

## Role of Public Development Banks in Supporting Domestic Carbon Markets

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#### ABOUT CLIMATE POLICY INITIATIVE

CPI is an analysis and advisory organization with deep expertise in finance and policy. Our mission is to help governments, businesses, and financial institutions drive economic growth while addressing climate change. CPI has seven offices around the world in Brazil, India, Indonesia, South Africa, the United Kingdom, and the United States.

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### 1. INTRODUCTION

The world needs to mobilize approximately USD 7.4 trillion annually by 2030 to meet decarbonization goals and avoid the worst impacts of climate change. Emerging markets and developing economies (EMDEs) face a particularly significant financing gap. EMDEs (excluding China) require over USD 2 trillion per year to meet their climate targets and transition to cleaner energy systems.

However, these countries are at a disadvantage compared to advanced economies when attracting investment; in 2022, only 15% of global climate finance flows went to EMDEs (excluding China),<sup>3</sup> underscoring a disparity in resources and support. Furthermore, many EMDEs are fiscally constrained and burdened by high debt, which limits their governments' ability to directly fund climate initiatives, or to incentivize private investment.<sup>4</sup> These structural challenges present a need for innovative financial mechanisms and tailored support to unlock EMDEs' full potential to drive global climate action. While international finance remains impactful, bolstering domestic markets is critical to achieving long-term climate and development goals.

In this context, carbon markets offer a promising means of bridging the financing gap. Carbon markets facilitate the trade of carbon credits, effectively providing a mechanism for financing carbon reduction projects by accurately pricing the negative externalities of CO<sub>2</sub> emissions. In 2024, the global voluntary carbon market had a value of USD 1.4 billion,5 though this had decreased from a value of nearly USD 2 billion in 2022. The World Bank expects it to grow to between USD 10 billion and USD 40 billion by 2030 as demand for carbon credits accelerates due to a confluence of factors. New Nationally Determined Contributions (NDCs)—to be communicated by governments in 2025—the implementation of the Carbon Offsetting and Reduction Scheme for International Aviation Phase II mechanism, and progress on Paris Agreement articles 6.2 and 6.4 frameworks are all expected to spur demand for carbon credits and drive up their prices. Corporate net zero commitments, growing pressure from stakeholders, mandatory extra-financial reporting requirements (e.g., the EU Corporate Sustainability Reporting Directive), and sectoral standards are also likely to contribute to these trends. Regulated carbon pricing mechanisms are already prevalent, generating revenues of over USD 100 billion in 2023 (see Box 1). More countries are adopting such mechanisms each year, albeit with a large concentration in advanced economies.6

Carbon markets are typically established for specific sectors or components of the economy, rather than operating economy-wide. They are often applied to emissions-intensive industries such as electricity generation or industrial processes, where greenhouse gas (GHG) reductions

<sup>1</sup> CPI. 2024. Global Landscape of Climate Finance 2024. Available at: <a href="https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2024/">https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2024/</a>.

<sup>2</sup> Independent High Level Expert Group on Climate Finance. 2022. Finance for climate action: scaling up investment for climate and development. Available at: <a href="https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/11/IHLEG-Finance-for-Climate-Action-1.pdf">https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2022/11/IHLEG-Finance-for-Climate-Action-1.pdf</a>

<sup>3</sup> CPI. 2023. Global Landscape of Climate Finance 2023. Available at: <a href="https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2023/">https://www.climatepolicyinitiative.org/publication/global-landscape-of-climate-finance-2023/</a>.

<sup>4</sup> International Monetary Fund. 2023. Fiscal Impacts of Climate Disasters in Emerging Markets and Developing Economies. Available at: <a href="https://www.elibrary.imf.org/view/journals/001/2023/261/article-A001-en.xml">https://www.elibrary.imf.org/view/journals/001/2023/261/article-A001-en.xml</a>.

<sup>5</sup> MSCI. 2025. Frozen Carbon Credit Market May Thaw as 2030 Gets Closer. Available at: <a href="https://www.msci.com/www/blog-posts/frozen-carbon-credit-market-may/05232727859#f5">https://www.msci.com/www/blog-posts/frozen-carbon-credit-market-may/05232727859#f5</a>

<sup>6</sup> World Bank. 2024. State and Trends of Carbon Pricing 2024. Available at: <a href="https://openknowledge.worldbank.org/handle/10986/41544">https://openknowledge.worldbank.org/handle/10986/41544</a>.

are both measurable and impactful. These markets generally function at a national or subnational level, within a single country or province. In some cases, carbon markets operate regionally across state or national borders. This requires specific linking agreements and mechanisms to align compatibility and alignment across participating jurisdictions, such as between the EU Emission Trading System and the Swiss ETS.

#### **Box 1: Compliance vs. voluntary carbon markets**

Carbon markets can be categorized as compliance or voluntary markets. Compliance markets are regulated and require participants to purchase government-issued allowances or authorized offsets that match their emissions and potentially incorporate a cap on overall emissions. In voluntary markets, buyers purchase credits to offset their emissions as part of corporate sustainability goals or individual commitments to transition to "net" zero emissions. This report and analysis are relevant to countries that are setting up either a domestic compliance market or a voluntary carbon market.

Ideally, countries can plan to transition to compliance markets over time. Transitioning to a domestic compliance market may increase the impact and revenue generation of their carbon market activities. Throughout this report, we indicate where a finding or recommendation is relevant only to voluntary or compliance markets.

Public development banks (PDBs) are uniquely positioned to play a pivotal role in enabling the transition to low-carbon development through carbon markets. While there are a diverse array of PDBs, the most prevalent in terms of scope and scale are the country-specific national development banks (NDBs)—e.g., the Brazilian Development Bank or Mexico's Nacional Financiera—and the international/regional multilateral development banks (MDBs), which range from global institutions like the World Bank and large regionally-focused institutions such as the African Development Bank through to smaller regionally-focused institutions such as the West African Development Bank. While some MDBs have a global mandate, others focus on and tailor their support to specific geographic regions. We use the term PDBs to refer to both NDBs and MDBs in this paper.

This brief explores how PDBs can leverage their financial and technical capabilities to help address the challenges that EMDEs face in developing domestic carbon markets. NDBs, in particular, possess deep knowledge of their respective countries' regulatory frameworks, national development strategies, and economic priorities. This positions them as key intermediaries, capable of bridging the gap between domestic governments, private-sector actors, and international investors to identify carbon market best practices, support implementation, and mobilize private capital. Moreover, PDBs play a crucial role in ensuring the integrity of carbon markets by supporting robust monitoring, reporting, and verification (MRV) systems and aligning market practices with internationally recognized standards.

This paper begins by exploring the benefits of domestic carbon markets in Section 2. Section 3 then examines barriers to the adoption of domestic carbon markets. Section 4 focuses on the barriers faced by PDBs in supporting the deployment of domestic carbon markets.

Section 5 explores the potential role of PDBs in facilitating the development of these markets. Finally, Section 6 offers recommendations for enhancing the role of PDBs in implementing domestic carbon markets.

This paper seeks to provide actionable insights for stakeholders aiming to harness the potential of domestic carbon markets to drive sustainable development and mitigate climate change.

# 2. BENEFITS OF DOMESTIC CARBON MARKETS

Countries have a range of tools at their disposal to reduce emissions and achieve their NDCs, including regulations, subsidies, and carbon taxes. Carbon markets stand out as a market-based mechanism that uses economic incentives to drive emissions reductions. While carbon markets cannot be the sole tool for funding climate goals, they offer unique advantages and should be considered as an important part of the policy mix. By creating a price signal on carbon, these markets enable emission reductions to occur where they are most cost-effective, potentially achieving climate targets at a lower economic and fiscal cost compared to direct government spending or regulatory approaches.

This section explores the benefits of carbon markets, focusing on three core areas. First, we examine how carbon markets channel funding to emissions reduction by creating economic incentives for businesses to invest in low-carbon initiatives, such as renewable energy. Secondly, the section explores how carbon markets help build and sustain a pipeline of carbon credit suppliers. Finally, it highlights the potential of voluntary carbon markets (VCMs) as a steppingstone for countries to establish experience with emissions trading and prepare for future integration into regional or international carbon pricing mechanisms.

## 2.1 DIRECTING FUNDS TO EMISSION REDUCTION PROJECTS

Carbon markets can channel private finance to projects that abate GHG emissions, particularly for "low-hanging fruit"—projects that can achieved quick reductions at relatively low costs. By establishing a price for carbon, carbon markets provide an economic incentive for businesses to invest in projects that reduce emissions, ranging from renewable energy installations to energy efficiency upgrades in industrial processes.

The structure of carbon markets, whether voluntary or compliance-based, allows entities to generate revenue through the sale of carbon credits. When projects reduce emissions bellow a pre-agreed baseline, the developers earn carbon credits, which can then be sold to other companies looking to offset their emissions. This transaction provides project developers with additional revenue to cover the costs of implementing and maintaining the project, as well as any associated operational expenses including costs associated with the validation, verification, and issuance of the carbon credits. In some cases, the developer may also reinvest these revenues in additional climate initiatives, potentially supporting a cycle of funding further emissions reductions. The ability of carbon credit purchasers to pay for climate-friendly projects remains especially valuable in countries with limited public funds for climate action, as it leverages private capital to address emissions reduction goals.

The World Bank's State and Trends of Carbon Pricing 2024 report notes that integrating carbon markets into sector-specific strategies can significantly scale up financing.<sup>7</sup> Programs such as

World Bank. 2024. State and Trends of Carbon Pricing 2024. Available at: https://openknowledge.worldbank.org/handle/10986/41544.

the Energy Transition Accelerator and the Innovative Carbon Resource Application for Energy Transition project for Uzbekistan (iCRAFT) illustrate this approach by supporting a range of crediting approaches. These initiatives aim to generate carbon credits from emissions reductions across entire sectors, such as energy, creating a broader impact and mobilizing finance more effectively.<sup>8</sup> The Taskforce on Scaling Voluntary Carbon Markets also emphasizes that VCMs can unlock funding from private investors seeking to participate in global emissions reductions by purchasing high integrity carbon credits.<sup>9</sup>

#### 2.2 SUPPORT PIPELINE OF CARBON CREDIT SUPPLIERS

Carbon markets facilitate corporate investment, with one-third of financial commitments to credit generating projects from 2021 to 2024 made by global corporations, amounting to USD 5.2 billion.<sup>10</sup> In this sense, domestic carbon markets can provide additional revenue streams that enhance the financial feasibility of emission reduction projects. Many projects—such as forestry, clean cooking solutions, or methane capture initiatives—struggle to secure financing if they rely solely on primary revenue sources like timber production or electricity sales and do not monetize the positive externalities that they create. By enabling projects to generate and sell carbon credits, carbon markets create supplementary income, reducing the financial risks for project developers and making these projects more likely to proceed. This additional revenue can also attract investors who might otherwise consider such projects too risky or insufficiently profitable.

For example, replacing traditional biomass stoves with clean and efficient cookstoves can generate carbon credits by reducing GHG emissions, while also providing health and economic benefits for their users. According to the 2024 State of the Voluntary Carbon Market report, these markets are increasingly valuing credits from projects with "beyond carbon" co-benefits, such as contributions to the UN Sustainable Development Goals. Although price premia for these credits declined in 2023 on previous years, this is likely due to an increased supply of projects with co-benefits.<sup>11</sup>

Additionally, nature-based solutions, such as reforestation projects, can leverage carbon credit revenue to offset their often-long payback periods to support the development and maintenance of their activities. By addressing financial gaps, carbon markets can play a key role in expanding the pipeline of credit suppliers and enabling more projects to enter the market.

Specifically, domestic carbon markets can help foster a pipeline of local projects, which are critical for meeting long-term climate targets. An estimated 1,500 new carbon credit projects are under development globally with the potential to reduce between 150 and 300 million tonnes of  $\rm CO_2$  per year. By providing a predictable revenue stream, carbon markets support project developers to innovate, scale, and sustain operations, driving both environmental benefits and economic development.

<sup>8</sup> World Bank. 2024. State and Trends of Carbon Pricing 2024. Available at: https://openknowledge.worldbank.org/handle/10986/41544.

<sup>9</sup> Taskforce on Scaling Voluntary Carbon Markets. 2021. Final Report. Available at: <a href="https://www.iif.com/Portals/1/Files/TSVCM\_Report.pdf">https://www.iif.com/Portals/1/Files/TSVCM\_Report.pdf</a>.

<sup>10</sup> Trove Research. 2023. Investment trends and outcomes in the global carbon credit market. Available at: <a href="https://ieta.b-cdn.net/wp-content/uploads/2023/09/IETA\_Report\_TroveCreditInvestment\_Sept2023.pdf">https://ieta.b-cdn.net/wp-content/uploads/2023/09/IETA\_Report\_TroveCreditInvestment\_Sept2023.pdf</a>.

<sup>11</sup> Ecosystem Marketplace. 2024. 2024 State of the Voluntary Carbon Market. Available at: <a href="https://www.ecosystemmarketplace.com/publications/2024-state-of-the-voluntary-carbon-markets-sovcm/">https://www.ecosystemmarketplace.com/publications/2024-state-of-the-voluntary-carbon-markets-sovcm/</a>.

<sup>12</sup> Trove Research. 2023. Investment trends and outcomes in the global carbon credit market. Available at: <a href="https://ieta.b-cdn.net/wp-content/uploads/2023/09/IETA">https://ieta.b-cdn.net/wp-content/uploads/2023/09/IETA</a> Report TroveCreditInvestment Sept2023.pdf.

#### 2.3 INTEGRATION WITH GLOBAL CARBON PRICING

Both voluntary and domestic compliance carbon markets offer countries an opportunity to establish a foundation for emissions reduction and to prepare to integrate carbon pricing mechanisms on a regional or global scale in the future. As more countries adopt climate policies, the frameworks established under the Paris Agreement Article 6 can facilitate international cooperation by enabling the transfer of emissions reductions between countries. While this is not the same as formal "linking" of markets—which requires deeper alignment of policies and market mechanisms—this collaboration between countries may lay the groundwork for future interoperability. Article 6 implementation could also enhance the integrity and transparency of VCMs as stakeholders seek agreement on key issues.<sup>13</sup>

By establishing a domestic carbon market, even on a voluntary basis, a country and its companies gain experience in emissions trading, MRV, and credit issuance, positioning them well to participate in broader markets. This preparation helps companies adjust to carbon pricing and align with emerging international standards, and later benefit from any future linkages between domestic and international carbon markets.

Even if a fully linked market does not materialize, the emergence of carbon border adjustment mechanisms (CBAMs), such as the European CBAM,<sup>14</sup> is an example of the potential benefit of establishing a domestic carbon market. CBAMs impose fees on imports based on the carbon intensity of the imported products, with the aim of protecting countries with strong climate policies from "carbon leakage"—where companies may relocate their production to countries with weaker emissions regulations. By adopting a domestic carbon market, countries can help their exporters meet CBAM requirements through domestic offsets that meet global integrity standards, rather than paying the full CBAM fee to importing countries with CBAMs in place.

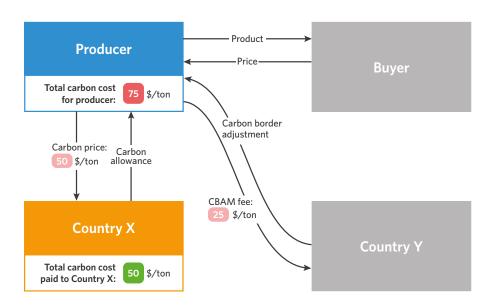
A domestic carbon market allows countries to retain carbon revenues locally rather than paying CABM fees to other countries. Consider a hypothetical example to illustrate this: if Company A in Country X produces a carbon-intensive product and sells it in Country Y, which has a CBAM with a price of USD 75/ton of CO<sub>2</sub>. If Country X has a domestic carbon market, Company A can offset part of its emissions domestically by purchasing carbon credits from Company B (also in Country X) at USD 50/ton. As a result, Company A would only need to pay Country Y the difference—USD 25/ton—to meet the CBAM requirements. In this case, Country X retains USD 50/ton of the carbon costs, which can go to supporting domestic emissions reduction projects.

<sup>13</sup> The Oxford Institute for Energy Studies. 2022. Article 6 and Voluntary Carbon Markets. Available at: <a href="https://www.oxfordenergy.org/wpcms/wpcontent/uploads/2022/05/Insight-114-Article-6-and-Voluntary-Carbon-Markets.pdf">https://www.oxfordenergy.org/wpcms/wpcontent/uploads/2022/05/Insight-114-Article-6-and-Voluntary-Carbon-Markets.pdf</a>.

<sup>14</sup> European Commission. 2025. Carbon Border Adjustment Mechanism. Available at: <a href="https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism\_en">https://taxation-customs.ec.europa.eu/carbon-border-adjustment-mechanism\_en</a>.

Figure 1: Carbon market flows with a domestic carbon market and a carbon price of USD 50/ton

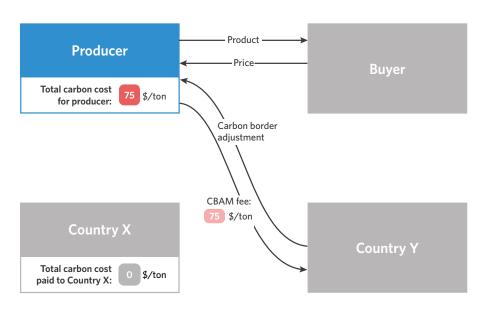
#### Country X does have a domestic market



On the other hand, Figure 2 below shows that, without a domestic carbon market, Company A needs to pay the full USD 75/ton to Country Y under the CBAM, with no portion of the revenue staying in Country X. Company A incurs the same cost in each scenario, but in the absence of a domestic market, Country X loses the opportunity to retain carbon-related revenues and to foster local emissions reduction projects through financial flows. By allowing countries to capture and reinvest these funds locally, VCMs not only help meet external carbon pricing requirements but also contribute to national sustainable development and emission reduction efforts.

Figure 2: Carbon market flows without a domestic carbon market

#### Country X does not have a domestic market



# 3. BARRIERS TO COUNTRIES ADOPTING DOMESTIC CARBON MARKETS

Despite the benefits described in Section 2, adoption of carbon markets globally has been limited, especially in EMDEs. While high- and upper-middle-income countries have been establishing carbon taxes and emission trading systems, only one lower-middle-income country has adopted carbon pricing mechanisms, and no low-income country has done so to date. This section summarizes why countries have been slow to adopt domestic carbon markets, based on a literature review and interviews. Sections 4 and 5 will then review the barriers PDBs face in supporting countries developing domestic carbon markets and the role they can play moving forward.

CPI's desk research and interviews with country governments and PDBs identified the following barriers to countries adopting domestic carbon markets.

#### 3.1 LACK OF BUY-IN AND STRATEGIC INTEGRATION

Adopting carbon pricing is politically challenging as such policies carry acute costs, with benefits that are often only evident at a societal level. As with other policies, passing and implementing carbon pricing is easiest and most effective when done as part of a broader strategy to achieve a country's development and climate goals. Without considering this broader context and sharing lessons from successful implementation of existing systems, policymakers may struggle to convince businesses and constituents that carbon markets or other emission pricing systems are worth the economic tradeoffs.

Many EMDEs have yet to devise robust, long-term strategies to achieve their development and climate goals. Without such plans, it is challenging for country governments to identify what role a carbon market could play in fulfilling climate goals, and therefore to convince the public, businesses, and other stakeholders of such a platform's potential benefits. Relevant considerations may include the carbon market's sectoral coverage, the potential emissions impact and the timeline in which this is expected to be realized, the pricing or stringency of the market, and whether another policy—e.g., a monetary incentive or regulatory change—may be more appropriate. Without integration with a comprehensive strategy, a carbon market may be oversold or appear to have more costs than benefits, thereby limiting policymakers' interest in expending their political capital and capacity on developing one. Even those policymakers and countries that are convinced of the value of carbon markets will need to balance the time and costs required to set one up with other interests, especially as carbon markets are not a panacea but one tool in the decarbonization toolkit.

Insufficient long-term planning can also limit local stakeholder engagement, which can reduce implementation buy-in from the broader carbon market ecosystem of businesses, local government, and civil society organizations. If such groups are insufficiently engaged, they will not appreciate the benefits and may pose resistance when the policy costs become apparent.

<sup>15</sup> World Bank. 2024. State and Trends of Carbon Pricing 2024. Available at: <a href="https://openknowledge.worldbank.org/handle/10986/41544">https://openknowledge.worldbank.org/handle/10986/41544</a>.

#### 3.2 LACK OF TECHNICAL CAPACITY

Once a country identifies a carbon market as an appropriate policy tool to achieve part of its strategy, the government may lack the technical capacity or know-how to develop and implement one. This capacity shortfall is especially acute in EMDEs and may include a lack of budget, staff time, technical knowledge, and experience.

Technical capacity is required to both design and implement an effective carbon market, which can be especially challenging for countries with a less robust civil service. While there are many examples of market design around the world, setting up a market still requires decisions on scope, methodology, and how to integrate with local policies and international carbon trading rules. To make these decisions, policymakers need knowledge, perspective, and time to understand the tradeoffs of different approaches. Once a project is designed, effective implementation requires the government to monitor, collect, and verify emissions data, and to conduct enforcement to avoid double counting and confirm that the market is having its intended effect.

Data availability and transparency increase credibility of and engagement with a system among both buyers and sellers. Coordinated infrastructure including reliable emissions registries, tracking systems, and carbon credit certification processes can make markets more efficient and facilitate stakeholder engagement. Without this, local stakeholders may lack insight into how the system works and how to navigate it. This can also reduce the chance of the market facing accusations of corruption and mismanagement, which would reduce user confidence and lead to dissatisfaction, lower prices, and ineffective outcomes.

While technical assistance (TA) can increase capacity, according to the World Bank's State and Trends of Carbon Pricing 2023 report, TA for carbon markets often takes years to fully develop, delaying market readiness. A consistent theme throughout our interviews with PDBs was that even the largest institutions struggle to source sufficient staff resources and internal experience to provide TA. Nevertheless, capacity development solutions exist, such as from the World Bank's Partnership for Market Implementation program (see Box 4, Section 5.1).<sup>16</sup>

#### 3.3 DEMAND-SIDE RESTRICTIONS

It can be challenging to convince companies and other buyers to spend the money and time to participate in VCMs. Outside compliance markets, participants purchase carbon credits to meet their internal climate goals or for marketing purposes. The decline in the value of the global VCM over the past few years indicates that companies are unwilling to scale up their voluntary involvement amid uncertainty over the integrity of current carbon credit offerings.

Companies considering participation in carbon markets or advocating for adoption of carbon pricing face the barrier of reputational risk. International pushback against using faulty offsets to reach climate goals has caused companies to limit their involvement in VCMs, as evidenced by the 50% decline in the global VCM value in 2023 compared to 2021. For smaller companies, this potential downside may not be worth the cost of finding suitable credits for their needs

<sup>16</sup> World Bank. 2023. State and Trends of Carbon Pricing 2023. Available at: <a href="https://openknowledge.worldbank.org/entities/publication/58f2a409-9bb7-4ee6-899d-be47835c838f">https://openknowledge.worldbank.org/entities/publication/58f2a409-9bb7-4ee6-899d-be47835c838f</a>.

and conducting due diligence. Relying on higher quality intermediaries or brokers may also be unattractive, as use of such intermediaries may incur additional costs.

In addition, some companies in advanced economies are concerned that the credits they purchase from projects in other countries may be instead seized by the host government to meet the country's climate commitments. These restrictions are intended to keep emissions credits within the country and to accrue benefits to the local communities, which could reduce a project's ability to generate revenue from international markets.<sup>17</sup>

#### 3.4 SUPPLY-SIDE RESTRICTIONS

In addition to challenges in attracting buyers to a VCM, countries may struggle to generate sufficient credits to fuel their markets. Many credit pipeline barriers match those faced by many project developers in EMDEs, including expensive investment terms due to investors' perceptions of high risks, a lack of pre-development funding and support, and difficulties in securing land and permits. In addition to these common project barriers, projects participating in carbon markets must be approved by a standards organization (see Box 2), which often requires proving their additionality, permanence as relevant, and ongoing MRV. This adds cost and uncertainty to the development process. Relying on carbon credit revenues also brings additional risks, including natural disasters affecting project performance, carbon pricing volatility, methodology changes, and political risks due to local policies and ownership rules, which developers and investors need to carefully navigate.

These challenges are particularly acute for smaller projects in EMDEs, which are often deemed particularly high risk by investors and lack the capacity to navigate financial institutions, government regulations, and standards organizations. There are also limited financial products available for small-scale projects.

<sup>17</sup> See, for example: Alaistair Marsh and Natasha White. Bloomberg. 2023. Global Carbon Market in Turmoil After Zimbabwe Grabs Offset Money. Available at: <a href="https://www.bloomberg.com/news/articles/2023-05-18/global-carbon-market-in-turmoil-after-zimbabwe-grabs-offset-money">https://www.bloomberg.com/news/articles/2023-05-18/global-carbon-market-in-turmoil-after-zimbabwe-grabs-offset-money</a>.

#### **Box 2: Carbon markets standards organizations**

Carbon markets standards organizations—such as Gold Standard and Verified Carbon Standard (Verra)—aim to increase the integrity of carbon credits and standardize decentralized VCMs. They operate as pseudo-regulators in the absence of government intervention in order to give confidence to buyers and sellers that the credits they are transacting adhere to a consistent set of guidelines relative to other projects without needing to re-invent a methodology for every project.

Each standards organization has different sectoral and geographical scopes, and uses different methodologies. These incorporate climate considerations such as a project's additionality and permanence, and often include innovative approaches, such as integrating non-climate factors such as community engagement.

PDBs may interact with standards organizations by facilitating coordination with interested credit sellers, providing inputs to specific methodologies or processes, and adhering to the standards in their own credit purchases, setting an example for other market participants.

Despite their contributions, standards organizations currently face significant scrutiny. <sup>18</sup> Critics argue that some projects they have certified have failed to deliver real emissions reductions, or lack transparency. This is an issue that the standards organizations, policymakers, civil society, and PDBs should collaboratively address to avoid eroding trust in certain credits and carbon markets as a whole.

<sup>18</sup> See, for example: Patrick Greenfield. The Guardian. 2023. Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless, analysis shows. Available at: <a href="https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe">https://www.theguardian.com/environment/2023/jan/18/revealed-forest-carbon-offsets-biggest-provider-worthless-verra-aoe</a>.

# 4. BARRIERS TO PDB SUPPORT FOR DOMESTIC CARBON MARKETS

While PDBs are potentially well-positioned to support country governments in the development of domestic carbon markets (see Section 5) and to support the development of the carbon credit pipeline, these banks may be hindered by their own capacity limitations, a lack of country buy-in, and financial constraints.

#### 4.1 LIMITED CAPACITY

Each development bank has limited funds, time, and political will to achieve its mandate, which can include both development and climate goals. The limitations are greater for smaller NDBs, and even some regional banks, and can be exacerbated by these organizations' lack of technical expertise and carbon markets experience. TA programs such as the World Bank's Partnership for Market Implementation can support smaller NDBs in developing the technical understanding necessary to play a leadership role domestically.

Even MDBs that are interested in assisting smaller PDBs and country governments with market development through TA can face capacity constraints. It is challenging for an MDB to take strong action in carbon markets if its shareholders and stakeholders are not aligned on this as a priority. Climate teams at MDBs have limited staff time, and providing TA, especially to a country or NDB with limited existing knowledge of or readiness for a domestic carbon market, can be time intensive. This presents an opportunity for a carbon markets-focused, regionally-oriented program like the Africa Carbon Markets Initiative, which can concentrate more of its resources on supporting countries and NDBs to bridge the capacity gap.

#### 4.2 LACK OF HOST COUNTRY BUY-IN

The PDBs staff that we interviewed noted that interventions to support domestic carbon market development require the host country's engagement and commitment. If the country government and NDB are not leading the process, a supporting MDB—or other PDB—will encounter a barrier that they are not well-suited to overcome.

PDBs can help to develop this buy-in. As described in Section 3.2.1, some countries do not have a full strategy for achieving their climate and development goals, and therefore have not identified how or whether a carbon market will support their related targets. In these countries, PDBs will have to focus first on education and strategy development, which may take substantial time and resources, before carbon markets are viewed as a viable solution. This is especially important for large MDBs, which can offer global perspectives and deep technical expertise, while an NDB is likely to be most familiar with local priorities, stakeholders, and opportunities.

<sup>19</sup> Africa Carbon Markets Initiative. 2025. Available at: <a href="https://africacarbonmarkets.org/">https://africacarbonmarkets.org/</a>.

#### 4.3 FINANCIAL BARRIERS TO GREATER ACTION

PDBs can support the development of projects to provide a steady supply of credits requires capital, which can sometimes be in short supply for PDBs, particularly those that are smaller or in less well-developed financial markets. Many low-carbon projects have higher upfront costs than fossil-fuel-intensive alternatives, and participating in a carbon market can incur additional upfront costs, such as for certification and verification.

PDB staff interviewed for this report said that financing projects can be an arduous process, and that smaller PDBs may face difficulties in directing capital specifically to projects that aim to leverage carbon credits amid the vast range of potential projects they could finance. PDB funding frameworks can be rigid and sector-specific, making it difficult to address the needs of projects targeting carbon markets, which vary in size, scope, and sector, and often include innovative and relatively untested technologies and financing mechanisms.

Even when they can provide some of their own capital, PDBs often aim to catalyze private cofinancing for larger projects to increase their impact. In EMDEs especially, where markets may be less developed and perceived as riskier, it can be challenging and time-intensive to attract private investment.

# 5. PDBS' POTENTIAL ROLE IN DOMESTIC CARBON MARKET DEVELOPMENT

PDBs have the potential to play a key role in enabling the development and success of domestic carbon markets. Their position as financial and policy intermediaries allows them to provide strategic guidance, technical expertise, and resources to build credible, scalable, and sustainable carbon markets. However, their roles and capacities for supporting carbon markets vary significantly depending on their type—multilateral, regional, or national. This section outlines the potential contributions of PDBs in fostering domestic carbon markets according to their specific capacities and contexts.

The Brazilian Development Bank (BNDES) provides a good example of the leading role an NDB can play in fostering domestic carbon markets, by aligning efforts with national priorities and engaging local stakeholders, as outlined in Box 3.

#### Box 3: BNDES' involvement developing Brazil's VCM

To foster engagement with national priorities, it is helpful to have a national bank that shares the same carbon market priorities and uses its financing tools to achieve those goals. BNDES' financial and framework support has facilitated the growth of Brazil's VCM by encouraging private participation in carbon credit projects. This has been instrumental in positioning Brazil as a significant player in global carbon markets, leveraging its vast natural resources for sustainable development.<sup>20</sup>

Brazil's VCM has evolved significantly, with pivotal support from BNDES. In 2012, BNDES initiated efforts to foster this market by signing agreements with the state governments of Acre and Rio de Janeiro to promote environmental asset markets, including carbon credits.<sup>21</sup> In 2024, BNDES contributed to the drafting of Law 15.042/2024 which created the Brazilian Greenhouse Gas Emissions Trading System.<sup>22</sup> The law allocates a portion of the revenues from this system to BNDES to be allocated to innovation and decarbonization projects, so the bank will continue to be closely tied to the carbon market.

BNDES has purchased carbon credits directly and invested in projects that are relying on carbon credit sales to generate revenue. In 2022, the bank approved a pilot operation to acquire USD 10 million in carbon credits, marking its first direct involvement in carbon credit transactions. This aimed to support Brazil's VCM by purchasing credits primarily from REDD+ (Reducing Emissions

<sup>20</sup> BNDES. 2022. Climate and development: The BNDES's contribution to a just transition. Available at: <a href="https://web.bndes.gov.br/bib/jspui/bitstream/1408/22606/1/PRFol\_BNDES\_Climate%20and%20deevelopment%202022.pdf">https://web.bndes.gov.br/bib/jspui/bitstream/1408/22606/1/PRFol\_BNDES\_Climate%20and%20deevelopment%202022.pdf</a>.

<sup>21</sup> BNDES. 2013. Together with the governments of Acre and RJ, the BNDES signs an agreement to foster the environmental asset market. Available at: <a href="https://www.bndes.gov.br/SiteBNDES/bndes/bndes-en/conteudos/noticia/Together-with-the-governments-of-Acre-and-RJ-the-BNDES-signs-an-agreement-to-foster-the-environmental-asset-market/">https://www.bndes.gov.br/SiteBNDES/bndes/bndes-en/conteudos/noticia/Together-with-the-governments-of-Acre-and-RJ-the-BNDES-signs-an-agreement-to-foster-the-environmental-asset-market/</a>.

<sup>22</sup> Gov.BR. 2024. President Lula signs law creating regulated carbon market in Brazil. Available at: <a href="https://www.gov.br/planalto/en/latest-news/2024/12/president-lula-signs-law-creating-regulated-carbon-market-in-brazil">https://www.gov.br/planalto/en/latest-news/2024/12/president-lula-signs-law-creating-regulated-carbon-market-in-brazil</a>.

from Deforestation and Forest Degradation) projects, thereby validating quality standards for the country's decarbonization projects.<sup>23</sup> As an example of private-sector nature-based projects that rely on carbon credit revenues that BNDES invested in, in 2024 BNDES provided USD 27 million to a reforestation project through the Arc of Restoration program.<sup>24</sup> This project plans to repay BNDES in part through the sale of carbon credits generated by the reforestation.

#### 5.1 STRATEGIC GUIDANCE

PDBs can provide strategic guidance to countries aiming to integrate carbon markets into their broader climate and development agendas, especially those PDBs with more carbon market expertise. Institutions that operate at a global or regional scale are well positioned to share cross-country insights, coordinate strategies across jurisdictions, and promote harmonization of carbon market standards.

In addition to providing strategic insights, PDBs can facilitate cross-sector collaboration, which is vital for the successful development of domestic carbon markets. By fostering dialogue among stakeholders from sectors such as energy, agriculture, forestry, and waste management, PDBs help align carbon market strategies with national economic priorities. This integration ensures that carbon markets are not developed in isolation but rather embedded within broader development goals, maximizing their environmental and economic impact. Multi-sectoral cooperation, promoted by PDBs, can strengthen the inclusivity and robustness of carbon markets, paving the way for their sustainability and effectiveness.

For example, the World Bank's Partnership for Market Implementation (PMI) is an example of how MDBs can provide targeted support to help countries design and implement carbon pricing instruments, as outlined in Box 4. By addressing technical and institutional challenges, PMI highlights how strategic guidance can help countries transition from market readiness to full implementation.

<sup>23</sup> Green Finance for Latin America and the Caribbean. 2022. BNDES announces program for regular carbon credits acquisition. Available at: <a href="https://greenfinancelac.org/resources/news/bndes-announces-program-for-regular-carbon-credits-acquisition/">https://greenfinancelac.org/resources/news/bndes-announces-program-for-regular-carbon-credits-acquisition/</a>.

<sup>24</sup> BNDES. 2024. BNDES approves R\$ 160 million for Mombak reforestation in the Restoration Arc. Available at: <a href="https://agenciadenoticias.bndes.gov.br/detalhe/noticia/BNDES-aprova-R\$-160-milhoes-para-reflorestamento-da-Mombak-no-Arco-da-Restauracao/">https://agenciadenoticias.bndes.gov.br/detalhe/noticia/BNDES-aprova-R\$-160-milhoes-para-reflorestamento-da-Mombak-no-Arco-da-Restauracao/</a>.

#### **Box 4: The World Bank's Partnership for Market Implementation**

The World Bank's Partnership for Market Implementation (PMI) is a comprehensive program designed to assist countries in developing, piloting, and implementing carbon pricing instruments tailored to their development priorities. PMI builds on the success of its predecessor, the Partnership for Market Readiness, which from 2011 to 2021 supported 23 countries in designing carbon pricing mechanisms, covering approximately 46% of global GHG emissions. PMI expands this mandate by working to move countries from readiness to implementation.<sup>25</sup>

The PMI has a sectoral focus and emphasis on operationalizing Paris Agreement Article 6 on international cooperation on carbon markets. PMI supports 32 countries and jurisdictions in implementing carbon pricing instruments, such as emissions trading systems and carbon taxes, to meet NDC targets and long-term decarbonization goals.<sup>26</sup> The program also emphasizes aligning domestic carbon markets with international best practices to promote compatibility with broader market systems.

In addition to its TA, PMI plays a capacity-building role, helping countries to design robust MRV systems, adopt sector-specific strategies, and establish institutional frameworks. By providing a blend of financial and technical resources, PMI ensures that participating countries can navigate the complex processes of market development while integrating carbon pricing instruments into broader policy frameworks. The program demonstrates how targeted support can address technical and financial barriers, paving the way for the successful adoption of domestic carbon markets in emerging economies.

A successful case under this program is that of Viet Nam, where PMI provided TA and capacity building to help the country develop a robust MRV system and align with international carbon market standards. Support included targeted training for stakeholders, the development of emissions data systems, and assistance in piloting sector-specific carbon pricing instruments.<sup>27</sup>

NDBs such as Brazil's BNDES or Mexico's Nacional Financiera focus on aligning carbon markets with country policies and regulatory frameworks. NDBs are well-positioned to guide the integration of carbon markets with national economic priorities and development strategies, leveraging their understanding of domestic contexts, regulations, and stakeholders. Their ability to bridge government, private-sector, and community interests makes them indispensable for fostering localized solutions that align with broader climate goals.

<sup>25</sup> Partnership for Market Implementation. 2025. About us. Available at: <a href="https://pmiclimate.org/about">https://pmiclimate.org/about</a>.

<sup>26</sup> Partnership for Market Implementation. 2025. About us. Available at: <a href="https://pmiclimate.org/about">https://pmiclimate.org/about</a>.

<sup>27</sup> Partnership for Market Implementation. 2022. Viet Nam's Implementation Support Plan to PMI. Available at: <a href="https://pmiclimate.org/publication/vietnams-implementation-support-plan-pmi">https://pmiclimate.org/publication/vietnams-implementation-support-plan-pmi</a>.

#### 5.2 TECHNICAL ASSISTANCE

**Market design and methodologies:** MDBs can provide upstream TA, helping countries adopt internationally recognized methodologies, such as the Verified Carbon Standard or the Gold Standard. These banks bring global expertise and resources to support the creation of legal frameworks, institutional infrastructure, and sector-specific market structures. For example, the Asian Development Bank (ADB), through its Carbon Market Program has enhanced technical capacities for carbon markets in Southeast Asia, helping both governments and private stakeholders to prepare for market participation. The ADB plans to explore the provision of TA grants for climate action, targeting countries that typically do not qualify for concessionary funding.<sup>28</sup>

NDBs, on the other hand, provide more localized support, focusing on the practical challenges of market implementation. For instance, they help to integrate carbon markets into national regulations, adapt methodologies to local conditions, and work closely with domestic business to guarantee compliance and participation. By being embedded in national contexts, NDBs can also pilot smaller-scale projects tailored to sectoral needs, acting as testbeds for broader adoption.

**Data collection and verification:** Robust MRV systems are essential for effective carbon markets. MDBs are well-suited to provide high-level capacity building and TA for MRV development, often transferring best practices from international markets, such as methodologies for greenhouse gas (GHG) accounting, verification protocols, and digital MRV tools. NDBs can play a complementary role by operationalizing MRV systems at the local level, engaging with data collection and verification processes that align with national policies and are accessible to local stakeholders. This involves working with project developers, local governments, and community organizations to collect accurate data on emissions baselines, project impacts, and credit generation. Such collaboration between MDBs and NDBs can foster MRV systems that meet both international standards and domestic needs.

#### 5.3 SUPPORT CREDIT INTEGRITY

PDBs can help to establish and maintain the integrity of carbon credits by supporting the development of strict standards that align with international best practices. MDBs excel in disseminating globally recognized standards, such as the Core Carbon Principles set by the Integrity Council for the Voluntary Carbon Market.<sup>29</sup> These institutions promote consistency in carbon credit methodologies across countries, enabling credits to be widely accepted in international markets and contributing to market credibility.

While NDBs are not regulators, they can support the establishment of robust regulatory frameworks and ensuring that market participants adhere to credit integrity standards. NDBs can contribute to the regulatory process by providing TA to governments in setting up credit issuance and verification standards that align with international best practices. Once regulations are in place, NDBs can support credit suppliers and market participants through capacity-building programs, TA, and guidance on compliance with these standards.

<sup>28</sup> Asian Development Bank. 2023. Climate Change Action Plan 2023-2030. Available at: <a href="https://www.adb.org/sites/default/files/institutional-document/920956/climate-change-action-plan-2023-2030.pdf">https://www.adb.org/sites/default/files/institutional-document/920956/climate-change-action-plan-2023-2030.pdf</a>.

<sup>29</sup> Integrity Council for the Voluntary Carbon Market. 2025. The Core Carbon Principles. Available at: https://icvcm.org/core-carbon-principles/.

Additionally, NDBs can help enhance credit integrity by embedding these standards into their financing criteria. For example, they can require compliance with high-quality credit standards as a condition for financing emissions reduction projects or purchasing carbon credits. This approach not only encourages credit suppliers to meet rigorous quality requirements but also ensures that projects supported by NDBs contribute to a credible and transparent carbon market. By fostering compliance and promoting best practices, NDBs strengthen the market's integrity while supporting the growth of high-impact, high-quality carbon credit projects. To illustrate the importance of robust frameworks for carbon credit integrity, Nigeria provides a valuable case study of efforts to develop its carbon market while addressing challenges like transparency and double counting (see Box 5).

#### **Box 5: Carbon Markets in Nigeria**

Nigeria offers a unique example of a country working to establish a carbon market ecosystem that aligns with its development priorities and climate targets. Under the leadership of organizations including the Nigerian Economic Summit Group and Natural Eco Capital, efforts have been made to engage both private and public stakeholders to drive participation in VCMs and explore opportunities under Paris Agreement Article 6.

The country's carbon market potential lies in key sectors such as renewable energy, transport, agriculture, clean cooking, and forestry. Currently, Nigeria has registered 84 projects under the Gold Standard and six projects with Verra.<sup>30</sup> However, most activity in the carbon market remains voluntary, with limited regulatory oversight or MRV mechanisms on emissions reduction. Challenges such as double counting, transparency, and additionality highlight the need for a robust framework to ensure integrity and encourage greater private sector participation.

The Nigerian government is working to create an enabling environment for carbon markets. It hosted a capacity-building workshop on Article 6 in 2024 and has inaugurated an Intergovernmental Carbon Market Activation Plan Committee to establish a comprehensive strategy for the sector. In parallel, the private sector is being encouraged to adopt science-based targets, support sustainable projects with co-benefits, and ensure the integrity of emissions reporting. By addressing these challenges and fostering public-private collaboration, Nigeria is poised to become a significant player in the global carbon market.

<sup>30</sup> FiCS Lab Carbon Markets Working Group presentation. 2024.

#### 5.4 MANAGE RISK

A main barrier to wider participation in carbon markets is the uncertainty associated with fluctuating carbon prices. PDBs can help manage this risk by introducing financial instruments or programs such as minimum price floors, guarantees, pilot projects, or offtake agreements to stabilize market participation. MDBs' larger scale and financing capacity make them well-suited to providing these risk mitigation tools on a regional scale in partnership with local NDBs.

While minimum price floors are a promising approach to reducing price volatility, further research is needed to assess the financial and policy implications. It will also be important to determine whether their associated costs should be borne by governments, MDBs, private-sector participants, or a combination of these stakeholders.

The Multilateral Investment Guarantee Agency, which houses the recently launched World Bank Group Guarantee Platform, has introduced a letter of authorization (LoA) template to strengthen the credibility of carbon credit investments under Article 6 carbon markets. The LoA template is designed to define legal rights to carbon credits and provide enforceable commitments from host countries, including compensation and dispute resolution mechanisms. By addressing risks such as double counting of carbon credits and regulatory uncertainty, the LoA aims to reduce investor hesitation and lock private capital flows to carbon projects.

NDBs can complement these efforts by piloting localized risk-management initiatives. For example, they can work with small-scale project developers to create a track record of data and results to help build investor confidence. Such pilot projects not only reduce risks but also generate positive spillover effects by showcasing the viability of carbon markets to other sectors and stakeholders.<sup>31</sup>

NDBs can also explore the use of long-term offtake agreements as a tool to reduce spot price risk and provide stability for both project developers and credit buyers. These agreements, which secure the purchase of carbon credits over several years at fixed or variable prices, offer developers greater revenue certainty to support upfront investments while helping buyers access a steady stream of high-quality credits, particularly for supply-constrained projects like reforestation or engineered carbon removal initiatives.<sup>32</sup>

## 5.5 SUPPORT FINANCIAL MECHANISMS TO FRONTLOAD FINANCE

While carbon markets can generate revenue, carbon credits are often sold many years after a project is financed and constructed. To enable carbon revenue to support the initiation of emissions mitigation projects, countries may need to develop innovative mechanisms to bring forward these funds, including by borrowing money today to be repaid using funds from future carbon credit sales.

PDBs can develop tools that bring upfront financing for carbon abatement by combining their expertise in results-based finance with innovative financial instruments tailored to carbon

<sup>31</sup> Aurea Regina Evangelista Soares Franco de Carvalho. 2023. Bridging the Carbon Market Gap: The Role of Development Banks in Fostering Climate Finance and Mitigating Market Failures. Available at: <a href="https://ic-sd.org/wp-content/uploads/2023/10/2023-submission\_940.pdf">https://ic-sd.org/wp-content/uploads/2023/10/2023-submission\_940.pdf</a>.
32 MSCI. 2024. Nature-based offtake deals: Something is stirring in voluntary carbon markets. Available at: <a href="https://www.msci.com/www/blog-posts/nature-based-offtake-deals/05104913903">https://www.msci.com/www/blog-posts/nature-based-offtake-deals/05104913903</a>.

markets. With their access to substantial capital and experience in large-scale financing, MDBs can lead in designing innovative instruments such as carbon-linked bonds, performance-based guarantees, insurance schemes, and flexible contractual clauses. These tools can be designed to connect upfront financing directly to emission reduction outcomes, leveraging future carbon credit revenue streams as a repayment source. For example, the ADB's USD 100 million Climate Action Catalyst Fund provides upfront financing for high-impact climate mitigation actions, with future delivery of carbon credits secured through long-term transactions.<sup>33</sup>

In addition to these mechanisms, PDBs can mobilize private capital through blended finance approaches that mitigate risk for private investors. By offering tools such as guarantees, co-investment opportunities, offtake agreements, or concessional funding, PDBs can make carbon market projects—especially small-scale initiatives—more attractive to private investors. This not only helps to increase the private-sector participation that is essential for carbon markets, especially in EMDEs, but also addresses the funding gap for smaller projects, increasing their ability to access markets.

NDBs focus on deploying financial instruments at the local level, working with domestic banks and private investors to enhance their accessibility and relevance. By leveraging their knowledge of local financial systems and stakeholders, NDBs can tailor mechanisms to meet the needs of small- and medium-sized enterprises, community-based organizations, and other local actors. This can foster a broader and more inclusive carbon market to help financing reach those who need it most.

<sup>33</sup> UNFCCC. Asian Development Bank Carbon Market Program. Available at: <a href="https://unfccc.int/sites/default/files/resource/Bhutan-ADB-CMP-Slides.pdf">https://unfccc.int/sites/default/files/resource/Bhutan-ADB-CMP-Slides.pdf</a>.

### 6. RECOMMENDATIONS

This section includes some short-term actions that PDBs can pursue to achieve the impact described in Section 5 above. These recommendations include:

- Facilitating coordination with other PDBs
- Sharing best practices
- Supporting development of coherent climate and development strategies
- Supporting capacity building
- Advancing innovative pilot projects

#### 6.1 FACILITATE COORDINATION WITH OTHER PDBS

Successfully implementing any PDB-led project requires PDBs to coordinate with stakeholders including government, civil society, private financial institutions, and private-sector businesses. As discussed above, coordination among different PDBs, especially between NDBs and MDBs, is crucial for efficient development of domestic carbon markets. These two types of development banks frequently have different goals, capacities, resources, and familiarity with local opportunities and constraints. If these entities are aligned, they can work with other stakeholders more effectively to implement new projects and policies.

Successful coordination can take many forms, including:

- MDBs funding projects for NDBs to implement, or providing TA.
- Working together on policy proposals.
- Hosting events to convene relevant stakeholders.

In addition to single-jurisdiction projects, PDBs (especially regionally-focused banks) can work across markets to provide consistency in terms of methodology, integration, and avoiding unintended consequences for stakeholders that are working in multiple carbon markets.

#### **Box 6: IDFC Facility**

One example of PDB coordination is through the International Development Finance Club, which is a group of 26 PDBs that work together to implement and finance the goals of the Paris Agreement and the Sustainable Development Goals. In 2019, the IDFC created a Technical Assistance Facility, tasked with supporting the IDFC's climate change efforts through "strengthen[ing] knowledge and leverag[ing] resources," including by facilitating collaboration and developing finance expertise and capacities. While the IDFC Facility's focus is not primarily on carbon market development, it is an example of how collaboration between PDBs is operationalized and makes an impact, including through<sup>2</sup>:

- Knowledge sharing: monthly Climate Working Group meetings, workshops, one-on-one mentoring, internal and external training opportunities, a climate toolbox to build capacity and reduce duplication of efforts, and high-level events like COP and the Finance in Common Summit.
- **Tracking and transparency:** the annual Green Finance Mapping report tracks member banks' finance flows across sectors and regions, enabling measurement against targets.<sup>3</sup>
- **Joint project proposals:** coordinated mobilization to respond to business opportunities with a more impactful proposal while using fewer resources.

#### 6.2 SHARE BEST PRACTICES

PDBs, especially MDBs and regionally focused banks, will be able to provide important regional and global perspectives to both NDBs and local governments. Carbon markets are complex, and analysis has been conducted over the past decades on where existing markets have succeeded or fallen short. Given local governments' relative lack of capacity and technical expertise, PDBs can play a critical role in reducing duplication of efforts and supporting governments in learning from what has been tried in other jurisdictions in terms of market scope, methodology, community and business engagement, and financial mechanisms. PDBs can share these findings through convenings, public reports, or one-on-one engagement.

PDBs can also support with increased transparency and data sharing. This will address barriers described in this report by generating increased trust that the market does not have corruption and is having the intended impact, paving an easier path to integration with regional or global markets, and making it easier for both demand-side and supply-side actors to engage with the market.

<sup>1</sup> International Development Finance Club. 2024. IDFC Climate Facility. Available at: <a href="https://www.idfc.org/wp-content/uploads/2024/01/idfc-pamphlet.pdf">https://www.idfc.org/wp-content/uploads/2024/01/idfc-pamphlet.pdf</a>.

<sup>2</sup> International Development Finance Club. 2024. IDFC Climate Facility. Available at: <a href="https://www.idfc.org/wp-content/uploads/2024/01/idfc-pamphlet.pdf">https://www.idfc.org/wp-content/uploads/2024/01/idfc-pamphlet.pdf</a>.

<sup>3</sup> Climate Policy Initiative. 2024. IDFC Green Finance Mapping 2024. Available at: <a href="https://www.climatepolicyinitiative.org/publication/jdfc-green-finance-mapping-2024/">https://www.climatepolicyinitiative.org/publication/jdfc-green-finance-mapping-2024/</a>.

## 6.3 SUPPORT DEVELOPMENT OF COMPREHENSIVE CLIMATE AND DEVELOPMENT STRATEGIES

As noted in Section 5.1, a prerequisite of successful domestic carbon market development is identifying the specific role that the country wants the market to play in achieving its climate, development, and economic goals. To do this, a country needs a comprehensive and coherent policy strategy. Regional and multilateral PDBs can support the development of these strategies by providing financial resources, staff time, and TA. NDBs, which generally have fewer resources to spare, can provide their expertise on existing opportunities for and barriers to investment.

Once those strategies are available, PDBs can support governments in identifying the role of domestic carbon markets in their strategy, so that the markets are designed with those responsibilities in mind and expectations can be set as to their effectiveness.

#### 6.4 SUPPORT CAPACITY BUILDING

Delivering effective carbon markets will require scaling up the capacity of country governments, NDBs, and even larger PDBs. PDBs that have experience of working on carbon markets can provide trainings and resources to government officials, businesses, and communities on the basics of carbon markets and the major factors that should be considered as the are developed and implemented. Such resources should be mainstreamed throughout government, as successful implementation will incorporate staff from all of government including environment, regulators, economy, and finance.

This support is especially important for smaller projects and local stakeholders, who have limited capacity and less experience in navigating PDBs, carbon markets, and private financial institutions. PDBs could develop tailored financial products or programs to support small projects, including loan funds paired with TA, aggregation mechanisms, and blended finance vehicles. PDBs can also facilitate upfront engagement between policymakers, local businesses, and civil society organizations, including through holding events, spreading information, and establishing best practices and processes for policymakers to follow.

## 6.5 ADVANCE INNOVATIVE PILOT PROJECTS TO MANAGE RISK AND LEVERAGE CARBON REVENUES

As described in sections 5.4 and 5.5, PDBs can use their financial tools to de-risk carbon markets and increase their impact. To achieve this in the near-term, PDBs should identify potential pilot projects that address key risks and barriers across various geographies and sectors and are scalable to meet the climate finance need. NDBs can support development through coordination with local financial institutions, as they are closer to local markets and private-sector actors. Regional and multilateral PDBs can support pilot projects with TA and start-up funds, including by reducing the risks of projects that generate carbon credits and facilitating borrowing against future carbon revenues. One example could be to offer upfront financing through programs that purchase carbon credits from projects, such as the Forest Carbon Partnership Facility, either by modifying the program to provide financing at the start of a project or by working with a third party to lend against the future credit revenues.

### 7. CONCLUSION

While each bank and country context is unique, we endeavored to provide guidance that is broadly applicable and pragmatic. As noted in the examples throughout this report, efforts are well underway across the PDB ecosystem to expand the role of PDBs in supporting domestic carbon markets. Their strategic role in providing funding through innovative financial mechanisms, developing risk mitigation tools, and delivering technical assistance can help bridge key gaps and foster market growth. However, challenges remain, challenges remain, particularly in scaling these efforts and enhancing market integrity across diverse regulatory environments.

To maximize their impact, PDBs should continue to collaborate – both among themselves and with governments, private investors, and international institutions – to align carbon market strategies with broader climate and development goals. Engagement through coalitions such as the IDFC, during key convenings throughout the year, and via targeted interventions such as the FiCS Innovation Lab can further scale these efforts. Strengthening knowledge-sharing, piloting innovative financial tools, and improving coordination will be critical to overcoming existing barriers and unlocking the full potential of carbon markets. As global carbon pricing initiatives evolve, domestic carbon markets will play an increasingly vital role in mobilizing private finance for emissions reduction, particularly in emerging economies. By proactively addressing challenges and leveraging best practices, PDBs can position themselves as key enablers of climate action.

If you would like more information, or to provide feedback, please contact the authors of this report.

