



IDOS | German Institute
of Development
and Sustainability

IISD **ETH** zürich

COVCLIM

How does the COVID-19 pandemic affect climate policy? Case studies on climate targets, recovery spending, and carbon fiscal reform

Tobias S. Schmidt, ETH Zurich
T-AP RRR Networking Event, 12 Oct 2023



Project overview

Paris Agreement's climate commitment updates took place in the middle of the global COVID-19 pandemic and its economic and political repercussions.
=> does/did COVID-19 in/decrease climate ambition?

Overarching Research Questions

- 1) How ambitious are countries' updated NDCs and COVID-19 recovery packages and to what degree do they correlate?
- 2) Which political and economic drivers can explain country differences in climate ambition of NDCs and recovery packages?
- 3) Which political and economic drivers can explain country differences in climate ambition of NDCs and fiscal reform initiatives?

Task	Description	Methodology	Expected output	Participants
1	Assessment of the climate ambition in NDCs and COVID-19 recovery packages. Mapping of climate ambition across countries.	Descriptive statistics based on novel data. Indices developed based on datasets from WRI and IISD.	Academic publication in a general-interest journal, e.g. One Earth or Nature Climate Change	ETH (lead), UCB, DIE, IISD
2.1	Analyses of country-level drivers of climate ambition in NDCs and recovery packages. Focus on the role of positive feedback from national green coalitions.	Qualitative research methods, including desktop research and expert interviews. Case selection based on findings from Task 1.	Two academic publications in a public policy/political science journal, e.g. Comparative Political Studies or Climate Policy	ETH (lead), UCB, DIE, IISD
2.2	Analyses of country-level drivers of climate ambition in NDCs and recovery packages. Focus on the role of international financial institutions in driving positive feedback effects on the country-level.	Quantitative and qualitative research methods, including desktop research and expert interviews. Case selection based on findings from Task 1 and aligned with Task 2.	Two academic publications in climate and/or energy policy journals, e.g. Nature Energy or Joule	ETH (lead), UCB, DIE, IISD
3	Assessment of fiscal reform reference increases in updated versus previous NDCs. Analyses of country-level conditions and drivers of fiscal reform plans. Analyses of fiscal reform plans on carbon dioxide emission reductions, revenue generation, and income distribution in the selected country cases.	Quantitative and qualitative research methods, including desktop research and expert interviews. Case selection based on findings from Task 1 and aligned with Task 2.	Three academic publications in climate, development, and/or energy policy journals, e.g. Energy Policy, Climate and Development, Climate Policy	DIE (lead), ETH, UCB, IISD
4	Outreach: Presentation of findings to relevant climate policy networks, e.g. at COP side events. Dissemination of findings in relevant networks through cooperation partners.	-	Workshop, presentation, and policy briefs	ETH, UCB, DIE, IISD



Task 1: Assessment of climate ambition in NDCs and COVID-19 recovery packages

Motivation

Achieving Paris targets only possible if climate pledges of countries are credible and implemented.

Research Question

What is the relationship between countries' climate policy ambition with the greenness of economic recovery packages based on the response to COVID-19 energy-related recovery spending?

Findings

Strong correlation between international and national policy ambition

Limited evidence that high ambition is related to greener spending

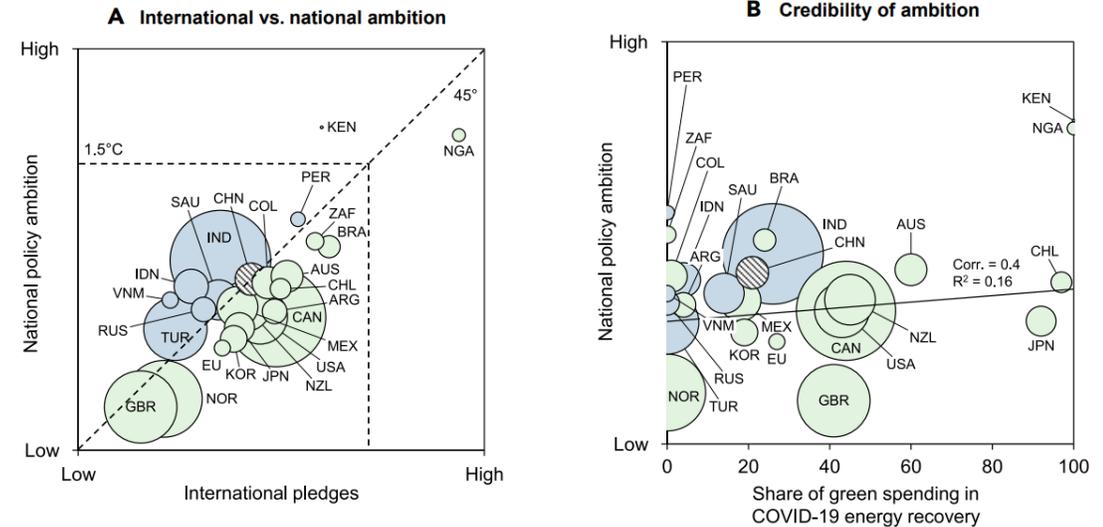
Casts into doubt ability of countries to deliver on the Paris Agreement, especially in the face of crises



Commentary

Scrutinizing countries' climate commitments: Insights from recovery spending

Florian Egli,^{1,2,*} Nicolas Schmid,¹ Taryn Fransen,³ Anna Stünzi,⁴ Abdulrasheed Isah,¹ Adrianna Pineda,¹ Christopher Beaton,⁵ and Tobias S. Schmidt^{1,6,*}
¹Energy Policy and Technology Group, ETH Zurich, Zurich, Switzerland
²School of Social Sciences and Technology, Technical University of Munich, Munich, Germany
³Energy and Resources Group, UG Berkeley, Berkeley, CA, USA
⁴Institute of Political Science, University of St. Gallen, St. Gallen, Switzerland
⁵International Institute for Sustainable Development, Geneva, Switzerland
⁶Institute for Science, Technology and Policy, ETH Zurich, Zurich, Switzerland
 *Correspondence: florian.egli@gess.ethz.ch (F.E.), tobiasschmidt@ethz.ch (T.S.S.)
<https://doi.org/10.1016/j.oneear.2023.08.022>



Task 1: Assessment of climate ambition in NDCs and COVID-19 recovery packages

Motivation

Understanding specific needs and priorities of developing countries necessary to ensure optimal allocation of finance and assess credibility of pledges.

Research question

What is the extent of specificity of climate finance needs in the NDCs of developing countries?

Findings

Overall, the specificity of climate finance estimates has increased between first and updated NDCs, albeit with regional heterogeneities.

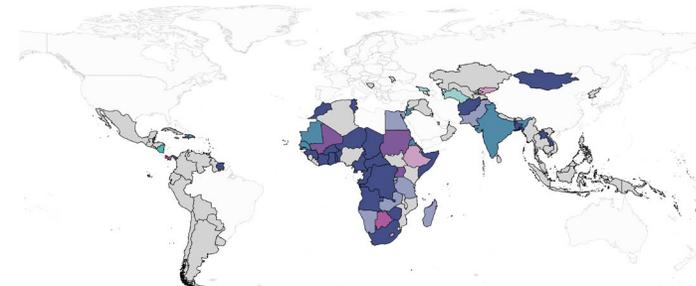
The specificity of estimates is higher for mitigation than adaptation finance. Mitigation finance needs has reduced, but adaptation finance needs has increased.

Estimated climate finance needs about \$400 bn per year by 2030, with implications for the NCQG.

Quantifying climate finance needs of developing countries since the Paris Agreement

Abdulrasheed Isah^{1*}, Florian Egli¹, Tobias Schmidt^{1,2}, Anna Stünzi³

First NDCs



Updated NDCs



Task 2.1: Analyses of country-level drivers of climate ambition and credibility

Motivation

A gap persists between the emissions reductions pledged by countries under the Paris Agreement and those resulting from their domestic policies

Research question

What is the nature of climate policy implementation gap and the drivers of variations across countries?

Findings

The implementation gap has two parts: a policy adoption gap and a policy outcome gap

Cross-national variation in the policy adoption gap may be due to strategic pledging behavior, domestic institutions, and interest group politics and public support

Need for better measurement of both components of the implementation gap, particularly the policy outcome gap

Ongoing research: *Explaining variation in climate pledging behavior*

nature climate change

<https://doi.org/10.1038/s41558-023-01755-9>

Taking stock of the implementation gap in climate policy

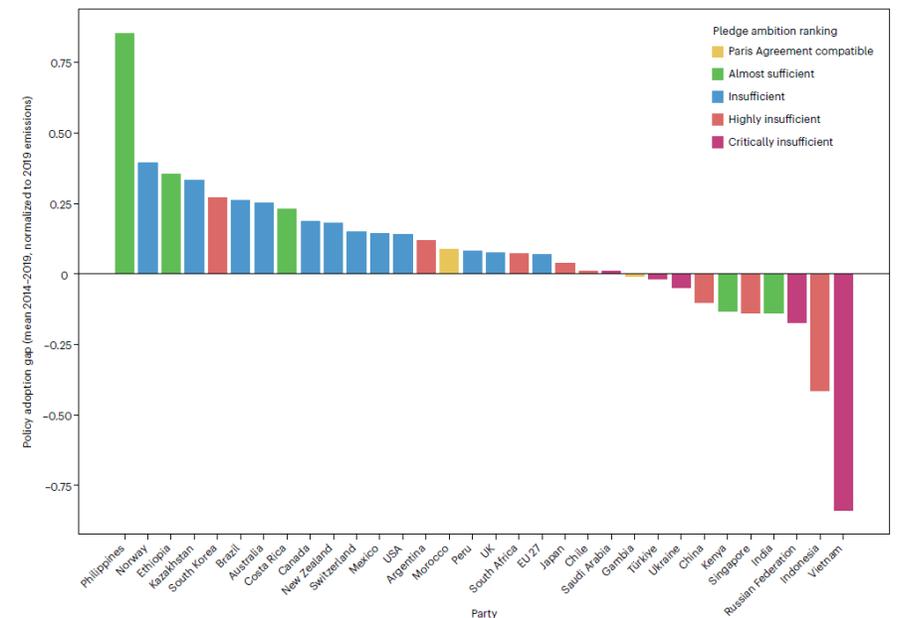
Taryn Fransen, Jonas Meckling, Anna Stünzi, Tobias S. Schmidt, Florian Egli, Nicolas Schmid & Christopher Beaton

Check for updates

A gap persists between the emissions reductions pledged by countries under the Paris Agreement and those resulting from their domestic policies. We argue that this gap in fact contains two parts: one in the policies that countries adopt, and the other in the outcomes that those policies achieve.

and explore the reasons for their variation across countries, as a prerequisite to investigating why the gap persists in some cases and not in others.

The implementation gap has two parts: a policy adoption gap and a policy outcome gap (Fig. 1). The policy adoption gap exists between emissions pledges and projected emissions under policies as adopted. This is the component of the implementation gap that has been quantified to date in the literature^{1–3}. The policy outcome gap exists between projected emissions under policies as adopted, assuming their implementation, and the emissions outcomes that



Task 2.2: The role of international financial institutions

Motivation

Emphasis on green economic recovery from COVID-19, but impact of MDB spending on low-carbon transitions is unclear

- Early finding: limited impact of COVID crisis on WBG investment, greater importance of long-term trends (e.g., tech innovation); these trends differ across sectors

Research question

How do differences in the availability of low-carbon investment opportunities across sectors affect the WBG's allocation of capital?

Findings

WBG investment shifted away from carbon-intensive sectors (Fig. 1)

In carbon-intensive sectors, carbon-increasing investment declined rapidly but mitigation investment remained limited

Relative shift in carbon-increasing and mitigation investment differs across sectors (Fig. 2) and between public and private arm of the WBG

- Aligned with differences in the availability of low-carbon investment opportunities, compatibility of opportunities with WBG

Working paper

Considering sectoral differences in decarbonizing World Bank Group lending

Adrianna Pineda ^{a,*}, Florian Egli ^a, Tobias S. Schmidt ^{a,b}

^a Energy and Technology Policy Group, ETH Zurich

^b Institute of Science, Technology and Policy, ETH Zurich

* Corresponding author: adrianna.pineda@gess.ethz.ch

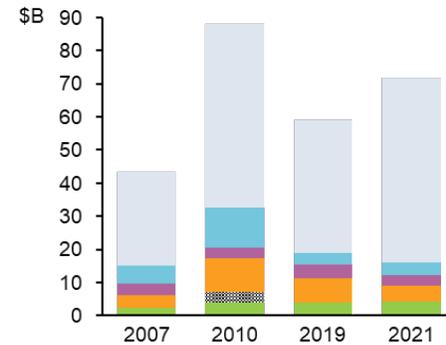


Fig. 1 WBG investment in carbon-intensive sectors (USD/year)

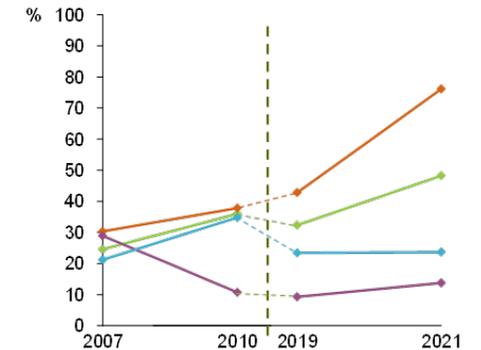


Fig. 2 Proportion of WBG mitigation investment (% of total)

Other Transport Industry Energy Energy (Eskom) Agriculture

Task 3: Environmental fiscal reform and COVID-19 recovery

Motivation

“Fossil fuel subsidy reform is not only about removing subsidies, but also requires a range of carefully designed and sequenced policy measures that help to ensure public support and social protection of vulnerable population groups.” (Rentschler and Bazilian, 2017)

Explicit carbon pricing critical to consider together with subsidy reforms (effective carbon pricing and sequencing)

Collection of data on influencing political economy factors

Findings (fossil fuel subsidy reform)

121 reform cases in 47 countries, 95 reform processes started after 1999

78.5% of reforms were implemented, but 24.2% were reversed

Identified 64 social protection initiatives that supported the implementation of the subsidy reform; 32 targeted social policies in the areas of health, education, transport or employment

Countries implemented 45 universal social policies to support societies with the effects of subsidy removal

In 56 cases, governments used a gradual approach to reform fossil fuels, sequencing phase out to ease the burden on consumers

Fossil fuel subsidy reform and carbon pricing database – Framework and data collection



Mauricio Böhl Gutierrez
Daniele Malerba
Anna Pegels

COVCLIM Research Project

 **IDOS** | German Institute of Development and Sustainability

Task 3: Environmental fiscal reform and COVID-19 recovery (cont'd)

Findings (carbon pricing)

118 total initiatives (55 taxes and 63 ETS; 68 national, 2 regional and 48 subnational; 73 implemented, 6 abolished, 4 scheduled and others under consideration)

- Focus on the implemented and national initiatives (39) as there is actual data on social policies and other political economy variables

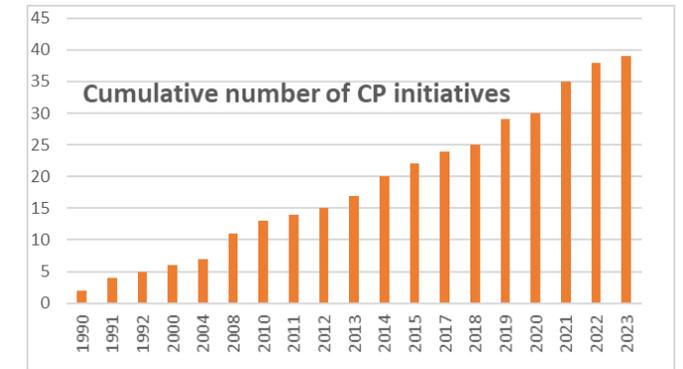
The implementation of national carbon pricing mechanisms has been steady; only 2 (national) reforms were abolished

In most cases the coverage of such schemes is limited (<40%) and with many exemptions

- In LMICS prices are also very low

Much less social (protection) policies (4 cases)

- Subsidies are more related to social contract, carbon pricing has also different motives (more environmental) and different countries
- For many high income countries the reason for implementing this reforms is climate change



Task 4: Dissemination of findings

1. COP27, Sharm el-Sheik, Egypt
2. Bonn Climate Change Conference, Germany
3. Swiss Network for International Studies Conference, St. Gallen, Switzerland
4. Technical Expert Dialogue New Collective Quantified Goal on Climate Finance (NCQG)]Geneva, Switzerland
5. International Sustainability Transitions Conference, Utrecht, Netherlands.
6. African Development Bank, Climate Policy Initiative, World Resources Institute, etc.
7. Seminars, Policy briefs (IISD)

Bonn



St. Gallen



Geneva



What is working well/not so well

1. Covid recovery: how relevant is this still? (unforeseeable at the time of funding)
 - Long-term trends/bigger topics matter; think about long-term trends in calls
 - How adaptable is this? (NSF/SNF more flexible than, e.g, Horizon Europe calls)
2. More in-person meetings at the beginning to build trust and get to know each other cross Atlantic (a learning)
3. Exchange between different parts of consortium but not full consortium (positive)
4. Having IISD as non-academic institution NGO is really helpful (far beyond the tracker)
5. 9h time difference (West Coast US-Europe is much trickier than East Coast US-Europe)

Thanks for your attention!
And thanks for funding our project!

