

WITHIN REACH

Navigating the Political Economy of Decarbonization

Jun Rentschler
Stephane Hallegatte

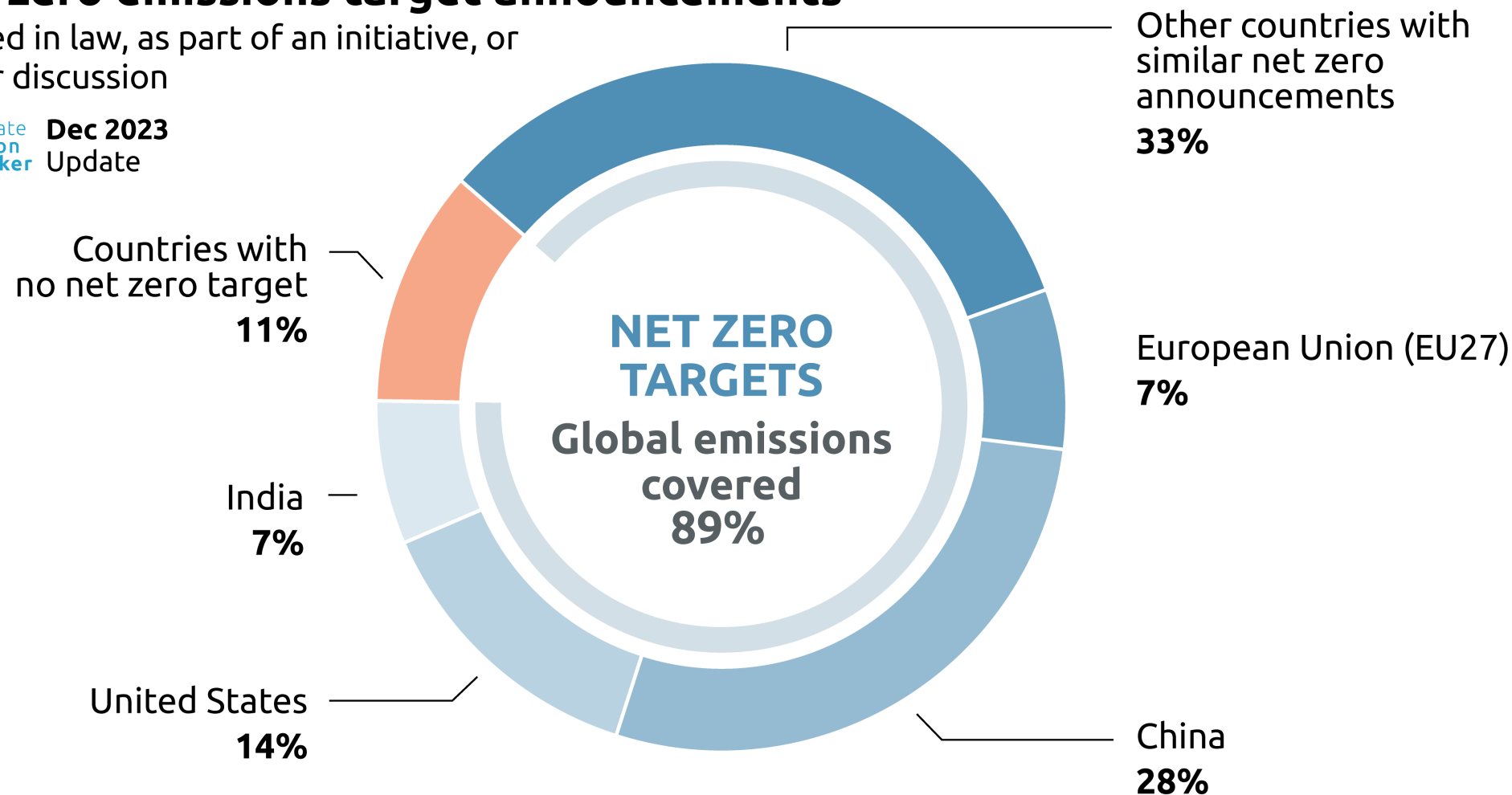
Tokyo, 14th Feb 2024

Countries have increasingly committed to reaching Net Zero emissions through rapid decarbonization of all economic sectors

Net zero emissions target announcements

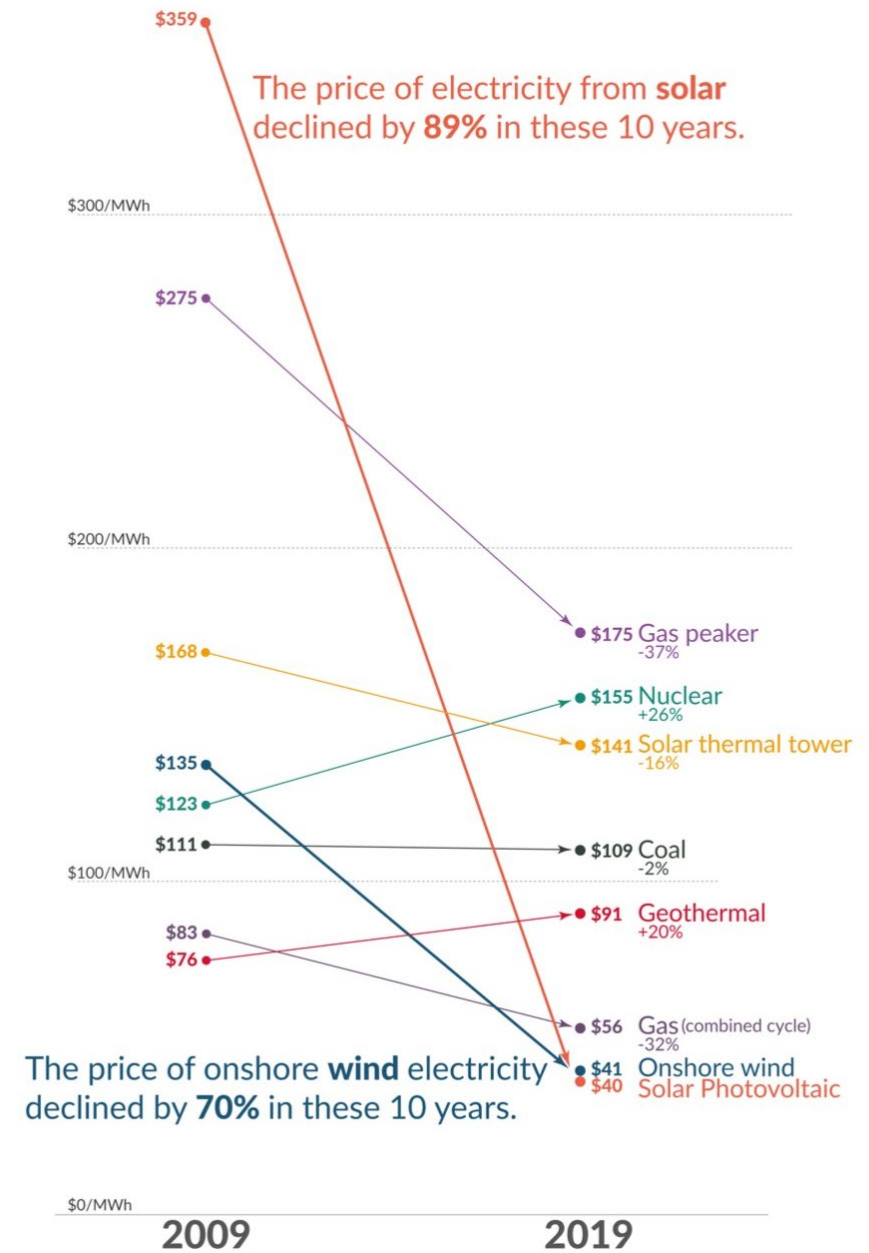
Agreed in law, as part of an initiative, or under discussion

 **Dec 2023**
Update



Innovation has made this goal easier to reach

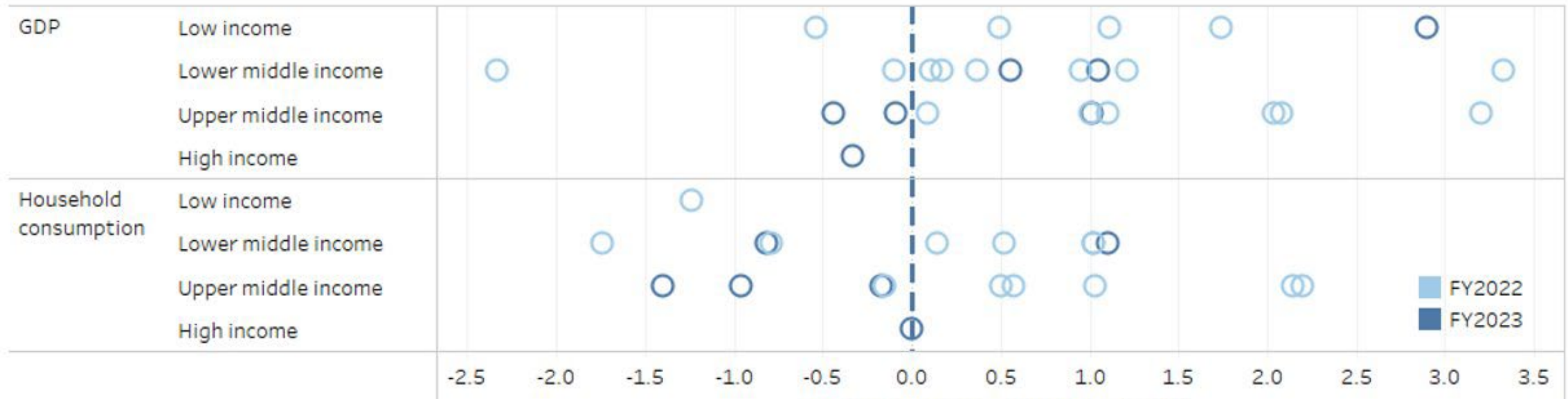
Source: OWID (2020)





According to World Bank's **Country Climate and Development Reports**, economic growth in low-carbon scenarios is similar – or even faster – than that in reference scenarios

Impact on GDP and consumption by 2030 (% of baseline)

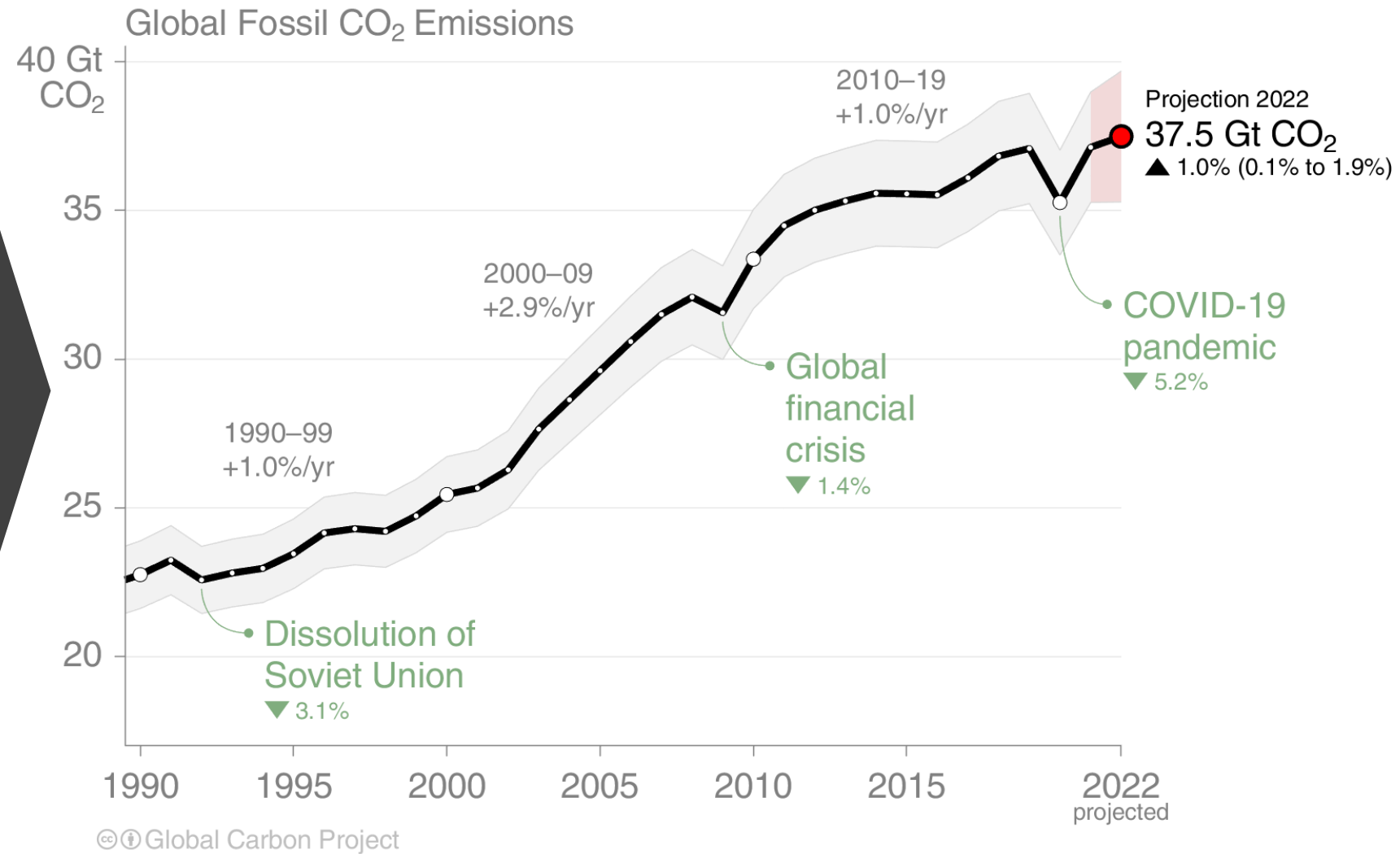





\$1.25 trillion/year

Global spending on environmentally harmful subsidies in fossil fuels, agriculture, and fisheries

So why the lack of rapid progress on climate action?

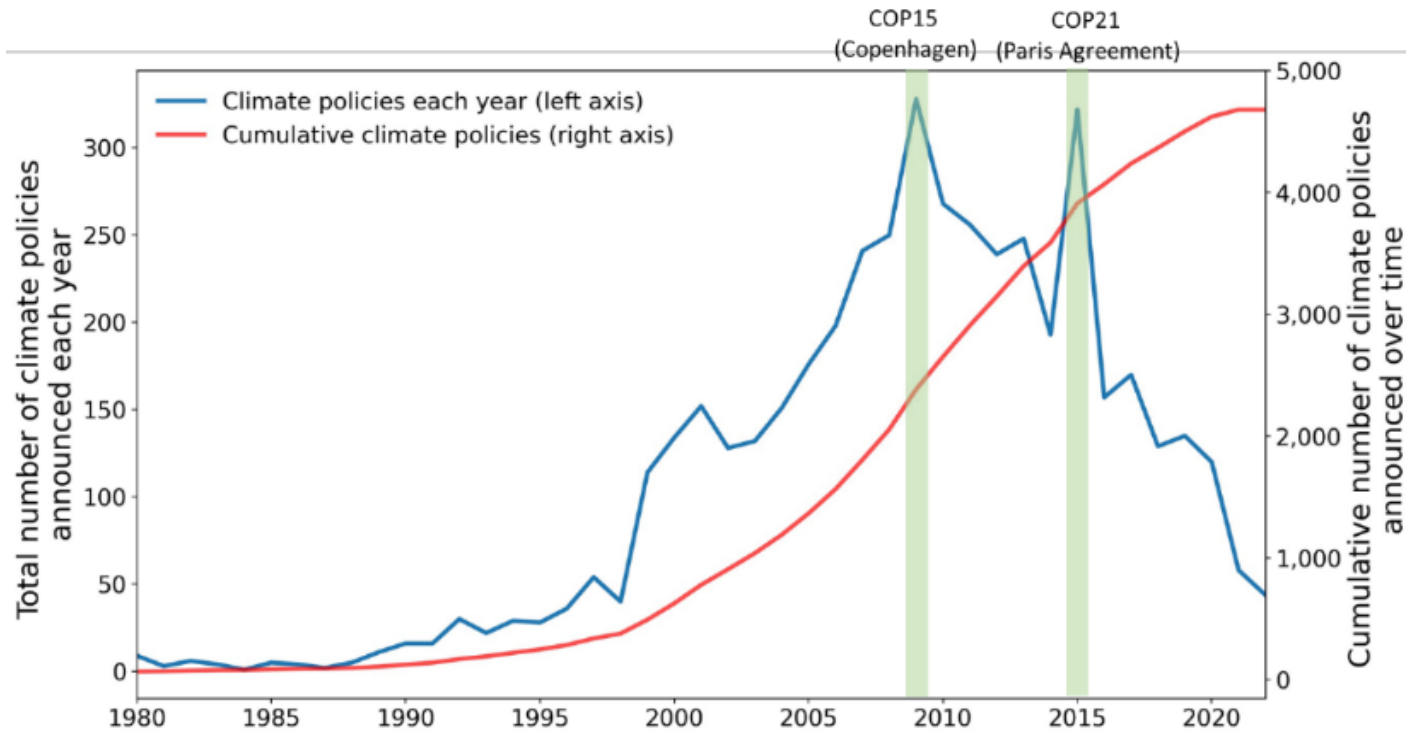




A complex political economy slowing down the implementation of all climate policies.

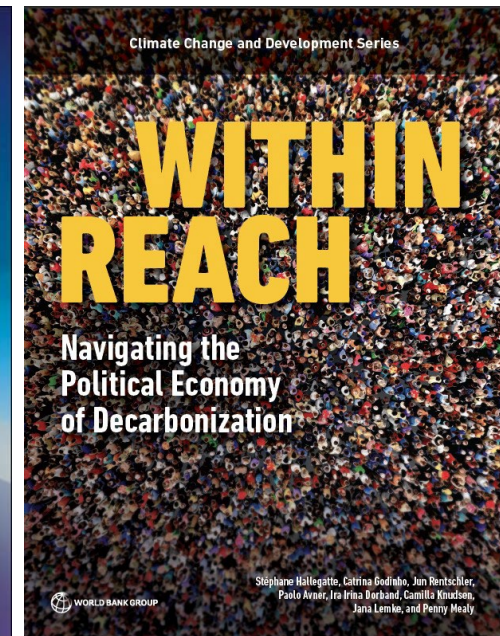
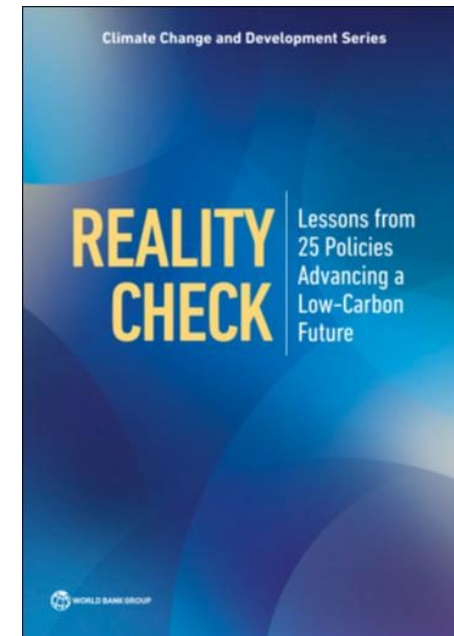
- political interest groups of varying degrees of power and influence
- inconducive institutional architecture
- limited government capacity
- diverging preferences, views, and beliefs across people

More than 4,500 climate policies have been announced globally (1980–2020)



Source: World Bank (2023c), based on the Climate Policy Database (New Climate Institute 2022)

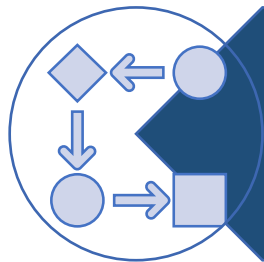
What have we learnt from climate policy successes and failures?





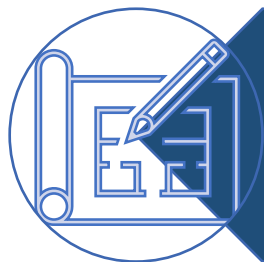
CLIMATE GOVERNANCE:

strategically adapt the institutional architecture and embed climate objectives into a positive development narrative



POLICY SEQUENCING:

balance short-term feasibility and long-term ambition



POLICY DESIGN:

focus on people and manage the distributional effects of climate policies



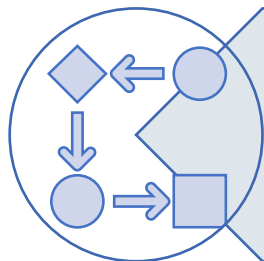
POLICY PROCESS:

use public engagement and communication to improve policies and their legitimacy



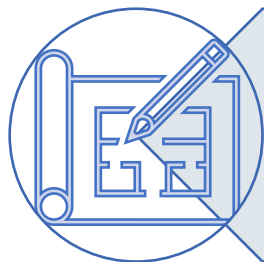
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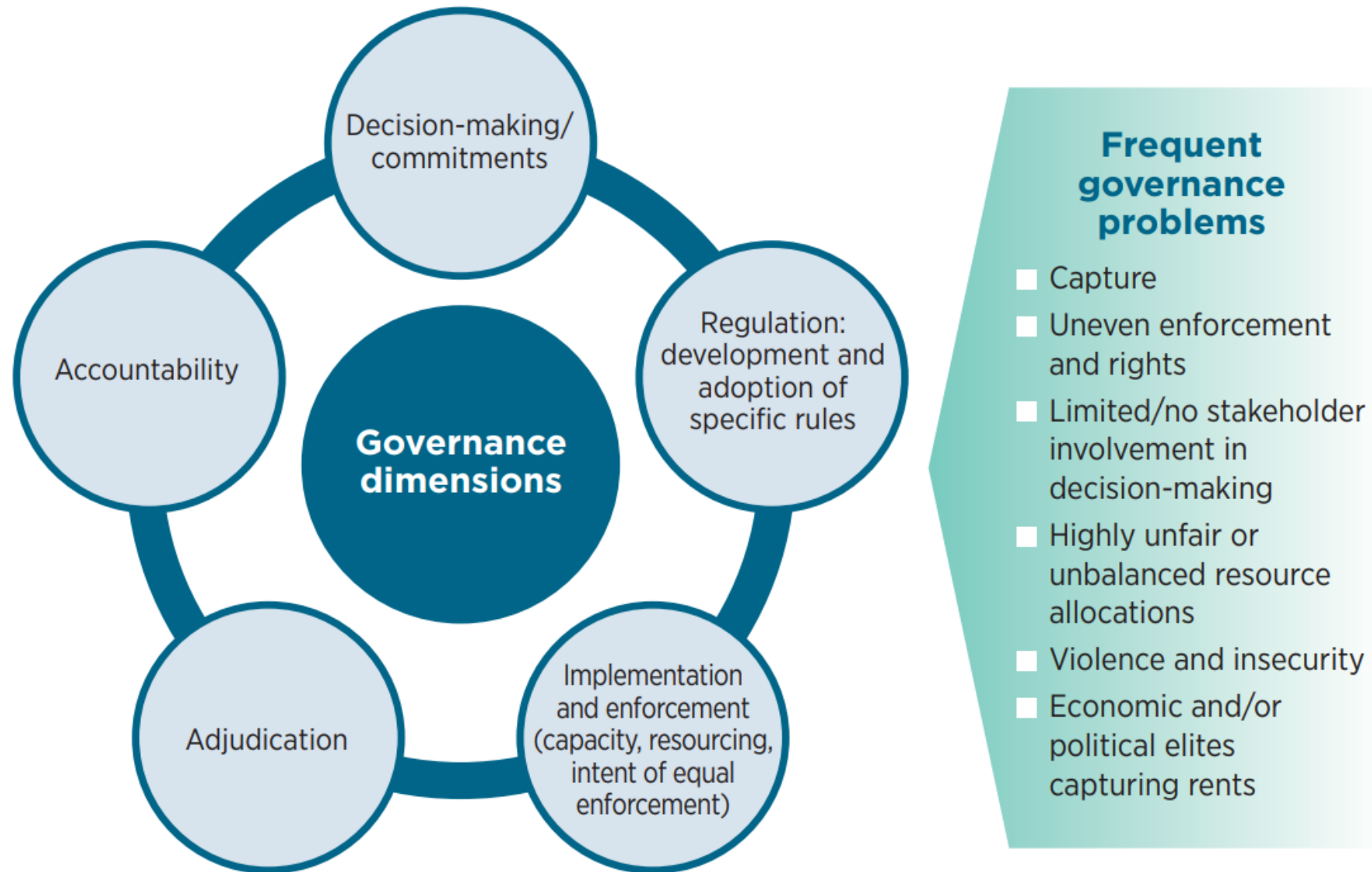
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POLICY PROCESS:

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Governance dimensions and frequent governance problems



Types of climate governance

Interests		Ideas	
		Dominant narrative on climate policies	
		Embedded	Mitigation-centric
Extent of political polarization of climate policy	Low	Under-the-radar climate politics Opportunistic climate institutions	Climate consensus politics Strategic climate institutions
	High	“Contested sector” politics Unstable sectoral institutions	In-the-crossfire politics Unstable climate institutions

Source: Dubash 2021.

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Source: Dubash 2021.

In the **United Kingdom**, the 2008 Climate Change Act, which followed almost two decades of climate institution building in the country, has enabled the country to meet its five-year mitigation targets.

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Source: Dubash 2021.

In **India**, opportunistic climate institutions have emerged building on existing priorities—including increasing energy supply and security, and controlling air pollution.

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In **Brazil**, the mitigation-centric 2004 Action Plan for the Prevention and Control of Deforestation in the Legal Amazon, contributed to a 76 percent reduction in the annual deforestation rate between 2005 and 2012, but the success of these efforts drew backlash from rural and agricultural interests.

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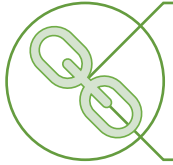
In **South Africa**, climate institutions have had limited effect because of highly contested politics and powerful vested interests in fossil fuel-based sectors.

Building climate into existing institutions—instead of waiting for the perfect conditions—can enable quicker and more ambitious action. To this end, governments can adopt a range of approaches:



Co-benefits and development synergies

(mainstreaming climate through existing high-level political priorities)



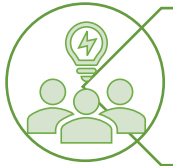
Integration

(building climate objectives or mandates into sectoral institutions)



Pilot programs

(using experimental approaches to allow for institutional learning)



Public investments

(using institutions to provide green public investments and research and development strategies)



Monitoring

(building capacity to provide information that can later be used in enforcement)



Capacity building

(through education and training programs)

Tools for strategic climate institutions

FRAMEWORK LEGISLATION

- Over 60 countries have already adopted framework legislations to tackle climate change, with varying degree of comprehensiveness
- Gaps in climate change framework legislation can undermine its effectiveness by allowing political economy constraints to persist or reemerge
- Legal frameworks can help citizens hold governments to account for their actions and inactions

LONG TERM STRATEGIES

- As of September 2023, 67 countries have LTSs under the UNFCCC
- When an LTS is embedded in law, it can provide a powerful instrument to maintain momentum, coordinate action across sectors, and offer a benchmark to measure progress over time
- Examples: **France's** *Stratégie Nationale Bas Carbone*, **Costa Rica's** *Plan Nacional de Descarbonización*

JUST TRANSITION FRAMEWORKS

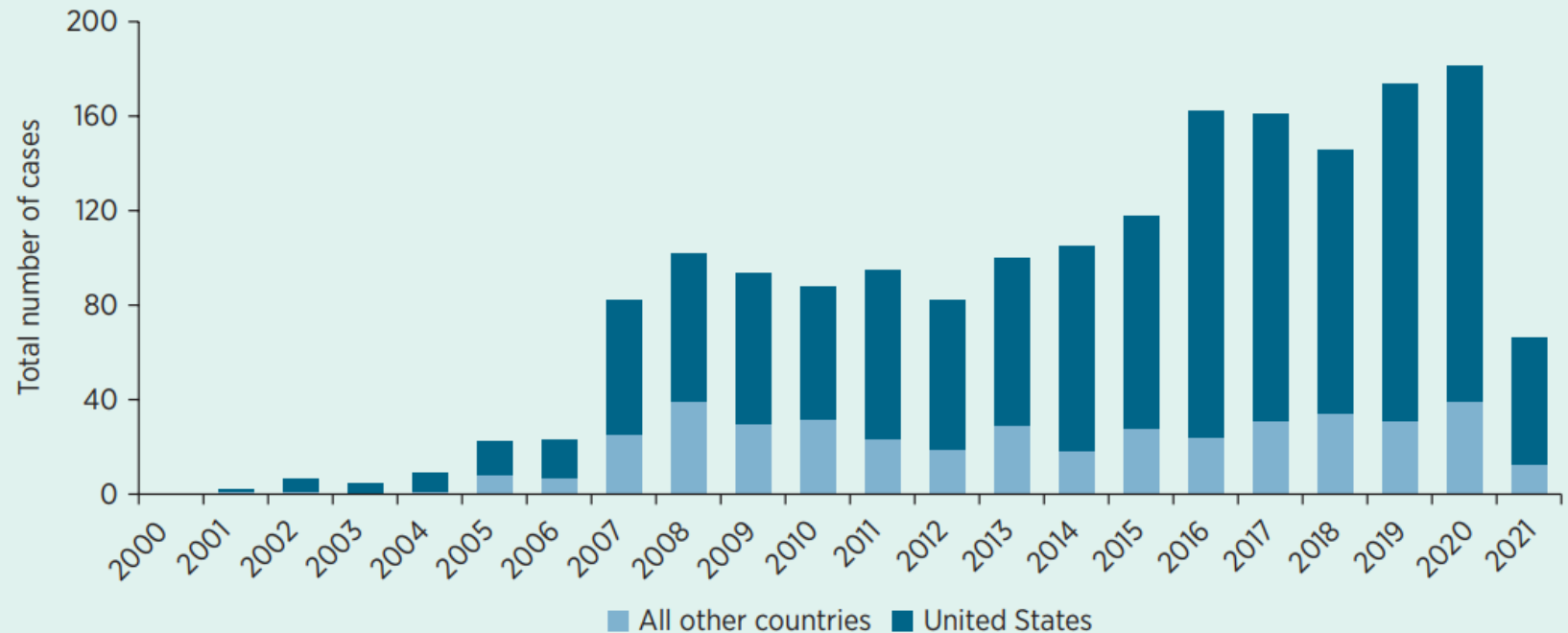
- Helps to establish a social mandate and guiding principles for climate action based on equity and fairness
- Example: **South Africa's** Just Transition Framework. Adopted in 2022, the framework spotlights at-risk sectors and value chains and lays out key policy areas for a just transition, governance imperatives, and financing

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FIGURE B2.7.1. Climate change-related lawsuits, 2000-21



Source: Schiermeier 2021.

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Planning for a future with zero net emissions: Costa Rica's National Decarbonization Plan

Policy instrument/program details

Economy-wide

Long-Term Strategy and National Decarbonization Plan

Primary objectives and co-benefits

Primary objectives: Decarbonize all sectors; governance

Co-benefits: Macroeconomic benefits: employment; poverty reduction

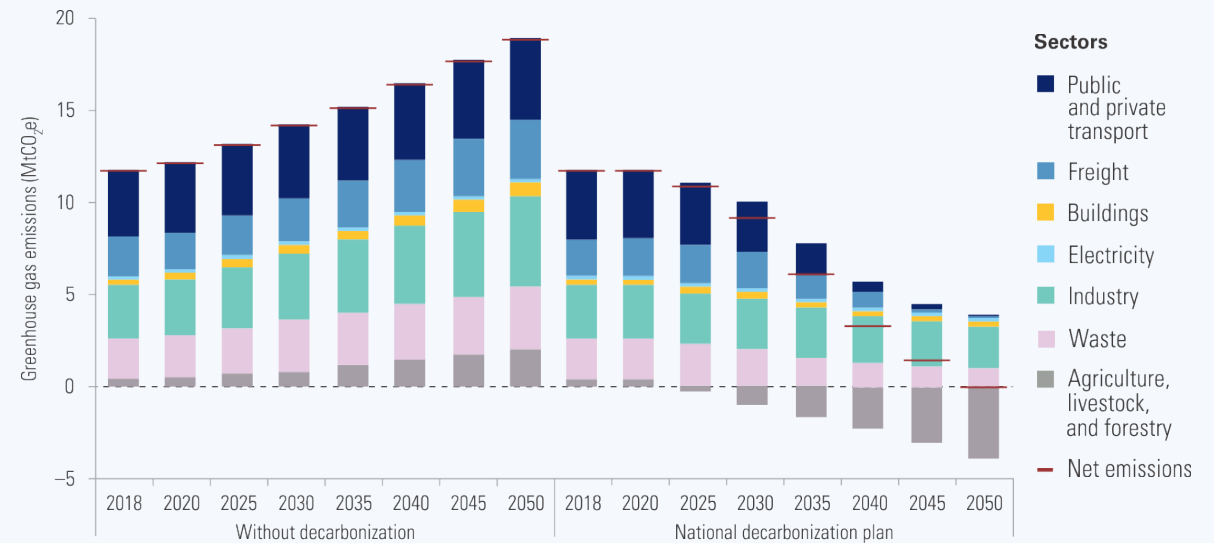
Political economy considerations

Policy development process strongly engaged technical and nontechnical stakeholders, including for climate justice and just transition considerations

Key Takeaways

- Clear transformation pathways are crucial for LTS success.
- Stakeholder buy-in over short, medium, and long terms is vital.
- Political support at the highest level is necessary for LTS coordination.
- Strong institutional arrangements are needed for financing and accountability.
- Private sector involvement is crucial for financing decarbonization.
- Local partnerships can help drive low-carbon development at the grassroots level.

GHG emissions over time, without decarbonization and with the NDP



Source: Groves et al. 2020.

Note: Emissions from the electricity sector are negligible in Costa Rica under baseline assumptions. GHG = greenhouse gas; MtCO₂e = metric megatons of CO₂ equivalent (million tons); NDP = national decarbonization plan.

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Ensuring a just transition: South Africa's coal sector

Policy instrument/program details

Coal

Created a Presidential Climate Commission (2021) that has developed national, sectoral, and regional Just Energy Transition strategies to start decommissioning/retrofitting coal power stations while also increasing RE sources

Primary objectives and co-benefits

Primary objectives: Just transition; decarbonize energy

Co-benefits: Environmental; air pollution reduction; improved domestic energy supply; attract foreign investment; job protection

Political economy considerations

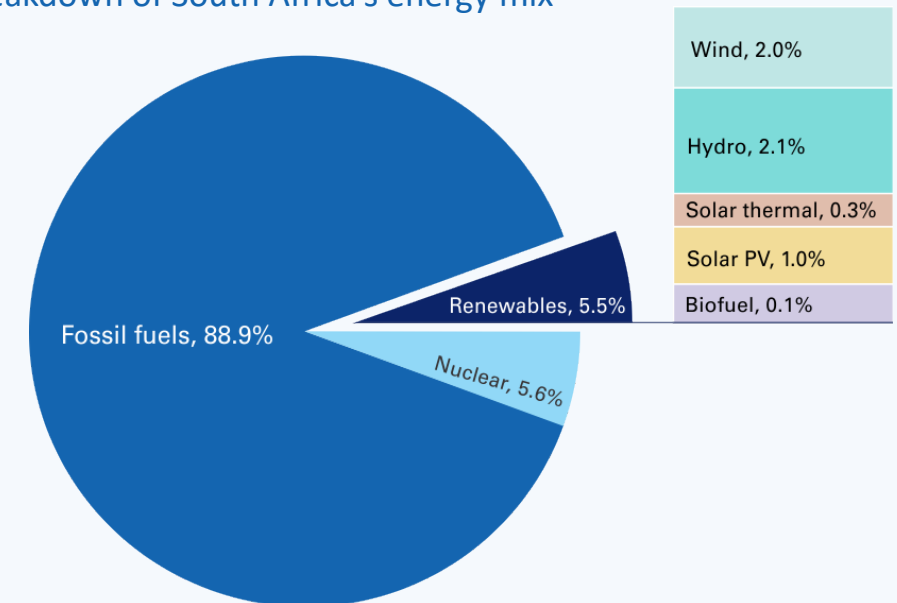
In 2012, the PCC launched the Social Partner Dialogues on Pathways for a Just Transition with government, labor workers/unions, business, and civil society to build a common vision for the Just Transition and create pathways to achieve this vision



Key Takeaways

- Speeding up the move away from coal is crucial, requiring early planning and fairness for affected coal communities.
- An independent body with diverse representation is vital for steering the transition and engaging stakeholders.
- Collaboration between various sectors is necessary for impact management and securing commitments.
- A just transition benefits people and the environment by creating new opportunities and providing support.
- Proper planning is essential to build public support and unlock opportunities during the transition.

Breakdown of South Africa's energy mix

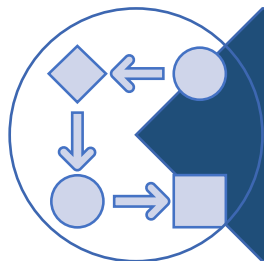


Source: Akinbami, Oke, and Bodunrin 2021, based on data in IEA 2023.
Note: PV = photovoltaic.



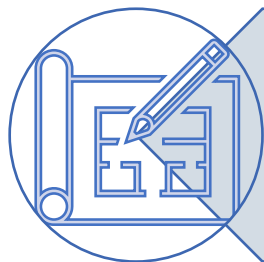
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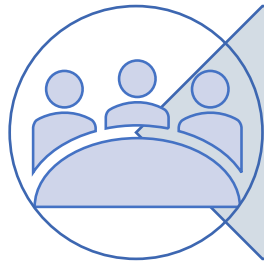
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POLICY DESIGN:

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POLICY PROCESS:

use public engagement and communication to improve policies and their legitimacy

Policy sequencing

- Policy makers face hard choices between focusing on low-hanging fruits or investing in more challenging, but more transformational, strategies and policies.
- On the one hand, always choosing easy policies would ensure action but is unlikely to trigger the systemic changes needed to reduce emissions to zero.
- On the other hand, always choosing transformational policies may lead to inaction as political forces or lack of capacity render enactment, implementation, or enforcement of climate policies impossible.



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How to choose policies that balance short-term political feasibility with long-term objectives?



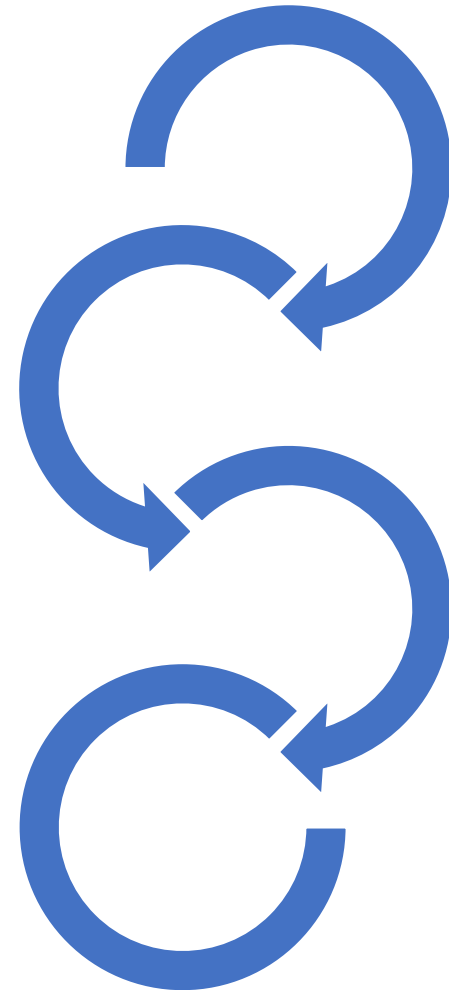
- Governments should implement policies that are **feasible** but that also **build greater political support** and reduce the costs of climate action over time, leveraging reinforcing policy feedback processes and targeting tipping points to **accelerate transformational change** toward net zero.
- Because policy and political processes are not static, **policy packages need to evolve over time** in a dynamically efficient way.

China's energy transition policy sequence (stylized)

Increasing emissions charge rates, tightening emissions limits and air quality standards

For example: Electricity price premium for environmental equipment 2013

Introduction of national emissions trading scheme 2021



10 years support for low-carbon technologies

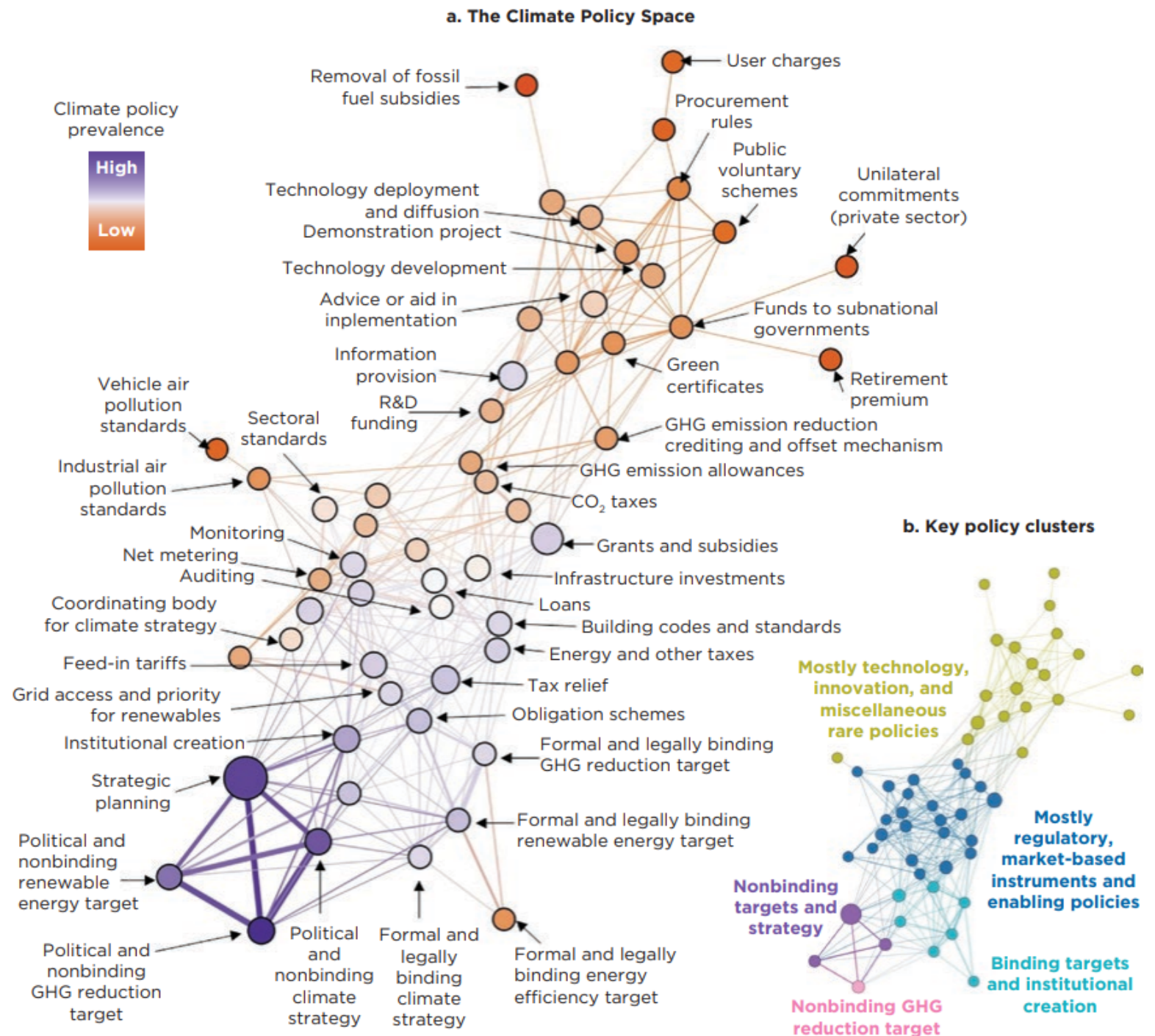
For example: Program on Rural Electrification via Small Hydropower in 1983; Subsidizing wind power concession projects in 2003

Reduction of feed-in-tariffs and other government subsidies

For example: Feed-in-tariff change for wind and solar PV 2017

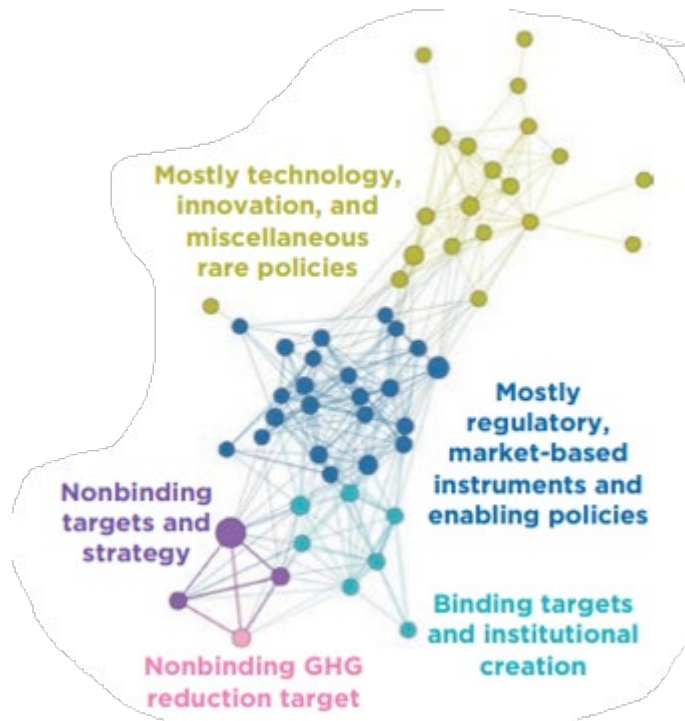
The Climate Policy Space

- Climate policy making is path-dependent, with institutional capacity limitations restricting the types of policy countries can introduce.
- Countries will likely find it easier to introduce a policy if they have prior experience introducing policies that involve similar (or related) institutional and administrative capacities and requirements.

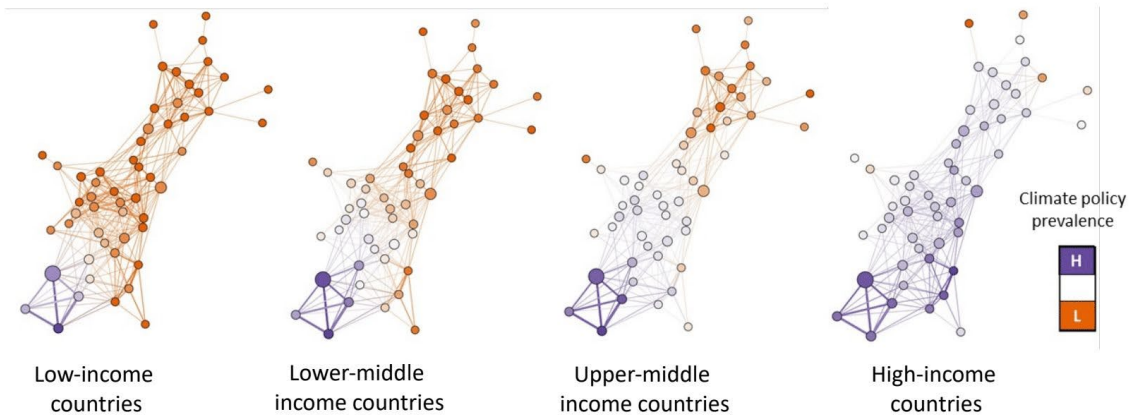


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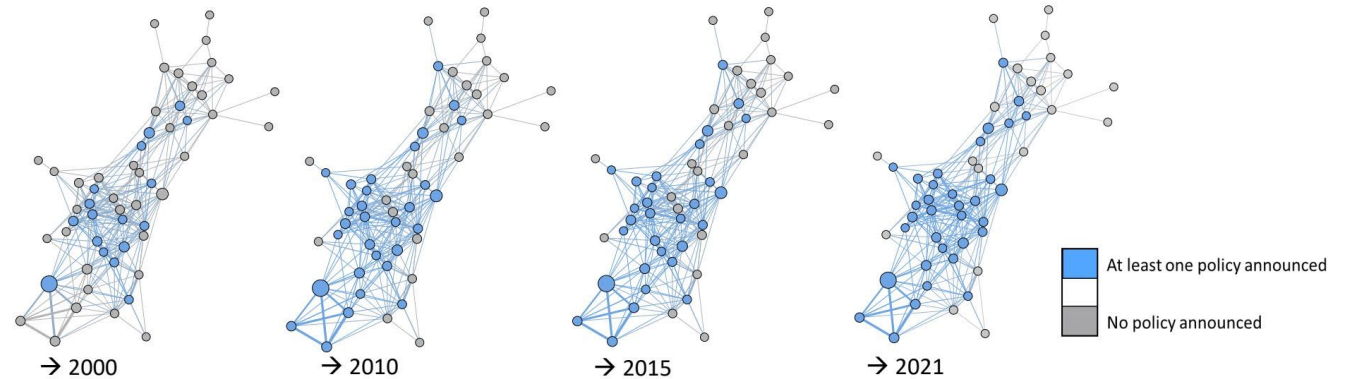
- Countries with different income levels are concentrated in different regions of the Climate Policy Space
- Countries move through the Climate Policy Space in predictable ways because past climate policies influence future policies.



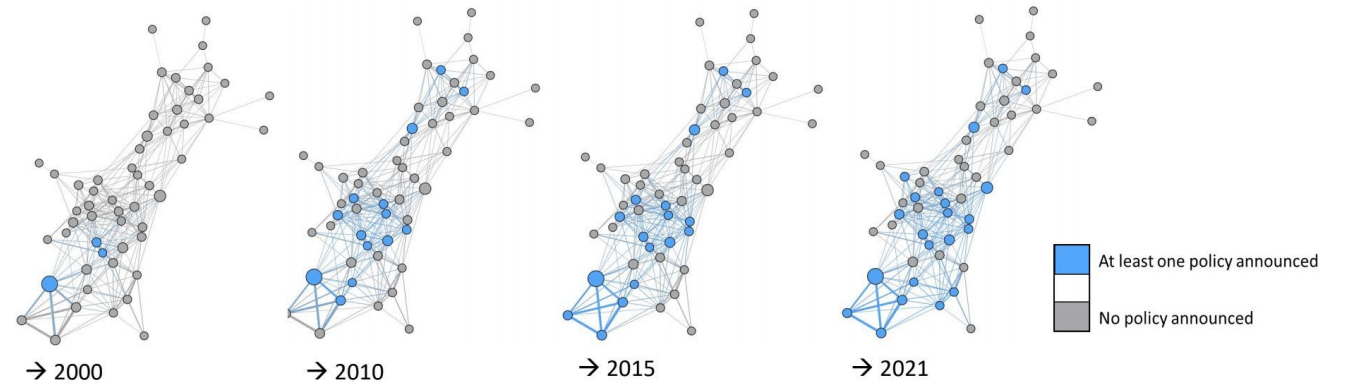
a) Climate policy prevalence for countries at different income levels



b) Türkiye's evolution through the Climate Policy Space over time



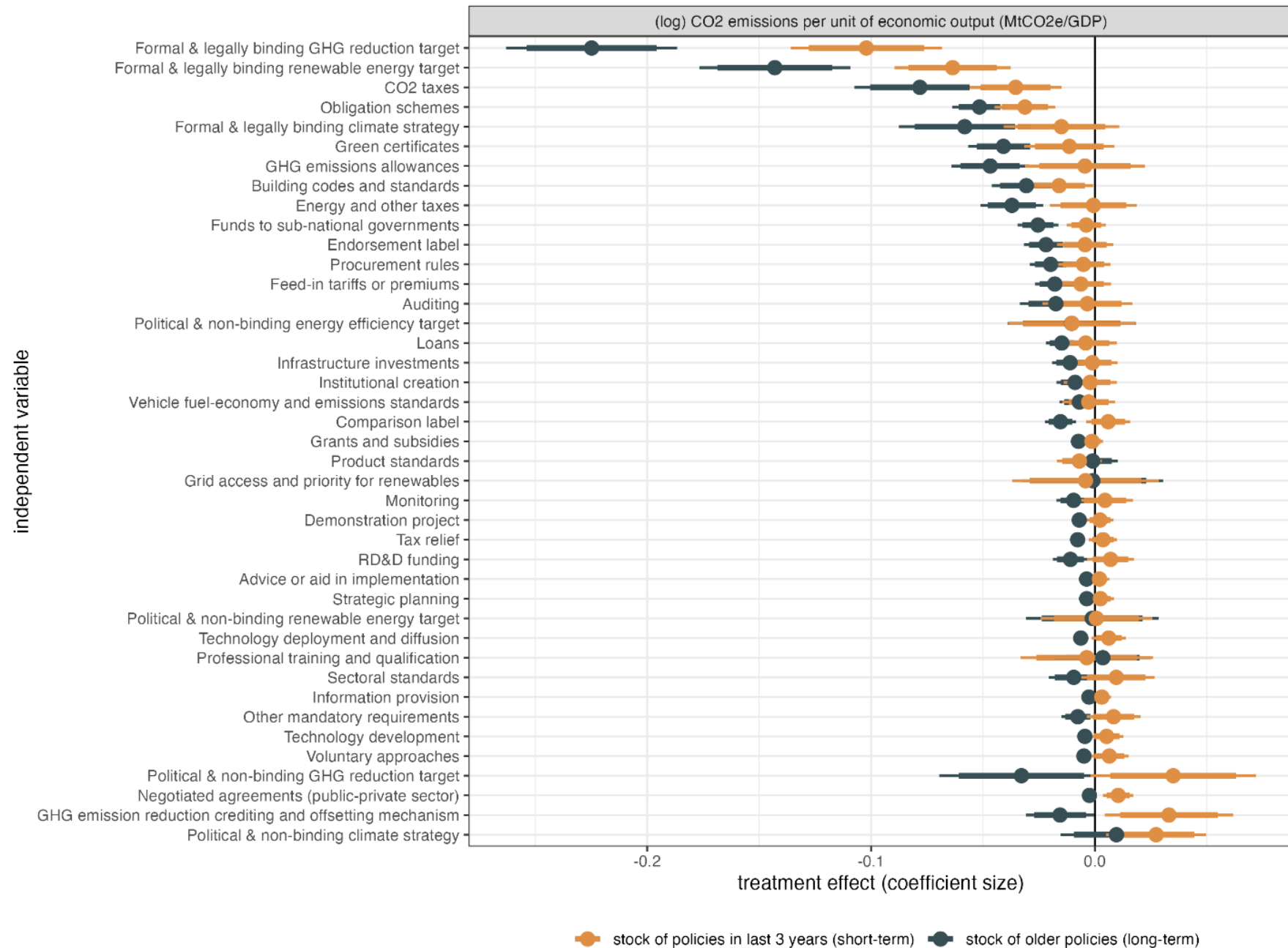
c) Vietnam's evolution through the Climate Policy Space over time



The Climate Policy Space

- Impossible to make causal linkage between policies interact and are implemented as packages.
- But some policies are correlated with larger emission reductions

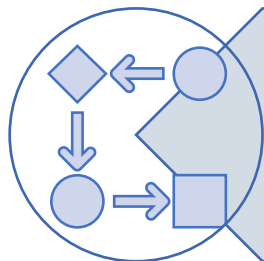
Effect of number of policies on emission reduction
two-way fixed effects and controls included





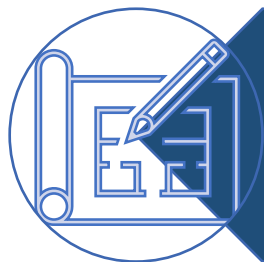
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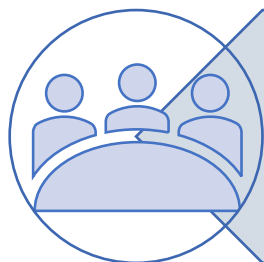
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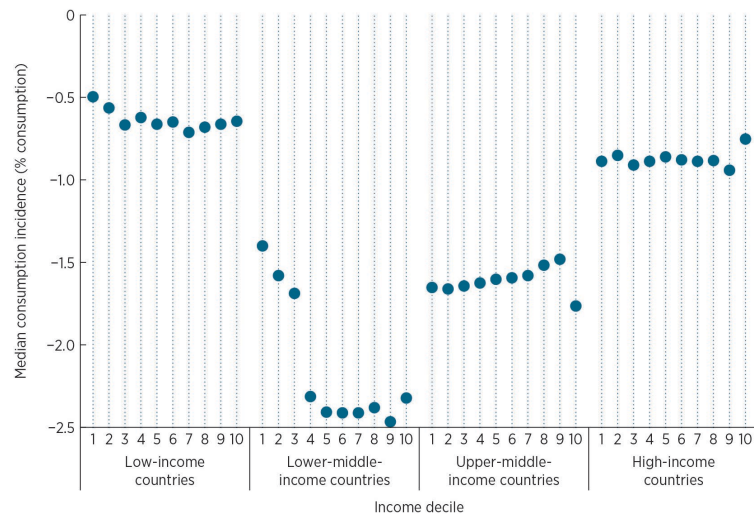


POLICY PROCESS:

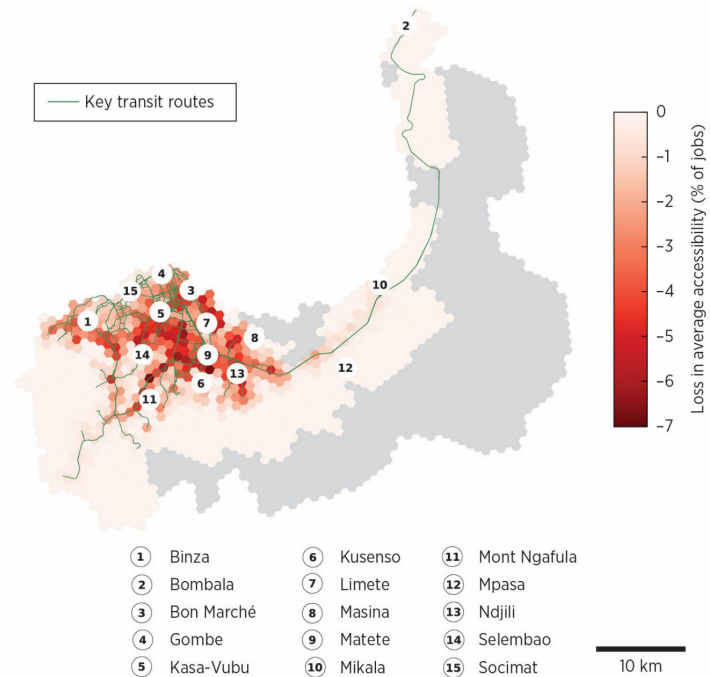
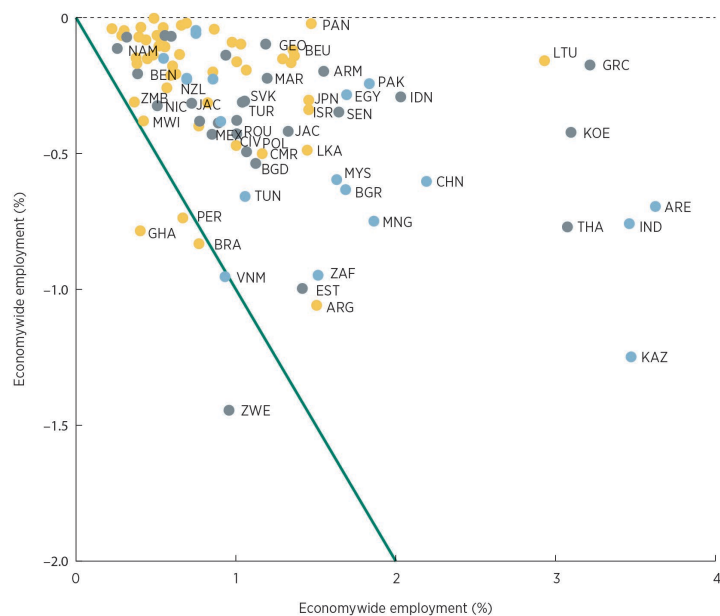
use public engagement and communication to improve policies and their legitimacy

The multiple channels of distributional impacts

Consumption
impacts of an
increase in
fuel prices

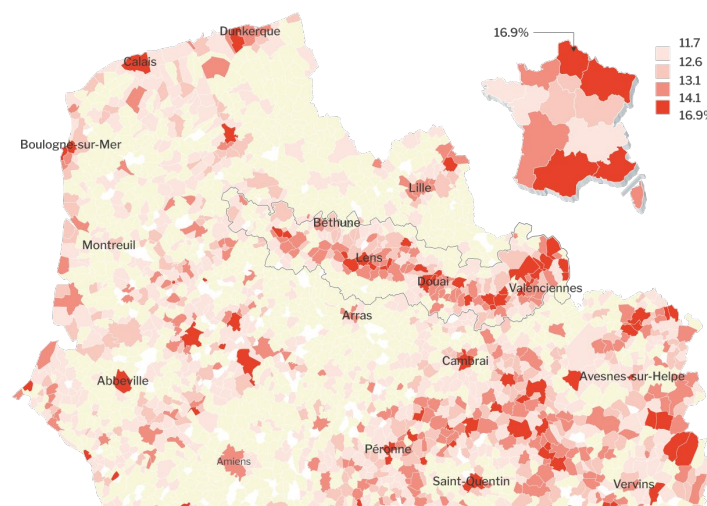


Employment
impacts of a
climate policy
package



Spatial impacts (job
accessibility using public
transportation in
Kinshasa)

Regional impacts,
here unemployment,
30 years after the
coal mine closures
in Francw



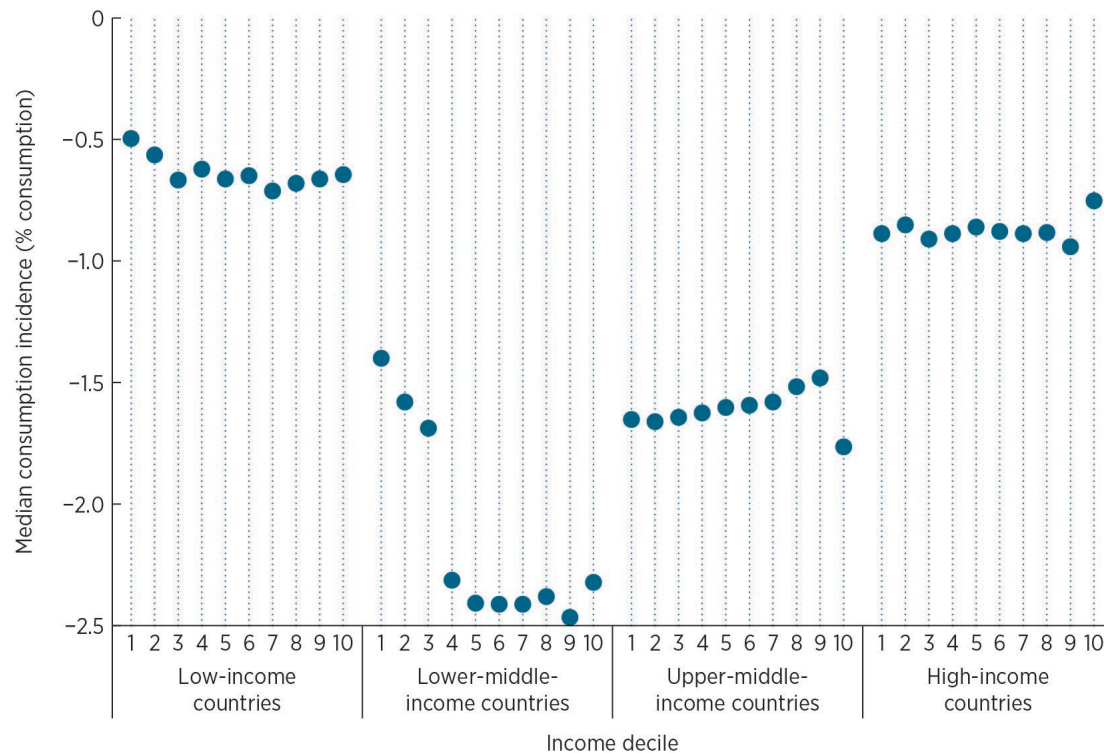
Source: Mission Bassin Minier.

Policy design

Consumption effects

- Because of different consumption patterns, consumption impacts of climate policies tend to vary across income levels within countries

Illustration of the consumption impacts of a (non-compensated) increase in fuel prices

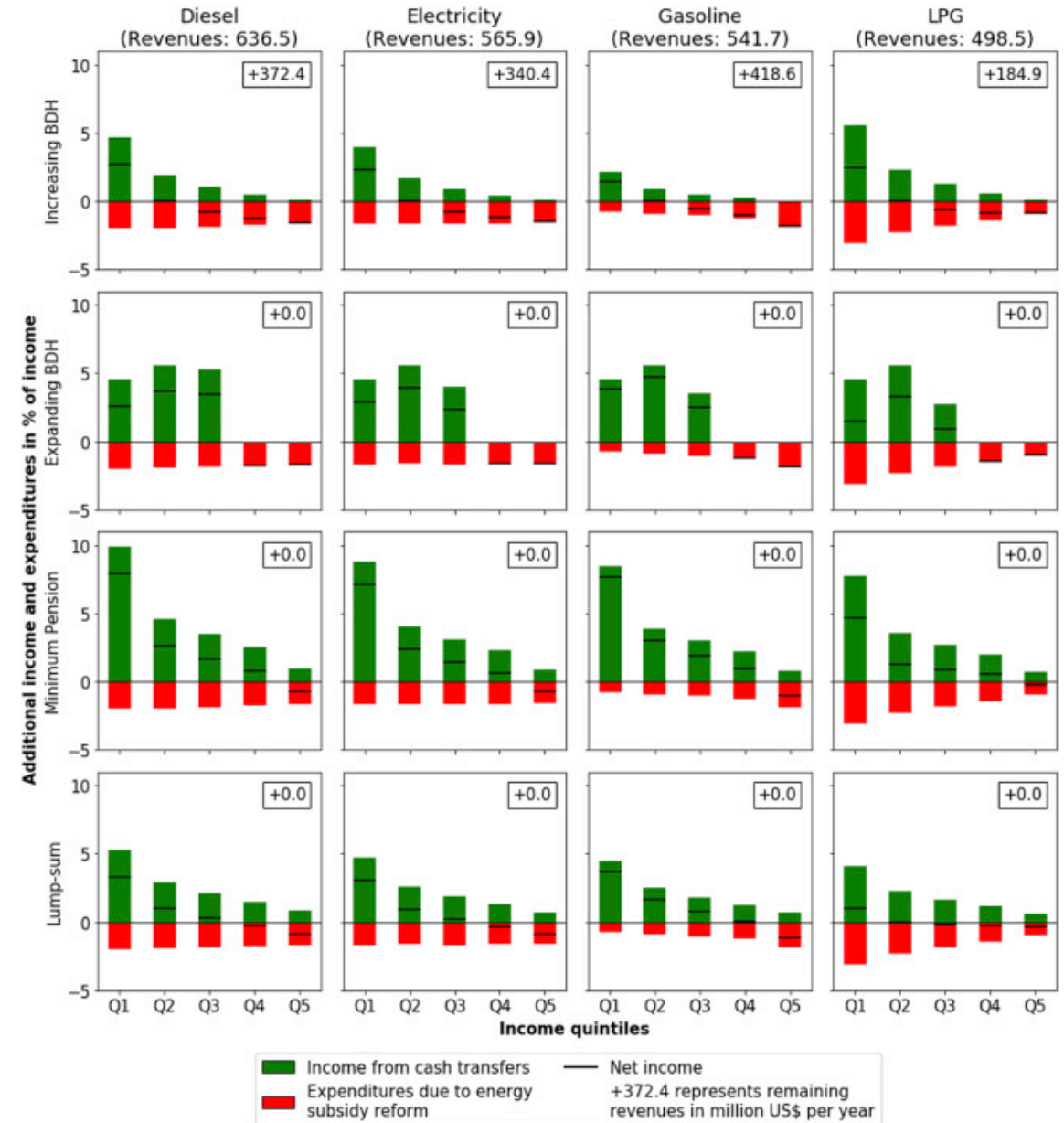


- Low-income countries: low or neutral impact
- Lower-middle-income countries: larger and progressive impact
- Upper-middle-income countries: mixed effects, but near poor and lower-middle classes are more vulnerable
- Findings may underestimate the vulnerability of poor people

Policy design

Managing consumption effects

- Investment, tax reforms and cash transfers can help to protect people from consumption effects
- Example: Schaffitzel et al. (2020) find that removing all energy subsidies in Ecuador and repurposing a share of this revenue to increase the national cash transfer program *Bono de Desarrollo Humano* (BDH) would increase the poorest quintile's real income by 10 percent and leave more than US\$1.3 billion for the public budget



Source: Schaffitzel et al. 2020



Getting the prices right: Energy subsidy reform in Egypt

Policy instrument/program details

Energy

Energy subsidy reform with support from WB and Energy Sector Management Assistance Program (2014–16)

Primary objectives and co-benefits

Primary objectives: Improve macroeconomic and enabling environment

Co-benefits: Reduced GHG emissions; growth of solar and wind power generation; creating fiscal space for social spending; reduced air pollution

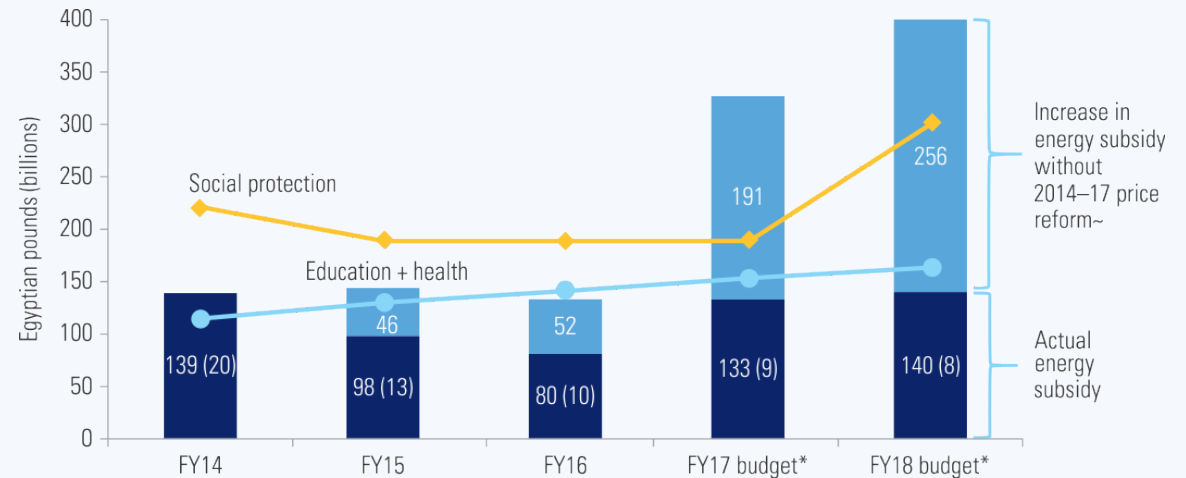
Political economy considerations

Included a public outreach campaign; strengthened social protection mechanisms; used targeted mechanisms with cash transfers; used fiscal savings to increase health and education spending

Key Takeaways

- Gradual, comprehensive reforms reduced the fiscal burden and attracted private investment.
- Strong government ownership and cross-sectoral coordination were crucial.
- Transparent communication engaged the public and supported evidence-based debate.
- Social assistance measures protected vulnerable households by redirecting savings.
- Broader energy sector reforms included policy improvements, fuel switching, debt resolution, efficiency enhancements, and better controls.

Energy Subsidy and Health, Education, Social Protection Expenditure in Egypt, FY2014-18



Source: World Bank 2017.

Note: ~ = World Bank estimate; * = Ministry of Finance budget for energy subsidy. Numbers in parentheses are in \$, billions.

Policy design

Managing employment effects

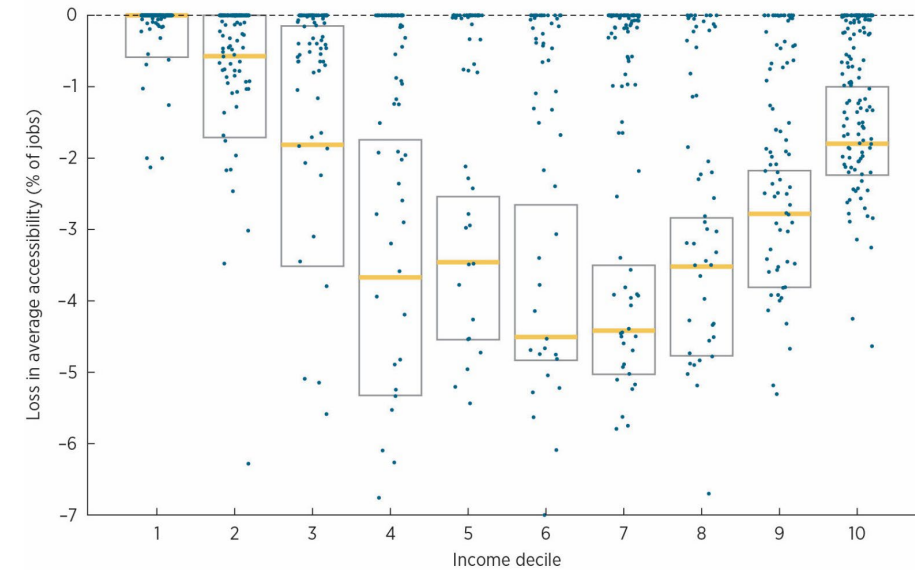
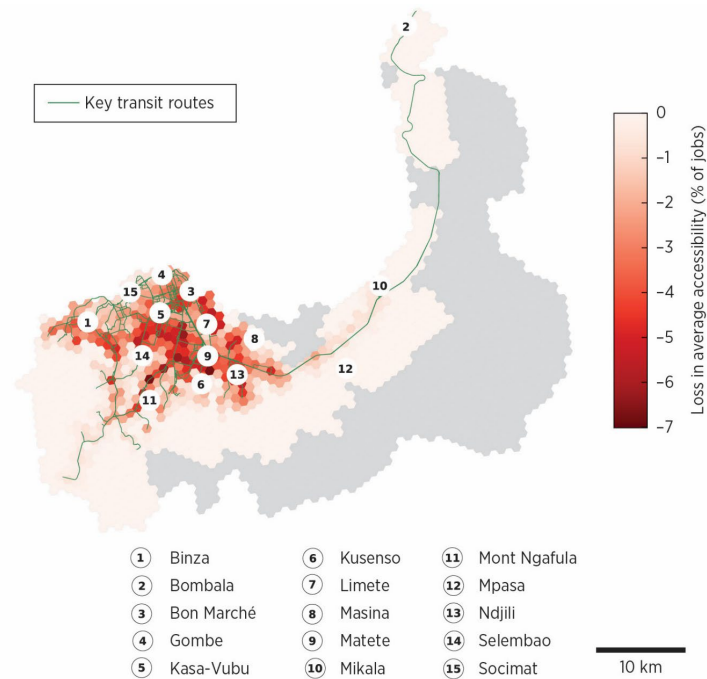
- Social protection and active labor policies can reduce and help manage concentrated sector impacts
- For example: [Castellanos and Heutel \(2019\)](#) show for the US that the modeled unemployment impacts of a carbon tax were 24 percent higher when the labor market was assumed to be perfectly immobile as opposed to being perfectly mobile
- Green industrial policies can build political support and reduce the cost of green technology
- For example: [Rozenberg, Vogt-Schilb, and Hallegatte \(2020\)](#) demonstrate how enacting regulations that apply only to new capital, as fuel economy standards or “feebate” programs do in the automobile sector, can favor a transition toward a greener economy without negatively affecting those who depend on existing polluting capital.

Policy design

Urban dimensions

- Climate policies can affect employment accessibility, labor market outcomes and overall urban productivity

Losses in accessibility of jobs using public transportation in Kinshasa, DRC



Source: Nell et al. 2023

- Fuel price increases have limited accessibility reductions for lower income households, who are mostly already priced out
- High vulnerability of near-poor households



Policy design

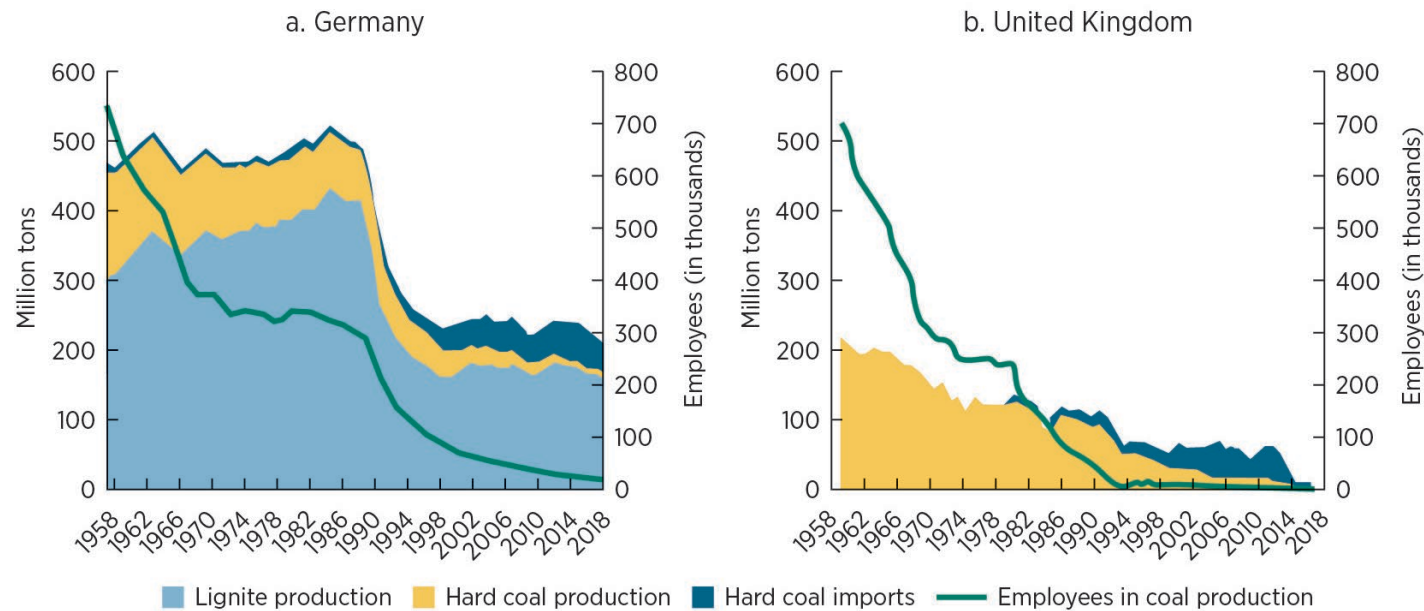
Managing urban dimensions

- Urban and transportation policies can mitigate the spatial impacts of climate policies
- Reducing housing market rigidities to allow for greater flexibility of people when adapting to changes in the transit system
- Investments in public transportation infrastructure to allow commuters to save time and money. Reduce congestion and improve air quality
- Public transportation subsidies to benefit those that live far from the city center

Policy design

Regional and spatial impacts

- Some communities or regions – such as coal mining regions – have heavy specialization in activities with high carbon intensity
- Climate policies can lead to large increases in unemployment; drops in income, tax revenues, and investments; outmigration of the most skilled workers; and other factors that increase the challenge of transitioning to alternative activities



Source: World Bank 2023.



Policy design

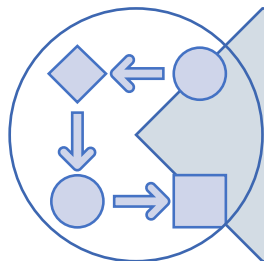
Managing regional and spatial impacts

- Place-based policies can help balance spatial and regional policy effects
- They can include a variety of possible interventions, such as tax incentives, expenditures to manufacturing extension or training programs
- They can make use of multiple instruments like transportation investments to improve connections within and between regions; fiscal incentives; direct service provisions; as well as measures to foster skills, enterprise development and innovation



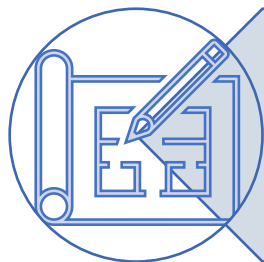
CLIMATE GOVERNANCE:

strategically adapt the institutional architecture and embed climate objectives into a positive development narrative



POLICY SEQUENCING:

balance short-term feasibility and long-term ambition



POLICY DESIGN:

focus on people and manage the distributional effects of climate policies



POLICY PROCESS:

use public engagement and communication to improve policies and their legitimacy

Policy process

Process legitimacy

Independent of the objectives and instruments, if a policy process is not considered credible, fair and acceptable by the public, the policy decision will likely be met with opposition



Source: Martin Bernetti/AFP ([Link](#))



Source: Philippe Huguen/AFP via Getty Images ([Link](#))

Policy process

Civic engagement

- Engagement of different stakeholders in policy design helps to account for priorities, values and effects on different groups
- Citizen engagement in climate policy reforms can take different forms:

Citizens' juries

- Usually involve small, representative group of lay participants
- Discuss the case at hand and make recommendations

Multicriteria mapping

- Selection of topic area and defining of basic policy options followed by interviewing participants to develop evaluation criteria
- Discussion of policy options by participants

Scenario workshops or visioning exercises

- Allows participants to articulate their vision of the future

Standing consultative panels or citizen panels

- Usually involve large representative groups of citizens who are consulted periodically to sample changing opinions and attitudes
- Can be consulted on a range of issues

Ombudsperson for future generations

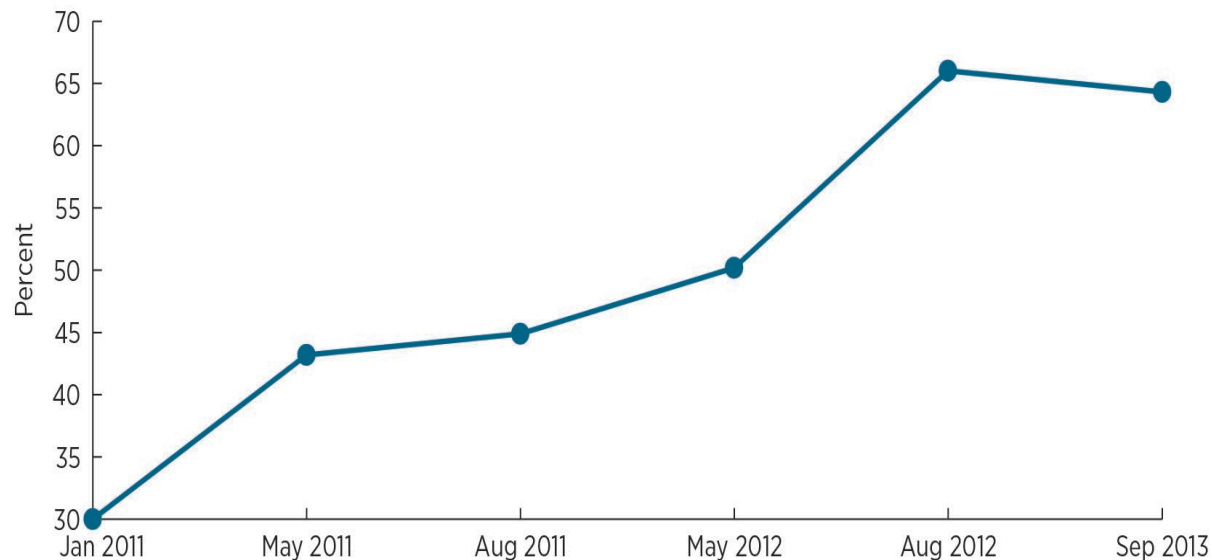
- Creating an Ombudsperson as a way to support civic engagement with younger populations, who are often not directly represented through democratic processes and decision-making

Policy process

Communication

- Communication helps to build and sustain support when implementing climate policies
- Communication strategies need to be designed to reach all segments of society and tailor strategies to the opinions and attitudes of the stakeholders

Share of population that reported being “satisfied” or “very satisfied” with El Salvador’s 2011 subsidy reform, 2011-13



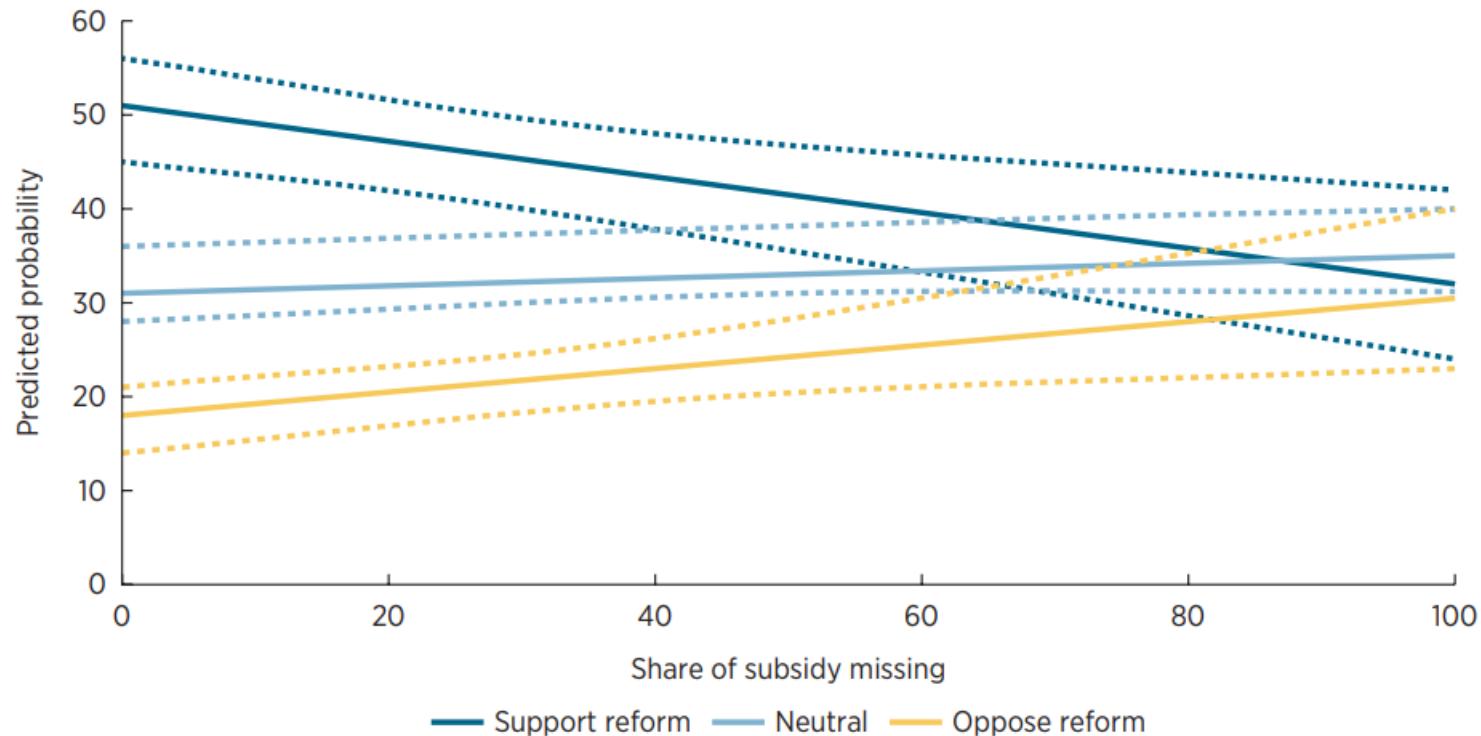
Source: Calvo-Gonzalez, Cunha, and Trezzi 2015.

- Reform was particularly unpopular among lower-income groups, even though it increased welfare of households in all but the two deciles of income distribution
- Reasons were misinformation and mistrust in the government’s ability to implement the policy
- Perceptions improved significantly over time as households benefited from the reform

Policy process

Public perceptions: when winners feel like losers

Support for and opposition to subsidy reform in Indonesia, by perceived level of corruption



Source: Kyle 2018.

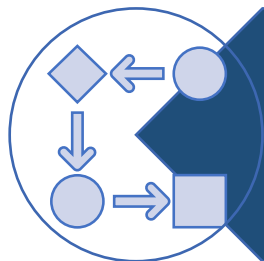
Note: *Share of subsidy missing* is a proxy for misappropriation of subsidy funds and corruption. A value of 100 suggests the highest level of misappropriation (and 0 the lowest).

- Empirical evidence from Indonesia shows that opposition to fossil fuel subsidy reform is directly linked to **local perceptions** of corruption
- When corruption levels are perceived to be low, poor households are more than **2.5 times more likely to support** than to oppose fuel subsidy reform.
- When corruption is perceived to be high, **support declines by 18 percentage points** and opposition increases by 14 percentage points.



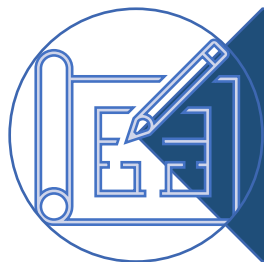
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WITHIN REACH

Navigating the Political Economy of Decarbonization

Jun Rentschler

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Tokyo, 14th Feb 2024