



PROTECT
THE PLANET

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der Universität Potsdam

„Klimastrategie München“: Langfristige Klima- und Umweltpolitik – (wie) können Barrieren abgebaut werden?

Donnerstag, 24.11.2022, 19:00 Uhr,
Münchner Zukunftssalon und parallel Zoom-Online

in Kooperation mit:



Münchner
Initiative
Nachhaltigkeit





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integrated climate impact research
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Langfristige Klima- und Umweltpolitik – (wie) können Barrieren abgebaut werden?

Zukunftssalon München, 24. Nov. 2022

Detlef Sprinz

PIK – Potsdam-Institut für Klimafolgenforschung e.V. &
Universität Potsdam

Prologue

In the long run, we are all dead
John Maynard Keynes (1923)

In the year 2525
If man is still alive
If woman can survive
They may find

....

In the year 9595
I'm kinda wondering if man's gonna be alive
He's taken everything this old earth can give
And he ain't put back nothing
Zager and Evans (1968)



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Prologue

Doch was auch immer man anführen mag, der Pessimismus lässt sich nicht ausräumen. Die während der letzten 300 Jahre entstandenen Strukturen der kapitalistischen Moderne zerstören die biologische Nische, in der menschliche Kultur stabil bestehen kann, und verhindern zugleich eine hinreichende Reaktion auf die Krise. Man mag in alternative Welten umziehen wollen. Aber sie stehen nicht bereit. *Dass unsere Gesellschaften noch rechtzeitig aus ihrer Lage herausfinden, ist Wunschdenken.*

Beckert (2022, emphasis added)



<http://www.progarchives.com/album.asp?id=1252>



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Overview

- › What Are Long-Term Policy (LoPo) Challenges?
- › Examples
- › LoPo Policy Options
- › Select Issue 1: Long-Term Climate Goal
- › Select Issue 2: Forest Carbon & Enabling Long-Term GHG Sinks
- › Select Issue 3: Compensation Fund for Climate Impacts
- › Select Issue 4: Time Inconsistency
- › Outlook



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What Are Long-Term Policy (LoPo) Challenges?

- › “super-wicked” policy challenges
 - › [s]uper wicked problems comprise four key features: time is running out; those who cause the problem also seek to provide a solution; the central authority needed to address them is weak or non-existent; and irrational discounting occurs that pushes responses into the future (Levin et al., 2012, 124).
- › Long-term Policy (LoPo) (Sprinz 2009)
 - › ≡ Public Policy Issues that
 - › last at least one human generation
 - › exhibit deep uncertainty exasperated by the depth of time, and
 - › engender public goods aspects both at the stage of problem generation as well as at the response stage



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LoPo Examples

- › Climate Change
- › Biodiversity Loss
- › Soil Degradation
 - › Regreening the Sahara

- › Long-Term Care for the Elderly
- › Public Debts
- › Good Governance
- › ...



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LoPo Policy Options

Category	Policy Option	Example(s)
Institutional Design	Create new or strengthen existing institutions	Hearings, commissions
	Electoral accountability and potentially delegate more weight to younger generations	Lower minimum age for eligibility to vote
	Nest intermediate goals within long-term goals	Short-, medium-, and long-term goals
	Delegation of authority/tying hands	Carbon bank
Institutional Design & Information	Eliminate alternative options	Reduce choice set, construction of long-term infrastructures
Information	Transparency	Advisory councils; youth or intergenerational councils, labeling
	Rational ignorance: collecting no new information	Exit polluting sector
Dis-/incentives	Government fiscal policy	Subsidies and financial offlifting to taxpayers, taxes
	Compensation and sanctions	Compensation for past, present, and potentially future damages, penalties
Regulation and Enforcement	Government regulation and enforcement	Emission permits, prohibition of polluting activities

Sprinz (forthcoming)



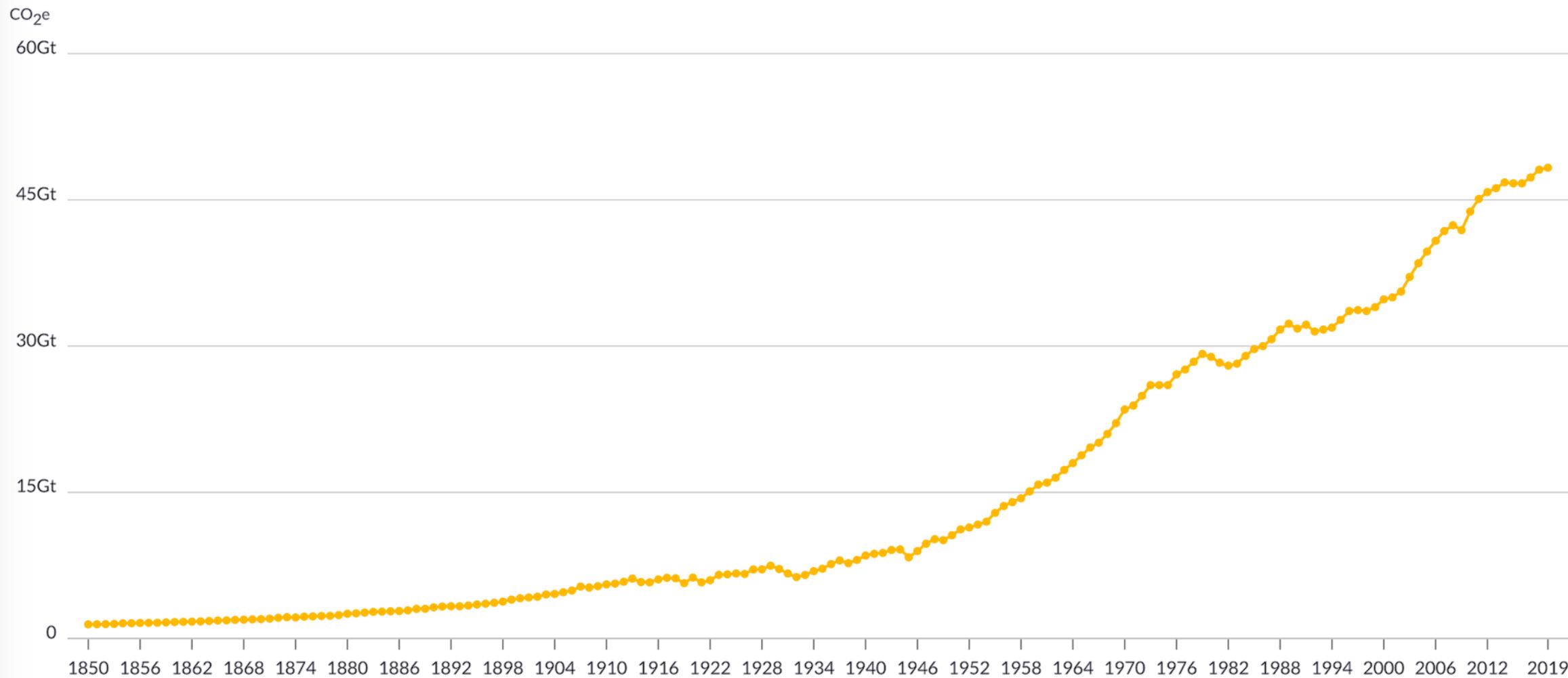
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Select Issue 1: Long-Term Climate Goal

- › Paris Agreement (2015)
 - › “Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels” (UNFCCC 2015, Art. 2)
- › Emissions Data
 - › Historical
 - › Global
 - › By Country
 - › Since 1990



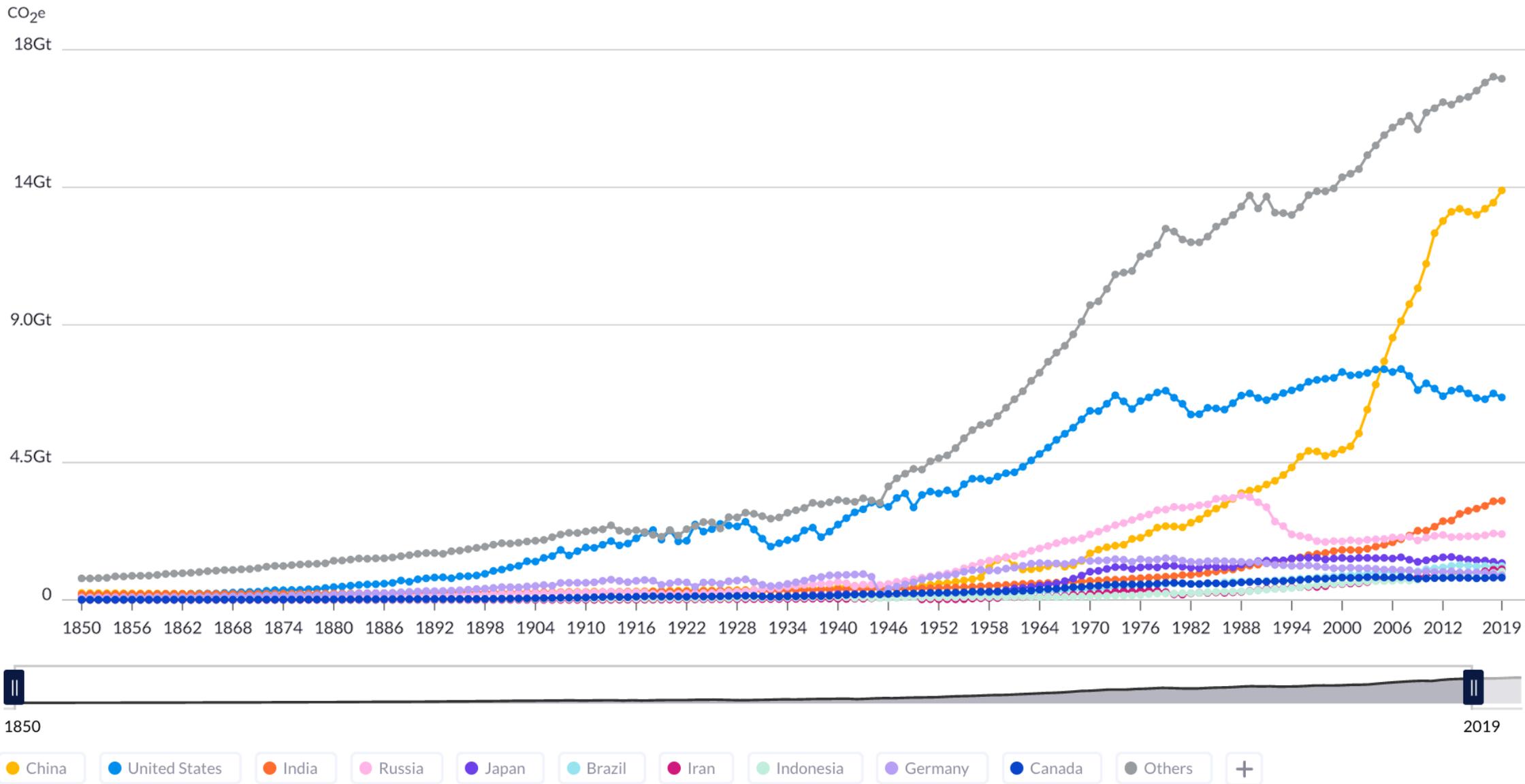


https://www.climatewatchdata.org/ghg-emissions?breakBy=regions&end_year=2019&source=PIK&start_year=1850



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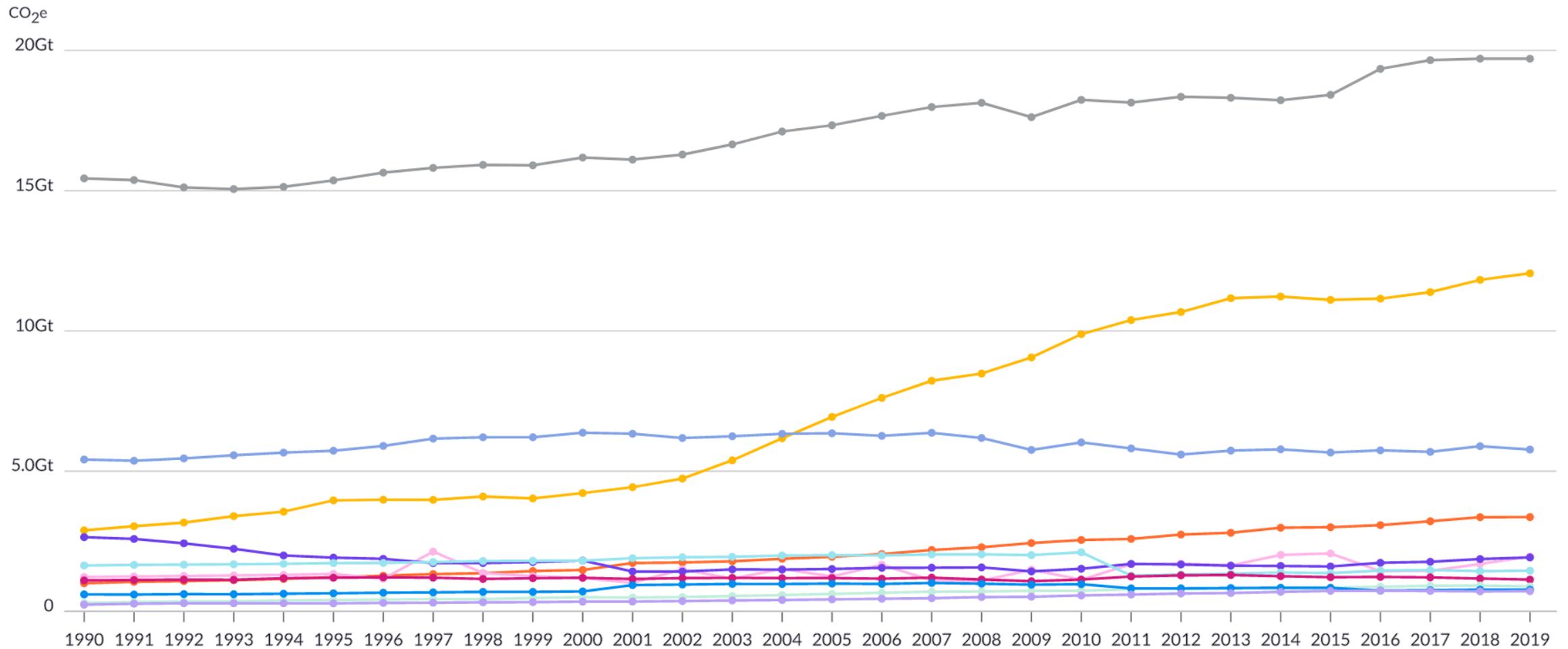


https://www.climatewatchdata.org/ghg-emissions?breakBy=countries&end_year=2019&source=PIK&start_year=1850



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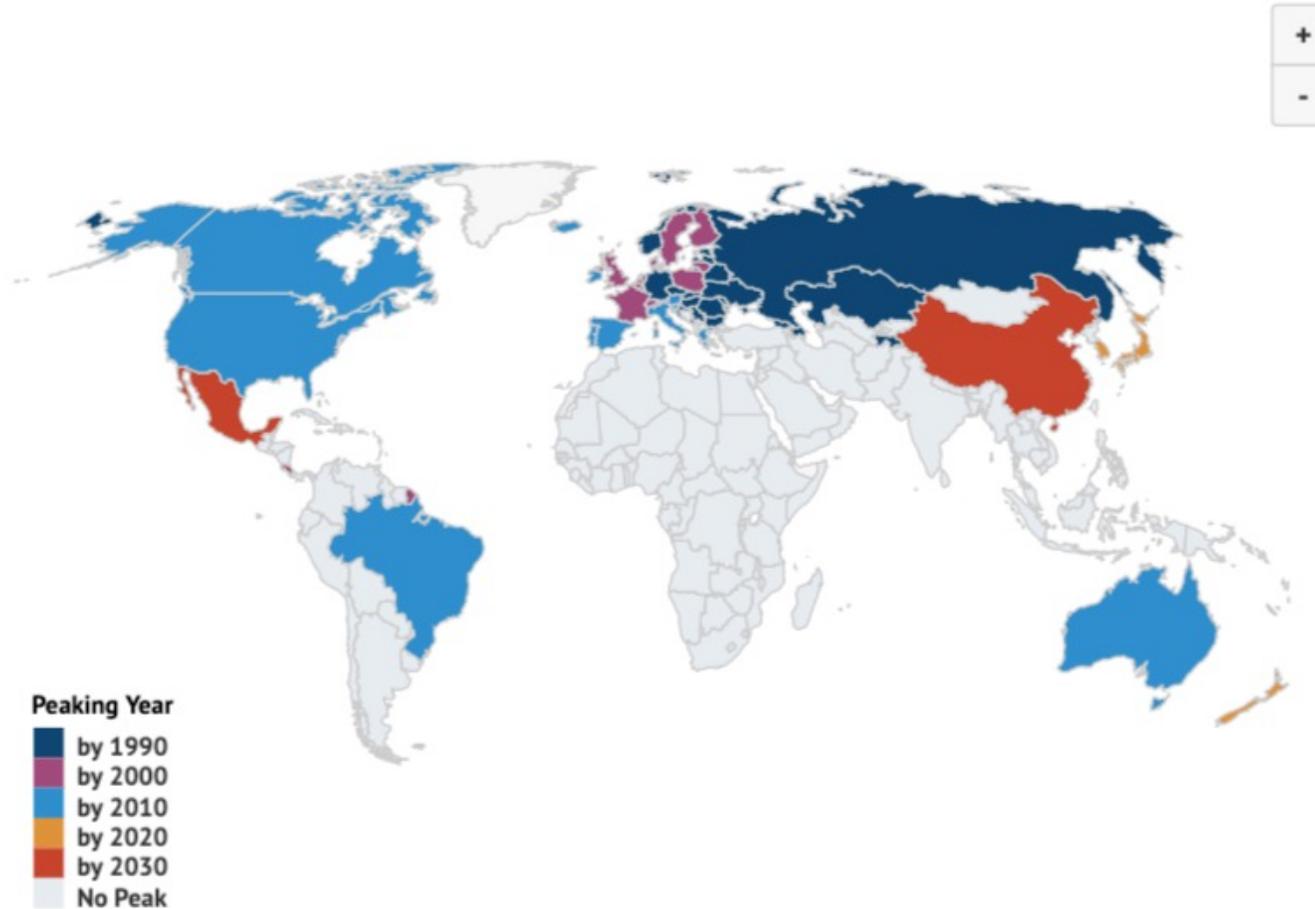
- China
- United States
- India
- Indonesia
- Russia
- Brazil
- Japan
- Iran
- Canada
- Saudi Arabia
- Others
- +

https://www.climatewatchdata.org/ghg-emissions?breakBy=countries&end_year=2019§ors=total-including-lucf&source=CAIT&start_year=1990

Select Issue 1: Long-Term Climate Goal

GHG emission peak dates

Click on a country to see its emissions timeline



<https://www.climatewatchdata.org/key-visualizations?visualization=22>, 21 Nov. 2022



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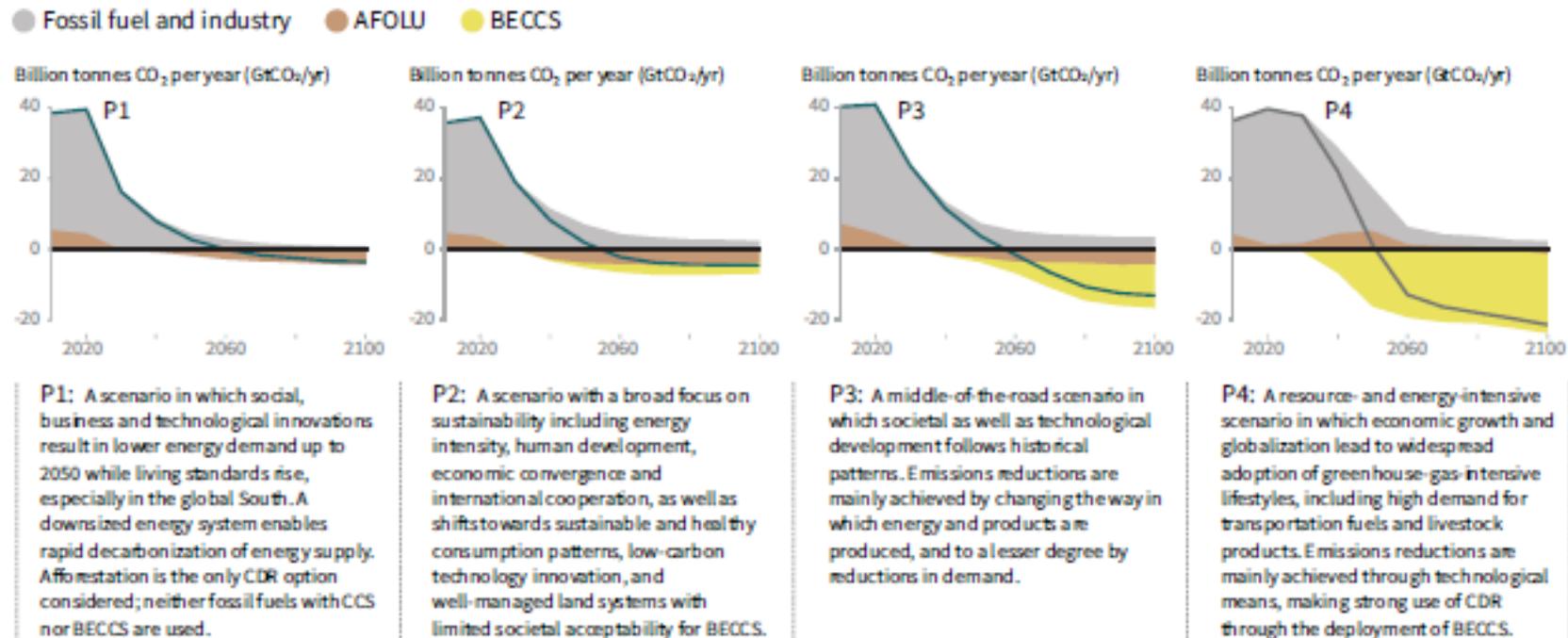


Select Issue 1: Long-Term Climate Goal

Characteristics of four illustrative model pathways

Different mitigation strategies can achieve the net emissions reductions that would be required to follow a pathway that limits global warming to 1.5°C with no or limited overshoot. All pathways use Carbon Dioxide Removal (CDR), but the amount varies across pathways, as do the relative contributions of Bioenergy with Carbon Capture and Storage (BECCS) and removals in the Agriculture, Forestry and Other Land Use (AFOLU) sector. This has implications for emissions and several other pathway characteristics.

Breakdown of contributions to global net CO₂ emissions in four illustrative model pathways



Source: IPCC (2018, 16, “Global Warming of 1.5°C, SPM”)



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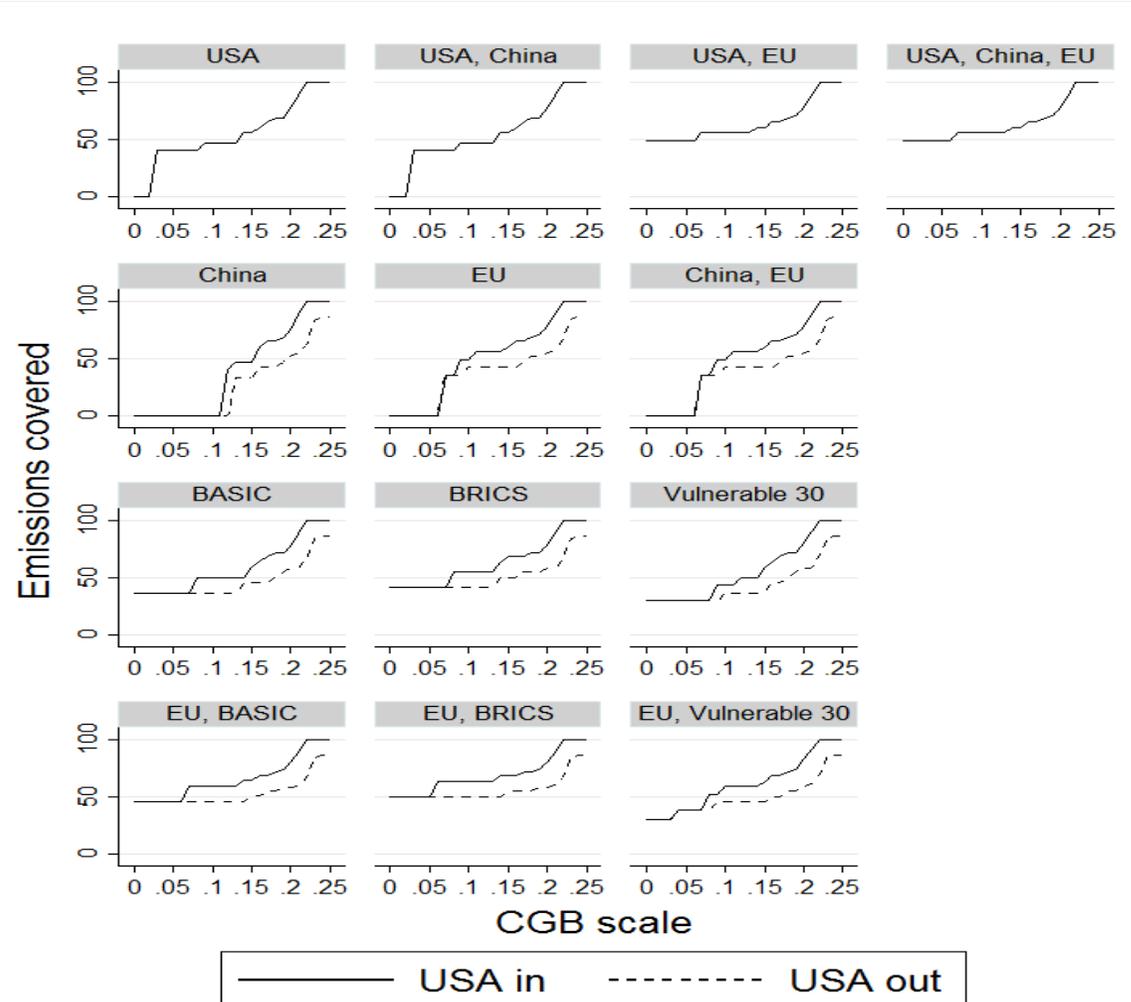
Select Issue 1: Long-Term Climate Goal

› Options

› Coalition of the Willing – Climate Clubs

Climate-club participation (as a percentage of global emissions) by scenario, with conditional commitments

in panel rows 2-4: solid lines: USA as follower; dashed lines: USA as outsider



Select Issue 1: Long-Term Climate Goal

- › Options (cont.)
 - › pricing GHGs (note: time inconsistency, see below)
 - › limits on quantities of emissions/permits (EU ETS)
 - › adaptation measures
 - › compensation (see below)



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Select Issue 2: Forest Carbon & Long-Term GHG Sinks

› Net Zero GHG Emissions Goals

› EU: 2050

› Germany & Sweden: 2045

› net negative emissions beginning 2050 (Germany) and 2045 (Sweden)

› broader picture

<https://www.climatewatchdata.org/net-zero-tracker?showEUCountries=true>



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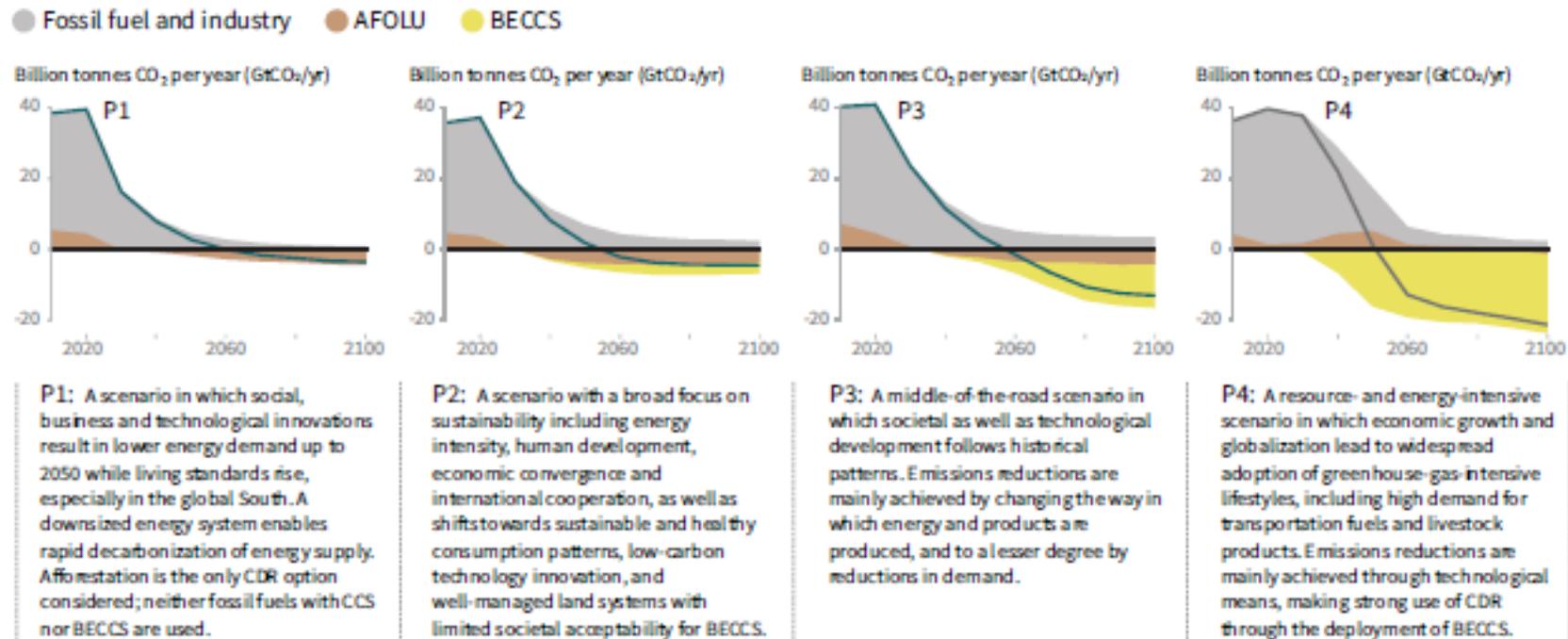


Select Issue 2: Forest Carbon & Long-Term GHG Sinks

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Select Issue 2: Forest Carbon & Long-Term GHG Sinks

› Bundes-Klimaschutzgesetz (KSG)

https://www.gesetze-im-internet.de/ksg/_3a.html

› § 3a Beitrag des Sektors Landnutzung, Landnutzungsänderung und Forstwirtschaft

› (1) Der Beitrag des Sektors Landnutzung, Landnutzungsänderung und Forstwirtschaft zum Klimaschutz soll gestärkt werden. Der Mittelwert der jährlichen Emissionsbilanzen des jeweiligen Zieljahres und der drei vorhergehenden Kalenderjahre des Sektors Landnutzung, Landnutzungsänderung und Forstwirtschaft soll wie folgt verbessert werden:

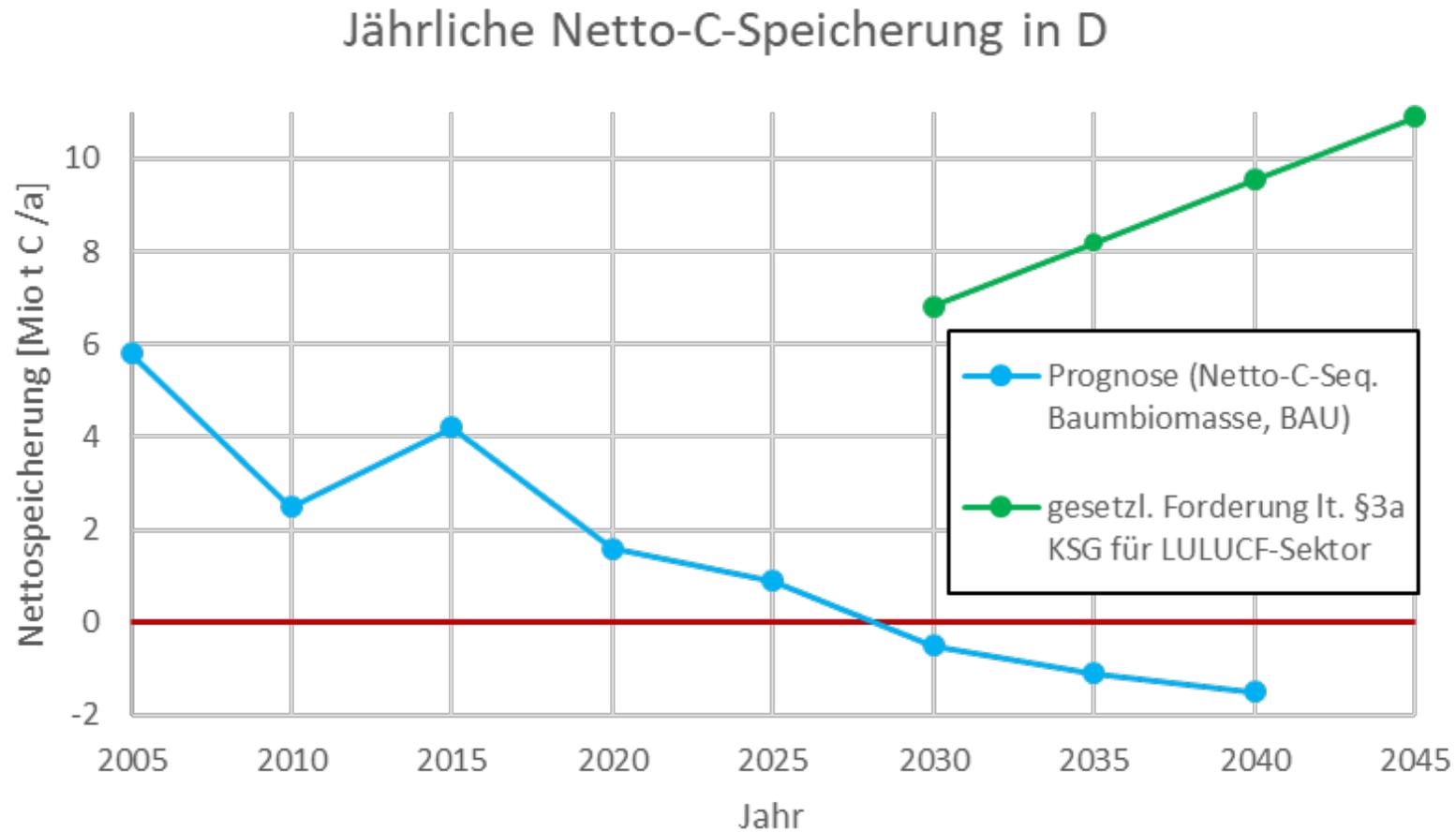
- 1. auf mindestens minus 25 Millionen Tonnen Kohlendioxidäquivalent bis zum Jahr 2030,
- 2. auf mindestens minus 35 Millionen Tonnen Kohlendioxidäquivalent bis zum Jahr 2040,
- 3. auf mindestens minus 40 Millionen Tonnen Kohlendioxidäquivalent bis zum Jahr 2045.



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Select Issue 2: Forest Carbon & Long-Term GHG Sinks



Elsasser (2021)



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Select Issue 2: Forest Carbon & Long-Term GHG Sinks

- › Political Forecasting Project from Summer 2022
 - › remuneration for forest ecosystem services
 - › Predictioneer's Game (Bueno de Mesquita 2009)
 - › Present slightly revised results with data inputs from early Oct. 2022
 - › collaboration with the University of Göttingen



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Select Issue 2: Forest Carbon & Long-Term GHG Sinks

- › 1. Quantities of Forest Carbon Sinks to Be Remunerated (longer-term)
 - › Position Scale

Scale value	Represents
0	No quantity of forest carbon will be remunerated (status quo)
30	Net change in forest carbon only
60	Net change in forest carbon plus carbon in harvested wood products (HWP)
100	Net change in forest carbon plus carbon in HWP, plus carbon substitution potential

- › Prediction
 - › 45.6 in Round 4
 - › i.e., net change in forest carbon only plus select harvested wood products
 - › EU may issue a veto

Select Issue 2: Forest Carbon & Long-Term GHG Sinks

- › 2. Extent of Nature Conservation Aspects to Be Considered and Made Available for Remuneration
 - › Position Scale

Scale value	Represents
0	No nature conservation aspects will be considered.
5	One aspect is included to a low degree.
10	One aspect is included to a high degree or two aspects to a low degree.
...	...
100	Ten aspects are included to a high degree.

- › Prediction
 - › 47.0 in Round 1
 - › i.e., nearly all criteria to a low degree or mixture of low/high degree, etc.

Select Issue 2: Forest Carbon & Long-Term GHG Sinks

- › 3. Extent of Measures for Strengthening Climate Resilience of Forest Stands and Made Available for Remuneration
 - › Position Scale

Scale value	Represents
0	No climate resilience aspects will be considered.
5	One aspect is included to a low degree.
10	One aspect is included to a high degree or two aspects to a low degree.
...	...
50	Five aspects are included to a high degree.

- › Prediction
 - › 20.6 in Round 1
 - › i.e., two criteria to a high degree or four criteria to a low degree, etc.



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Select Issue 2: Forest Carbon & Long-Term GHG Sinks

› Reality (2022 expenditures only)



Bundesanzeiger

Herausgegeben vom
Bundesministerium der Justiz
www.bundesanzeiger.de

Bekanntmachung

Veröffentlicht am Freitag, 11. November 2022
BAnz AT 11.11.2022 B1
Seite 1 von 11

**Bundesministerium
für Ernährung und Landwirtschaft**

**Bekanntmachung
der Richtlinie
für Zuwendungen zu einem klimaangepassten Waldmanagement**

Vom 28. Oktober 2022



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Select Issue 2: Forest Carbon & Long-Term GHG Sinks

- › *Preliminary* Evaluation of Political Forecasts (in light of results for 2022)
 - › Fast (round 1 agreements)
 - › Many criteria relate to nature protection of forests
 - › Some criteria relate to climate resilience of forests
 - › Combined: ca. 10 criteria + certification agencies
 - › Validation via forest certification agencies
 - › Forest carbon sinks are mentioned, but never quantified – yet seem not to play a major *substantive* (rather than declaratory) role
 - › no direct funding for forest carbon sinks (yet)
 - › preliminary support for the direction of our predictions
- › Our Predictions Are Technically for 2023+ (not 2022)



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Select Issue 2: Forest Carbon & Long-Term GHG Sinks

- › Policy Options
 - › payment for ecosystem services
 - › direct regulation



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Select Issue 3: Compensation Fund for Climate Impacts

- › Sprinz & von Büнау (2013): The Compensation Fund for Climate Impacts (UN: loss & damage)
 - › our proposal: voluntary system at the international level
 - › overall architecture
 - › ultimate objective → limitation on emissions
 - › compensation → rule-based adjudication
 - › distributional rule → double proportionality
 - › limit time inconsistency → frontrunner
 - › use → partial prepayment for adaptation

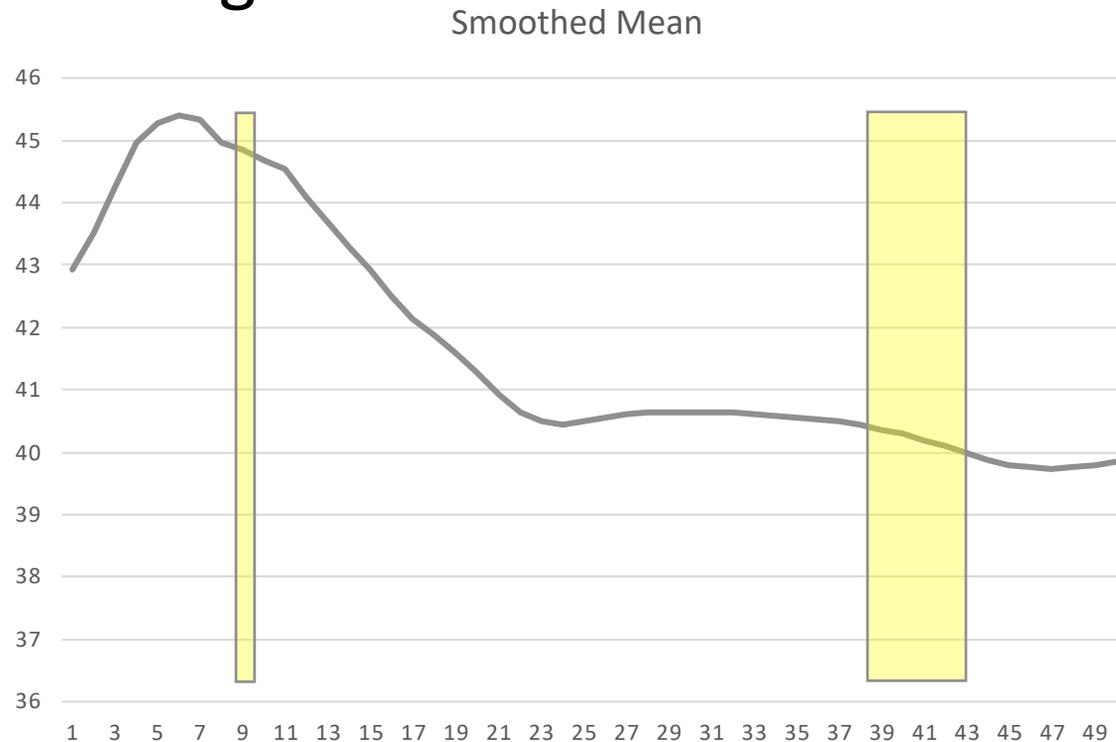


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Select Issue 3: Compensation Fund for Climate Impacts

› Sprinz et al. (2016) on Loss & Damage



Sprinz et al. (2016, extended time frame of prediction based on original input data from 2015)

To which degree will loss & damage (L&D) be included in an agreement?

0: no mention/omission of L&D

10: preambular reference only

20: reference to Warsaw International Mechanism (WIM) (under adaptation)

30: separate chapter on L&D with little substance

40: separate chapter on L&D and new institutional arrangements with little substance

50: separate chapter on L&D and new institutional arrangements with new non-financial elements (such as coordination and capacity-building)

70: separate chapter on L&D and new mechanism with new non-financial and financial elements (such as insurance) but no compensation regime

100: separate chapter on L&D and new non-financial and financial elements, including a compensation regime



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Select Issue 3: Compensation Fund for Climate Impacts

› UNFCCC COP 27 (2022)

<https://unfccc.int/cop27/auv>

- › new funding arrangement for loss & damage
- › procedural & institutional details
- › short on specifics
- › “financial funds in hand” vs. procedures
- › Compensation provisions are typical under domestic law

› Commentary

› The Economist

“..., the summit created a coffer, but it is not yet clear how much cash donors will cough up to fill it.”

<https://www.economist.com/international/2022/11/20/a-new-un-fund-for-loss-and-damage-emerges-from-cop27>



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Select Issue 3: Compensation Fund for Climate Impacts

› Policy Options

- › compensation for damages
- › incentives for permanently fund adaptation
- › disincentives for GHG emissions



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Select Issue 4: Time Inconsistency/Credible Commitment

- › Possibility to Renege on Policies, esp. under the threat of electoral replacement of governments
 - › new political priorities by way of new government or
 - › change in priorities over time within the same government
- › examples
 - › tax relief on fossil fuels
 - › retroactive removal of subsidies for renewable energy during the 2008+ financial crisis
- › Kydland & Prescott (1977)
 - › precommitment: “rules rather than discretion”
 - › deviation from rules only under extraordinary circumstances
 - › e.g., German constitutional provisions on governmental new debts
- › Policy Options
 - › Airbus “launch aid”
 - › central bank independence
 - › independence of judges (under rule of law political systems)
 - › German Constitutional Court Decision on climate change (strengthening rights of younger generations)



Select Issue 4: Time Inconsistency

- › Study Long-term Institutions, e.g.,
 - › intergenerational sovereign wealth funds (Alaska Permanent Fund, Government of Norway Pension Fund Global)
 - › short-term contingencies vs. long-term performance as portfolios with different weights



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Outlook

- › Select Summary
 - › LoPo is challenging
 - › policy options exist
 - › examples of prominent shortfalls also exist
 - › lack of global government is a reality (“anarchy of the international system”)
- › Climate & Environmental LoPo challenges are NOT the only challenges policymakers face
- › Hold Governments AND the Opposition Accountable
- › Experimentation
 - › remunerating the build-up of carbon sinks



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Outlook

- › Build a Research Center on Long-Term Policy
 - › Max Planck Institute
 - › alternative: why not privately sponsored?



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› www.sprinz.org



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Mehr Vorträge?
Jetzt spenden!
protect-the-planet.de/spenden

Danke für Ihre Teilnahme!



Unsere nächste Veranstaltungen in der Reihe
„Klimastrategie München“:

**01.12.2022, 18:00h, Münchner Zukunftssalon
Klimagipfel in Afrika (COP27)**
Ganswindt, Bartsch, Raschke – „live“-Nachlese

**06.12.2022, 19:00h, Münchner Zukunftssalon
Windkraft auch in Bayern ?!**
Wust, Singer, Keller – Kurzvorträge + Gespräch

Hybrid-Vortrag
**Ausbau der Windenergie:
Die Wind-Wende auch in Bayern?**

Dr. Bernhard Wust
Bundesverband Windenergie, stv. Vorsitzender Landesverband Bayern

Robert Sing
Ingenieurbüro IB-Sing, Geschäftsführer

Peter Keller
Protect the Planet, Projektmanager WindRat

**06. Dezember
19 Uhr
Münchner
Zukunftssalon
& online**