NOVEMBER 2024

Power and Planet

Lessons from a Climate and Trade Tabletop Exercise

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Introduction

In July 2024, CSIS's Energy Security and Climate Change Program, in collaboration with the Scholl Chair in International Business, hosted a one-day trade and climate simulation game titled Power and Planet. The focus was on how players representing key nations make decisions at the intersection of climate and trade policy to reduce emissions, boost economic opportunity, and ensure security.

The game explored the geopolitical and economic dynamics that arise when a bloc of developed countries establishes a climate club. Will such a club drive greater global cooperation on emissions as it expands, or will it trigger trade wars, creating a bleaker outlook for long-term climate outcomes? How do economic, environmental, geopolitical, or security considerations shape players' priorities?

This report documents the game and how participants navigated the one-day simulation. It outlines the game's setup, turn-by-turn progression, and key takeaways for policymakers. Additionally, the authors examine the game's limitations and propose areas for further research.

Game Structure and Rules

Each player was assigned to one of three teams: G7+ (representing the Group of Seven countries along with Australia and South Korea), China, or emerging markets. Each player assumed the role of a government leader tasked with achieving their country's ambitions for climate, economics, and security. Twenty-five experts from the climate and trade communities participated, representing a diverse mix of academic and civil society institutions, private companies, foreign embassies, and trade associations.

During the game, each participant represented a country or, in the case of China, a political or administrative entity. The three teams were as follows:

- **G7+ team.** Each of the 11 participants represented each G7 country (except Italy), Australia, and South Korea. The U.S. delegation had three players, acting as the president, the special presidential envoy for climate, and Congress. And European Union was represented by one player.

- **Emerging markets team.** The nine participants represented Brazil, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, Turkey, and Vietnam.
- **China team.** The five participants represented the following political authorities and administrative entities: Chinese president Xi Jinping and the Politburo Standing Committee of the Chinese Communist Party; the National Development and Reform Commission and the National Energy Administration; the Ministry of Ecology and Environment; the Ministry of Commerce, Ministry of Finance, People's Bank of China, State Administration of Taxation, Security Regulatory Commission, and Banking and Insurance Regulatory Commission; and provincial and local governments.

Participants received *individual motivations* outlining objectives to pursue and defensive interests to protect, both within their team's deliberations and in the broader game context. They were asked to make decisions consistent with that guidance but to be creative in how they realized their goals.

The game covered a five-year time frame from 2027 to 2032 and consisted of three rounds, each lasting between one and one-and-a-half hours. The first round began with instructions to the G7+ to establish a climate club in the first turn. Over the next two turns, exogenous geopolitical and climate conditions continued to worsen as global temperatures passed key global targets, climate-associated extreme events negatively affected different regions, and geopolitical tensions worsened.

Teams were assigned separate rooms to strategize, deliberate, and set policies. Teams could submit *action forms* to make official communications or announce policy decisions. These were publicly announced to all other teams and the game's moderators (Control). In addition to central moderators, each room had a facilitator answering questions and announcing updates from Control. Control could amend the scenario at any time to introduce events that could shift game dynamics, such as the reestablishment of the World Trade Organization (WTO) Appellate Body.

Except for the first hour and the last 30 minutes of the game, when teams deliberated over their opening and closing strategies, written bilateral communications and in-person bilateral and multilateral meetings were allowed between teams. Participants were free to take action independently of their team by submitting individual action forms. There was no limit to the number of forms participants could table per round, though all were encouraged to stay within the scope of trade, economic, and climate policy actions. They were also blocked from declaring war or resorting to kinetic military action.

Each team started the game with a score assigned by Control representing their collective standing in 2027 across four categories: economy, emissions, domestic political support, and allies (i.e., the level of cohesion within the group). Control updated the scores after each round based on how each team's actions had affected these four categories, and facilitators privately distributed these to team members. Teams could choose which categories they wished to prioritize through their actions, consistent with their internal motivations, but they were instructed to consider the long-term effects beyond the game's five-year time frame. For example, they had no obligation to implement dramatic emissions cuts within five years, as establishing credible long-term climate policies was sufficient to realize climate ambitions, though potentially at the expense of economic outcomes or domestic political support.

Each round was followed by a 30-minute break enabling teams to regroup and participants to address personal business, as well as a 30-minute adjudication session in which all teams reconvened in the main meeting room to receive an update on game progress from Control. The day ended with a one-hour hotwash for organizers to reflect on the decisions participants made throughout the game and for participants to share feedback on the game's overall design and conduct.

Game Progression and Key Events

ROUND 1: CLUB FORMATION AND REACTIONS

The first round, set in 2027, was devoted to establishing a G7+ climate club and immediate reactions from other participants. The G7+ team was tasked with reaching an agreement on the nature of their climate club within the first hour, while other teams considered their engagement strategies. The emerging markets team made preemptive announcements, expressing concern that wealthy nations would unilaterally impose border measures and undermine multilateral efforts to reduce emissions. They called on the G7+ to adopt collective strategies that accounted for their past emissions and developing countries' need for financial support and technology for mitigation. China echoed these sentiments, offering support for the emerging markets' position and inviting an open bilateral discussion.

The G7+ announced the creation of a climate club with the following features:

- **Carbon-free economy goal.** Members commit to achieving a carbon-free economy by 2050.
- **Carbon accounting.** Members gradually implement value chain accounting across all economic sectors.
- **Carbon border measures.** Each member establishes its own carbon border measure, such as the Carbon Border Adjustment Mechanism (CBAM) for the European Union or carbon tariffs for the United States under the Foreign Pollution Fee Act.
- **Internal trade exemption.** Members assign no climate-related border measures internally, pending the negotiation of an internal green marketplace.
- **Technology transfers.** Members make technology transfers to low- and lower-middle-income countries wishing to join the club.
- **Shared oversight.** All members participate in oversight and decisionmaking.

China criticized the proposal as vague and likely to undermine global trading rules for protectionist purposes. However, the China team refrained from taking adversarial action, instead calling for more details from the G7+ about the climate club. Meanwhile, China, Brazil, and India announced they would begin discussions on creating a global carbon accounting system open to all countries. The round closed with the United States and Canada communicating Mexico's decision to join the club.

ROUND 2: EXPANSION ATTEMPTS AND EMERGING MARKET RESPONSES

The second round, covering the period of 2028-2029, unfolded as a battle for influence over emerging markets between the G7+ and China, with China scoring some early wins. Talks between China, Brazil, and India on establishing a global carbon accounting system gained momentum as all remaining BRICS members and Saudi Arabia joined. In response, the G7+ offered to collaborate by sharing data and discussing potential common standards.

In addition, China released a three-pronged strategy designed to counter the G7+ club:

- Reserve the right to "respond appropriately" to any discriminatory measures.
- Invest RMB 10 trillion over 10 years to speed up the decarbonization of China's economy.
- Launch the Inclusive Green Belt, focused on a fair accounting mechanism for carbon, technology sharing for climate challenges, and promoting free trade in environmental goods and services.

China later secured the backing of India, Russia, Saudi Arabia, and South Africa to pursue a joint dispute settlement case at the WTO against U.S. carbon border tariffs. This decision prompted Control to announce the reestablishment of the WTO Appellate Body based on a coin toss.

However, China's momentum soon slowed. Crucially, no country chose to join the Inclusive Green Belt. While Russia responded positively to that proposal, China instead started bilateral negotiations on nuclear cooperation and a 30-year gas supply agreement aiming to reduce Chinese coal dependence.

In contrast, the G7+ successfully enticed Mexico and Turkey to join its climate club, though it had to concede to their demands for preferential conditions. To further strengthen the club, the United States announced a USD 1 trillion fund offering grants and submarket loads for climate investments—exclusively accessible to club members.

Courted on both sides, emerging markets sought to strengthen their negotiating power by leveraging their collective resources. Brazil, Indonesia, Vietnam, and South Africa came together to form the Organization of Critical Minerals Exporters (OCME) to promote inclusive, fair, sustainable, and stable critical minerals markets. In the process, OCME even attracted Australia and Canada to join its ranks.

Toward the end of the round, members of the Organization of the Petroleum Exporting Countries Plus (OPEC+) coordinated to undermine the green transition within the G7+. They released large quantities of oil into the market, aiming to slow the growth of electric vehicles (EVs) and stall investment in critical minerals. Officially, OPEC+ presented this as a move to ease the global cost of living.

ROUND 3: FINAL NEGOTIATIONS AND OUTCOMES

The third and final round, covering 2030-2032, did not bring any realignment among the teams. The G7+ solidified its climate club by achieving three key milestones. First, it finalized a major internal agreement on the green marketplace, tackling tariffs and nontariff barriers to establish a free market for environmental goods and services, public procurement options, conformity assessment and standards, nondiscriminatory access to incentives programs, and critical minerals. Second, the group tackled inflation concerns by reallocating tariff revenue toward cost transfers, home retrofitting for higher efficiency, and clean vehicles and electricity subsidies. Lastly, the G7+ anchored Turkey into the club, largely through an EU commitment to accelerate Turkey's accession talks and South Korea's pledge to invest in Turkey's nuclear and EV sectors.

However, the G7+ could not prevent Mexico from leaving the club as inflationary pressures and declining economic opportunities within the club prompted its exit. Additionally, a joint EU-U.S. offer granting OCME members access to climate funds in exchange for preferential access to critical minerals went unanswered.

China, meanwhile, toughened its opposition to the G7+ club by imposing an export ban on all critical minerals processing technologies. However, China failed to gain traction in emerging markets despite pledging up to RMB 10 trillion in foreign direct investment to countries that would join the Inclusive Green Belt and remove tariffs on Chinese green goods. Additionally, the global carbon accounting discussions from the first and second rounds seemed to stall or fall by the wayside.

Among emerging markets, cohesion dissolved as each country pursued its national interests, choosing to negotiate bilaterally—either with other emerging markets or with other teams. India agreed to double its imports of Russian oil and gas in exchange for Indian investment into the Russian energy sector along with enhanced cooperation on decarbonization between the two countries. India further secured public financing from Saudi Arabia for domestic climate and energy transition projects, while Saudi Arabia negotiated a uranium deal with the United States and Australia to facilitate the Gulf region's development of nuclear energy. OCME welcomed India, Japan, and South Korea within its ranks as "trusted processing and recycling centers," but no other multilateral agreements emerged.

Scoring Progression

As the day progressed, each team dealt with advances and setbacks, and its scores in the four categories (economy, political support, emissions, and allies) shifted accordingly. The formation of a climate club by the G7+ team in round 1 improved its members' emissions outlook, raising their emissions score from 2 to 4. By contrast, the club engendered the threat of trade restrictions and geopolitical hostility, lowering the team's economy score from 6 to 4 and political support score from 5 to 3. China and emerging markets also saw bleak economic outcomes, with the club's border adjustments and tariffs creating an economic burden for nonmember states. Round 2 saw general improvements for the G7+ and China teams, with the G7+ team expanding its alliance and China presenting a clear alternative to the G7-led climate club. The emerging markets team, however, was left with worsening natural disasters and inadequate financial commitments, reducing its political, economic, and allied scores.

Table 1: Progression of Scores by Team and Round

	G7+				China				Emerging Markets			
Round	EC	PS	EM	AL	EC	PS	EM	AL	EC	PS	EM	AL
1	6	5	2	6	5	6	2	5	5	4	4	6
2	4	3	4	5	3	4	4	6	3	3	4	6
3	5	4	5	6	3	5	6	6	3	2	4	5

Note: EC = economy, PS = political support, EM = emissions, and AL = allies.

Team Analysis

G7+ team. The G7+ team proved particularly fractious due to the large number of participants and their diverse domestic approaches to climate policy. Internal differences kept the club from policy alignment. Early on, the EU and U.S. players retreated to separate rooms to coordinate their positions, a practice they continued at regular intervals. These divided sessions slowed overall club negotiations as each prioritized the management of their internal cohesion. The U.S. and EU policy proposals were also in conflict, as the United States had no internal carbon price to secure its climate goals, while the European Union was attached to its emissions trading system, which forced other members to mediate.

Ultimately, the European Union and the United States reached an ungainly compromise and agreed on the main terms and benefits of the club, which they reluctantly extended to the rest of the group. However, the European Union stressed that its agreement was contingent on establishing a shared financing mechanism and access to U.S. subsidies in later rounds, which virtually halted the club's implementation until all details were finalized in the late stages of the game.

Consumed by internal negotiations throughout the game, the G7+ had little bandwidth to devote to a coherent outreach strategy for membership candidates—or even to consider how its proposals might appeal to them. Unable to tolerate China's presence within the club, the United States clearly defined the group's collective stance toward China, though the group's lack of coordination was evident in the absence of cohesive messaging inside meetings.

The China team. The team's structure was designed to mirror the decisionmaking processes that shape energy and climate policies in China. Each player represented a specific government entity. However, such internal dynamics were largely muted during the gameplay, as players were not assertive in their assigned roles. Instead, the team took a collaborative approach and deferred to the president/politburo when making major decisions. This pattern persisted when a different player assumed the presidency later in the game for logistical reasons.

In the early stages of the game, players spent significant time aligning their views on two key points: the state of energy and climate in China and the government's priorities and redlines. Once the team reached a consensus, it acted as a unified block in international proceedings. No player deviated from the agenda during meetings with foreign representatives, the group consulted internally before and after each meeting, and no actions were taken without the group's consent.

Although players were keen to use China's strengths in technology and state-driven international finance during negotiations, they took a cautious approach, avoiding proposals that might harm China's economic security. Only in the final turn did China act on its stated opposition to the G7+ club by raising export controls on critical minerals technology. Their other initiatives to compete with the G7+ for global leadership, such as the Inclusive Green Belt and global carbon accounting schemes, stalled.

The emerging markets team. In the initial stages of the game, India and South Africa sought to lead a preemptive strategy to deter or at least mitigate the impact of the anticipated G7+ climate club. However, discussions broke down due to competing national interests. Turkey's economic ties with Europe, as well as Mexico's trade relationship with the United States, made them more conciliatory toward the G7+, culminating in their decision to join the G7+ club. However, Mexico later withdrew after determining the cost of membership was too high. By contrast, Indonesia and Vietnam were wary of antagonizing or overly depending on China, which hindered unification efforts.

Natural resources also played a major role for players on the emerging markets team, as seen in the establishment of the OCME. Russia, meanwhile, pursued a natural gas and nuclear agreement with China, though its primary strategy was disruption. Russia used its cyber capabilities and natural resources to sow discord, particularly within the G7+, and to deter any actions that might threaten demand for its hydrocarbon exports. By the end of the game, the emerging markets team was too fragmented to resemble a cohesive economic bloc.

Key Outcomes and Insights

The outcomes highlighted the risks of a trade-based climate strategy. The game ended with escalating trade tensions, a worsening economic outlook for many countries, and only a modest increase in global ambitions for climate change. Despite mounting pressure from the public and increasingly visible climate effects, players prioritized economic and geopolitical goals over emissions reductions. Throughout the simulation, U.S.-China relations remained distant, and even the threat of a trade war failed to inspire rapprochement on carbon accounting standards, green development spending, or a common approach to climate and trade. The potential benefits of joining the G7+ climate club were not compelling enough to attract major emitters such as India, Brazil, or Indonesia.

Ambiguity prevented teams from taking decisive action in early rounds. As China and the emerging markets awaited details about the nascent club, they cautioned the G7+ against adopting protectionist measures but did not oppose the creation of a climate club outright or threaten direct retaliation. This left the G7+ team relatively free to act without external pressure. Most notably, China and the emerging markets failed to unite around a credible alternative to the G7+ effort. This could reflect a lack of appetite for climate clubs, or it could stem from emerging markets hedging their bets between potentially attractive options. In any case, the G7+ team appeared too preoccupied with its internal divisions to capitalize on opportunities to bring large emitters from the emerging markets team (such as Brazil, India, or Indonesia) into the fold or pressure China to increase its internal ambitions for climate.

Economic imperatives appeared to have a stabilizing effect on Chinese decisionmaking. Appearing hesitant to jeopardize economic opportunities through retaliatory measures, the China team explored alternative options ranging from warning the G7+ against discriminatory measures to engaging with emerging markets in various formats and appealing to the WTO. When these efforts failed, China finally opted for retaliation, the scope of which was narrow, focusing on critical minerals and WTO litigation. The China team calculated that persistent macroeconomic difficulties would make it unfeasible to sustain a large-scale trade war that could compromise other priorities, including national security and climate goals.

Geopolitical considerations, as well as regional and economic proximity, strongly influenced decisionmaking. After the G7+ formally established its club, the United States and Canada swiftly approached Mexico, and the European Union approached Turkey. These moves seemed low risk and logical given the nations' geographic proximity, political ties, and significant trade flows. By contrast, India was never directly courted to join either the G7+ club or China's Inclusive Green Belt. The country's ambivalent geopolitical positioning, as well as its low-ambition trade and climate mitigation policies, may have acted as deterrents.

Notably, both Mexico and Turkey sought access to the G7+ club in a manner that would permit continued Chinese investment in their economies. They requested that goods produced by Chinese companies on their soil, like BYD EVs, not be excluded from the internal green marketplace. Meanwhile, bilateral deals—such as those between China and Russia, Russia and India, or Saudi Arabia and the United States—aligned with existing geopolitical and sectoral relationships.

Trade liberalization and energy supplies were the most effective tools for driving collaboration and realignment. Both the G7+ and China made technology transfer and investment central to their efforts to entice other countries to cooperate, but they met with little success. Attempts by China and the emerging markets to exert influence through tighter controls on critical minerals or fossil fuels were also of limited influence. In contrast, trade liberalization played a significant role in supporting and dissuading club membership. Access to the green marketplace was key in attracting Mexico and Turkey to the G7+ club, while market access for Chinese green goods deterred emerging markets from embracing the Inclusive Green Belt. Energy supply played a significant role in bilateral deals between teams but was not a driver for clubs.

Lessons for Policymakers

Clear policy communication is paramount in multilateral negotiations—both in the run-up to a major policy pronouncement and upon its enactment. Slow, cautious play characterized the game's opening turns as all three teams appeared unsure of how to proceed or respond. After the G7+ and China teams published their proposals, they spent considerable time dispelling misunderstandings and clarifying their terms. Without clearly articulated goals and terms, club members had little opportunity to market membership to large emitters or potential geopolitical allies.

Climate clubs are contingent on flexible mechanisms that accommodate diverse national interests. The G7+ team struggled to overcome its members' disparate policy approaches but struck compromises to clinch an ambitious agreement based on long-term decarbonization. For example, the European Union exempted U.S. products from CBAM, even in the absence of a U.S. carbon market, in exchange for access to Inflation Reduction Act-style subsidies and expanded trade in green goods. The members also did not create a unified border measure, instead allowing each country to follow its national preference. Flexibility was crucial in expanding the club in later turns, as demonstrated in Mexico's and Turkey's attempts to protect Chinese investment in their territories.

Climate clubs must be aggressively marketed to emerging markets and geopolitical allies. Neither the G7+ team nor the China team succeeded in attracting development economies to their club. This failure appears to stem from a lack of coordination among emerging markets as well as the one-size-fits-all approaches of the G7+ and China. Participants did not form any transactional arrangements, such as exchanging access to critical minerals for industrial investment or market access.

Trade has the potential to drive, as well as deter, climate action. Conventional climate club designs feature a common border measure to encourage nonmembers to join and adopt emissions targets. This is precisely what drove Mexico and Turkey to seek accession to the G7+ club. Yet trade policy considerations also complicated the search for solutions. The debate over the nature and extent of the border measure almost derailed the formation of the G7+ club, as the European Union and the United States disagreed on whether to adhere to WTO rules for raising border adjustments or selectively liberalize trade within the club. Later in the game, China's demand for tariff-free treatment of its exports as a condition for participating in its Inclusive Green Belt deterred emerging markets from joining.

Priorities for Future Research

Improve modeling of climate-focused trade mechanisms. A key shortfall in this game was the inability to model or quantitatively understand the economic, trade, emissions, and political stakes of different decisions. Participants had to reason about decisions using intuition or by asking questions of Control. They were also limited in their ability to compare options or grapple with the outcomes of different actions. Although policymakers in the real world face substantial uncertainty in the outcomes of their decisions, they must enter negotiations with some quantitative understanding of how to achieve their climate and economic goals.

Understand the priorities of emerging markets in climate and trade negotiations. Future research on climate clubs should focus on devising a coherent approach that enables the identification and harmonization of the diverse and often conflicting security, climate, and economic priorities of emerging market and developing economies (EMDEs). Research could explore how climate clubs can tailor membership incentives, such as market access, technology transfer, and political support, to attract EMDE participation. This could alleviate the shortcomings of the narrow, one-size-fits-all approaches observed in this simulation.

Develop a standardized and adaptable global carbon accounting framework. Lack of consensus on carbon accounting standards and other evaluative criteria emerged as a major obstacle to cooperation during the simulation. Future research should focus on identifying carbon accounting procedures that meet enough needs to become standardized, such as accounting for data access and validation procedures. Proactive multilateral engagement is critical to effectively integrating these global standards into trade negotiations and carbon border mechanisms.

Identify and navigate geopolitical and security redlines in climate negotiations. The simulation illustrated that bilateral and multilateral agreements that align with existing geopolitical relationships or shared economic and security interests have higher rates of success. Future research should focus on identifying geopolitical and security redlines that hinder climate negotiations, as well as the ways climate clubs can mitigate these obstacles through measures such as public diplomacy, economic incentives, and security guarantees. ■

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This white paper is made possible by the generous support of the Hewlett Foundation.

Appendixes

APPENDIX A: CHALLENGES AND LIMITATIONS OF THE EXERCISE

Attempting to mimic the conditions in which a climate club could materialize in the real world through a policymaking simulation can be challenging. Causal attribution can be difficult as factors ranging from climate and economic policies to geopolitical dynamics and trade repercussions shape each other in an interactive process. Forecasting the evolution of global climate conditions and their long-term impact on populations, economies, and the natural habitat is also fraught with uncertainties.

Limitations inherent to tabletop exercises include the following:

- **Time constraints.** Unlike most events in real life, a tabletop exercise takes place over an artificial time frame. This is liable to cause simplistic assessments and errors in judgment. It can also lead participants to gloss over the technical difficulties of a particular policy initiative and focus only on the political aspects.
- **Scoring system.** Tabletop exercises sometimes include a scoring system, which could induce more active participation in the game but also distort behavior. Similarly, scoring metrics might not be interpreted uniformly. Scoring players collectively could also fail to accurately reflect their individual conduct.
- **Representation of political constraints.** Tabletop exercises have baked-in assumptions and limitations that make it too easy for players to avoid real-life political constraints. They might, for instance, rely on unrealistic fiscal largesse to attain their goals. They might also strike deals that are not politically feasible in the real world.

A few design changes could be considered for future iterations of the game. First, the longer a game lasts, the more it resembles real-life decisionmaking, as it allows players to delve deeper into the implications of their policy choices. Participants could receive briefing materials in advance to ensure participants are adequately prepared when the game starts. Second, scoring could be eliminated from the game, or scores could be revealed only at the end to avoid distorting player behavior. Third, Control could play a more assertive role by disciplining players when their actions stray too far from real-life constraints or by introducing exogenous changes that better reflect the consequences of player actions, such as a sovereign credit rating downgrade due to unsustainable public debt levels or electoral upheaval at home following unpopular foreign policy dealings.

APPENDIX B: LIST OF PARTICIPANTS

Please note that not all participants are listed.

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