



Muss die Wirtschaft schrumpfen, um das Klima zu retten?

Prof. Dr. Fabian Lindner, Vortrag Keynes Gesellschaft Februar 2022

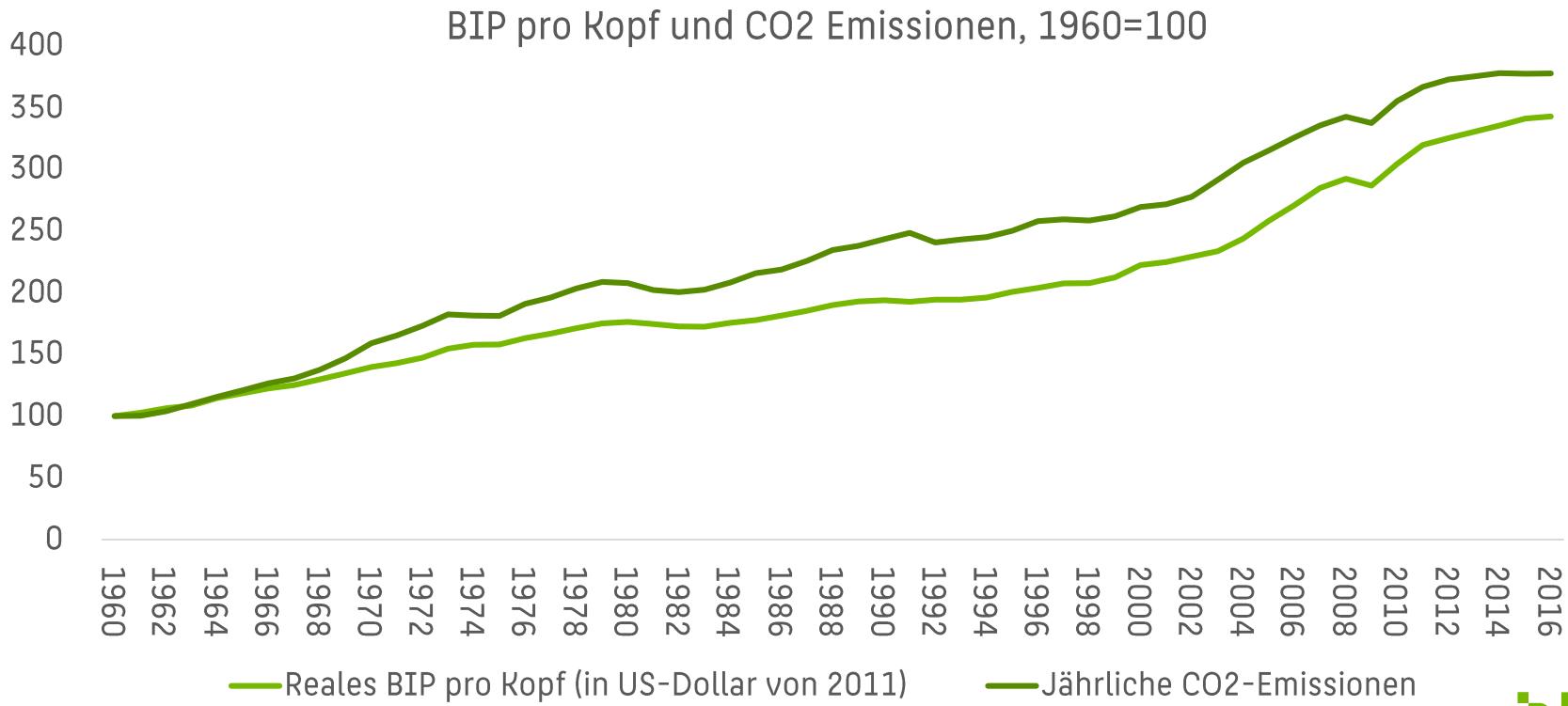


Hochschule für Technik
und Wirtschaft Berlin

University of Applied Sciences

1. Was will die Degrowth-Bewegung?
2. Warum die Forderungen unrealistisch sind
3. Grünes Wachstum als realistische Alternative?
4. Grünes Wachstum braucht enorme Anstrengungen

Mehr Wachstum, mehr Treibhausgasemissionen



Quelle: Our World in Data

Armut oder Klimakollaps?

CO₂ emissions per capita vs GDP per capita

Our World
in Data

Per capita consumption-based CO₂ emissions

20 t

CO₂ emissions
are too high

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Energy poverty

5 t

2.5 t

0 t

\$2,000

\$5,000

\$10,000 \$20,000

\$50,000

\$100,000

GDP per capita (int.-\$)



Data for 2017: Global Carbon Project, UN Population, and World Bank.

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

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htw

Idee:

BIP pro Kopf heute weltweit einfrieren

Einkommen der Armen unterhalb Einkommensschnitt wachsen lassen



Einkommen derjenigen über dem Schnitt schrumpfen

Vertreter Degrowth



Jason Hickel



Kate Raworth



Giorgos Kallis

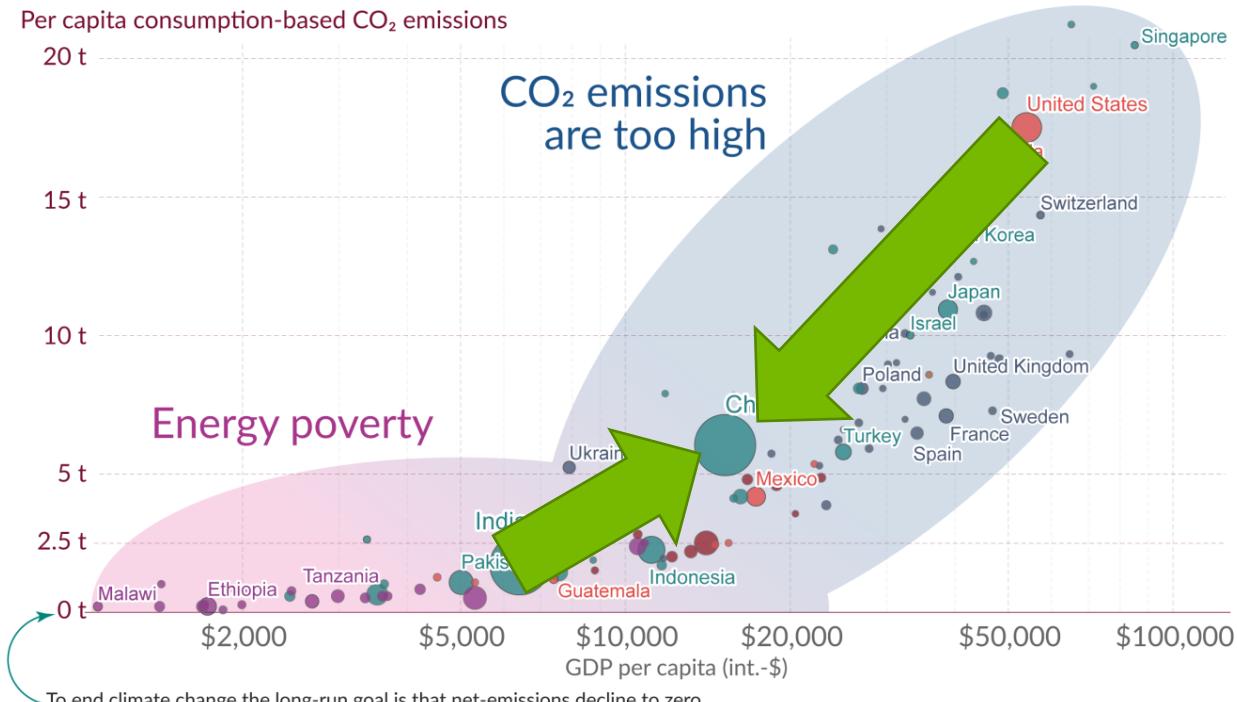


Tim Jackson

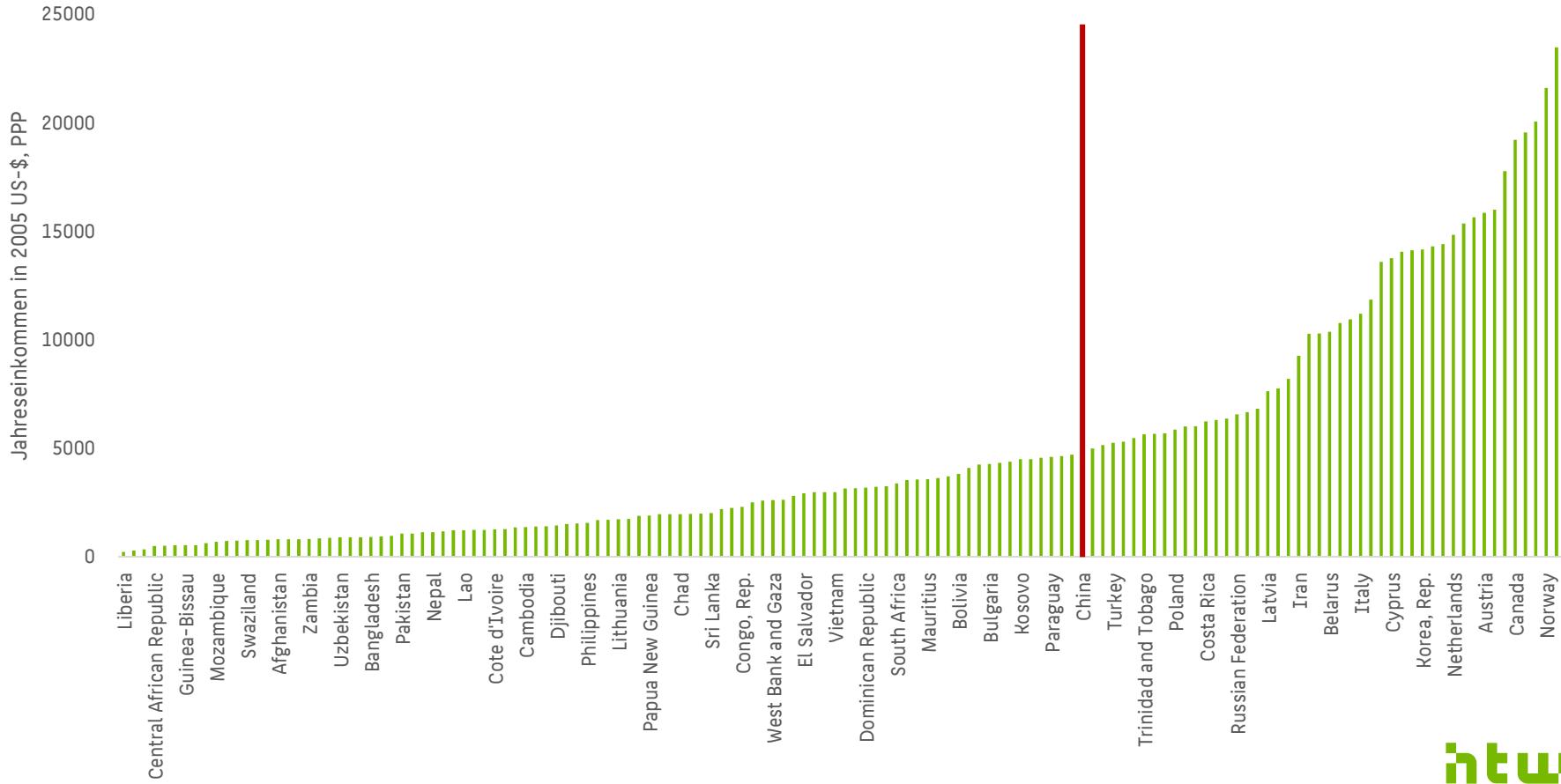
Treffen in der Mitte

CO₂ emissions per capita vs GDP per capita

Our World
in Data

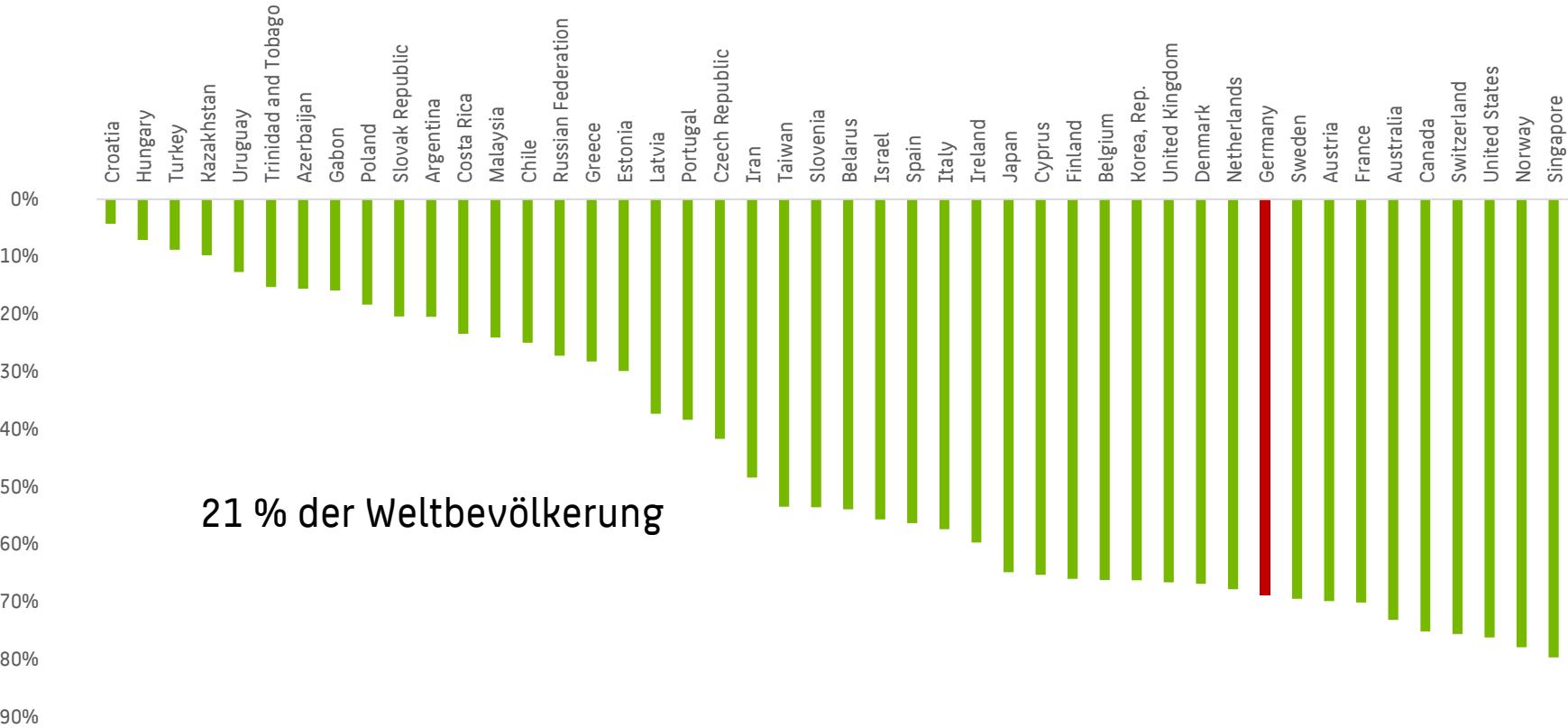


Weltweite Verteilung der Einkommen, 2014



Quelle: GCIP (<https://jackblun.github.io/Globalinc/>)

Schrumpfung der durchschnittlichen Einkommen in %, damit alle gleich viel haben



21 % der Weltbevölkerung

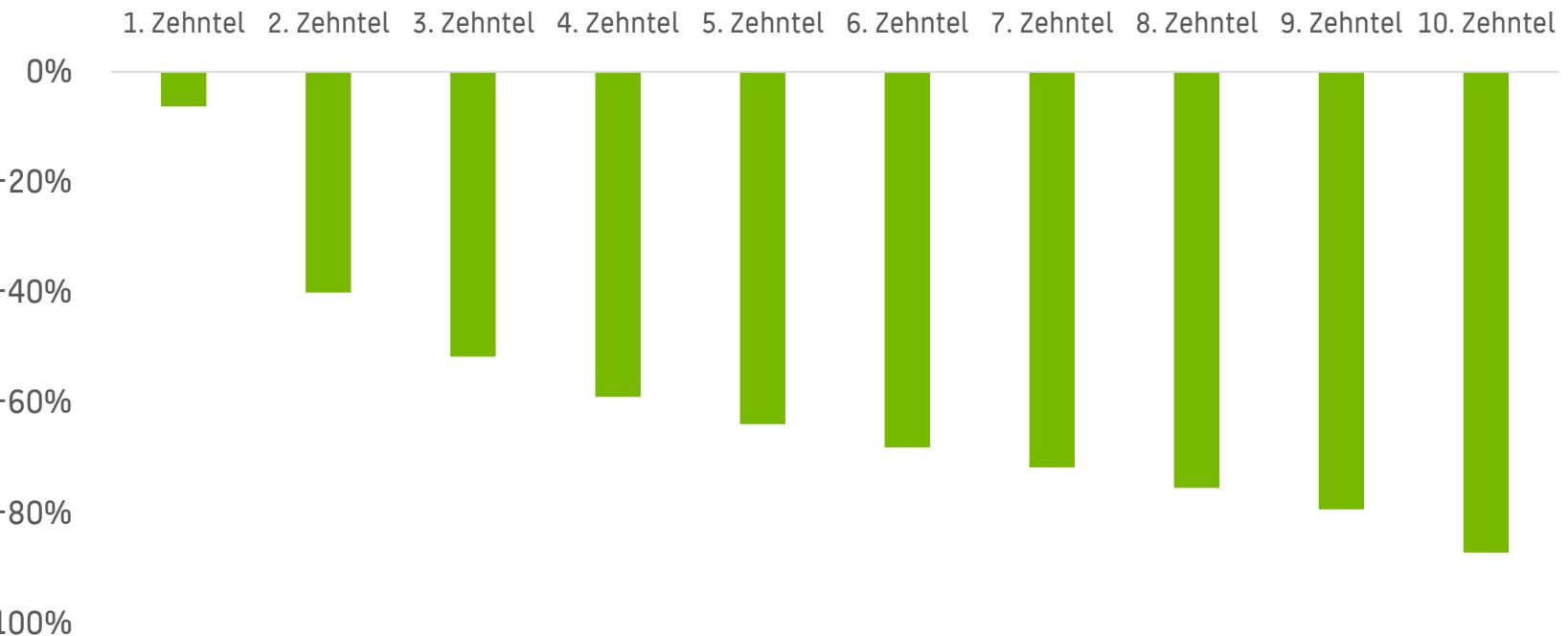
Wie den sozialen Kollaps verhindern?

Arbeitslosigkeit verhindern
durch **Arbeitszeitverkürzung** (um 70 %)

Einkommen im Durchschnitt kürzen (um 70 %),
aber **Einkommensverteilung gleicher machen**

Einschränkung privater Konsum,
Ausbau öffentlicher Dienstleistungen

Notwendige Einkommenssenkung in Deutschland bei absoluter Einkommensgleichheit



Quelle: DIW, SOEPv34, BPB, eigene Berechnungen

BIP nicht mit Lebensqualität korreliert (Hickel & Kallis)

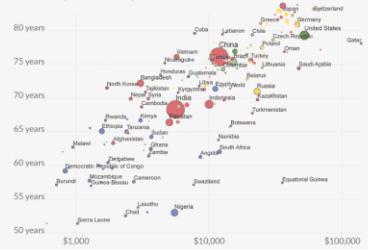
Bspw.
Kuba vs. USA

USA 6,6fach höheres Pro-Kopf Einkommen,
aber
gleiche Lebenserwartung (79 Jahre)

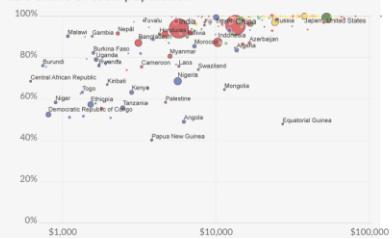
How is life at different levels of GDP per capita?

The horizontal axis of each of the 12 charts shows GDP per capita adjusted for price differences between countries to allow for comparisons between countries. The size of the circles corresponds to the population of the country. Their color represents the world region.

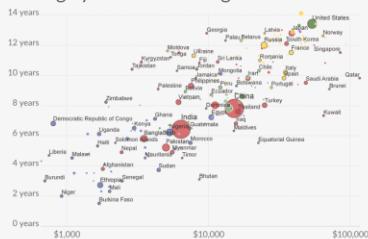
Life expectancy



Access to improved drinking water
as a share of total population

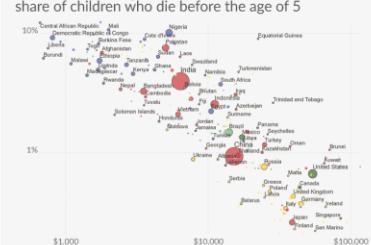


Average years of schooling

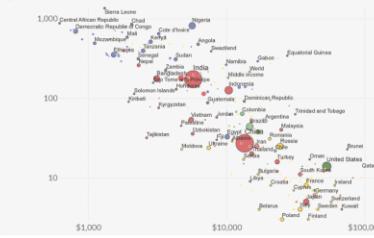


All data refers to 2015-17. The World Development Indicators are the source for all metrics except life satisfaction (Gallup World Poll) and learning outcomes (Altinok, Angrist and Patrinos - 2018). This is a visualization from OurWorldInData.org, where you find data and research on how the world is changing.

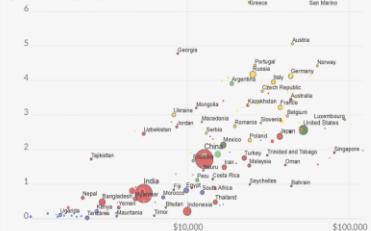
Child mortality



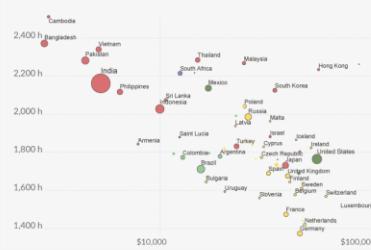
Maternal deaths
per 100,000 births



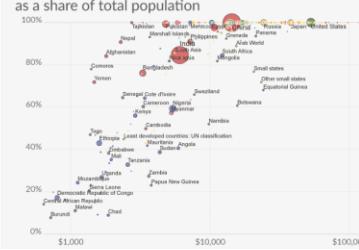
Medical doctors
per 1,000 people



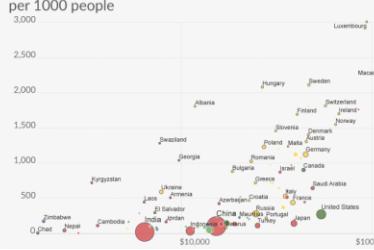
Average annual working hours



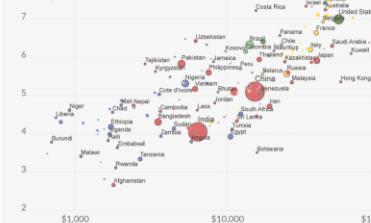
Access to electricity
as a share of total population



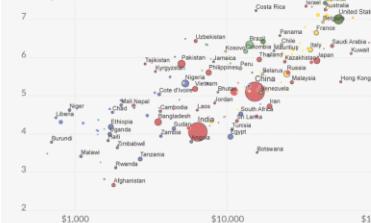
Tourist departures
per 1,000 people



Learning outcomes
test scores in math, reading, and science



Life Satisfaction
self-reported on a scale from 0 to 10



Fazit Degrowth

National & international politisch nicht durchsetzbar

Grünes Wachstum?

Grünes Wachstum: BIP erhöhen, Emissionen senken

CO₂ emissions per capita vs GDP per capita

Our World
in Data

Per capita consumption-based CO₂ emissions

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Energy access with
net-zero CO₂ emissions

GDP per capita (int.-\$)

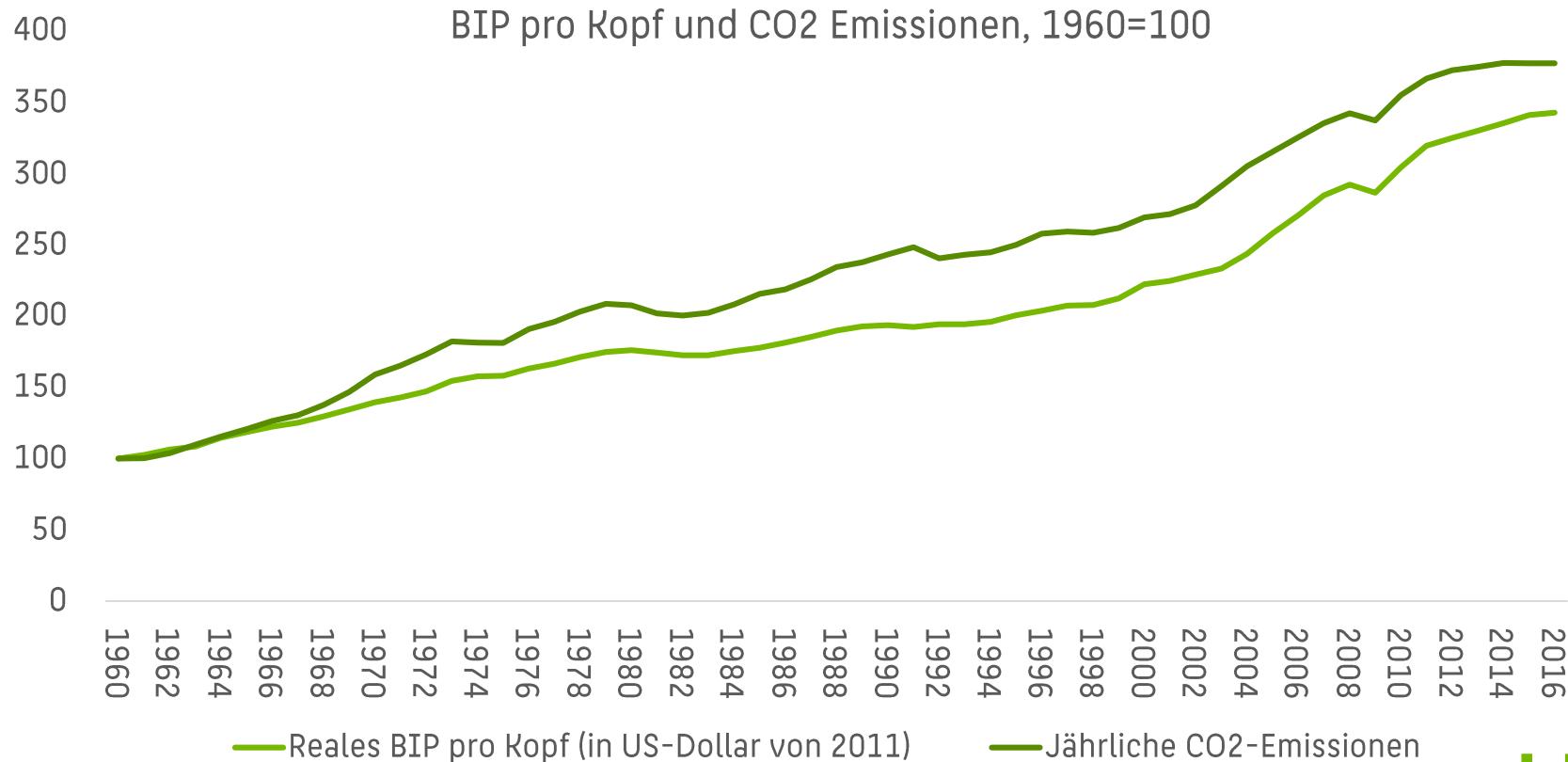
To end climate change the long-run goal is that net-emissions decline to zero.

Data for 2017: Global Carbon Project, UN Population, and World Bank.

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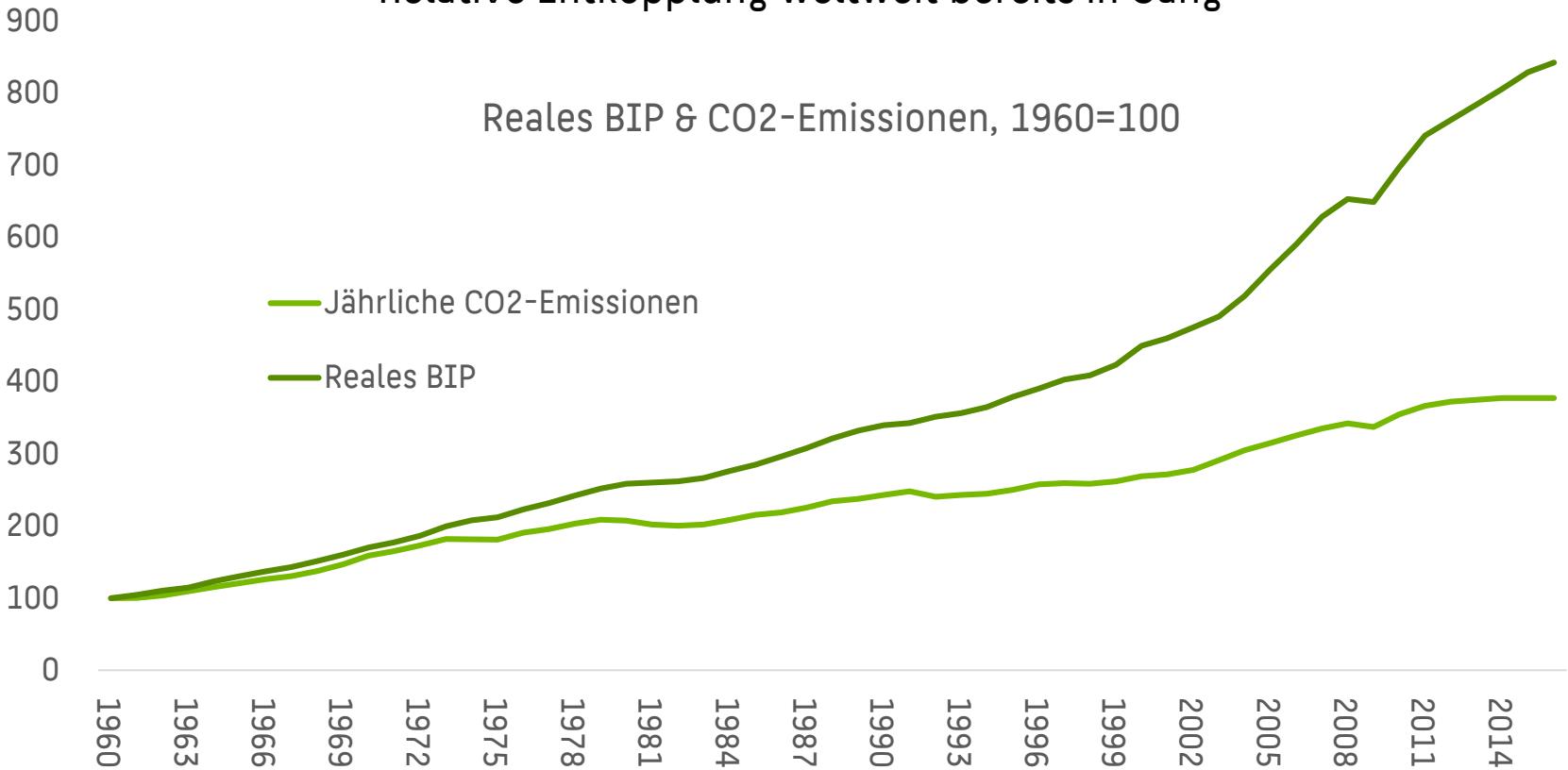
Irreführende Zahlen?



Quelle: Our World in Data

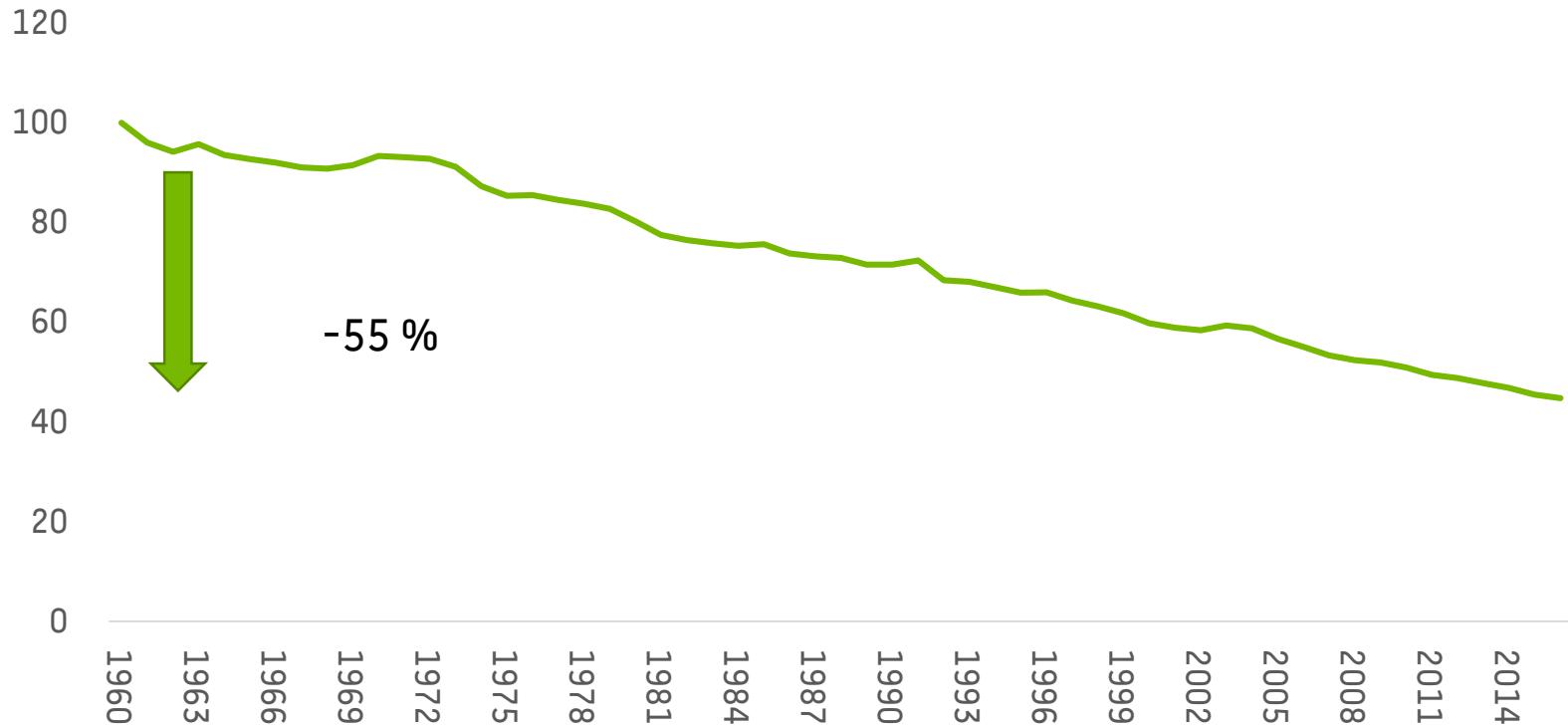
Relative Entkopplung weltweit bereits in Gang

Reales BIP & CO₂-Emissionen, 1960=100



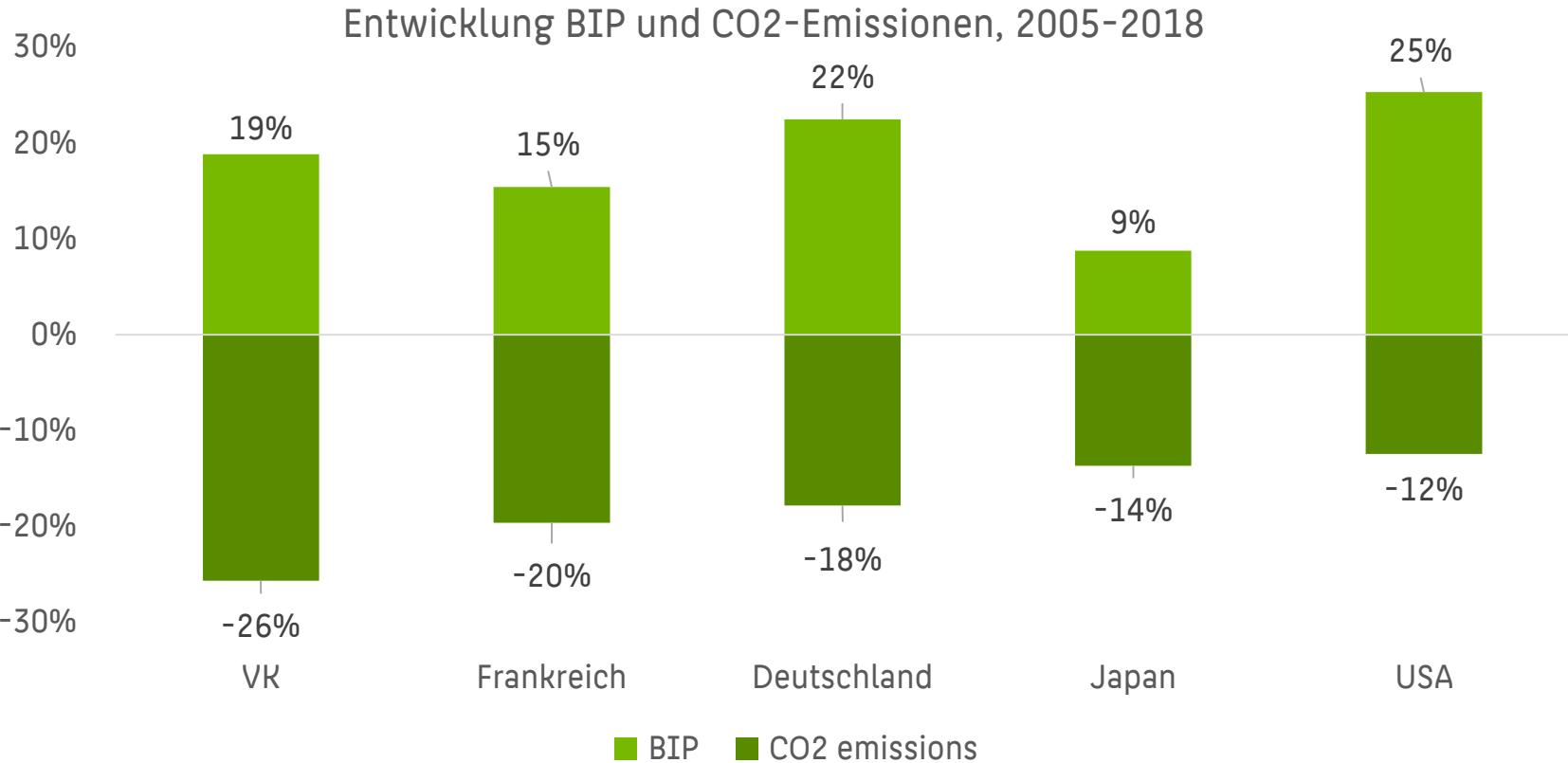
Quelle: Our World in Data

CO2 pro \$ BIP, 1960=100



Quelle: Our World in Data, eigene Berechnungen

In Industriestaaten findet absolute Entkopplung statt

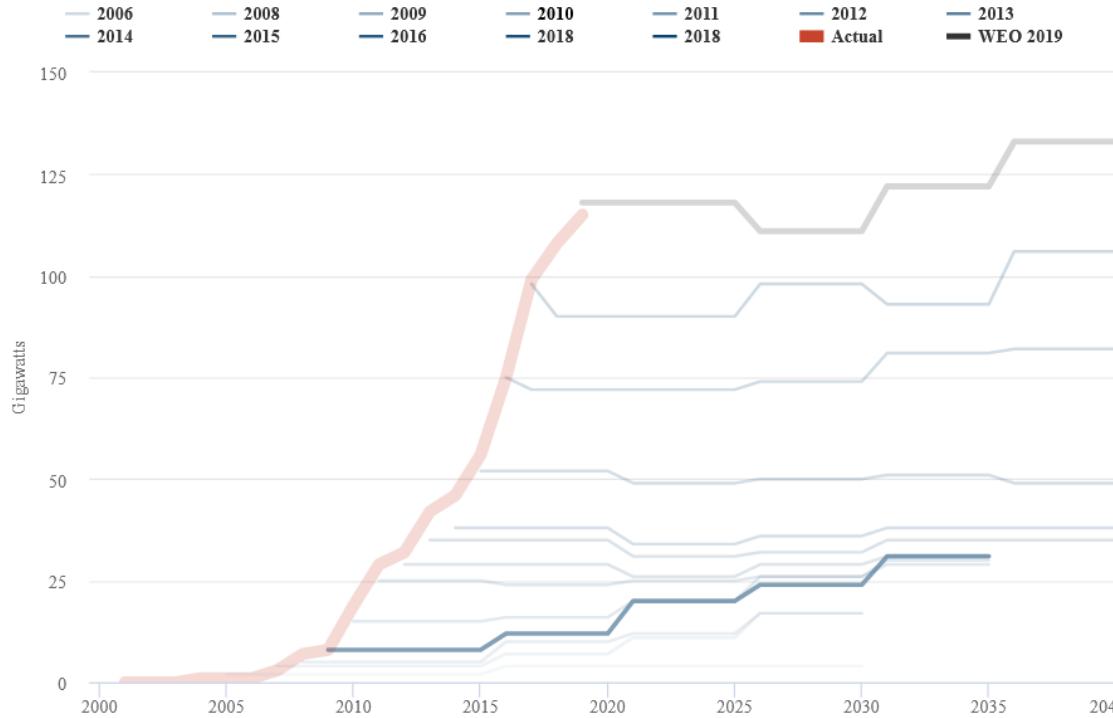


Quelle: Weltbank & Global Carbon Project

Unerwartet starker Ausbau von Solarenergie...

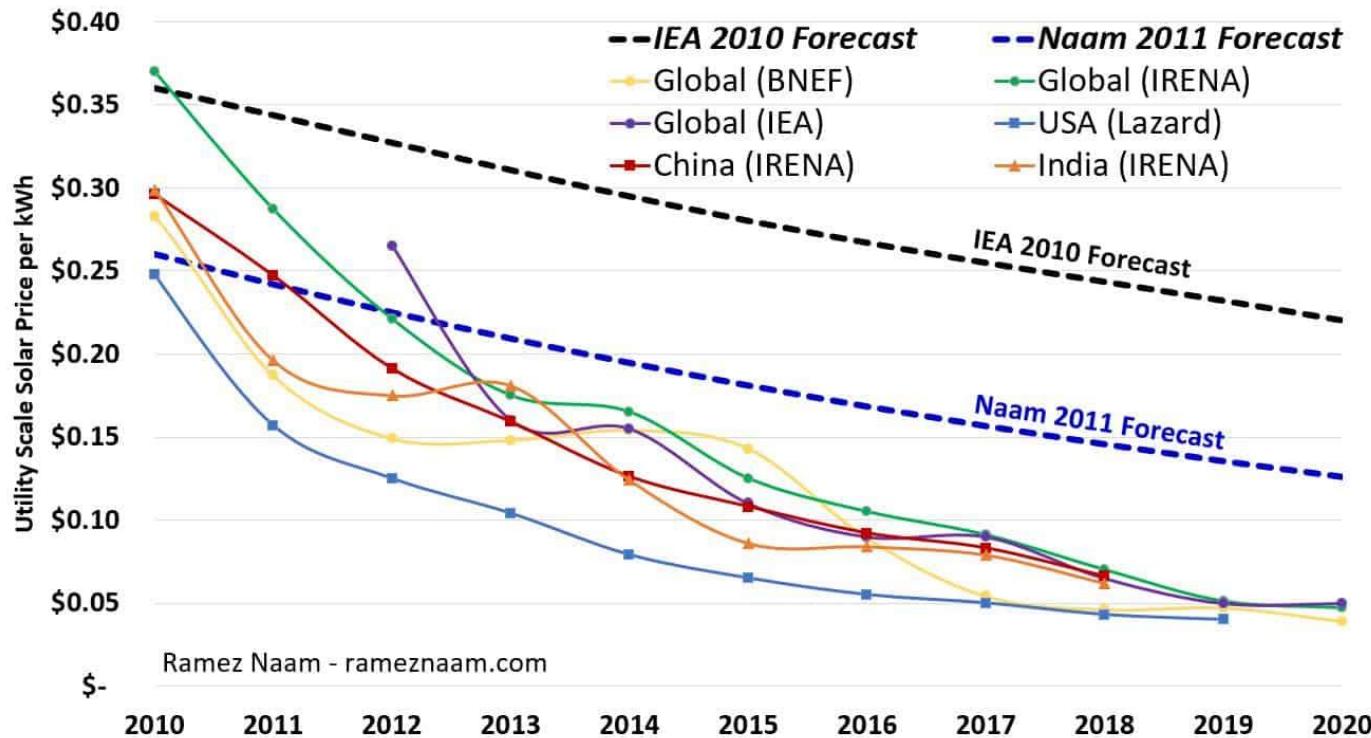
The IEA has **consistently underestimated the speed of global solar capacity growth**

This year the WEO's main **stated policies** scenario once again increases the prospects for solar expansion



... wegen technologischem Fortschritt

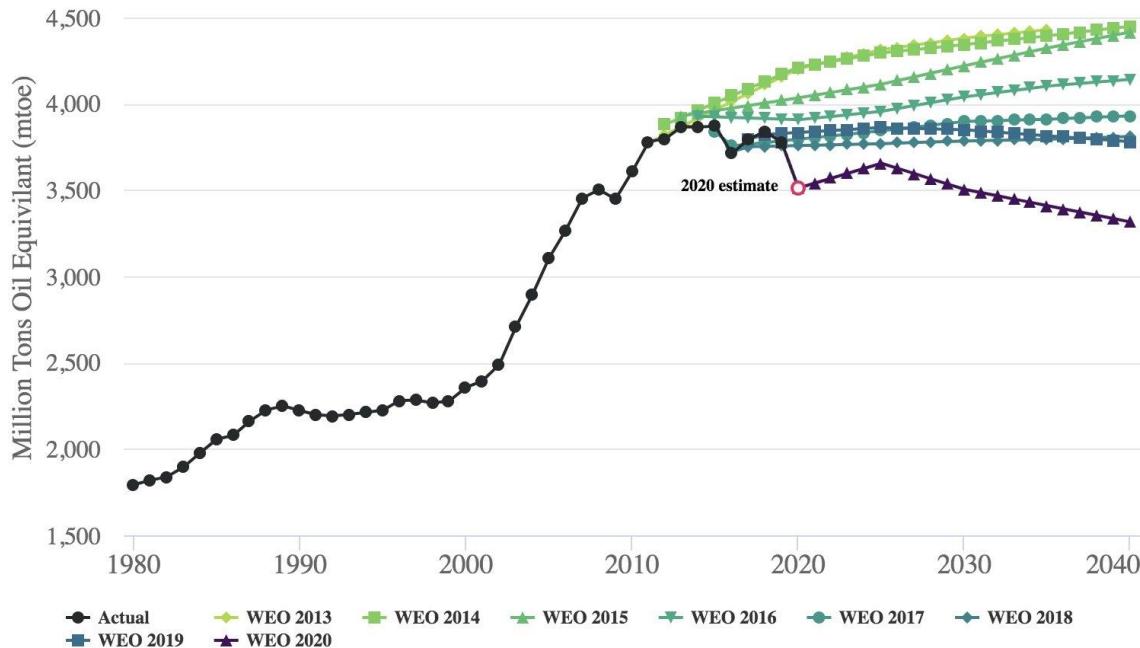
Solar Costs A Fraction of 2010-2011 Forecasts



Quelle: <https://rameznaam.com/wp-content/uploads/2020/05/Solar-Costs-2010-2020-vs-Forecasts-2.jpg>

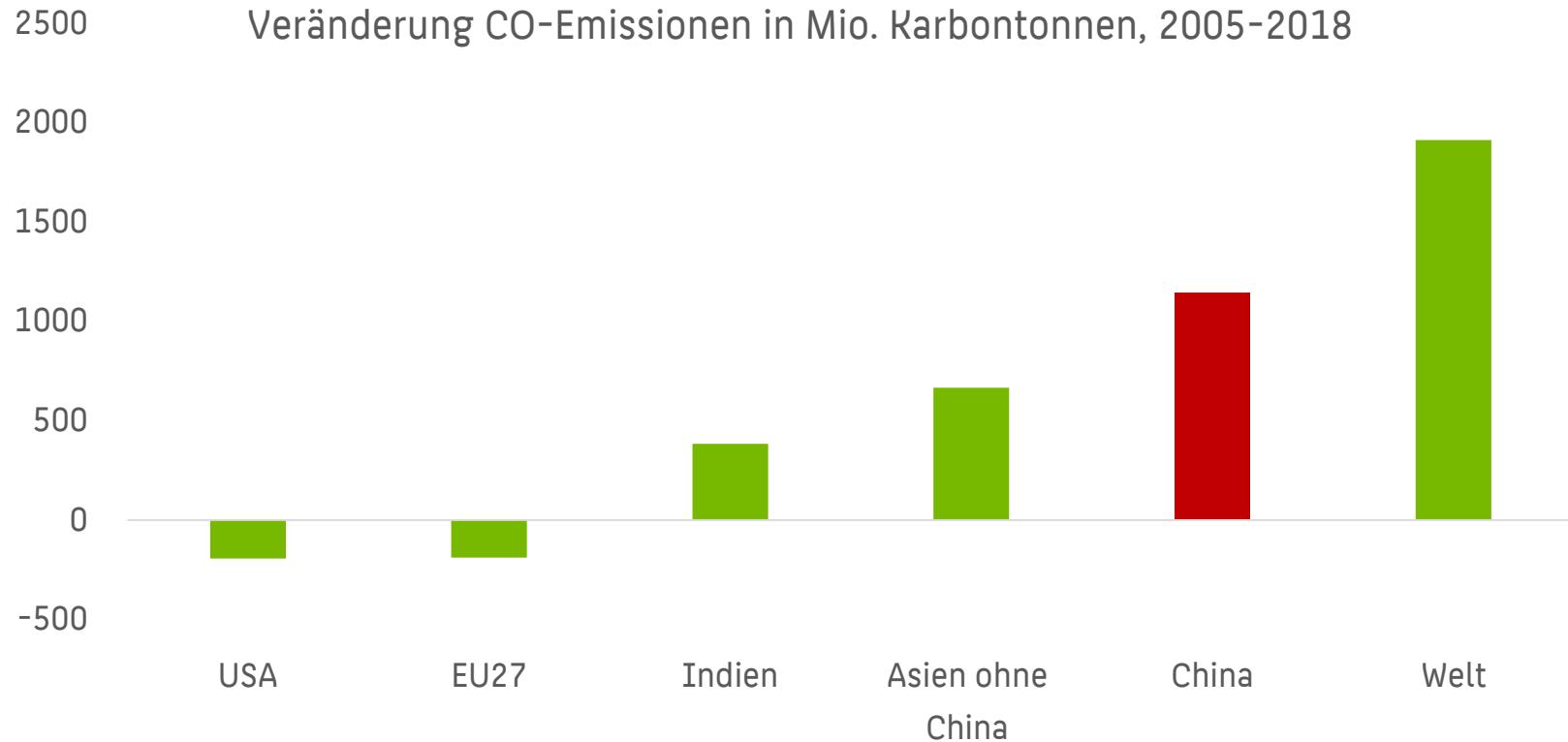
Weltweiter Kohleeinsatz könnte Höhepunkt überschritten haben

Global Coal Use – Actual and WEO Forecasts from 2013-2020



Quelle: Breakthrough Institute

Weltweite Emissionssteigerung vor allem in China & Asien



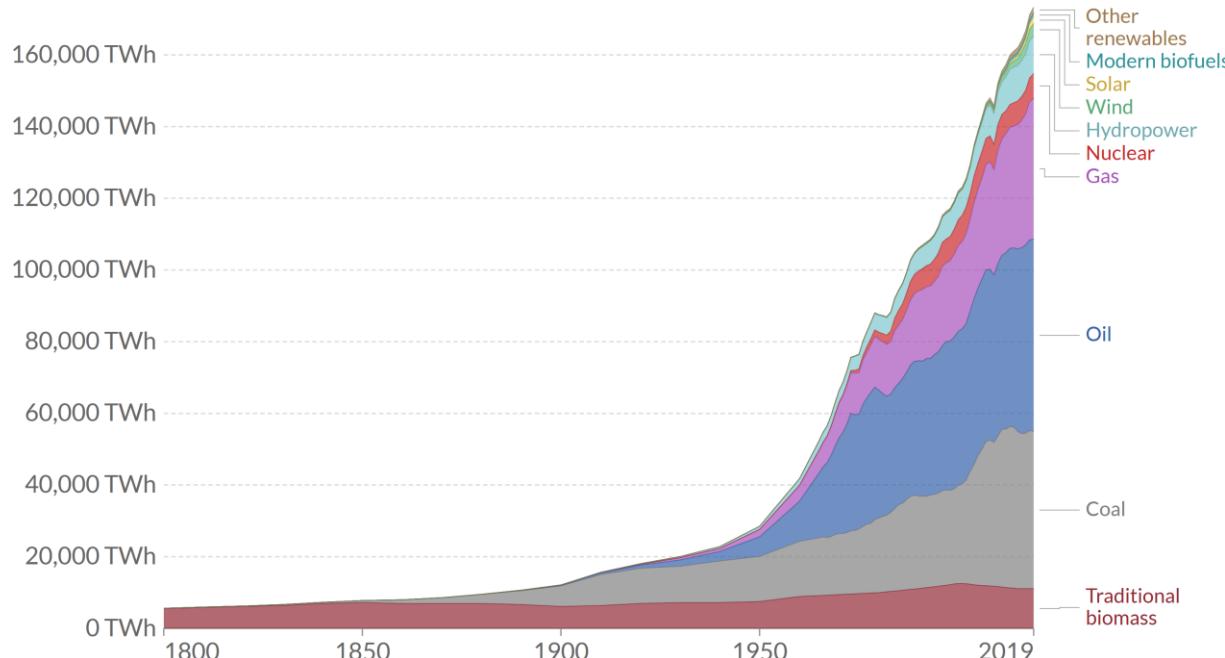
Quelle: Global Carbon Project, eigene Berechnungen

Fossile Energieträger immer noch dominierend

Global primary energy consumption by source

Primary energy is calculated based on the 'substitution method' which takes account of the inefficiencies in fossil fuel production by converting non-fossil energy into the energy inputs required if they had the same conversion losses as fossil fuels.

Our World
in Data

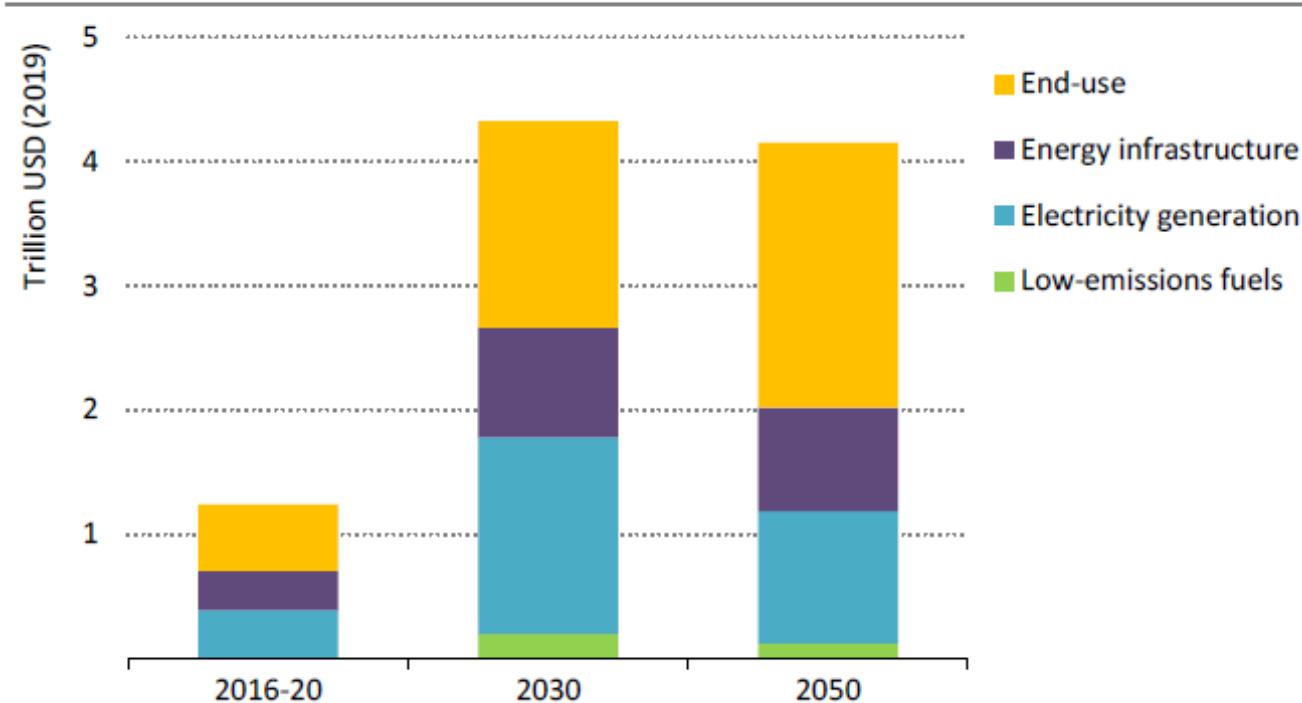


Source: Vaclav Smil (2017) & BP Statistical Review of World Energy

OurWorldInData.org/energy • CC BY

Verdreifachung globaler Investitionen nötig...

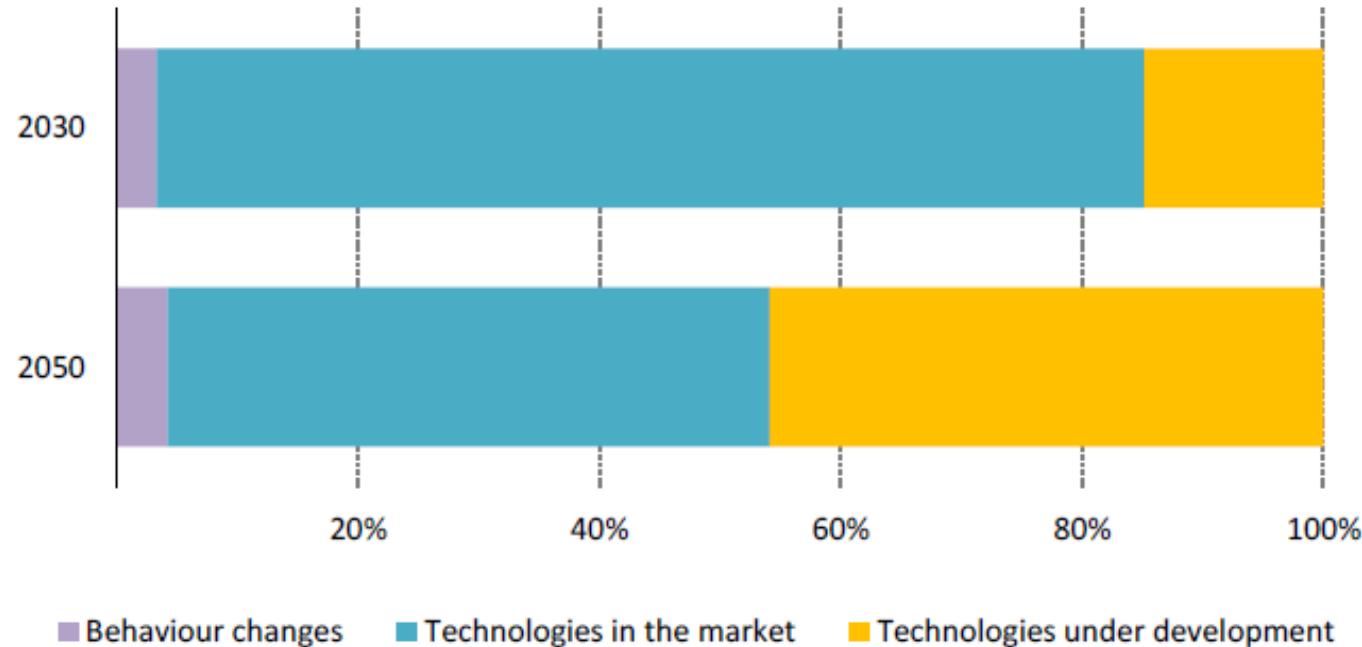
Clean energy investment in the net zero pathway



Quelle: IEA 2021

... und Großteil notwendiger neuer Technologien noch nicht marktreif

Annual CO₂ emissions savings in the net zero pathway, relative to 2020



Quelle: IEA 2021

Kann man den Zielkonflikt zwischen Klima und Wohlstand aulösen?

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Politische Optionen für grünes Wachstum

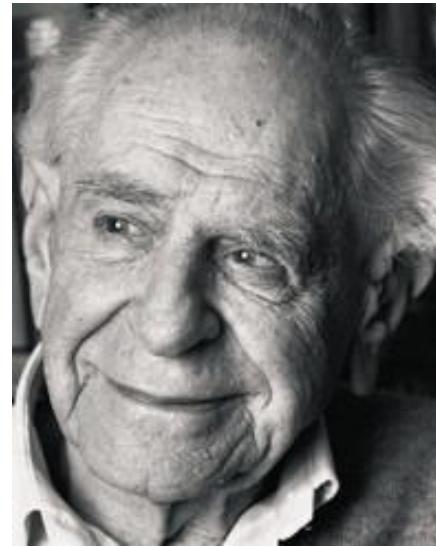
CO2-Steuer & Laissez-faire

vs.

Grüne Industriepolitik (Mazzucato & Schumpeter)

„Optimismus ist Pflicht. Man muß sich auf die Dinge konzentrieren, die gemacht werden sollen und für die man verantwortlich ist“

Karl Popper



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(<https://ourworldindata.org/energy-production-consumption>)
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