



# **A CHANGING GLOBAL LANDSCAPE FOR DEVELOPMENT AND CLIMATE ACTION**

Leo Horn-Phathanothai

Seminar on “Navigating the Climate Action Landscape: Thailand’s Path in a Changing  
Global Framework”

26 Sept, 2024 @ TIJ Common Ground



# PART ONE

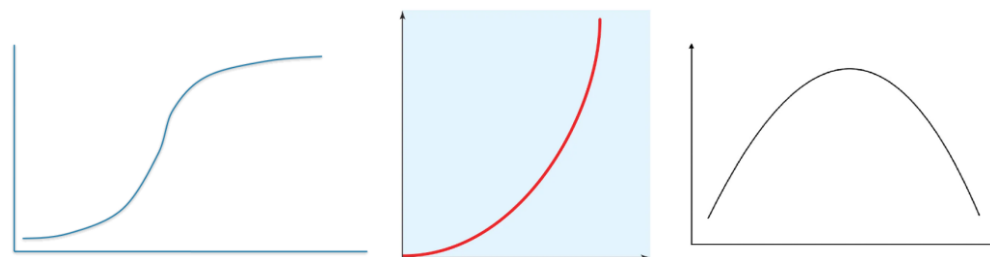
## GLOBAL CONTEXT

*A landscape increasingly shaped by climate change and responses to it*

### PROGRESS



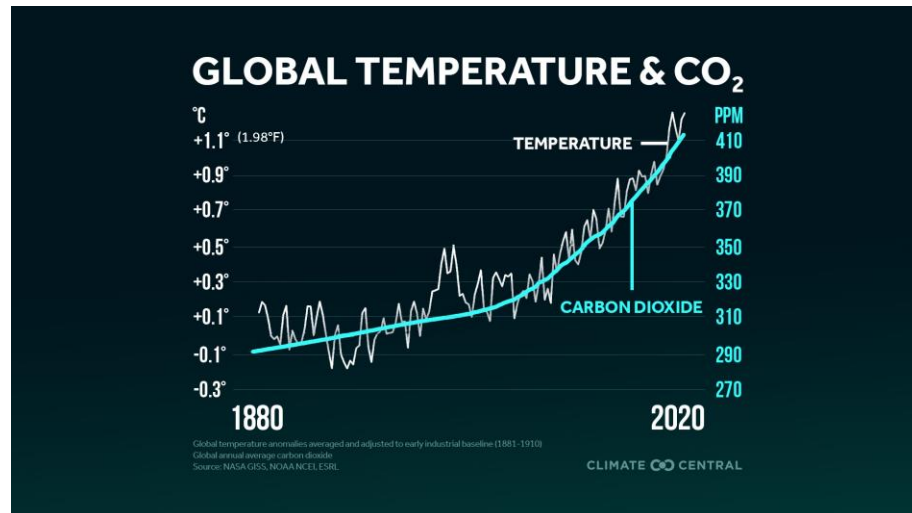
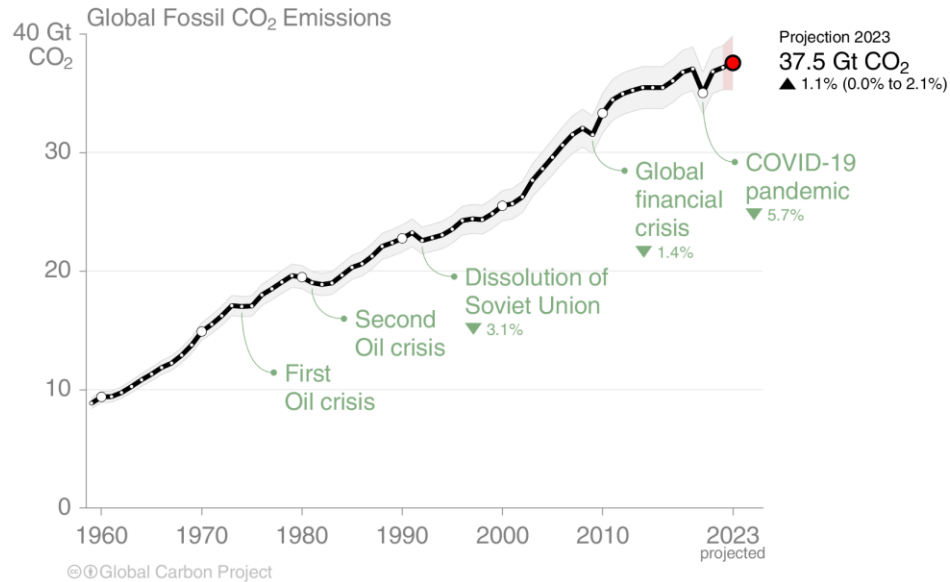
### TRENDS



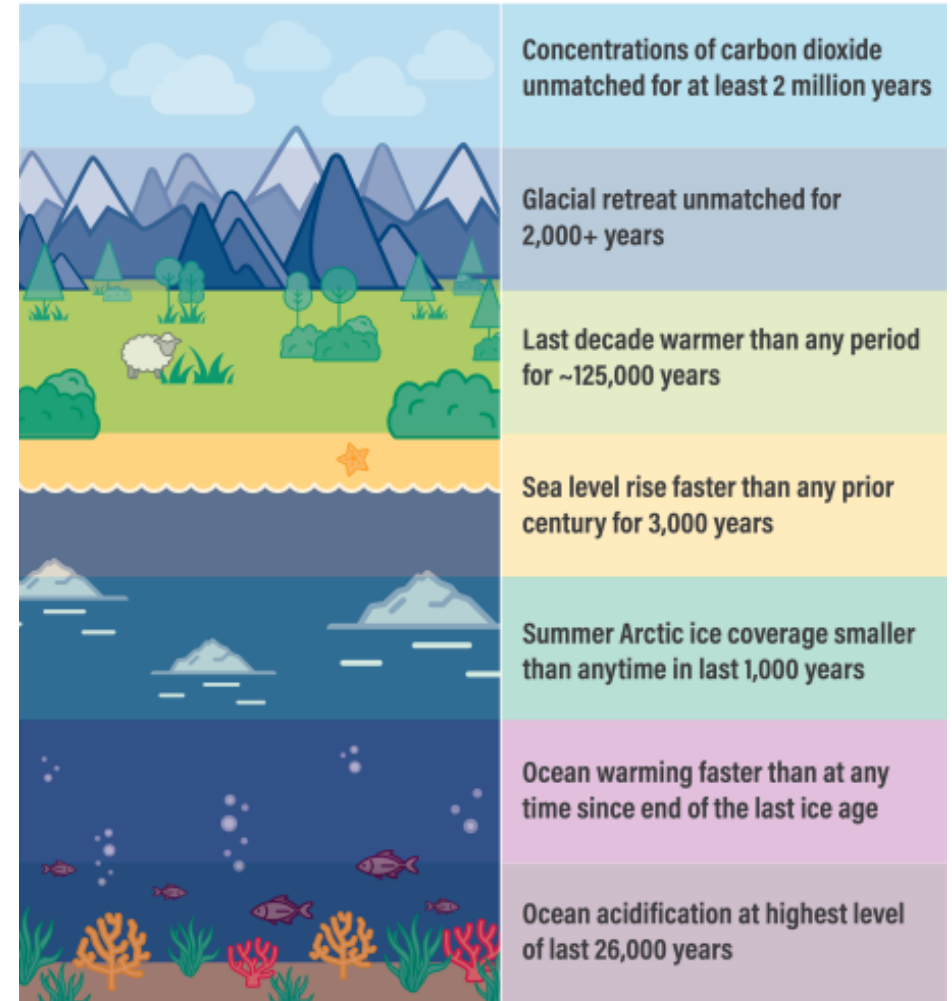
### SIGNALS



# RISING EMISSIONS & ESCALATING CLIMATE RISKS



## Evidence of global warming already underway



Source: IPCC AR6.  
23/03/19



# CLIMATE IMPACTS ARE HERE



FIRES

DROUGHTS

FLOODS

# CLIMATE TOPS GLOBAL RISK ASSESSMENTS

2024	Extreme weather	Critical change to Earth systems	Biodiversity loss / ecosystems collapse	Natural resource shortage	Misinformation & disinformation
2023	Failure to mitigate climate change	Failure of climate change adaptation	Extreme weather events	Biodiversity loss / ecosystems collapse	Large scale migration
2022	Climate action failure	Extreme weather	Biodiversity loss	Social cohesion erosion	Livelihood crises
2021	Extreme weather	Climate action failure	Environmental damage	Infectious diseases	Biodiversity loss
2020	Extreme weather	Climate action failure	Natural disasters	Biodiversity loss	Environmental damage
2019					
2018					
2017					
2016					
2015					
2014					
2013					
2012					
2011					
2010					
2009					
2008					

- Economic
- Environmental
- Geopolitical
- Societal
- Technological

Source: World Economic Forum Global Risk Reports, 2008-2024



# UNIVERSAL FRAMEWORK FOR ACTION

## WHAT'S IN THE PARIS AGREEMENT?

**195**  
COUNTRIES  
(acceded or  
ratified)

**MANDATORY  
REPORTING**  
enhanced  
transparency  
and  
accountability

Limit  
temperature  
rise to  
**1.5-2°C**  
Net Zero  
by 2050  
45%  
reductions  
by 2030

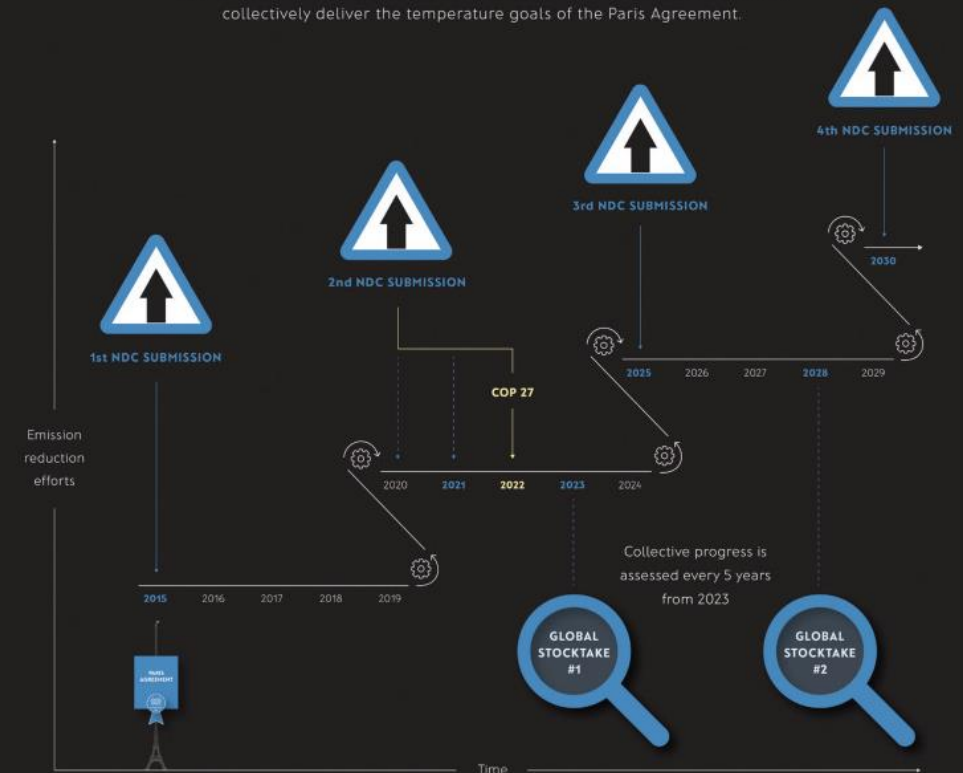
**RATCHET**  
to strengthen  
actions every  
**5** years

**ADAPTATION  
&  
RESILIENCE**  
help for the  
most  
vulnerable

**FINANCING**  
Financial  
support for  
LDCs and  
aligning  
financial flows  
w Paris goals

## NATIONALLY DETERMINED CONTRIBUTIONS (NDCs)

That's right — nations choose how ambitious their own pledges are. But there's a catch...  
Nations' carbon-cutting pledges are expected to **ratchet up over time** so they collectively deliver the temperature goals of the Paris Agreement.



The COP26 Glasgow Climate Pact requested that countries 'revisit and strengthen' their NDC carbon-cutting pledges by the **end of 2022**.

# PROGRESS, BUT WE ARE NOT ON TRACK

## Global greenhouse gas emissions and warming scenarios

- Each pathway comes with uncertainty, marked by the shading from low to high emissions under each scenario.
- Warming refers to the expected global temperature rise by 2100, relative to pre-industrial temperatures.



Annual global greenhouse gas emissions  
in gigatonnes of carbon dioxide-equivalents

150 Gt

100 Gt

50 Gt

Greenhouse gas emissions  
up to the present

0

1990 2000 2010 2020 2030 2040 2050 2060 2070 2080 2090 2100

### No climate policies

4.1 – 4.8 °C

→ expected emissions in a baseline scenario if countries had not implemented climate reduction policies.

### Current policies

2.5 – 2.9 °C

→ emissions with current climate policies in place result in warming of 2.5 to 2.9°C by 2100.

### Pledges & targets (2.1 °C)

→ emissions if all countries delivered on reduction pledges result in warming of 2.1°C by 2100.

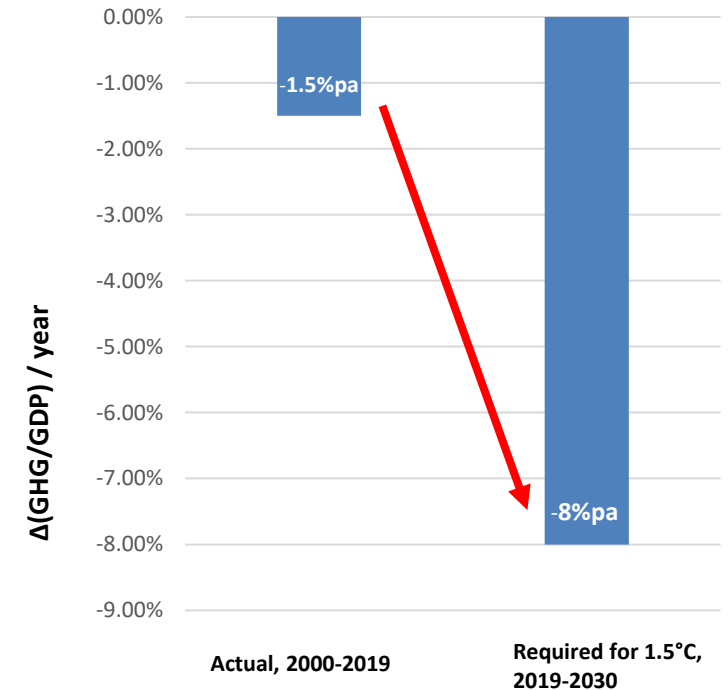
2°C pathways  
1.5°C pathways

Data source: Climate Action Tracker (based on national policies and pledges as of November 2021).  
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Last updated: April 2022.  
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## Need to decarbonize 5 x faster

Rate of decarbonisation of the global economy



# MOMENTUM FOR NET-ZERO IS GROWING

## COMPANIES



6046

with science-based targets

8928

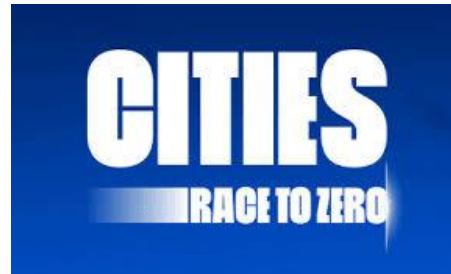
companies taking action

3447

net-zero commitments

= **39%** of global market capitalization

## CITIES



**1,000+ cities**  
committed to net zero

## FINANCE



**GFANZ**

Glasgow Financial Alliance for Net Zero

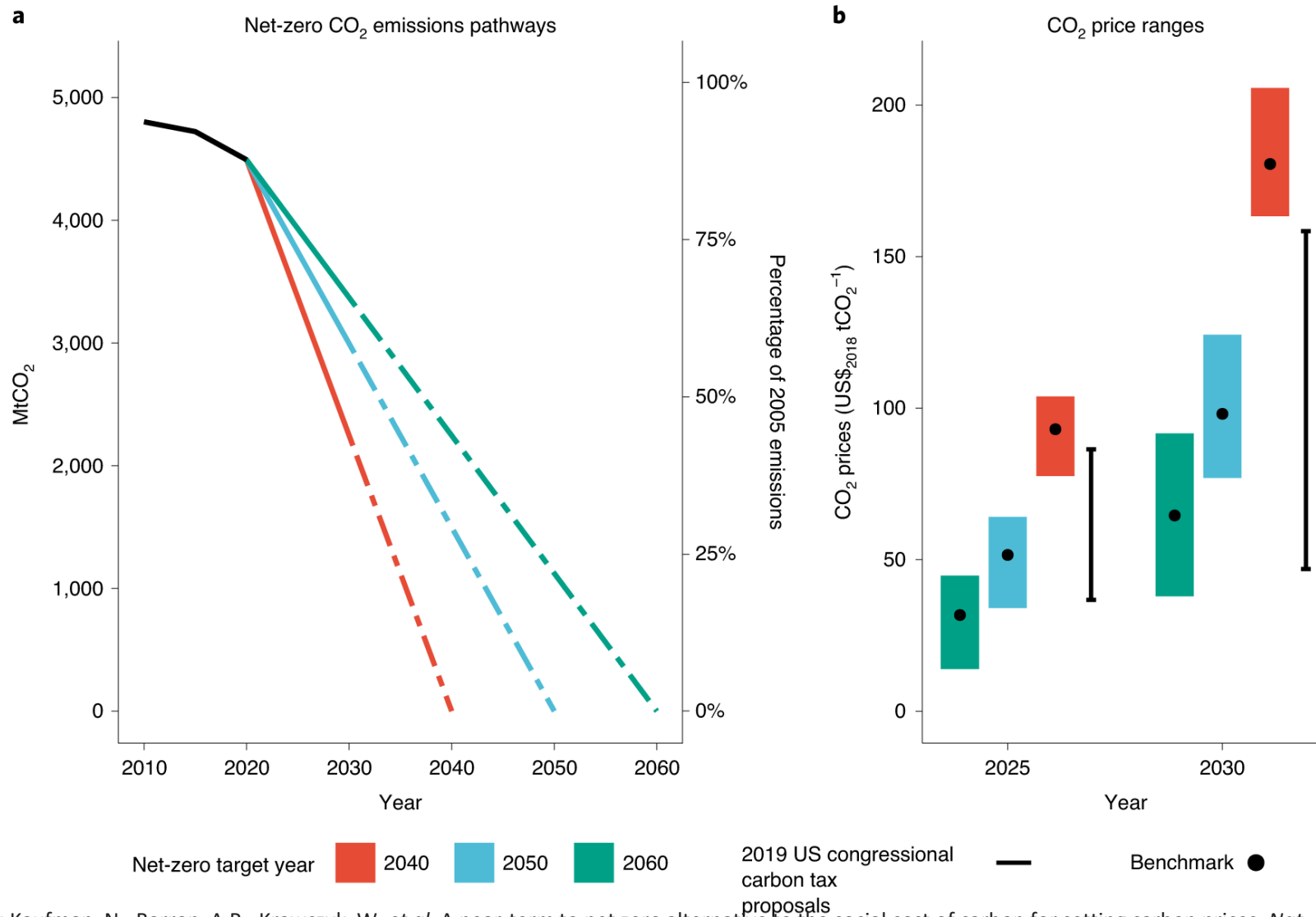
**\$130 Trillion** in capital committed to net zero

**24%** of global emissions covered by carbon price

Jurisdictions accounting for **55%** of GDP adopted ISSB reporting standards



# EXPECT CARBON PRICE TO INCREASE



Source: Kaufman, N., Barron, A.R., Krawczyk, W. *et al.* A near-term to net zero alternative to the social cost of carbon for setting carbon prices. *Nat. Clim. Chang.* **10**, 1010–1014 (2020). <https://doi.org/10.1038/s41558-020-0880-3>

# AS WELL AS PRESSURE FOR MORE AMBITIOUS CLIMATE ACTION



**Adelaide Charlier on successfully passing the EU Nature Restoration Law.**



**Catalina Santelices on ratifying the Escazú Agreement - a pioneering regional environmental rights law.**



**Samela Sateré-Mawé on the Brazilian Supreme Court Ruling in Favor of Indigenous Land Rights.**



**Abigael Kima on the landmark deal agreed to 'transition away' from fossil fuels at COP28.**

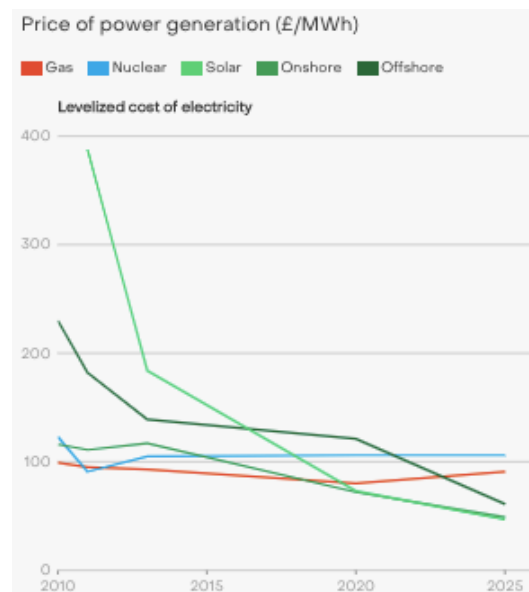
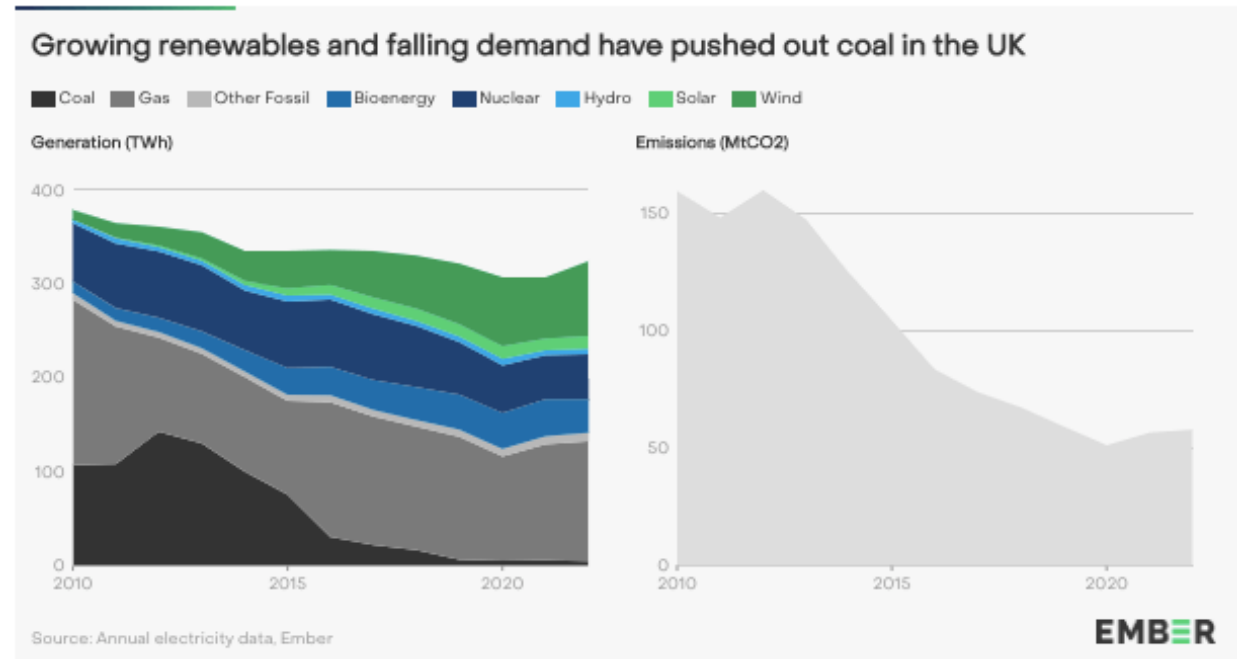


**Sara Dubbeldam on winning a court case against greenwashing in The Netherlands.**



**12 y.o Han Jeah was among hundreds of children to bring a successful lawsuit to the constitutional court demanding more action from the government**

# THE END OF AN ERA: U.K. KICKS COAL IN 12 YEARS!



The cost of clean energy has plummeted in the UK

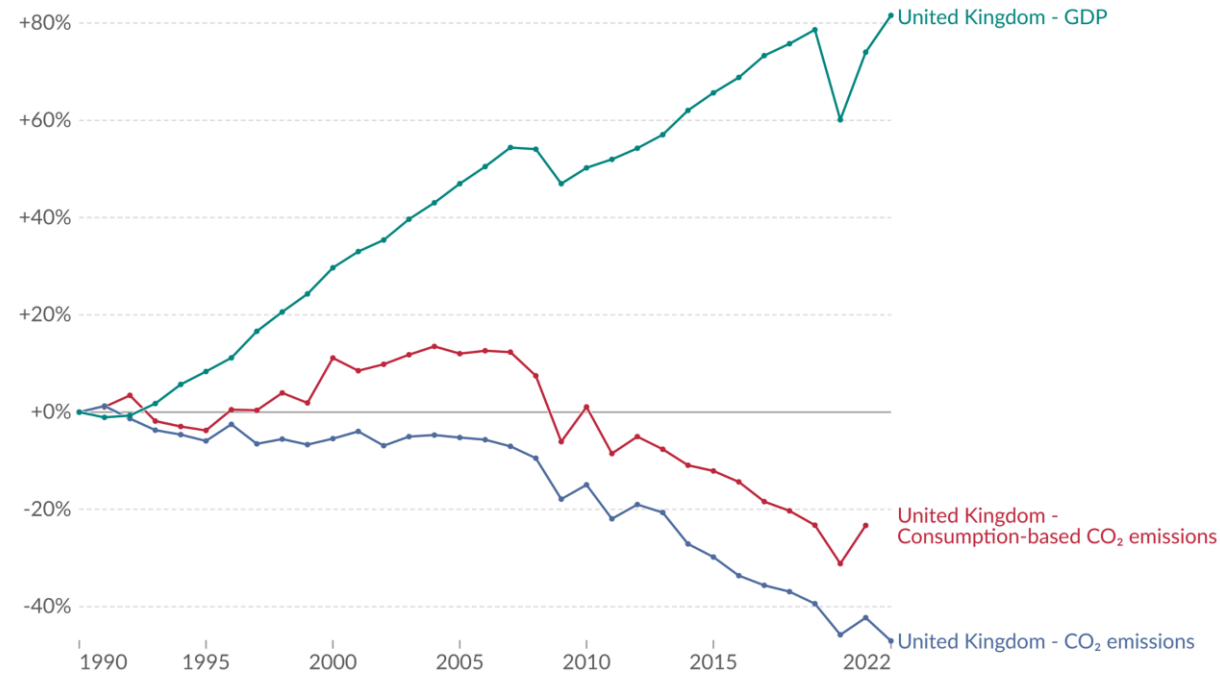
% of generation	2010	2022	Change
Coal	28	2	-94%
Gas	46	39	-15%
Wind	3	25	+906%
Solar	<1	4	+>1000%
Nuclear	16	15	-10%
Power demand (TWh)	382	320	-16%
CO <sub>2</sub> intensity (gCO <sub>2</sub> /MWh)	461	182	-61%

# DECOUPLES ECONOMIC GROWTH FROM EMISSIONS

## Change in CO<sub>2</sub> emissions and GDP, United Kingdom

Our World  
in Data

Consumption-based emissions<sup>1</sup> are national emissions that have been adjusted for trade. This measures fossil fuel and industry emissions<sup>2</sup>. Land-use change is not included.



Data source: World Bank (2023); Global Carbon Budget (2023)

OurWorldinData.org/co2-and-greenhouse-gas-emissions | CC BY

Note: Gross Domestic Product (GDP) figures are adjusted for inflation.

**1. Consumption-based emissions:** Consumption-based emissions are national or regional emissions that have been adjusted for trade. They are calculated as domestic (or 'production-based' emissions) emissions minus the emissions generated in the production of goods and services that are exported to other countries or regions, plus emissions from the production of goods and services that are imported. Consumption-based emissions = Production-based - Exported + Imported emissions

**2. Fossil emissions:** Fossil emissions measure the quantity of carbon dioxide (CO<sub>2</sub>) emitted from the burning of fossil fuels, and directly from industrial processes such as cement and steel production. Fossil CO<sub>2</sub> includes emissions from coal, oil, gas, flaring, cement, steel, and other industrial processes. Fossil emissions do not include land use change, deforestation, soils, or vegetation.



# MORE COUNTRIES JOINING THE CLUB

## Decoupling: Countries that achieved **economic growth** while **reducing CO<sub>2</sub> emissions**, 2005–20

Our World  
in Data

Emissions are adjusted for trade. This means that CO<sub>2</sub> emissions caused in the production of imported goods are added to its domestic emissions – and for goods that are exported the emissions are subtracted.

Average incomes are measured by GDP per capita (except for Ireland, for which it is measured by GNI per capita).



Data sources: Global Carbon Project & World Bank.

There are more countries that achieved the same, but only those countries for which data is available and for which each change exceeded 5% are shown.

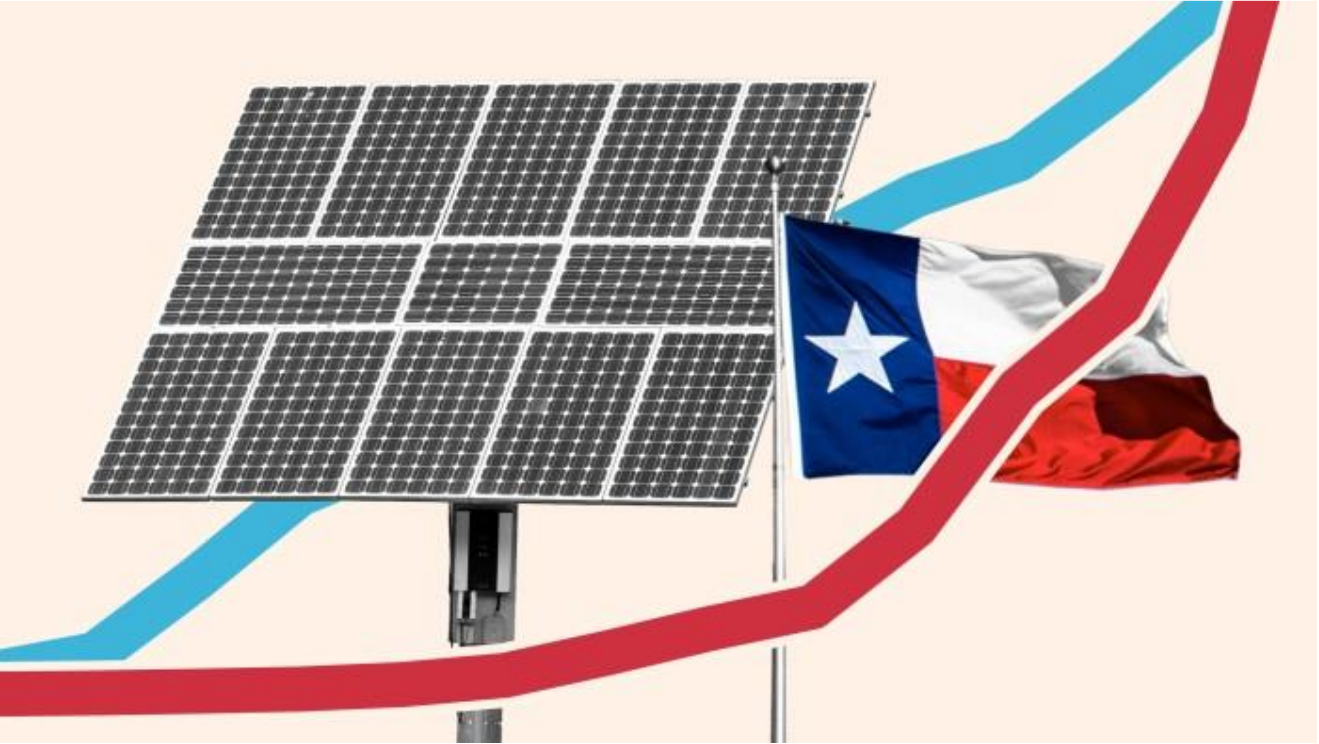
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# FINANCIAL TIMES

## How **red Texas** became a model for **green energy**

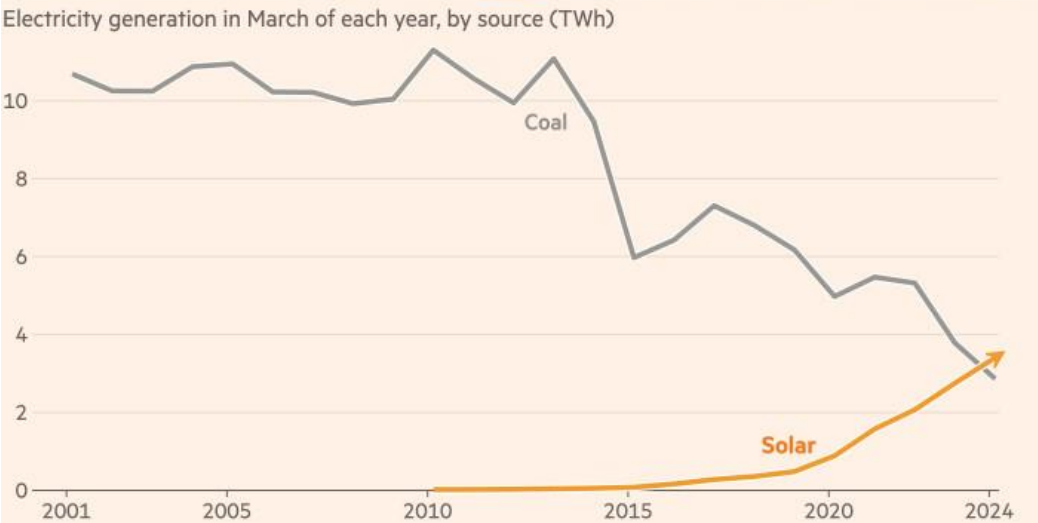
The state's solar surge proves that the energy transition defies politics



John Burn-Murdoch

May 24, 2024

Texas generated more power from **solar** than **coal** for the first time in March



Source: Ember  
FT graphic: John Burn-Murdoch / @jburnmurdoch  
© FT

After trailing for years, Texas has become America's clean energy giant

Rolling annual power generation from all clean sources\* (TWh)



\*Wind, solar, hydro, other renewables, nuclear, bioenergy  
Source: Ember  
FT graphic: John Burn-Murdoch / @jburnmurdoch  
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EARLY PEAKING OF CHINA'S EMISSIONS

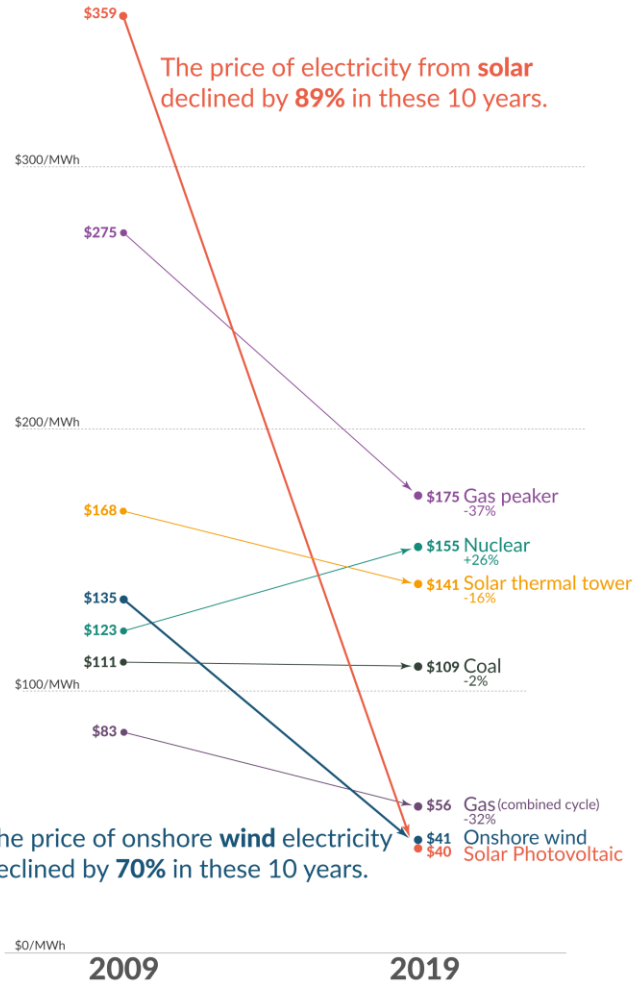


# POWER FROM RENEWABLES CHEAPER THAN FROM FOSSIL FUELS IN MOST COUNTRIES

## The price of electricity from new power plants

Electricity prices are expressed in 'levelized costs of energy' (LCOE). LCOE captures the cost of building the power plant itself as well as the ongoing costs for fuel and operating the power plant over its lifetime.

Our World  
in Data



Data: Lazard Levelized Cost of Energy Analysis, Version 13.0  
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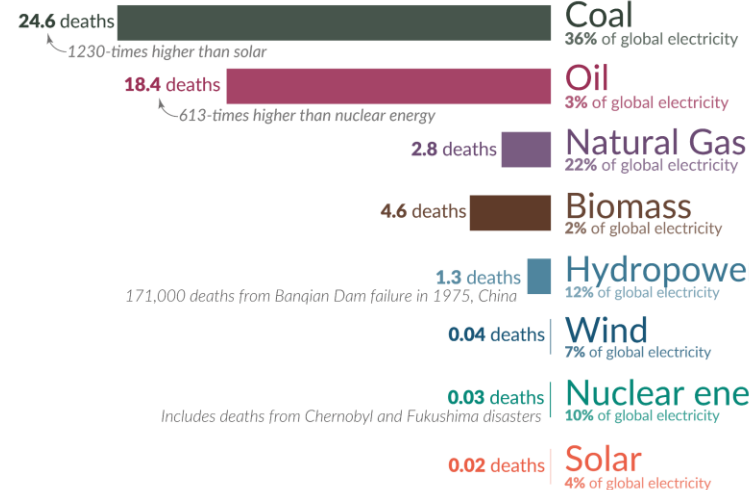
... and better for our health and safety!

## What are the safest and cleanest sources of energy?

Our World  
in Data

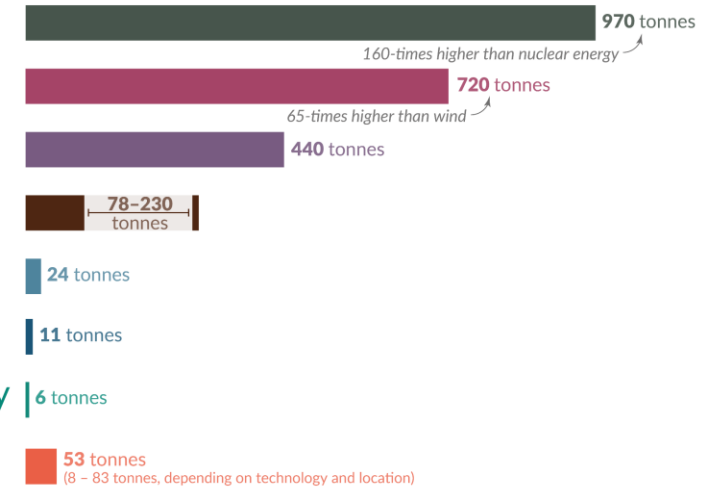
### Death rate from accidents and air pollution

Measured as deaths per terawatt-hour of electricity production.  
1 terawatt-hour is the annual electricity consumption of 150,000 people in the EU.



### Greenhouse gas emissions

Measured in emissions of CO<sub>2</sub>-equivalents per gigawatt-hour of electricity over the lifecycle of the power plant.  
1 gigawatt-hour is the annual electricity consumption of 150 people in the EU.



Death rates from fossil fuels and biomass are based on state-of-the-art plants with pollution controls in Europe, and are based on older models of the impacts of air pollution on health. This means these death rates are likely to be very conservative. For further discussion, see our article: [OurWorldinData.org/safest-sources-of-energy](https://ourworldindata.org/safest-sources-of-energy). Electricity shares are given for 2021.  
Data sources: Markandya & Wilkinson (2007); UNSCEAR (2008; 2018); Sovacool et al. (2016); IPCC AR5 (2014); UNECE (2022); Ember Energy (2021).

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# COP28: HISTORIC DEAL TO TRANSITION FROM FOSSIL FUELS



# THE KUNMING-MONTREAL GLOBAL BIODIVERSITY FRAMEWORK: A PARIS TYPE AGREEMENT FOR NATURE

## Paris moment for nature



The UN Biodiversity Summit has approved a landmark deal to protect nature and direct billions of dollars towards biodiversity conservation. Highlights of the deal

**2030  
limit**

The Kunming-Montreal Global Biodiversity Framework contains 23 action-oriented targets, which have been divided in three broad categories:

**1** Reducing threats to biodiversity

**2** Meeting people's needs through sustainable use and benefit-sharing

**3** Tools and solutions for implementation and mainstreaming

### KEY TARGETS



**Conserve area:** At least 30% of terrestrial, inland water, and coastal, marine areas, are conserved



**Restore ecosystems:** At least 30% of areas of degraded ecosystems are under restoration



**Reduce harmful subsidies:** Identify, and eliminate incentives harmful for biodiversity



Officials at the United Nations Biodiversity Conference (COP15) in Montreal. AFP

**DIVERGENCES REMAIN:** Division over how to fund efforts led to intense negotiations, with China, chair for COP15, disregarding objections from the delegation of the DRC



**THE BIODIVERSITY PLAN**  
For Life on Earth





# PART TWO

# CHOICES

*Response options to thrive whilst transitioning to a climate-safe future*

## DENY/ IGNORE



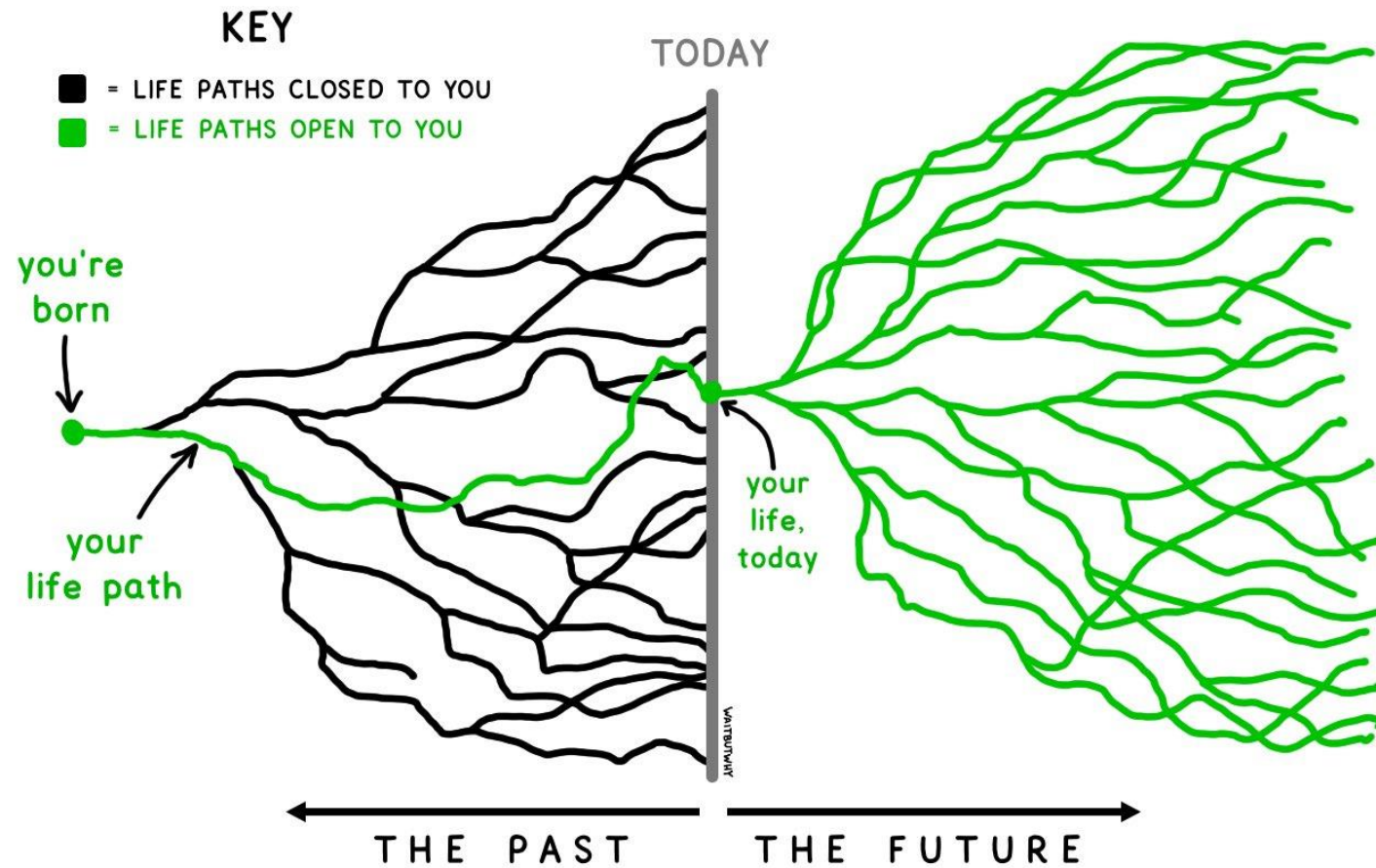
## REACT



## CREATE BETTER ALTERNATIVE



# CHOICES NOW AFFECT OPTIONS LATER

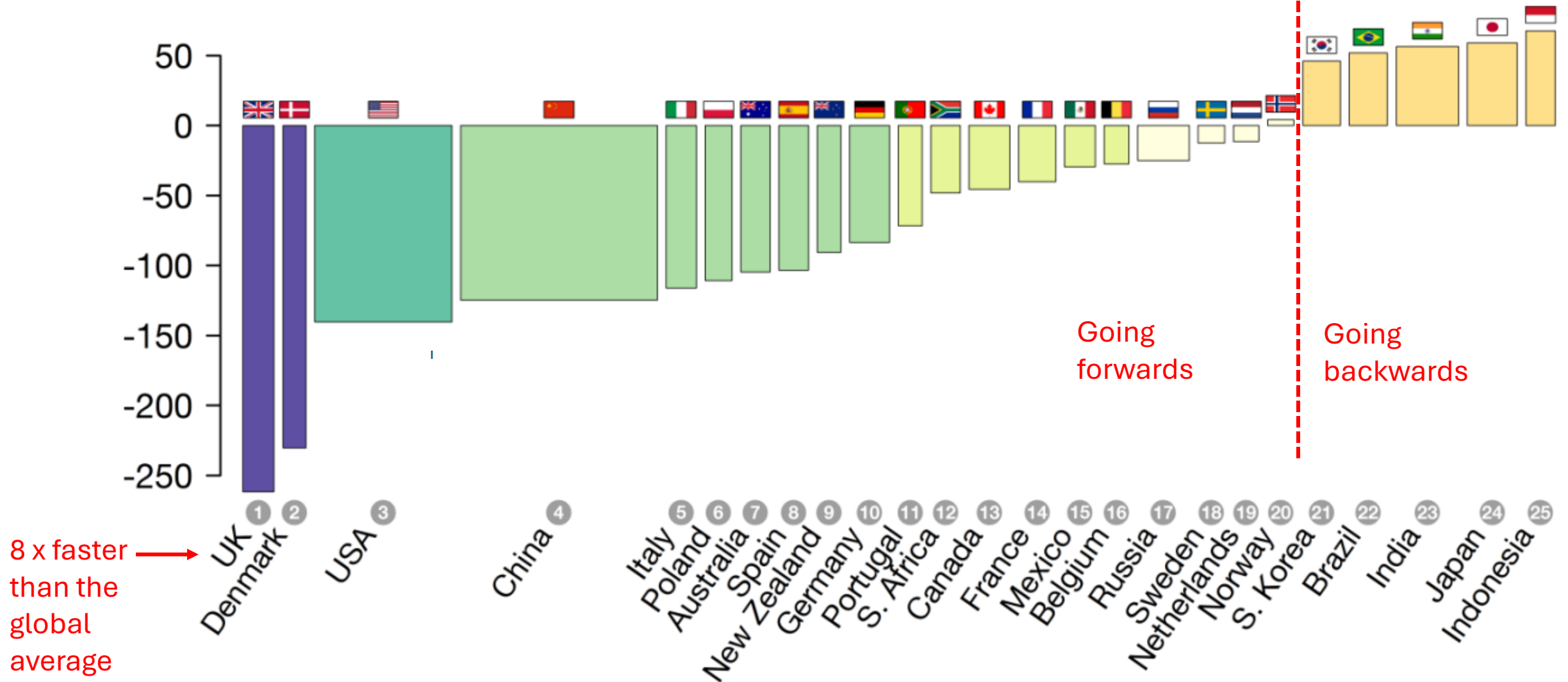




So, how do we make better choices?

# POLICY DETERMINES THE PACE OF THE TRANSITION

Change in carbon intensity of electricity generation, gCO<sub>2</sub>/kWh, 2008 – 2017

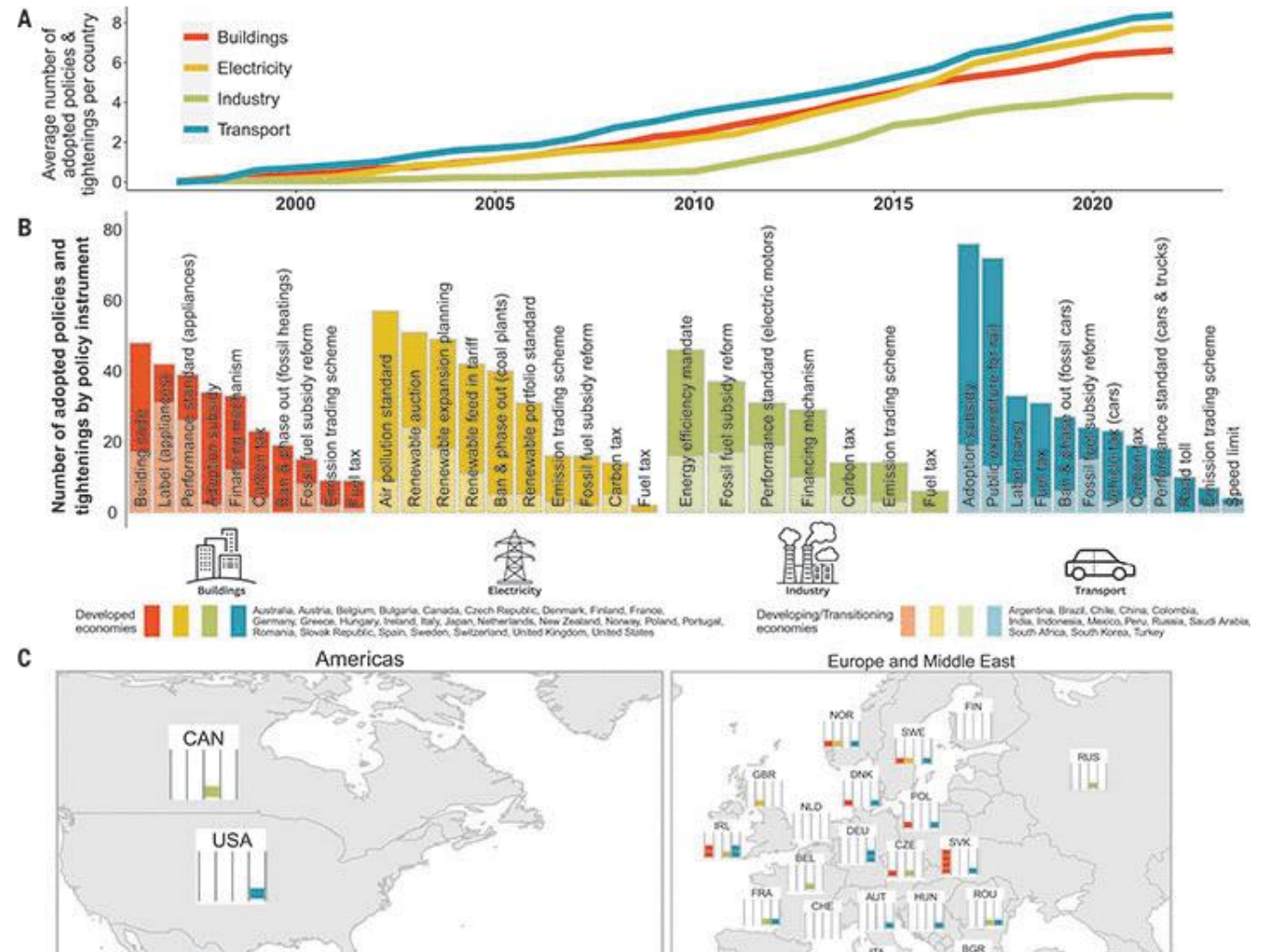


Credit: Simon Sharpe

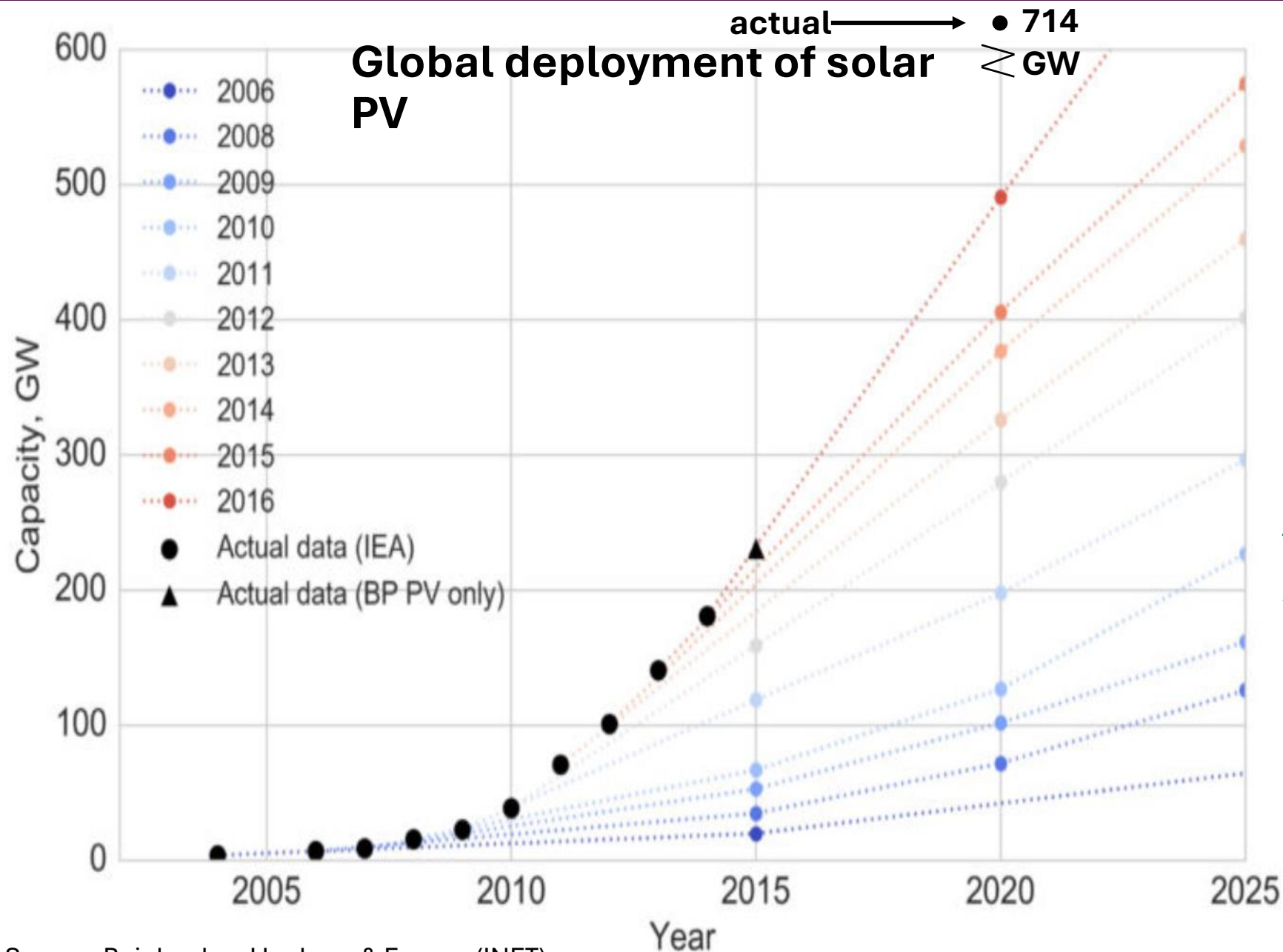
# POLICIES THAT ACHIEVED MAJOR EMISSION REDUCTIONS



Global evidence from 1500 climate policies implemented over the past 25 years



# INVESTMENT BEATS TAX, EARLY IN A TRANSITION



*“Today, renewable energy is cheaper than coal in many places in the world, all major car manufacturers are working on several electric car models, and cities are starting to switch to electric buses.*

***All of this was achieved with policies focussed on new investments, not with carbon taxes.”***

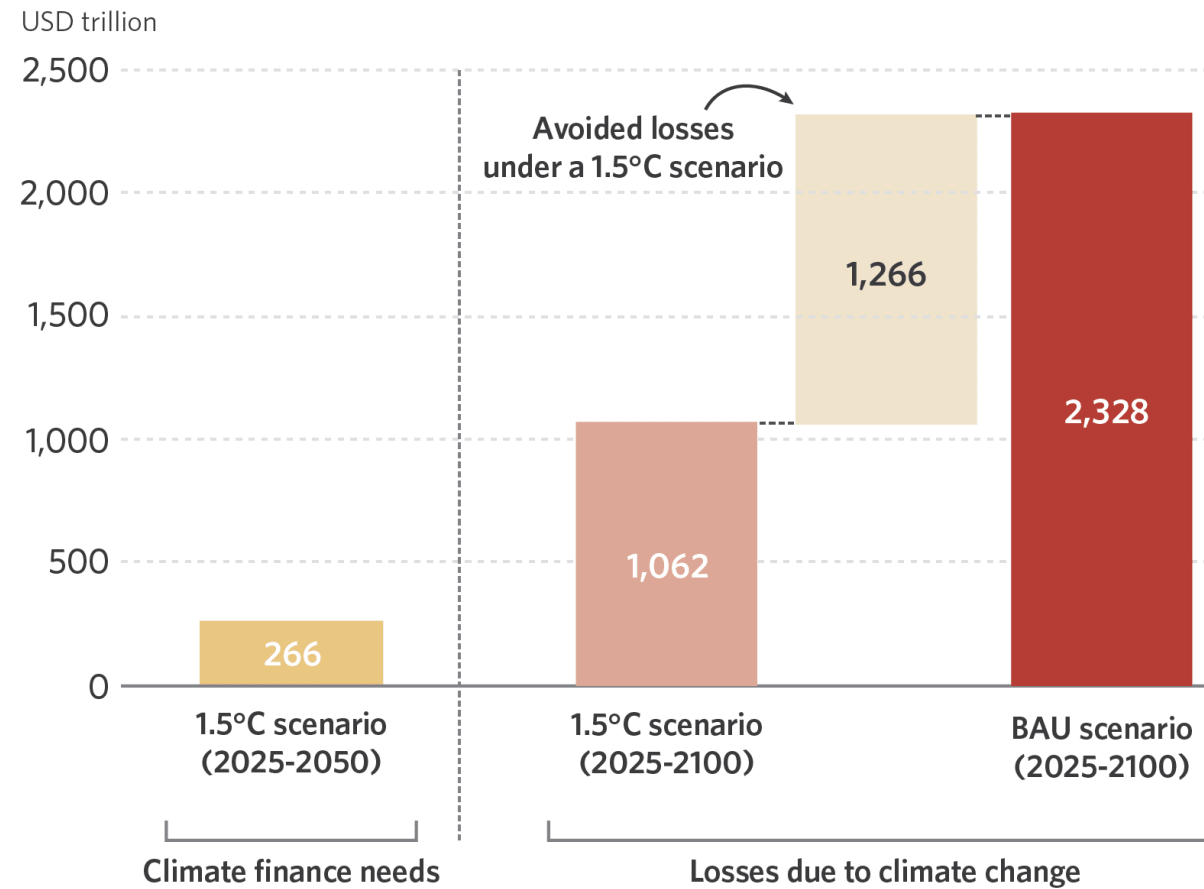
*Stephane Hallegatte & Julie Rozenberg*

<https://blogs.worldbank.org/climatechange/all-hands-deck-mobilizing-all-available-instruments-reduce-emissions>



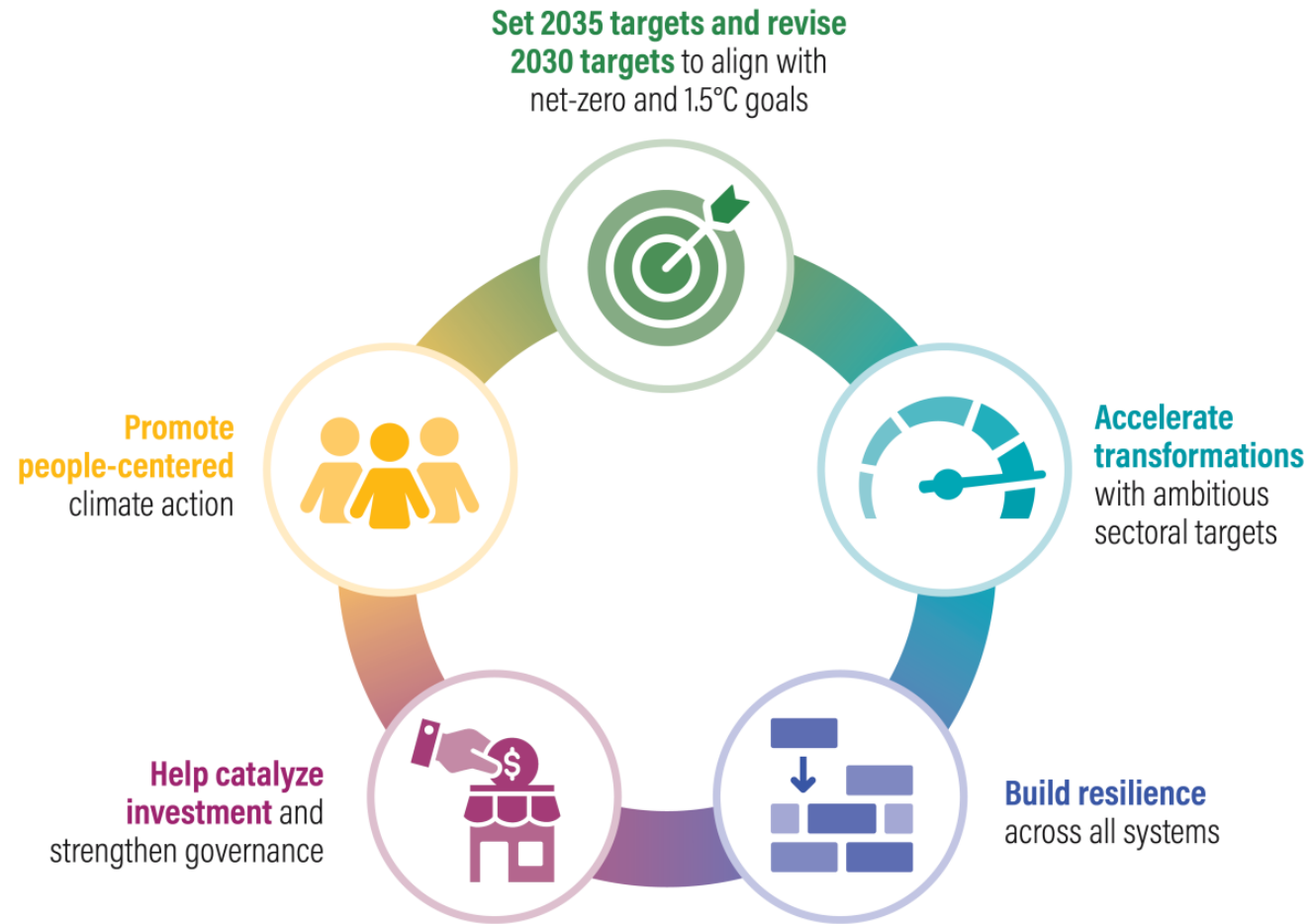
# A SOUND FINANCIAL INVESTMENT

**Figure ES4:** Cumulative climate finance needs vs. losses under 1.5°C and BAU scenarios



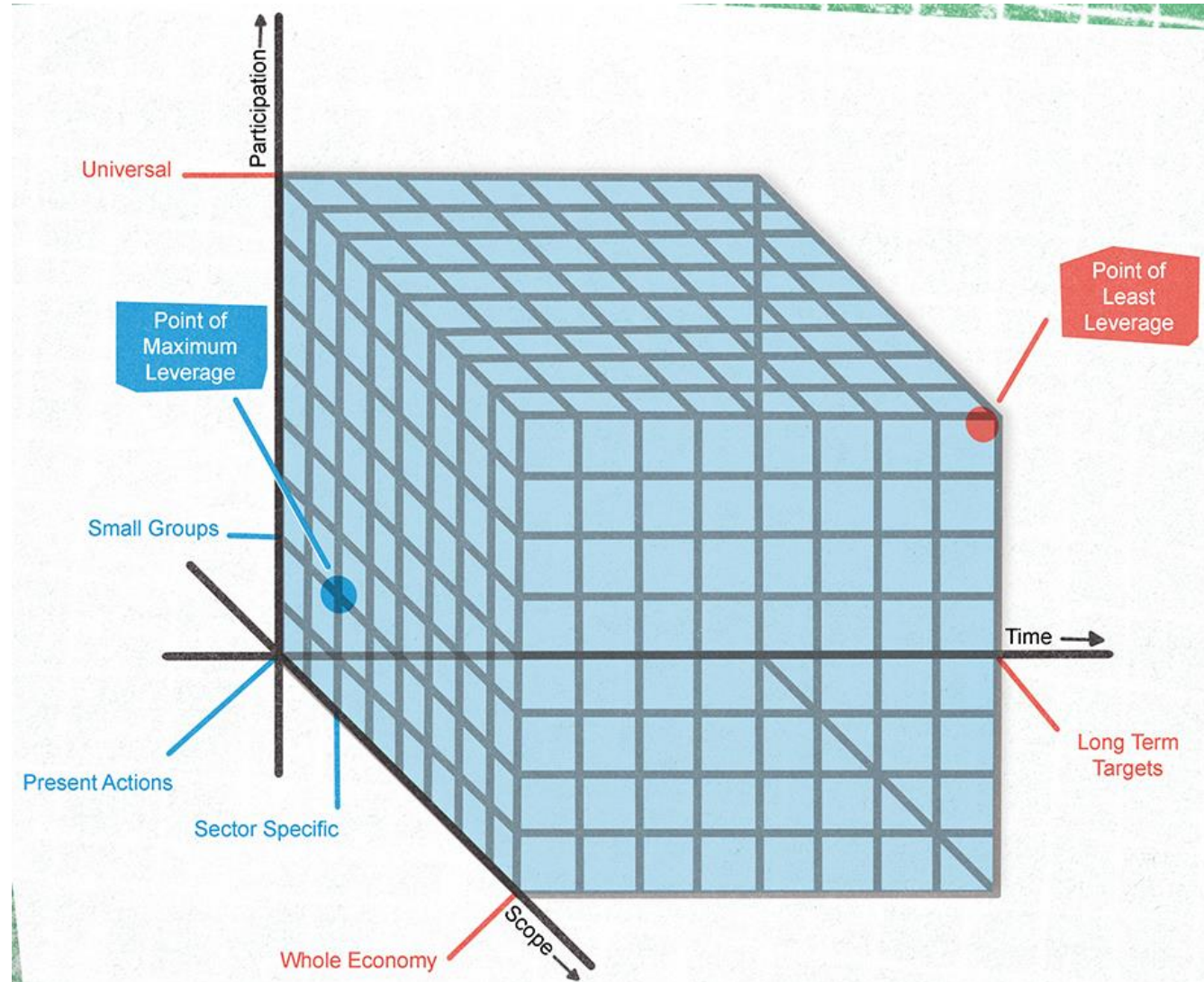
Source: Climate Policy Initiative

# CREATE A STRONG SIGNAL IN THE REVISED NDC



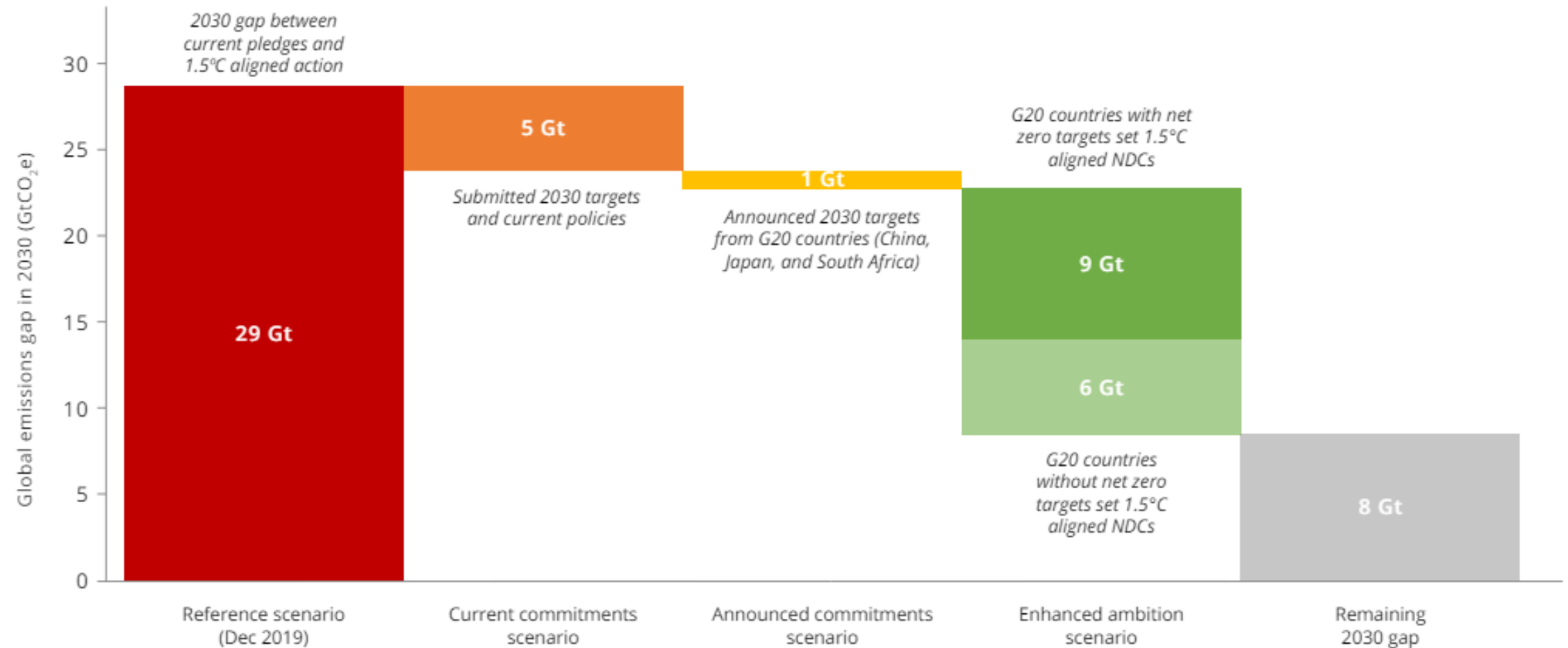
# DIPLOMACY: SEEK HIGHER LEVERAGE CONFIGURATIONS

Focus of  
climate  
diplomacy for  
this decade?



Focus of  
climate  
diplomacy  
for the last  
30 years

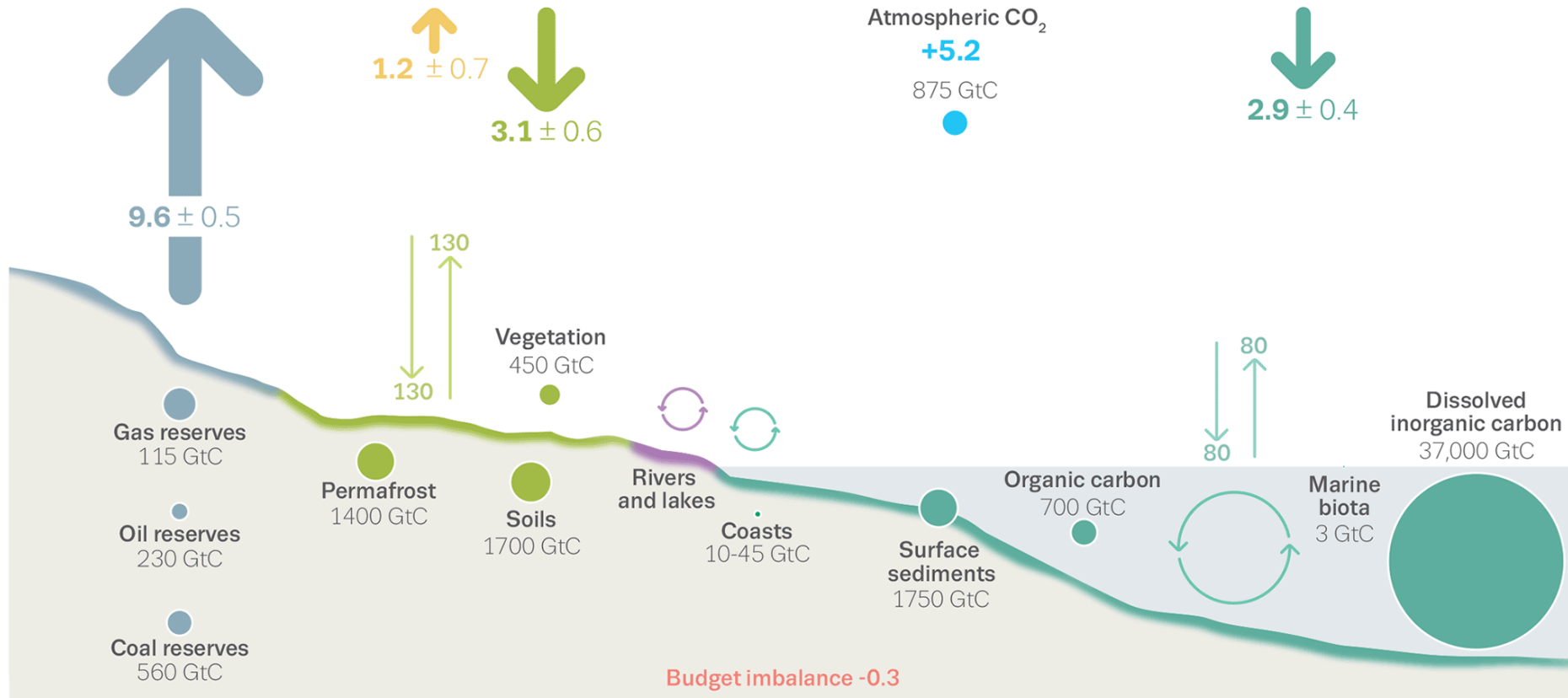
# MOST OF THE 2030 EMISSIONS GAP CAN BE CLOSED BY ENHANCED G20 AMBITION





# ALLY WITH NATURE

## The global carbon cycle



Anthropogenic fluxes 2012-2021 average GtC per year

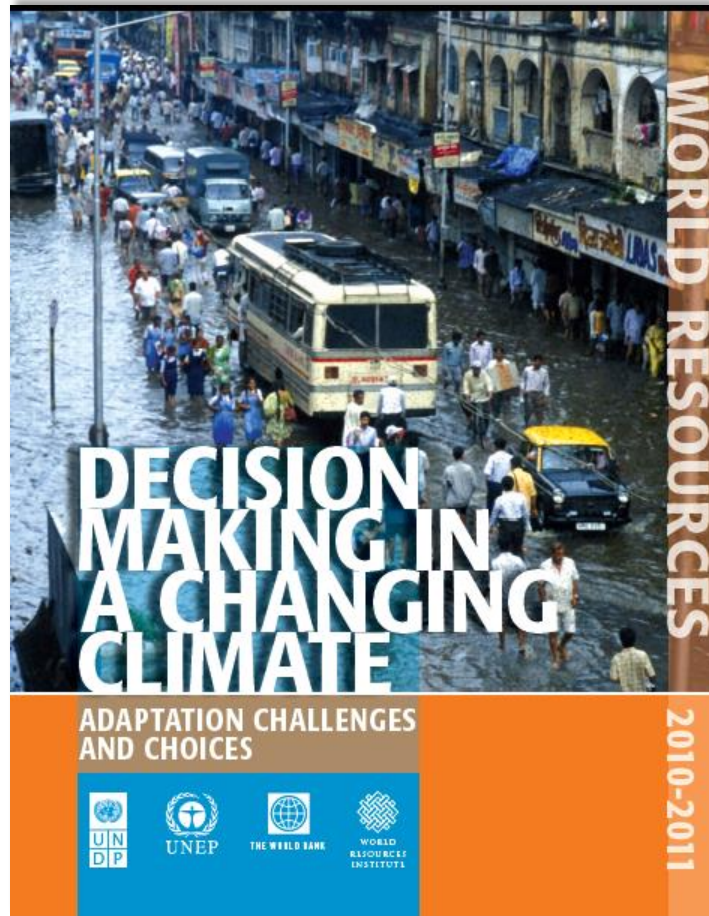
↑ Fossil CO<sub>2</sub> E<sub>FOS</sub>  
↓ Land uptake S<sub>LAND</sub>

↑ Land-use change E<sub>LUC</sub>  
↓ Ocean uptake S<sub>OCEAN</sub>

↑ Carbon cycling GtC per year  
● Stocks GtC

+ Atmospheric increase G<sub>ATM</sub>  
■ Budget Imbalance B<sub>IM</sub>

# ELEMENTS OF EFFECTIVE DECISION MAKING



Available online at [www.sciencedirect.com](http://www.sciencedirect.com)

ScienceDirect



## Does public participation lead to more ambitious and transformative local climate change planning?<sup>☆</sup>

Massimo Cattino<sup>1</sup> and Diana Reckien



The scientific literature is inconclusive with regard to whether public participation leads to more ambitious and transformative local climate governance. We review the scientific literature and, for climate adaptation, interpret whether the level of participation is associated with transformative potential of adaptation. For mitigation, we analyze whether public participation in local climate plans is significantly related to local greenhouse gas reduction targets. We find that public participation has a positive impact on both, the transformative potential of adaptation and the ambition for mitigation. The influence of participation on adaptation is stronger than the influence on mitigation. Based on our review, we highlight four conditions under which public participation can lead to potentially transformative action and greater local climate ambition, that is, recognition of all actors, their clear and meaningful engagement in all decision making stages, full decision-making power of the involved public, and the support of a logic of welfare.

### Address

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<sup>1</sup> Permanent address: Circonvallazione Trionfale 34, 00195 Rome, Italy.

Current Opinion in Environmental Sustainability 2021, 52:100–110

This review comes from a themed issue on Climate decision-making

Edited by Diana Reckien, Rachael Shwom and Catherine Vaughan

For a complete overview see the Issue and the Editorial

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### Introduction

It seems widely acknowledged, that public participation—also termed community participation or citizen participation—benefits local government decision making [1]. Public participation is ‘any process that directly engages the public in decision-making and gives full

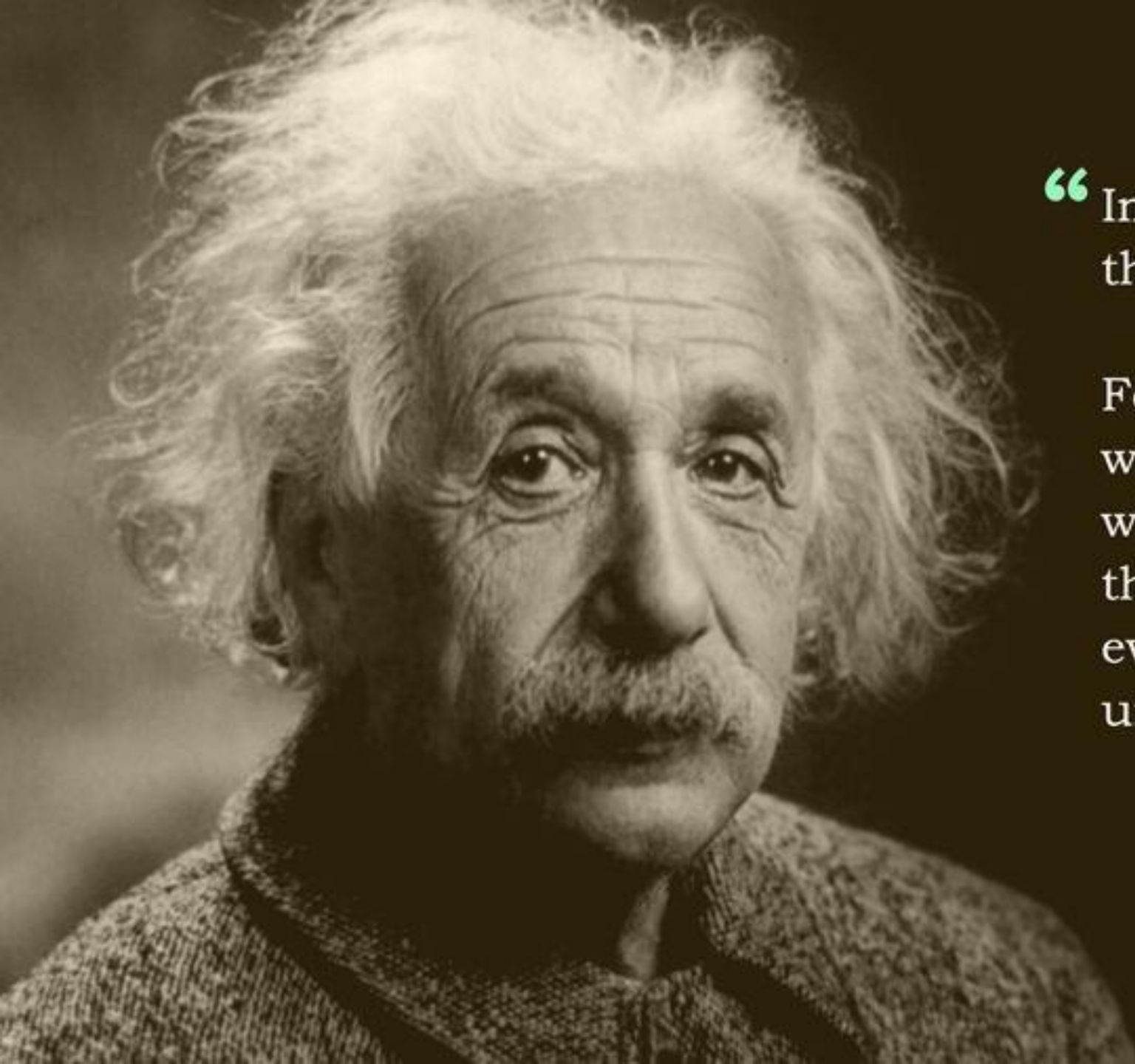
consideration to public input in making that decision’ [2]. Often, it refers to ‘a deliberative process by which interested or affected citizens, civil society organisations, and government actors are involved in policy-making before a political decision is taken’ [3]. We use the term ‘public participation’ synonymous with citizen participation and community participation, acknowledging that there are different types, forms and levels of participation (see Ladder of Participation by Arnstein [4]). These different levels can be placed on a ‘continuum of interaction between government and the public, ranging from informing and listening at one end, to implementing jointly agreed solutions at the other; and in between there is dialogue, debate and analysis’ [3]. Important aspects of genuine participation is the possibility for involved citizens to come to a shared understanding of problems and potential solutions, and with that to change one’s mind throughout the process, instead of just exchanging or listening to other views [3].

Assumed benefits of public participation are related to legitimacy [5], justice and equity of planning processes and outcomes, greater awareness of communities about societal problems addressed with the plan or policy, that is, learning and empowerment, larger willingness for community cooperation and dialogue, and increased individual behavioral change, all with the consequence of stronger and more resilient communities [6\*\*], [11,12], [3–15]. In particular with the acknowledged climate crisis [16] and related needs for a societal transformation [17] public participation may be seen as a condition of success [6\*\*] in transforming societies towards climate resilience and carbon neutrality by way of local and regional decision-making. As an example, one of the main goals of the youth climate movement is substantially higher climate ambition and faster mitigation action [18,19]. Without the persistent youth strikes and related calls for more climate action countries’ mitigation strategies would not be as ambitious. The recent decision of Germany’s Federal Constitutional Court that the country must provide more explicit plans to reduce greenhouse gases (GHG) emissions through to 2050, instead of 2030, is regarded a major victory for climate youth activists [20]. Similar, for adaptation, one could assume that public participation would lead to more ambitious adaptation, as people at risk and affected by climate impacts might

Good decisions are the ones that are opened up to the public and grounded in participatory processes that are unmistakably democratic in character.

Given the deep uncertainties and long-time horizons characteristic of decisions relevant to climate change adaptation, effective public engagement is all the more critical to ensure legitimacy and durability of policy decisions.

<sup>☆</sup> Given his/her role as Guest Editor, Diana Reckien had no involvement in the peer-review of this article and has no access to information regarding its peer-review. Full responsibility for the editorial process for this article was delegated to Rachael Shwom.



“Imagination is more important than knowledge.

For knowledge is limited to all we now know and understand, while imagination embraces the entire world and all there ever will be to know and understand.”

– Albert Einstein