

BALANCING ACT:

Political Economy and the Pursuit of
Ambitious Carbon Pricing in Developing
Countries



PMI
PARTNERSHIP FOR
MARKET IMPLEMENTATION



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Climate Change

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List of Acronyms

ASEAN	Association of Southeast Asian Nations
CBAM	Carbon Border Adjustment Mechanism (European Union)
CESPEDES	Comisión de Estudios del Sector Privado para el Desarrollo Sustentable (Commission for Private Sector Studies for Sustainable Development, Mexico)
CPLC	Carbon Pricing Leadership Coalition
ETS	Emissions trading system
EU	European Union
G20	Group of Twenty
GIZ	Gesellschaft für Internationale Zusammenarbeit
ICAP	International Climate Action Partnership
MRV	Monitoring, reporting, and validation
MONRE	Ministry of Natural Resources and Environment (Vietnam)
NDC	Nationally Determined Contribution
NGO	Non-governmental organization
OECD	Organisation for Economic Co-operation and Development
PLN	Perusahaan Listrik Negara (State Electricity Company, Indonesia)
PMI	Partnership for Market Implementation
PMR	Partnership for Market Readiness
REDD+	Reducing Emissions from Deforestation and Forest Degradation
SEMARNAT	Secretariat for Environment and Natural Resources (Mexico)
UK	United Kingdom
UN	United Nations

Foreword

Carbon pricing is one of the most powerful tools available to policymakers to help decarbonize economies. Yet, only a quarter of global emissions are currently covered by carbon pricing instruments, and both coverage and price levels remain too low.

Unlocking the potential of carbon pricing in reducing emissions requires not only setting a clear policy direction but also overcoming political economy challenges—often a delicate balancing of local concerns, industry interests, institutional capacities, and the prevailing political landscape.

There is now a wealth of implementation experience across diverse jurisdictions that demonstrate how potential political challenges particular to developing countries—including possible distributional impacts on vulnerable groups—can be overcome through strategic actions and policy design.

No one size fits all when it comes to carbon pricing, but all successful carbon pricing systems, besides working out how to manage any potential adverse economic and social impacts, have a few attributes in common:

- **Broadening ownership:** carbon pricing policies with a broad and strong support base across diverse sectors of the economy are both politically more acceptable and stable and can be sustained and ambition raised even as administrations change.
- **Stakeholder dialogue:** meaningful engagement with stakeholders, that seeks to integrate feedback from various affected groups often yield a robustly designed policy package.
- **Policy champions:** While not all successful carbon pricing must have a policy champion, when available, these champions can be effective communicators, and can keep carbon pricing center stage even as priorities change. Champions in government are often the most powerful.

- **Windows of opportunity:** once the case of carbon pricing has been established, there is usually not a set time to adopt carbon pricing policy; countries have often had to take advantage of windows of opportunity, and these can arise even in times of economic crisis.
- **Policy ecosystem:** complementary policies and actions improve feasibility of carbon pricing by helping put in place supporting systems. The associated ecosystem of policies if well-aligned with carbon pricing can help ensure its effectiveness.
- **Policy iteration:** pilot phases provide information that enables improvement and refinement prior to launch but are only the start. Successful carbon pricing systems continuously evaluate performance against objectives to improve, including through adjustment in scope, coverage, and ambition.
- **Building confidence:** regulated entities often encounter difficulty coping with new regulation but authorities who act decisively to support those entities, including through communication, capacity building, or punitive measures for non-compliance build trust and confidence in the system.

This report discusses these themes and more, and the strategies used to achieve them using several developing country case studies. Written and disseminated as part of the World Bank's Partnership for Market Implementation's global knowledge program, "Balancing Act: the pursuit of Ambitious Carbon Pricing in Developing Countries" is our effort to help democratize knowledge that has been gained on the political economy of carbon pricing. Our intention is that report is of use to policymakers and their advisors around the developing world, seeking meaningful insights to help advance their own carbon pricing initiatives.

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Preface

Carbon pricing, especially if adopted as part of a comprehensive policy mix can be a powerful instrument for governments to incentivize cuts in carbon emissions while at the same time realizing broader economic aspirations. There are substantial political challenges that governments must confront in the adoption of carbon pricing, however, and these often affect how carbon pricing programs are designed, put into action, and sustained, as well as the impact these policies ultimately have on emissions reductions. The political hurdles associated with carbon pricing include the need to form alliances, overcoming resistance from businesses and communities, communicating, and collaborating with regulated entities, international coordination, and maintaining or increasing ambition.

This report provides practical insights into the political economy challenges and opportunities for advancing carbon pricing, drawing on the experiences of select countries, including those in the World Bank's Partnership for Market Implementation (PMI). Such countries often face different socioeconomic, political, and institutional environments than high-income economies. The review combines findings from academic literature in economics and political science, interviews with stakeholders, and an original survey of carbon pricing experts and policymakers in developing countries, to extract meaningful insights into how policymakers navigate political economy challenges to promote carbon pricing in developing countries. The report does not deal with the adoption of the broader set of climate policies that may also support mitigation.

The premise of this report is that carbon pricing can be an effective and cost-effective instrument, one that has increasingly attracted government interest as a key part of the climate policy toolkit. The target audience for this report is national and subnational policymakers and other interested stakeholders seeking practical insights on real-world approaches that have worked or failed when advancing carbon pricing. The report does not prescribe best practices or cover every possible circumstance. Instead, by examining current practices at each stage of carbon pricing development, it aims to inform and assist in efforts to implement carbon pricing.



Five questions for navigating the political economy of carbon pricing



1.

What are the benefits and risks of pursuing carbon pricing in my context?



2.

How do I build a political coalition in support of carbon pricing?



3.

How do I improve the political feasibility of pricing carbon?



4.

How to ensure effective implementation of carbon pricing policy?



5.

How do I strengthen and consolidate carbon pricing over time?



QUESTION 1:

What are the benefits and risks of pursuing carbon pricing in my context?

Carbon pricing, administered via a carbon tax or emission trading system, can enable countries to steer their economies onto climate-compatible trajectories and away from carbon-intensive development models that are increasingly losing their economic appeal and political viability. Carbon pricing is consistent with the polluter-pays-principle, a compelling approach to accounting for the damage caused by private carbon pollution to society. When implemented as part of a broader policy mix that also addresses non-price barriers, related market failures, and distributive impacts, it can be especially powerful for promoting low-carbon growth.

All countries, including those with relatively low total or per capita emissions, can also leverage carbon pricing to achieve broader economic objectives including as an opportunity to undertake broader fiscal reform and pursue comprehensive environmental and climate policies. Carbon

pricing can help contribute towards further catalyzing low carbon innovation and spawning low-carbon industries. Additionally, because of its revenue collection potential, it is often an avenue to shore up government revenues and support expenditures without resorting to distortionary policies. Carbon pricing is now also seen as a means of soft diplomacy and gaining favor with trading partners who may have carbon pricing policies of their own.

In advancing carbon pricing, policymakers must contend with several risks. These include resistance from influential carbon polluters, unfavorable impacts on vulnerable communities—often manifested through higher energy and product prices, possible short-term losses in economic competitiveness due to emissions leakage, accusations of favoring climate elites, potential revenue loss from carbon-heavy industries, and the risk of adopting an ineffectual policy.



QUESTION 2:

How do I build a political coalition in support of carbon pricing?

Mobilizing a political coalition to support carbon pricing takes significant effort. While supporters in government are necessary, they are insufficient for moving carbon pricing onto the policy agenda. It is, therefore, crucial that carbon pricing advocates engage and facilitate dialogue with various stakeholders early. Partners need to be found from other corners of society: often private companies with low-carbon technologies and products, supporters of complementary mitigation policies, communities experiencing the negative effects of climate change or fossil fuel use, businesses and industries that support a predictable carbon pricing system over piecemeal regulation, environmental organizations and communities, international partners, sectors that generate offsets, and of course the public at large. In developing countries, international organizations have and can also play an important role in convening and providing technical support to carbon pricing coalitions in the initial stages.

Clearly communicating benefits as well as being transparent about costs can win supporters for carbon pricing. Using carbon revenues to provide tax rebates, fund public services, or invest in clean energy can draw

supporters. Highlighting co-benefits of carbon pricing, such as improving public health and safety, energy security, and progress on environmental issues (e.g., biodiversity conservation), can help build support for carbon pricing. Stressing cooperation, economic opportunities, and reputation/standing with international partners may also appeal to some supporters. The business community often join the support coalition to get ahead of regulation they perceive as inevitable, reduce regulatory uncertainty, or secure compensation that helps their sector adjust to carbon pricing. Notwithstanding, policy advocates need to also communicate costs and facilitate dialogue to address potential concerns including through design accommodations.

Policy actions such as first implementing supporting climate policies can also draw support, because carbon pricing while crucial, it alone is insufficient to drive deep decarbonization. Carbon pricing policy that builds upon or is integrated into existing policy frameworks often provide a foundation to build broader support. In the absence of such policy frameworks, building support can mean following a sequenced approach to adoption of carbon pricing policy.



QUESTION 3:

How do I improve the political feasibility of pricing carbon?

Overcoming the resistance of regulated firms—driven by concerns about international competitiveness and the cost of compliance—is especially important. Policymakers often address these fears, including over energy and compliance costs, by combining an initially weak carbon price with plans to increase stringency over time. This usually includes setting low tax rates, establishing high caps, targeting only select sectors, providing generous allowances, exemptions, or offset credits, and deploying countervailing subsidies. All these measures lessen carbon pricing's efficacy, however. And while policymakers often view such accommodations as temporary to raise acceptance and help put systems in place, efforts to remove them later often meet substantial resistance from affected groups.

Other options exist beyond lowering the policy's ambition. Policymakers may choose to adopt complementary actions and policies. Actions and policies prior to carbon pricing can include (legally binding) commitments, creation of supporting institutions and processes, investment policies to support the proliferation of green technologies or procurement policies for the phase out of carbon intensive technologies, and performance/portfolio energy standards that may be capable of addressing a broader set of market failures or barriers. As part of the carbon pricing package, carbon tax revenues can be used to mitigate carbon pricing's social and economic impact, especially for

vulnerable populations, without eliminating the incentive to decarbonize. To address competitiveness and leakage concerns, policymakers may adopt carbon border adjustment mechanisms, carbon tax rebates on exports, or benchmark the provision of free allowances to reward the most carbon-efficient firms.

In some contexts, carbon pricing supporters have enough political power and momentum that it may be possible to rally public support merely through campaigning, communication, dialogue, and feedback to address legitimate design and implementation concerns. If supporters control the mechanisms of government, they can also use legislative and regulatory opportunities to advance their goals. For example, some governments embed carbon pricing in a more comprehensive reform package (e.g., a broader tax reform), in other situations advancing carbon pricing as a standalone legislation may be the best recourse, while in others amending existing regulation is best suited. In other situations, leveraging executive orders and agency regulations may prove successful but often do not result in enduring policies. When faced with national roadblocks, supporters may also find that shifting focus to sub-national or international efforts may provide better subsequent opportunities than at the national level.



QUESTION 4:

How to ensure effective implementation of carbon pricing policy?

Comprehensive and clear communication of market participants' responsibilities and legal requirements is key for ensuring a smooth rollout of carbon pricing. Such communication efforts help ensure that regulated entities know their obligations, government entities coordinate among themselves, and the broader group of stakeholders and the public are kept informed. Early stakeholder involvement, both in the development of carbon pricing policies and pilot phases, benefits subsequent implementation since regulators can iterate rules and guidance in dialogue with regulated entities. Precise rules for implementing and monitoring carbon pricing make the process transparent and build trust among affected groups. This trust is critical in shaping how views toward carbon pricing, especially those of regulated entities, evolve after the introduction of the carbon pricing policy. Without trust, initially supportive stakeholders and the public may lose confidence in the policy. With it, in contrast, early resistance may soften, especially if early concerns are proven wrong.

Credible and transparent governance and enforcement are crucial for effective carbon pricing, as is building the right capacity within the regulator and regulated entities, something that can be a challenge to accomplish in low-capacity contexts. Establishing MRV procedures for traditional air pollutants before adopting carbon pricing can build regulators' confidence and nurture a culture of compliance among regulated entities. Carbon pricing mechanisms that build on pre-existing frameworks tend to result in a smoother rollout, such as building carbon pricing upon existing tax bases for fuel and excise taxes prior to an economy-wide rollout. Relatedly, starting with simplified processes, such as default values for emissions instead of measuring actual emissions, can help address initial capacity challenges and thereby facilitate compliance. Importantly, regulators need to settle on the instrument that suits the domestic and capacity context best.



QUESTION 5:

How do I strengthen and consolidate carbon pricing over time?

Preparing for future learning and raising ambition should be a part of carbon pricing strategy from the beginning. This particularly applies when governments start with carbon pricing policies that are too weak to induce meaningful emissions reductions. Political turnover, volatile socioeconomic and market conditions, and ongoing efforts by opponents can be barriers to making the necessary change. Mechanisms to overcome such barriers include rules that automatically lock in policy changes, or a reevaluation process conducted at regular intervals to streamline the process of ratcheting up ambition. This process can be coupled with data collection and analytics to continually assess and improve the effectiveness of carbon pricing.

It is helpful to make an effort from the start to develop a sound understanding of policy interactions in the specific country context and to identify complementary policy measures that support carbon pricing. Measures to maintain and expand support for carbon pricing over time include increasing subsidies and policy support to low-carbon energy sources and technologies, providing economic and financial incentives for firms to decarbonize their supply chains, reducing fossil fuel subsidies, expanding the scope and coverage of carbon pricing, integrating carbon pricing within the broader climate policies and mitigation objectives, and international cooperation including on linkage with other carbon pricing mechanisms. Policymakers can strategically supplement these efforts by creating a systematic process of gathering and acting on feedback from stakeholders during the implementation process.





Executive summary



Carbon pricing carries political risks...

Widely seen as one of the toughest climate policies to adopt, carbon pricing often faces opposition from influential polluters and communities, as it elicits concerns about economic competitiveness and fairness especially for vulnerable groups. Since carbon pricing accentuates the individual costs of compliance vis-à-vis the collective benefits from emissions reductions, it can be a challenging policy to champion. Implementing a carbon price also involves complex administrative tasks, which often strain both regulators and regulated parties, possibly leading to delays, distrust, and potentially policy weakening or reversal. Efforts to introduce or expand carbon pricing are also subject to being portrayed by critics as a partisan or elitist issue.

...but also rewards exist

With proactive and adaptive policymaking, carbon pricing can result in political and policy success. To advance carbon pricing, politicians often strengthen their position by emphasizing the polluter pays principle, i.e., the idea that polluters should bear the costs of their own pollution; responding to public demand for climate action; promoting the growth of low-carbon industries and green jobs; and generating revenue for public and social investments. Governments also can use carbon pricing to demonstrate their commitment to international and domestic climate goals, assert their leadership on policy, secure access to important export markets, and attract foreign investment.



Policy champions play a crucial role in driving momentum for carbon pricing

By effectively communicating the importance of carbon pricing, policy champions are key to successfully adopting and implementing carbon pricing. Policy champions can emerge from any part of society, including the private sector and intergovernmental organizations, but champions in government positions can be particularly impactful. Indeed, carbon pricing initiatives are most successful when influential figures such as presidents and ministers actively rally support and endorse the policy. Well-placed policy supporters are valuable, but they are insufficient. Meaningful engagement with stakeholders across ministries, the private sector, and civil society, including those who oppose carbon pricing is also key. Governments that pursue carbon pricing without extensive consultation often struggle to gain acceptance for the policy or maintain its legitimacy and effectiveness in the long run, something further discussed in **Chapter 1** and **Chapter 5**.



Narratives centered around jobs, low-carbon innovation, and investment attract broad support for carbon pricing

Policy champions can emphasize that implementing carbon pricing will help open new economic opportunities including through incentivizing low-carbon innovation and attracting investment in low-carbon technologies. Redirecting carbon tax revenue towards bolstering the domestic low-carbon energy sector and environmental causes can be instrumental for also building strong coalitions in support of carbon pricing and ensuring sustained backing. Additionally, highlighting external pressures stemming from trading partners, participation in climate alliances, and engagement with international organizations can help positively shape the domestic discourse on carbon policy. The prospect of gaining exemptions from initiatives like the European Union's Carbon Border Adjustment Mechanism (CBAM), for instance, has motivated many countries to push forward with their own carbon pricing efforts. **Chapter 2** presents examples of international influences and **Chapter 5** discusses how to exploit economic opportunities to help advance carbon pricing.



Combining carbon pricing with other policy reforms can help mitigate opposition

This involves policymakers leveraging the synergies between policies to on the one hand ensure that the carbon pricing policy package also addresses distributional impacts, and on the other hand, is supported by an ensemble of policies that address both market failures and barriers that ordinarily limit its efficacy. Safeguards for industries vulnerable to international competition and initiatives supporting a fair transition for affected workers and poor and vulnerable populations can alleviate concerns and enhance the overall benefits of carbon pricing. Many governments choose to implement complementary policies initially to pave the way for carbon pricing later. Such a bundling strategy can also encompass a broader set of tax reforms, legislation, and institutions to address mitigation and climate change more broadly. These initiatives can serve as opportunities to attract the attention and support of key decision-makers in the private sector and government departments. For further details, refer to **Chapter 3**.



Policymakers decide whether to use an Emission Trading System (ETS) or a carbon tax based on their political situation, priorities, and past experiences

ETSs and carbon taxes can be made to operate comparably, but policymakers tend to view them differently. Many see taxes as simpler, but harder to gain political support for. ETSs, on the other hand, are seen as more complex but less likely to trigger opposition. Carbon taxes are often favored by policymakers in smaller economies with transparent and effective tax systems, where existing taxes (e.g., fuel and excise) can be readily updated. Policymakers choose ETSs when they have relatively large and well-functioning economies, prefer to avoid legal/political risks of tax reform, value providing firms with flexibility in choosing the means to comply, or seek to attract foreign investment through straightforward links to international carbon markets. Past experiences with compliance and voluntary carbon markets, as well as other market-based policies, also influence whether policymakers choose an ETS or a carbon tax. Both options are used worldwide. For more information, refer to **Chapter 3**.



Policymakers have often balanced technical effectiveness against political feasibility, but this does not have to be the case.

Policymakers typically adjust policy designs to address opposition by incorporating features like low prices, exemptions, and pilot phases. However, these adjustments may compromise the policy's ability to effectively reduce long-term carbon emissions (for more see **Chapter 3**). Carbon pricing schemes sometimes only price certain sources of emissions, offer free allowances, provide exemptions that weaken the carbon pricing signal, and permit the use of offsets, some of which may not be of high quality. To facilitate adoption, it is also common to start with a modest carbon pricing signal and increase it gradually. These approaches are often the outcome of negotiations with stakeholders and contribute to minimizing resistance from both regulated entities and the public concerned about the costs of decarbonization. While such practices may also build administrative capacity, they could also stall more ambitious climate action (see **Chapter 3** and **Chapter 5**).



Detailed rules and their clear communication help meet implementation challenges

Implementing a carbon pricing policy presents significant challenges for governments and regulated entities. Capacity limitations in staffing, finances, and organization increase the risk of inefficiency, mismanagement, and overall poor policy performance. These issues can erode political support for carbon pricing. To address these challenges, policymakers often take several steps. Firstly, they focus on clearly communicating the responsibilities of market participants and regulators. Secondly, they establish detailed and unambiguous implementation rules. Thirdly, they simplify procedures to streamline the compliance process. Lastly, where possible they repurpose and extend existing institutional structures instead of creating entirely new ones. These strategies help anticipate and mitigate implementation challenges associated with carbon pricing policies (for more see [Chapter 4](#)).



Inclusive deliberation and gradual implementation help pinpoint issues and establish trust.

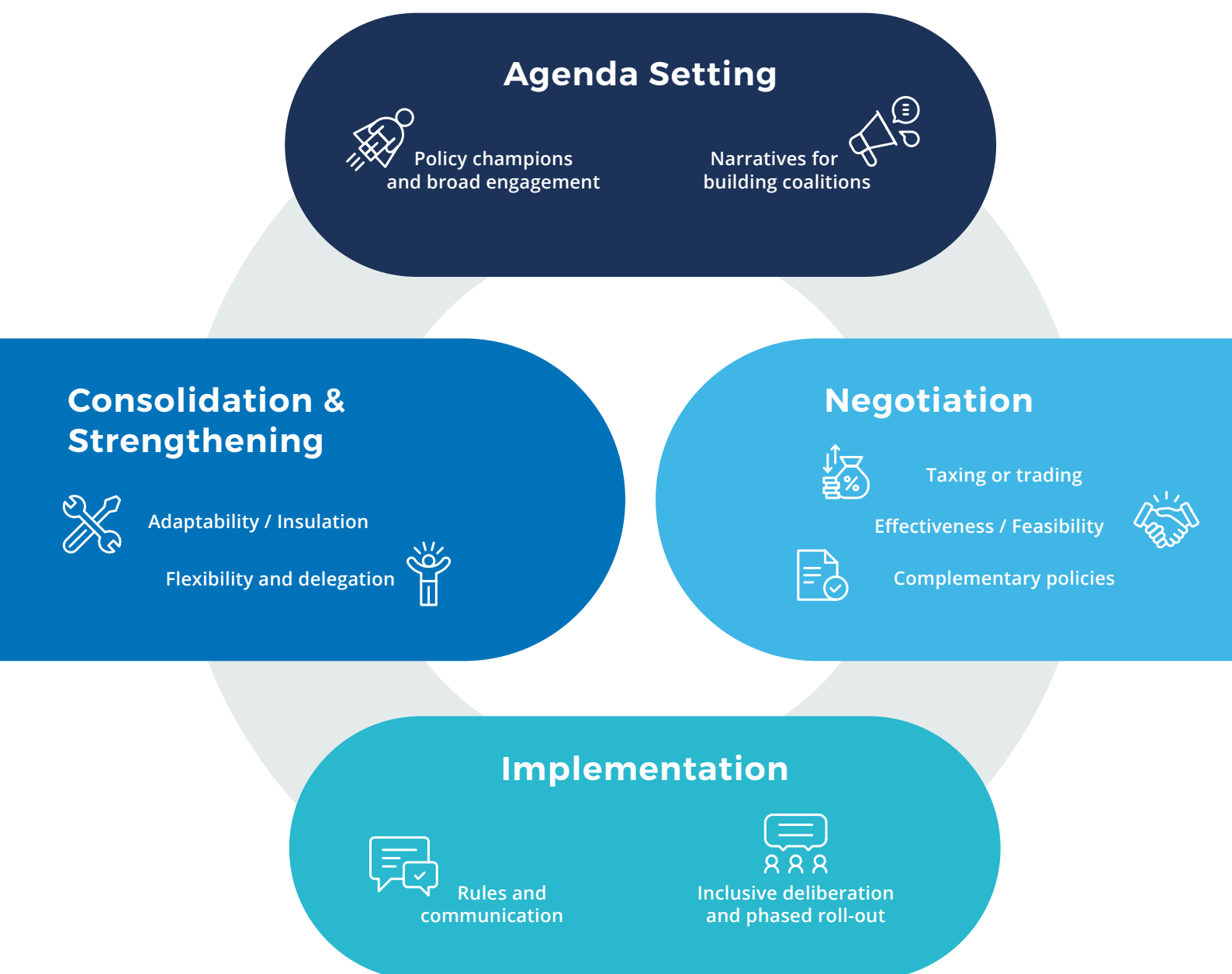
Early involvement of stakeholders and phased adoption help identify and tackle implementation challenges while fostering trust. Taking steps to develop monitoring systems before enforcement begins can aid implementation and instill confidence in the policy among regulated parties.

Although overarching implementation principles like proactive planning and transparent decision-making apply universally, strategies should adapt to local circumstances. For instance, policymakers might tailor enforcement methods for private versus state-owned enterprises, considering the unique dynamics at play (see [Chapter 4](#) for further details).



Effective carbon prices balance adaptability and predictability.

For carbon pricing policies to achieve meaningful emissions reductions, they must both push regulated entities to reduce their pollution and sustain that pressure over time. Setting and communicating a long-term carbon pricing trajectory helps provide firms with the certainty to make costly investments toward decarbonization. Policymakers can provide for unanticipated developments by designing flexibility mechanisms, such as a regular review-and-ratchet process. The credibility of a policy trajectory depends on its predictability even amidst transient political events, something that can be strengthened by delegating authority to technical bodies and by designing rules that automatically adjust prices to relevant conditions (for more, see [Chapter 5](#)).



1.

Introduction

Who should read this report?

The primary audience of this report is government policymakers and carbon pricing stakeholders, with interest in the experiences of countries in confronting political economy to advance carbon pricing. The report gives considerable attention to carbon pricing experiences in developing countries. It contains insights relevant both to countries that have yet to adopt a carbon price and those seeking to raise ambition.

What does this report do?

This report captures and distills firsthand experiences of carbon pricing practitioners (**Box 1.1**). Variation in history, capacity, and institutional arrangements create distinctive local contexts and thus, no universally applicable best practice recommendations are presented. Rather, the report describes how stakeholders have navigated political economy obstacles to pricing carbon, such that other practitioners can extract insights

from successful (and less successful) experiences and make informed choices on how they might advance carbon pricing in their own contexts.¹ Throughout this report, “carbon pricing” refers to the policy instrument, whereas a “carbon price” refers to the price signal created by the policy. The report does not address the broader issue of the political of climate policies something handled in a sister World Bank publication¹⁰⁴.

Box 1.1

Data sources for this practice review

The carbon pricing experiences described in here draw from an extensive review of more than 180 practitioner publications, academic studies in political science and economics, as well as 49 in-depth interviews with developing country carbon pricing stakeholders, professionals, and policy champions. This report additionally draws on the results of an original survey of 107 carbon pricing experts recruited from the stakeholder networks of the Partnership

for Market Implementation (PMI) and the International Climate Action Partnership (ICAP). Experts surveyed have been directly involved in the development of carbon pricing in more than 28 developing countries. The report thus provides a broad perspective on the political economy of carbon pricing. Further details, including a list of respondents who wished to be personally acknowledged for their contribution to the report, can be found in the Appendix.

What motivates policymakers to pursue carbon pricing?

Policymakers seek to enact carbon pricing for its environmental, economic, and political benefits. Environmentally, carbon pricing helps account for the social cost of GHG emissions. Economically, it offers more than just a cost-effective instrument.² Across a variety of studies, evidence indicates well-designed carbon pricing policies can reduce inequality,³ broaden formal employment,⁴ increase foreign direct investment,⁵ and, even at relatively moderate prices stimulate renewable energy markets.⁶ Countries may also implement carbon pricing policies to receive exemptions from other jurisdictions’ carbon border policies.ⁱ Politically, politicians can take credit for making polluters pay, meeting rising public demand for

climate action,⁷ and demonstrating credibility and leadership on the international stage. Moreover, carbon pricing may generate substantial revenue, which politicians can reinvest to advance their broader political and economic agenda.⁸

Box 1.2 presents a snapshot of how carbon pricing experts (demographic information of respondents is shared in Appendix B) interviewed for this report view the strengths and weaknesses of carbon pricing. In general, they view carbon pricing favorably, see it is a politically challenging policy to implement, and regard carbon prices in their own jurisdictions to be somewhat ambitious.

i For example, part of the rationale for carbon pricing described in Türkiye’s Medium Term Programme (2023–2025) is to reduce charges from the EU’s CBAM.

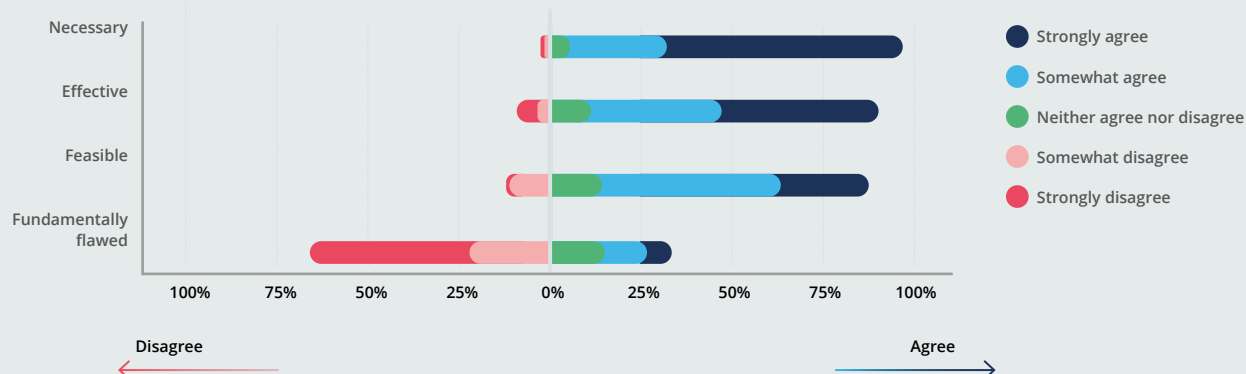
Box 1.2

What do carbon pricing experts interviewed for this report think about carbon pricing?

1.

Carbon pricing has a crucial role in decarbonization

- Large majorities of experts believe carbon pricing is necessary for developing countries to transition to a low-carbon economy (92%) and think the policy can do so effectively (80%).
- They express caution about the political prospects of carbon pricing in developing countries: 24% “strongly agree” and 50% “somewhat agree” that carbon pricing is feasible in their country.
- Very few (7%) believe that carbon pricing is fundamentally flawed.



Question: “For your country to transition to a low-carbon economy, to what extent do you agree that carbon pricing is...” (104 responses). Source: Original expert survey

2.

Carbon pricing is seen as more effective but less feasible than other climate policiesⁱⁱ

- Experts believe carbon pricing is more effective in reducing carbon emissions than other mitigation policies including mandates, regulations, and spending.
- They perceive carbon pricing as less politically feasible than regulations (e.g., efficiency standards) and spending (e.g., subsidies for renewable energy), and at a similar level as mandates (e.g., fossil fuel phase-outs).



Question: “Thinking generally, rank each of the following in terms of political feasibility/technical effectiveness” (112 responses). Source: Original expert survey

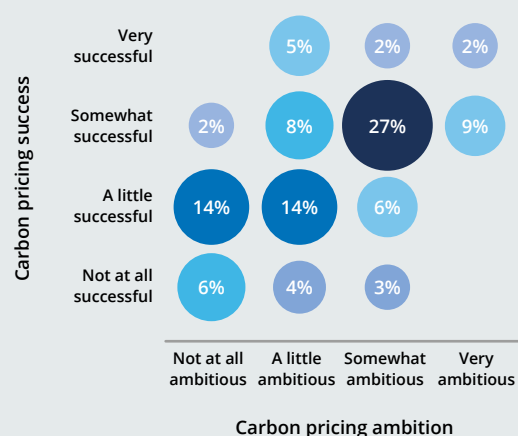
ii This result reflects expert perceptions, rather than more systematic observation. To generate more robust evidence on this question, the OECD launched the Inclusive Forum on Carbon Mitigation Approaches in January 2023 to take stock of and consider the effectiveness of different carbon mitigation approaches: <https://www.oecd.org/climate-change/inclusive-forum-on-carbon-mitigation-approaches/>

3.

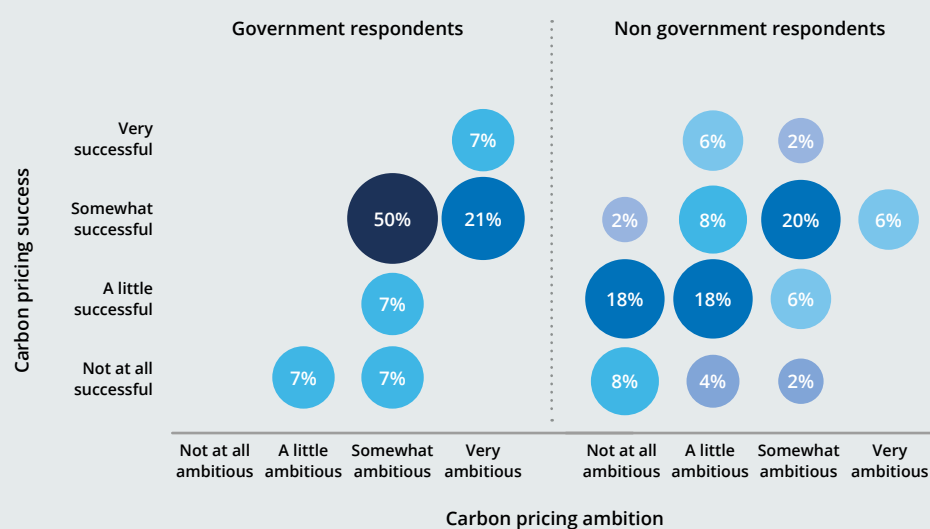
Experts view carbon prices in developing countries to be modestly successful and ambitious, especially by those currently in government positions

- On average, experts view carbon pricing policies in developing countries to be at least “somewhat” successful (53%) and “somewhat” ambitious (49%).
- Experts currently working in government had a far more positive view of their countries’ carbon prices (78% at least “somewhat” successful and 92% at least “somewhat” ambitious).

All responses



By Position



Question: “How ambitious is the carbon pricing policy in your country” “How successful has the carbon pricing policy in your country been so far?” (64 responses). **Source:** Original expert survey

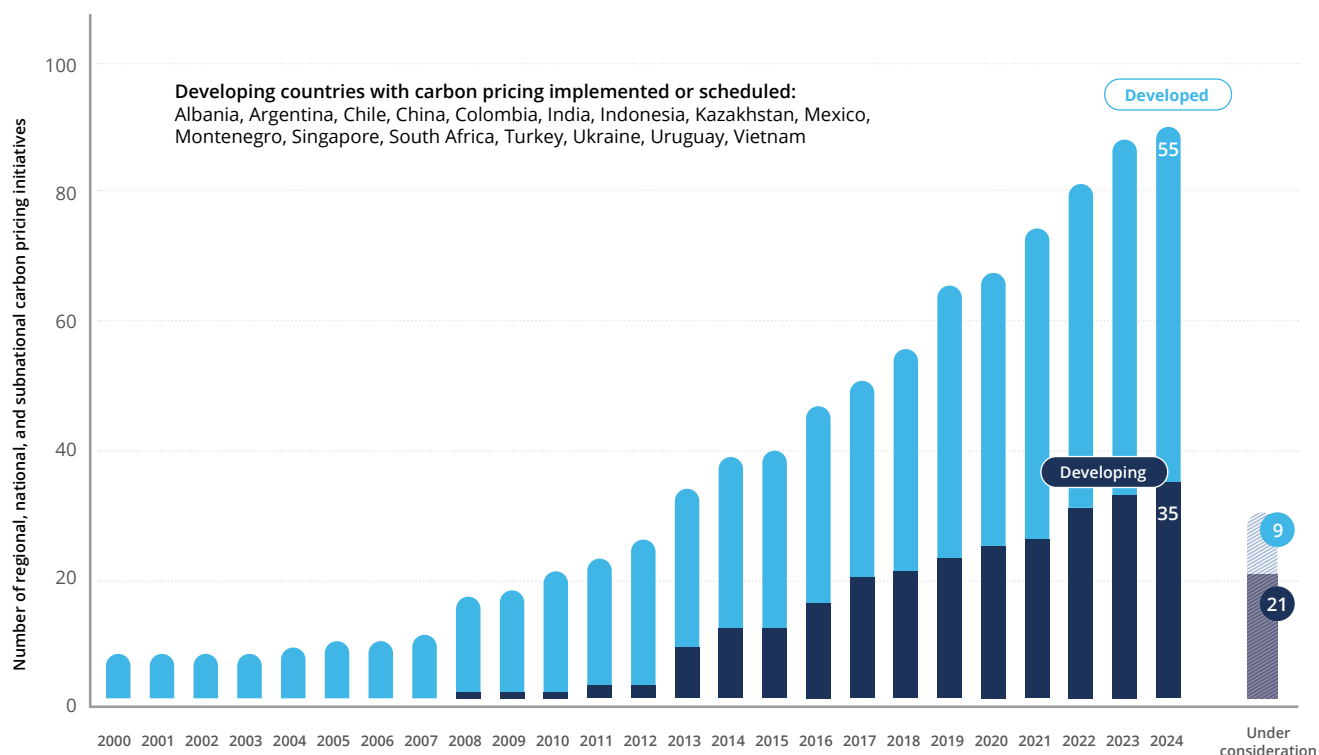
Why study the carbon pricing experiences of developing countries?

The efforts of developing and developed countries to reduce carbon emissions are critical for meeting the Paris climate goals. Yet, most countries have increased their carbon emissions over the past two decades.⁹ To help reverse this trend, multiple countries are considering carbon pricing as a key component of their climate action plans alongside other appropriate climate policies.

Figure 1.1 shows that following Ukraine's adoption of a carbon tax in 2011, a further 34 new carbon pricing initiatives have been enacted in eleven developing countries. Currently, there are 21 carbon pricing policies in active preparation in developing countries, 12 more than in developed countries. These developments suggests that a phase of more rapid and widespread adoption of carbon pricing in both developing and developed countries is underway.

FIGURE 1.1

Global adoption of carbon pricing policies by economic development



Carbon pricing policies adopted since 2000 and carbon pricing policies under consideration. "Developed" and "Developing" country groupings reflect International Monetary Fund classifications as of April 2023. Carbon pricing policy data from State and Trends of Carbon Pricing 2023. Note that some countries have adopted multiple national or subnational carbon pricing instruments.

Learning from the experiences of other countries can help accelerate the diffusion of carbon pricing among developing countries.¹⁰ However, it is important to tailor knowledge-sharing resources and initiatives to the needs of developing countries. Policymakers in developing countries typically operate in the context of steeper emissions declines, less awareness and public support for climate action, lower levels of energy access, more pressing needs than emissions reductions, and constrained human, financial, and institutional capacity. Hitherto, knowledge-sharing for developing countries has largely focused on the technical aspects of carbon pricing design

and implementation. And while several important resources examine the political economy of carbon pricing, these give relatively little attention to lower-capacity contexts.¹¹

Accordingly, this report aims to help catalyze peer learning on the political challenges of carbon pricing within developing countries. For many of these countries, their experiences are still nascent and developing. Therefore, the report mostly features country experiences at the early stages of the carbon pricing journey than at later more advanced stages.

What does the “political economy of carbon pricing” mean?

The political economy of carbon pricing describes how political and economic forces shape the adoption and subsequent effectiveness of carbon pricing policies. Key issues of interest here include the political challenges of implementing carbon pricing policies; economic implications of carbon pricing for businesses and households; and the feedback from the economic, social, and political arena into the choice and design of carbon pricing policies.

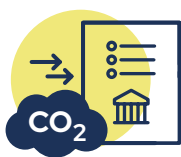
This report explores how policymakers navigate political economy of carbon pricing, with a particular focus on the adoption of direct carbon pricing via carbon taxes and emissions trading systems. It covers not only the initial decision to adopt, design, and update a carbon price but

also decisions in the policy’s administration and communication that affect its base of support. These dynamics reflect the challenges of regulating a previously unregulated pollutant with salient localized/personal compliance costs, global and delayed benefits from emissions reductions, and the potential for free-riding incentives that undermine momentum for ambitious policy.

Although each carbon pricing policy and context presents its own unique political economy, they tend to share similar stakeholder interests, ideas driving implementation, and institutions. These commonalities make it worthwhile to explore and compare the political economy of carbon pricing across the various cases highlighted in this report.

What are the key political economy challenges for pricing carbon?

This report is structured around four key challenges of navigating the political economy of carbon pricing, drawing on problem-driven approaches to political economy analysis.¹²



CHALLENGE 1:

Moving carbon pricing onto the policy agenda

Explicit carbon pricing has historically been slow to gain political traction, especially in developing countries. This is due to factors like committed opposition by powerful polluters, the low salience of climate change amid competing priorities, regressive impacts of carbon taxation on households, the relative absence of carbon pricing in peer countries, and a deficit of political will. Institutional inertia, incentives favoring short-term decision-making, and political, economic, and fiscal reliance on carbon revenues drive this lack of political will.¹³ Efforts to convert carbon pricing to an action item on the policy agenda in developing countries tend to be most successful when advocates identify policy champions, build a broad and enduring support coalition, and act decisively to capitalize on a window of opportunity (for more, see **Chapter 2**).



CHALLENGE 2:

Negotiating an ambitious and politically feasible carbon pricing policy

Even after carbon pricing enters the policy agenda, politicians may fail to adopt the proposal into law. Failure at this stage often stems from efforts by carbon pricing skeptics, most commonly incumbent polluters, to shape public opinion and pressure legislators to resist carbon pricing proposals. This pressure manifests as misleading narratives that frame carbon pricing as an elitist concern and present objections based on freeriding risks, historical climate injustice, limited capacity to meet regulatory requirements, and fears of lost international competitiveness, growth, and jobs. Carbon pricing supporters can ease these concerns through strategic policy design, information and activist campaigns, and complementary non-pricing policies. Following this, elections, and procedural maneuvers, such as packaging carbon pricing with other large or popular reforms, are more likely to overcome residual opposition (for more, see **Chapter 3**).

**CHALLENGE 3:****Achieving successful implementation of carbon pricing**

Carbon pricing only spurs decarbonization if regulated entities understand their legal obligations, respond to price signals (current and projected), and believe regulators fairly and consistently enforce compliance. This can be difficult to achieve, especially in contexts with limited time and capacity to develop and communicate detailed rules, inexperience and underinvestment in data management, provisions that provide preferential treatment to certain sectors, and ad-hoc and opaque market governance, oversight, and enforcement. To overcome such challenges, governments can, among other measures, introduce simplified monitoring and reporting requirements, formulate a targeted communication and coordination strategy, and improve transparency in government decision-making. Multiple countries have had success with rolling out carbon pricing across the economy and conducting enforcement in phases (for more, see [Chapter 4](#)).

**CHALLENGE 4:****Consolidating and strengthening carbon pricing**

Most carbon pricing policies do not begin at levels that will meaningfully affect emissions trajectories. Thus, they must raise ambition over time. Doing so can be challenging for policymakers, as compromises made to facilitate adoption, such as low prices, large exemptions, and free allowances, often prove sticky. Carbon pricing is also vulnerable to retrenchment and reversal when priorities change following political turnover, regulated entities and consumers experience more salient and rising costs, and economic shocks pressure politicians to artificially lower prices. Policymakers can take steps to accommodate and shield carbon pricing from transient turbulence, via the use of pre-agreed ambition corridors, and delegation of oversight to politically insulated institutions. Investment in building capacity and trust, support for low-carbon industries and growth, and salient co-benefits are key for ensuring the policy's endurance over time (for more, see [Chapter 5](#)).

A large white number 2 is centered on a dark blue background. The background of the entire image is a photograph of a modern glass skyscraper with a grid-like window pattern. The building reflects the sky and surrounding structures. In the lower-left corner, a portion of an older brick building with a cylindrical water tower on its roof is visible. A dark blue semi-circular shape overlaps the bottom of the number 2 and the top of the text area.

2

**Moving carbon pricing
onto the policy agenda**

Key Messages

- Supporters of carbon pricing are typically motivated by environmental impacts of carbon pollution, opportunities for and benefits of low-carbon growth, complying with international climate commitments, revenue generation, and fiscal consolidation. Opponents, in contrast, often cite higher energy costs, loss of revenue and competitiveness, job losses, and complexity of implementing carbon pricing.
- It takes significant effort to mobilize the large coalition of supporters including from the private sector, needed to place carbon pricing on the agenda. Stakeholders decide to support or oppose carbon pricing based on values and expectations about the political and economic consequences of carbon pricing.
- Policy champions build coalitions for carbon pricing through persuasive appeals (e.g., emphasizing health, economic, and environmental co-benefits), domestic and international pressure (e.g., carbon border taxes), and adjustments to the policy's benefits and costs for key stakeholders (e.g., tying pricing to low-carbon technology subsidies).
- Once supporters are identified and mobilized, carbon pricing can enter the policy agenda when a window of opportunity opens. These opportunities include electoral turnover, fiscal crises, broad policy reforms, and international climate events and pressure.

This chapter describes the political, economic, and social actors involved in the early stages when placing carbon pricing on the policy agenda. It identifies the motivations leading to support and opposition of carbon pricing, as well as strategies for mobilizing supporters to create a coalition in favor of this policy intervention. This coalition allows advocates to take advantage of opportunities to generate momentum for pricing carbon.

2.1

Mapping the landscape: Actors and motivations for supporting or opposing carbon pricing

This section provides a brief overview of the key stakeholders relevant to entering carbon pricing onto the policy agenda. It subsequently describes common motivations that lead stakeholders

to support or oppose carbon pricing. Finally, it characterizes perceptions regarding the extent to which different actors act as champions or blockers of carbon pricing in developing countries.

2.1.1 Champions and opponents of carbon pricing

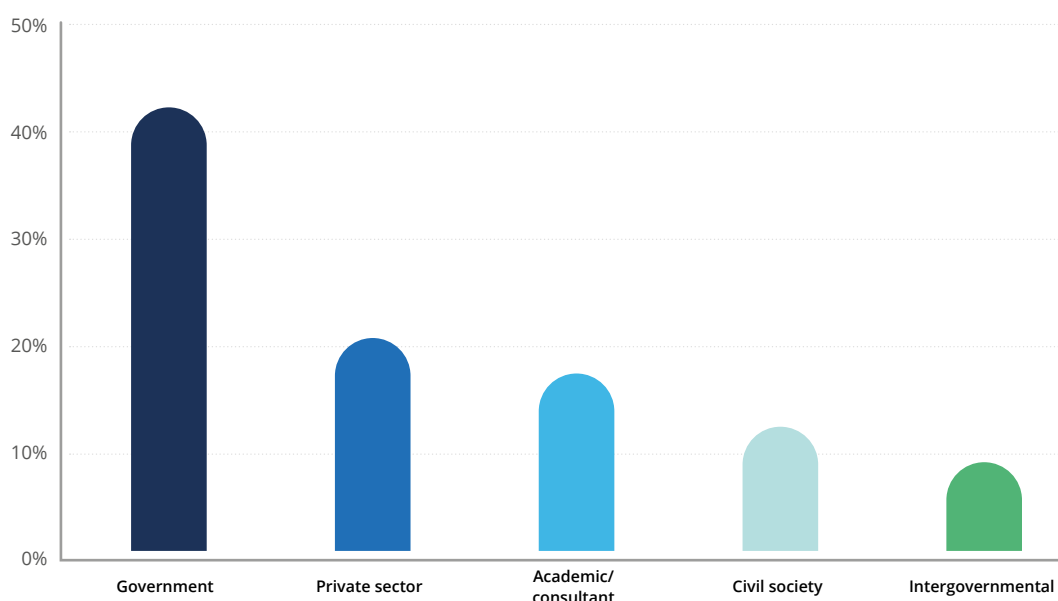
A simplified but instructive perspective for understanding the agenda-setting process for carbon pricing is through the lens of supporters and opponents. Each coalition is often led by a relatively small number of individuals who mobilize and organize stakeholders to achieve a common political goal, either as champions of carbon pricing or as opponents who seek to prevent carbon pricing from entering the policy agenda.

Champions

To mobilize support for carbon pricing, individual or institutional policy entrepreneurs need to publicly champion the idea and commit time and resources toward building a support coalition. A plethora of reasons may motivate these stakeholders, including commitments to environmental protection, economic opportunities, desire to gain international legitimacy and recognition, and fiscal consolidation.

While all types of stakeholders can act as policy champions, experts interviewed for this report referenced one of four types when asked of a specific example of a carbon pricing champion in their country (**Figure 2.4**). The largest group, 42%, identified a champion in government (i.e., a political leader or bureaucrat), 20% chose a person or organization in the private sector, and 17% and 12% selected an academic or member of civil society, respectively. Only 8% of those surveyed identify a carbon pricing champion who works at an intergovernmental organization. Specifically named policy champions include high-level politicians in Indonesia, an Argentine member of parliament, a Mexican business association leader, and a Brazilian professor.

FIGURE 2.1
Policy champions by position



Question: “Sometimes, specific people or organizations play a particularly important role in promoting carbon pricing. Can you think of the name of a person/organization who is a particularly important supporter of carbon pricing in your country? [If yes] Which of the following best describes their position or sector?” (59 responses).

Source: Original expert survey

At the early stages of the policymaking process, it is often easier to find carbon pricing policy champions in civil society and grassroots movements than in government. This is because political leaders and government administrators value concrete outcomes for which they can claim credit, something that is often difficult to achieve at the agenda-setting stage.¹⁴ However, if active supporters can be found in powerful positions, they can be decisive in bringing carbon pricing to the forefront of the political conversation.

Leveraging synergies among different types of carbon pricing champions helps strengthen the momentum for carbon pricing. For example, a consulted policy expert describes a case where an NGO engaged in ongoing research and lobbying efforts for climate policy, in collaboration with a business association representing renewable energy firms, and a university-affiliated partner exploited their organizational complementarities, expertise, and legitimacy to jointly play a central role in their home country's carbon pricing movement. Their activities included participation in a crucial multi-stakeholder commission on the country's energy transition and a carbon pricing presentation to the Senate during discussions on whether to adopt a carbon tax.¹⁵

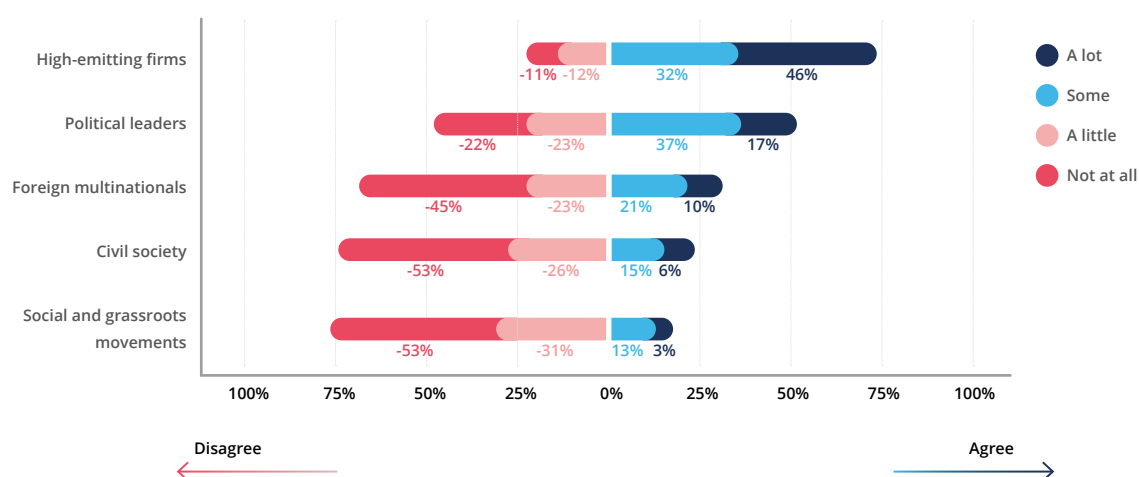
Opponents

Opponents attempt to ensure that carbon pricing remains on the fringes of the political debate. These stakeholders often have the most to lose from the adoption of carbon pricing and include fossil fuel producing regions and producers, and consumers benefitting from cheap or subsidized energy. Among experts, 78% view firms with high carbon emissions as obstacles to ambitious carbon pricing, with nearly half (47%) characterizing them

as a “very” important barrier (**Figure 2.2**). Politicians sometimes also act as carbon pricing opponents, but only 19% of experts see politicians as a “very” important barrier. Politicians are perceived to be barriers due to their electoral mandate or base of support, and due to more pressing economic and energy access needs which render carbon pricing a low action item (for more see **Section 2.1.3**).

FIGURE 2.2

Perceived barriers to ambitious carbon pricing, by actor



*Question: “To what extent have the following posed a barrier to ambitious carbon pricing in your country?” (95 responses).
Source: Original expert survey*

Results are more ambiguous with respect to foreign multinationals. Only 33% of respondents characterized foreign multinationals as opponents of carbon pricing. As discussed further in **Section 2.1.3**, this may stem from their orientation towards low-carbon industries, competitiveness edge over domestic enterprises, ability to influence policy stringency, or simply commitment towards sustainability. Foreign multinationals are

also a diverse group with differing relationships towards carbon.¹⁶ Interview subjects, nonetheless, described several instances of foreign firms working to prevent ambitious carbon pricing in developing countries, including in the Gambia and Indonesia.

CASE STUDY 2.1

Uruguay's mobilization for a stringent but narrow tax



On January 1, 2022, Uruguay adopted one of the highest carbon taxes in the world, at \$137 per ton, with little turbulence or controversy. It redirected revenues to climate-related projects and could have drawn attention to the often-fraught issue of higher energy prices stemming from taxation, yet it faced no real opposition. A key reason for this is that the tax was conceived to make explicit the already high tax on fuels. Additionally, it has relatively constrained ambition.

The “new” tax did not add new impetus to the country's decarbonization trajectory as it was a one-for-one replacement for a portion of existing excise taxes on fuel and electricity. Its narrow scope also means that the tax prices greenhouse gas emissions from fuel and electricity but not those from agriculture, the country's main source of emissions. The ranching and meat industry remains strongly opposed to extending carbon taxation to the agricultural sector. The

policy was primarily envisioned as a response to international trade and investment signals coming from the then prospective European Union CBAM.

The fact that the Ministry of Finance, a politically powerful institution in the Uruguayan government, promoted the policy also facilitated smooth passage. The ministry effectively promoted the idea that the carbon tax would help Uruguay claim international leadership on climate issues, which eased intra-governmental negotiations and attracted additional champions from the private sector. These were mostly renewable energy companies that had benefited from the country's large public investments in wind and hydropower during the 2010s. The public remained largely unengaged. This narrow support coalition achieved the goal of enacting a carbon tax, but also largely explains the limitations of the program.

2.1.2 Key stakeholders in the political economy of carbon pricing

The following list identifies the key stakeholders in the carbon pricing policymaking process.

- Political leader**
 Typically, the most high-profile and consequential stakeholders in the policymaking process, political leaders exercise the authority to enact a carbon pricing policy by either approving a specific carbon pricing design or empowering the executive to create and implement a carbon pricing design. Political leaders include heads of state, heads of government, and members of the legislature. They are typically supported by advisors and political parties.
- Government administrators and ministries.**
 Staff in government institutions are responsible for formulating rules for carbon pricing, communicating with stakeholders, monitoring the behavior of regulated entities, and disseminating information about the policy's performance. Government administrators also contribute to the policy agenda by informing political leaders about emerging issues and opportunities for improvement. Government administrators include ministers and regulators, typically located within the executive branch.¹⁷

Ministries are most influential when their mandate includes climate policy and, crucially, they have the capacity, credibility, and political influence to capture the attention of high-level decisionmakers and clear a political path for carbon pricing.¹⁸ In some cases, ministries of finance may be more important than ministries of the environment. Uruguay's Ministry of Finance initiated a proposal to implement a carbon tax, lending strength to the proposal in subsequent discussions inside the government (**Case Study 2.1**). Similarly, academic experts in Brazil credit leadership by the Finance Ministry for placing carbon pricing on the policy agenda in Brazil, whereas the Ministry of the Environment previously had only limited success.

Not every type of stakeholder takes a highly visible role in carbon pricing policymaking processes, however. Often only a few stakeholders are directly involved at the start of the process, who then strategically bring in others at later stages of the process.

- **Regulated entities.**

Regulated entities are public or private businesses whose activities fall within the scope of a carbon price. In many countries, direct carbon pricing—especially in the form of emissions trading—mostly applies to larger emitters. Many regulated entities, such as electricity generators, fossil fuel companies, and steel and cement manufacturers, are embedded in complex value chains, purchasing or supplying products from across a country's economy and through international trade.¹⁹ While carbon pricing may increase public revenues from carbon-intensive industries in the short term, it can reduce fiscal dependence on these industries in the long term by diverting investment away from emitting sectors and towards low-carbon activities.

- **Low-carbon firms.**

Companies that offer low-carbon products have a stake in carbon pricing because it affects their competitiveness against high-carbon alternatives. Firms that produce solar panels and wind turbines or provide energy-saving technologies and equipment often see their market share rise as coal, oil, and gas become more expensive under carbon pricing. Other firms offering emissions abatement technologies, consulting services, etc., often also see increased activity. Besides carbon pricing, these firms may need additional policy and financial support in the early years to make them competitive against entrenched firms that are supplying competitive fossil-based products.

- **Citizenry and civil society.**

Many countries have thriving communities of grassroots and professional civil society organizations. These activists, who sometimes represent broad swaths of the citizenry, may have missions directly relating to advancing carbon pricing, climate action more generally, or they may be motivated by the indirect effects of carbon pricing on inequality and employment. Example civil society organizations represent specific segments of the population affected by climate change and adjacent activities including indigenous communities, coal mining communities, autoworker labor unions, etc.

- **International institutions.** External political actors can play an important role in the development of carbon pricing. Several international initiatives promote carbon pricing by providing dedicated staff and resources to support the design and implementation of carbon pricing, including the World Bank's PMI, the International Carbon Action Partnership, and the Carbon Pricing Leadership Coalition. Intergovernmental organizations like the United Nations, the World Bank, and the World Trade Organization can also shape the

broader enabling environment for carbon pricing. Foreign governments may have a stake in a country's carbon pricing debate, either through proactive action (e.g., bilateral aid, trade conditionality) or by serving as instructive examples for policy learning.

- **Technical experts.**

Individuals and organizations with technical expertise in carbon pricing often provide strategic input for both the design and

strategic promotion of carbon pricing. These experts are typically either consultants and/or academics. Many formerly worked in government positions as climate policymakers. Developing country governments often solicit support from foreign technical experts due to limited domestic expertise in design and implementation of carbon pricing policy instruments.

2.1.3 Motivations for supporting or opposing carbon pricing

Stakeholders support or oppose carbon pricing according to their beliefs about the role of government in environmental protection, the political consequences of carbon pricing (e.g., public opinion, elections, international reputation),

and its economic consequences (e.g., government finances, technological innovation, regulatory cost burden). Table 2.1 summarizes some of these motivations." In practice, most stakeholders hold a combination of these motives.

TABLE 2.1

Motivations for supporting or opposing carbon pricing

	Supporters	Opponents
Values	• Realize polluter-pays principle • Promote climate justice	• Focus on short-term crises • Misaligned missions and priorities • Skepticism about the need for climate action
Political consequences	• Meet public desire for climate action • Improve public finances • Strengthen International reputation	• Constituencies dependent on high-emissions industries • Constituencies with low support for climate action • Worries about short-term increases in energy prices • Doubts about administrative capacity
Economic consequences	• Mitigate climate impacts • Support low-carbon transition • Secure access to export markets • Attract international climate finance	• Economic dependence on carbon-intensive industries • Prospective losses for carbon-intensive and carbon-reliant firms • Concerns about lost international competitiveness

Motivations for supporting carbon pricing

Environmental ethics

Carbon pricing helps realize the polluter pays principle, which was codified into international law as part of the 1992 Rio Declaration. This principle requires the party responsible for pollution, rather than the society at large, pay for the damage done to the natural environment. It promotes economic fairness for businesses and equity for both current and future generations and across geography, by reflecting the true environmental cost of polluting activities. Similarly, supporters of carbon pricing may also be motivated by commitments to environmental justice and the broader transition toward sustainable development.

Political benefits

Some leaders pursue carbon pricing for its potential political rewards. In democracies, leaders may broaden their base of support by including carbon pricing as a plank of their electoral platform.²⁰ By emphasizing the need to address local air pollution, reduce long-term greenhouse gas emissions, and the need for revenues to fund social and public spending, carbon pricing became a winning issue across different bases of support in Chile (see **Case Study 4.2**), leading the country to ultimately adopt a “green” tax in 2014 with minimal opposition. In the absence of competitive elections, carbon pricing can still reward political leaders by boosting their political standing and credibility. Indeed, while carbon pricing is key to helping China meet its long-term emissions reductions goals, its immediate political resonance stems in part from its capacity to help immediately address local air quality.²¹

Revenue generation

Carbon pricing generates fiscal resources that can fund initiatives government programs popular with voters. Carbon pricing revenues have been used to promote a just green transition, fund

programs to protect poor households from rising energy prices, support communities and workers during exit from carbon-intensive industries, and pay for environmental justice initiatives.²² The most recent version of the EU ETS reforms for instance, includes a Social Climate Fund that provides cash payments to vulnerable households and supports measures and investments that reduce emissions in targeted sectors. Similar steps were taken in Colombia where carbon pricing revenues were earmarked to addressing social and environmental causes, popular with a larger swath of voters.

International commitments

A further political motivation for supporting carbon pricing is the desire to maintain and build the government’s reputation as a reliable partner to other nations in the fight against climate change. Many governments have made international climate commitments, such as NDCs under the 2015 Paris Agreement, which will be difficult to achieve without carbon pricing. Carbon pricing can also be a means of demonstrating international policy leadership. As discussed in **Section 2.3**, Chilean politicians prioritized carbon pricing reforms in the prelude to the 2019 UN climate conference as a strategy to project policy leadership. Finally, the adoption of carbon pricing may be a precondition for achieving political goals, such as accession to the EU.

Economic consequences

Many stakeholders are motivated to pursue carbon pricing over other mitigation instruments because it is seen as offering attractive economic benefits. For political leaders and government administrators, carbon pricing is not only consistent with market principles, but the instrument can facilitate negotiations over aid and trade ties where international partners attach climate policy considerations (see **Section 2.2.2**).²³ Additionally, carbon pricing may offer an opportunity to increase international financial

flows through carbon market linkages.²⁴ These economic and financial motivation are key drivers of carbon pricing interest in Senegal, the Gambia, and Pakistan, among other developing countries.

For firms, carbon pricing can reshape the market by affecting competition, the rate and direction of technological innovation, and the potential of economic rents. Three types of firms are particularly apt to support carbon pricing.

- **Firms that benefit directly from decarbonization policy.** These firms anticipate a more even playing field, lower operational costs, more stable supply chains, and access or provide low-carbon technology and equipment.²⁵ In Uruguay, for example, renewable energy companies were vocally supportive of proposals for a carbon tax. Similarly, oil companies with international operations framed carbon pricing in Kazakhstan as a means for bringing good practices into the domestic industry.
- **Firms that benefit indirectly from decarbonization policy.** These firms often hold assets vulnerable to climate change. Examples include ecologically vulnerable farmers and landowners, insurance companies, the tourism industry, and carbon offset generators.²⁶
- Firms that view carbon pricing as the least-worst option. If carbon pricing seems inevitable, carbon-intensive firms may voice their support to gain favor from regulators and lobby for measures that mitigate the policy's impact, such as generous free allowances.²⁷ Similarly, many firms that export to the EU seek to secure exemptions from the CBAM by pushing their home governments to enact a carbon price, especially if domestic carbon pricing would likely be weaker than the EU's tariff. Alternatively, firms under reputational pressure may publicly support carbon pricing

when the political context makes the policy's adoption unlikely.²⁸ Firms may also support pricing to resolve climate policy uncertainty.

Motivations for opposing carbon pricing

Policy priorities

One of the primary reasons policymakers fail to support carbon pricing is that they assign greater importance to other more pressing policy priorities over a long-term-oriented proposal like carbon pricing. Experts view short-term crises like poor economic conditions (68%) and the 2022–2023 energy crisis (65%) to be among the most important barriers to ambitious carbon pricing (**Figure 2.3**). Catastrophic flooding in 2022 followed by political unrest stalled Pakistan's carbon pricing efforts. Inflation and political instability associated with the war in Ukraine have similarly eroded support for increasing the stringency of the Kazakh ETS. Inflationary concerns in Indonesia led to delay in rolling its carbon tax.

Among government administrators in different ministries, differing priorities are a common cause of friction, reflecting their distinct missions and constituencies. In fossil fuel producing countries, the power of some government ministries depends on carbon intensive firms, creating vested interest in protecting the industry against carbon pricing. Yet, other ministries that would see their political and economic influence rise under carbon pricing, often have an interest in advancing carbon pricing policy. This dynamic can lead to challenging inter-ministerial negotiations.

Another common reason stakeholders oppose carbon pricing is that they do not believe it to be necessary or appropriate for their government to take any form of climate action. This could stem from a rejection of climate science, a desire to delay climate action, or a general mistrust

of government and the political system.²⁹ In developing countries, this concern may be framed in terms of climate justice or a right to development. Experts believe narratives that compare carbon emissions in developing countries to those in advanced countries are an important barrier to ambitious carbon pricing, although they express fewer concerns about freeriding (**Figure 2.3**).

Political consequences

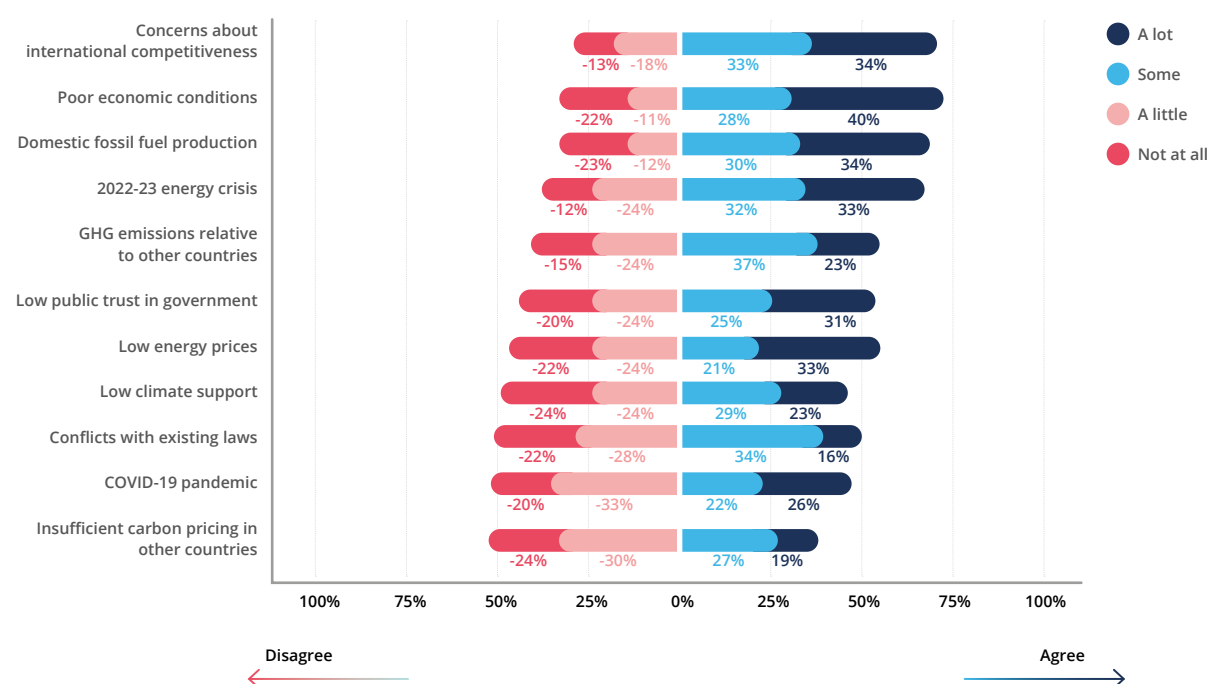
For many political leaders, the political costs of carbon pricing are more salient than their benefits. The desire to retain power may discourage leaders from pursuing policies that offer long-term benefits but risk short-term political and economic costs, especially in representative democracies.³⁰ Politicians whose constituencies directly or indirectly depend on high-emissions industries for their livelihoods often have little incentive to support carbon pricing.

A further reason for politicians to oppose carbon pricing is that many governments—including, but not limited to, developing countries—artificially keep energy prices low to minimize the cost burden for individuals and firms. (For further discussion of energy subsidies, see **Section 3.1.3**.)

Carbon pricing risks raising energy prices in the short term, which can be politically damaging. Experts view low energy prices as a modestly important barrier to ambitious carbon pricing (**Figure 2.3**).

In countries that have already implemented carbon pricing, some political leaders decide to campaign explicitly against carbon pricing in the belief that doing so will help them get elected. Once elected, they may well obstruct the policy. Indeed, carbon pricing ambition in several countries (e.g., Australia, Mexico, France, and Switzerland) has been scaled back or postponed following a new electoral mandate or civil pushback.

Carbon pricing may also threaten political costs if its implementation is expected to be difficult (see **Section 4.3.1**). If regulators are uncertain of their capacity to induce compliance with the policy, they may oppose carbon pricing in favor of a non-pricing climate policy instrument. Administrators might also be concerned about carbon pricing conflicting with existing laws. Experts, however, view this to be only a moderate barrier to ambitious carbon pricing (**Figure 2.3**).

FIGURE 2.3**Perceived barriers to ambitious carbon pricing**

*Question: "To what extent have the following posed a barrier to ambitious carbon pricing in your country?" (95 responses).
Source: Original expert survey. See Table A.1 for top barriers for selected countries*

Economic consequences

For political leaders, carbon pricing may raise concerns about damaging the international competitiveness of exporters. In the absence of complementary and compensatory policies, these firms may lose market share to products from jurisdictions without or with lower carbon pricing.³¹ Experts reported that concerns about international competitiveness were the strongest barrier to ambitious carbon pricing (Figure 2.3).

Government dependence on employment and tax revenue from carbon-intensive industries is also a barrier. 64% of survey respondents indicated domestic fossil fuel production poses a substantial barrier to ambitious carbon pricing (Figure 2.3). In China, this dynamic emerges in the form of

lobbying by rural community groups to avoid economic losses through special treatment under the ETS.

For business leaders, a key reason to oppose carbon pricing is if they expect it to cause them material losses.³² The stakes are especially high for firms that hold climate-forcing assets, such as coal mines, as ambitious carbon pricing poses an existential threat to their economic value.³³ Examples of major emitters opposing carbon pricing include opposition from business associations in Mexico, electricity generators in Chile, and fossil fuel exporters in Kazakhstan. Even when public opposition is not politically feasible, groups can lobby privately to reduce the policy's cost impact, as the cement industry did in China.

Firms may also oppose carbon pricing if they are embedded in carbon-intensive value chains. Carbon prices are typically propagated through the economy, leading to higher costs for high-carbon supplies and weakened demand by high-carbon customers. This results in a broad, and often highly organized, extended coalition of carbon-dependent firms opposed to carbon pricing. In the U.S. context, these firms account for two-thirds of all climate change lobbying.³⁴ Similarly, firms in Chile's construction industry decided to oppose carbon pricing in part due to concern about rising input costs.

International energy investors and trade partners may also use their structural power as a deterrent to ambitious carbon pricing. For instance, stakeholders in Indonesia note that the country's robust energy trade with China has decreased its government's political interest in imposing stringent carbon pricing.

Motivations for neutrality

Some stakeholders opt to remain neutral or decline to participate in the political debate over carbon pricing. While these parties are not always active in the agenda-setting stage, they hold the potential to exert substantial influence over a proposal's political feasibility. Neutrality may reflect a short-term strategic decision to avoid a visible position.³⁵ Alternatively, neutrality may be an inchoate position that reflects a lack of attention to carbon pricing,³⁶ a lack of information about the benefits or costs of carbon pricing,³⁷ or a lack of experience with the implementation of climate policy more generally. For example, fossil fuel lobbies in Texas stayed neutral about the state's wind energy law in the 2000s due to their limited understanding of the costs of transmission.³⁸

If advocates can persuade neutral stakeholders to mobilize in support of carbon pricing, they can be an important source of political capital. However, there are often substantial political, educational, and organizational challenges to doing so. Moreover, opponents of carbon pricing may also actively seek to move neutral stakeholders toward their position. Ecuador's foray into (indirect) carbon pricing was derailed when opponents tapped the support of indigenous communities from the Amazon and Andes to underscore that the removal of fossil fuel subsidies on gasoline and diesel was an inequitable and undesirable carbon tax that would negatively impact these communities by raising transportation costs, considering that low fuel costs were the only real tangible benefits these communities received following oil and gas exploitation on their homelands. These developments highlighted the need for careful design and gradual execution of reforms as to protect vulnerable segments of the population and gain citizen's trust.

2.2

Strategies for building a powerful and lasting support coalition

Policy champions use a combination of three broad strategies to build a coalition in support of carbon pricing: persuasive appeals, coercive pressure, and benefit-cost adjustments. Persuasive tactics raise stakeholder awareness and knowledge of carbon pricing. Coercive

pressure strategies increase the cost of failing to support carbon pricing. Benefit-cost adjustments alter the material rewards of joining the support coalition through complementary policies. The following sections explore common tactics for each strategy.

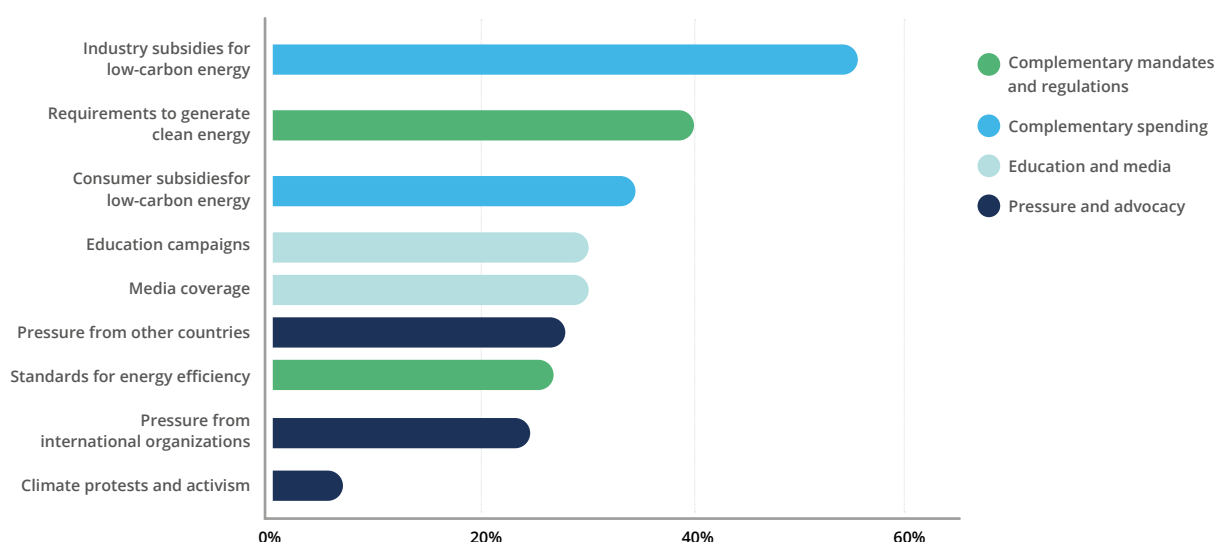
2.2.1 Persuasive appeals

Carbon pricing champions often develop a coordinated communications strategy, aiming to both mobilize existing supporters or persuade neutral stakeholders to join the carbon pricing coalition. A communications strategy is a plan to create and disseminate messages through a range of media to reach key audiences and achieve key

objectives.³⁹ Persuasive communication aims to build coalitions. A moderate number of experts viewed education campaigns and media coverage to be important for supporting ambitious carbon pricing in their country (**Figure 2.4**), and they tend to be lower cost than other strategies.

FIGURE 2.4

Perceived importance of strategies for ambitious carbon pricing



Percentages represent the proportion of respondents who selected a given option as per the question below.
Question: "Increasing which of the following would most improve the political feasibility of ambitious carbon pricing in your country? Select up to three." (85 responses).

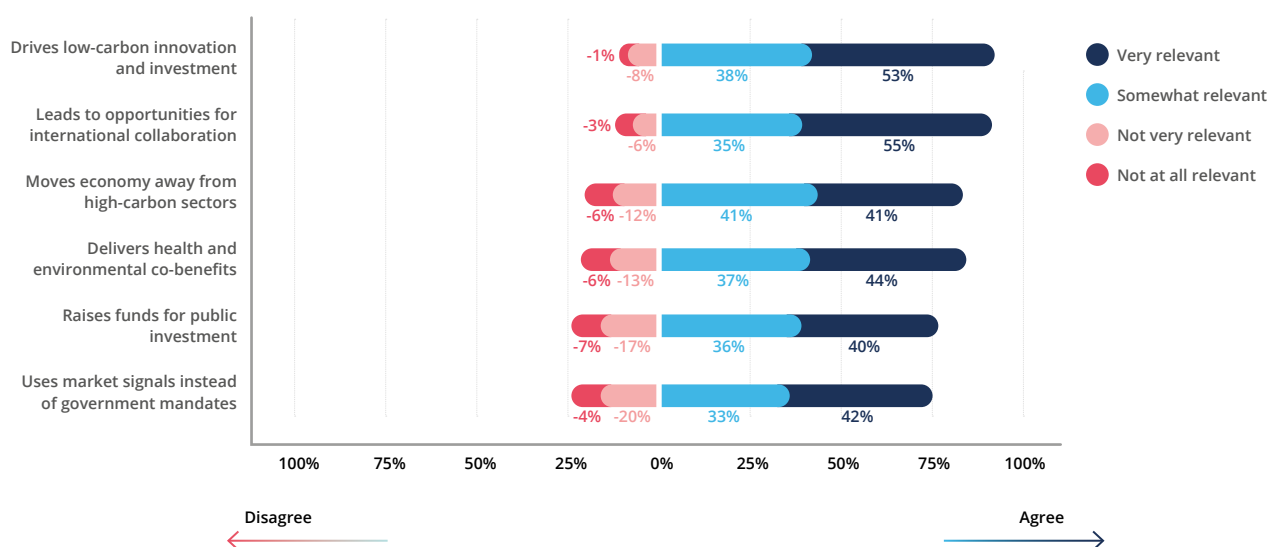
Source: Original expert survey

Persuasive campaigns can focus on carbon pricing's ability to spur the decarbonization of the economy and drive low-carbon innovation and investment. Experts view both claims to be highly relevant to the carbon pricing discussion in developing countries (**Figure 2.5**) and they came up in nearly all stakeholder interviews. For example, a stakeholder described how the Indonesian government linked UK support for

Indonesia's carbon pricing policy with themes of economic growth and trade in its domestic communications about the November 2022 Group of Twenty (G20) Leaders' Summit in Bali. To persuade neutral stakeholders to join the carbon pricing coalition, communication campaigns can draw attention to the co-benefits of carbon pricing that different groups of stakeholders already care about.⁴⁰

FIGURE 2.5

Relevance of claims relating to the core objectives of carbon pricing



Question: "How relevant are the following claims to the political discussion about carbon pricing in your country?" (97 responses).

Source: Original expert survey

To be effective, advocates need to identify the issue that resonates with a specific audience, create a targeted message, and spread it through credible intermediaries. **Table 2.1** provides examples of targeted messages that carbon pricing experts believe to be highly relevant to the carbon pricing discussion in developing countries (**Figure 2.5**).

TABLE 2.2

Examples of messages targeting audiences primarily motivated by related issues as

Primary motivation	Example message
Social justice	Carbon pricing can promote environmental quality, public health, and help address income equality
Economic efficiency	Carbon pricing uses market signals instead of government mandates, thereby promoting policy efficiency.
Fiscal consolidation	Carbon pricing raises funds that: help reduce deficits, tackle the accumulation debt, fund public investment, social programs, ecosystem protection and preservations
Global cooperation	Carbon pricing offers opportunities for deeper international collaboration, economic ties, and trade security
Economic expansion	Carbon pricing expands economic opportunities by promoting the opening of new industries, economic sectors, and jobs.
Energy security	Carbon pricing reduces dependence on foreign fossil fuels and promotes energy security by helping diversify the domestic energy mix.

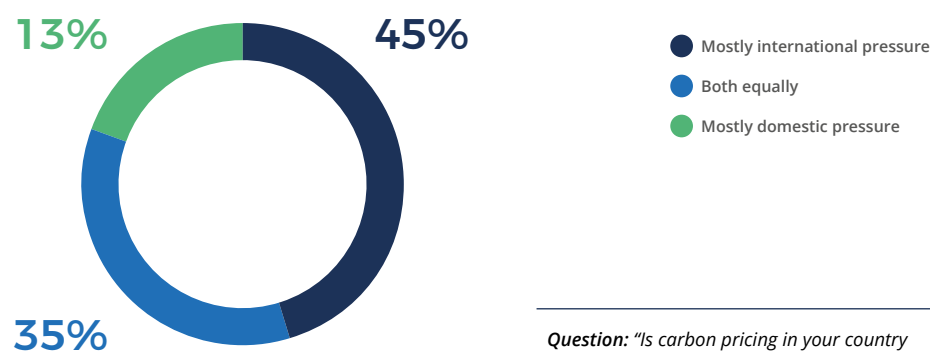
2.2.2 Coercive pressure

Pressure tactics induce stakeholders to support carbon pricing by politicizing the consequences of failing to do so. Pressure can come from domestic stakeholders, international stakeholders, or both. Most experts think domestic sources play

some role in exerting such pressure, but nearly 80% believe that international sources are either mostly or equally important as domestic sources in exerting pressure for carbon pricing in developing countries (**Figure 2.6**).

FIGURE 2.6

Perceived importance of sources of pressure for climate policy



Question: "Is carbon pricing in your country driven mostly by domestic or international pressure?" (92 responses).

Source: Original expert survey

Domestic pressure

Climate activism has often focused on the need to address climate action via a comprehensive policy package, rather than focusing specifically on carbon pricing^{41,42}. Carbon pricing experts tend to take a pessimistic view of the potential for domestic protests and activism to facilitate the adoption of an ambitious carbon tax (**Figure 2.4**). Protests, while the most visible form of pressure and can be key to bringing attention to issues of importance, the public can use voting and lobbying to advance their goals. Environmental activism can also mobilize politically powerful electoral constituencies, especially among middle-class and younger segments of the population. For carbon pricing champions, demonstrating the potential political benefits of climate action may be more useful than emphasizing the technical details of pricing.

Stakeholder interviewees expressed that due to limited access and technical capacity, domestic environmental NGOs generally struggle to pressure policymakers in developing countries to adopt carbon pricing. This is especially acute in countries with little operating space for civil society. Nevertheless, long-term engagement by NGOs has helped sustain momentum for carbon pricing.

Among firms, pressure to support carbon pricing may spread across corporations through social forces. Corporate leaders in many countries socialize in tight-knit groups and often serve on the boards of directors for multiple firms. Through learning, socialization, and competition, these interactions push firms to align their orientations toward climate policy. In the United States, for example, firms are twice as likely to join a pro-climate group if even just one of its directors simultaneously serves on the board of a firm that has already done so.⁴³

International pressure

The most direct form of international pressure is when trade partners and aid donors make continued engagement conditional on the adoption of specific climate policies. This generates pressure on domestic firms to prepare for a regulatory “race to the top” on climate emissions. The ultimate objective is to seed and possibly catalyze norms of international trade that could later formalize in international trade agreements. All countries face this pressure, but it is especially salient in developing countries.⁴⁴ The most prominent example of trade conditionality for carbon pricing is the EU’s CBAM (**Box 2.1**).

BOX 2.1**The effect of the EU's CBAM on carbon pricing in developing countries**

The European Union's Carbon Border Adjustment Mechanism is the EU's tool to: (i) put a price on carbon intensive goods that are entering the EU, and (ii) encourage cleaner industrial production in non-EU countries. It requires that the EU's trading partners put a price on carbon for select goods imported to the territory equivalent to the carbon price of domestic EU production, or else importers of carbon-intensive goods purchase CBAM certificates linked to the EU ETS carbon price. In addition to ensuring that EU's mitigation objectives are not undermined through carbon leakage, CBAM promises to help ensure that the EU phases out free allowance allocations for trade exposed sectors.

The CBAM entered into operation in October 2023 (with full implementation scheduled for 2026) and many industry groups and governments in developing countries are highly motivated to respond, especially those with strong trade ties to the EU.⁴⁵ Stakeholders interviewed for this study including in China, India, Indonesia, Israel, Kazakhstan, South

Africa, Türkiye, Ukraine, and Uruguay among others, report a strong mobilization by exporters exposed to the EU's CBAM, in favor of domestic carbon pricing, leading to a marked acceleration in various countries efforts to develop or strengthen this policy.

Such results are encouraging for the mitigation agenda, and yet several complexities have emerged. It is not clear yet how domestic carbon pricing will have to be coordinated with EU ETS prices in order to fully exempt importers of financial adjustments since CBAM certificate prices will hinge on the weekly average auction price of EU ETS allowances. In addition, since many low income countries have relatively weak direct trade ties with the EU, it is unclear how CBAM can incentive foreign exporters in those countries to reduce emissions, absent any supplemental assistance.⁴⁶ Finally, while CBAM may encourage countries to put in place carbon prices comparable to those in the EU, those governments may also enact countervailing subsidies, that would potentially undermine the overall impact on emissions reduction.

A softer form of international pressure is a pledge for further international collaboration following the adoption of a carbon price. This might consist of carbon tax harmonization, carbon market linkages or simply technical assistance. Such pressure may generate momentum for effective carbon pricing.⁴⁷ Opportunities for international diplomacy that focus on cooperating on climate action can lead to cooperating on carbon pricing. Efforts by the US and China to cooperate on climate action resulted in joint statements on climate action, and could be instrumental for

coordinating future efforts on carbon pricing. Similarly, cooperation between the EU, and Eastern and Central European countries has been instrumental for the adoption of the Turkey ETS and is proving to be key in paving the way for harmonization on carbon pricing. Availability of technical and design assistance from the EU has also been instrumental in the implementation and operation of South Korea's ETS.

2.2.3 Benefit-cost adjustments

Policy champions adjust the benefits and costs of carbon pricing for stakeholders through two approaches: seeking technical assistance and leveraging complementary policies.

Technical assistance

Technical assistance can play a significant role in lowering the cost and improving the effectiveness of carbon pricing policy including through improved policy design, implementation efficiency, and developing of transition and equity allocations or programs. Policy champions can seek this assistance from international organizations, their peers, and consultants to better engage stakeholders through technical reviews, training workshops, and planning and advisory committees, among other initiatives. These efforts build institutional and human capacity, provide detailed context-specific information on the operation, obligations, and

implications of carbon pricing, and help develop a common understanding of feasible carbon pricing approaches.⁴⁸ Technical assistance initiatives, such as the PMR/PMI, may also provide ongoing learning support, sharing successful practices across contexts, and developing networks of carbon pricing experts and scientific advisors.⁴⁹

The majority (63%) of developing country carbon price adopters received support from international organizations (e.g., the World Bank) to do so.⁵⁰ Carbon pricing experts view this assistance positively, with 73% crediting the World Bank's assistance with providing new opportunities for carbon pricing (**Figure 2.7**). While not exhaustive, lists examples of instances where international technical assistance contributed momentum for carbon pricing. Note that this assistance typically has more nuance than is shared here and may involve several international partners delivering or cooperating on assistance to one country.

TABLE 2.3

Examples of international technical assistance for carbon pricing



China was approached by the EU in 2010 with an offer to support the development of its ETS, which led to the EU-China ETS initiative. Key components of this program include policy dialogue between EU and China on emission trading, capacity building and training of Chinese authorities and industry representatives, practical advice to Chinese authorities on ETS development, and joint research and knowledge sharing.



Colombia designed an ETS and prepared for the implementation of its Nationally Determined Contribution with support from the PMR. Key ways the PMR assisted include: ETS roadmap development, ETS design modelling, legal gap analysis, stakeholder engagement, and capacity building that included training courses and ETS simulations.



Kazakhstan received assistance from Norway, the United States Agency for International Development, and the European Bank for Reconstruction and Development in the mid-2010s, accelerating the development of offset credit protocols, guidelines, and MRV methodologies.⁵¹



Mexico benefited from technical assistance from the PMR and GIZ to strengthen technical capacity and develop mutual agreement on the design of an ETS through early engagement with private sector representatives (**Case Study 4.2**)



South Africa's discussions on energy diversification with the International Energy Agency and engagement with the High-Level Commission on Carbon Pricing and Competitiveness informed the subsequent development of carbon pricing.

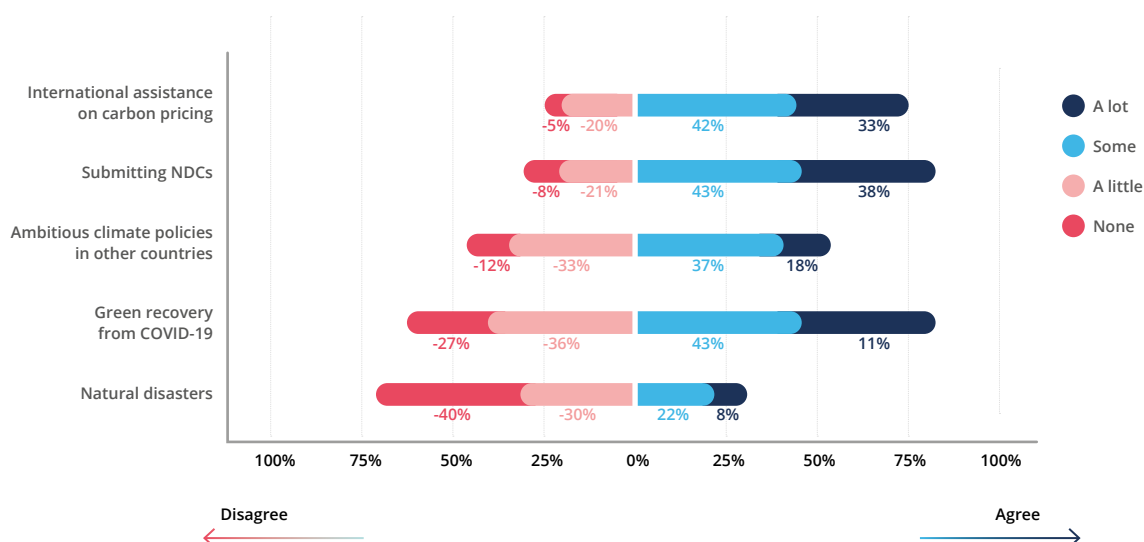
Complementary policies

The costs and benefits of carbon pricing vary considerably according to the broader policy context in which it operates. Enacting non-pricing policies that complement carbon pricing by reducing its costs and increasing its benefits can build a carbon pricing coalition over time. For example, firms that remain neutral out of concern for the short-term costs of carbon pricing (e.g., food suppliers, wood producers) may be convinced to support carbon pricing by packaging the policy with temporary public investments, such as trade protections and subsidies. Clean energy standards can provide electricity generators with an additional impetus to support carbon pricing. Compensation, either to reduce the direct cost impact of carbon pricing (e.g.,

free credit allocations) or to offset the indirect impacts of carbon pricing (e.g., investments in fossil-fuel-dependent communities), can persuade hesitant stakeholders to support carbon pricing. (See [Section 3.1.3](#) for a discussion on the role of complementary policies when negotiating a specific carbon pricing policy.)

Broader changes in fossil fuel and renewable energy use can also affect support for carbon pricing. For example, Chile's 2019 commitment to phase out coal-fired power plants prompted electricity generators to shift investments toward renewable energy, which in turn reduced the political risk of supporting a more stringent carbon price.

FIGURE 2.7
Sources of momentum for ambitious carbon pricing



Question: "To what extent have the following contributed to momentum for ambitious carbon pricing in your country?" (92 responses). To ensure clarity about the meaning of "international assistance," the wording for "international assistance on carbon pricing" used in the survey was "World Bank assistance on carbon pricing."

Source: Original expert survey

2.3

Opportunities to place carbon pricing on the policy agenda

Once actors recognize their shared interest in promoting carbon pricing and form a support coalition, they engage in coordinated efforts to generate a foundation of technical knowledge (e.g., economic modeling) and recruit more allies. At this point, policy champions look for focal events and changes in the balance of power that offer opportunities to present carbon pricing as a feasible and appropriate solution to a given problem. This process is often described metaphorically as similar to surfers waiting for the right wave.⁵² If carbon pricing advocates succeed in catching the attention of key decisionmakers, the policy moves onto the agenda and negotiation over a specific policy proposal begins (**Chapter 3**).

It can be difficult to predict when carbon pricing's time has come, but some events are more promising than others. The following briefly describes some of the most common opportunities.

Electoral turnover

Frequent government turnover and slim electoral leads are not conducive to ambitious climate policy.⁵³ Nonetheless, a transfer of power can create new opportunities for carbon pricing. Indeed, electoral turnover is the third-most identified strategy for advancing carbon pricing in the short term (**Box 5.1**). Brazil's 2022 presidential election, for example, created a window of opportunity for the country's carbon pricing movement. The private sector was especially motivated to capitalize on the transition from President Jair Bolsonaro to President Luiz Inácio Lula da Silva, with one industry group even going so far as to send a letter to every candidate asking them to control deforestation, manage solid waste, and create an ETS (**Case Study 3.3**).

Broad policy reforms

Broad policy reforms, such as tax reforms, can offer a convenient political vehicle for adopting carbon pricing. Folding carbon pricing into a bill that is essential or popular is often an effective procedural tactic for easing opposition (**Section 3.2.2**). The window of opportunity for leveraging a broader policy reform can close quickly, so supporters often act quickly. In Chile, the pressure to pass a larger tax reform helped speed inter-ministerial coordination between the Ministries of Environment, Finance, and Energy. Similar events featured in the case of Colombia (**Case Study 3.2**).

International climate commitments

National climate policy targets and pledges made through intergovernmental processes (e.g., the submission of NDCs under the 2015 Paris Climate Agreement) are often major opportunities to advance carbon pricing. Stakeholders in India and China, among other countries, credit the process of formulating NDCs with providing momentum to discussions over carbon pricing in their countries. Most carbon pricing experts share this impression, with nearly three-quarters (73%) agreeing that the process of formulating NDCs provides a substantial opportunity for carbon pricing (**Figure 2.7**).

International climate events

Several countries have taken advantage of hosting the UN climate negotiations to announce new climate commitments, including carbon pricing. These commitments are often interpreted as attempts to strengthen a government's international standing. 78% of experts believe international reputation is a key driver of carbon pricing in developing countries.ⁱⁱⁱ For example,

iii Seventy percent of experts agree with this statement when asked directly, but this rises to 78% after adjusting for response bias using the item-count technique.

international reputation had an impact when Chile co-hosted the 2019 UN climate negotiations. Government officials used the occasion as an opportunity to capture the attention of political leaders and adopt a far-reaching climate strategy that included establishing the legal foundation for enacting an ETS. However, momentum can dissipate quickly when international attention moves on. Indonesia first stated to consider carbon pricing when it hosted the climate negotiations in 2007, but policy champions have struggled to maintain momentum for ambitious carbon pricing (**Case Study 2.2**).

Accession to intergovernmental organizations

Political leaders may adopt carbon pricing as a strategy for improving their country's chances of becoming a member of a prestigious intergovernmental organization. These organizations are typically believed to have a positive disposition toward carbon pricing, so the possibility of accession can spur countries to adopt carbon pricing. This effect has been observed in Eastern Europe, the Balkans, and Türkiye for EU accession;⁵⁴ in Argentina, Brazil, Chile, and Colombia for Organization for Economic Co-operation and Development (OECD) accession; and in the Philippines for Association of Southeast Asian Nations (ASEAN) membership.

Climate policy developments in other jurisdictions

Ambitious climate policies in other countries can lend momentum to carbon pricing. Policymakers and advocates regularly consider the policy actions of peer countries when making policy decisions.⁵⁵ This manifests as an increased probability of adopting a carbon price when a government's trading partners and export competitors do so as well.⁵⁶ For example, stakeholders in both Kazakhstan and China pointed to the EU ETS as a key example for motivating politicians, learning about carbon pricing (including study tours and

training workshops in collaboration with the EU), and a source of potential economic benefit through future linkage with the EU ETS.

The extent to which another country's climate policy affects domestic political economy dynamics determines its impact. A policy adopted by a major trade partner, such as the United States' 2022 Inflation Reduction Act, may open a window of opportunity in developing countries via changes in manufacturing and supply chains. In contrast, a policy change in a relatively peripheral country may not offer much of an opportunity to attract political interest. Accordingly, carbon pricing experts are split on the overall importance of such events, with only 53% believing that ambitious climate policies in other countries provide "some" or "a lot" of opportunities for carbon pricing (**Figure 2.7**).

Climate conditionality for international trade and foreign investment pressure

As discussed in **Box 2.1**, the EU's CBAM directly pressures trading partners to adopt carbon pricing. Other types of climate provisions in preferential trade agreements also reduce imports of dirty goods and increase exports of clean goods, with subsequent implications for the feasibility of carbon pricing.⁵⁷ However, as with other types of foreign climate policy developments, the opportunities created by these events are likely to vary by a country's political and trade relationships.

Disaster response

Natural disasters, energy price spikes, and other crises can indirectly increase the political feasibility of carbon pricing by temporarily aligning institutional veto points, demonstrating the possibility of transformative change, and raising the ambition of policymakers beyond incremental adjustments to the status quo. For example, some countries formulated plans for a "green" recovery from COVID-19.⁵⁸ Stakeholders in Indonesia report

that major fires and forestry damage increased stakeholder buy-in for the country's voluntary Reducing Emissions from Deforestation and Forest Degradation (REDD+) system for pricing carbon in forests.

However, some studies suggest crises rarely provide meaningful momentum for climate policymaking. In the context of the COVID-19

pandemic, most countries approached their recovery in ways that entrenched the status quo carbon economy more than providing opportunities for low-carbon development.⁵⁹ Carbon pricing experts take a similarly skeptical view, with fewer than 40% identifying natural disasters or green COVID-19 recovery plans as meaningful opportunities for ambitious carbon pricing (**Figure 2.7**).

CASE STUDY 2.2

Indonesia's challenging mobilization for carbon pricing



Indonesia made significant strides following the issuance of Presidential Regulation Number 98 in 2021. The regulation lay the foundations for the nation's direct carbon pricing policy mix. It positions carbon pricing as an instrument for Indonesia to achieve its emission reduction targets under the Paris Agreement and outlines for carbon pricing to be implemented through mechanisms including allowance-based emissions trading, a carbon tax, and carbon credit mechanism. Voluntary offset trading was launched in 2023, with plans to transition it to also accommodate trading of credits for domestic compliance as well as trading by international participants.⁶⁰ After one year of piloting, an ETS for the power sector was also launched in 2023 in the form of an intensity-benchmark credit and trade system, currently covering coal-fired power plants above 100 MW, connected to the state's electricity grid.^{61, 62} Plans are underway to expand the ETS to cover oil- and gas- fired power plants as well as plants not currently connected to the state's electricity grid. Carbon prices remain low, however, especially when compared to foreign markets: just under \$5 on the secondary market

for offsets. The government is working on roadmaps to extend ETS potentially to the many sub-sectors of energy related industries (e.g. iron and steel, ceramics, fertilizers). Simultaneously, the government is working on a carbon tax—announced in 2022 but sidelined to 2025 due to inflationary concerns—to apply to regulated emissions that have not been offset above a pre-specified cap.^{63, 64}

Prior to carbon pricing, Indonesia worked on reforming fossil fuel subsidies, an experience that provides valuable lessons for advancing carbon pricing but also points to potential complexities.⁶⁵ Beginning in the late 1990s, the government undertook episodic reforms, which culminated in 2015 with the formal elimination of gasoline subsidies and capping of diesel subsidies. Eliminating inefficient subsidies freed up budget resources to be allocated to productive sectors, primarily infrastructure and social protection.⁶³ Economic pressures and a growing fiscal imbalance, caused by declining oil production and the shift from a net oil exporter to an importer in 2004, brought about this need to reform

fossil fuel subsidies. Those attempts were frequently met with public backlash and the unsuccessful episodes have been associated with the absence of a credible reform strategy including for redistributing savings from the reform, inadequate consultation with stakeholders, the belief among the population that the reform was designed to favor powerful interest groups, lack of an effective communications strategy, and rapid and drastic rather than staggered and gradual reforms.³⁷ Subsidies rose during the recent global energy crisis, reaching nearly USD 50 billion in 2022.⁶⁶ Historically they have also dwarfed expenditures on climate investments. Their continued existence while seen as key for promoting economic growth while considering inequality and poverty, introduces additional challenges for the impact of carbon pricing and the overall mitigation agenda.

The Indonesian government is taking deliberate and careful steps to cultivate support for carbon pricing in different sectors, which could help avoid some of the difficulties experienced with the fossil fuel subsidy reform especially regarding affordability and public support. The government is exploiting instrument design and a suite (rather than a single) instrument to drive overall mitigation. During the power sector ETS pilot the government exploited reputational standing, by formally recognizing companies that achieved the largest emissions reductions compared to all the companies participating in it. The government is also ensuring that it engages with local governments and NGOs through projects and communication campaigns, in part to respond to a strong movement for decentralization and devolution reforms in the governance of forestry and environmental resources. In 2022, Indonesia named energy transition

as one of the three pillars of the country's G20 presidency, adding further momentum for carbon pricing and as a strategy to reiterate their climate commitment in both the domestic space and international fora. Despite these developments, carbon pricing continues to attract only modest support rendering its rollout not only a technical issue but one that is also more political.

Indeed, the strength of corporate concern about carbon pricing varies across sectors, with particular concern coming from the energy-intensive industries and sectors.⁶⁷ Furthermore, as a state-owned enterprise, the PLN is less responsive to price signals than a private firm might be (see **Section 3.1.3**). It purchases coal at market rates but sales electricity below-the-market, something that impacts the ability to pass-through carbon prices and thereby induce required investment and behavioral change, as well as alter economic incentives for reducing emissions. Politically, there are also ongoing deliberations between ministries on which sectors to qualify for exemptions, at least initially. Prices in the offset and allowance markets have also been rather low with sparse trading, attributed in part to loose benchmarks.⁶⁸ And despite the enactment of Presidential Regulation which provides overarching guideline for carbon pricing implementation and role of ministries, discussions are still on-going on the administration of carbon pricing instruments and coverage, and an often-changing timeframe makes implementation slow and introduces uncertainties for the private sector.



3.

**Negotiating an ambitious
and politically feasible
carbon pricing policy**

Key Messages

- Once carbon pricing is on the policy agenda, advocates of carbon pricing must engage with skeptical stakeholders to ease and eventually overcome their opposition.
- The most common strategy for easing opposition to carbon pricing is to keep the cost to regulated entities low at the start and increase ambition over time. This can be achieved through low prices, design elements like narrow sectoral scope, offset credit provisions, free allowances, high emissions caps, and limited enforcement.
- Carbon pricing mechanisms often struggle to generate public enthusiasm, primarily because they emphasize the costs rather than the benefits. Governments can attempt to build broad public support, but they must also concentrate substantial efforts on engaging with regulated entities and industries. The nuances will depend on whether a carbon tax, ETS or hybrid instrument is to be adopted.
- Adopting complementary, more politically straightforward policies (e.g., green subsidies) can help broaden the support coalition for decarbonization, laying the groundwork for enacting carbon pricing at a later point. Alternatively, supporters can embed carbon pricing in larger reforms that may have more political momentum.
- In some contexts, carbon pricing advocates have either enough public support or allies in control of the government to pass carbon pricing policies without making substantial compromises with opponents. In these cases, it may be viable to pursue strong prices from the start, while ensuring that potential adverse impacts of carbon pricing on households and businesses are mitigated through support measures to maintain public support.

This chapter discusses how and why carbon pricing policies succeed or fail to be adopted despite the presence of a substantial support coalition. It focuses on how supporters engage with opponents, either by adjusting the policy to address their concerns or overcoming their political power.

3.1

Easing opposition to carbon

This section describes how opponents of carbon pricing can be accommodated during the policy negotiation process. First, it describes how the policy's design may be adjusted to encounter

less opposition among both firms and the public. Second, it discusses design features that can distribute burdens in a politically advantageous way.

3.1.1 Easing opposition through policy design

The process of developing a carbon pricing policy involves many decisions about the policy's design, resulting in a wide variety of policy designs. This diversity reflects not only variation in national circumstances (e.g., the legality of earmarking carbon pricing revenues, history of government-controlled electricity prices, and the size and types of carbon-intensive firms) but also political calculations that balance the policy's potential to induce emissions reductions (i.e., technical

effectiveness) with measures that preserve the policy's political feasibility or chances of adoption. Technical effectiveness and political feasibility are both important dimensions, that policymakers work hard to maximize.

The following subsections consider the political economy considerations of eight key decisions in carbon pricing policy design, summarized in **Table 3.1** at the end of this subsection.

TABLE 3.1

Select policy design options for easing opposition to carbon pricing

Design option	Mechanism
 Instrument choice	ETs are perceived to provide more flexibility and may be less threatening to opponents. Taxes are seen to be simpler and easier to incorporate into broader tax reforms but risk backlash from burdened groups.
 Coverage	Exemptions for sectors, fuels, or sizes of firms can buy support or acquiescence.
 Revenue use	Use carbon pricing revenues to buy support or acquiescence from affected groups through compensation.
 Differentiation	Apply lower prices on more politically powerful opponents.
 Offset credits	Allow firms to reduce cost burdens by purchasing offset credits, typically at lower prices than the compliance market.
 Point of regulation	Apply carbon price upstream to minimize public visibility and reduce implementation costs.
 Effective price	Lower prices, higher caps, credits, and generous free allocation of permits reduce the cost effect of carbon pricing for polluters.
 Trajectory	Start with low-stringency carbon pricing to give regulated entities time to adapt and build capacity.



Instrument choice

ETS, tax, or both? Instrument choice is often the most immediate decision to make. There are instances in which policymakers have little choice, but in most cases policymakers must weigh their preferences for one instrument vis-à-vis the other. Factors to consider include the window of opportunity, preexisting law, choices by international partners including possibilities for linkage, historical precedence, familiarity with the tool, institutional context and capacity, and preferences of entities to be regulated. Some countries end up having both an ETS and tax. Even so, they will usually pursue one at a time. Mexico had a carbon tax for six years before it began its ETS pilot in 2020. Colombia, Ukraine, and Indonesia also have carbon taxes and are considering adding ETS programs.

From a technical perspective, the differences between an ETS and a carbon tax depend on specific design decisions, but they can be made to operate similarly or as hybrid instruments.⁶⁹ Allowance banking and minimum/maximum prices help ensure predictable ETS prices, and taxes can be designed to rise as emissions overshoot targets.

A key consideration for the choice of ETS or tax is the domestic composition of emissions and the potential size of a secondary market for permits. In South Africa, emissions are highly concentrated, with four firms responsible for more than two-thirds of emissions. Accordingly, policymakers feared an ETS would encounter significant liquidity issues, a problem that arose when South Korea and Montenegro implemented their ETS schemes. Montenegro's case is especially notable, as only three plants were regulated under the ETS, and two have since shutdown according to ICAP. In Brazil, where hydroelectric power and biogas

mean that many sectors are relatively low carbon, stakeholders characterize an ETS as a way of targeting efforts in industrial sectors where bigger changes are needed.

While technical concerns may not be the decisive factor between an ETS or a carbon tax, the perception, and related politics, of the two instruments can be quite different. Stakeholders often view some contexts as particularly amenable to one instrument or the other due to the simplicity of a carbon tax or the lower political capital needed to achieve an ETS. A carbon tax can also be folded into a broader tax reform with relative ease. In Uruguay, policymakers took advantage of a larger reform to convert some of the existing fuel excise tax to a carbon tax (**Case Study 2.1**). But an ETS is seen as giving firms more flexibility because allowance trading and banking provide more control over means of compliance and timing of abatement. The potential for free permit allocation can also make an ETS seem less threatening, and even present a financial windfall, to incumbent polluters.^{iv} Past experiences with market-based instruments can have an effect. For example, Chile's privatized water system may have negatively affected perceptions of market-based instruments. However, the perceived complexity of ETSs can raise concerns that they are challenging to implement successfully, making a tax more attractive, especially for governments with limited administrative capacity.⁷⁰

^{iv} Carbon taxes can be designed to provide similar, if potentially less systematic, allowances and exemptions.

Stakeholder perceptions of instrument complexity also matter. A national ETS in China would build off the experience already gained with the regional ETS. In Brazil, stakeholders had similar opinion, not least because some companies operating internationally already had experience with ETSS. While some stakeholders want to minimize complexity, others view it as an asset.

In Mexico, firms may have been more positively disposed to an ETS because they believed they could exert greater influence on the technical details of permit distribution than a more readily interpretable tax rate.



Coverage

Carbon pricing programs vary in their breadth of coverage and exemptions for various sectors, fuels, or sizes of firms.⁷¹ Technical or administrative factors may drive this difference. Emissions in some countries are highly concentrated in just a handful of sectors or large firms, making the administration of a narrow policy more cost effective. Similarly, many governments find it administratively challenging to incorporate agricultural emissions into their carbon pricing policies due to the diffuse source of emissions, affordability impacts for farmers, and opposition from well-organized agricultural associations and unions.

Narrow coverage of carbon prices often reflects a trade-off between technical effectiveness and political feasibility. While reducing the coverage of carbon pricing offers a straightforward way to reduce opposition from the private sector, the increased political feasibility comes at a cost of diminished emissions reductions potential such as in Uruguay's (**Case Study 2.1**) or Brazil' (**Case Study 3.3**) exemptions of the agricultural

sector, and Argentina's exemption of the natural gas sector. Natural gas is responsible for 77% of Argentina's emissions from electricity (63% of the country's total), so this exemption substantially undermines the tax's impact on the country's overall emissions.⁷² Rather than providing indefinite exemptions from carbon pricing, it may be strategically beneficial for policymakers to start with narrow coverage and broaden it over time. For example, Vietnam plans to gradually expand the coverage of its ETS over time, starting first with the waste sector before broadening coverage to thermal power, steel, and cement (**Case Study 3.1**). The EU ETS provides a similar example, with notable expansions in 2012, 2013, and 2023.⁷³

Attempts to define policy coverage are complicated by the potential for a lack of price pass-through and associated effects on emissions reductions. Firms' market position and the regulatory environment shape the extent to which price increases are passed through the supply chain.⁷⁴ A sector that sells primarily to the domestic market and faces little competition from imports may be able to raise prices for its customers, while sectors that sell to foreign markets or compete with foreign producers are less likely to have that option. Regulation may limit pass-through or may enable it. For example, independent electricity generators in Indonesia are allowed to pass the full cost of carbon pricing to the national energy company, which means increased payments from the government offset any increase in the carbon price. The inability to pass-through carbon prices can generate opposition to carbon pricing, especially among upstream groups.

CASE STUDY 3.1

Slow but steady carbon pricing development in Vietnam

Vietnam has taken a slow but deliberate path toward carbon pricing. With initial interest from officials in the Ministry of Natural Resources and Environment's (MONRE's) Department of Climate Change and the Ministry of Finance, Vietnam started working with the Partnership for Market Readiness (PMR) project in 2015. At the time, there was no legal basis for carbon pricing in the country and there was only limited experience with carbon markets from the Joint Crediting Mechanism projects with Japan, a few Clean Development Mechanism projects, and a handful of firms selling renewable energy credits on the voluntary market.

MONRE began by systematically engaging in data collection, research, and pilot projects to address concerns of other ministries, especially the Ministry of Industry and Trade (MOIT). Progress accelerated in 2020 with the revision of the Law on Environmental Protection and, notably, Vietnam's declaration of its 2050 net-zero goals at COP26. The government subsequently established a steering committee—headed by the prime minister and several ministers from key ministries as committee members—tasked with ensuring the country meets its commitments.⁷⁵ This was soon followed by legislative decisions that established emissions inventory obligations⁷⁶ paving the way for establishing carbon pricing in the country.⁷⁷

According to the roadmap, by 2027, Vietnam plans to finalize its implementation rules, increase private sector awareness, and conduct a pilot Emission Trading System (ETS) and National Crediting Program (NCP). The carbon market is expected to become operational from 2028 onwards, with the government aiming to link it to regional and global carbon markets. The key sectors that will be covered in the ETSs first phase include steel, cement, and thermal power. MONRE will manage and supervise both the trial and official market operation, while the Ministry of Finance will develop the exchange's rules and management mechanisms.

MONRE has also decided to focus its first pilot National Crediting Program on the waste sector. This is because, while the technology for tracking emissions from waste is more complex, the sector falls solely within MONRE's jurisdiction, thereby avoiding the challenging task of coordinating across ministries. Once MONRE has gained experience with the waste sector, the NCP is scheduled to expand to other sectors including transport, and agriculture. While small companies in Vietnam still have limited knowledge about carbon pricing, large export-focused companies have grown more supportive of it. This shift partly reflects the effects of the EU's CBAM. Firms with high volumes of exports to the EU, such as those in the textile industry, are pushing for faster development of carbon pricing policies. In contrast, companies with minimal exports to Europe, such as those in forestry, largely remain concerned about carbon pricing.



Revenue use

Revenue use offers plausibly the most significant opportunity to build support without undermining stringency. Decisions about revenue use are more closely associated with taxes because taxes raise revenue automatically, but ETS programs that auction allowances also generate revenue. Where legally possible, some governments redistribute or earmark revenues from carbon pricing to ease

opposition and build supportive constituencies for carbon pricing early on **Table 3.1**.⁷⁸ But in some countries constitutional or other legal barriers render earmarking impossible, requiring carbon pricing revenues to contribute to the general budget. Returning revenue primarily to emitting firms may weaken opposition but dramatically undermine stringency.

TABLE 3.2

Examples and implications of options for using carbon pricing revenues

Revenue use option	Description	Political economy implication	Example(s)
Environmental earmarking	Revenues can be used to subsidize low-carbon technologies, to fund research and innovation, to invest in environmental infrastructure, or to fund climate adaptation	Sectors that receive more financial assistance can grow more easily and are likely to support carbon pricing (policy feedback). The climate effect of carbon pricing can be strengthened, which can increase public support.	Regional Greenhouse Gas Initiative, EU ETS
Redistribution	Revenues can be used to support low-income households, to make lump-sum transfers to all households, or to grant tax rebates for certain sectors	Financial assistance for low-income households can cushion the social impact of carbon pricing, which can increase the feasibility and public support for carbon pricing. Lump-sum support for all households may generate broad public support.	British Columbia
Tax reform	Revenues can be used to reduce indirect taxes, to reduce labor taxes, or to reduce corporate taxes	Tax rebates mitigate undesirable social or competitiveness impacts, which can increase beneficiaries' support for carbon pricing. The tax system can be shifted away from labor and toward environmental activities (polluter pays).	Uruguay
General budget	Revenues can be used to reduce a budget deficit or to supplement the general budget	Contributions to the general budget can avoid the increase of taxes or other revenue streams. It tends to be less visible than other options for revenue use.	Chile



Differentiation

Redistributing revenues across the whole tax base tends to be less popular than targeting spending toward green investments or help for the vulnerable.⁷⁹ For example, Switzerland allocates one-third of its carbon pricing revenues to fund green building retrofits and uses the remaining two-thirds to provide a discount on health and social insurance.⁸⁰ However, the low visibility of the insurance discount may have led to relatively low public awareness of the individual benefits provided by Switzerland's carbon pricing.

Public opinion research in both advanced and developing countries indicates that more targeted revenue recycling helps make carbon pricing more equitable and, as a result, more popular.⁸¹ Carbon pricing experts working in developing countries also perceive redistribution of revenue to vulnerable groups as politically resonant, even more than supporting green infrastructure or lump-sum transfers to the entire population (**Box 3.1**). Yet being able to target vulnerable populations in practice is often a challenge especially when social assistance systems are absent or need to be built up anew. For further discussion on strengthening the support for carbon pricing through revenue use, see **Section 5.1**.

Multiple sectors or fuels included under a carbon pricing policy can—and typically do—face different prices. Extreme price differentiation can be equivalent to exemption; for example, the carbon prices of nearly all developing countries apply to only a few high-emitting sectors and leave others unpriced.⁸² However, more nuanced uses of differentiated pricing provide a middle way for strengthening the political viability of carbon pricing, promising to reduce the policy's cost for key opponents without providing outright exemptions that risk fracturing the support coalition.

While differentiation is politically useful and often technically and economically necessary, policymakers should exercise caution to ensure that it does not inadvertently encourage switching to more emissions-intense production processes or fuels. Discrepancies between emissions potential and prices can lead to perverse outcomes. For example, uneven environmental taxes in both Mauritius and Vietnam led electricity generators to switch towards dirtier sources.⁸³ In Mauritius, the *Maurice Ile Durable* fuel levy applies to coal, diesel, and gasoline, but while diesel and gasoline also face an excise tax, coal does not. As a result, the use of fuel oil for electricity decreased by 4.5% following implementation, while the use of coal went up by 2.6%. Similarly, after Vietnam introduced its Environmental Protection Tax in 2012, it kept taxes on non-anthracite coal at lower levels, abolished its gasoline surcharge, and reduced tariffs on ASEAN fuel imports. This price differentiation may have encouraged diesel and coal use for transportation and electricity.



Offset credits

Offset credits allow regulated entities the option to pay for the right to continue emitting by funding emissions reductions by other actors. Most major ETSs allow the use of offset credits, and several carbon tax schemes have provisions that allow offset credits to reduce the tax burden. For example, Colombia's program has a provision allowing firms to avoid their carbon tax liability by purchasing offset credits generated in national GHG mitigation project activities. In South Africa, waste and land use sectors have free allowances of offset credits equal to their total emissions, and all other regulated firms receive an allocation of tax-free allowances equivalent to between 60% and 75% of their emissions. South African firms can also use offset credits and additional allowances to avoid 90–100% of the tax. Moreover, South African energy firms can use their obligations under the existing electricity generation levy to reduce their carbon tax liability.⁸⁴

In the near term, offset credits help reduce opposition in exchange for reduced effectiveness of the carbon price signal. Offset credits may also threaten efforts to raise ambition in the future. Instead of decarbonizing to reduce policy exposure over time, firms purchasing offset credits on an ongoing basis to maintain their emissions levels continue to be exposed to price increases. As a result, carbon pricing policies that allow for the widespread use of offset credits may encounter growing opposition over time. In addition, firms that rely on offset credits may attempt to minimize their compliance costs by making it difficult to validate their offset claims and resisting proposals to create and enforce quality standards for purchased credits (**Chapter 4**). Authorities have also to be judicious, ensuring that the credits they admit for compliance are high quality.



Point of regulation

The number of regulated entities and their compliance liabilities covered by a carbon pricing policy typically depends on where in the supply chain emissions are regulated. Policies that apply to upstream carbon emissions often face less opposition because, even if the incidence is high, the cost is less visible to consumers. Moreover, regulating upstream sources of emissions can be much simpler administratively given the smaller number of entities involved. For example, Chile limited its carbon price to stationary sources, opting to regulate mobile sources with non-pricing policies, such as efficiency standards and product bans. However, policymakers implementing programs that apply to upstream emissions should be prepared for those entities to mobilize downstream opposition from firms or the public based on threats of rising costs.⁸⁵





Effective price

Perhaps the most common way to limit opposition is to minimize the carbon price that is effectively paid by business and consumers (the case of Kazakhstan provides a notable example, see **Case Study 5.2**) In a carbon tax, this is simply a matter of setting low effective tax levels. In an ETS, this often involves setting high caps under which emissions are traded. In both systems, regulated entities can be granted free emissions rights that reduce the effective price, such as is done for some industries in South Africa. Around the world, most carbon prices are currently too weak to incentivize rapid decarbonization.⁸⁶ However, low carbon prices can still induce emissions reductions if firms anticipate higher prices in the future.⁸⁷



Trajectory

It is common to give regulated entities time to adapt and build capacity by starting with a low-stringency policy. This may consist of an impact-neutral tax, generous free allocation, a pilot phase, a narrower scope, and/or less demanding rules and enforcement (**Chapter 4**). This may be a sensible strategy, but policymakers must take care to maintain ambition to increase stringency. See **Section 5.2** for a more detailed discussion of the political economy of carbon pricing trajectories.



BOX 3.1**Technical effectiveness versus political feasibility dimensions in carbon pricing policy design: an experiment with carbon pricing experts**

A putative relationship exists between the technical efficacy of carbon pricing proposals and their political viability.⁸⁸ Specifically, the measures that ostensibly enhance a proposal's effectiveness in driving emissions reductions to mitigate severe climate change impacts are also putatively linked to a decrease in its political feasibility, as these measures potentially impose upfront costs on businesses and households across the whole economy, thereby potentially eroding public support.⁸⁹ This tension sometimes possess a trade-off for policymakers since an overly stringent policy may never be adopted, but an insufficiently stringent policy fails to address the underlying problem of carbon pollution.⁹⁰

The tension between technical effectiveness and political feasibility have been studied in the context of public opinion, but few studies examine how carbon pricing experts approach this trade-off in the context of developing countries. To shade some light and attempt to disentangle these motivations,

carbon pricing experts made judgments about six pairs of designs for a simplified carbon pricing policy. All experts, as earlier noted, have worked on creating carbon pricing policies for developing countries. Each design presented to them was a random combination of an instrument (carbon tax or ETS), coverage (narrow or broad), and revenue use rule (investment in green infrastructure, compensation to the entire population, or compensation to vulnerable groups). For each pair, respondents selected the design they believed to be more technically effective, more politically feasible, and one they would propose to a policymaker.

To have a common baseline, respondents were asked to advise a policymaker in a fictional democratic upper-middle-income country with high inequality and significant fossil fuel production. While this scenario and exercise has limits in its generalizability, it nonetheless offers important insights into how experts evaluate the various dimensions of carbon pricing design.

Carbon Pricing Instrument: Tax or ETS?

Experts see an ETS as similarly effective to a carbon tax but are 10% more likely to view it as politically more feasible. By a slightly higher margin, they are more likely to propose an ETS to a policymaker. While the latter recommendation is likely partially explained by the professional exposure of the sample of respondents, they also by a substantial margin, would not recommend an ETS if it implies a less effective policy package than a carbon tax.

Coverage: Narrow or Broad?

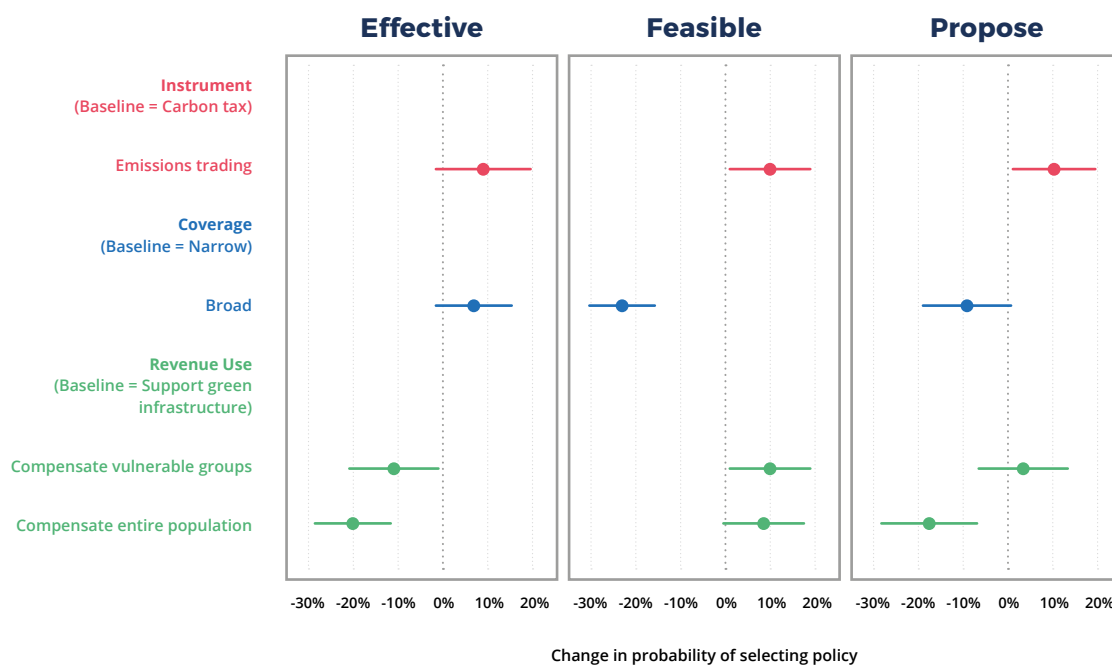
In comparing broad and narrow carbon pricing policies, experts were 6% more likely to perceive broad policies to be more effective than narrow policies, but 24% more likely to view narrow policies as politically feasible. On balance, feasibility outweighs effectiveness: experts are 7% more likely to recommend narrowly scoped carbon pricing than a broad approach. That is, a significant number of experts who saw narrow policies as less effective but more feasible, would recommend them.

Revenue Use: Green Infrastructure, Vulnerable Groups, or the Entire Population?

Experts consider using revenue from carbon pricing to support green infrastructure to be more effective for reducing carbon emissions than compensating vulnerable groups (by 11%) or compensating the whole population (by 20%). But they also see

infrastructure spending as 7–10% less politically attractive. On balance, carbon pricing experts are as likely to recommend infrastructure support as they are compensation for the vulnerable, but 16% less likely to recommend universal compensation.

Expert preferences for carbon pricing policy design



Survey respondents were asked to compare six pairs of alternative carbon policy designs and identify which would be more effective, which would be more feasible, and which they would propose to a policymaker. To make responses comparable, respondents were asked to imagine they were advising a policymaker in a fictional democratic, upper-middle-income country with high inequality and significant domestic fossil fuel production. Each policy design consisted of a random combination of instrument, coverage, and revenue use. Estimates represent average marginal conditional effects, interpreted as the change in probability of selecting a policy design with one attribute over another (all other attributes set at random levels). Estimates correct for multiple testing using the Holm-Bonferroni method. Error bars are with 95% confidence intervals (97 responses). Source: Original expert survey

3.1.2 Easing opposition through information and pressure campaigns

Even a well-designed carbon price may fail to win support from the public, industry, or within government itself if it is mistrusted or misunderstood. In general, carbon pricing faces a challenging communications landscape because a price tends to draw attention to costs rather than benefits. Communication difficulties are particularly likely in contexts where trust in the government is low.⁹¹ Moreover, it can be difficult to identify typical patterns because perceptions of carbon pricing vary widely across contexts, as a policy that seems simple and business-friendly in one country may be perceived as complicated and overbearing in another.

Sometimes information campaigns for carbon pricing center on building a basic understanding of how carbon pricing works, especially among (prospective) regulated entities. In Mexico, policymakers' early engagement with representatives from industry facilitated the development of technical capacities as well as a solid understanding of the different design elements that the policy would have (**Case Study 4.2**). In China, the government helped generate media coverage of carbon pricing to build awareness among both regulated industries and the public. In Colombia, the government worked extensively with the relevant industry associations to proactively engage with the private sector (**Case Study 3.2**).

Carbon pricing in developing countries often involves only limited public debate, especially where civil society in general, and environmental movements in particular, are weak or primarily focused on insider politics. If elite stakeholders can negotiate settlements among themselves, using the tools discussed in the previous section, then there may be less incentive for any of them to mobilize the



CASE STUDY 3.2

Easing private sector concerns through accommodation and strategic engagement in Colombia



In December 2016, Colombia introduced a national carbon tax of \$5 per ton.⁹² Part of a wider reform aimed at modernizing and simplifying Colombia's tax code, the policy was developed in a relatively short time by the Ministry of Finance and Public Credit. Anticipated to provide \$200 million in annual government revenue,⁹³ the policy was an opportunistic response to several years of declining government finances.⁹⁴ The policy's supporters hoped it would facilitate Colombia's prospects of joining the OECD by improving the government's fiscal health and supporting the country's NDC and national development strategy. It also addressed concerns of an expert commission that Colombia had few environmental taxes relative to its peer countries in Latin America.

The carbon tax contained several features to ease opposition from the private sector. Like most countries new to carbon pricing, Colombia began with a modest initial price and cautious price trajectory, with increases of 1 percent plus inflation annually until approximately \$25 per ton (2022 values).⁹⁵ It applies to less than a quarter of Colombia's greenhouse gas emissions, targeting producers and direct importers of fossil fuels for the domestic market but excluding coal and domestic gas use.⁹⁶ Moreover, firms could entirely avoid the tax through carbon offset credits, reflecting the private sector's concerns about abatement opportunities.

While many multinational firms had already initiated plans to reduce their emissions, the Ministry of Environment and Sustainable Development engaged in substantial outreach in collaboration with the Ministry of Commerce, Industry and Tourism, which acted as a convener for the sectors involved. Reflecting its strong interest in the offsetting mechanism, the private sector actively

contributed to discussions determining the rules for the use of carbon credits, eligibility of international carbon standards, and promoting Ecoregistry, an independent national registry of national emissions reduction projects.⁹⁷

Revenues from Colombia's carbon tax are earmarked for environmental projects in post-conflict zones. Revenues are currently channeled through the Peace Fund for Columbia (previously through the Fund for Environmental Sustainability and Sustainable Rural Development) to finance adaptation (25%), ecosystem preservation (5%), and post-conflict solutions (70%).⁹⁸ Key policy developments since adoption include the tax underperforming revenue projections,⁹⁹ which has led to a revision limiting the use of offset credits. The exemption of coal has also been reversed, although it will only be subject to the full tax rate from 2028 onwards.¹⁰⁰

Colombia's 2018 climate change law provided the legal authority to create a mandatory emissions trading system (ETS). This offers an opportunity to develop an ETS that covers more of the country's greenhouse gas emissions than the fuel sales covered by the tax. The ministries of finance, the environment, and planning are collaborating on the design of the ETS. While implementation details, including linkage to the carbon tax, are still being developed, recent secondary regulation to the climate action law stipulate that the ETS should be operational by 2030 and that allowances will be allocated primarily through auctions.

public. In Uruguay and Indonesia, for example, stakeholders described a top-down process in which ministries and relevant industries but not the public had meaningful input. In Argentina, the inclusion of carbon pricing in a larger tax reform package took environmental NGOs by surprise. South Africa's government, in contrast, started communicating with the public early, launching a campaign to educate the public about the benefits of carbon pricing and the need to act on climate change. The campaign included a range of activities, such as public meetings, workshops, and online engagement tools (see **Case Study 5.2**).¹⁰¹

Of course, carbon pricing supporters can also use information and pressure campaigns to push governments to act in the first place. However, such campaigns are likely to produce a response from pricing opponents with the strong incentive to limit policymaker and public support for an ambitious price. Opponents of carbon pricing are often large, well-resourced firms with strong connections to policymakers and sophisticated lobbyists. Fossil fuel companies have a strong incentive to mobilize against any meaningful carbon price and have historically played a crucial role in blocking climate action.¹⁰²

Public pressure for climate action is often important in advanced countries, though it may not always be tied to specific policies. In contrast, attempting to ease opposition to carbon pricing by appealing to public opinion has a mixed record in developing countries. Market-based policies like carbon pricing are often largely unfamiliar to stakeholders in developing countries and pose complex political and distributional implications, requiring more extensive communication efforts than non-pricing policies. In contrast, opponents of carbon pricing can more easily rally against taxation and build a narrative that carbon pricing reflects the values of an out-of-touch elite willing to sacrifice economic growth and development for climate action.¹⁰³ Developing countries may provide especially fertile soil for narratives against carbon pricing, as many have relatively low historical responsibility for carbon emissions, high levels of social inequality, and difficulty achieving broad public participation in government decision-making.¹⁰⁴ **Case Study 3.3** describes Brazil's carbon pricing experience before, during, and after the populist presidency of Jair Bolsonaro.

In political systems where bargaining and consensus between ministries and peak organizations like trade associations drive most policy decisions, the carbon pricing movement may only seek to create mass pressure campaigns as a last resort, when negotiations have already broken down. Similarly, motivating carbon pricing by pointing to external sources of pressure may lead to mixed results. For example, while the EU's CBAM has accelerated carbon pricing discussions in many developing countries, stakeholders in Ukraine, Argentina, and Mexico expressed concern that the resulting carbon prices may be ineffective (**Box 2.1**). They also challenged the policy's implicit presentation of the EU ETS as "good practice" to be emulated, observing that the EU ETS has encountered its own challenges and may not be a suitable model for their economic, political, and social context.

3.1.3 Easing opposition through sequencing and alignment with complementary policies

Just as carbon pricing is not the only policy mechanism at governments' disposal, the failure to internalize the cost of emissions is not the only barrier to decarbonization. There are many other barriers, such as lack of financing, weak incentives to innovate, friction in technological deployment, slow consumer uptake, and countervailing subsidies for fossil fuels and energy consumption.

For countries with few existing climate policies, carbon pricing may not be the best place to begin¹⁰⁵.¹⁰⁶ Developing a portfolio of related policies can help build a coalition of supporters before pursuing a carbon price. Moreover, such policies can address other barriers to decarbonization and market failures, making the eventual market response to an eventual carbon price stronger. Countervailing policies can also interact with carbon pricing in unexpected ways, even causing the policy to unintentionally increase emissions. As discussed in **Section 3.1.1**, Mauritius's *Maurice Ile Durable* fuel levy led to increased emissions because its interaction with excise taxes led to increased use of coal. Similarly, Vietnam's Environmental Protect Tax, in combination with other tax reductions, encouraged a shift toward diesel and coal. provides examples of policies that can lay a foundation for carbon pricing and tend to provoke less resistance than carbon pricing. Some of these policies can be passed at the same time as a carbon price, but there is also value in pursuing them first to expand the future support coalition for pricing. As demonstrated in developed countries, there is often value in having green industrial policies in place before pursuing carbon pricing¹⁰⁷.¹⁰⁸

Removing countervailing policies

One of the most important policy actions to complement carbon pricing is the reduction or elimination of countervailing subsidies and protections. These may include measures that allow firms to reduce their carbon pricing tax liabilities. For example, South Africa allows independent power producers to use the levy on fossil and nuclear electricity generation in this manner, making it difficult for carbon pricing to incentivize meaningful emissions reductions.

Other policies may undermine the price signal created by carbon pricing, especially energy subsidies. Most energy subsidies favor the use of fossil fuels. Some are justified as protections for consumers, especially low-income consumers. Others are targeted at producers. They are extremely costly in both developed and developing countries, with estimates ranging from more than \$500 billion to as much as \$5.9 trillion.¹⁰⁹ Among 33 developing countries, more than half provide fossil fuel subsidies that act as negative carbon prices and for seven countries, the net effective carbon price is negative.¹¹⁰ Comparing fossil fuel subsidies with fuel taxes and explicit carbon prices shows global carbon pricing has stagnated: it is not much higher now than it was in 1994.¹¹¹

Countervailing policies can also interact with carbon pricing in unexpected ways, even causing the policy to unintentionally increase emissions. As discussed in **Section 3.1.1**, Mauritius's *Maurice Ile Durable* fuel levy led to increased emissions because its interaction with excise taxes led to increased use of coal. Similarly, Vietnam's Environmental Protect Tax, in combination with other tax reductions, encouraged a shift toward diesel and coal.¹¹²

Table 3.3
Examples of complementary non-pricing instruments

Instrument type	Description
Green Industrial Policy, Subsidies, and Green Procurement	Use government funds to directly encourage decarbonization and subsidize domestic firms that benefit from decarbonization. These policies aim to leverage climate action as a means to create strategic industries, jobs, export revenue, and economic growth. ¹¹³
Feed-in Tariffs or Renewable Portfolio Standards	Tilt the energy playing field toward clean sources, without provoking the same resistance among losers that taxes tend to do. Such policies impose costs on taxpayers or ratepayers, but these costs tend to be less visible and salient than taxes. These can also provide a more stable investment environment for green energy entrants than a carbon price.
Carbon Border Adjustment Mechanisms	Resolve domestic concerns about carbon leakage through trade, potentially reducing the size of the opposition coalition. Climate provisions in preferential trade agreements lower imports of dirty goods and increase exports of clean goods, which gives them a stronger impact on national legislation than anything else. ¹¹⁴
Just Transition Policies	Create social welfare programs to target redistribution and investment in specific vulnerable groups that may suffer in the short term under decarbonization. For example, labor unions that are concerned about job losses under decarbonization might receive specific transition assistance to help them weather economic changes, making carbon pricing less threatening.

Removing fossil fuel subsidies is critical for the success of carbon pricing and, while it is likely to be hard, it may not be impossible.¹¹⁵ Surveys of public attitudes towards subsidy removal in Ecuador, Egypt, Mexico, Indonesia, and India find that people believe removing fossil fuel subsidies is just as valuable as introducing carbon taxation, especially when there are plans to use the money saved from subsidies in ways they consider positive.¹¹⁶ This echoes the views of a stakeholder

in Indonesia (**Case Study 2.2**), who noted that President Joko Widodo had successfully achieved a subsidy reform early in his first term by communicating clearly with the public about how the money would be reallocated to education and healthcare, although favorable shifts in world prices around the time of the reform also played a role.

CASE STUDY 3.3

Carbon pricing's changing political fortunes in Brazil

Different from most countries, Brazil's GHG emissions are concentrated in agriculture and land use and land use change (LULUCF). In the 2000s, Brazil achieved a significant reduction in emissions through policies that bolstered socioeconomic development and the enforcement of environmental regulations, leading to a decrease in deforestation, particularly in the Amazon region. The strengthened environmental measures, however, encountered resistance from various interest groups linked to agriculture and mining, resulting in a partial rollback of these policies in the 2010s, which corresponded with an uptick in deforestation and emissions. In response to these challenges, recent efforts have been made to enhance environmental regulation enforcement, curb deforestation, and lower emissions. These efforts have yielded a notable decrease in Amazon deforestation by 21.8 percent in 2023. Despite this progress, deforestation in the Cerrado region has shown more resilience to change.

Compliance carbon pricing mechanisms in Brazil have historically not been a central topic in environmental debates, largely because such schemes have not included the land use sector. Legislative discussions gained momentum in the mid-2010s and 2020s with the introduction of multiple bills, yet progress stalled due to a lack of governmental backing. In 2022, a significant policy development was the announcement of a "national carbon market," aimed at creating a registry for companies to report their emissions and planned reduction trajectories. However, experts predicted limited impact on emissions reductions from this initiative, citing a lack of enforcement mechanisms and no clear path to developing such mechanisms. Moving forward, in 2023, federal government support was signaled

for congressional efforts to create a compliance carbon market in Brazil, with an emphasis on aligning with the best international practices.

On October 4th 2023, a bill to establish the "Brazil Greenhouse Gas Emissions Trading System" or "Sistema Brasileiro de Comércio de Emissões de Gases de Efeito Estufa" was approved by Senate's Environmental Committee. The bill aims to establish a cap-and-trade system in the country. Its components include a system for trading GHG emissions, introduces emissions ceilings, establishes regulation and a market for carbon credits, and allocates carbon revenues. The regulated carbon market is expected to affect 5,000 companies across non-LULUCF sectors that annually emit more than 25,000 tons of CO₂ equivalent. In its current form, it does not cover agriculture directly. However, it might affect it indirectly as emissions reductions from the land use sector (e.g., forest restoration) could be used as offsets in the ETS market. On December 21, 2023 the house of representatives approved a revised proposal to regulate the carbon markets in Brazil. The revisions made by the house of representatives included more detailing on carbon crediting under the SBCE framework, particularly in relation to REDD+ projects. These changes reflected the opinions of groups of stakeholders, namely Amazon state governments, agribusiness, and project developers. The bill will return to the Senate for analysis on changes made by the house of representatives.

3.2

Overcoming opposition to carbon pricing

This section discusses how carbon pricing can be passed without the accommodation of political opponents, when supporters gain enough power to act without their plans being vetoed. This depends both on the relative political strength of supporters and opponents, as well as the extent of institutional constraints on policy change.

3.2.1 Overcoming opposition through electoral platforms

Occasionally, political candidates attempt to use carbon pricing to distinguish themselves from their opponents. Winning an election with an explicit carbon pricing platform provides a strong mandate to pursue pricing once in office. This occurred in Mexico when Enrique Peña Nieto featured tax and energy reforms prominently during his 2013 campaign for president. After his victory, he included a carbon tax in his legislative package. Similarly, as described in [Case Study 3.3](#), Lula da Silva won Brazil's 2022 presidential election on a platform that included environmental tax reform as part of a broader reform, defeating the incumbent, Jair Bolsonaro. However, as discussed in [Section 3.1.2](#), most carbon pricing experts believe the policy's complexity and technical nature make it a poor fit for general election campaigning, especially in developing countries. Around half of the experts surveyed say that low support for climate action or low public trust in government were barriers to enacting ambitious carbon pricing in their countries (see [Figure 2.3](#)). Even more respondents say that the shocks of the 2022–2023 energy crisis and poor economic conditions make ambitious pricing difficult to enact (see [Figure 2.3](#)).

Some governments have tried to use referenda to bypass regular policymaking channels. This carries substantial risk, as it encourages opponents to counter-mobilize the public as much as possible. This counter-mobilization may shape public perceptions in ways that last longer than elite lobbying would. Referenda can also make it hard to adjust policy details as needed. In the United States, the left-leaning and relatively low-carbon Washington State tried and failed to pass a carbon price by referendum twice after triggering significant pushback from industry and dividing the state's labor and environmental movements. Ultimately, the pro-climate coalition's effort found success by first enacting a clean portfolio standard law through the state's legislature in 2019. Two years later, the state finally enacted a carbon price, designing the policy as a "cap and invest" program that uses revenue from an ETS to make clean energy investments.

3.2.2 Overcoming opposition through procedural maneuvers

Design and communication are not the only paths to policy success. Carbon pricing advocates in government can also take advantage of procedural maneuvers to advance pricing.

Log-rolling

Log-rolling, or packaging carbon pricing with other policies, is a classic approach for building support among neutral actors. For example, if a government is already pursuing larger tax reform packages, including carbon pricing as one element among them may be less controversial than pursuing it on its own. This can be especially effective when carbon pricing is combined with spending on green infrastructure, low-carbon technology, or redistributive transfers to vulnerable groups.¹¹⁷ Log-rolling with such measures does not mean concealing the carbon price, but finding complementary policies that expand the coalition. Indeed, attempting to “sneak in” a carbon price through log-rolling could provoke a backlash that threatens subsequent implementation and consolidation.

Argentina successfully achieved its carbon tax through log-rolling when it passed a much larger tax reform program.¹¹⁸ Uruguay presents more of a cautionary tale, as log-rolling probably helped prevent controversy but the compromises required to do so caused the overall package to have either a null or minimal net positive effect on carbon emissions (see [Case Study 2.1](#).)

Shifting to sub-national or international venues

When carbon pricing advocates face strong barriers at the national level, they can also consider shifting venues to either the subnational or international level. Many countries have implemented carbon pricing at the subnational level first, laying the groundwork for national prices later. As discussed in [Case Study 3.4](#), China

launched pricing pilots in several subnational regions—Beijing, Shanghai, Guangdong, and Tianjin (2013), Hubei and Chongqing (2014), and Fujian (2016)—before launching its national ETS in 2021. Subnational pilots offer an opportunity for governments and firms to learn about pricing without applying it to the whole economy, limiting the number of entities with a strong incentive to resist. This approach can also work well in federal countries, as the ability for subnational units to implement policies independently allows jurisdictions with more climate policy support to move faster. And, though there are limited examples of international carbon pricing in developing countries so far, transnational programs are possible: the California cap-and-trade program has been linked with a companion program in Québec since 2014.

Process Management

As in all policymaking, control of the negotiation process itself, the degree of formalization, and the level of transparency can all shape outcomes. As discussed in [Chapter 2](#), it is often worthwhile to include stakeholders who are neutral or even initially opposed to see if they can be brought in through policy adjustments and compromise. Brazil chose to take a very deliberate, gradual process for considering a carbon price, with wide consultation and many engagement sessions. Stakeholders observe that, while this slow approach may have delayed the introduction of a carbon price, it may have helped the movement survive the administration of President Bolsonaro, who was strongly opposed to climate action ([Case Study 3.3](#)).

CASE STUDY 3.4

Easing opposition through pilot phases in China

Before the introduction of emissions trading, the Chinese government already had experience with an “Energy Saving Campaign,” but the process of setting targets for individual firms proved difficult. As momentum grew for carbon pricing in other countries, and the European Union offered specific support for emissions trading, interest in an ETS within the Chinese bureaucracy grew.

The idea of a carbon pricing scheme initially faced resistance due to concerns that an energy price shock would disrupt an economic growth model that had brought benefits to millions. And even though the Central government has substantial authority over policy, the support of state-owned enterprises that dominate the economy would have to be key for any national pricing policy.¹¹⁹ Carbon pricing faced an additional hurdle: despite the high level of state capacity, the lack of a data collection apparatus for emissions meant that any pricing system would require non-trivial investments in new administrative and monitoring capabilities for both government and firms.

The government decided that rather than immediately pursuing a national ETS, it would set out a series of pilot ETS programs in eight provinces and large cities. The pilot jurisdictions were chosen to cautiously test the performance of an ETS, with the different provinces and cities accorded flexibility in their chosen design and coverage of their local ETS. Hubei province’s ETS for example opted to only cover industrial emissions, while Shanghai’s covers industry, domestic aviation, transportation, and buildings. Most only cover CO₂, but Chongqing’s ETS also covers CH₄, N₂O, SF₆, HFCs, and PFCs. In Shenzhen, all firms with annual emissions of over 3,000 tons of dioxide are covered, but in Tianjin, the threshold is 20,000 tons.¹²⁰

The pilots were designed to give regulated entities and bureaucracies a chance to learn and build the capacity to comply, a process that can require several years. Compliance rates appear high but concerns about data quality persist despite a decade of pilots and investment. This is due in part to persistently low prices in most of the pilots (although Beijing’s pilot has reached over \$17 per ton). In the pilots’ early stages, electricity consumers were compensated by receiving free allowances associated with indirect electricity emissions.¹²¹

The government has now begun the process of transitioning to a national ETS. Since 2021, power sector emissions, accounting for more than 40% of China’s carbon dioxide, have been covered. As with the pilot systems, the system began with many free allowances and prices on the secondary market are still relatively low (\$8.20 per ton on the secondary market). Coverage is intended to expand over time; in the meantime, the pilots continue to cover sectors and emissions not yet integrated into the national system.¹²² The government has also pursued other climate mitigation strategies alongside pricing, especially through investment in manufacturing and deployment in areas like clean energy, electric vehicles, and mass transit. The overall effect of these spending programs may be larger in impact than the pricing schemes.



4.

**Achieving successful
implementation of carbon
pricing**



Key Messages

- Inclusive engagement of regulated entities and other stakeholders, along with detailed and precise rules (e.g., for MRV) and targeted communication can build trust in carbon pricing, shaping subsequent levels of support and opposition.
- Carbon pricing communication strategies inform firms of their legal obligations, encourage cooperation, and keep stakeholders updated on the policy's performance and plans for its development over time.
- Assessing and building institutional capacity, both for governments and for firms, is crucial for the successful implementation of carbon pricing. Concerns about capacity are especially high for countries with an ETS.
- Strategies for overcoming capacity issues include building on existing institutional infrastructures, simplifying MRV burdens where relevant, and starting with a facilitative approach to enforcement before gradually transitioning to a more punitive approach.

This chapter focuses on three core pillars of policy implementation: formulation of MRV rules, communication with regulated entities and other stakeholders, and compliance and enforcement of legal obligations.

4.1

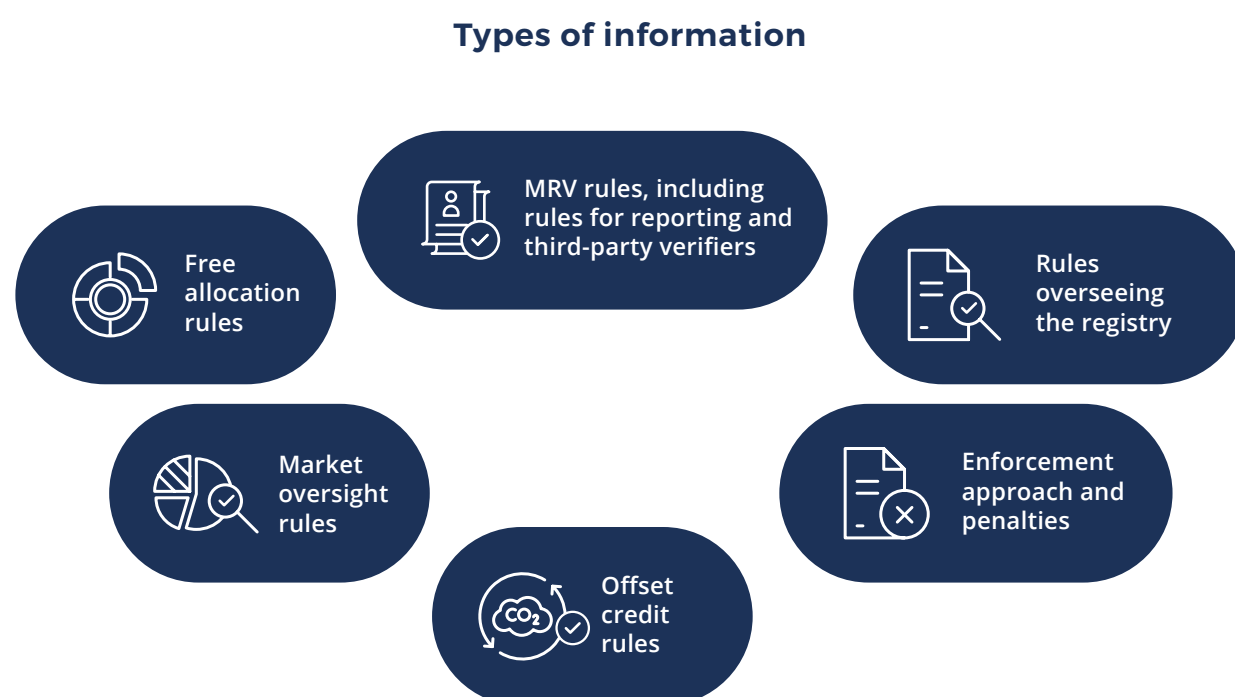
Instilling trust through compliance rules

To move carbon pricing from paper to practice, regulators develop a suite of additional rules and guidelines that detail what regulated entities must do and what they can expect (**Table 4.1**). This tends to be more demanding for an ETS, than for a carbon tax which requires fewer rules and additional institutions. Generally, the responsible ministry or a specific agency oversees carbon pricing implementation. Whereas the political sphere is crucial for policy design and adoption, the public administration sphere is central in implementation. Detailed instructions help regulated entities understand the compliance activities expected of them, allowing them to make plans according to a shared set of expectations. It can take time to formulate these rules. For example, Indonesia enacted its ETS law in October 2021 and continues to develop implementing regulations as of June 2024.¹²³

Compliance rules are important for providing regulated entities with the certainty to make the investments necessary to close the cost gap between high-carbon and low-carbon technologies, reduce the cost of emissions mitigation, and realize behavior changes like fuel switching and technology adoption.¹²⁴ Clear rules can be decisive in determining whether regulated entities become alienated due to inefficient and unclear obligations or whether they gradually develop confidence in the carbon pricing policy and its procedures because their concerns are addressed. In this context, trust describes the willingness to make business decisions and invest in low-carbon technologies with the assumption that the carbon price will develop in a certain way.

TABLE 4.1

Types of regulatory and market information provided by carbon pricing regulators



Rigorous market oversight and disclosure requirements can combat regulators' temptations to provide preferential treatment of certain sectors through ad-hoc and opaque calculations of, for example, free allocations, exemptions, and tax rates. By making such information public, regulators defuse potential conflict among stakeholders and strengthen the belief that the government is motivated to pursue carbon pricing out of the public interest. Many of the policies established under the EU ETS provide examples of transparent decision-making processes, such as allocating free permits according to a defined method for calculating regulated entities' trade exposure and carbon leakage risk.

Developing a robust MRV system

Monitoring, reporting, and verification are indispensable for effective carbon pricing. Regulated entities need to measure and report their emissions or fuels to regulators, who must be able to verify the accuracy of emissions claims. Setting up an MRV system can be challenging, especially in contexts where regulators and regulated entities face capacity limitations.

A recommended strategy is for governments to build on existing MRV structures. Chile's carbon pricing MRV system is directly based on an existing MRV system developed for conventional air pollution controls (**Case Study 4.1**). Firms were already familiar with what, how, and when to report and they can report in a single system to the Ministry of Environment. Similarly, Türkiye positioned itself to eventually adopt a full emissions trading system by adopting MRV legislation in 2012 with the support of the PMR. While the country has not yet created a carbon price, approximately 1,000 entities have had to monitor, report, and verify their carbon dioxide emissions from large installations annually. Initially, the Turkish MRV system was voluntary, but since 2015 it has been mandatory, and regulated entities face fines for noncompliance.¹²⁵ Similarly, the South African carbon tax and the

2010 Indian Clean Environment CESS tax on coal, lignite, and peat built off the existing monitoring mechanisms in the tax system.

Where MRV systems do not already exist, many governments opt to help prepare both regulated entities and regulators by phasing them in over time. This may consist of making reporting voluntary at first and gradually moving to a mandatory system. During the voluntary phase, both regulators and regulated entities can build capacity and establish procedures without the fear of penalties if their reporting is not yet compliant.

Another common strategy for capacity building is to begin by using default values instead of measuring actual emissions. These default values are estimates based on the firm's sector, size, and other characteristics. In this way, firms can pay the approximate cost of their emissions without investing in the infrastructure necessary to directly measure their emissions. The use of default values is straightforward, but it is important to transition to requiring firms to report measured emissions quickly, as the use of default values does not incentivize firms to reduce their emissions thereby reduce their cost burden. See **Section 4.3.2** for further discussion of options for simplified MRV systems.

Data management is also challenging for both regulators and regulated entities, and poor data quality has hampered some programs. For example, the city of Wuhai in Inner Mongolia, China, discovered in 2021 that a company had falsified data, which would have increased its free allocation share in the national ETS. The fraud incident led to ETS rule revisions that imposed stricter financial penalties in cases of fraud and noncompliance. Data quality concerns were mentioned as early as 2017 as one of the reasons for delaying the Chinese national ETS, but a systematic effort has eventually built confidence in the system. These examples illustrate the importance of investing in MRV and data management to ensure the credibility and effectiveness of the carbon pricing policy.

CASE STUDY 4.1

Chile's roll-out building on existing emissions monitoring infrastructure

In 2014, Chile's legislature adopted a broad tax reform that included three emissions taxes, including a carbon tax on stationary sources. With high societal pressure to raise money for the educational system, as well as the public's desire to reduce local air pollution, carbon pricing advocates worked quickly to take advantage of the opportunity offered by the tax reform.

Electricity generators were initially skeptical of the carbon tax, as they had made substantial investments in coal following Argentina's decision to cut natural gas supply to Chile in 2007. One key to securing their acquiescence was the decision to set the rate at just \$5 per ton and to provide cost certainty by fixing the price in law. The policy also defined a high threshold at which emitters became subject to the tax, leading the policy to apply primarily to the power sector. However, the Chilean constitution requires tax revenue to go to the general budget, so policymakers could not allocate carbon price revenues to specific pre-defined uses.

The carbon tax entered into force in 2017 and its implementation proved straightforward, largely because electric utilities and heavy industry had already developed emissions MRV systems in response to conventional air quality standards adopted between 2011 and 2013.¹²⁶ This process had already given regulated entities experience in interacting with regulators on emissions control.

After the tax's adoption, the agricultural sector and other groups with seasonal operations, as well as renewable energy firms, raised concerns about the use of thermal capacity to calculate the tax. Chile's government responded quickly by switching to total annual emissions. Policymakers also later added an offset mechanism allowing companies to submit emissions reductions or capture certificates from domestic projects instead of direct payment of the tax.

Chile's government has also continued to work on improving the tax and there are plans to introduce a tax price raise in a future tax reform. The election of a strongly pro-climate government in 2021 has raised new opportunities for plans to raise the carbon tax from \$5 to \$35 per ton by 2030. The Framework Law on Climate Change passed in 2022 legally requires the government to develop a range of carbon pricing instruments, including an ETS. Rather than replace the carbon tax, policymakers are considering whether to allow the private sector to choose between the two instruments or use the tax as the price floor for the ETS.

4.2

Communicating effectively during policy roll-out

Once a policy is adopted and rules are established, the policy's designated regulator formulates a communication strategy. This strategy should accomplish three main goals. First, regulated entities must understand their responsibilities and legal obligations. Second, other relevant government institutions and regulated entities should determine how to coordinate information and decision-making with the primary regulator. Third, procedures need to be created to keep regulated entities, other stakeholders, and the

public informed of the policy's performance and any planned adjustments, as well as provide channels for regulators to systematically gather and process feedback. The following sections assess the political economy of these three objectives as they relate to a carbon pricing communication strategy. The PMR/Carbon Pricing Leadership Coalition Guide to Communicating Carbon Pricing offers detailed and practical advice on creating a carbon pricing communication strategy.¹²⁷

4.2.1 Explaining responsibilities and obligations

The most basic function of a carbon pricing communication strategy is to inform regulated entities of their legal responsibilities and obligations under carbon pricing. Clear explanation of the processes by which regulators will monitor and verify emissions and firms will pay the tax liability they incur (under a carbon tax), or purchase/trade emissions allowances (under an ETS) is vital. Firms need to acquire a detailed understanding of what they need to do, how, and when if they are to comply.

It is in regulators' interests to explain the practical implications of carbon pricing to regulated entities thoroughly. This may involve both direct interaction through training workshops and roundtables and the writing and distribution of technical guidelines and news articles. The goal of these efforts is not just to convey technical knowledge, but to engage with regulated entities as compliance partners. To the extent possible, and especially at the outset, communications efforts should aim to generate buy-in from affected actors by cultivating a sense that stakeholders are not being left behind or threatened.

As discussed in [Section 4.1](#), the success of initial efforts to help firms become comfortable with their new carbon pricing obligations can shape their disposition toward the policy over the long term. When regulators provide clarity and certainty, firms often see the opportunities and benefits offered by stringent carbon pricing favorably. But if firms remain uncertain about their responsibilities, they are likely to resist. Kazakhstan was forced to suspend its ETS in 2015 after adopting it in 2013, for example, and stakeholders attributed industry resistance to a lack of government engagement with the private sector in developing and implementing the program ([Case Study 5.2](#)).

4.2.2 Stakeholder inclusion

In some developing countries, carbon pricing policies apply to only a handful of large firms, making it easy for regulators to communicate consistently with regulated entities. In others, carbon pricing affects many firms—China’s nationwide ETS began with more than 2,200 firms.¹²⁸ In these contexts, regulators need to take a proactive and structured approach to coordination (**Case Study 3.4**).

Similarly, the implementation of carbon pricing can involve government authorities from a wide range of sectors, from energy and manufacturing to transport and agriculture. To accommodate the

varied missions and remits of these institutions, governments often opt to establish formal procedures for intra-governmental coordination. Through these procedures, governments can clarify and align carbon pricing activities with existing obligations and ensure regulated entities receive consistent information.

A third function, often left implicit, is to provide a venue for maintaining enthusiasm and political support for carbon pricing among government stakeholders. **Case Study 4.2** describes Mexico’s coordinated communication efforts for its ETS program.

CASE STUDY 4.2

Mexico’s comprehensive implementation strategy linking pilot and implementation phases



Mexico launched its three-year ETS pilot program in 2020, with plans to launch a formal national program in 2022.¹²⁹ The pilot enabled the nation to build the carbon pricing capacity and fluency of regulators and regulated entities. It sought to enhance competency in emissions reporting, system design, and the emissions trading capacity of regulated entities. As part of the pilot, the Mexican government engaged in a comprehensive stakeholder mapping, communication, and engagement strategy. The strategy explicitly included linking experiences in the pilot and implementation phases to strengthen future compliance.

Effective early engagement with regulated entities

The Secretariat for Environment and Natural Resources (SEMARNAT) began assessing the

feasibility of a mandatory system in 2015, identifying legal and technical requirements and developing MRV guidelines, regulatory context assessments, and stakeholder engagement procedures. Early in the planning process, private sector stakeholders were proactively consulted about their concerns and questions through the Emissions Trading System Advisory Committee, a dedicated multistakeholder forum consisting of government, academic, and industry representatives. This effort was a major innovation in how public policies are developed in Mexico and stakeholders view this decision as invaluable for the subsequent success of the planning process, legislative amendments, and formal consultation.

Building on this initial consultation, SEMARNAT implemented an ETS simulation exercise in 2017–2018 in collaboration with the PMR. The simulation

involved direct technical exchanges between regulators and representatives for over 100 energy and industrial companies. This exercise led to the formation of a public-private working group. Guided by the ICAP ETS Handbook, the working group conducted a series of constructive dialogues that ultimately produced an ETS design that would be politically feasible in Mexico.

In the day-to-day operation of the pilot, the regulator and regulated entities maintained ongoing dialogue relating to the implementation process. Policymakers from SEMARNAT note the value of the exchanges as an evaluation mechanism for improving the system. For example, they described recognizing the importance of specifying and incorporating specific processes and procedures in the implementing rules to generate trust and certainty for regulated entities and reduce the risk of legal challenges to regulatory decisions not described in the original policy.

Communication, capacity building, and stakeholder engagement strategy

In parallel with its stakeholder consultation, the Mexican government commissioned the design of a communication, engagement, and capacity-building strategy for its ETS.

Tailored specifically for the Mexican context, the strategy identified clusters of stakeholders in support or opposition to ETS. This stakeholder mapping was a crucial step for preparing targeted messages and strategically positioning the ETS within the broader landscape. The strategy also produced a proactive risk management plan for addressing a wide range of threats, including inconsistent messaging from other parts of government, institutional instability, poor performance, lack of periodic information for key actors, and politicization of the ETS by organized opposition. The final component of

the strategy was a capacity-building plan that identified productive narratives and opportunities to develop skills and seed constructive debate among audiences directly involved in the design and implementation of the ETS.

Once the strategy was formulated, it was reviewed and integrated into the government's broader carbon pricing implementation strategy, along with a monitoring and evaluation plan to assess its application and performance. Government-affiliated industry associations play an important role in implementing the strategy, acting as mediators between regulated entities and the government.

Ongoing decarbonization efforts despite political turbulence

The administration of President Andrés Manuel López Obrador (2018-2024) is perceived to have not proactively prioritized ETS, with observers seeing ETS efforts as having largely stalled^{130, 131}. The proliferation of subnational "green" taxes, also culminated in a successful challenge court challenge that pointed to unconstitutionality with aspects of their implementation.¹³² This introduced additional policy uncertainty that could affect carbon pricing stringency, and underscored the need for greater coordination on environmental taxes between the federal and state government.¹³³ Amidst such concerns, firms continue to invest in emissions monitoring and reduction technologies, likely reflecting the success of SEMARNAT's strong engagement effort. President-elect Claudia Scheinbaum has reiterated her commitment to accelerating the renewable energy transition, but there remains a lack of clarity on the role of carbon pricing and ETS within this transition as the pilot program's status is unclear and a full-fledged ETS has not been implemented yet.¹³⁴

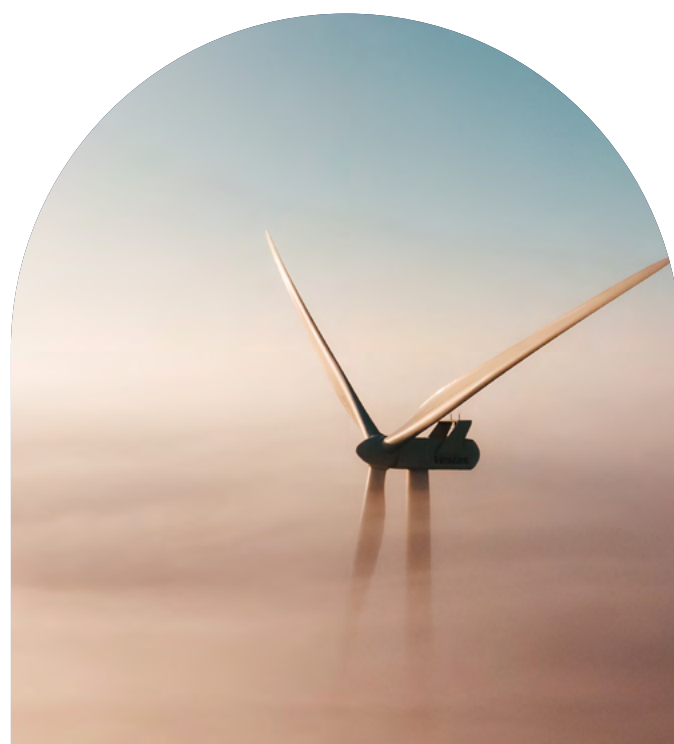
Keeping stakeholders informed

The third goal of a carbon pricing strategy is to keep stakeholders informed of the policy's performance and plans for its development over time. Regulators in several jurisdictions such as California and Québec regularly disseminate implementation results, such as compliance rates, collected revenues, and the use of those revenues. Such transparency can discourage corruption and mismanagement and create virtuous cycles in which high rates of compliance and effective use of carbon pricing revenues make firms more motivated to comply and make similar investments in emissions reductions. Of course, if the policy is performing poorly, transparency may contribute to negative cycles of low compliance, revenues, and investment.

Regulators often need to adjust carbon pricing rules, either following a planned set of phased stages or on an ad-hoc basis (e.g., in response to unanticipated events). By establishing regular channels of communication, regulators can disseminate new obligations and other important information to regulated entities and other stakeholders. For example, the Chilean government has intentionally developed communication ties with specialized spokespersons for different stakeholder groups, such as indigenous communities, youth, the private sector, and academia. The speed and clarity afforded by these procedures are especially important for maintaining trust and minimizing uncertainty when regulators deviate from previously announced plans.

These communication channels can also work in the reverse direction, from the regulated entity to the regulator. Collecting feedback on the policy's performance and practical suggestions for improvement is critical for empowering regulators to make evidence-based adjustments to carbon pricing rules. A representative of an international NGO highlighted this aspect by describing how China has established multiple feedback mechanisms to promote responsive regulation, including provisions that ensure a chain of communication from regulated entities to provincial authorities to the central government (see [Section 5.2](#) for further discussion of strategies for updating carbon pricing policies).

Beyond regulated entities, efforts to communicate with the public are important for sustaining support for carbon pricing throughout implementation. For example, communication campaigns that highlight the use of carbon pricing revenues for specific environmental causes or to address the policy's regressivity can help raise awareness of the policy and generate support. Government communication around carbon pricing success stories (e.g., firms that make substantial emissions reductions) can raise broader awareness and support for carbon pricing.¹³⁵



4.3

Overcoming barriers to compliance and enforcement

After implementation rules have been formulated and communicated to regulated entities and other stakeholders, countries are prepared to start enforcing compliance with the legal obligations of

carbon pricing. This section first explores common obstacles to compliance and enforcement in developing countries before describing a set of strategies for overcoming such challenges.

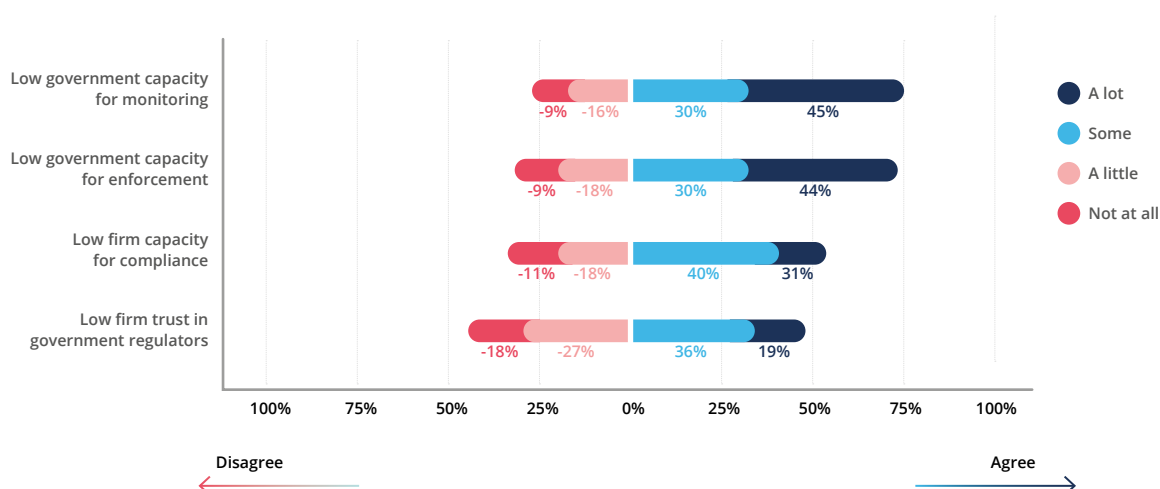
4.3.1 Compliance, monitoring, enforcement, and trust limitations for carbon pricing

Most carbon pricing initiatives in developing countries contend with significant limitations in compliance, monitoring, and enforcement. Limitations of trust are common as well. Carbon pricing experts believe both governments and firms are generally poorly positioned to enforce and comply with carbon pricing (**Figure 4.1**). Three-quarters of the experts express concern that government capacity for monitoring and enforcing carbon pricing is either very or somewhat low. Similarly, 70% judge the capacity

of firms to comply with carbon pricing as either very low or somewhat low. Another 65% view firms' trust in government regulators posing at least some barrier to implementation. While the capacity assessment tool included as an attachment to the World Bank's report on *Carbon Pricing Assessment and Decision-Making* offers a way to make a more comprehensive assessment, these results indicate the presence of substantial obstacles to implementing ambitious carbon pricing in low-capacity countries.¹³⁶

FIGURE 4.1

Perceived barriers to ambitious carbon pricing relating to firms and regulators



Question: "To what extent have the following posed a barrier to ambitious carbon pricing in your country?" (96 responses)."

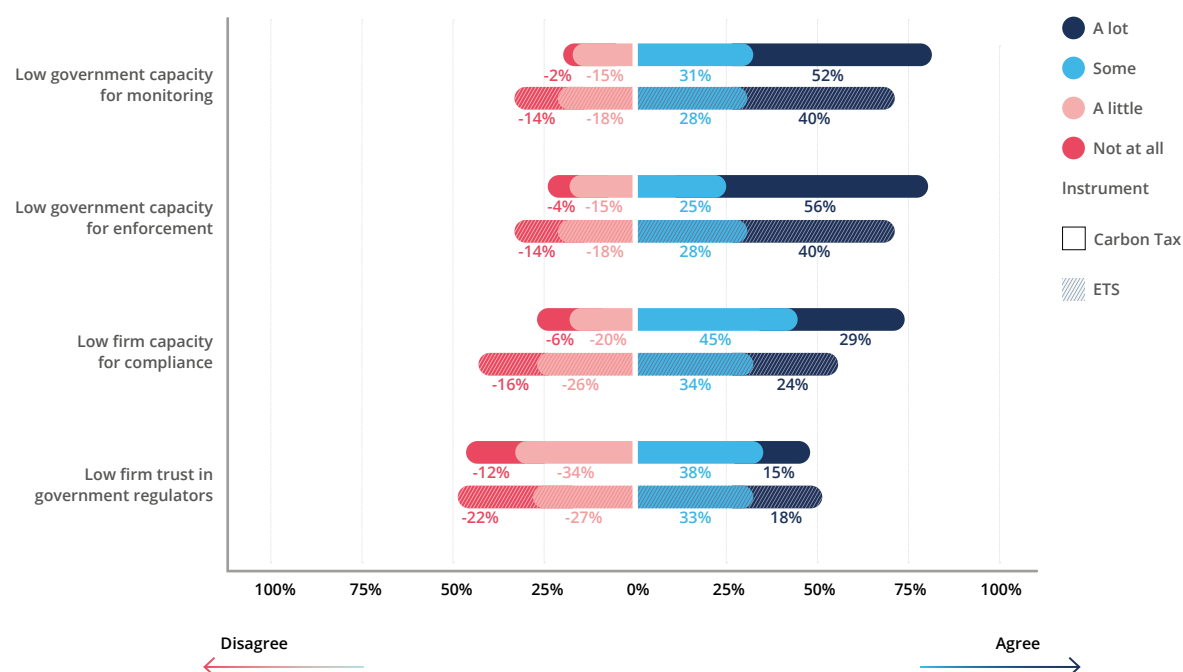
Source: Original expert survey

While the capacity challenges for carbon taxes are meaningful, as the World Bank's *Carbon Tax Guide* details,¹³⁷ pursuing an ETS may place a particularly severe strain on capacity (**Figure 4.2**). ETSs require a more elaborate institutional structure (e.g., allowance registry and trading platform) compared to an upstream carbon tax, an issue the World Bank report *Governance of Emissions Trading* lays out.¹³⁸ As a result, carbon pricing experts in countries pursuing an ETS were

more likely to identify “government monitoring” and “enforcement capacity”, respectively, as a major concern than experts in countries pursuing a carbon tax (82% vs. 67% and 80% vs. 67%). Similarly, 72% of carbon pricing experts indicated an ETS is likely to cause firms to have compliance challenges compared with 58% for a carbon tax.

FIGURE 4.2

Perceived barriers relating to firms and regulators, by carbon pricing instrument



Question: “To what extent have the following posed a barrier to ambitious carbon pricing in your country?”
(50 responses from respondents in countries with carbon taxes adopted or implemented, 49 responses from respondents in countries with ETSs adopted or implemented).”

Source: Original expert survey

4.3.2 Strategies for overcoming compliance and monitoring limitations

Simplified MRV

The most immediate response to capacity limitations is to design rules that account for them. These include simplified MRV approaches that use default values rather than actual emissions data, clear and easy-to-use templates and forms, and built-in plausibility checks for data submission (Table 4.2). Such measures help facilitate compliance among regulated entities that are still learning to navigate the policy and can gradually be replaced by more elaborate provisions. To ensure that rules are feasible, regulated entities can be involved in rulemaking processes such as rule design, the development of methodologies, and setting default values.

Simplified MRV measures may require regulators to rely on trust to a greater extent than they otherwise would. In Chile, for example, policymakers initially intended to have regulators use third-party verification, but legal barriers required the use of a simpler verification strategy; the regulator verifies the data itself rather than using third-party verification. While this strategy carries a higher chance of false reporting, the process is simpler and, if regulators have come to trust that regulated entities will comply with the rules, the risk of cheating may remain relatively low.

TABLE 4.2

Options for simplified MRV to ease the initial compliance burden

Option	Description
Default values rather than actual emissions data	Default factors are an estimate of emissions rather than directly measured emissions. This simplifies the procedure and saves costs for regulated entities. The regulator generally establishes default factors for the covered emission sources. The downside of default values is that they do not incentivize investment in cleaner technology and processes.
Clear and easy-to-use templates and forms	Numerous ETSs provide templates that can easily be downloaded and completed. These facilitate the process of reporting for regulated entities.
Built-in plausibility checks in data submission	To verify reported emissions, regulators can cross-check them with activity data, such as amounts of steel produced and energy usage patterns. Third-party verification may be more accurate and reliable but also requires accredited verifiers and verification standards.

Capacity-building

A longer-term strategy is to build capacity to overcome capacity limitations. This involves establishing sound infrastructure for carbon pricing and targeted guidance for specific types of regulated entities on how to meet their obligations.

China's experience provides an instructive example. The National Development and Reform Commission had responsibility for developing carbon pricing until 2018, when it became the responsibility of the Ministry of Ecology and Environment. However, the latter lacked the experience and technical capacity to coordinate carbon pricing stakeholders effectively, as it had been responsible primarily for implementing only non-market pollution control instruments up to this point. To address this capacity gap, China invested substantial resources in building

the ministry's capacity for engaging with industry groups and expertise in managing markets and enforcing penalties for noncompliance. These capacity-building efforts were supported by initiatives like the EU-China ETS Dialogue, which organized training sessions for firms to improve their understanding and MRV responsibilities.¹³⁹

Beyond experience and technical expertise, governments need to be appropriately staffed to provide timely support to regulated entities through helpdesks, guidelines, and up-to-date websites. Since this may be challenging to organize in resource-limited contexts, policymakers should allocate resources ahead of time for ongoing support services. Policy design can also anticipate capacity limitations by, for example, designating an upstream point of compliance, which tends to be more straightforward to administer.¹⁴⁰

4.3.3 Strategies for overcoming enforcement limitations

Considering the capacity limitations of regulated entities, regulators may opt for a facilitative, rather than punitive, approach to compliance and enforcement in the early phases of implementation. This can avoid alienating regulated entities and build a collaborative culture of compliance. However, facilitative enforcement risks free-riding and subsequent reputational damage if firms start to perceive enforcement as lax.

The Mexican ETS pilot illustrates a gradual approach to enforcement. During the pilot phase, entities did not face monetary penalties for noncompliance. Instead, they would not be able to bank unused allowances for the next pilot compliance cycle. They would also lose free allowances during the first compliance cycle of the system's operational phase. Through this process, regulated entities were able to become fluent in their roles and responsibilities without fear of severe punishment for failing to comply with an unfamiliar regulation. A further discussion

of Mexico's experience is provided in **Case Study 4.2**.

More punitive enforcement tactics include naming-and-shaming, make-good obligations, monetary fines, and criminal charges. Naming-and-shaming involves making noncompliance information publicly available (e.g., through press releases) on the premise that firms will shrink from the resulting reputational damage. Make-good obligations give regulated entities an extended deadline to comply. Fines are a fixed amount to be paid per ton of emissions. For example, South Africa's 2019 carbon tax includes penalties for the failure to register for the carbon tax or submit carbon tax returns on time of up to 10,000 Rand (about \$670) per day of noncompliance.¹⁴¹ Criminal charges are also legally available and, while rare, some governments have brought charges for reporting false information and selling fraudulent carbon credits. Examples include cases in Canada and the United States.¹⁴²

The blurring of interests and responsibilities can complicate enforcement. In several countries, state-owned enterprises are some of the largest emitters. This creates a situation in which the actor who fines and gets fined is *de facto* the same. In these contexts, non-monetary tactics may be more effective for eliciting compliance. China's gradual and adaptive approach to regulating state-owned enterprises within its ETSs is particularly instructive (**Case Study 3.4**) and will be especially so as the ETS is rolled out to the manufacturing and industrial sectors.

Reducing the coverage by initially increasing the threshold for entities that must comply with certain requirements can be another option to gradually build up capacity and phase in the implementation of a carbon pricing instrument. For example, the Vietnamese ETS plans currently include only the waste and few industrial emitters (see **Case Study 3.1**). This approach is in line with a gradual expansion of scope and ambition as described in **Chapter 3**.



An aerial photograph of a complex highway interchange with multiple lanes and overpasses. The scene is surrounded by lush green trees, some with autumn-colored foliage. A large, white, stylized number '5' is superimposed on the right side of the image, partially overlapping the highway and the trees. Below the number, a dark blue circular shape is visible.

5

**Consolidating and
strengthening carbon
pricing**

Key Messages

- Support for carbon pricing needs to entrench and expand over time to achieve meaningful emissions reductions.
- Governments can attempt to maximize equity and minimize opposition to carbon pricing by adjusting the balance of costs across groups through a combination of flexibility mechanisms and the distribution of visible benefits.
- Policymakers seeking to build capacity, transparency, and trust can gradually raise ambition over time through either separate or dynamically linked phases.
- Requirements for governments to reevaluate prices at regular intervals are increasingly popular as a strategy for ensuring carbon pricing policies adapt to changing conditions without locking in specific increases or tying them to specific goals.
- The absence of strong carbon pricing coalitions generally implies a preference to limit discretion in updating the policy, and instead tending to prefer automatic stringency mechanisms.

To realize the full potential of carbon pricing, supporters must contend with ongoing efforts to weaken or repeal it, especially as the policy's ambition increases. This chapter assesses how carbon pricing, once adopted, can be consolidated and strengthened. It first describes strategies for creating an enduring carbon pricing coalition before turning to plans for raising the ambition of carbon pricing over time.

5.1

Consolidating the carbon pricing coalition

Once a carbon price is enacted, a variety of threats that test the strength and cohesion of its support coalition typically emerge. Stagnation, retrenchment, and the eventual reversal of carbon pricing can result. **Table 5.1** provides examples of these challenges to the consolidation of carbon pricing.

To maintain momentum, supporters must consolidate the coalition for carbon pricing. Whereas coalition-building, negotiation, and implementation of carbon pricing implicate only current interests, consolidation requires advocates to consider how these interests will change in the future. The political economy of carbon pricing, like that of any policy, is not static. Policy feedback cycles emerge gradually over time, as choices made at the outset eventually reshape the landscape of relevant interests. Ideally, these decisions expand the coalition of supporters over time, rather than creating or strengthening opponents.

There is a wide range of strategies for consolidating carbon pricing, including continuing to revise, adapt, and expand the policy itself; receiving reliable financial support and capacity building; persistently engaging the public and policymakers to communicate the benefits of carbon pricing; and adopting other climate, fiscal, and social policies that complement and rely on carbon pricing (see **Box 5.1** for expert views on the importance of these and other strategies). These strategies can help prepare for future attempts to weaken or dismantle prices, although they can never prevent them completely.

The most effective strategies redistribute the costs and benefits of carbon pricing across economic, social, and political groups. These aim to strike a balance between retaining support in the short term and avoiding inequities and favoritism that may risk the coalition's cohesion over the long term. The following discussion examines two such strategies in greater detail.

TABLE 5.1

Examples of emerging threats to the consolidation of carbon pricing

Threat	Description	Illustration
Ambition handcuffs	Policy design choices empower opponents to resist price increases, limiting future ambition	Legislative approval is required to increase price levels (e.g., Chile's 2014 carbon tax)
The “fog of enactment”	Stakeholders belatedly discover an incentive to resist once the initial “fog of enactment” lifts and costs become real ¹⁴³	Fossil fuel exporters initially support, then push to abolish carbon pricing (e.g., Kazakhstan, see Case Study 5.2)
Adverse issue-linkage	Opponents link the policy to other, more contentious social issues ¹⁴⁴	Carbon pricing framed as “climate elitism” (e.g., France's 2018 Yellow Vests protests ¹⁴⁵)
Adverse politicization	Opposition to the policy becomes polarized, forming part of a partisan political platform	Carbon pricing is targeted as part of partisan messaging (e.g., Australia's 2014 carbon tax repeal)
Crisis spillover	Unrelated short-term crises (social, political, economic, or environmental) fracture support for long-term policy	Global inflation delays plan for implementing carbon pricing (e.g., Indonesia's carbon tax ¹⁴⁶)

Flexibility mechanisms

One strategy to promote the consolidation of carbon pricing is to simply reduce the policy's costs for key stakeholders. Flexibility mechanisms like offset credits or free permits are useful for accommodating regulated entities and reducing the overall costs of decarbonization. In the South African system, for example, firms can use carbon credits to offset 5-10% of their emissions (**Case Study 5.1**). Flexibility mechanisms can be included in the policy's initial design or added subsequently. For instance, Chile created an offset mechanism for its carbon tax six years after its initial passage (**Case Study 4.1**).

CASE STUDY 5.1

South Africa's delays and resistance to attempts to raise ambition

South Africa published its National Climate Change Response Policy in 2011 and subsequently released a carbon pricing proposal and began seeking comment and support. Discussion and consultation would take the next eight years. The Department of Environmental Affairs backed the proposal immediately, but many other departments were initially opposed: Trade and Industry was concerned about industrial energy prices already being high; Transport was concerned about impacts on fuel costs, and Employment and Labor was concerned about the impact on coal jobs, salient concerns given that more than 90% of South Africa's electricity is generated from coal and up to 200,000 people were employed in coal mines, coal power plants, and coal transport. Resistance from energy-intensive industries, combined with the lack of ministerial enthusiasm and a high level of ministerial turnover, undermined momentum.

To ease these concerns, the Department of Environmental Affairs led an extensive process of stakeholder consultation, which helped avoid the misperception that the tax's primary aim would be to simply raise revenue. Carbon pricing boosters also worked to emphasize the co-benefits of the policy. For example, testimony by civil society organizations about local air pollution impacts proved pivotal for policymakers who might have otherwise been less motivated to address a purely global issue.

When Tito Mboweni, became Minister of Finance in 2018, the policy regained its political momentum. The 2019 announcement of the EU's plans to pursue its CBAM policy provided a new rationale for departments like Trade and Industry to support carbon pricing. This became reality in June 2019.

The tax was initially to be priced in U.S. dollars, but, in response to domestic firms' concerns about exchange rate fluctuation, the tax was eventually set in rand, at 120 Rand (approximately \$8) per ton to start. Reflecting policymakers' desire to address fugitive emissions, reduce trade impacts, and encourage offset credit projects, they created a wide array of exemptions and offset crediting opportunities.¹⁴⁷ As a result, firms can avoid between 60% and 95% of their tax burden through free emissions allocations and offset credits. Firms will continue to enjoy large exemptions until the policy's second phase, and some key sectors—agriculture, forestry, waste, and the state-owned utility Eskom—remain outside the tax's scope.

In February 2022, a new Climate Change Bill and budget speech reset plans for the carbon tax.¹⁴⁸ These plans announced an intention to gradually raise the tax rate until it reaches \$30 by 2030 and more than \$120 after 2050. But the start of the carbon tax's second phase was also delayed from 2023 until 2025, raising significant concerns about the future. Changes in ministerial enthusiasm and exposure to domestic inflation may mean that the tax will not provide meaningful incentive for firms and households to decarbonize in the foreseeable future, and the planned rate increases may merely serve as bargaining chips to be cashed in for further short-term political gains.

If flexibility is too great and/or in place for too long, it will eliminate the incentive for firms to reduce emissions and maintain their interest in opposing stringent pricing in the future. As a result, flexibility often only postpones opposition until ambition starts to rise. This occurred in Colombia, where firms were at one stage able to avoid 100% of the carbon tax through offset credits (see **Case Study 3.2**). Similarly, state energy subsidies and long-term power purchasing agreements mean generators in Indonesia do not bear meaningful costs from the carbon tax (see **Case Study 2.2**). When eliminating exemptions, it is crucial that regulators target raising both the average and marginal carbon price paid. The former can provide valuable insights for long-term planning, policy design, and overall progress assessment, while the latter is useful for operational decisions and identifying which actions will have the most significant impact on reducing emissions in the short-term.

Distributing visible benefits

A more sustainable strategy is to create benefits that change group interests over the long term. The more that firms and industries benefit from increasing carbon prices, the stronger and more unified the coalition will be in supporting and raising the policy's stringency over time. To accelerate this shift, policymakers can subsidize the development and implementation of low-carbon technology. In the United Kingdom, the energy sector changed from opponents to supporters of carbon pricing after electricity generators had invested in renewables, technologies whose value depends in part on the carbon price itself.¹⁴⁹ Developing countries also often opt to allocate carbon pricing revenues to fund low-carbon technology, although other countries—many in Latin America—have legal or constitutional restrictions on using tax revenue in this way and must look for other sources, such as repurposed fossil fuel subsidies.

It may also be important to create public benefits that are visible and explicitly linked to the carbon pricing policy. These typically take the form of compensation, but different communities may prefer different forms of compensation. Coal communities in India and the United States, for instance, want spending to be focused on replacing lost coal jobs, whereas the general public prefers more widely spread compensation and investment.¹⁵⁰ Carbon pricing experts, as well as public opinion surveys in middle-income countries, suggest that, in countries with less public trust in government, people may see using carbon pricing revenues for investment as more credible than broad compensation (**Box 3.1**).¹⁵¹

5.2

Planning for change over time

There are three approaches for structuring updates to a carbon pricing scheme.¹⁵² The first is a **discretionary** approach where governments simply update as needed. This offers flexibility but limits predictability. A discretionary approach may also make it difficult to revise or strengthen the policy, as it can be hard to re-capture the attention needed to address technical issues that emerge during a carbon pricing policy's operation. Stakeholders that rely on carbon-intensive production processes and products, especially firms that struggle to pass costs through to their customers, are likely to oppose proposals to raise the stringency of carbon pricing. Moreover, there is no guarantee that government leaders will continue to prioritize carbon pricing after its adoption, both due to government turnover and competing priorities. Opponents who failed to block the passage of a policy may wait until political attention has shifted, and then work behind the scenes to weaken it after passage. All these challenges make it important to anticipate and plan carefully for change.

An **automatic** approach is either based on a fixed schedule or tied to certain triggers, such as meeting emissions goals (as is done in Switzerland) or economic conditions (as in Colombia, which indexes prices to inflation). Tying the rules to non-emissions factors can address concerns around growth, but they can also undermine emissions impacts. Automatic changes provide the carbon pricing trajectory with the most predictability and protection from political turbulence, though such protection can never be complete. By reducing the risk that future administrations weaken carbon pricing, this approach communicates a credible

commitment to higher prices and places more pressure on firms to plan accordingly. Moreover, it provides entities with regulatory certainty, facilitating investment decisions in low-carbon alternatives. However, automatic mechanisms come at the cost of flexibility in the event of unexpected changes in conditions.

Finally, in a **structured discretionary** approach, where changes are not fixed in advance but are subject to reevaluation on a regular schedule, usually by a delegated body. The UK's independent Climate Change Commission, for example, is empowered to make recommendations every five years based on progress with emissions reductions. While the commission's recommendations do not bind the government, they provide regular windows of opportunity to update policy and a clearer signal when the government is falling behind.

The structured discretionary approach is an increasingly popular strategy, as it avoids explicitly defining stricter standards (which could face stronger opposition) while still ensuring that discussions about increasing stringency periodically return to the policy agenda. Similarly, while not a carbon tax, Vietnam's Environmental Protection Tax provides an instructive example of a streamlined process in which a standing committee in the legislature is empowered to adjust the tax within specified ranges, making it relatively easy to update.

Phased roll-out

Many countries break their pricing systems into distinct *phases* that expand the policy sequentially. The purpose of a pilot phase is to help build capacity for the regulator and trust and familiarity among regulated entities. China was able to experiment with different designs by conducting multiple parallel pilots in different cities and provinces (**Case Study 3.4**). During Mexico's ETS pilot, the regulator maintained an ongoing list of processes and procedures to be improved, which helped to build a consensus about how the full policy should be implemented. Developed countries also frequently employ a phased approach.

The weakness of the phased structure is that transitioning away from minimal or nonexistent pricing in an early phase to a policy with meaningful stringency in a subsequent phase is often difficult. In the case of the EU, high-emitting firms were initially more likely than lower-emitting firms to support the ETS in its early, lenient phase, but they eventually became more likely to express opposition to the policy as it entered a more stringent phase.¹⁵³ In Kazakhstan, plans to move beyond the second phase of its pricing program to the more stringent third phase elicited objections from regulated entities. These concerns caused the program to halt altogether for two years before it resumed with weaker stringency in the third phase than in the second (**Case Study 5.2**). Similarly, energy-intensive firms in India, Vietnam, and Bangladesh have threatened to relocate to other developing countries if their governments change from a voluntary to a mandatory carbon price. This presents additional political economy

challenges, even as the empirical evidence points to minimal impacts of carbon pricing on firm relocation decisions.¹⁵⁴ Delays in raising ambition undermines the urgency of the price signal, reducing pressure to invest in mitigation and leading firms to further lock themselves into fossil fuels and stranded assets.

CASE STUDY 5.2

Kazakhstan's carbon pricing policy suspended and amended following difficult implementation

Kazakhstan became one of the first developing countries to enact a carbon price when it passed ETS legislation in 2011. Covering about half of the country's emissions, the program was proposed and adopted quickly, attracting some initial support from fossil fuel exporters. Private sector involvement and consultation had been minimal, however, and a significant backlash from the private sector ensued.

The Kazakh ETS began its first phase in 2013 as a quasi-pilot, with free permit allocations based on historical emissions, no commitment to reductions, and penalties for nonreporting but not noncompliance. In 2014, the program entered its second phase, requiring firms to make gradual reductions in their emissions and a small amount of trading at low prices (around US\$2 per ton) began.¹⁵⁵ However, market activity quickly proved to be limited, in large part because the initial permit allocations were calculated during years of economic downturn. Stakeholders reported that firms found it challenging to acquire enough permits to comply with their obligations.

Under pressure from industry, the government soon rolled back requirements and extended the pilot phase by one year, but criticism of the ETS escalated. Industry groups claimed that, in addition to requiring unrealistic emissions reductions, the program was based on a "weak" "legal foundation."¹⁵⁶ Within the Kazakh government, there was also substantial disagreement over the order in which regions or sectors would be obliged to participate. Meanwhile, both international oil prices and the value of the tenge fell. In 2016, Kazakhstan suspended the ETS entirely for two years.¹⁵⁷

The ETS was reactivated in 2018 with greater industry involvement, but disconnects remain. Permitting was reformed to allow facilities to pick between grandfathering based on historical emissions or benchmarking sector-specific factors.¹⁵⁸ However, regulators have not explained how they provide free allocations. Industry had no way to anticipate that after several years of large free allocations, there would be none in 2021. Similarly, one-fifth of the reserve for the period 2022–2025 must be set aside for auctions, but, as of 2023, the Kazakh ETS regulator has not explained how the auction will be conducted. With patchy communications, firms seem to be having difficulty in planning for future carbon price developments and making investment decisions.

The pace of emissions reductions under the ETS has slowed to a halt, with the planned 2025 cap set above its 2015 level. Additional pressure mounted on policymakers when the price of liquified petroleum gas doubled in early 2022, resulting in large protests.¹⁵⁹ The price of traded permits in the Kazakh ETS remains very low, around 500 tenge or \$1, making trading a much cheaper option than emissions reductions. This limits the incentive for change. The government has announced that it intends for prices to rise from \$1.1 in 2021 to \$50.8 per ton in 2026–2030,¹⁶⁰ but the potential for industry and public resistance makes it unclear whether this claim is credible.

Dynamic linkage

One way to ease the transition from one phase to another is through dynamic linkages that connect firm performance in one phase to the next.¹⁶¹ Policymakers can allow emissions permits to persist across phases or use a dynamic asset price that accounts for rates of technological change, carbon budgets, or inflation. As described in **Case Study 4.2**, the Mexican government started its ETS with a pilot in which there were no monetary penalties for noncompliance, but compliant firms received additional credits for the post-pilot period. In Indonesia, firms can receive carbon credits based on renewable energy investments through the Joint Crediting Mechanism, which they can bank for use in future periods.

The relationship between coalition consolidation and approaches to raising ambition

There is a two-way relationship between plans for increasing stringency and the consolidation of the support coalition. If support for carbon pricing is relatively consolidated, it may be desirable to use a more flexible, ad-hoc approach to raising ambition. In contrast, if the carbon pricing coalition is weak and risks becoming fragmented in the future, a less flexible price trajectory may be more likely to succeed.

Similarly, it may make sense to chart a more gradual or differentiated trajectory if the risk of resistance is higher.³⁷ A gradual trajectory can be achieved by incremental rises in the carbon price, phasing out of offsets, or expansion of industries covered. Such measures may lessen the chances of repeating the experiences of Indonesia in the 1990s, Mauritania in the 2000s, Nigeria in the early 2010s, France in the late 2010s and more recently in 2023 Canada, when rapid energy price increases and general inflation led to public backlash and scaling back of policy ambition. A differentiated trajectory can involve structuring price increases to affect products used by wealthier consumers first, although this may be difficult in countries where the poor make up a large share of the population, as is the case for many developing countries.³⁷

BOX 5.1**What strategies do carbon pricing experts favor for raising ambition?****Broad emphasis on the importance of continuing the technical development of carbon pricing policies**

- The technical work of developing additional policy instruments was the most preferred strategy for promoting ambitious carbon pricing in both the short- and long-term
- Carbon pricing can only move forward if its frameworks and rules are ready to be rolled out

Distinct approaches for short-term and long-term strategy

- In the near term, experts value financial and technical support specific to carbon pricing and look to take advantage of windows of

economic or political opportunity

- In the long term, experts emphasize cultivating a stronger enabling environment for pursuing carbon pricing, leveraging complementary policies, international action, and education

More cohesive vision for near-term strategies than long-term strategies

- Experts identify only seven primary approaches in the short-term, whereas 11 long-term approaches attracted substantial support
- This difference may reflect experts' greater uncertainty about the long-term future of the political economy of carbon pricing

Common factors identified by experts for promoting ambitious carbon pricing in the short term

Strategy	Frequency	Example
Policy development	28%	"Creation of a robust and internationally acceptable ETS"
Financial support	22%	"Access to finance is of utmost importance"
Change in government	20%	"A federal government with a climate agenda"
Technical support	19%	"Support from development partners"
Education	16%	"Climate education for policymakers"
Lobbying	15%	"Lobbying, media, and [civil society organization] pressure"
Technical development	11%	"More effective MRV system"

Other factors included opportunities for peer learning (6%), the development of complementary policies (5%), improved enforcement (4%), international carbon markets (3%), regulatory stability (3%), external conditionality (3%), international action (2%), policy communication (2%), pilots (2%), and the end of a crisis (2%). Percentages do not add up to 100% due to multiple answers in open response.

Question: "In a few words, what would most help carbon pricing in your country in the short term?" (93 responses).

Source: Original expert survey

Common factors identified by experts for promoting ambitious carbon pricing in the long term

Strategy	Frequency	Example
Policy development	31%	"Designing tailor-made carbon pricing instruments mix for the country"
Complementary policies	22%	"A Green Deal"
International action	13%	"Trade (CBAM)"
Education	13%	"Awareness of local elected officials in the fight against global warming"
Financial support	12%	"Government to government incentives"
Coalition-building	8%	"A comprehensive and integrated approach that involves the government, private sector, and civil society in developing and implementing carbon pricing policies"
Institutional development	8%	"Establish a strong institutional architecture that does not depend on the political cycle"
Lobbying	8%	"A push from the domestic and international finance sectors"
Strategic policy design	8%	"Revenues obtained from carbon pricing used in mitigation actions/ technologies and...public welfare"
Technical development	8%	"Introducing an absolute emission cap for the market"
Technical support	8%	"A new CPLC [Carbon Pricing Leadership Coalition] including UN and IMF [International Monetary Fund]"

Other factors included change in government (7%), stronger monitoring and enforcement (7%), technical capacity-building (6%), policy communication (3%), disaster response (3%), and learning (2%). Percentages do not add up to 100% due to multiple answers in open response.

Question: "What would most help carbon pricing in your country in the long term?" (89 responses).

Source: Original expert survey



6.

**Conclusion: The future
of the political economy
of carbon pricing**

Carbon pricing has gained momentum in developing countries and most experts expect carbon pricing to continue to both spread and become more ambitious (**Figure A.1** and **Figure A.2**). Although many threats to carbon pricing remain—including adverse politicization, uncertain political outcomes, and spillovers from social disruptions, wars, and disasters—the supporters of carbon pricing have developed a variety of strategies for promoting, negotiating, implementing, and consolidating carbon pricing.

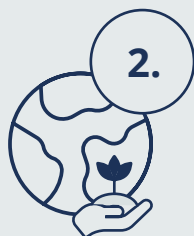
Economic theory suggests that carbon pricing is the single most cost-effective way to catalyze the economic transition to a carbon-neutral global economy.¹⁶² However, political economy dynamics can make it difficult to put a price on carbon emissions. These dynamics are especially challenging in developing countries, where factors like quickly rising emissions trajectories, relatively weak support for climate mitigation, and capacity constraints combine to pose a formidable obstacle to ambitious carbon pricing. This report has highlighted a wide range of carbon pricing experiences, especially those in developing countries to improve efforts to advance carbon pricing worldwide.

Developing countries have economic and political incentives to act swiftly and decisively to mitigate the impacts of climate change. As the political economy challenges of carbon pricing become easier to navigate (**Box 6.1**), more policymakers in developing countries are pursuing carbon pricing. While few developing countries have implemented stringent carbon prices at this point, initially modest carbon pricing policies can complement and, in time, replace more feasible, if less efficient climate policies.

As this report demonstrates, the political economy of carbon pricing requires many compromises, exceptions, and accommodations—a balancing act of sorts. Nevertheless, when used in conjunction with a broader portfolio of climate policies and commitments, carbon pricing can be a flexible, powerful, and politically feasible tool for accelerating decarbonization.

BOX 6.1**Five reasons carbon pricing is gaining political momentum in developing countries****Stakeholder learning about the technical details and political economy consequences of carbon pricing**

It takes time for policymakers to become comfortable with carbon pricing, especially for relatively complex ETSS. International technical support, pilots, and other low-stakes opportunities have helped regulators and regulated entities become familiar with the mechanics of carbon pricing. Policymakers have also been able to observe and learn from the carbon pricing experiences of their peers abroad.¹⁶³

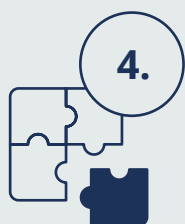
**Shifting rationales for climate action**

Policymakers increasingly see climate action as an opportunity for growth, rather than only a moral responsibility. The 2015 Paris Climate Agreement marked a particularly important turning point in the shift from minimizing the costs of climate policy to maximizing the gains it offers.¹⁶⁴ This discourse motivates carbon pricing in terms of accelerating the development of low-carbon technology and increasing the fiscal resources at policymakers' disposal.



3. Environmental priorities, also among multinational corporations and international investors

National policy to reduce local pollution will continue to be a key driving force for adopting carbon pricing in many developing countries. But corporate environmental commitments are also spreading across the private sector,¹⁶⁵ especially among international investors and multinational corporations. While only some of these commitments are genuine, some firms have played a role in generating pressure for climate action in countries where they operate.



4. Adoption of complementary environmental policies

A wide range of complementary environmental policies—traditional pollution control, low-carbon subsidies, reductions in fossil fuel subsidies, increases in indirect forms of carbon pricing, and decarbonization targets—have strengthened coalitions for explicit direct carbon pricing while reducing the cost of decarbonization. With increasing access to renewable energy, as well as the expansion of research and development and manufacturing capacity for clean energy technologies, policymakers are increasingly confident that, if they adopt carbon pricing, firms will be able to transition successfully to low-carbon alternatives.¹⁶⁶



5. Policy actions by trading partners

When other countries adopt pro-climate trade restrictions, firms—especially large exporting firms—often endorse climate action as a means of maintaining access to international markets. Policies like a carbon border tax offer preferential treatment to countries with carbon pricing, raising the opportunity cost of failing to price carbon. The EU's CBAM, the first carbon border tax to be adopted, has become a key driver of carbon pricing in developing countries (**Box 2.1**). With industry groups pushing hard to respond to CBAM before its full implementation in 2026, hopes are high for rapid policy development. In the words of a Chinese NGO representative, of carbon pricing, “Everyone is talking about it.”

Appendices

APPENDIX A – ADDITIONAL SURVEY RESULTS

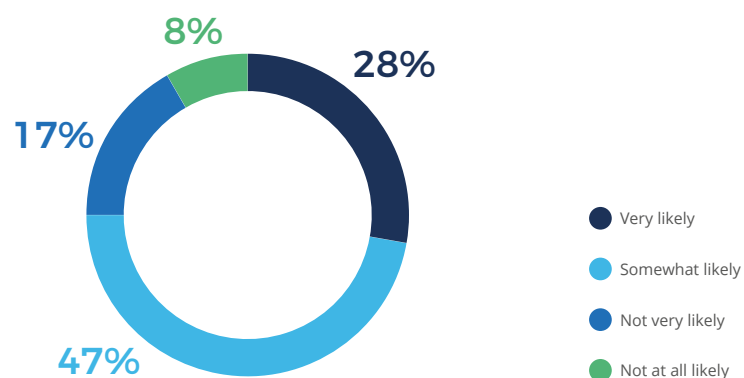
TABLE A.1

Top perceived barriers to ambitious carbon pricing, selected countries

Country	Top barriers
Brazil (N = 4)	Domestic fossil fuel production; concerns about international competitiveness; poor economic conditions
Chile (N = 7)	Concerns about international competitiveness; 2022-23 energy crisis
China (N = 10)	2022-23 energy crisis; COVID-19 pandemic
Colombia (N = 7)	Greenhouse gas emissions relative to other countries; domestic fossil fuel production; insufficient carbon pricing in other countries
India (N = 4)	Concerns about international competitiveness; poor economic conditions
Indonesia (N = 9)	Domestic fossil fuel production; low energy prices; 2022-23 energy crisis
Mexico (N = 16)	Domestic fossil fuel production; low climate support
Pakistan (N = 5)	Low public trust in government; 2022-23 energy crisis; COVID-19 pandemic
Türkiye (N = 6)	Concerns about international competitiveness; greenhouse gas emissions relative to other countries; 2022-23 energy crisis
Ukraine (N = 5)	Domestic fossil fuel production; low energy prices; poor economic conditions

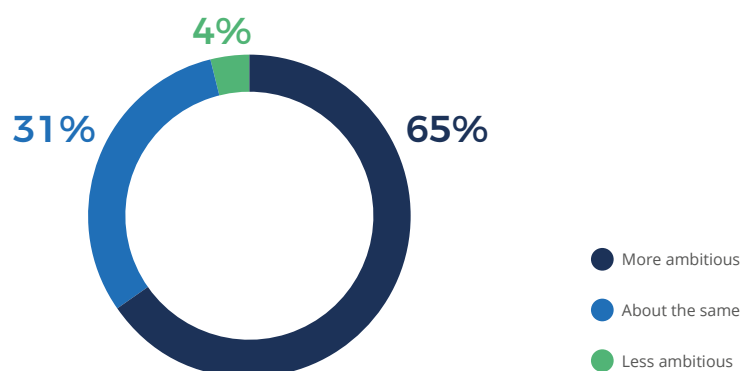
Factors most frequently identified as posing “a lot” or “some” extent of an obstacle to ambitious carbon pricing (Top two; three in case of ties).

Source: Original expert survey

FIGURE A.1**Likelihood of implementing carbon pricing by 2025**

Question: "Is it likely or unlikely that carbon pricing will be implemented in your country by 2025?" (36 responses).

Source: Original expert survey

FIGURE A.2**Anticipated ambition of carbon pricing by 2025**

Question: "In 2025, do you expect carbon pricing in your country to be about the same/less ambitious/repealed?" (55 responses).

Source: Original expert survey

APPENDIX B – METHODOLOGY

Literature review

A literature review was conducted to identify relevant publications on the political economy of carbon pricing, with particular focus on developing country contexts. Publications were relevant if they centered on 1) carbon pricing policies, policymaking processes, and related policies and dynamics in developing countries, 2) the development and implementation of low-carbon technology in developing countries, 3) strategies and approaches to eliciting behavior change through policy design, or 4) interest-based factors affecting the adoption and implementation of carbon pricing.

The first stage of the review compiled practitioner publications from relevant units at the World Bank, International Monetary Fund, and OECD, as well as academic journals in political science and behavioral economics. The review was then expanded by examining the reference lists of these seed publications, an iterative process that was continued to saturation. Finally, the literature review was complemented by suggestions from peer reviewers. In all, the literature review identified more than 300 items, of which more than 180 were eventually integrated into this practice review.

Expert survey

The population of interest for the survey consisted of individuals with personal experience working to advance or develop carbon pricing in one or more developing countries. The sample frame was constructed using the PMI and International Climate Action Partnership stakeholder contact lists, supplemented by the authors' professional contacts. A total of 345 carbon pricing experts from more than 37 countries received an invitation to participate in the survey via Qualtrics. The invitation came from the PMI Secretariat and included incentives consisting of the opportunity to be acknowledged in the report, a copy of the

report upon publication, and an invitation to the launch event, but no financial compensation. Responses were collected between February 14, 2023, and March 24, 2023.

Of the 345 experts in the sample frame, 185 started the survey (54%) and 107 provided a valid response (31%). A valid response was defined as participants who completed more than 25% of survey questions, spent longer than 10 minutes on the survey (median time to completion 32 minutes), and indicated when asked that their responses were sincere and that they had experience working on carbon pricing in a developing country. **Figure B.1** provides survey respondents' demographics by position, experience, location, and gender. **Figure B.2** lists the count of survey respondents by country.

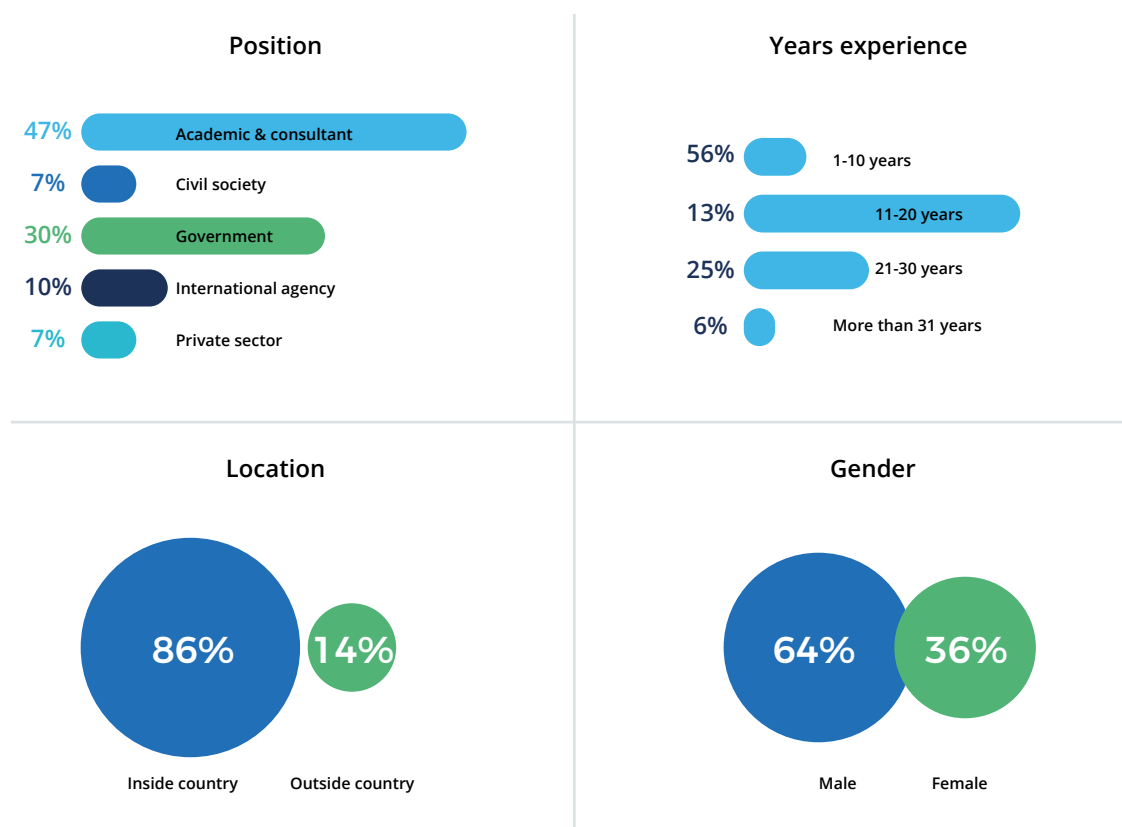
Stakeholder interviews

Stakeholder interviews were conducted to study cases of interest in greater depth, fill knowledge gaps, validate claims in the literature, and provide context and detail to the survey results. The interviews were conducted primarily as remote, semi-structured one-on-one discussions of approximately one hour in duration, although other modalities were used on occasion (e.g., in-person and/or group interviews). The semi-structured interviews relied on an interview guide customized according to the interview subject's context, position, and (where available) survey responses.

Potential interview subjects were identified from a combination of survey respondents and the authors' professional contacts, including through the PMI's Knowledge Forum. All interview subjects had worked on carbon pricing in developing countries. A total of 88 stakeholders from 23 countries were invited to participate in an interview, of which 49 completed an interview. Approximately half of the interview subjects also participated in the survey. No incentive was offered for participating in the interviews.

FIGURE B.1

Survey respondents by position, experience, location, and gender

**FIGURE B.2**

Survey respondents by country

Country	Number of respondents
Mexico	19
China	11
Indonesia	9
Chile	7
Colombia	7
India	7
Pakistan	6
Türkiye	6
Ukraine	6
Brazil	4
Other (18)	25

APPENDIX C – EXPERT SURVEY ACKNOWLEDGMENTS

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Neil McCulloch	
Mariana Micozzi	
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Rangeet Mitra	

Endnotes

1

For more of a broader consideration of the political economy of climate policies more generally, see World Bank, “The Political Economy of Climate Policies: Taking Climate Action in the Face of Politics, Trade-Offs, and Vested Interests” (Washington, DC: World Bank Group, In Progress).

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The political economy of adopting carbon pricing can be challenging to navigate but policymakers have become increasingly adept at it as a variety of factors are driving this shift including, lessons learned from early adopters, evolving discussions on the need for climate action, adoption of complementary policies, increasingly ambitious private sector climate commitments and demand for regulation, and climate policy actions by trading partners such as the European Union's Carbon Border Adjustment Mechanism. Amidst those developments, many carbon pricing policies are expected to become more ambitious. And while carbon pricing is not on its own a silver bullet capable of completely mitigating climate change, there is broad consensus that it can accelerate the transition to a climate-compatible trajectory while contributing to broader economic objectives, especially if adopted alongside supporting policies, measures, and actions. This report synthesizes information on navigating the political economy of carbon pricing based on select country experiences, lessons learned from scientific literature, and an original survey and interview with carbon pricing policy experts from developing countries. The goal is to extract and make available meaningful insights for countries that are seeking to adopt carbon pricing for the first time or to increase their carbon pricing ambition. The report can also be used as part of carbon pricing capacity building toolkit.

