstein



**CENTER for
INDUSTRIAL
PROGRESS**





Alex Epstein ✓

@AlexEpstein

Following

@billmckibben Duke will host a debate between you+anyone and me+Dr.-Eric-Dennis on the morality of fossil fuels. You'll get \$10K. Deal?

4:15 PM - 25 Jul 2012

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Bill McKibben ✓ @billmckibben · 29 Jul 2012

Replying to @AlexEpstein

@Alexepstein happy to debate \$10k to 350.org, you and me 1 on 1, "Resolved: Humans are causing risky warming," neutral audience



The Opinion Pages

**Dot Earth**NEW YORK TIMES BLOG

CLIMATE CHANGE

Will Storm's Wall Street Impact Influence U.S. Carbon Policy?

BY ANDREW C. REVKIN NOVEMBER 8, 2012 1:46 PM 50

Watch this [video of this week's Duke University debate](#) between [carbon campaigner Bill McKibben](#) and carbon defender [Alex Epstein](#) to see how this plays out.

Who won?

Given that they argued their positions using entirely different framings of costs and benefits, victory is in the eyes of the viewer.

Global Warming's Denier Elite

President Obama has vowed to take action to fight global warming. Meet the polluters, politicians and propagandists who've vowed to stop him



Aerial view of a coal fired power station. Paul Langrock/Zenit/laif

Alex Epstein

President and founder, Center for Industrial Progress

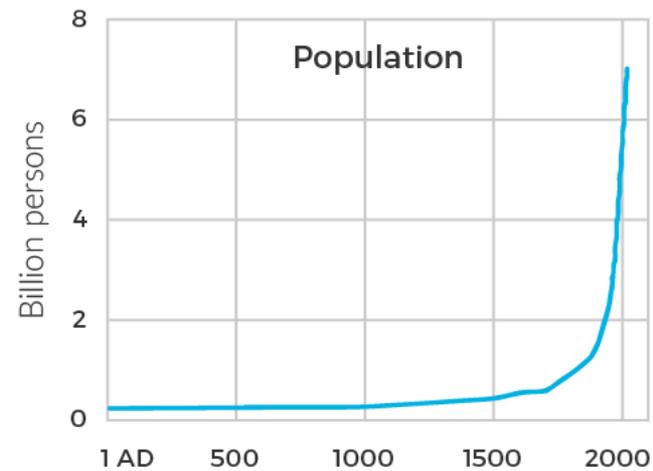
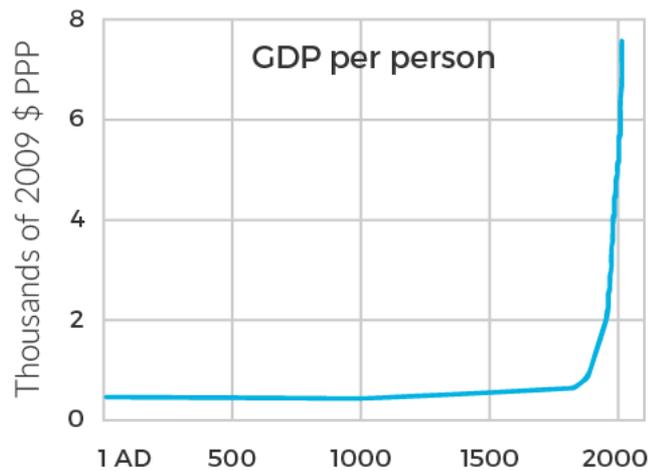
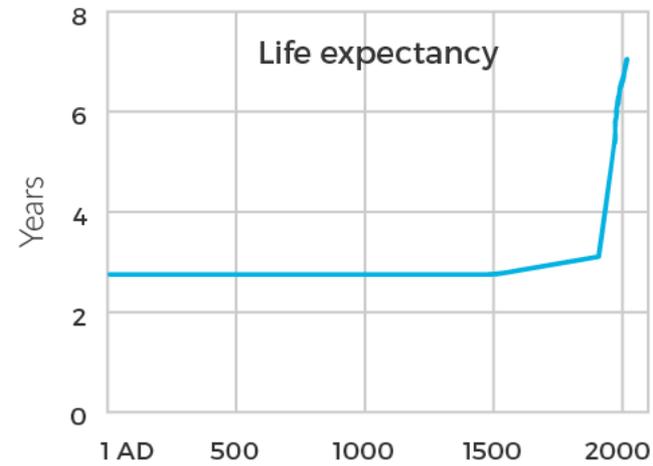
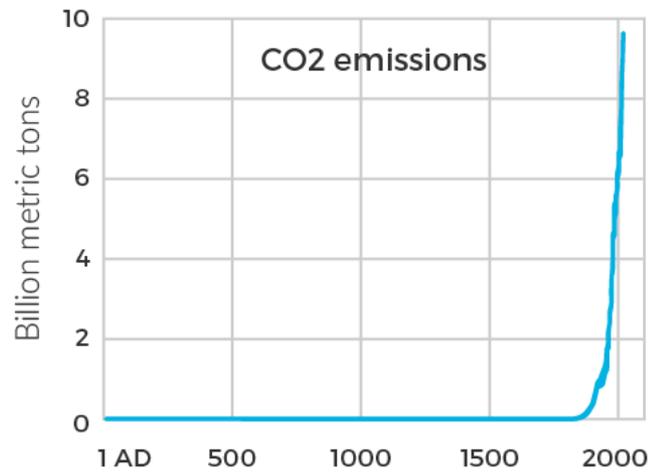
The youthful Epstein tours college campuses debating environmentalists and promoting the benefits of oil and coal to modern society; "Fossil Fuels Improve the Planet" was the title of his April talk at Vassar. Recently he termed the Tesla Model S "a coal car" because "the electricity in an 'electric car' must come from somewhere – and that somewhere is usually fossil fuels." And in April, Epstein told a Canadian oil-industry gathering, "Thank you for producing the lifeblood of civilization."

Craig Idso

Chairman, Center for the Study of Carbon Dioxide & Global Change

A leading skeptic who believes that rising carbon levels are actually a

CPR energy is fundamental to flourishing -- and difficult



Our global energy discussion is:

1

Biased

2

Sloppy

3

Anti-human

Perfect Planet Premise

Stable
Safe
Sufficient

Humans are polluter-parasites

Goal: minimize human impact

Perfectible Planet Premise

Dynamic
Dangerous
Deficient

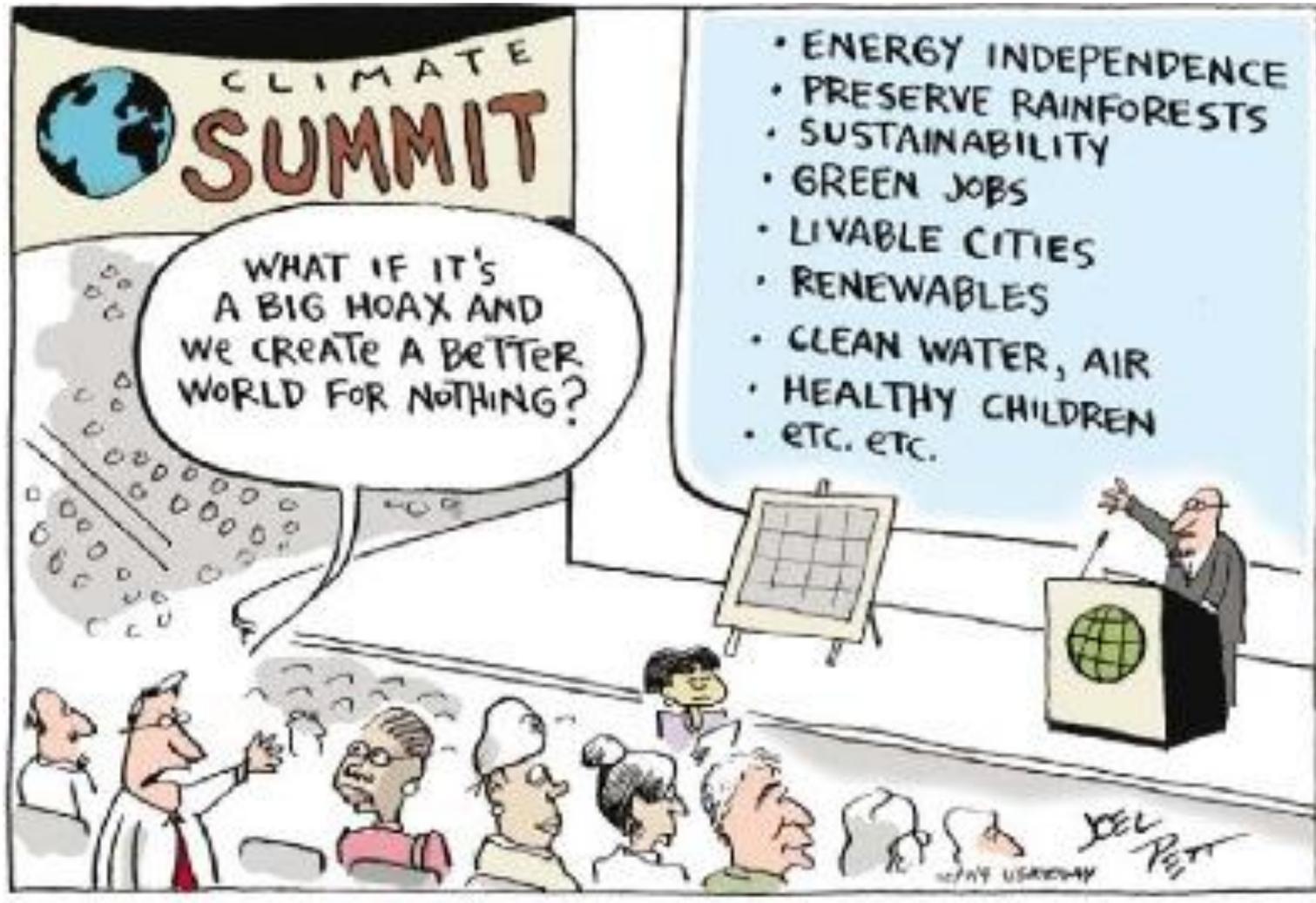
Humans are perfecter-producers

Goal: Maximize human flourishing
through intelligent transformation

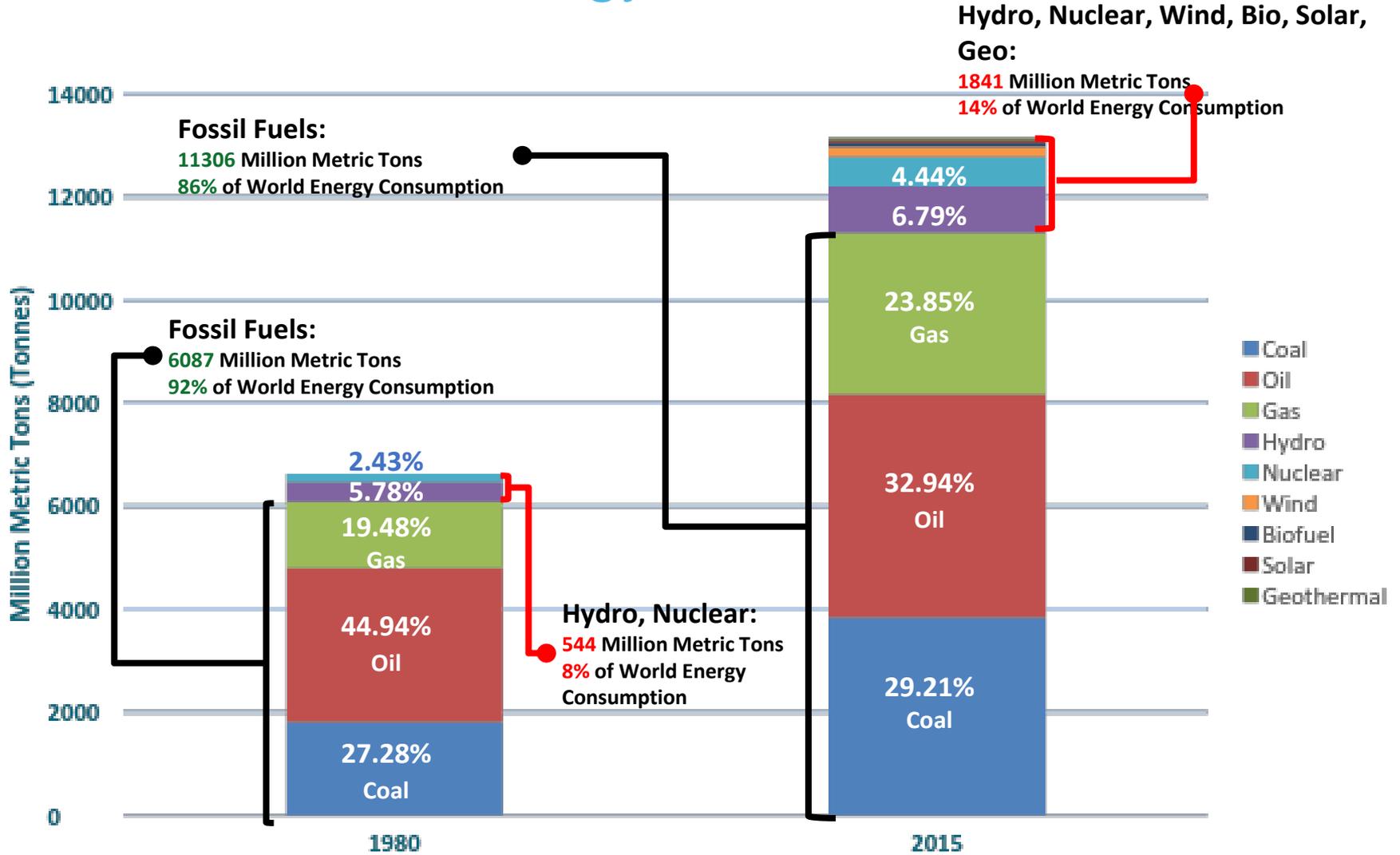
Full Context

Potential unique benefits (access to energy, CO₂), potential unique risks (CO₂, pollution, depletion) for human flourishing.

“Renewables”: free and forever?



The truth about energy



Source: BP, Statistical Review of World Energy 2015, Historical data workbook

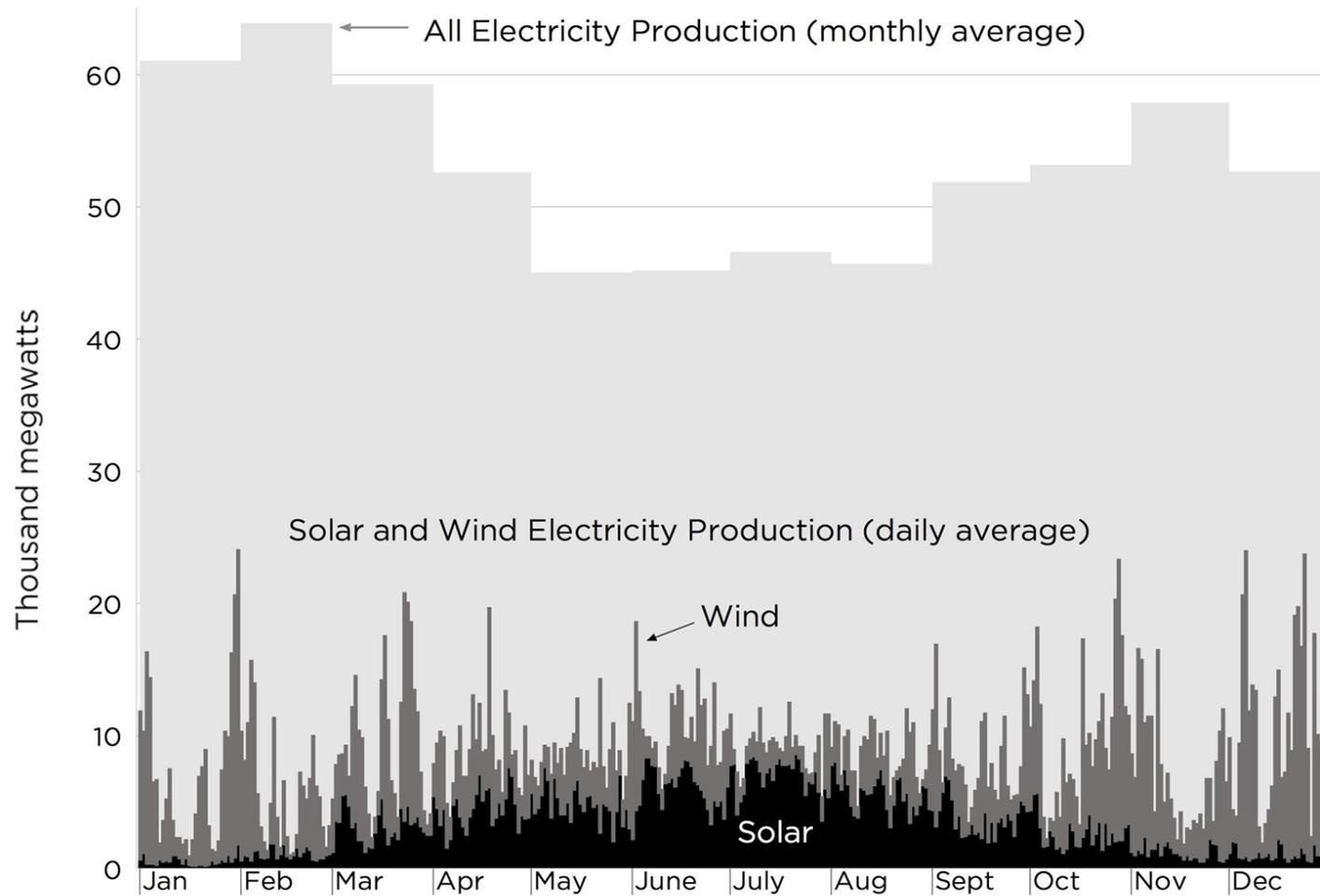
Jimmy Fallon makes the world's best case...



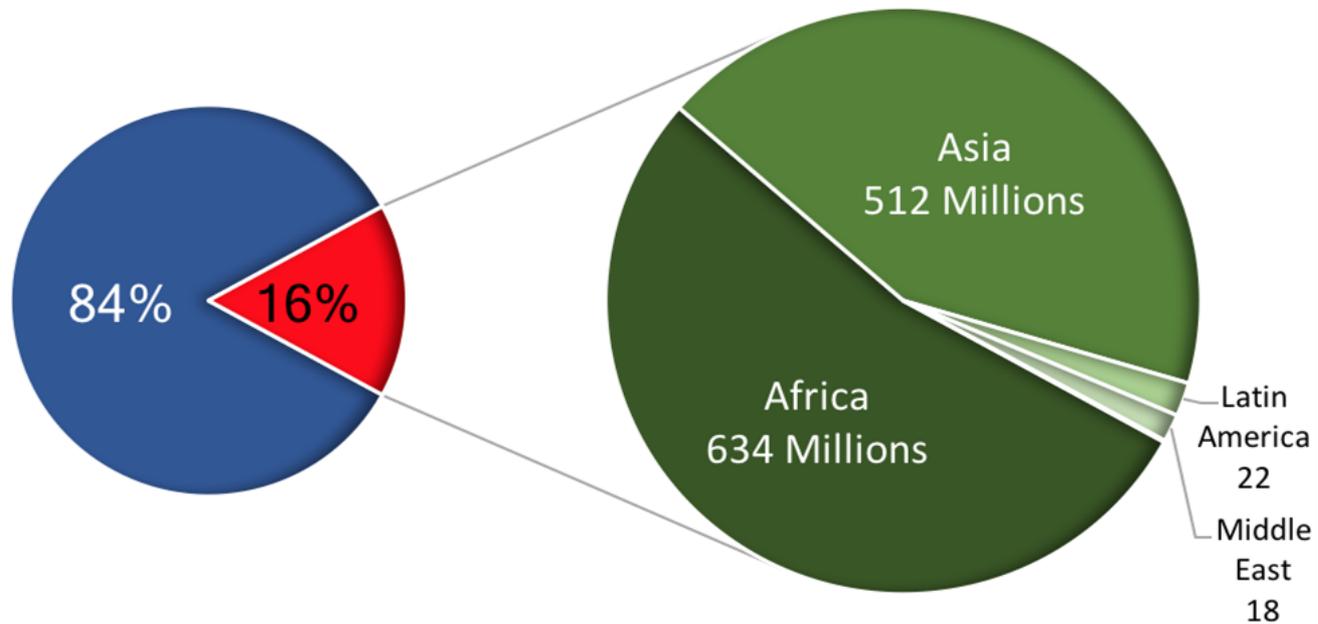
Every energy technology is a resource-intensive process—some are much more resource-intensive than others

Mining
Processing
Manufacturing
Transportation
Operation
Maintenance
Disposal

The truth about unreliable: Germany

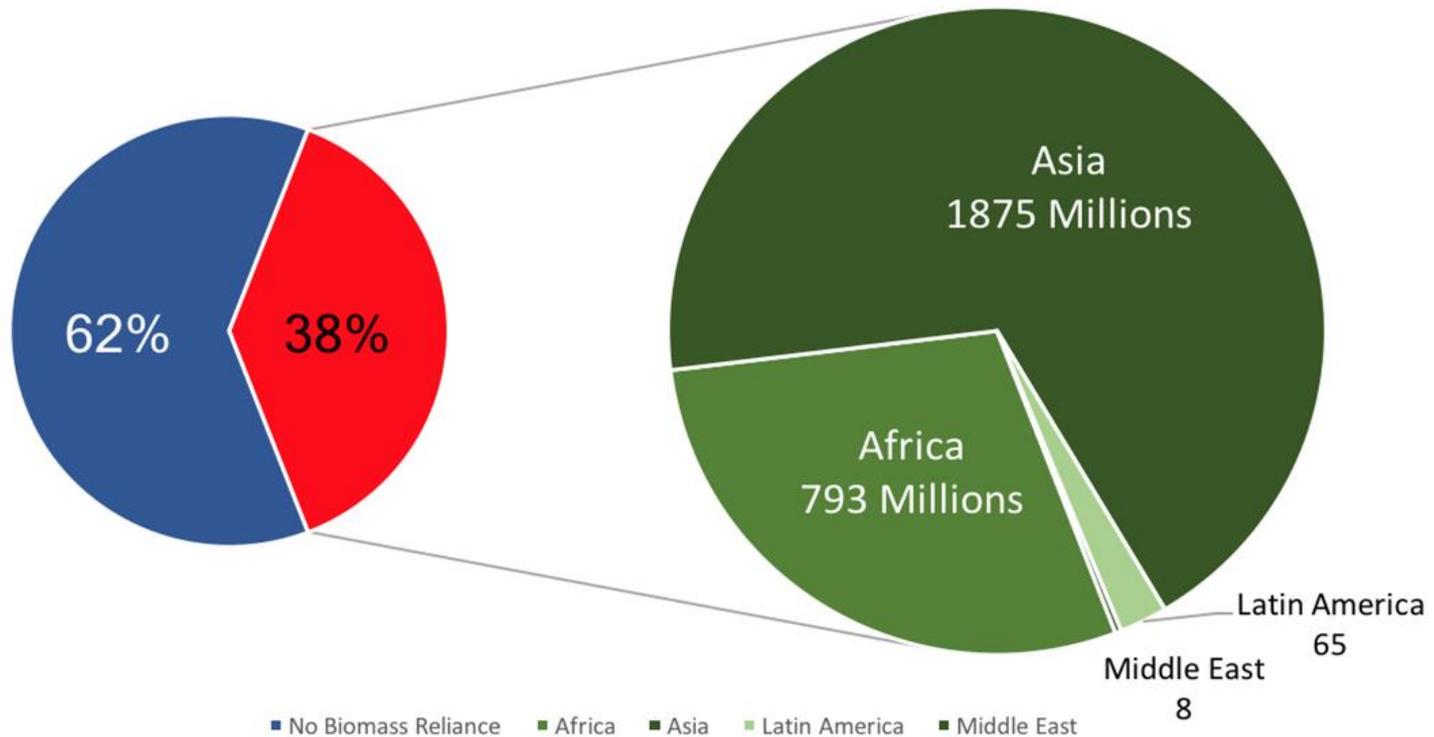


1.2 billion humans without access to electricity



■ Access to Electricity ■ Africa ■ Asia ■ Latin America ■ Middle East ■ Other

2.7 billion humans rely on biomass for cooking and heating



The unique benefits of fossil fuel use place an extremely high burden of proof on any restrictive proposals.

There are three main concerns about fossil fuels:

catastrophic
resource
depletion



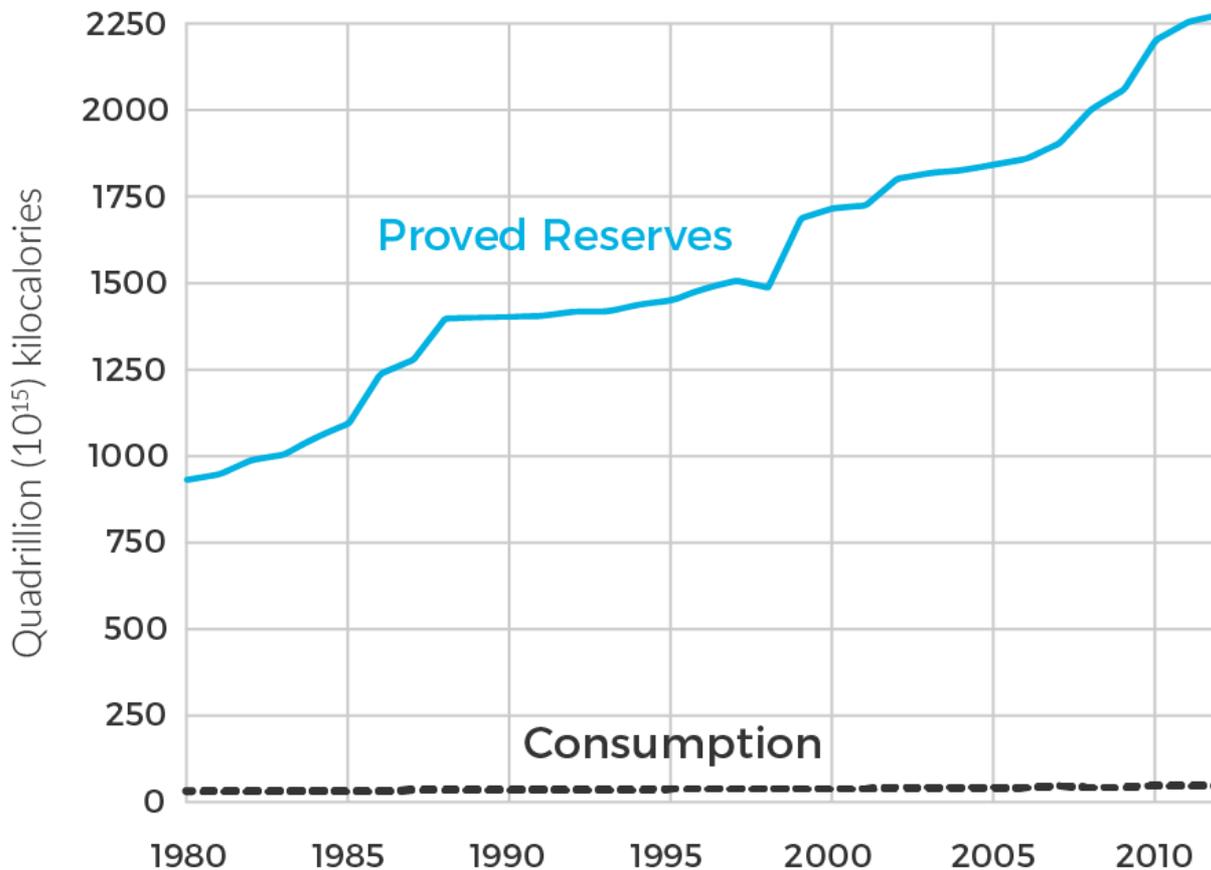
catastrophic
pollution



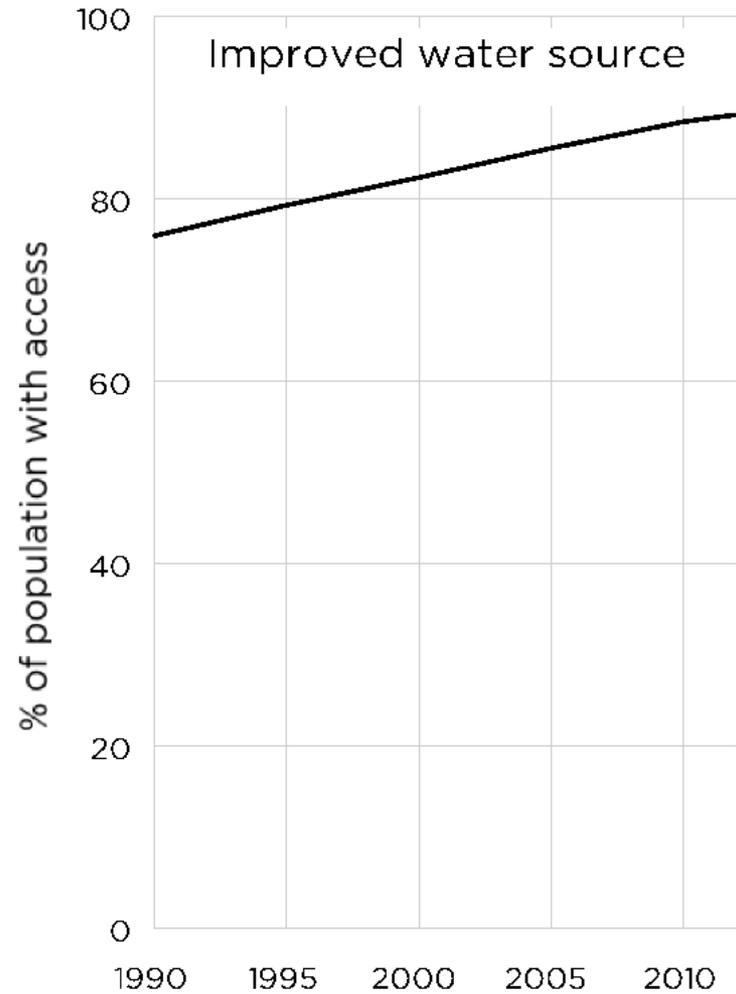
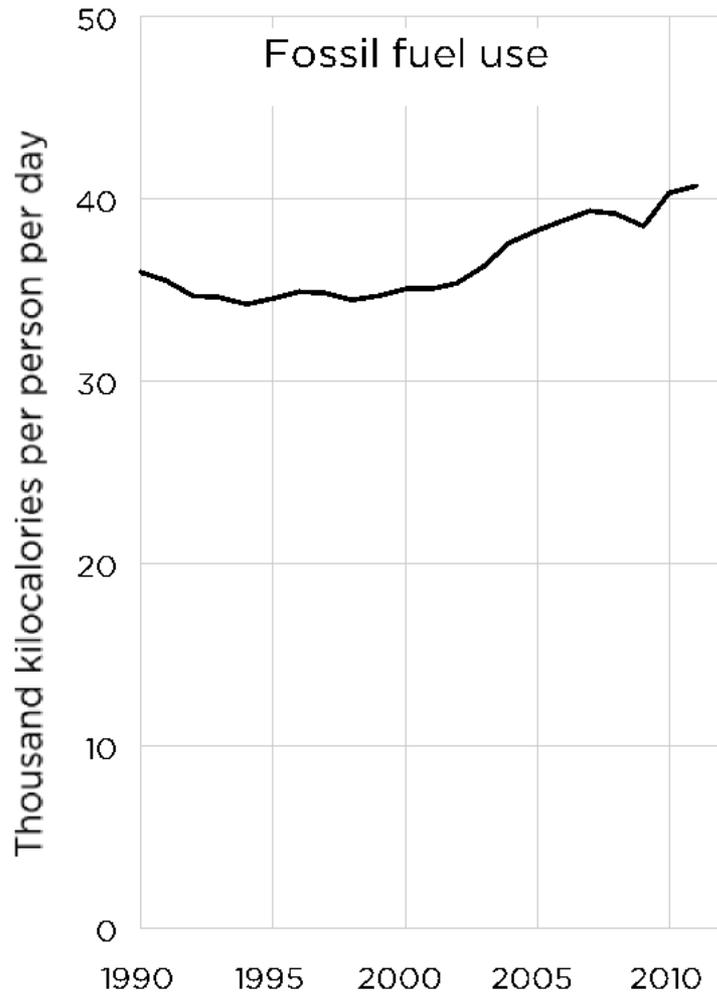
catastrophic
climate
change



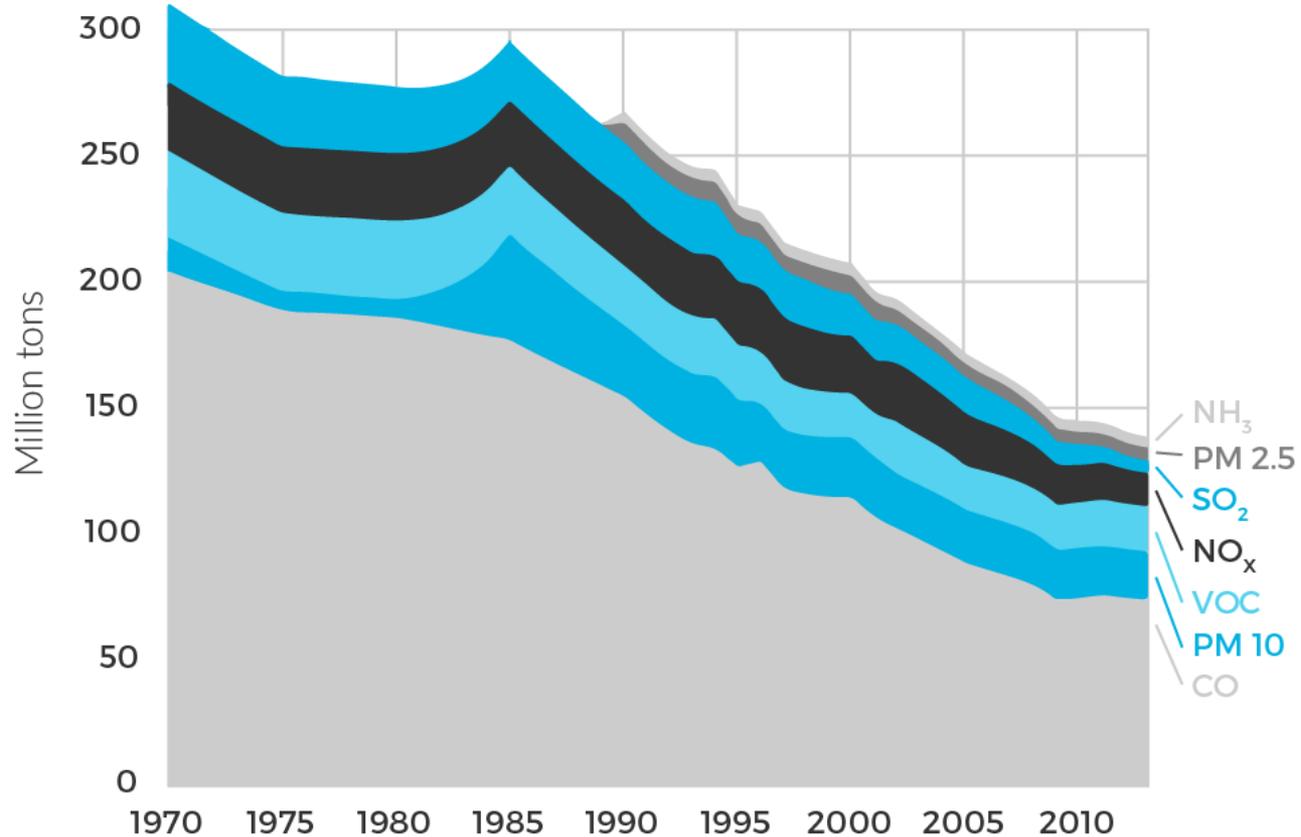
We have untold amounts of potential hydrocarbon resources – over 10X more than we've used in the history of civilization.



More fossil fuels, better water



As fossil fuel use has gone up in the US, concentrations of air pollutants have gone down.



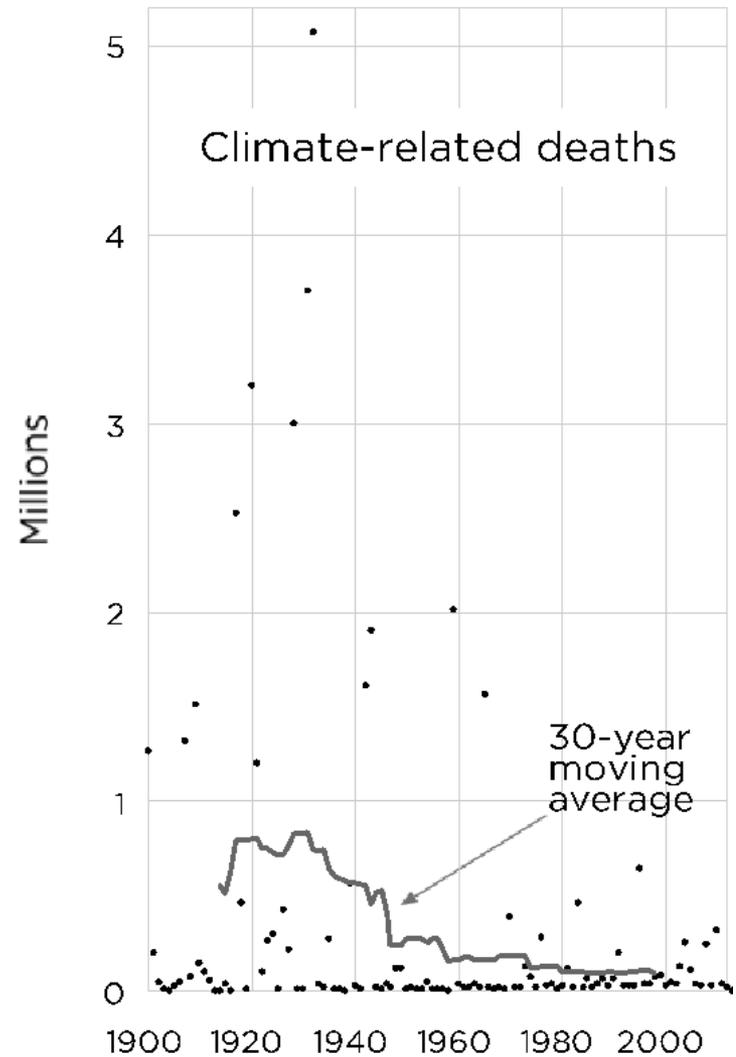
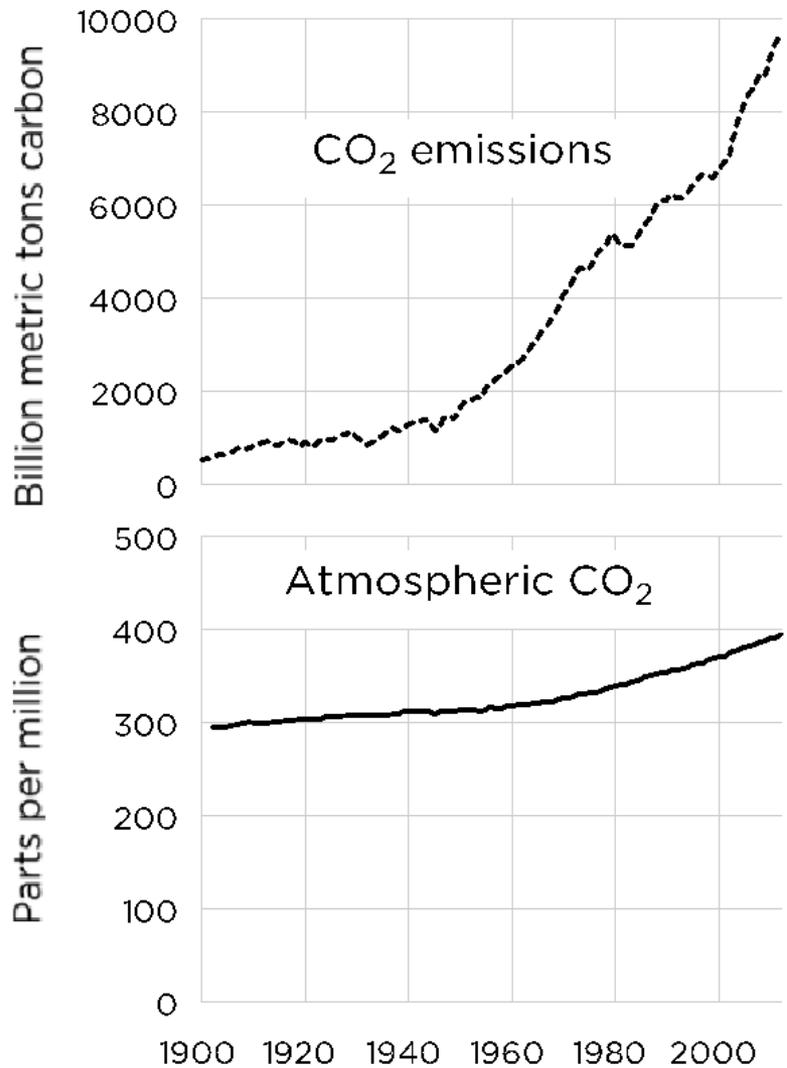


Assessing climate livability

1. The greenhouse effect
2. The fertilizer effect
3. The protection effect

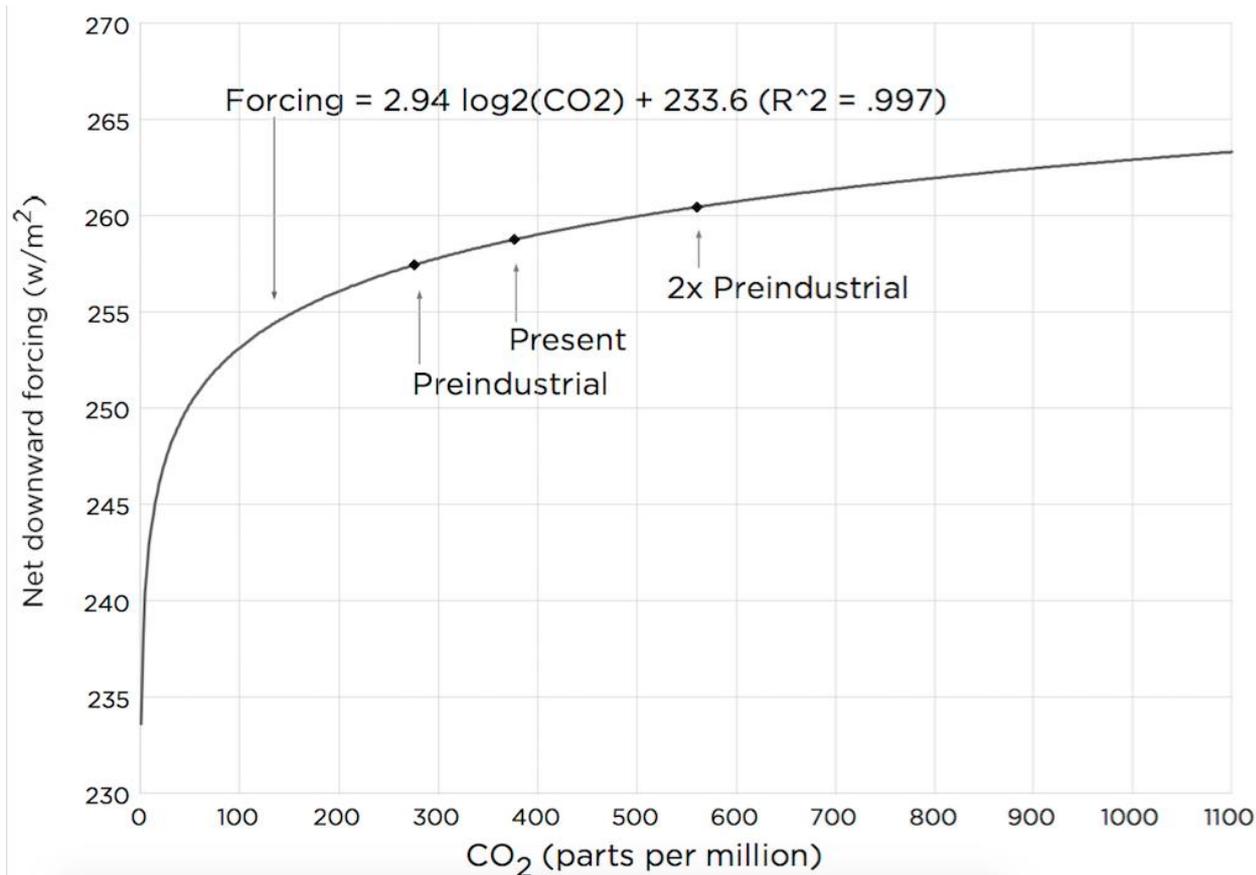


Climate-related deaths



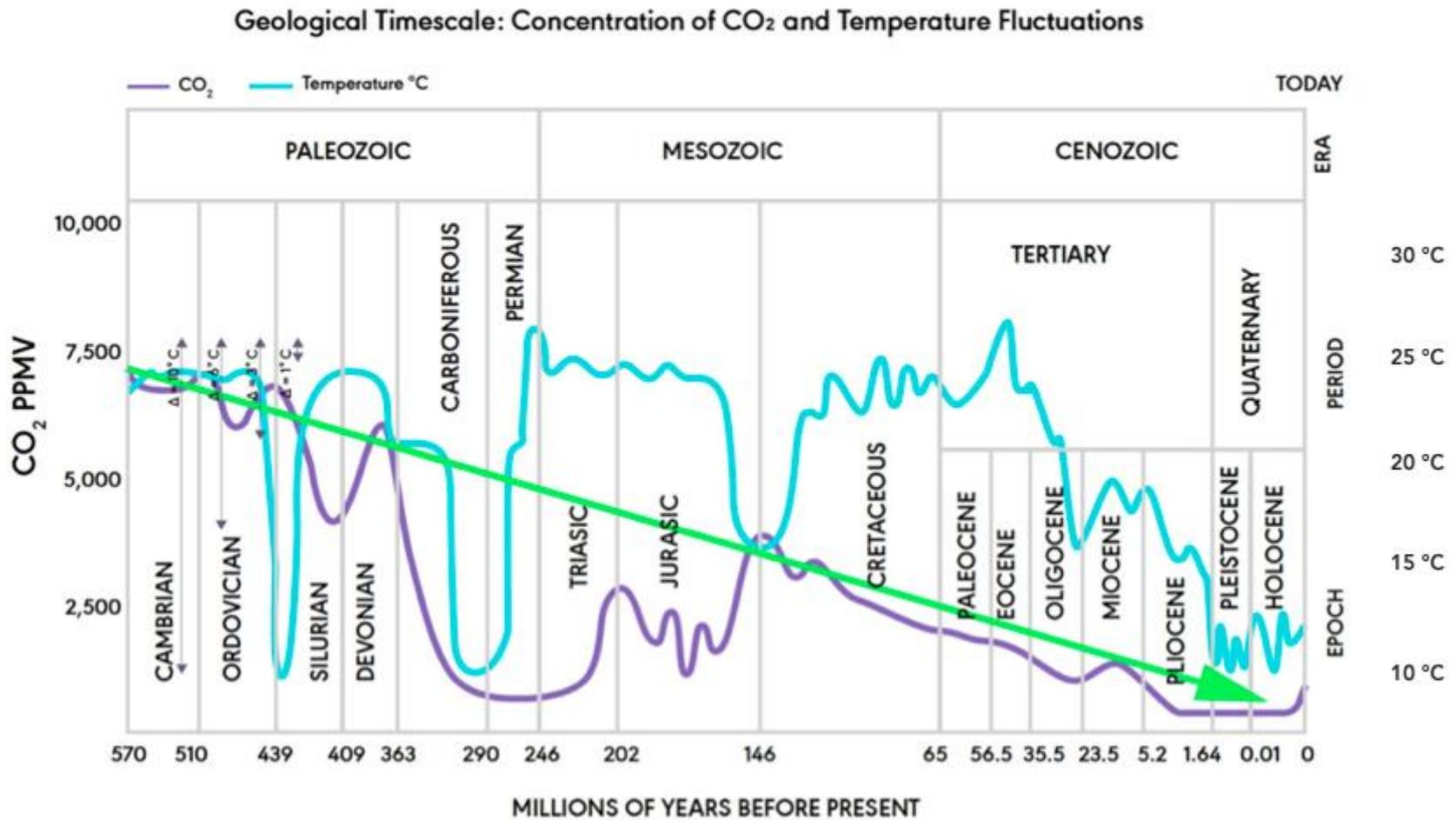
The greenhouse effect of CO₂ is a diminishing effect.

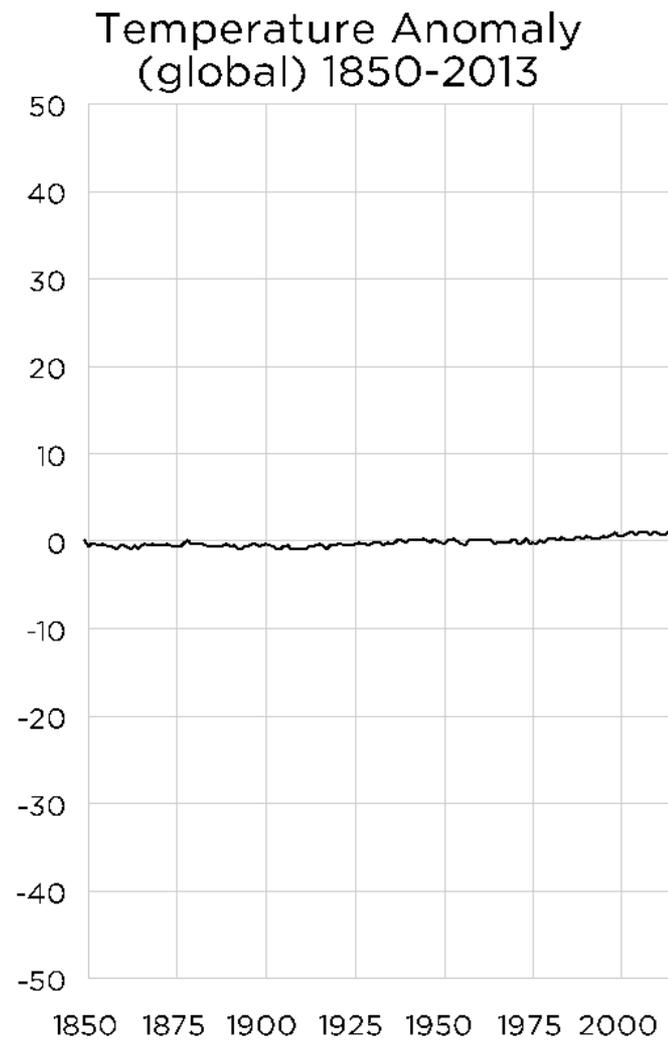
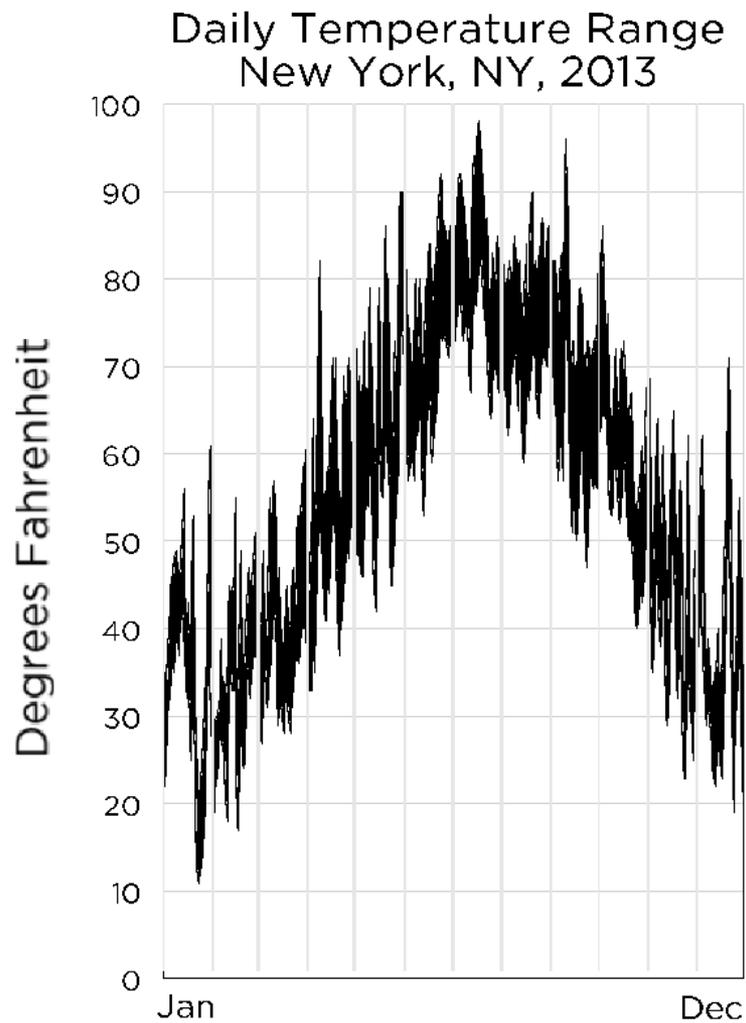
How does the **greenhouse effect** work? CO₂ absorbs parts of the infrared radiation coming from the planet's surface and traps part of the heat energy temporarily.



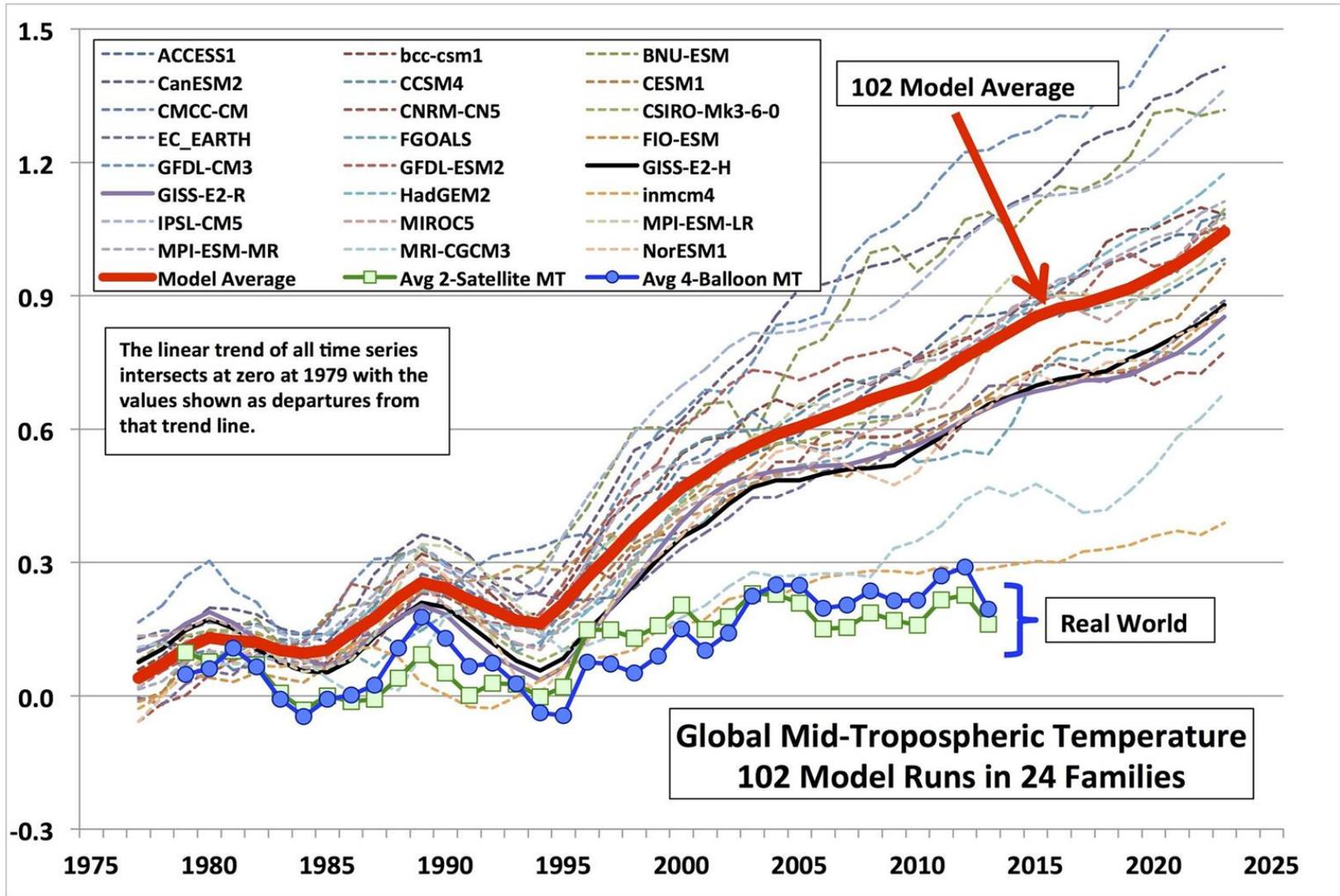
It's a
diminishing,
logarithmic
effect.

Geological timescale: concentrations of CO₂ and temperature fluctuations

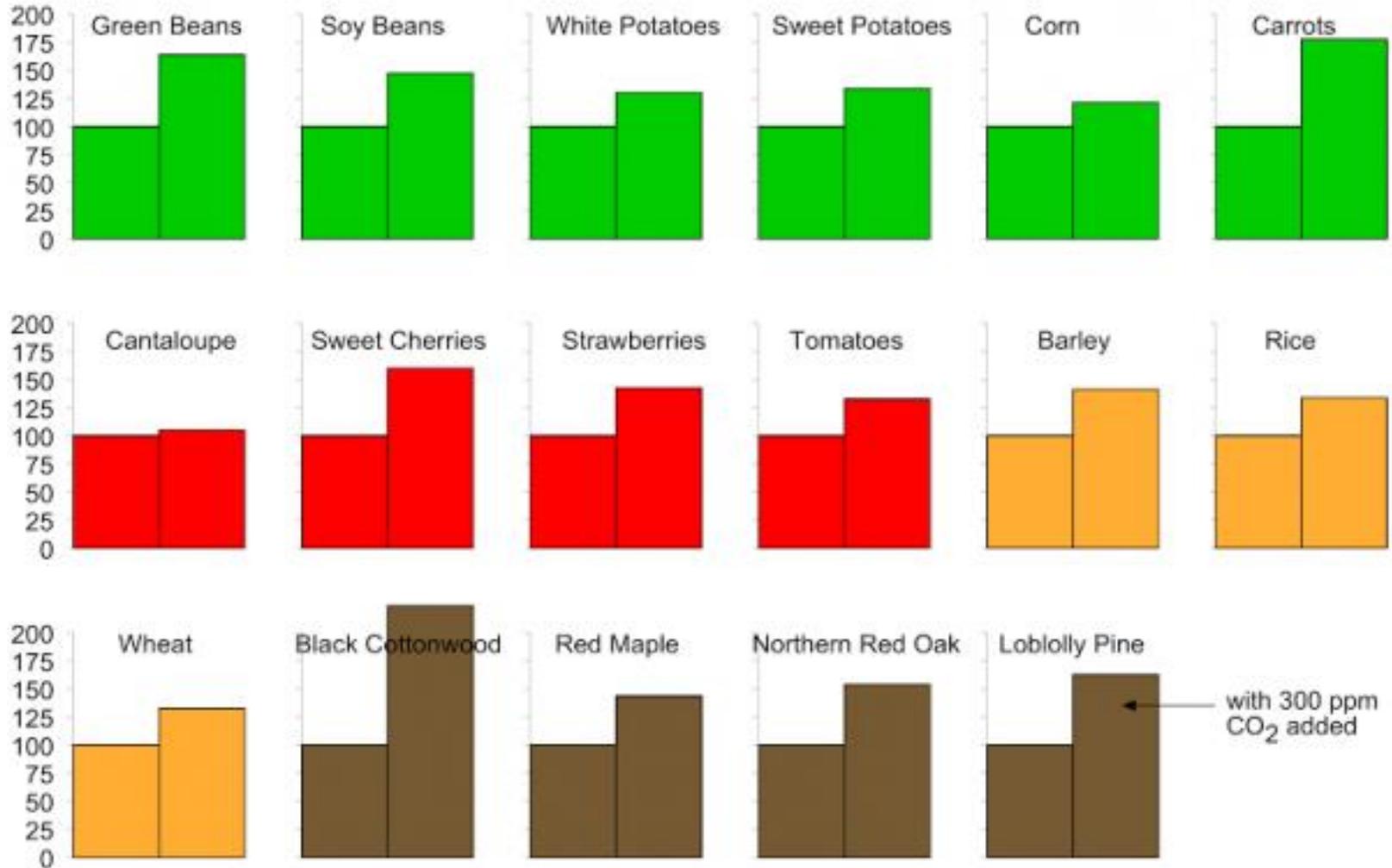




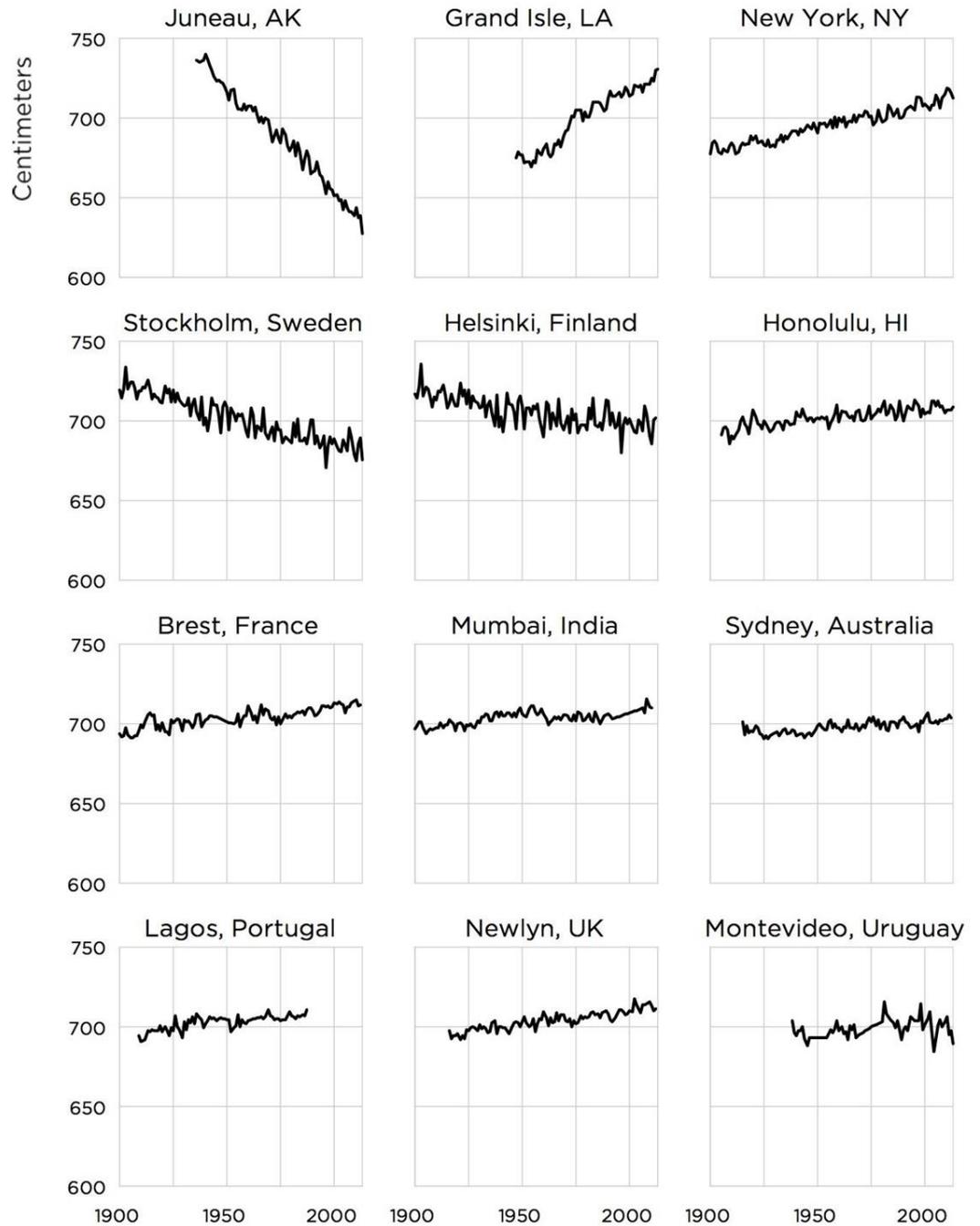
Current climate models that can't predict climate



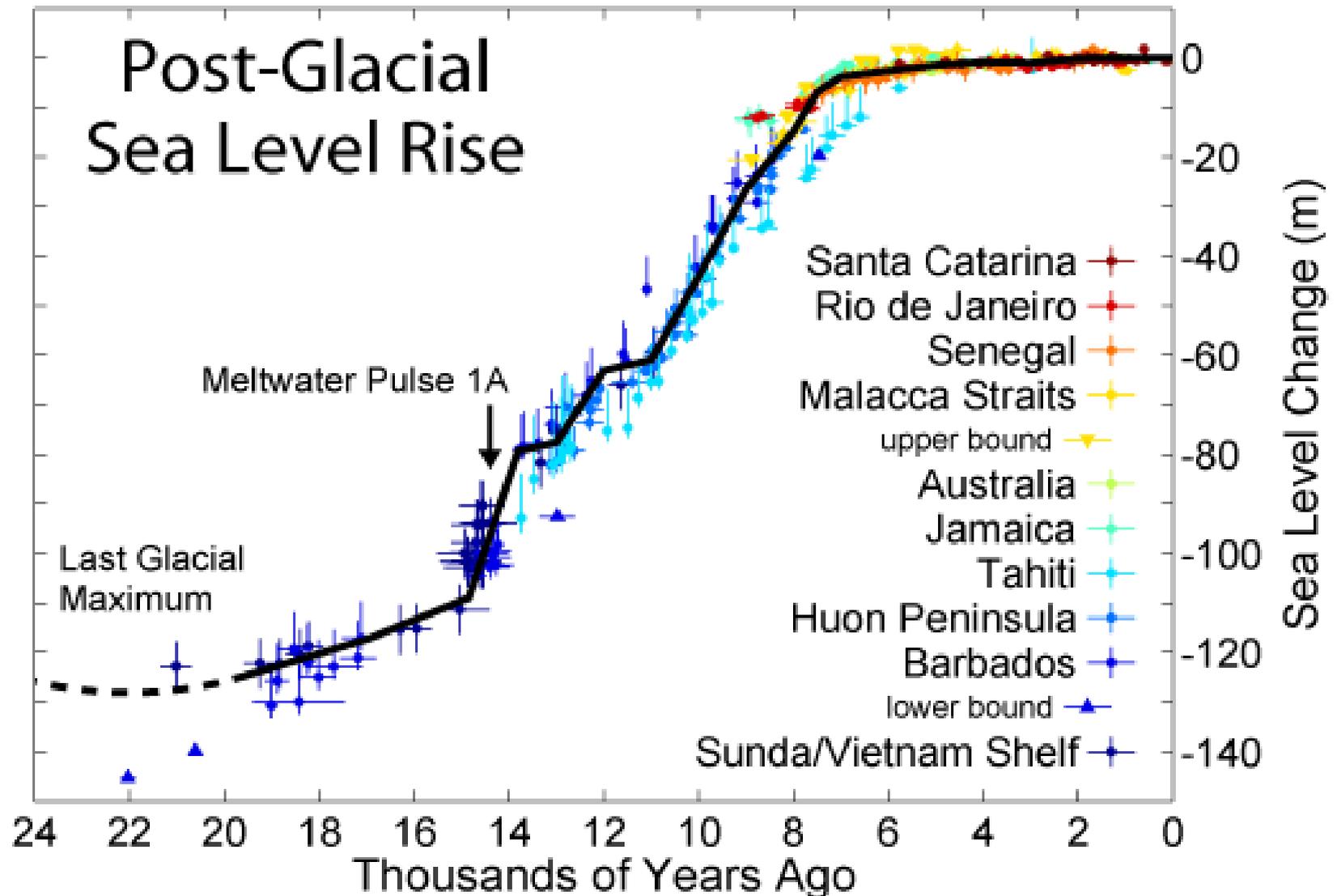
The fertilizer effect of CO₂ is significant.



Sea level trends around the world



The historical context





If our goal is human flourishing and we look at the full context there is a strong moral case for using more fossil fuels, not less.



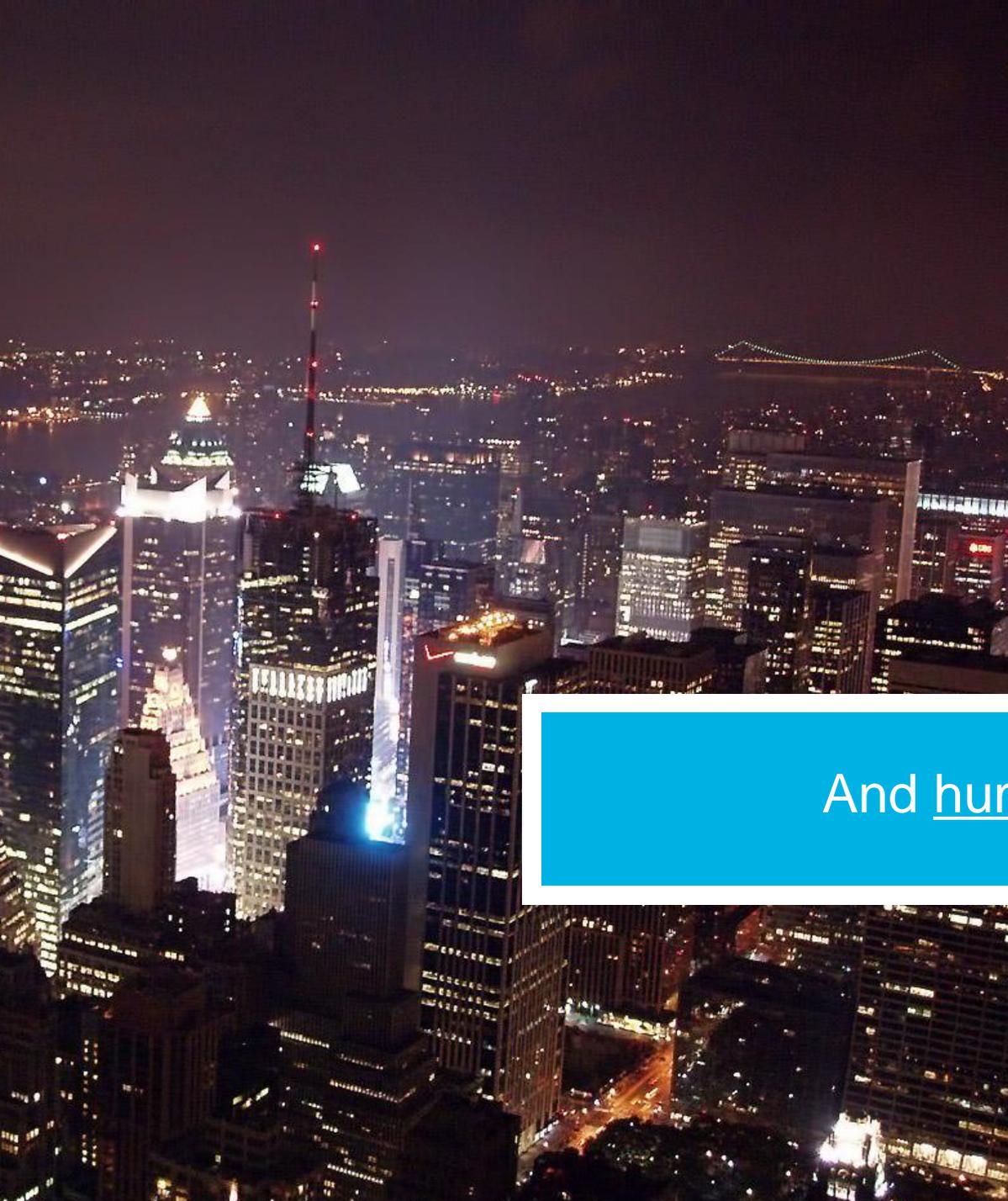
Human flourishing, not minimum impact, should be the guiding principle of energy progress.



And technological progress



The Human Flourishing Project



And human progress

