Shaping Climate Cooperation in a More Contested World

Quo Vadis Multilateralism? International Cooperation in a Changing Global Order

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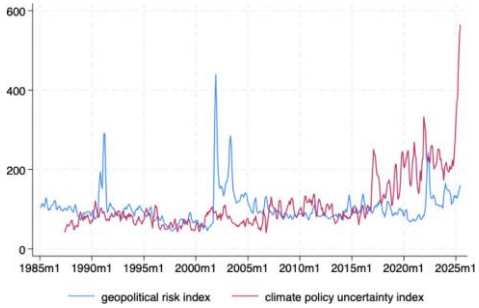
Motivation and Questions

Motivation

- Global climate cooperation is under strain:
  - renewed U.S. withdrawal from the Paris Agreement
  - rollback of basic climate policy tools (e.g. emissions data collection)
  - war in Ukraine, energy insecurity, and green industrial rivalry.
- Question is no longer only *how much* mitigation we want, but:
  - how to reconcile climate goals with energy security, geo-economics, and fiscal limits.



source: Gavriilidis (2021), Caldara and Iacoviello (2022)

Core Questions

- Why has universal, UNFCCC-based multilateralism struggled to deliver?
- What kinds of institutions can sustain cooperation in a more fragmented order?
- How far can “climate club” approaches take us?
- What structural reforms in the global economy are needed to make deep decarbonization politically feasible?

A New Geopolitical Reality

Eroding Institutional Foundations

- First Trump administration: announced U.S. exit from Paris.
- Second term: executive order to leave Paris again.
- EPA decision to stop collecting emissions data from major polluters:
  - reduces reporting burdens for individual firms,
  - but dismantles the information infrastructure needed for markets and regulators.
- What happens to negative externalities when information is suppressed?

Geopolitically Constrained Governance

- Russia–Ukraine war:
  - energy security back at the top of national agendas
  - in some cases, renewed reliance on fossil fuels
- Green industrial rivalry:
  - U.S. Inflation Reduction Act (IRA)
  - EU Green Deal Industrial Plan & CBAM
- Climate policy uncertainty and geopolitical risk indices now move together:
  - geopolitical shocks narrow the room for cooperative climate action.

Motivating Example: Germany's Shifting Growth Model

- Pre–war German growth model combined:
  - **Stable, low–cost energy** imports from Russia, and
  - Competitiveness in manufacturing, including a strong automobile industry
- Since the Russia–Ukraine war:
  - The energy pillar has broken down as Russian gas supplies collapsed.
  - China's rise in EVs threatens Germany's auto-led model.
- As a result, Germany is searching for a **new growth model**:
  - One strategy is to use the **transition to a low-carbon economy** as a way to rebuild industrial competitiveness.
  - Green industrial policy is framed not only as climate policy, but as **industrial and geopolitical strategy**.
- This example illustrates today's central question:
  - How do **geopolitical shocks** and the **green transition** jointly reshape national growth models and the scope for climate cooperation?

Climate as a Global Public Good

- Climate stability is a textbook global public good:
  - non-rival and non-excludable
  - benefits are global; costs of mitigation are domestic
- Strong incentives to free-ride:
  - each country prefers others to bear a larger share of mitigation costs.
- Without enforcement or reciprocity:
  - treaties drift toward non-cooperative equilibria.
  - outcomes are collectively inefficient (Barrett (2005); Nordhaus (2015, 2021)).

The Paris Paradigm: Achievements and Limits

- Paris Agreement: a major step forward in terms of legitimacy.
  - near-universal participation
  - nationally determined contributions (NDCs)
  - transparency and review mechanisms
- But aggregate ambition and implementation fall short of 1.5°C path:
  - NDCs stabilized emissions only weakly.
  - an “implementation gap” between pledges and policies
- Design trade-off:
  - flexibility and inclusiveness → weak enforcement and reciprocity
  - voluntary pledges exposed to domestic political cycles and economic pressures

Fragmented Regime Complex

- Climate governance today:
  - a fragmented “regime complex” (Keohane & Victor (2011))
  - overlapping treaties, clubs, and institutions
- Climate finance:
  - repeated delays in delivering the USD 100bn pledge
  - bilateral and industrial-policy-linked funds rising relative to multilateral channels
- Result:
  - Paris persists as a legal and diplomatic shell.
  - but lacks robust mechanisms of reciprocity and enforcement

Rethinking Climate Cooperation in a Fragmented World

Victor & Jones (2018)

Victor & Jones (2018) anticipated the limits of universal multilateralism and proposed a more pragmatic framework built on four pillars:

1. **Smaller coalitions** of major emitters
2. **Adaptive institutions** capable of evolving over time
3. **High-leverage emissions**, especially SLCPs
4. **Transformative technologies** for deep decarbonization

Two guiding questions for this paper:

- Do these four pillars still hold under the more fragmented order of the 2020s?
- What new elements—**energy security, climate finance, technology alliances**—must now be added?

Rethinking Climate Cooperation in a Fragmented World

Climate Clubs

The Logic of Climate Clubs

- Basic idea:
  - a smaller group of countries agrees on a common mitigation policy
  - club members enjoy benefits; non-members face penalties
- Trade measures as enforcement devices:
  - uniform tariffs on imports from non-participants
  - reduce incentives to free-ride
- Overcoming the “small-coalition paradox”:
  - large, fully inclusive coalitions are hard to sustain
  - smaller groups can go further, faster

Emerging Club-like Initiatives

- COP29 Climate Club:
  - broad, voluntary, standard-setting and MRV cooperation
- G7 Climate Club:
  - smaller group of advanced economies
  - emphasis on industrial decarbonization
- EU CBAM:
  - quasi-club mechanism via carbon border adjustment
  - aims to limit leakage and enforce comparable effort
- U.S.–EU Global Arrangement on Sustainable Steel and Aluminum (GSSA):
  - sector-specific club linking trade treatment to low-carbon production.

New Designs: Tiered Clubs and Price Floors

- Tiered Climate Club (Iverson (2024)):
  - Tier 1: ambitious carbon price and potential trade leverage
  - Tier 2: carbon price as a fraction of Tier 1 average
  - matching mechanism: Tier 1 abatement induces Tier 2 effort
- International Carbon Price Floor (IMF):
  - differentiated minimum carbon prices by income group
  - countries can use taxes or equivalent regulations.
  - simpler, more WTO-compatible, politically acceptable
- Common feature:
  - move from purely moral appeals to incentive-compatible reciprocity

Rethinking Climate Cooperation in a Fragmented World

From Diplomacy to Structural Reform

Episodic Multilateralism

- Victor & Jones (2018):
  - global cooperation will be “episodic.”
  - driven by periodic alignments among a few key actors
- Diplomacy tends to follow, not lead, structural change:
  - “new facts on the ground” in technology, markets, and behavior
  - formal agreements ratify changes that have already begun
- Political economy constraints:
  - concentrated near-term costs vs diffuse, long-term benefits
  - green “pioneer” states account for a shrinking share of global emissions

From Managing Tons to Managing Systems

- Green (2025) criticizes the prevailing *emissions-centered* paradigm of climate governance:
  - heavy reliance on carbon markets, offsets, and accounting of "tons"
  - limited influence on the deeper structures that generate emissions
- Risks of this paradigm:
  - overestimation of offset additionality
  - preservation of incumbent advantages through free allowances and exemptions
- Green's argument: climate governance must shift from "managing tons" to "managing systems":
  - reform fiscal, financial, and legal rules that structure the global economy
  - tackle wealth concentration and fossil-asset power
  - expand climate finance and reshape investment incentives

Key Structural Levers

- **Global tax cooperation**
  - offshore wealth and corporate assets linked to carbon-intensive activities
  - global minimum corporate tax as first step
  - proposals for progressive wealth taxation on very large fortunes
- **Reforming investor protections (ISDS)**
  - a large share of ISDS cases involve fossil-fuel firms.
  - awards in the hundreds of millions or billions of dollars
  - creates “regulatory chill” for ambitious climate policy
- **Rewriting rules for capital allocation**
  - align financial regulation and investment mandates with decarbonization
  - redirect capital flows toward low-carbon infrastructure and innovation

Rethinking Climate Cooperation in a Fragmented World

SLCPs in a Changing Landscape

SLCPs: Rationale and Risks

- Short-lived climate pollutants (SLCPs):
  - methane, black carbon, HFCs, etc.
- Rationale:
  - short atmospheric lifetimes → rapid climate and health benefits
  - visible “quick wins” can sustain political momentum
- Risks:
  - cannot substitute for deep CO_2 cuts
  - overemphasis may create moral hazard if it delays energy-system decarbonization.
- Emerging consensus:
  - SLCP mitigation is a complement and catalyst, not a replacement.

SLCPs, Trade, and Energy Security

- Post-Ukraine war realignment:
  - shift from Russian pipeline gas to global LNG
  - spotlight on methane leakage along supply chains
- Policy responses:
  - EU Methane Regulation: life-cycle reporting for imported gas
  - U.S. methane fee under the IRA
- SLCP policy as test bed for club-based governance:
  - potential extensions of CBAM to non-CO_2 gases
  - differentiated participation and reciprocity in SLCP coalitions

The Role of the CCAC

- Climate and Clean Air Coalition (CCAC):
  - launched in 2012 under UNEP
  - more than 80 country members and many non-state actors
- Key contributions:
  - Global Methane Pledge
  - capacity building in agriculture, waste, and oil & gas sectors
  - agenda-setting and norm diffusion
- But:
  - voluntary, limited funding
  - notable absentees among major emitters
- Builds “coalition capital” that can be leveraged by more formal institutions

Conclusion

Conclusion: Adaptive and Resilient Governance

- Multilateralism remains essential for setting common goals and language.
- But universal, voluntary agreements alone cannot solve the free-rider problem in a geopolitically contested world.
- The emerging architecture is likely to be:
  - multi-layered: Paris + clubs + sectoral alliances,
  - incentive-based: trade measures, price floors, finance compacts,
  - structurally oriented: tax, finance, and investment rules that reshape the global economy.
- The challenge: design institutions that can operate under fragmentation, yet still steer us toward deep decarbonization.
- **Additionally:** Although not covered in detail here, **technological progress and the climate finance needed to support it are crucial**. As Nordhaus (2021) and Iverson (2024) emphasize, faster declines in abatement costs make climate clubs far more effective and politically sustainable.

Thank you!

Additional Figures (For Discussion)

- For the 2018–19 trade war, Cavallo, Gopinath, Neiman and Tang (2021) showed that U.S. firms initially absorbed most of the tariff burden, resulting in limited price increases at the retail level.
- Cavallo, Llamas and Vazquez (2025) examine the effects of the 2025 tariff measures in real time using high-frequency pricing data and product-level detail.