



Global Climate Policy Project
at Harvard and MIT

**Technical
Report**

Putting Climate Coalitions into Practice

A Common Framework for Balancing Competitiveness and Equity

Executive Summary



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Technical Report of the Global Climate
Policy Project (GCPP) Working Group on
Climate Coalitions

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September 2026

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About the Project

The Global Climate Policy Project (GCPP) is a joint initiative between Harvard and MIT dedicated to identifying and advancing innovations in global climate policies and institutions. Existing frameworks, including the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, have established an important foundation for climate action but are not sufficient to manage the risks of a changing climate. With financial support from the Salata Institute for Climate and Sustainability at Harvard University, the Weatherhead Center for International Affairs at Harvard University, the MIT Climate Project, the MIT Center for Energy and Environmental Policy Research, MIT Future Energy Systems Center, and the Hewlett Foundation, GCPP puts forward ideas and policy proposals that complement the UNFCCC and address critical gaps in trade, finance, security, and other areas.

By convening leading academics, policymakers, industry experts, and members of civil society, GCPP drives research-backed policy proposals that can shape the global dialogue and accelerate urgent climate action.

Members of the GCPP Working Group on Climate Coalitions

This report reflects proposals and technical analysis developed by the GCPP, informed by extensive consultation and substantive feedback from the GCPP Working Group on Climate Coalitions, a diverse group of experts from both developed and developing countries, including many of the world's major emitters. Members brought expertise from government, international financial institutions, the private sector, academia, and civil society. This report builds on the Working Group's 2025 Flagship Report *Building a Climate Coalition: Aligning Carbon Pricing, Trade, and Development*.

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All members of the Working Group serve in an individual capacity. This report does not necessarily represent the views of the institutions to which they are affiliated. Working Group members participate on a voluntary basis and do not receive financial compensation for their contributions. Members all agree with the broad thrust of the analysis and recommendations presented in the report but should not be taken as agreeing with every aspect of the proposal.

Acknowledgments

Preparation of this report was overseen by Catherine Wolfram, who served as chair of the Global Climate Policy Project (GCPP) Working Group on Climate Coalitions. The project was directed by Arathi Rao and managed by Willow Fortunoff.

Core authors included Catherine Wolfram, Arathi Rao, Ayoub Aouzal, Alexandra Chau, Mariana Icaza Diaz, Willow Fortunoff, and Rachit Haritwal. Michelle Liu and Adarsh Kumar provided research assistance, while Didem Nisanci provided strategic guidance. Marika Tatsutani served as editor and Christyann Rothmel supported production. Bethany Patten, Zoe Stone, and Tony Tran provided valuable support in bringing the report to publication and Kate Danahy, Sefanya Hope-Hiennadi, and Joyce Light ably supported the Working Group.

Numerous people provided insightful comments that informed and improved the report, including Dora Benedek, Ignacio Garcia Bercero, Alberto Da Cruz, Jos Delbecke, Harikumar Gadde, Félix Mambo, Michael Mehling, Klaus Oppermann, Rohini Pande, Joe Pryor, José Scheinkman, Aparna Sharma, Chandra Shekhar Sinha, Robert Staiger, Robert Stavins, Ebru Voyvoda, Ardhi Wardhana, and Mark Wu. Material for this report was presented at the Environmental Defense Fund's workshop on Cross-Border Coordination and Cooperation in Regulated Carbon Markets; the Chinese Association of Environmental and Resource Economists & China Environmental Economics Tour 2026; the Bruegel–Potsdam Institute–Resources for the Future event on CBAM, Linking & Article 6; and the Golden Jubilee celebrations of the National Institute of Public Finance and Policy. Participants at all events provided helpful comments.

GCPP would like to acknowledge the generous support of the Salata Institute for Climate and Sustainability at Harvard University, the Weatherhead Center for International Affairs at Harvard University, the MIT Climate Project, the MIT Center for Energy and Environmental Policy Research, the MIT Future Energy Systems Center, and the Hewlett Foundation.

List of Abbreviations

BCA	border carbon adjustment
CAD	Canadian dollar (C\$)
CBAM	carbon border adjustment mechanism
CEA	China Emission Allowance
CNY	Chinese yuan (renminbi) (¥)
CIF	Climate Investment Funds
CO _{2e}	carbon dioxide equivalent
CO ₂	carbon dioxide
COP	Conference of the Parties (to the UNFCCC)
CPS	Carbon Price Support (UK)
EACR	Effective Average Carbon Rate (OECD)
ECC	effective carbon cost
EEA	European Economic Area
ETS	emissions trading system
EU	European Union
EUA	European Union Allowance
EUR	euro (€)
GATT	General Agreement on Tariffs and Trade
GBP	Great British pound (£)
GHG	greenhouse gas
HIC	high-income country
ICAP	International Carbon Action Partnership
IMF	International Monetary Fund
LIC	low-income country
LMIC	lower-middle-income country
MDB	multilateral development bank
MRV	measurement, reporting, and verification
MIC	middle-income country
MSR	Market Stability Reserve
Mt	million metric tons
NDC	Nationally Determined Contribution (under the Paris Agreement)
NZU	New Zealand Unit
OBPS	Output-Based Pricing System (Canada)
OECD	Organization for Economic Cooperation and Development
SBCE	Sistema Brasileiro de Comércio de Emissões (Brazil)
SGD	Singapore dollar
SME	small- and medium-sized enterprise
TPRM	Trade Policy Review Mechanism (WTO)
TCP	total carbon price (World Bank)
UKA	UK Allowance
UMIC	upper-middle-income country
UNFCCC	United Nations Framework Convention on Climate Change
USD	US dollar (\$)
WTO	World Trade Organization

Executive Summary

Climate-related disasters across the globe—including intense heatwaves, wildfires, droughts, and floods—are underscoring the urgency of the clean energy transition. The war in Iran has further highlighted the energy security and resilience benefits of clean-energy investment. But governments are simultaneously grappling with geopolitical rivalries, pressures on energy supply and affordability, and tight fiscal constraints. Against this backdrop, climate policies will need to advance decarbonization while addressing countries' broader economic, security, and political priorities.

A climate coalition can let countries that are ready to act move first and create incentives for others to follow. As the Global Climate Policy Project at Harvard and MIT set forth in its 2025 flagship report, *Building a Climate Coalition: Aligning Carbon Pricing, Trade, and Development* (the 2025 GCPP report), members of the coalition would commit to a carbon price floor in agreed industries and apply border carbon adjustments (BCAs) to imports from nonmembers, thereby helping ensure that firms face comparable carbon-related costs. The coalition would also offer incentives for low- and middle-income countries to join, including technology and capacity-building support, climate finance, and preferential market access.

Over the past year, carbon pricing systems have come into direct contact across borders, setting the stage for such an approach. On January 1, 2026, the European Union's Carbon Border Adjustment Mechanism (CBAM) entered its compliance phase, becoming the first policy to charge imports for their embedded emissions. Countries including Australia, Thailand, Türkiye, and the United Kingdom are contemplating BCAs of their own, alongside domestic carbon pricing. Whether these measures develop into a patchwork of unilateral approaches or coordinated rules will depend on decisions governments make over the next few years.

At COP30 in Belém, 17 countries and the European Union endorsed the Declaration on the Open Coalition on Compliance Carbon Markets (the Open Coalition), which formally launched in May 2026 with Brazil, China, and the European Commission—three of the largest compliance carbon markets—at the helm.¹ The Declaration reflected the endorsing countries' intention to discuss experiences and share lessons on carbon pricing, carbon accounting, high-integrity offsets, and verification systems, while exploring options to promote interoperability across compliance carbon markets in the long term.²

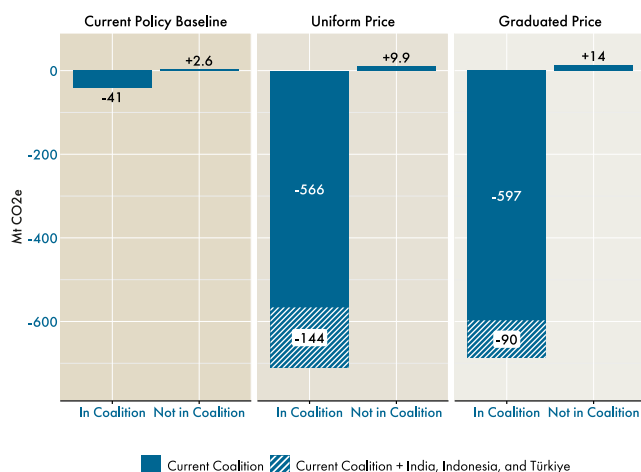
Converging on common standards is far easier now than after rules are set. For the first time, major economies are developing their carbon markets in parallel, just as trade brings them into direct contact and at a point where key design choices remain open. The Open Coalition can serve as a platform for advancing common standards and beginning a dialogue on deeper interoperability—helping reduce trade frictions, address competitiveness and carbon leakage concerns, and provide the investment certainty needed to advance industrial decarbonization and mobilize transition finance.

This report models a hypothetical alignment on carbon pricing in four industries—iron and steel, aluminum, cement and fertilizer—between the countries that endorsed the declaration on the Open Coalition in Belém as an illustrative example of the coalition approach. **The results show that cooperation centered on carbon pricing and trade measures could deliver substantial climate and economic benefits (Figure ES1):**³

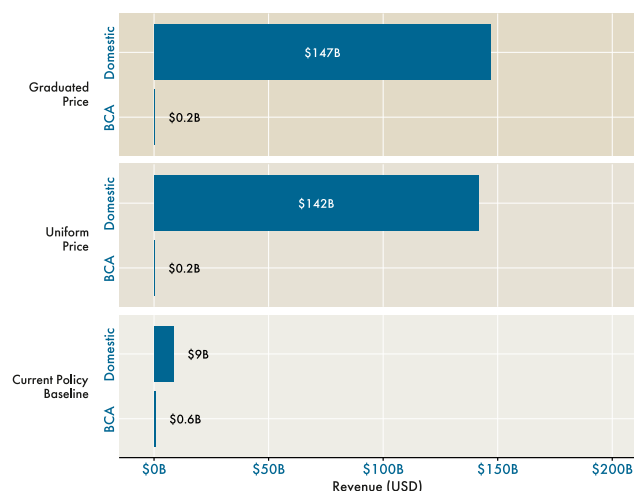
- **Far greater emissions impact.** Annual emission reductions reach approximately 557–584 million metric tons (Mt), roughly fifteen times larger than those achieved through current policies alone. These reductions correspond to approximately 1.1% of global annual greenhouse gas emissions (1.5% of global carbon dioxide emissions). The steel industry accounts for the largest share of these emission reductions, followed by cement and aluminum.
- **Significant new revenues.** An illustrative coalition could generate approximately USD 145 billion annually in carbon pricing revenues for participating countries. An overwhelming majority of these revenues are generated domestically rather than through BCAs.
- **Manageable price impacts.** Updated modeling continues to indicate that coordinated carbon pricing leads to moderate increases in commodity prices relative to current policies. In coalition member countries, steel prices increase 0.6%–1.4%; aluminum prices increase 2.6%–3.0%; cement prices increase 3.0%–3.1%; and fertilizer prices increase 3.5%–4.2%, all relative to current policies. These modest price increases allow producers of lower-carbon materials to capture a “green premium,” helping to support investment in cleaner production methods.
- **Minimal output losses and carbon leakage.** Across the four target industries, output in coalition member countries declines by no more than 2.5% relative to current policies. When coalition membership is based on graduated carbon prices by income group, output losses for low- and lower-middle-income countries are even smaller.

Figure ES1: Climate coalition impacts on climate and economic outcomes

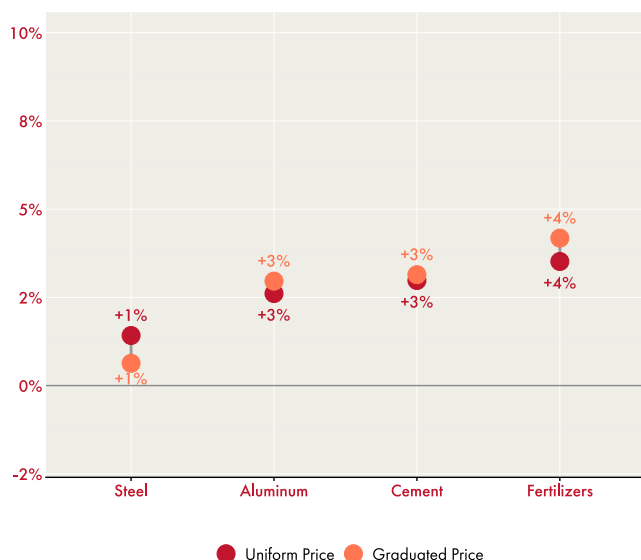
(a) A climate coalition leads to significantly greater emission reductions than the *Current Policy Baseline*⁴



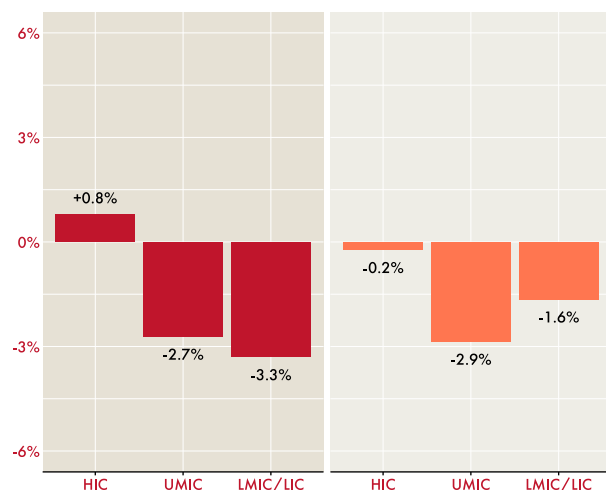
(b) A climate coalition generates substantial revenue primarily through domestic carbon pricing



(c) Coalition members experience moderate changes in prices relative to the *Current Policy Baseline*



(d) Differentiated carbon price floors mitigate output losses for lower-income countries



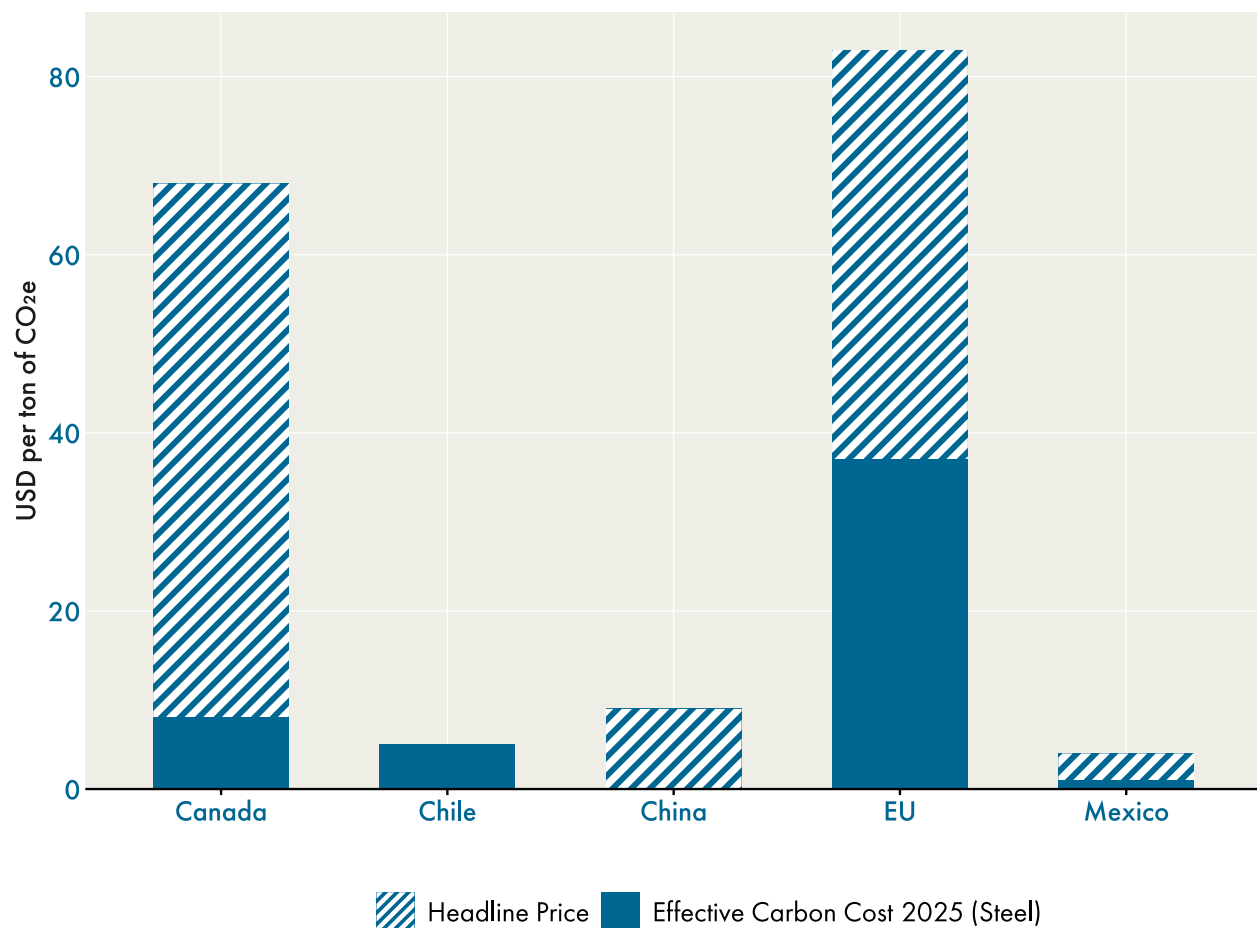
Notes: Figure ES1 (a) shows simulated annual changes in greenhouse gas emissions (CO₂e) from steel, aluminum, cement, and fertilizer production. In Figure ES1 (b), domestic revenue reflects the total revenue generated by domestic carbon price floors, measured net of the carbon pricing revenue coalition members already collect under existing policies. BCA revenue refers to fees paid by importers to coalition countries under the border carbon adjustment. In Figure ES1 (c), points show simulated percentage changes in average commodity prices in coalition countries relative to the *Current Policy Baseline*. The bars in Figure ES1 (d) show simulated percentage changes in coalition output by World Bank income group relative to the *Current Policy Baseline*. All graphs use 2025 as the reference year. Production and emissions data for the analysis are from Climate TRACE and CRU Group.

This report also sets forth a novel and pragmatic pathway for achieving interoperability: a common framework for assessing carbon pricing comparability. A rules-based framework that balances competitiveness and equity objectives allows coalition members to establish that their carbon pricing systems, though different in form, are sufficiently comparable in effect. The ability to compare effort across different types of systems helps coalition members preserve national policy autonomy, supports broad participation, and establishes a foundation for a constructive dialogue on trade and climate.

At the center of the framework is a metric—**effective carbon cost (ECC)**—which captures the average carbon price, per metric ton of CO₂-equivalent emissions (CO₂e), borne by regulated facilities. By accounting for the effect of policy design features that alter what firms ultimately pay, such as coverage, free allocation, and output-based benchmarks, the ECC lets policymakers compare what different systems mean for competitiveness.

Applying this metric to emissions from the steel, aluminum, cement, and fertilizer industries in Open Coalition countries in 2025 reveals, notably, that **headline carbon prices can overstate how far apart systems are in terms of effective cost to regulated entities (Figure ES2)**. For example, in the steel industry, a gap of USD 75 per metric ton of CO₂e (\$/t) between the headline carbon prices for the European Union and China shrinks to roughly \$35/t once free allocation and other design features are considered.

Figure ES2: Headline prices can substantially exceed the ECCs that firms face



Notes: Select countries represented. Total bar height reflects the headline carbon price, while the solid segment shows the effective carbon cost. Production and emissions data for the analysis are from Climate TRACE and CRU Group.

The second element of the framework establishes the level of carbon pricing effort expected from each participating jurisdiction: the **expected carbon price**. To balance competitiveness and equity, the framework could assess comparability against differentiated benchmarks that reflect countries' economic and structural circumstances, while preserving incentives for progressively stronger climate action.

The common framework could accommodate these differences in one of two ways:

- **Income-based differentiation.** One approach would be to establish carbon price floors with differentiated commitments by income group. This could take the form of a tiered graduated price, as described by the International Monetary Fund (IMF) and the 2025 GCPP report, or a continuous graduated price that rises with per capita income.⁵ Alternatively, coalition members could agree on a uniform minimum effective carbon price—for example, \$25/t—while allowing low- and middle-income countries a longer transition period before the minimum price takes effect.
- **Broader country-specific benchmarks.** While income provides an important indicator of a country's capacity to undertake industrial decarbonization, it may not fully capture differences in the feasibility and cost of carbon pricing. Countries with similar income levels can face markedly different structural conditions. For example, Brazil's extensive hydropower resources provide comparatively favorable conditions for decarbonizing energy-intensive industries, whereas Indonesia's greater reliance on coal-fired electricity implies higher transition costs. A more refined approach would therefore develop **country-specific benchmarks based on a broader set of structural fundamentals**, such as **economic capacity** (e.g., income per capita and institutional capacity), **industrial significance** (e.g., heavy-industry emissions per capita and global industrial importance), and **structural decarbonization costs** (e.g., marginal abatement costs and heavy industry as a share of GDP).

The first two elements of the carbon pricing comparability framework address the need for methodologies to establish both the carbon pricing effort that jurisdictions actually deliver and the level of effort that can reasonably be expected given their structural circumstances. The third element of the framework compares these two measures to determine whether jurisdictions provide sufficiently comparable carbon pricing effort to support mutual recognition.

Under this approach, coalition members would assess each jurisdiction's ECC relative to its expected carbon pricing benchmark. Jurisdictions whose ECCs are broadly consistent with their expected benchmark could be recognized as providing comparable carbon pricing effort, even where they rely on different policy instruments or face different structural conditions. Coalition members would ultimately need to determine the degree of deviation that can be deemed consistent with any agreed framework and whether that threshold should shift over time as carbon pricing systems mature. Importantly, jurisdictions may pursue different emissions targets, complementary policies, or decarbonization pathways while nevertheless providing comparable levels of carbon pricing effort under the framework.

The review process for assessing comparability could combine standardized reporting, independent technical review, peer dialogue, and transparency to encourage continued alignment while preserving national control over domestic carbon pricing policies.

For the coalition approach to gain traction, create incentives for expanded participation, and promote greater climate ambition, implementation needs to begin quickly. **Several conditions favor action.** Notably, the world's

largest carbon markets are at stages where design choices remain open and the EU CBAM's entry into its compliance phase has given exporting countries a concrete reason to seek recognition of their own carbon prices. **Further, as this report documents, carbon pricing systems are currently more comparable in effort than their headline prices suggest, creating an opportunity for coordination now.**

These conditions will not last. If systems consolidate around incompatible standards and trade frictions harden into precedent, the cost of coordination will rise with each year of delay. Moreover, several jurisdictions have committed to phasing out some features of their pricing systems, such as free allocation, that currently bring these systems closer together. This report identifies some of the technical work that global and regional forums, like the Open Coalition, could take up now to begin turning the aspirations expressed at Belém into action.

Download the full report using this QR Code:



The full report can also be found at:

<https://salatainstitute.harvard.edu/putting-climate-coalitions-into-practice-gcpp-report/>

Executive Summary Endnotes

- 1 European Commission Directorate-General for Climate Action, "EU, Brazil and China Launch Open Coalition to Boost Integrity and Effectiveness of Carbon Markets" (May 7, 2026), https://climate.ec.europa.eu/news-other-reads/news/eu-brazil-and-china-launch-open-coalition-boost-integrity-and-effectiveness-carbon-markets-2026-05-07_en.

Andorra, Armenia, Brazil, Canada, Chile, China, the European Union, France, Germany, Guinea, Mexico, Monaco, New Zealand, Norway, Rwanda, Singapore, the United Kingdom, and Zambia endorsed the Declaration on the Open Coalition on Compliance Carbon Markets at COP30 in Belém, Brazil. Brazil then worked with the European Commission and China to build on this early momentum over the subsequent six months, and the Open Coalition was formally launched in May 2026 in Florence, Italy. Brazil will chair the Open Coalition for its first two years, with China and the European Commission serving as Co-Chairs. Membership is open to any jurisdiction operating a nationwide compliance carbon market, whether an emissions trading system or carbon tax, and Germany and New Zealand joined as the first new members. Subnational authorities operating eligible mechanisms can participate as observers. The Open Coalition's initial technical work will be formalized in a work plan adopted at their first meeting on September 14, 2026, in Wuhan, China. See: European Commission Directorate-General for Climate Action, "EU, Brazil and China Launch Open Coalition to Boost Integrity and Effectiveness of Carbon Markets."
- 2 *Open Coalition on Compliance Carbon Markets* (November 7, 2025), https://www.gov.br/mre/pt-br/canais_atendimento/imprensa/notas-a-imprensa-backup/declaracao-sobre-a-coalizao-aberta-de-mercados-regulados-de-carbono/OpenCoalitiononComplianceCarbonMarkets.pdf.
- 3 The analysis treats current Open Coalition signatories as an illustrative case and assumes implementation consistent with the coalition vision set out in GCPP's 2025 report; it does not imply that signatories have adopted or committed to all the policies modeled here. The modeled coalition proposal covers four industries: iron and steel, aluminum, cement, and fertilizers. Throughout the report, "steel" is used to denote "iron and steel."
- 4 See Section 3.
- 5 Ian W.H. Parry, Simon Black, and James Roaf, *Proposal for an International Carbon Price Floor Among Large Emitters*, International Monetary Fund Staff Climate Notes (2021), <https://www.imf.org/en/Publications/staff-climate-notes/Issues/2021/06/15/Proposal-for-an-International-Carbon-Price-Floor-Among-Large-Emitters-460468>.



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