

Down The Awareness Rabbit Hole

Jonathan Frost

We must accept responsibility for a problem before we can solve it. We cannot solve a problem by saying 'It's not my problem.' We cannot solve a problem by hoping that someone else will solve it for us. I can solve a problem only when I say 'This is my problem and it's up to me to solve it.'

M. Scott Peck

The first step in solving a problem is to recognize that it does exist.

Zig Ziglar

What are the biggest problems that hide in plain sight?

How can they be shown quickly and clearly?

What actions can we take?

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The Great Acceleration

What is it?

The Great Acceleration refers to the dramatic, continuous, and roughly simultaneous surge in growth rates across a range of measures of human activity, from population and economy to resource use, which began in the mid-20th century. This phenomenon has led to unprecedented environmental changes and impacts, reflecting the increasingly significant influence of human activity on the Earth's systems.

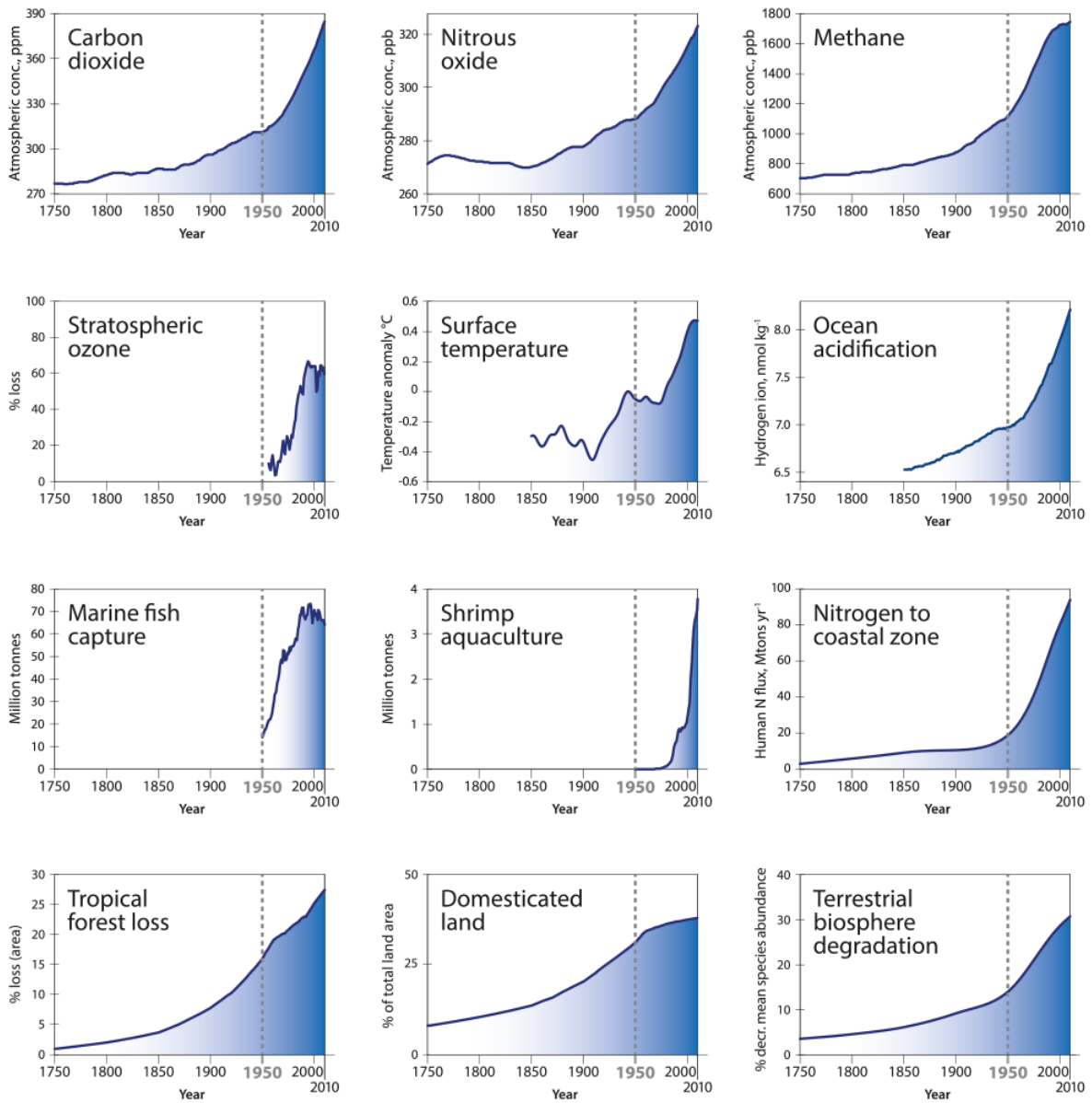
Why is it important?

The Great Acceleration is important to our standard of living because it has facilitated advancements in technology, healthcare, and economic growth, significantly improving quality of life and life expectancy worldwide. However, it also raises critical sustainability challenges, as the rapid increase in resource consumption and environmental impact threatens the long-term health of the planet, upon which our standard of living ultimately depends.

What can I do about it?

To mitigate the effects of the Great Acceleration, we can adopt sustainable practices like reducing carbon emissions, conserving natural resources, and shifting towards renewable energy sources. Additionally, supporting policies and innovations that promote environmental protection, efficient resource use, and a circular economy can help balance human progress with the planet's health.

Earth system trends

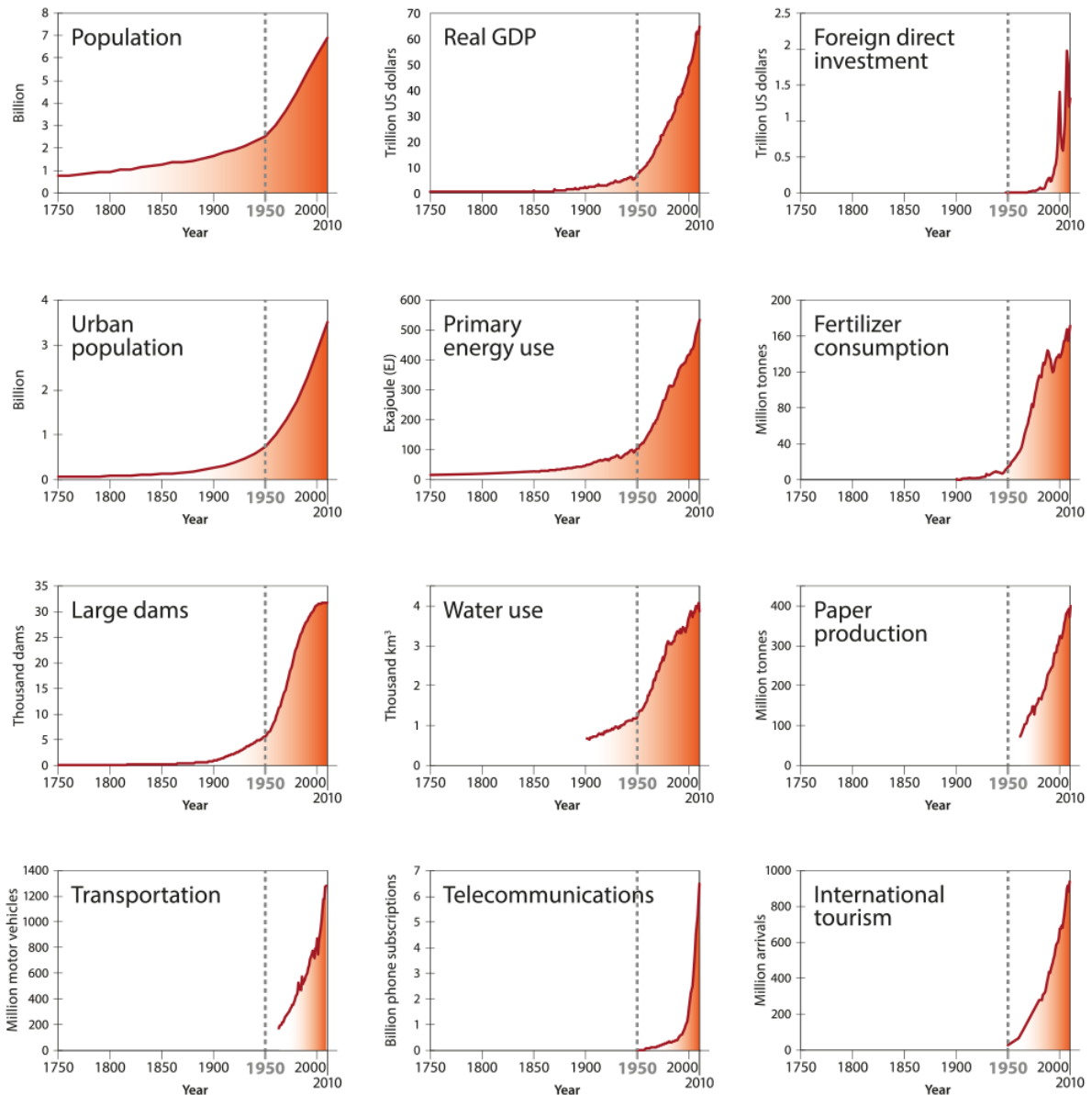


This shows the exponential growth of selected physical environmental quantities over recent centuries.

Earth System Trends

https://futureearth.org/wp-content/uploads/2015/01/great_accel-12graph-ES.png

Socio-economic trends



This shows the exponential growth of selected physical activities over recent centuries.

Socio Economic Trends

https://futureearth.org/wp-content/uploads/2015/01/great_accel-12graph-SE.png

Slide show

<https://futureearth.org/2015/01/16/the-great-acceleration/>

Limits to Growth

What is it?

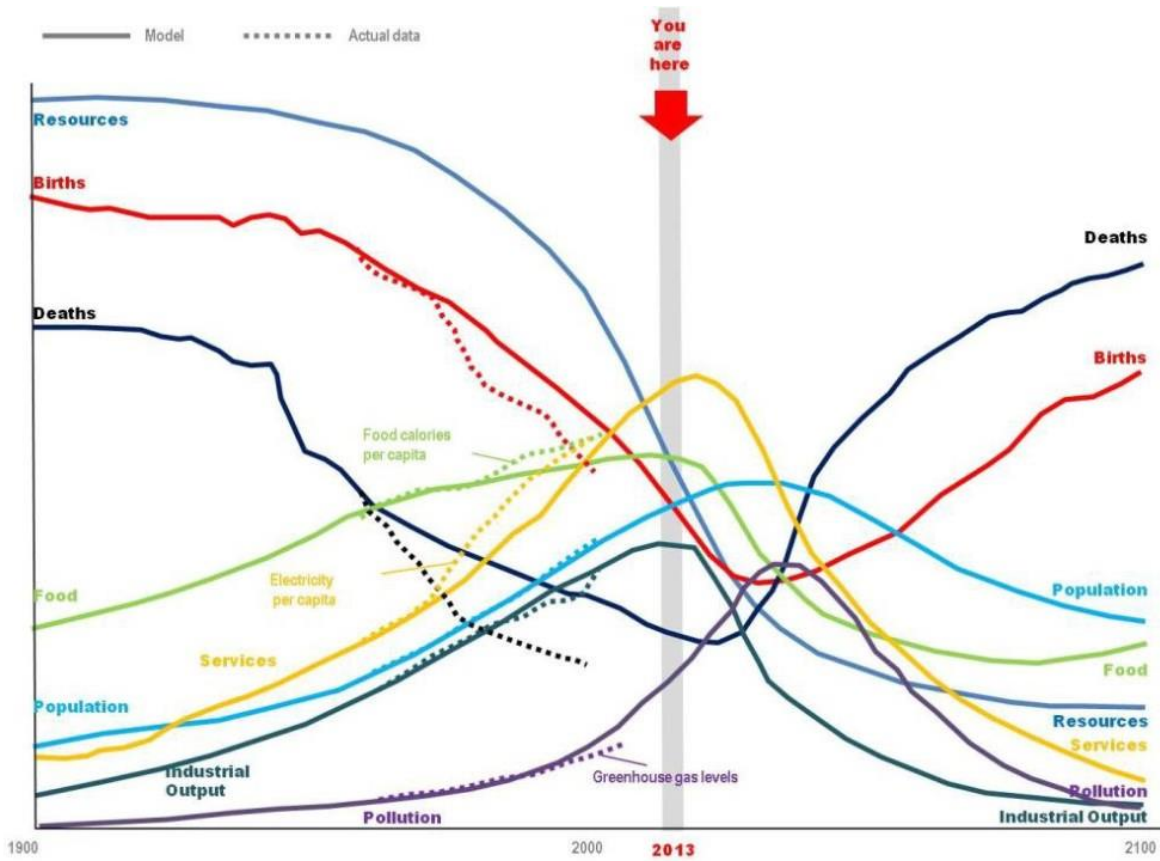
"Limits to Growth" is a 1972 report published by the Club of Rome, which used computer modelling to analyse the long-term consequences of unchecked economic and population growth on the Earth's ecosystems. The report warned of potential global crises due to resource depletion, pollution, and other environmental impacts if sustainable practices were not adopted.

Why is it important?

"Limits to Growth" is important to our standard of living as it highlights the critical balance between economic development and environmental sustainability, underscoring the need for responsible resource management to maintain a high quality of life. The report serves as a cautionary tale, emphasizing that neglecting environmental limits could lead to significant declines in global health, prosperity, and social stability, affecting our standard of living adversely.

What can I do about it?

To address the concerns raised in "Limits to Growth," we can prioritize sustainable development practices, such as investing in renewable energy, efficient resource use, and promoting a circular economy to reduce waste and environmental impact. Additionally, fostering global cooperation and policy-making focused on sustainable resource management and environmental conservation is crucial to ensure a balanced and sustainable standard of living for future generations.



This shows results of a computer model of human population, resource and activities developed in the 1970s. The dotted lines show good agreement between measurements and model after the calculations of 1970 until 2000.

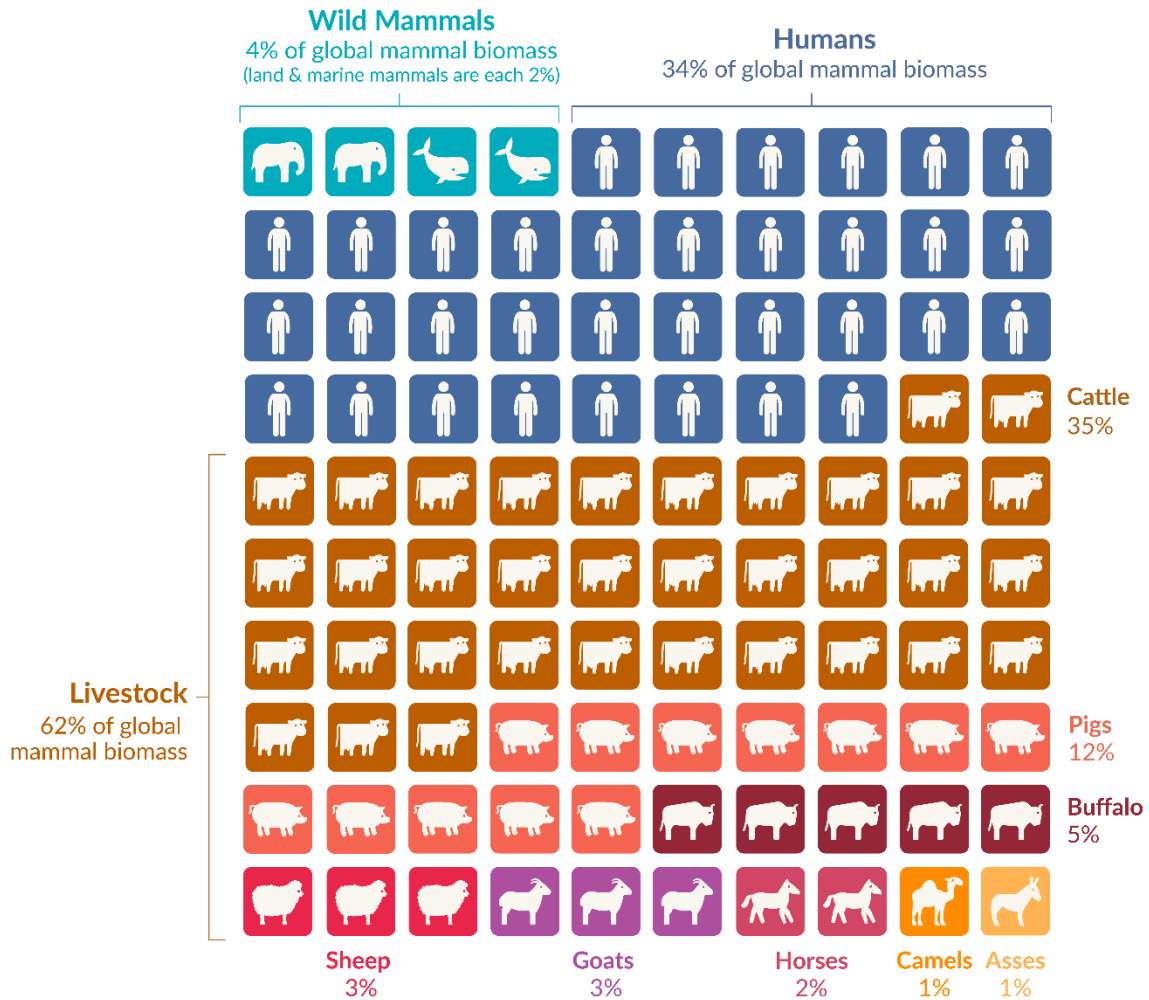
Limits to Growth Update

<https://www.linkedin.com/pulse/limits-growth-none-dirk-bruere/>



Distribution of mammals on Earth

Mammal biomass is measured in tonnes of carbon, and is shown for the year 2015. Each square corresponds to 1% of global mammal biomass.



Note: An estimate for pets has been included in the total biomass figures, but is not shown on the visualization because it makes up less than 1% of the total.

OurWorldinData.org – Research and data to make progress against the world's largest problems.

Licensed under CC-BY by the authors Hannah Ritchie and Klara Auerbach.

This shows that the mass of humans and domesticated animals far outweighs that of wild animals globally.

Human and Other Mammal Biomass

<https://assets.ourworldindata.org/uploads/2021/03/Distribution-of-earths-mammals.png>

Peak Oil

What is it?

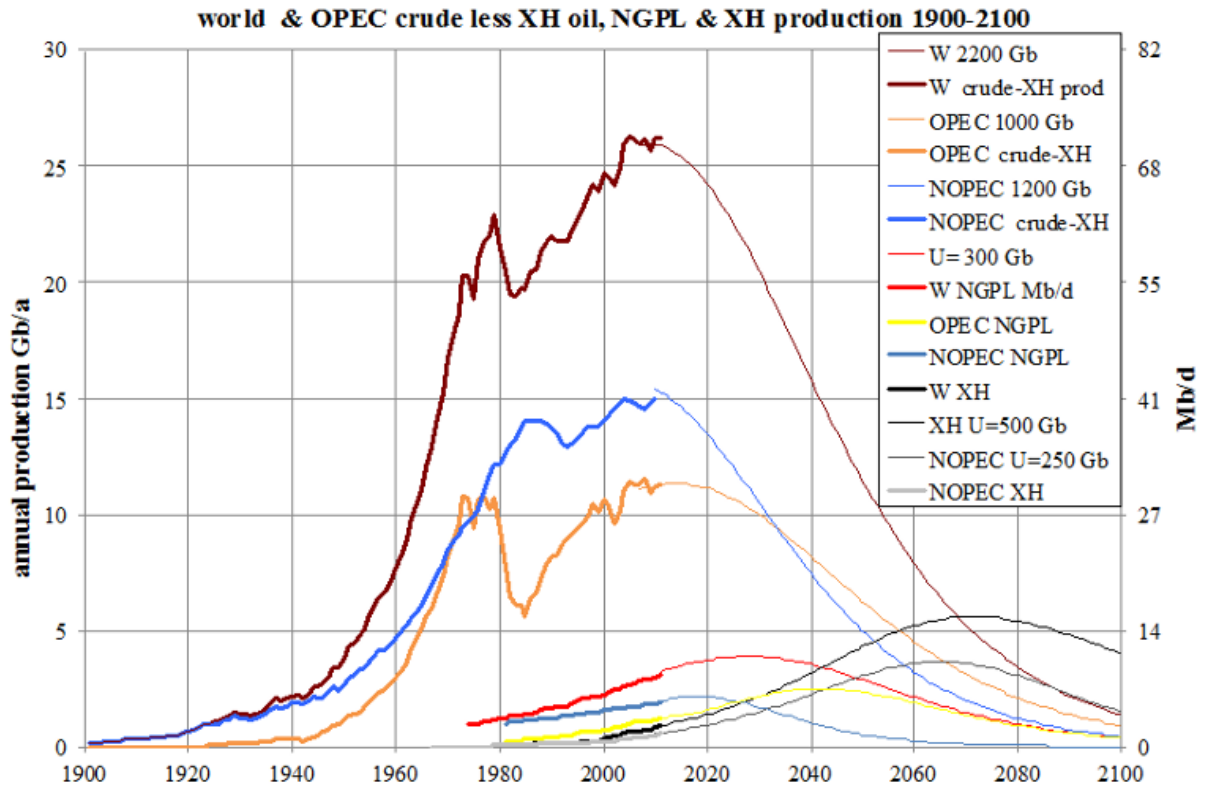
Peak oil theory posits that global oil production reaches a maximum rate, after which it will irreversibly decline due to the finite nature of oil reserves and geological constraints. This concept underscores the challenges of depending on a limited resource for energy, highlighting the need for alternative energy sources and strategies for sustainable energy consumption.

Why is it important?

Peak oil theory is important to our standard of living as it signals the potential for increased energy costs and economic instability as oil production begins to decline, affecting everything from transportation to the production of goods. This scenario underscores the urgency of transitioning to renewable energy sources and improving energy efficiency to sustain and improve our quality of life in a post-peak oil world.

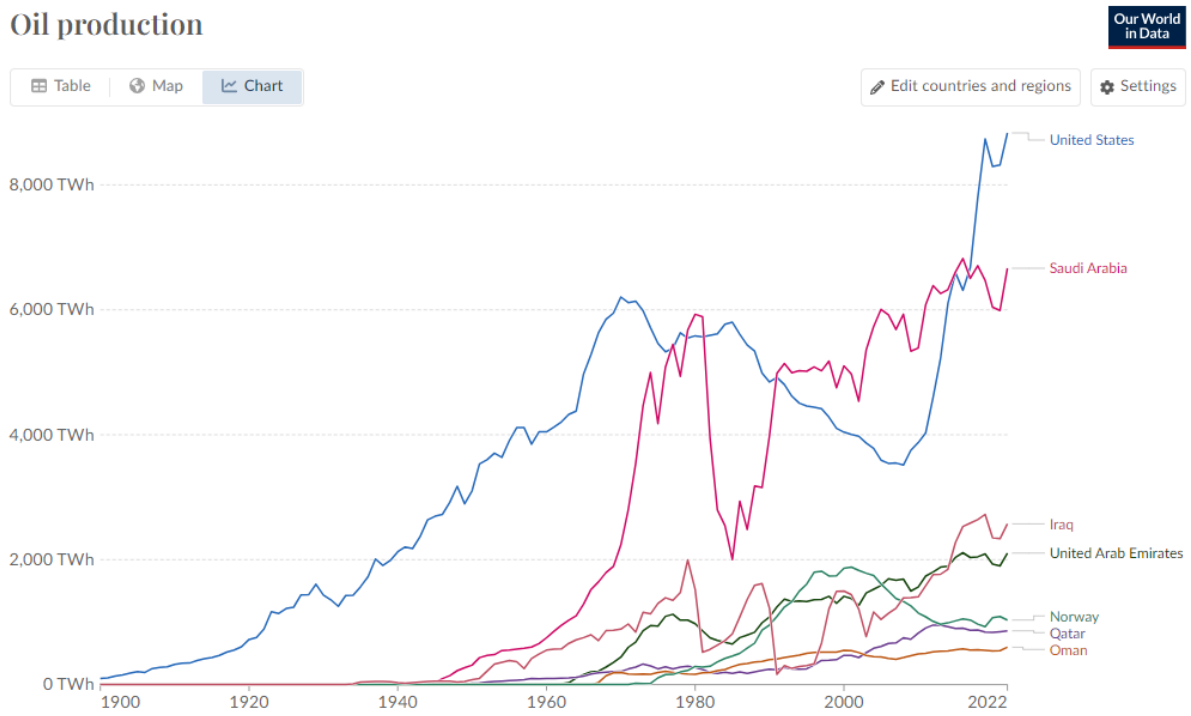
What can I do about it?

To mitigate the effects of peak oil, we can accelerate the transition to renewable energy sources like solar, wind, and geothermal, invest in research and development of sustainable technologies and massively reduce our consumption of goods and services. Additionally, adopting energy-efficient practices in industries, transportation, and homes, along with promoting public transportation and electric vehicles, can reduce our reliance on oil and ease the transition to a more sustainable energy future.



This shows the actual and projected global liquid oil production from 1900 to 2100. Note that shale related production is not shown here.

<https://www.resilience.org/stories/2018-03-12/the-world-oil-supply-is-infinite-i-know-that-because-i-believe-it/>



This shows the global liquid oil production since 1900 for top producer nations. Note the recent peak in production in the USA from shale fields.

Best Our World in Data

<https://ourworldindata.org/grapher/oil-production-by-country?time=earliest..2022>

Climate Change- Global Temperature

What is it?

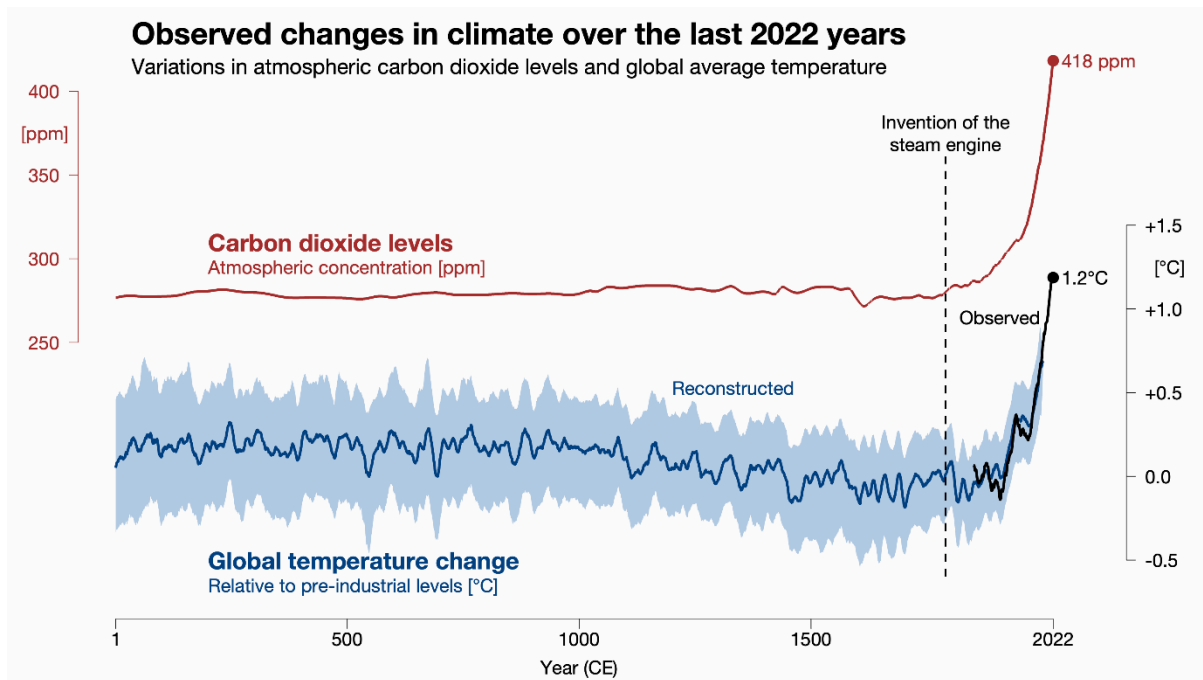
Climate change refers to significant, long-term changes in the patterns of temperature, precipitation, wind, and other aspects of the Earth's climate system, largely caused by human activities, especially the burning of fossil fuels which increases greenhouse gas concentrations in the atmosphere. This phenomenon leads to global warming, rising sea levels, and extreme weather events.

Why is it important?

Climate change is critical to our standard of living as it directly impacts food security, water availability, health, and the overall stability of the natural systems we depend on for survival and economic activities. The increasing frequency and severity of extreme weather events, such as hurricanes, droughts, and floods, driven by climate change, threaten infrastructure, livelihoods, and communities, necessitating urgent adaptation and mitigation measures to safeguard our quality of life.

What can I do about it?

To combat the effects of climate change, we can reduce greenhouse gas emissions by adopting renewable energy sources, improving energy efficiency, and transitioning to sustainable transportation and industrial practices. Additionally, enhancing climate resilience through adaptive measures like sustainable land use, protecting ecosystems, and preparing communities for extreme weather events is crucial to mitigate climate change's impact on our lives and environment.



This shows the measured global temperature over the last 2022 years compared with a baseline of about 1900 as well as observed atmospheric carbon dioxide concentration. Note that the two are correlated.

Global Temperatures

<https://ed-hawkins.github.io/climate-visuals/CLIMATE-INDICATORS/climate-indicators-simple.png>

<https://ed-hawkins.github.io/climate-visuals/stripes.html>

Global Debt

What is it?

Global debt refers to the total amount of debt owed by all sectors—government, corporate, and household—across all countries worldwide. It encompasses a wide range of financial obligations, from sovereign bonds and corporate loans to consumer credit, representing a significant aspect of the global financial system.

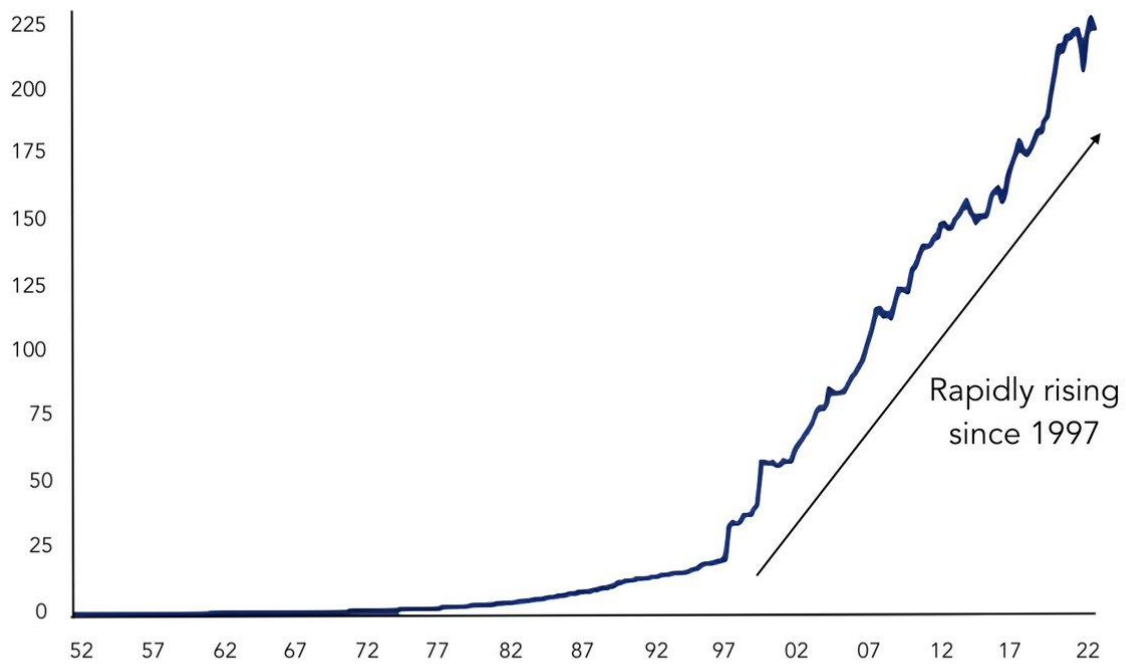
Why is it important?

Global debt is important to our standard of living as it influences economic stability and growth prospects; high levels of debt can lead to financial crises, austerity measures, and reduced public spending, affecting employment, healthcare, and education services. Conversely, manageable and well-utilized debt can fuel investments in infrastructure, technology, and social programs, boosting economic development and enhancing the quality of life.

What can I do about it?

To address the effects of excessive global debt, governments and financial institutions can implement responsible fiscal policies, including debt restructuring, prudent borrowing, and efficient spending, to ensure long-term economic stability and prevent financial crises. Additionally, promoting economic growth through investment in education, infrastructure, and innovation can help increase revenue and reduce the debt-to-GDP ratio, making debt more manageable over time.

World Debt (in \$ trillion) At Record High



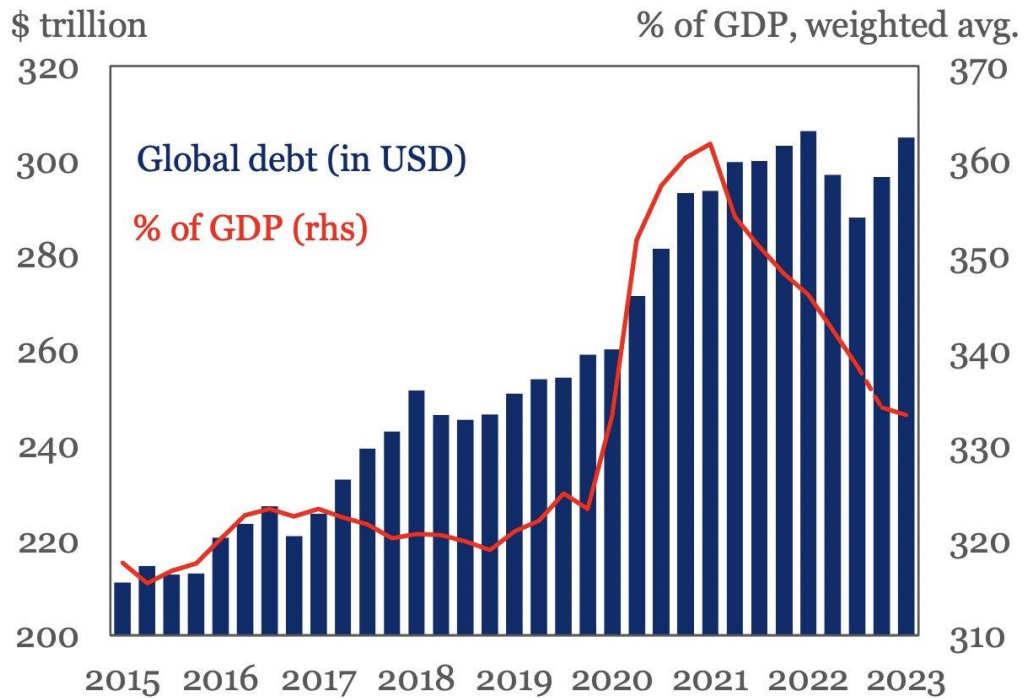
Source: Bloomberg, Game of Trades.

This shows the total global debt since 1952. Note the change of slope when the world dropped a gold standard in 1970. Note a second change in slope near 1997 when government money printing began in earnest.

Global Debt Data

<https://twitter.com/GameofTrades/status/1721199442995585050>

Chart 1: Global debt surpassed \$300 trillion in Q1 2023



Source: IIF

This shows the total global debt in trillions of USD since 2015 in blue and as a percentage of GDP in red. This equates to about \$40,000 for each one of the 8 billion population of the Earth.

Global Debt Data

<https://svencarlin.com/economic-crisis-global-debt/>

<https://twitter.com/Schuldensuehner/status/1659269567519105054/photo/1>

Misinformation, disinformation, censorship

What is it?

Misinformation refers to false or inaccurate information shared without harmful intent, often due to a lack of understanding or knowledge, while disinformation is deliberately created and disseminated with the intent to deceive or manipulate public opinion. Censorship is the suppression or limitation of access to information, ideas, and expressions by authorities or powerful entities, often to control public discourse and maintain power.

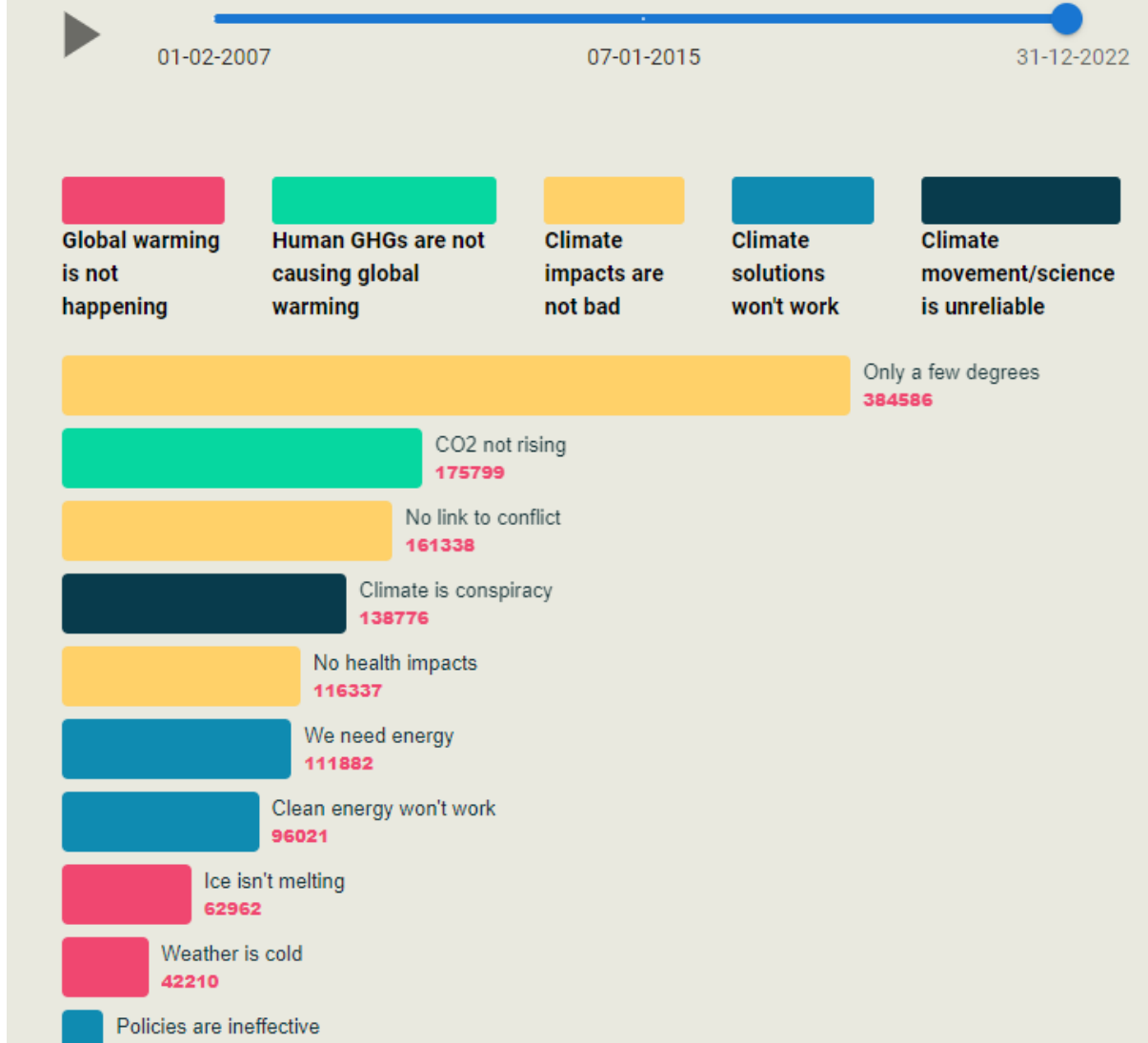
Why is it important?

Misinformation and disinformation undermine efforts to solve global issues by spreading false narratives and eroding public trust in credible information sources, making it challenging to achieve consensus or effective action. Censorship exacerbates this by restricting access to accurate information and diverse perspectives, hindering informed decision-making and collaborative problem-solving essential for addressing complex global challenges.

What can I do about it?

To combat misinformation and disinformation, we must promote critical thinking skills that help individuals evaluate information sources and encourage the responsible sharing of information. Regarding censorship, advocate for freedom of expression, support independent media, and use technology to circumvent information suppression to ensure access to diverse and accurate information, essential for informed public discourse.

Number of tweets related to climate Lies November, 2022



This is a snapshot of the number of climate disinformation (lie) tweets in November 2022. The animation shows an exponential increase over the last decade.

Climate disinformation research

<https://www.bu.edu/igs/research/projects/faculty-funding/climate-disinformation-initiative/twitter/>

Global Wealth Inequality

What is it?

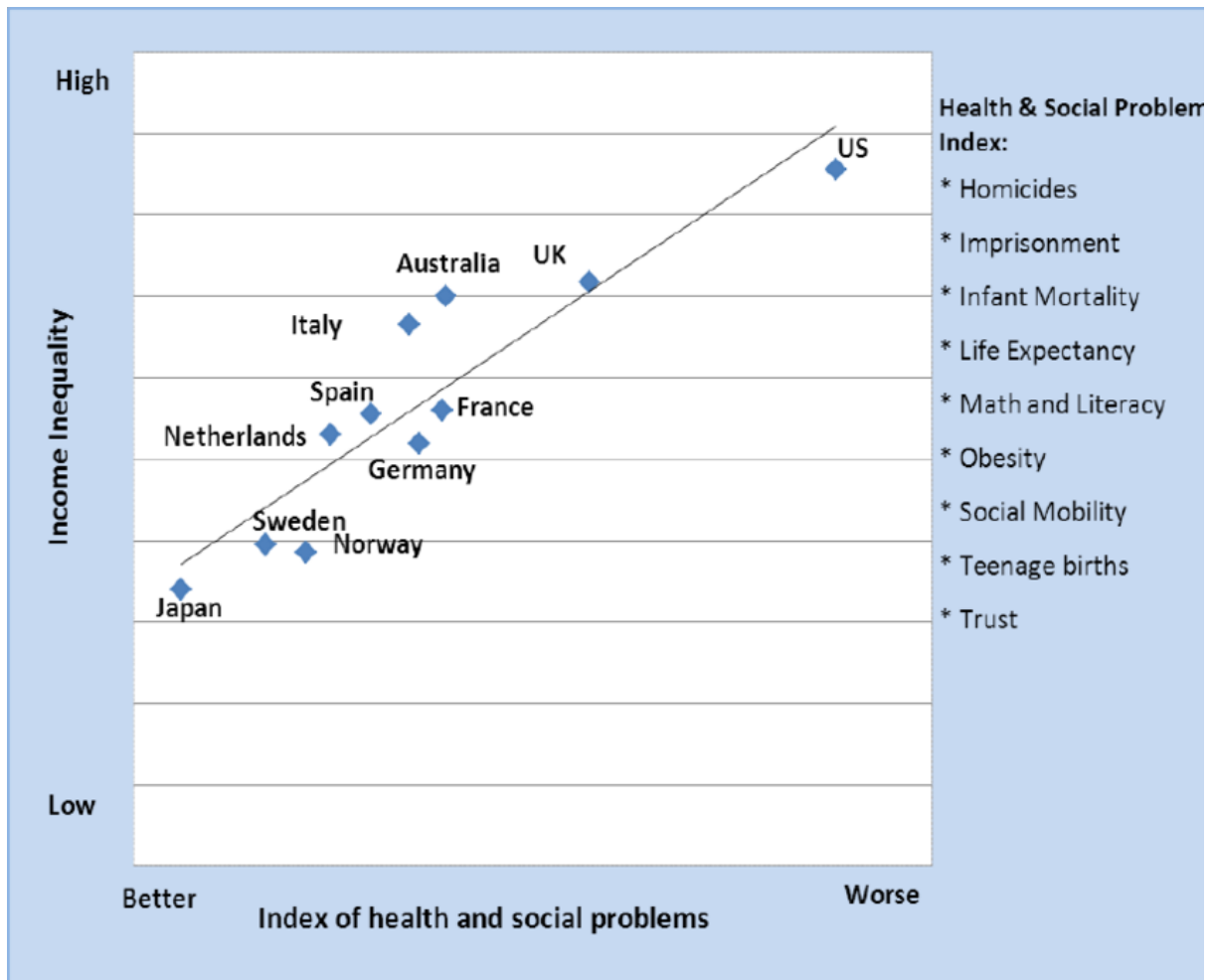
Global wealth inequality refers to the significant disparity in the distribution of assets, income, and economic opportunities among individuals and countries around the world. This inequality manifests in vast differences in living standards, access to resources, and economic power, often reflecting historical, structural, and systemic factors.

Why is it important?

Resolving global wealth inequality is crucial because it fosters a more equitable and sustainable world where resources and opportunities are more fairly distributed, leading to improved living standards and reduced poverty. Additionally, addressing these disparities can enhance social stability, promote inclusive economic growth, and prevent the social and political unrest often associated with extreme wealth gaps.

What can I do about it?

To resolve global wealth inequality, policies that promote fair income distribution, such as progressive taxation, increased access to quality education and healthcare, and living wage laws, are essential. Additionally, international cooperation to address systemic issues like tax evasion, corruption, and unfair trade practices, along with investments in sustainable development in underprivileged regions, can significantly contribute to reducing global wealth disparities.

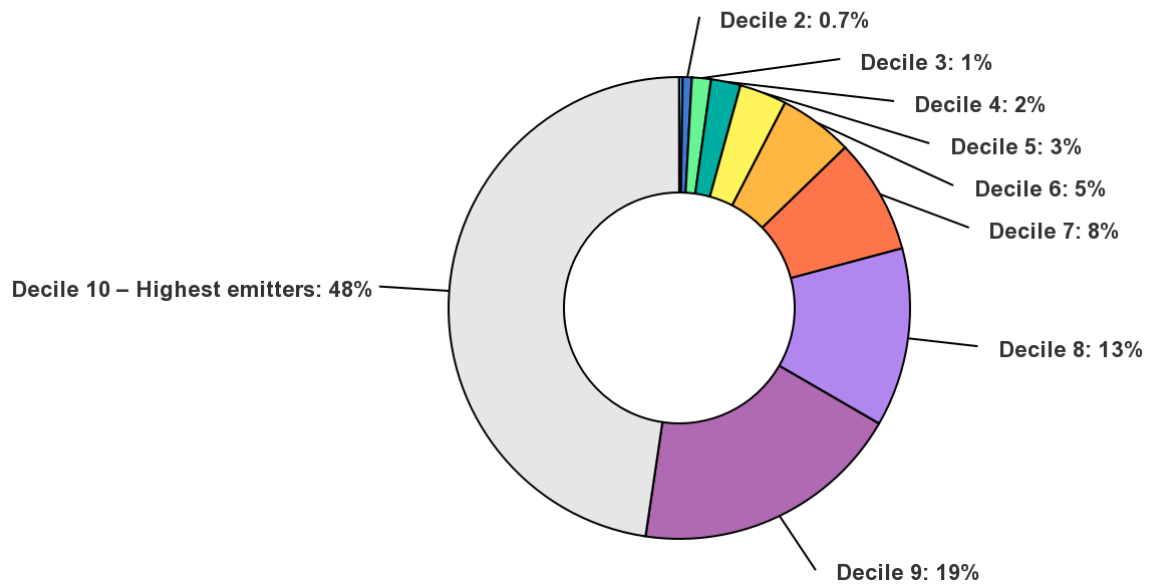


This shows the correlation between global social problems and national income inequality. The higher the income inequality, the higher the health and social problem index.

Health and Wealth Inequality

<https://www.researchgate.net/profile/Garry-Jacobs-3/publication/49599352/figure/fig18/AS:305988520431617@1449964756344/Impact-of-income-inequality-on-health-and-social-problems-Data-from-86.png>

Global energy-related CO2 emissions by decile, 2021



www.iea.org/data-and-statistics

This shows the global carbon dioxide emissions as a function of income. The richest 10% emit almost half of global carbon dioxide. The poorest 10% emit only 0.7% of global carbon dioxide. This shows the biggest positive effect on climate change can be made by the richest members of society.

Carbon dioxide emissions

<https://www.iea.org/data-and-statistics/charts/global-energy-related-co2-emissions-by-decile-2021>

<https://www.iea.org/data-and-statistics/charts/energy-related-co2-emissions-per-capita-by-income-decile-in-selected-countries-and-regions-2021>