



Building partnerships for a low-carbon future



ANNUAL REPORT
2022/23



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FOREWORD BY PMIF CHAIR



To deliver on our goal of a world free of poverty on a livable planet, the World Bank is committed to supporting countries to integrate climate and development.

But achieving these outcomes requires financing at tremendous scale—and here the role of carbon markets will be more important than ever. They are effective ways to incorporate the costs of climate change into economic decision-making, and are vital elements in the policy toolbox for countries to incentivize climate action. These instruments also present the opportunity to raise revenue, drive innovation, and direct international financial flows to accelerate global climate action.

The Partnership for Market Implementation Facility (PMIF) plays a critical role in helping countries introduce carbon pricing instruments, build domestic carbon crediting mechanisms, and connect to international carbon markets. The PMIF also provides leadership in driving climate finance and carbon markets innovation: innovation in global carbon markets infrastructure, via the Climate Warehouse program, and innovation in supporting new business models and financial instruments for climate action, via the Compact with Africa—Green Business Fund and the PMIF’s innovation pillar. The PMIF also supports convening global fora, from the World Bank’s flagship climate conference—Innovate4Climate—to Regional Climate Weeks, in partnership with UN Climate Change, to bring together public and private sectors and civil society to discuss and find solutions to the most pressing climate challenges.

In its country programs, the PMIF has had tangible impact, charting a course that supports over 20 countries on their

trajectories toward development and implementation of carbon pricing and participation in carbon markets. For example, we are assisting Vietnam, Kazakhstan, and Colombia as they prepare to deploy emissions trading systems. In Bangladesh, Guinea, and Pakistan we are working with governments to prepare for carbon pricing policies.

Partnerships are at the core of the PMIF’s vision and critical to its success. This past year, the PMIF brought together donors, implementing countries, and partners to share experiences, discuss new trends, and learn from one another. I am especially proud of the PMIF’s role in enabling us to join forces with our client countries on their climate action journey—one that not only advances the principles of sustainable development but also embraces the promise of a greener, more equitable future for all. This journey would not be possible without the support of our 11 dedicated contributing donors.

As we transition into the next phase, poised to deepen implementation of our country support programs, I extend my deepest appreciation to our development partners, client countries, and the committed individuals driving this mission.

Jennifer Sara

PMIF Chair and Global Director for Climate Change, World Bank



LOOKING AHEAD TO NEW OPPORTUNITIES



In its second year (2022-23), and building on the successes of the Partnership for Market Readiness (PMR), the PMIF began concrete initiatives to support climate action in more than 20 partner countries across carbon pricing, carbon markets, and climate finance.

Momentum to participate in carbon markets and access climate finance is growing, and appetite to implement domestic carbon pricing is building despite economic headwinds.

The urgency for action is creating a deeper and renewed sense of partnership. Our goal is to capitalize on this momentum: to engage more countries, deepen collaboration with new and existing partners, and find new and innovative ways to scale climate finance and carbon markets.

Knowledge exchange is a fundamental part of our mission. We are committed to learning from our experiences and to serve as conveners for the global south and north to learn about what works and what doesn't as countries find their unique path to put a price on carbon and access sources of international climate finance.

We are working to operationalize the PMIF in strategic World Bank climate engagements, and will continue to drive innovation to support building a transparent, high-integrity carbon market. This partnership is the cornerstone of these ambitions.

Thank you for being part of this remarkable journey.

Hania Dawood

Practice Manager Climate Finance and Economics, World Bank

PROMOTING CARBON PRICING IN DEVELOPING COUNTRIES



A notable observation from the 2023 report on the State and Trends of Carbon Pricing published by the World Bank is that carbon pricing policies have remained resilient in the face of economic uncertainty and geopolitical instability, and implementing countries have pushed emissions trading systems and carbon taxes by either retaining or expanding carbon pricing policies.

About 73 jurisdictions have in place, or are planning, carbon pricing instruments, while carbon revenues nearly reached \$100 billion. While this illustrates the efficacy of carbon pricing as a mitigation tool, an overwhelming majority of instruments are in industrialized countries. It is imperative that there is greater uptake among the emerging economies and developing countries if carbon pricing is to make a significant contribution. Since its launch in 2021, the PMIF has emerged as a key global initiative to serve this goal through technical assistance, capacity building, and innovation in over 20 countries.

The fiscal year 2022-23 has been a year of consolidation for the partnership, with important milestones being achieved, as detailed in this report. Under the Partnership for Market Implementation (PMI), the flagship initiative under the PMIF umbrella, program proposals from 15 countries were formally approved and the implementation process initiated. The regional initiative in Sub-Saharan Africa focused on building the capacity of local stakeholders, and discussion on similar initiatives in the Pacific and Caribbean regions has progressed. Under the PMI's technical work stream, the annual report on the State and Trends of Carbon Pricing was released in May 2023. Work on two reports—the role of carbon pricing in the power sector, and the political economy of carbon pricing in developing countries—has made brisk progress and is expected to be completed in early 2024. Two global technical workshops were successfully conducted in Rwanda and Spain, and the PMI also supported two national-level workshops in Indonesia and Vietnam. A training program on emissions trading for the Europe and Central Asia region was conducted in Montenegro.

Under the innovation pillar of the PMIF, the establishment of autonomous Climate Action Data Trust in Singapore has been an important development in facilitating carbon transactions in a secure and efficient way. All of these developments were shared with stakeholders in a global knowledge forum in May 2023, held in Bilbao, Spain, along with the World Bank's flagship annual climate event, Innovate4Climate. During the year, the PMIF continued to build important partnerships such as with the Global Carbon Pricing Challenge of Canada and the Article 6 Implementation Partnership of Japan.

The past year has seen increasing demand for services on compliance as well as voluntary carbon markets, engendered by positive decisions in successive COPs. The PMIF is working to address these support requests from various countries, which are expected to increase sharply in the future, by strengthening partnerships and promoting deeper innovation.

At the same time, following a global dialogue on its role, the World Bank has been working with its shareholders on an Evolution Roadmap. The roadmap aims to, among other things, accelerate the mainstreaming of climate action including carbon markets and pricing into the developmental mandate. This is expected to create greater opportunities for the PMIF in serving its client countries and the team is committed to fulfilling this critical mandate in the coming years.

Venkata Ramana Putti
Program Manager, PMIF



ABOUT THE PMIF

The Partnership for Market Implementation Facility (PMIF) is an umbrella trust fund managed by the World Bank to help accelerate global decarbonization efforts. It was launched in 2021 and is supported by 11 global donors: Australia, Canada, the European Commission, Finland, Germany, Japan, Norway, Spain, Sweden, Switzerland, and the United Kingdom.

OUR CURRENT DONORS



Australia



Canada

European
Commission

Finland



Germany



Japan



Norway



Spain



Sweden



Switzerland



United Kingdom

The PMIF has two main goals:

1

Assisting client countries to design and deploy explicit carbon pricing policies appropriate to their domestic context and compatible with their sustainable development priorities.

2

Catalyzing the development of and enabling countries' participation in the next generation of international carbon markets.

The [PMIF](#) brings together World Bank initiatives covering carbon pricing and climate finance under one umbrella. It comprises the anchor program, the [Partnership for Market Implementation](#) (page 9–18), [Compact with Africa—Green Business Fund](#) (page 31–33), the [Climate Warehouse](#) program (page 21), the [Carbon Pricing Leadership Coalition](#) (page 25), the [Innovate4Climate](#) global conference (page 26–28), and the [Regional Climate Weeks](#) (page 29).



The PMIF program is implemented in collaboration with World Bank Group regions, country management units, and global practices to leverage and support operations. Its activities are structured around four thematic pillars.

 ADVISORY	 INNOVATION	 ADVOCACY	 KNOWLEDGE AND OUTREACH
<p>Help countries build their capacity to design and implement carbon pricing policies.</p> <p>Use country-specific approaches to create an enabling environment for private investment in climate-smart initiatives.</p>	<p>Conceptualize, develop, test, and pilot new ideas and prototypes.</p> <p>Develop new tools and assessment frameworks, explore the use of new technologies, develop innovative financial approaches, and help create an enabling environment.</p>	<p>Convene, deliver, and exchange consultative dialogues with key stakeholders on carbon pricing policies and market development.</p> <p>Facilitate leadership dialogue to catalyze action on carbon pricing in the public and private sectors.</p>	<p>Support the development of technical knowledge products, tools, and assessment frameworks.</p> <p>Develop carbon pricing guidebooks and organize global/ regional conferences and workshops.</p>
<p>Partnership for Market Implementation</p> <p>Compact with Africa</p>	<p>Networked Carbon Markets</p> <p>Climate Warehouse</p>	<p>Carbon Pricing Leadership Coalition</p>	<p>Innovate4Climate</p> <p>Regional Climate Weeks</p>

Through the thematic pillars, the PMIF aims to:

- I Help countries and jurisdictions **develop** and **implement** carbon pricing instruments.
- I Help countries’ participation in the **operationalization of Article 6** of the Paris Agreement by facilitating international cooperation on carbon markets and promoting the alignment of national carbon pricing policies.
- I Help countries identify and implement **best practice approaches** and, where relevant, ensure compatibility with other carbon pricing efforts and markets.
- I Develop **innovative methods and instruments** to enable carbon markets to contribute to mobilizing climate finance.
- I Develop and deploy innovative financial tools in relevant sectors to create **enhanced access to climate finance**.
- I Inform policy discussions on greenhouse gas mitigation by **sharing lessons learned** and providing a platform for collective innovation on carbon pricing instruments.
- I Continue developing the **knowledge base** and facilitating **information exchange** on carbon pricing instruments and carbon market mechanisms.

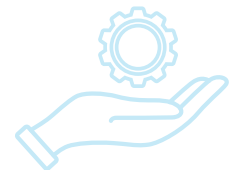
ACHIEVEMENTS IN FY23

In FY23, the PMIF supported the implementation of carbon pricing programs at country level, taking concrete steps in supporting climate action through its various initiatives.



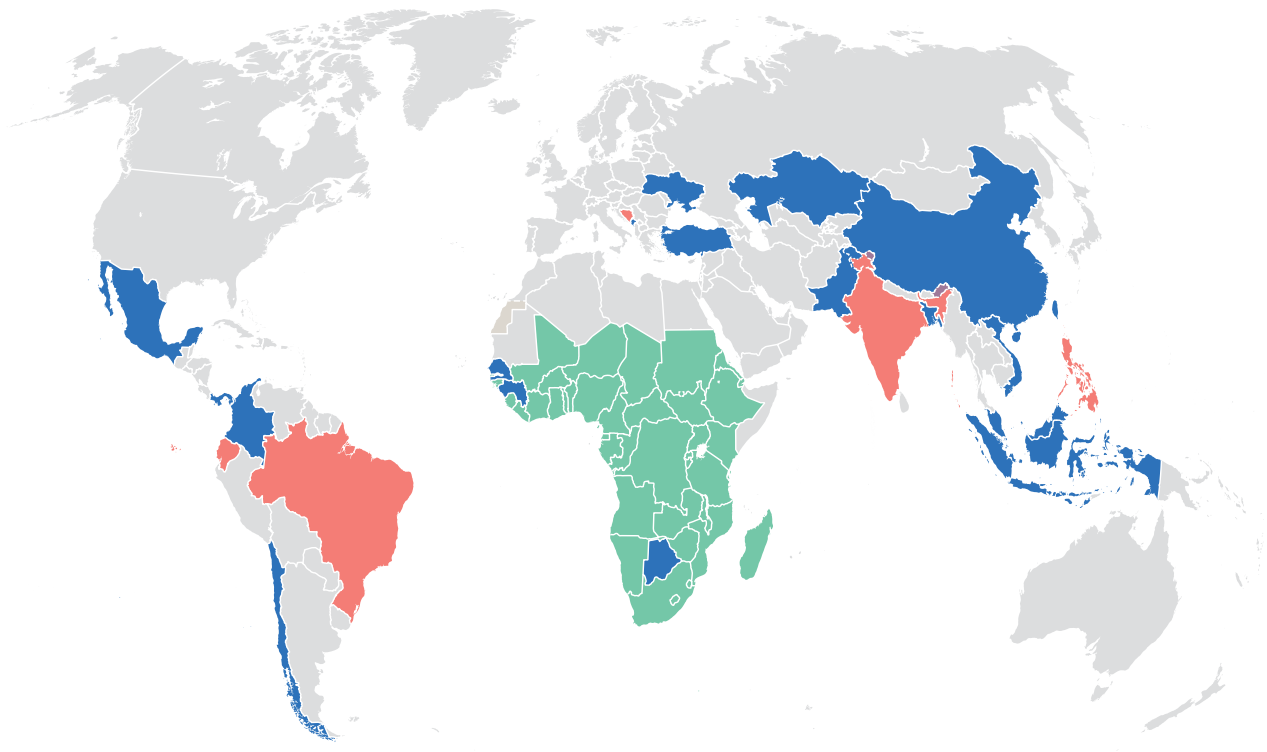
ADVISORY

Partnership for Market Implementation



The Partnership for Market Implementation (PMI) was launched in 2021 with the goal of putting carbon pricing programs in place in at least 30 countries by 2025. It is already rolling out tailored support for 17 countries.

PMIF GLOBAL COVERAGE



- PMI COUNTRIES**
- Bangladesh
 - Botswana
 - Chile
 - China
 - Colombia
 - Guinea
 - Indonesia
 - Kazakhstan
 - Malaysia
 - Mexico
 - Montenegro
 - Pakistan
 - Panama
 - Senegal
 - Türkiye
 - Ukraine
 - Vietnam

- JUST IN TIME**
- Bosnia and Herzegovina
 - Brazil
 - Ecuador
 - India
 - Philippines

SUB-SAHARAN AFRICA



Country support

There are two windows for full country support: the implementation window (also known as “Window 1”), which supports countries that completed their readiness activities with the support of the Partnership for Market Readiness (PMR) and are committed to advancing implementation of carbon pricing instruments, and the readiness window (also referred to as “Window 2”), which helps countries new to the field of carbon pricing develop policies, build capacity, and create necessary infrastructure. The PMI also provides

support to facilitate countries’ participation in international carbon markets through Article 6 of the Paris Agreement.

The PMI’s technical assistance at country level is supplemented by focused support for countries with specific needs (just-in-time support), regional capacity building (both included under “Window 3”), a technical work program, and outreach activities.

SCOPE OF WORK

PROGRAM WINDOW 1



Carbon Pricing Implementation Support

Target: Countries with an implementation timeline, demonstrated political commitment or an existing carbon pricing system in place.

Support package: Strengthening domestic implementation capacity, strengthening legislative and policy review functions, scaling and expanding to new sectors.

PROGRAM WINDOW 2



Carbon Pricing Readiness Roadmaps

Target: New countries ready for the decision to assess and potentially implement a carbon pricing instrument.

Support package: Early stage activities to determine which instrument to adopt, build stakeholder support for policy infrastructure, e.g. monitoring, reporting, and verification (MRV).

PROGRAM WINDOW 3



Targeted Technical Support

Target: Regional, subnational jurisdiction, ad-hoc demands in preparation for potential Window 1 or 2 support.

Support package: Harmonization of carbon pricing infrastructure, development of transparent accounting procedures, etc.

Out of the 33 countries that initially showed interest in implementing domestic carbon pricing instruments with the support of the PMI, 17 were selected and all but one country have submitted full proposals for grant support. The PMI has approved 15 country proposals and allocated funds to the respective country programs. The level of support was determined through a thorough evaluation process, which involved independent experts reviewing

the implementation proposals. Program execution is already under way in several countries, and will commence in others once the grant agreements are effective.

The following tables provide status updates for country programs as of June 30, 2023 and further details on each program are included in Annex 1.



Implementation support (Window 1)

COUNTRY	SCOPE OF PMI WORK	CARBON PRICING DEVELOPMENTS FY23	STATUS
Chile	Operationalizing domestic offsetting mechanism, evaluating energy sector ETS, supporting national policy for Article 6.	Operational offsetting mechanism for carbon tax, proposed tax reform to increase carbon tax value.	Approved
China	Improving national ETS, legislative process acceleration, carbon tax studies, institutional capacity enhancement.	Implementation plan for carbon accounting system improvement, updated allowance allocation plan for thermal generators.	Under review
Colombia	Finalizing ETS regulation, developing greenhouse gas (GHG) emissions reporting platform, designing ETS IT infrastructure, capacity building.	Continued ETS support, adjustments to existing carbon tax including coal combustion, offsetting limited to 50 percent.	Approved
Indonesia	Enhancing institutional capacity for carbon pricing, technical components for policy analysis, institutional strengthening, ETS design, coordination.	Ministerial regulations defining domestic carbon crediting rules, power sector ETS progress.	Approved
Kazakhstan	Strengthening ETS, expanding to new sectors/GHGs, stakeholder engagement, supporting updated NDC targets.	New national allocation plan approved, cap set for 2023.	Approved
Mexico	Support for ETS operational phase, just-in-time activity definition.	Carbon tax applied in multiple states, ETS rules and guidelines are currently delayed.	Under further consideration
Türkiye	Finalizing ETS design, supporting pilot launch, roadmap for Article 6 mechanisms, capacity building, considerations for domestic crediting and carbon tax.	Emphasis on ETS implementation, Medium-Term Programme aligning with NDC and EU Directive.	Approved
Ukraine	Assessing ETS design, providing operationalization advice, stakeholder consultations.	Work impacted by Russia's invasion, technical work and engagement continue, MRV requirements suspended.	Phase 1 approved
Vietnam	Developing and implementing national crediting program, domestic ETS.	Roadmap for ETS implementation outlined, emissions reporting requirements for facilities established.	Approved

Readiness support (Window 2)

COUNTRY	SCOPE OF PMI WORK	CARBON PRICING DEVELOPMENTS FY23	STATUS
Bangladesh	Readiness support for international carbon credit trading, market infrastructure development, policy framework, MRV and registry assessment, national carbon pricing policy, capacity-building, communication strategy.	Engagement in readiness activities for international carbon trading (VCM and Article 6).	Approved
Botswana	MRV system, macroeconomic modeling, distributional impacts assessment, stakeholder consultations.	Initiation of readiness activities and preliminary discussions on role of carbon pricing in context of upcoming Country Climate and Development Report.	Approved
Guinea	Designing a carbon price signal instrument for mining sector, regulatory and institutional infrastructure for Article 6, just transition, capacity building.	PMI launch workshop in March 2023.	Approved
Malaysia	Readiness support across carbon pricing assessment, MRV and registry, crediting, capacity building, communication strategy.	Design of carbon pricing in preliminary stage, launch of Bursa Carbon Exchange in December 2022.	Approved
Montenegro	Impact assessment of carbon pricing implementation, analytical work to support enhancement of the carbon policy and legal-regulatory framework, communications strategy, technical assistance to stakeholders and key actors.	Government decision to update the Law on Protection against Negative Impacts of Climate Change, purchase of ETS allowances from market stabilization reserve, creating public funds for implementation of climate mitigation projects.	Approved
Pakistan	Readiness support for international carbon credit trading, market infrastructure development, policy framework, MRV and registry assessment, national carbon pricing policy, capacity building, communication strategy.	Engagement in readiness activities for international carbon trading (voluntary carbon market and Article 6), including piloting of emission reduction credits (ERCs) registry prototypes.	Approved
Panama	Implementation support for the institutional arrangements of Panama's national carbon market, mitigation instrument development, capacity building, legal and technical foundations for energy sector instruments.	Climate Change Framework bill presentation, agreements with standards for technical exchanges, virtual markets' module development.	Approved
Senegal	Roadmap for operationalization of carbon tax, regulatory and institutional infrastructure for Article 6, just transition, capacity building.	PMI launch workshop on May 26, 2023.	Approved



Technical support (Window 3)

REGIONAL PROGRAMS

In addition to the two windows for the country support program, the PMI has another window to support activities at regional, sectoral, or subnational levels based on demand. In FY23, the PMI continued implementing a regional program in Sub-Saharan Africa to help build capacity, assess feasibility, and create infrastructure (such as MRV systems and registries).

A similar regional program was originally planned to provide support to those Latin American countries that had been part of the Partnership for Market Readiness but were yet to commit to implementing a carbon pricing instrument. Given the countries' different stages of readiness, the regional program was converted into country-specific targeted activities (see next section on the just-in-time support program).

In addition, needs assessments and activity scoping for a regional program in clustering Pacific Island states have started and will be launched in FY24.

Sub-Saharan Africa

The program aims to promote the participation of African countries in post-2020 carbon markets by working with regional institutions to build the capacity of national governments on carbon pricing and coordinate government responses to climate change.

- West and Central Africa: In coordination with the West African Power Pool (WAPP), two capacity-building programs for national governments and regional institutions were delivered in April and May 2023, based on a needs assessment of WAPP member countries. The first program—an in-person workshop—was held in Lomé, Togo, for the WAPP and its member utilities from April 24–28, 2023. The workshop provided an understanding of the key elements of carbon pricing and shared practical examples of how countries have accessed carbon markets to raise additional revenues for clean energy projects. The second capacity-building program was a virtual workshop from May 22–25, 2023.

- Southern Africa: Capacity-building activities similar to those ongoing for WAPP are planned for the Southern Africa region in partnership with the Southern African Power Pool Secretariat and the Southern African Development Community. Economic Consulting Associates has been competitively selected to design and deliver a series of capacity-building and knowledge sharing workshops for Southern African Power Pool, in coordination with the United Nations (UN) Climate Change Regional Collaboration Centers and the climate change focal points.
- East Africa: There is an ongoing dialogue with the Eastern Africa Alliance on Carbon Markets and the UN Climate Change Regional Collaboration Center Kampala to discuss capacity-building partnerships in support of carbon pricing in the region.

In addition, the PMI is working to establish a broader partnership with development partners such as UN Climate Change to identify synergies and coordinate capacity-building support across Sub-Saharan Africa. World Bank global practices are coordinating internally to identify existing regional engagements through which capacity-building activities can be delivered.

The Pacific Islands

The Pacific Islands regional program is being coordinated to support the region on international carbon markets. Extensive technical dialogues with the relevant country offices and regional operational teams in the World Bank have been carried out to identify regional priorities and scope of work under the program. The initial work program would be structured at both individual country level to support their access to international carbon markets and regional level to conduct capacity building and knowledge dissemination across the region.

Based on the potential market size and ongoing policy dialogues with the World Bank, a few potential countries, including Papua New Guinea and Fiji, have been identified for further consultation to confirm the country's interest and

alignment with the PMI's activities. As a next step, further assessment will be carried out to prioritize the scope of work through:

- Assessment of the government's commitment and strategies, as well as the country's needs and readiness to meet the requirements for participation in post-2020 carbon markets.
- Regional consultations and information sharing about carbon market developments, as well as potential avenues to attract markets through a regional pooling facility or mechanism for the Pacific.

JUST-IN-TIME SUPPORT

Carbon market developments at COP26 and COP27 generated substantive interest from countries seeking technical just-in-time support from the PMI. The PMI has expanded Window 3 to include strategic ad hoc requests for support related to infrastructure development, policies and procedures, and capacity building. Requests for support are assessed and approved by technical experts at the World Bank. The table below includes details on the country projects and activities that were carried out or approved in FY23 for just-in-time support. Additional details can be found in Annex 1.

COUNTRY	SCOPE	STATUS
Bosnia and Herzegovina	<ul style="list-style-type: none"> • Modeling and macroeconomic impact assessment of different cap options for national ETS. • Design options based on European Union (EU) ETS design. 	<ul style="list-style-type: none"> • Final report due, to be submitted during first quarter of FY24.
Brazil	<ul style="list-style-type: none"> • Energy sector MRV. • ETS design support. 	<ul style="list-style-type: none"> • MRV activity: ongoing. • Scoping of ETS targeted support, implementation in FY24/25.
Ecuador	<ul style="list-style-type: none"> • Carbon footprint program and compensation mechanism. 	<ul style="list-style-type: none"> • Just-in-time activity proposal approved. • Implementation in FY24.
India	<ul style="list-style-type: none"> • Design of carbon market registry infrastructure. • Assessment of market stability mechanism and design options. 	<ul style="list-style-type: none"> • Just-in-time activity proposal approved. • Implementation in FY24.
Philippines	<ul style="list-style-type: none"> • Targeted technical support for the assessment and design options of planned national ETS. 	<ul style="list-style-type: none"> • Just-in-time activity proposal approved. • Implementation in FY24.

Additional countries have expressed interest in targeted grant assistance through the just-in-time support window. By the end of FY23, the PMI Management Unit had received just-in-time activity proposals from Belize (blue carbon program assessment), Eastern Caribbean States (carbon pricing policy option assessment), and Namibia

(Article 6 market readiness). Countries that have expressed interest to submit a just-in-time grant proposal through World Bank country teams include Azerbaijan, Bhutan, Moldova, Mongolia, Serbia, Sri Lanka, Tanzania, Thailand, and Uzbekistan.



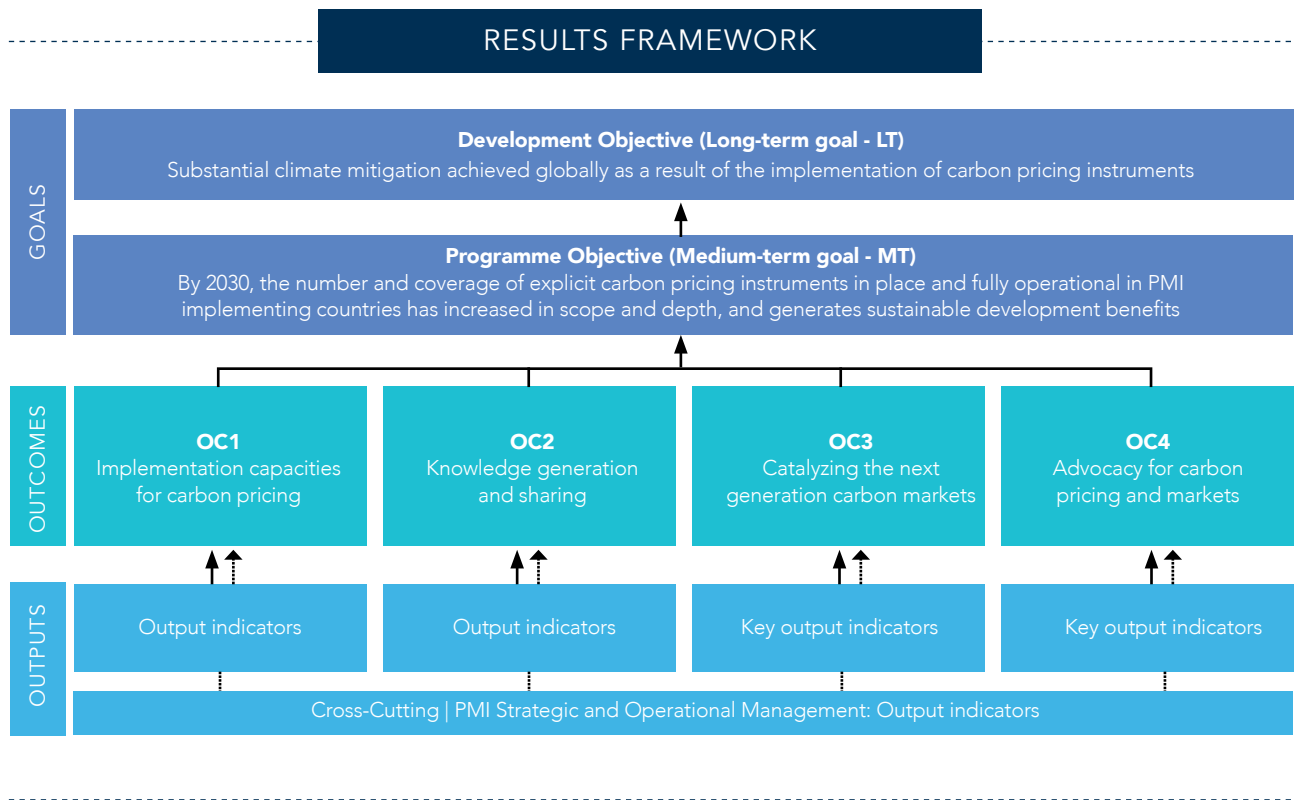
Results framework for country support

During FY23, the PMI resumed the development of a results framework. The PMI Monitoring & Evaluation Working Group held several meetings and consultations with key stakeholders to discuss and prioritize the intended outcomes, outputs, indicators, and targets of the PMI. The results framework will be adopted early in FY24 and will be used to track impacts and outcomes in the country programs.

There will be systematic tracking of country progress over time, providing evidence of whether the PMI is achieving

its intended results, providing evidence-based information on what works and what needs adjustment.

The results framework will guide how the PMI will transform its objectives into actionable steps, track progress, inform decision-making, and demonstrate the program’s accountability and effectiveness. It is a vital tool that will guide the PMI’s efforts in implementing carbon pricing instruments and supporting access to international carbon markets.



DEVELOPMENT OBJECTIVES

DEVELOPMENT OBJECTIVE/GOAL	INDICATORS	REFERENCE VALUES
<p>LONG TERM</p> <p>Substantial climate mitigation achieved globally as a result of the implementation of carbon pricing instruments.</p>	<ul style="list-style-type: none"> • LTI: Proportion of global GHG emissions covered by an explicit carbon pricing instrument • LT2: Global weighted average carbon rate across carbon pricing instruments increases 	<ul style="list-style-type: none"> • LTI: <u>Metric:</u> % of annual global emissions subject to an explicit carbon price [%] <u>Baseline value:</u> 21% <u>Target value:</u> 60% • LT2: <u>Metric:</u> Weighted average carbon price [USD/t CO₂e] <u>Baseline value:</u> [4-7 USD approx] <u>Target value:</u> 50 USD/ton
<p>MEDIUM TERM</p> <p>By 2030, the number and coverage of explicit carbon pricing instruments in place and fully operational in PMI implementing countries has increased in scope and depth, aligned with what is needed to achieve the Paris decarbonization goals, and delivers sustainable development benefits.</p>	<ul style="list-style-type: none"> • MT1: Number of PMI implementing countries that have strengthened existing carbon pricing instruments or introduced new ones • MT2: Proportion of PMI jurisdictions' emissions covered by an explicit carbon pricing instrument (%) • MT3: Increase in carbon revenues raised from carbon pricing instruments in place in PMI participant countries (%) 	<ul style="list-style-type: none"> • MT1: <u>Metric:</u> Legislation and regulation passed [# countries] <u>Baseline value:</u> 0 <u>Target value:</u> 20 • MT2: <u>Metric:</u> Share of jurisdiction's emissions subject to explicit carbon price [%] <u>Baseline value:</u> [tbc] <u>Target value:</u> 60% • MT3: <u>Metric:</u> Jurisdiction's public revenue from carbon pricing higher than baseline [% GDP] <u>Baseline value:</u> [X] <u>Target value:</u> [X+20%]



Technical work program

Events

PMI events are designed to create a collaborative and inclusive space that promotes cross-country learning, technical expertise sharing, and the development of comprehensive and effective carbon pricing strategies. The convergence of representatives from PMI countries, donor countries, and technical experts enriches the policy-making process and strengthens global efforts to address climate change through carbon pricing instruments.

In FY23, the PMI held two in-person technical workshops: one on international carbon markets, and a training session on emissions trading systems, in addition to the PMIF Global Knowledge Forum. The PMI further supported the delivery of technical workshops with the World Bank's Climate Change Group in Vietnam and Indonesia.

GLOBAL EVENTS

[Technical workshop on Country Experiences on Using International Carbon Markets to Achieve NDC Targets: Kigali, Rwanda, March 29–31, 2023](#)

This two-and-a-half-day workshop, attended by almost 100 participants and jointly organized by the PMI and the Compact with Africa—Green Business Fund (CwA-GBF), facilitated discussions and supported learning and information sharing between countries that already have experience in building readiness to participate in international carbon markets and identifying opportunities to access associated financing flows. The workshop addressed various topics, including the key factors shaping country strategies, such as country-level policy frameworks, MRV and registry systems, pricing considerations, capacity-building needs, private sector requirements, and other related aspects. Presentations from the workshop are available on the [PMI website](#).

[Technical workshop on the Political Economy of Carbon Pricing during I4C 2023: Bilbao, Spain, May 24, 2023](#)

This workshop was jointly organized by the PMI, the London School of Economics, and Adelphi—International Carbon Action Partnership during the 2023 Innovate4Climate (I4C) conference in Spain. The session discussed lessons learned and explored strategies to advance carbon pricing in developing countries. It provided a platform for policy makers

and practitioners to learn from one another and interact with international experts from academia and business.

[PMIF Global Knowledge Forum: Bilbao, Spain, May 23–25, 2023](#)

This two-day knowledge forum was an opportunity for PMI countries and donors to discuss carbon pricing developments. With some PMI countries starting their programs—and almost all countries close to finalizing their program proposals—this forum created space for countries to share their progress, as well as discuss any carbon pricing issues and challenges. The forum provided updates on key carbon pricing topics in 2023, and countries were invited to share their experiences in developing their implementation and readiness support proposals. The event included a structured discussion on common political economy challenges facing PMI countries, drawing on work from the technical work program.

COUNTRY EVENTS

Through its technical work program, the PMI also carried out in-country workshops on carbon pricing, carbon markets, and results-based climate finance jointly with World Bank country teams:

Vietnam: Results-based Carbon and Climate Finance Workshop: February 27 – March 1, 2023

The workshop, attended by about 100 participants, aimed to contribute to Vietnam's efforts to scale up and improve the effectiveness of results-based carbon and climate finance to help the country reduce emissions, finance its NDC activities, and attract private investment. Topics discussed included a review of the results-based carbon and climate finance landscape in light of the Paris Agreement and the Glasgow Climate Act, interactions with Vietnam's planned domestic carbon pricing instruments, as well as key building blocks for developing results-based carbon and climate finance on a national and sectoral level.

Indonesia: National Climate Finance Workshop: March 6–7, 2023

The workshop aimed to contribute to Indonesia's ongoing efforts to scale up finance to meet its NDC targets. It focused on opportunities for results-based carbon finance, discussed challenges, and shared lessons for Indonesian policy makers.

Montenegro: Emissions trading capacity building course for Europe and Central Asia countries: May 8–12 2023

Based on regional demand for emissions trading capacity building, a one-week regional training workshop was held for 30 government officials from Bosnia and Herzegovina, Kazakhstan, Montenegro, Türkiye, and Ukraine. Participants from Europe and Central Asia governments that are pursuing carbon pricing and have requested technical assistance were also invited, including Kosovo and Serbia. The workshop was delivered together with the International Carbon Action Partnership and the Joint Vienna Institute. The workshop introduced emissions trading as a policy instrument for climate policy, and provided many practical case studies. It addressed a range of issues faced in the design of emissions trading systems, tailored to the needs and circumstances of the countries in the region.

Reports

The State and Trends of Carbon Pricing 2023



[The State and Trends of Carbon Pricing 2023](#) was launched at the Innovate4Climate Conference in Bilbao, Spain, in May 2023. This

annual publication provides an overview of carbon pricing developments from year to year. Key topics covered in the 2023 report include how the global energy crisis has impacted carbon pricing, the geographical distribution of carbon pricing, and how carbon credit markets are evolving, including those under Article 6. The report was launched in conjunction with an update of the [Carbon Pricing Dashboard](#) to reflect these latest developments.

During FY23, work continued on two major publications:

[Pricing Carbon for Low-Emissions Development: Challenges and Opportunities for Low and Middle-income Countries](#)

The carbon pricing in the power sector report is a joint publication produced by the PMI, the World Bank Energy Global Practice, as well as the International Energy Agency and the International Carbon Action Partnership. The publication is scheduled for release at the end of 2023 with a potential launch during COP28.

[Understanding the Political Economy of Carbon Pricing](#)

This resource for PMI client countries offers insights on

advancing domestic carbon pricing when political economy challenges persist. The first draft of the report has been delivered by the London School of Economics and Adelphi based on stakeholder interviews, covering over 100 officials, academics, and practitioners, and in-depth consultative discussions with over 20 of these stakeholders. The report is expected to be finalized by COP28, in November 2023.

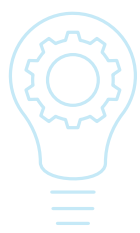
Other reports under development include the role of carbon pricing in the climate policy mix, as well as a potential revision of the [Carbon Tax Guide](#).

Supporting countries with implementation of MRV and registry systems

The PMI technical work program includes supporting countries with the establishment of an MRV system and a registry system, both as part of the implementation and readiness support and supporting countries currently not part of the PMI. The MRV system allows for reporting of emissions or emissions savings from activities and underpins the integrity of any carbon market-based system. The registry allows for the tracking of tradable certificates representing emission or emissions savings. The overall objective is to establish the systems needed to enable participation in international carbon markets, in particular those falling under the Article 6 of the Paris Agreement. This work may also help identify the systems needed to support a national carbon pricing system.

Activities include:

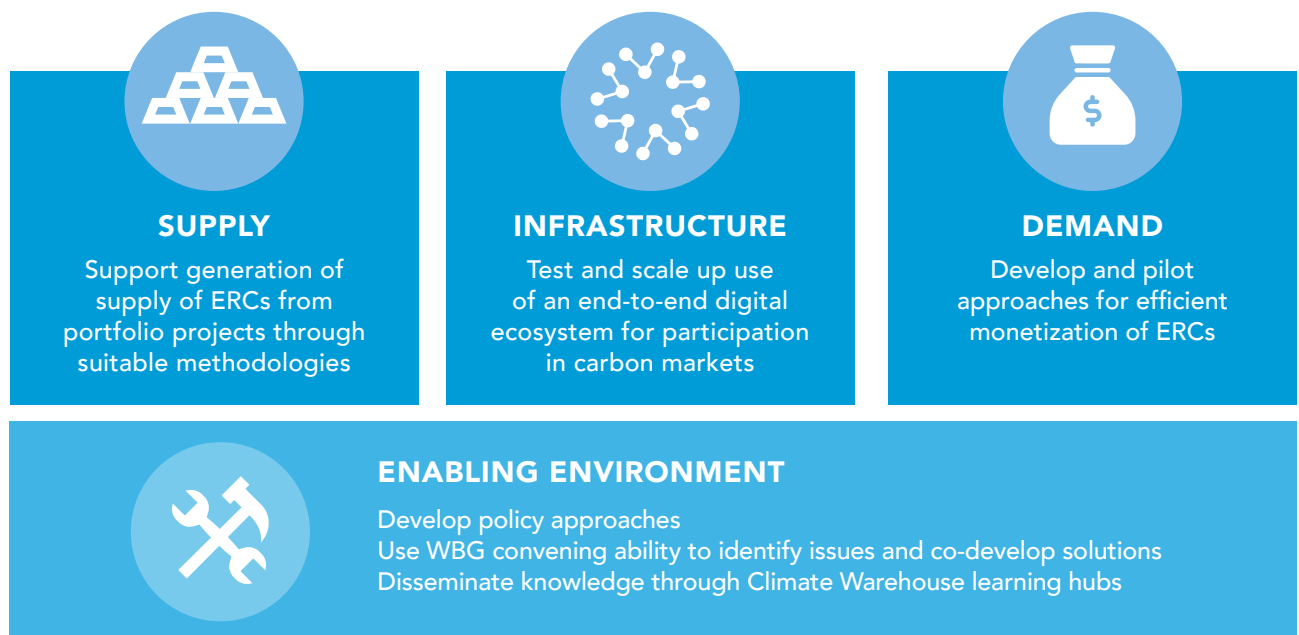
- Assessing options for registry systems, including the suitability of open-source tools made available by the World Bank or partners under the Digital4Climate Working Group (see innovation pillar).
- Establishing an MRV and registry system for participating in international carbon markets, including Article 6 activities. This could involve the localization of existing open-source tools.
- Specifying further MRV and registry system development to support additional carbon pricing policies.



INNOVATION

The innovation pillar of the PMIF develops forward-looking products that can support the World Bank’s client countries in accessing finance for climate action, with a particular focus on results-based climate finance and carbon revenues.

These focus areas have the potential to accelerate the transition needed for decarbonization by providing an additional source of funding that recognizes and rewards projects for the climate benefits they generate. They can also enable a broader set of participants to participate in climate action and allow climate mitigation projects to leverage capital from diverse sources, including the private sector. There are four workstreams under the innovation pillar:



Supply

The supply workstream focuses on generating high-quality emission reduction credits (ERCs) from the World Bank’s lending operations and developing and testing new scaled-up approaches. In addition to contributing to the supply of ERCs, this work helps clients consider the use of

different methodologies and how the resulting ERCs could be characterized in terms of their linkage with NDCs and other sustainable development benefits. This provides hands-on experience to client countries on the process of carbon asset creation and the decisions that need to be made to inform their own domestic processes related to participation in international carbon markets.

Infrastructure

The infrastructure workstream focuses on producing technical and analytical outputs and demonstrating proof of concept to inform infrastructure development and contribute to building transparent, secure, and liquid carbon markets.

The bottom-up nature of carbon markets under the Paris Agreement comes with increased complexity and diversity of reporting and verification approaches, which can lead to market fragmentation and limited transparency and liquidity. Emerging digital technologies have the potential to resolve these issues, and the PMIF is working towards an end-to-end digital ecosystem for carbon markets. This includes:

- Using digital MRV to automate monitoring and reporting using digital technologies (such as remote sensors, blockchain, and artificial intelligence), reduce transaction costs, and minimize the need for physical verification, while increasing accuracy and generating real-time data that can enable the generation of carbon credits at shorter intervals.
- Integrating data from disparate registries across the world by establishing a peer-to-peer network for sharing data in alignment with the Paris Agreement through the Climate Action Data Trust (CAD Trust), which will enhance transparent accounting and reduce double counting risks.
- Using tokenization to create digital representations of carbon credits that can be stored and traded with blockchain technology to enhance liquidity in markets.

In FY23, the team launched the CAD Trust—an open-source data system that uses distributed ledger technology to create an immutable, auditable, and decentralized record of carbon market data, which can help identify double counting—in partnership with the government of Singapore and the International Emissions Trading Association at the Asia Climate Summit. The CAD Trust platform establishes a peer-to-peer network for sharing data in alignment with the Paris Agreement and helps avoid double counting by bringing together real-time, comparable, and auditable emissions reductions data from disparate registries from across the world.

The CAD Trust created a council that leads the mandate and strategy, consisting of government representatives and major carbon registries, including those of Bhutan, Chile, Japan, Senegal, Singapore, and the United Kingdom, as well as Verra, Gold Standard, American Carbon Registry, and Global Carbon Council.

The team is currently engaging with 10 countries to bring them onto the system.

The PMIF is also expanding workstreams under the ambit of the Digital4Climate Working Group.

Digital4Climate was established with the European Bank for Reconstruction and Development, the UN Development Program, UN Climate Change, the International Emissions Trading Association, and the European Space Agency to coordinate respective workflows and products, and create a modular and interoperable end-to-end digital ecosystem for carbon markets.

Demand

The demand workstream focuses on developing innovative approaches for deploying activity-based and results-based climate finance toward low-carbon programs.

Develop new financial products that can facilitate market access and monetization and/or mitigate transaction risks

During FY23, the demand workstream:

- Designed and implemented an emission reduction-linked bond in Vietnam to provide carbon financing upfront for a water purification project by linking the coupons to bond investors to future emission reduction purchase agreement payments against emission reductions to be delivered by the project.
- Developed an exchange-risk facility concept, in collaboration with Columbia University and the World Economic Forum, to explore the potential for hard currency cash flows from carbon revenues to partially mitigate the risk of currency depreciation for foreign currency loan repayments made by the underlying emission reduction generating project.



- Designed the conceptual framework for the use of the Multilateral Investment Guarantee Agency's guarantees for mitigating corresponding adjustment risk.

Enabling environment

The enabling environment workstream aims to create an enabling environment, build capacity, and disseminate lessons to operationalize the next generation of carbon markets.

A significant level of capacity-building support is needed at both a policy and transaction level to operationalize international carbon markets.

At the policy level, the PMIF initiated a consultative process informed by the experiences of countries to help outline options and provide guidance for operationalizing Article 6. In June 2020, the World Bank convened the Climate Market Club, which brings together 14 country members that share lessons on their experiences with the operationalization of carbon markets under Article 6. This has resulted in the development of a series of approach papers that outline the various options available to client countries to operationalize carbon markets by establishing the necessary domestic institutional arrangements. These papers have been used by countries such as Ghana as the starting point for establishing their own national processes.

As many organizations and entities are working to address countries' needs in the carbon market space, it is important that the approaches and products are interoperable and have synergies. To ensure harmonized approaches between different organizations, the World Bank established partnerships with multilateral organizations such as the Multilateral Development Bank Working Group on Article 6 and Digital4Climate.

All the papers and knowledge products developed under the innovation pillar work program are made publicly available at the [Climate Warehouse website](#), which serves as a knowledge hub.

Separately, the Networked Carbon Markets initiative contributed to several tools and methodologies related to carbon pricing.

Together with Climate Transparency and in coordination with the World Bank's NDC Support Facility, the Networked Carbon Markets developed the NDC Transparency Check, a tool for assessing and comparing the completeness of countries' first (2015) and updated (2020) NDC submissions based on requirements of the Paris Rulebook. Building on this work, the Networked Carbon Markets also helped Climate Transparency develop the Climate Policy Implementation Check, a methodological framework for assessing the progress of countries in implementing the policies needed to achieve their NDCs. While Climate Transparency is using these tools as part of its independent country assessments, the World Bank has further leveraged these country assessments to inform the development of Country Climate and Development Reports.

The Networked Carbon Markets has also developed a methodology for consolidating global carbon pricing information and benchmarking. Following review by various experts and World Bank teams, the [paper](#) was published in October 2022.

Enhance knowledge and understanding of legal nature of carbon markets

The PMIF convened a roundtable of experts to discuss the legal nature and regulatory framework for carbon credits. Following this roundtable, there is an ongoing project with the International Institute for the Unification of Private Law (UNIDROIT) and the International Swaps and Derivatives Association on providing guidance on private law issues that will offer greater confidence in voluntary carbon credit transactions among market participants.

The Climate Warehouse website was developed for knowledge dissemination to the public and to facilitate greater collaboration with partners. To date, the website has shared Climate Warehouse's public observer node, updates on new streams of work, and outputs including 8 Article 6 Approach Papers, 6 blog posts, 17 event recordings, 7 videos, and 15 technical documents. On average, the website receives more than 1,300 users per month.

PARTNERSHIPS OF THE PMIF



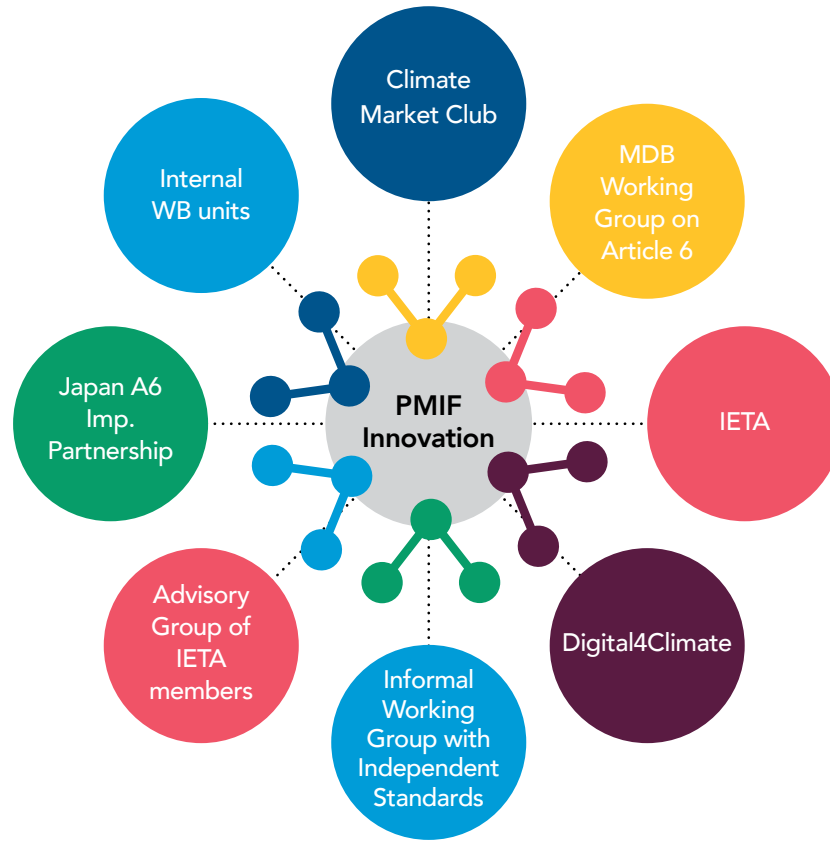
The PMIF works with multiple partners across its various programs and initiatives to deliver innovative solutions and implementation support for client countries looking to raise climate finance through their participation in international carbon markets and use of carbon pricing instruments. The partnerships established so far have been critical to the success of each of the respective programs and have accelerated implementation and fostered greater socialization of technical knowledge across a wide range of stakeholders.

Technical partnerships: Technical partnerships within the PMIF aim to foster expertise, innovation, and practical solutions in the complex realm of carbon markets and carbon pricing. These collaborations are driven by a shared dedication to understanding and implementing the intricate technical aspects of Article 6 of the Paris Agreement. Through initiatives such as the Multilateral Development Bank Working Group on Article 6, these partnerships aim to position market-based mechanisms as pivotal tools for achieving climate commitments cost-effectively. By working closely with organizations like UNIDROIT and the International Swaps and Derivatives Association, the PMIF ensures that the legal landscape for carbon credits is well-defined, instilling confidence in market participants.

The technical collaborations also extend to the supply of carbon credits. The development of quantification methodologies for diverse mitigation activities, such as coal decommissioning and solar with battery storage, showcases the dedication to advancing practical solutions for emission reductions. These partnerships are not just about calculations; they contribute to a cleaner future by shaping the methodologies that drive carbon market participation.

As part of the Digital4Climate Working Group under the Climate Warehouse program, the team works with UN Climate Change, the UN Development Programme, the European Bank for Reconstruction and Development, and the European Space Agency to develop interoperable and modular parts of an end-to-end digital ecosystem for carbon markets, such as digital MRV protocols and systems, national registries, and digitized methodologies.





Implementation partnerships: Implementation partnerships emphasize capacity building, practical knowledge transfer, and on-the-ground support for countries navigating the complexities of carbon markets. Working alongside regional organizations like the UN Climate Change Regional Collaboration Centers and alliances such as the WAPP, these partnerships help equip governments with the skills and know-how needed to engage effectively in international carbon markets.

The Japanese Article 6 Implementation Partnership Center exemplifies a collaborative effort to provide hands-on support. By partnering with UN Climate Change, this initiative ensures that governments are well-prepared to implement carbon pricing instruments in a way that aligns with global goals. In addition, the technical training programs in collaboration with the International Carbon Action Partnership are instrumental in equipping various regions with the expertise to establish and manage emissions trading systems.

The UN Development Programme and the PMI have been collaborating on linking the open-source national carbon

registry to the CAD Trust (a Climate Warehouse initiative) as part of the Digital4Climate Working Group. This open-source registry complements the enhanced carbon registry that was developed as a part of the PMR’s support to Jordan and Sri Lanka and the core digital carbon registry that is currently being developed under the Climate Warehouse and will be tested in Bangladesh, Bhutan, India, and Pakistan.

Socialization partnerships: Socialization partnerships focus on knowledge sharing and consensus building. They create platforms for stakeholders to come together, exchange insights, and collectively drive progress. The Multilateral Development Bank Working Group collaborations highlight the importance of fostering a collective understanding of market-based mechanisms. By collaborating on simulations, providing feedback, and sharing inputs for initiatives like the Integrity Council for the Voluntary Carbon Market and the Taskforce on Scaling Voluntary Carbon Markets, these partnerships ensure that a diverse range of perspectives shape the development of core carbon principles and assessment frameworks.



The Climate Market Club has 14 country members (Bangladesh, Bhutan, Chile, Ghana, Kazakhstan, Japan, Namibia, Peru, Rwanda, Senegal, Singapore, Sweden, Switzerland, and Ukraine) and five non-sovereign members (KliK Foundation, the Global Green Growth Institute, Temasek, the Institute for Global Environmental Strategies, and the United Nations Development Programme) and serves as a forum for discussion and consensus on how different technical elements of Article 6.2 can be piloted.

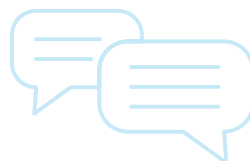
The different categories of partnerships within the PMIF reflect a holistic approach to driving change in international carbon markets and on carbon pricing implementation.

Technical expertise, practical implementation, and shared knowledge all come together to accelerate progress towards getting countries ready for carbon pricing instruments.





ADVOCACY



Carbon Pricing Leadership Coalition

Hosted by the World Bank, the CPLC is a voluntary initiative that brings together leaders from government, business, civil society, and academia to enhance global understanding of and support for carbon pricing as a tool for accelerating and financing effective climate action. It is the World Bank's principal vehicle for advocacy on carbon pricing.

Over the last six years, the CPLC has established itself as a trusted platform for carbon pricing advocacy and as a source of information for the public and private sectors and other stakeholders. As institutions globally seek solutions to the increasingly important but complex issues on carbon pricing, several national and global initiatives have emerged focusing on advocacy for carbon pricing. The knowledge generation and dissemination and in-country engagement around carbon pricing—initial core workstreams of the CPLC—has also become decentralized and well-funded by partners and other institutions.

It is in this context that the CPLC, to ensure its efforts have the most impact and given the evolving landscape of carbon pricing, is revisiting its goals and repurposing its mission, while building on its notable achievements. The CPLC has focused on strategic planning for the future in FY23 and conducted a series of consultations with key stakeholders and partners both internally and externally. A transition and handover process for the CPLC Secretariat is expected to take place in FY24.

Alongside the ongoing transition, the CPLC has published its [Carbon Pricing Leadership Report 2022/23](#), convened All-Partners Calls, and co-organized the Carbon Markets Plenary at the World Bank's annual flagship climate event, Innovate4Climate, in Bilbao, Spain.



KNOWLEDGE AND OUTREACH



Innovate4Climate

Under the knowledge and outreach pillar of the PMIF, I4C has been the World Bank Group’s annual flagship event on climate action since 2017. It has built a reputation for high-quality technical knowledge sharing, focusing on themes in finance, markets, policy, and technology.

I4C 2023: Scaling Climate Action in a Changing World

Back in person after two virtual deliveries in 2021 and 2022, [Innovate4Climate 2023](#) took place at the Bilbao Exhibition Centre in Bilbao, Spain, on May 23–25, 2023. The event built on the momentum of COP26, highlighting the need for governments and businesses to act urgently to tackle the climate challenge and build back better. It brought together over 1,500 participants (945 in person, 634 online) from 132 countries, representing the public and private sectors, international organizations, civil society, academia, youth, and media.

Under the theme “Scaling climate action in a changing world: innovation, investment, and impact”, the three-day conference showcased inspiring leadership and featured three high-level plenaries focusing on:

- Stepping Up Climate Finance: From Innovation to Delivery
- Carbon Markets and the Path to Net Zero: From Potential to Reality
- Making Climate Action Work for All: An Inclusive and Just Transition.

It included a rich workshop program with over 40 technical workshop sessions showcasing proven how-to climate solutions from around the globe, and a marketplace with 35 exhibitors from the public and private sectors, and multilateral organizations presenting groundbreaking initiatives in the climate space. The event also hosted a journalists workshop and a young climate innovators program.

I4C is a key moment on the global climate calendar with a unique energy: it puts innovation and discussing “the how” of delivering impactful climate action at its heart.

“It is an opportunity for us to show how we are delivering innovative climate and development solutions. It was also great to share some of our insights on the latest trends and practices from everything to reducing methane in agriculture to the latest in carbon pricing. And I enjoyed meeting with a wide group of practitioners, including from the private sector and youth representatives.”

– Jennifer Sara, World Bank Group Global Director, Climate Change



INNOVATE4CLIMATE 2023 IN NUMBERS:

1,500+ PARTICIPANTS FROM 132 COUNTRIES

35 EXHIBITORS

3 HIGH-LEVEL PLENARIES

44 WORKSHOPS



This year, I4C saw its biggest ever youth contingent and hosted multiple conversations and consultations with them, which we look forward to continuing in the run up to COP28.

“Youth are such an integral piece of the climate innovation puzzle—they bring a fresh perspective, insights, and expertise to the climate space. In fact, many of them are at the heart of some of the most exciting climate solutions out there, from nascent technologies to accountability mechanisms and to ensuring an inclusive climate action agenda.”

– Kaia Rose, Connect4Climate

“To ensure a prosperous future, we need to empower and engage youth in decision-making processes.”

– Joice Mendez, United Nations Secretary General’s Youth Advisory Group on Climate Change



“Standards will enable benchmarks, transparent pricing and best in class verification. It’s a critical part the answer to building high integrity carbon markets.”

– Sonja Gibbs, Managing Director and Head of Sustainable Finance, Institute for International Finance



Regional Climate Weeks

Regional Climate Weeks is a joint initiative of UN Climate Change, the World Bank Group, the UN Development Program, and the UN Environment Program. These events bring together governments and other stakeholders to showcase climate action initiatives and explore strategies to achieve the Paris Agreement goals of limiting global warming and fostering resilience. The Regional Climate Weeks cover three themes: national actions and economy-wide approaches; integrated approaches for climate-resilient development; and seizing transformation opportunities.

Two Regional Climate Weeks took place in FY23, with the World Bank leading several sessions. There were over 4,000 participants and over 345 sessions in total. The key takeaways from the Latin American and Caribbean in July 2022 and the Africa Climate Week in August 2022 were compiled into output reports and published on the [UN Climate Change Regional Climate Weeks](#) website.

In 2023, four climate weeks (Africa, Middle East and North Africa, Latin America and the Caribbean, and Asia-Pacific) are taking place from September to November to build momentum ahead of the UN Climate Change Conference COP28 in Dubai and the conclusion of the first Global Stocktake, designed to chart the way for fulfilling the Paris Agreement's key goals.



Latin America and the Caribbean Climate Week 2022, Santo Domingo, Dominican Republic



Africa Climate Week 2022, Libreville, Gabon



Africa Climate Week 2022, Libreville, Gabon

Communications

All of the pillars under the PMIF rely on communication and outreach.

The PMIF has taken significant strides in establishing robust communication channels to enhance awareness, information dissemination, and engagement around carbon pricing initiatives. Recognizing the pivotal role of communication in driving successful policy implementation, the PMIF initiated several key communication efforts in FY23.

Regular newsletters: The PMIF publishes informative newsletters two to three times a year. These newsletters serve as a valuable medium to share updates, best practices, implementation status, and emerging trends in the field of carbon pricing.

User-friendly website: An enhanced online platform will serve as a hub for information related to carbon pricing initiatives, showcasing case studies, policy documents, research findings, and event announcements. In FY24, the PMIF webpage will become a comprehensive resource that stakeholders can easily access to stay informed and engaged.

Informative brochures: The PMIF has developed informative brochures that succinctly explain the principles, benefits, and processes associated with carbon pricing mechanisms. These brochures are essential tools for conveying complex concepts to a broader audience in a concise and understandable manner.

Participation in technical forums: PMIF experts participated in the following global forums:

- European Climate Week, Florence, May 2023
- Regional workshop on stewarding the low-carbon transition, Singapore, April 2023
- African Development Bank Gender and Carbon Markets workshop, April 2023
- G-STIC Conference, Brazil, February 2023

- IEA-International Carbon Action Partnership-KAS Carbon Pricing Dialogue, Singapore, December 2022
- COP27 Launch of Canada’s Global Carbon Pricing Challenge, Egypt, November 2022
- COP27 Launch of Japan’s A6 Implementation Partnership, Egypt, November 2022
- Carbon Market Platform, Germany, October 2022
- MOF Seminar on “Dual Carbon” Goal of China, October 2022
- A6 Implementation Partnership Consultation, Japan, September 2022
- International Carbon Action Partnership Annual meeting, USA, September 2022
- APEC Workshop on carbon pricing and carbon markets, September 2022
- Business Partnership for Market Implementation Workshop, Mexico, September 2022
- UN Climate Change High Level Dialogue on regional climate action in the SIDS, Bahamas, August 2022
- Expert Group Meeting on regional carbon market development, UNECA, August 2022
- 5th International Sustainable Energy Summit, Malaysia, August 2022
- Carbon pricing and net zero offsite—Calvert Research and Morgan Stanley event, July 2022

In FY23, the PMIF started to put in place communication tools to foster transparency, education, engagement, and advocacy. This will be further enhanced, and a new communications strategy is being developed for launch in FY24.



COMPACT WITH AFRICA —GREEN BUSINESS FUND

The G20 Compact with Africa (CwA) was initiated in 2017 to promote private investment in Africa, including in infrastructure, by improving countries’ macroeconomic, business, and financing policy frameworks.

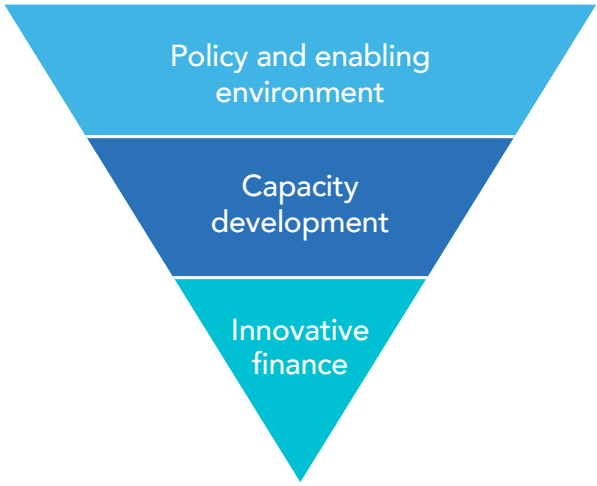
It brings together reform-minded African countries, international organizations, and bilateral partners from the G20 and beyond to coordinate country-specific reform agendas, support policy measures, and promote investment opportunities to private investors. The CwA has 12 member countries: Benin, Burkina Faso, Côte d’Ivoire, Egypt, Ethiopia, Ghana, Guinea, Morocco, Rwanda, Senegal, Togo, and Tunisia.

With support from the International Climate Initiative under the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety, the World Bank established the Compact with Africa—Green Business Fund (CwA-GBF) in 2021 as an associated trust fund under the PMIF umbrella. The CwA-GBF helps small and medium enterprises (SMEs) in Africa access climate

finance to adopt and scale climate solutions. It aims to achieve this objective through three focus areas:

Policy dialogue and enabling environment: The objective of this focus area is to create an active community of SMEs, financial intermediaries, entrepreneurs, and relevant policy makers in targeted countries. This is achieved through shared understanding of policy and regulatory barriers for SMEs to access climate/green finance to scale up climate solutions; promotion of regulatory frameworks that incentivize SMEs to adopt and scale up climate solutions across different sectors; and exchange of knowledge and expertise on climate change risks and solutions.

During FY23, the CwA-GBF engaged in a number of outreach and knowledge events:



- Organized a session at UN Climate Change Africa Climate Week (Libreville, Gabon, August 2022) on “Blended Finance to Support African SMEs to Scale Transformative Climate Solutions”, which reviewed examples of innovative financial mechanisms that can be tailored to African SMEs.
- Organized face-to-face policy dialogue between CwA focal points from ministries of finance and economy and representatives of ministries of environment in charge of climate change (Kigali, Rwanda, March 2023). The session,

organized in partnership with the African Center for Economic Transformation and the World Bank Finance, Competitiveness, and Innovation Global Practice, was the first of its kind to promote an informal exchange of views on climate change and SMEs between the participants across CwA partner countries and between government stakeholders. The dialogue was enhanced by representatives of three financial sector stakeholders active in the region that were able to bring their on-the-ground understanding of the challenges involved and recommendations on the way forward to support private sector mobilization on climate action. The dialogue led to requests from participants for more climate finance learning events for the CwA focal points and for a shared commitment to address the issue of private sector financing for climate change adaptation and mitigation in the updating of the CwA reform matrices that seek to promote private sector investments.

- Co-sponsored the PMIF technical workshop on “Country Experiences on Using International Carbon Markets to Achieve NDC Targets”, and organized two sessions on the “Role of the Private Sector in NDCs” and a “Deep Dive with Innovators in the African Climate Finance Landscape”. The sessions explored private sector challenges, solutions, and business models for financing SME climate action (Kigali, Rwanda, March 2023).
- Organized a session at Innovate4Climate on “Enhancing Financing for Small and Medium Scale Enterprises via Risk Guarantee Instruments”, to explore the role for risk guarantee instruments to de-risk local businesses for climate action (Bilbao, Spain, May 2023).
- Released a working paper on the landscape of green SMEs in Africa, to analyze the key sectors of relevance to the SMEs and climate change agenda in the region and what barriers they face specific to climate change, in addition to the broader barriers related to access to finance faced by SMEs generally. Insights will be

used to inform the CwA-GBF’s engagement with SMEs, including capacity-building activities and potential collaborations.

Capacity development and technical assistance: The program creates tailored capacity-building packages for SMEs to improve their understanding of the risks and opportunities for innovation under a rapidly changing climate. Activities include supporting SMEs in identifying and developing business models for climate-smart products and services, and developing toolkits for financial intermediaries and SMEs to assess climate risk.

During FY23, the CwA-GBF pursued a number of initiatives:

- Collaborated with IFC’s Financial Institutions Group Green Banking Academy to develop a program to train financial institutions on climate finance for SMEs. The curriculum aims to complement and leverage the academy’s program, which offers specialized advice and training to accelerate the green transformation of banks in the region, by bringing a focus on SMEs and climate finance to that training. The program is expected to be scaled up in CwA countries in FY24.
- Worked with the World Bank’s Agriculture and Food Global Practice and Egypt’s Ministry of Planning and Economic Development, to analyze the enabling policy and institutional environment, green and blended financing incentives, and mechanisms for SMEs in selected agri-food value chains to adopt or scale climate technologies. The completed study (pending publication), will inform climate finance approaches and options for an upcoming operation that aims to improve productivity and enhance climate resilience in the Egyptian agrifood sector.
- Worked with the World Bank’s Global Practice for Finance, Competitiveness, and Innovation and the Technology and Innovation Lab to develop a proof of concept for the use of blockchain and digitalization to support climate results-based

financing by reducing the cost of MRV and addressing aggregation challenges in agriculture value chains in the region. An assessment of the potential for results-based financing linked to the digitalization of mango value chains in Côte d'Ivoire will be available in the first quarter of FY24.

Innovative financial instruments: This focus area aims to conceptualize, design, and pilot sustainable business models that apply innovative financial instruments to enhance access to climate finance in selected countries.

During FY23, the CwA-GBF worked with World Bank global practices to build on and leverage World Bank projects to develop and deploy innovative instruments. This includes the following initiatives, in addition to a number of discussions with potential partners both inside and outside the World Bank:

- With the Energy and Extractives Global Practice, the CwA-GBF conducted a market study on scaling up of off-grid-solar in Benin, Burkina Faso, Côte d'Ivoire, Ghana, Togo, and Senegal. The study, which will be completed by the end of 2023, aims to assess the off-grid solar market, with the aim of filling the knowledge gap regarding policy and enabling environment barriers adversely affecting the scaling-up of solar, and how local commercial financial institutions can be best assisted in order for them to enhance their funding for solar companies and SME businesses. This includes outlining the design of a partial risk guarantee facility to address these barriers that can inform the World Bank's energy access programs in the region.
- The CwA-GBF is collaborating with the World Bank's global practices for Agriculture and Food and for Finance, Competitiveness, and Innovation in the context of the Commercialization and De-Risking for Agricultural Transformation Project, the largest World Bank project in Rwanda. A joint mission was organized with the Agriculture and Food Global Practice to Rwanda to propose the design of a results-

based climate finance scheme linked to the adoption of climate-smart agriculture practices, as an incentive tied to a credit line provided by the World Bank to the Development Bank of Rwanda. This could be scaled up in the future as carbon markets and sources of climate finance further grow and develop. The initiative would also serve to build the capacity of the Development Bank of Rwanda and its clients to engage with results-based climate finance and carbon markets, derisking SME investments in climate-smart agriculture. This engagement is expected to run from FY24 to FY26.



PROGRAM MANAGEMENT

The PMIF is governed by a Partnership Council and a Program Management Unit. The council determines the strategic direction of the program and endorses the annual work program and budget, while the Program Management Unit is responsible for day-to-day operations and funding decisions.

GOVERNANCE



The PMIF's governance structure consists of a Partnership Council, which determines the strategic direction of and endorses work program priorities, and a Program Management Unit, which is responsible for administering the PMIF's anchor and associate trust funds.

The **Partnership Council** is made up of all the donors that contribute to the individual trust funds in the PMIF (anchor and associates) and is chaired by the World Bank's Global Director for Climate Change. The council meets at least once a year to discuss the strategic direction of the program, endorse the annual work program and budget, and review the progress of the work program presented in an annual report. The PMIF Council Meeting took place on May 22, 2023, in Bilbao, Spain.

The World Bank's Climate Finance and Economics unit is the **Program Management Unit** for the PMIF. It is responsible for day-to-day operations and funding decisions as per predetermined thresholds and due process. The Program Management Unit reports progress against key strategic priorities, thematic focus areas, and the agreed results framework. It is also responsible for organizing various meetings and consultations.

In addition to the formal governance process based on annual reporting and review, the PMIF has created institutional structures for individual trust funds and initiatives to facilitate periodic discussions with contributing partners and receive feedback on various aspects of the work program. During FY23, the Technical Advisory Group of the PMI met twice, while the CwA held two Steering Committee meetings. Similarly, the CPLC held Advisory Group meetings and the Climate Warehouse organized regular stakeholder consultations.

In the PMI, two working groups have been established, with participation of Technical Advisory Group members on a voluntary basis, to advance discussions and provide technical advice on specific topics:

- Working Group on Just Transition
- Working Group on Monitoring and Evaluation (currently focused on the results framework).



FINANCIAL OVERVIEW



For FY23, the Partnership Council approved a budget of \$23.47 million for the PMIF. Across various trust funds and activities under the umbrella, the amount spent or allocated for FY23 was \$47.4 million.

PMIF FY23 budget and commitments

PILLAR	APPROVED	SPENT/ALLOCATED
Advisory and Technical Assistance		
Partnership for Market Implementation	11,530,000	42,783,810
Compact with Africa	6,970,000	1,385,000
Innovation		
Climate Warehouse	2,620,000	807,777
Advocacy		
Carbon Pricing Leadership Coalition	200,000	103,835
Outreach		
Innovate4Climate	1,900,000	2,100,000
Regional Climate Weeks	250,000	262,550
TOTAL	23,470,000	47,442,972



PMI FY23 financial statement

The PMI's country support program was launched on schedule and 17 countries were selected to develop full proposals.

COST ITEM	PLANNED	DISBURSED	ALLOCATED	TOTAL
Country program support				
Window 1: Implementation	4,000,000	703,500	26,650,000	27,353,500
Window 2: Readiness	3,200,000	424,800	11,470,000	11,894,800
Country delivery and advisory	850,000	901,640		901,640
Proposals review by experts	180,000			
Targeted support				
Window 3: Targeted support	350,000	550,170		550,170
WB delivery and advisory	150,000			
Technical program support	900,000	698,000		698,000
Communications/outreach	250,000	197,460		197,460
Program management	1,150,000	1,188,240		1,188,240
Subtotal	11,030,000			
Contingency	500,000	0		
TOTAL	11,530,000	4,663,810	38,120,000	42,783,810

ANNEX I: ADDITIONAL INFORMATION ON COUNTRY PROGRAMS

Window 1: Implementation support

CHILE	
Project duration	3 years
PMI country focal point(s)	Ministry of Energy
Other core institutions	<ul style="list-style-type: none"> • Ministry of Environment • Ministry of Finance • Chilean Agency for International Development Cooperation
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> • Carbon tax operational since 2017. • Offsetting mechanism to complement carbon tax since 2022. • Climate Change Framework Law allows for additional (sectoral) carbon market instruments.
Scope of PMI work	<ul style="list-style-type: none"> • Operationalize domestic offsetting mechanism. • Evaluate energy sector ETS. • Support national policy for Article 6.
Carbon pricing developments in the country FY23	<ul style="list-style-type: none"> • Offsetting mechanism for carbon tax in operation. • Proposed tax reform with plans to increase carbon tax value.

CHINA	
Project duration	3 years
PMI country focal point(s)	Ministry of Ecology and Environment
Other core institutions	<ul style="list-style-type: none"> • Ministry of Finance • The Foreign Economic Cooperation Office • Ministry of Ecology and Environment
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> • National ETS (since 2021). • 7 pilot ETSs (since 2011). • Domestic crediting mechanism launched in 2012 and halted in 2017.
Scope of PMI work	<ul style="list-style-type: none"> • Improve the national ETS (governance, cap setting, auctioning, sector expansion, MRV, trading infrastructure, trading products). • Accelerate legislative process for emission trading, studies on carbon tax and domestic crediting mechanism. • Improve institutional capacity and communication strategy (including just transition) for promoting national ETS.
Carbon pricing developments in the country FY23	<ul style="list-style-type: none"> • Three ministries jointly released an implementation plan in August 2022 to improve the carbon accounting system for China's carbon markets by 2025 (Implementation Plan on Accelerating the Construction of a Unified and Regulated Statistics and Accounting System for Carbon Emissions). • Updated allowance allocation plan for thermal generators (released in March 2023).

COLOMBIA	
Project duration	4 years
PMI country focal point(s)	Ministry of Environment and Sustainable Development
Other core institutions	<ul style="list-style-type: none"> • Ministry of Finance (Hacienda) • National Planning Department
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> • Carbon tax established in 2016 on the carbon content of fuels except coal. • Carbon offsetting mechanism for carbon tax, allowing up to 100% compensation. • 2018 Climate Change Law mandates ETS implementation; NDC commits to it being fully operational by 2030. Detailed regulation to be established with support of PMI.
Scope of PMI work	<ul style="list-style-type: none"> • Finalize ETS regulation and operation of ETS pilot phase. • Develop corporate GHG emissions reporting platform. • Technical design of IT infrastructure for ETS operation (registry, auction, and trading platform). • Capacity building and stakeholder training.
Carbon pricing developments in the country FY23	<ul style="list-style-type: none"> • New government continues support for ETS implementation. • Adjustments to the existing carbon tax now including coal combustion. • Use of offsetting of the carbon tax now limited to 50% (formerly 100%).

INDONESIA	
Project duration	3 years
PMI country focal point(s)	<ul style="list-style-type: none"> • Ministry of Environment and Forestry • Coordinating Ministry for Maritime Affairs and Investment
Other core institutions	<ul style="list-style-type: none"> • Indonesia Environment Fund • Ministry of Energy and Mineral Resources
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> • 2021 Presidential Regulation on Economic Valuation of Carbon established a legal framework for developing and implementing carbon pricing policies in Indonesia. • 2022 Environment and Forestry Ministerial Regulation governs implementation of carbon pricing instruments, including rules and modalities for domestic carbon crediting, and general provisions for allowance-based trading. • 2022 Energy and Mineral Resources Ministerial Regulation launched a 3-phased emissions trading program in the power generation sector.
Scope of PMI work	<ul style="list-style-type: none"> • Enhance institutional capacity to implement and administer carbon pricing policy instruments and to enable access to international carbon markets. • The project consists of four technical components: (1) policy analysis and implementation roadmaps; (2) institutional strengthening and capacity development; (3) ETS instrument design and MRV infrastructure; and (4) coordination, communication, and consultation.
Carbon pricing developments in the country FY23	<ul style="list-style-type: none"> • Adoption of ministerial regulations defining rules and modalities for domestic carbon crediting and power sector ETS. • Further progress in the implementation of institutional arrangements for carbon pricing policy coordination and carbon market administration.

KAZAKHSTAN	
Project duration	3.5 years (till Dec 2026)
PMI country focal point(s)	Ministry of Ecology and Natural Resources of the Republic of Kazakhstan
Other core institutions	JSC Zhasyl Damu
Country carbon pricing policy framework—planned and/or existing	Kazakhstan has an ETS enshrined in law.
Scope of PMI work	<ul style="list-style-type: none"> Strengthen the effectiveness of the ETS and support carbon pricing expansion to contribute to Kazakhstan’s updated 2030 NDC targets and 2060 carbon neutrality goals. Key components are: (1) strengthening the ETS (MRV, auction design, benchmarking); (2) expansion of the ETS to cover additional sector(s) or GHGs such as methane; and (3) stakeholder engagement and just transition.
Carbon pricing developments in the country FY23	A new National Allocation Plan for 2022–2025 was approved in July 2022, establishing a cap of 163.7 MtCO ₂ for 2023.

MEXICO	
Project duration	TBD
PMI country focal point(s)	Secretariat of Environment and Natural Resources
Other core institutions	Secretariat of Finance (Department of Finance and Public Credit)
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> Federal carbon tax in place (since 2014). Carbon tax introduced in the states of Zacatecas, Baja California, Durango, Guanajuato, Tamaulipas, State of Mexico, Querétaro, and Yucatán. Carbon tax is under consideration in Jalisco. General Law on Climate Change amended in 2018 mandates the creation of an ETS. A 3-year pilot program has been completed. The law envisions a transition period and the start of the operational phase of the ETS in 2023. Publication of rules and guidelines for operational phase not yet published (expected in calendar year 2023).
Scope of PMI work	<ul style="list-style-type: none"> Draft implementation support plan was focused on support for operational phase of ETS. Just-in-time support activity in process of being defined.
Carbon pricing developments in the country FY23	<ul style="list-style-type: none"> 5 states apply carbon tax as of April 2023: Durango, Querétaro, State of Mexico, Yucatán, and Zacatecas. Publication of rules and guidelines for ETS operational phase delayed.



TÜRKIYE	
Project duration	4 years
PMI country focal point(s)	Ministry of Environment, Urbanization, and Climate Change
Other core institutions	Ministry of Finance
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> • Mandatory MRV system (installation level) operational since 2015. • The Medium-Term Programme (2023–2025) defines policy and measures on establishing an ETS under the green transformation topic. • Drafting national Climate Change Law in line with 2053 net zero target.
Scope of PMI work	<ul style="list-style-type: none"> • Finalize ETS design and support pilot launch (design options, legal gaps, registry development, and modeling impacts). • Roadmap for Article 6 mechanisms and capacity building for negotiations. • Consider domestic crediting and carbon tax (in other sectors to complement the ETS).
Carbon pricing developments in the country FY23	<ul style="list-style-type: none"> • Climate council recommendations (June 2022), emphasize prioritizing ETS implementation (launching pilot ETS in 2024) in compliance with the updated NDC and EU Directive. • These recommendations are also in Türkiye’s Medium-Term Programme, approved and published in September 2022.

UKRAINE	
Project duration	<p>1.5 years (phase 1)</p> <p>Phase 2 will be contingent on completion of phase 1 activities and confirmation of an enabling environment in the country, which will be determined through a due diligence process undertaken by the World Bank task team.</p>
PMI country focal point(s)	Ministry of Energy and Environment
Other core institutions	Ministry of Finance
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> • Ukraine plans to establish a national ETS in line with the Ukraine-EU Association Agreement (which entered into force September 2017). • National MRV system operational since 2021.
Scope of PMI work	<ul style="list-style-type: none"> • Assess and propose design details for a national ETS. • Provide advice to support ETS operationalization (legal gap analysis and best practices). • Conduct stakeholder consultations.
Carbon pricing developments in the country FY23	<ul style="list-style-type: none"> • Work on emissions trading and carbon pricing has been severely impacted by Russia’s invasion of Ukraine. • Technical work and stakeholder engagement continues to be carried out. • MRV requirements suspended given Russia’s invasion.

VIETNAM	
Project duration	4 years
PMI country focal point(s)	Ministry of Natural Resources and Environment
Other core institutions	<ul style="list-style-type: none"> • Ministry of Finance • Ministry of Industry and Trade • Ministry of Construction • Ministry of Planning and Investment • Ministry of Transport
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> • Vietnam does not have a direct tax on carbon emissions, only an environmental and natural resource tax and environmental fees on wastes. • The new Law on Environmental Protection specifies the need to establish the domestic carbon market—a national crediting program and an ETS.
Scope of PMI work	<ul style="list-style-type: none"> • Develop and implement the national crediting program. • Develop and implement the domestic ETS.
Carbon pricing developments in the country FY23	<ul style="list-style-type: none"> • Decree 06/2022/ND-CP outlined the roadmap for the implementation of the domestic ETS. • The decree requires facilities with annual GHG emissions above 3,000 tCO₂e to submit a biennial inventory report of their emissions from 2025 onwards. • The accompanying Decision 01/2022/QD-TTg lists the sectors and facilities with emissions inventory obligations.





Window 2: Readiness support

BANGLADESH	
Project duration	3 years
PMI country focal point(s)	Ministry of Environment, Forests, and Climate Change
Other core institutions	Department of Environment
Country carbon pricing policy framework—planned and/or existing	Bangladesh has recognized the importance of market-based instruments to support the achievement of its climate commitments in key policy documents, including the Mujib Climate Prosperity Plan, the Bangladesh updated NDC (2021), and its Roadmap & Action Plan for NDC implementation.
Scope of PMI work	<p>Readiness support, with a focus on enabling activities for international carbon credit trading and development of market infrastructure:</p> <ul style="list-style-type: none"> • International carbon markets: development of country policy framework and institutional arrangements. • MRV and registry: assessment of options for registry systems including the suitability of open-source tools; customization and piloting of core registry to support carbon credit trading. • National carbon pricing policy: technical assessments around feasibility and impact of introducing an explicit carbon pricing instrument in Bangladesh, to inform policy-making. • Cross-cutting: development and execution of capacity-building plan, communication strategy, knowledge management/outreach activities.
Carbon pricing developments in the country FY23	Bangladesh is engaged in readiness activities for international carbon trading (voluntary carbon market and Article 6).

BOTSWANA	
Project duration	3 years
PMI country focal point(s)	Ministry of Finance
Other core institutions	Department of Environment
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> • Ministry of Mineral Resources, Green Technology, and Energy Security • Ministry of Environment, Natural Resources Conservation, and Tourism
Scope of PMI work	<ul style="list-style-type: none"> • MRV system. • Macroeconomic modeling. • Assessment of distributional impacts (just transition considerations). • Stakeholder consultations.
Carbon pricing developments in the country FY23	None

GUINEA	
Project duration	3 years
PMI country focal point(s)	Ministry of Environment and Sustainable Development
Other core institutions	Ministry of Economy, Finance, and Planning
Country carbon pricing policy framework—planned and/or existing	Not formally in place. In its first revised NDC (2021), Guinea expressed its interest and intention to voluntarily engage in cooperative approaches under Article 6 of the Paris Agreement, to finance its contribution to mitigation efforts that is contingent on securing international financial support. It identified the mining sector as an area for mitigating GHG emissions and committed to net zero GHG emissions for the mining sector by 2040.
Scope of PMI work	<ul style="list-style-type: none"> • Design of a carbon price signal instrument, targeting the bauxite and iron ore mining sector, initially, as well as developing government capacity in enabling legislation for compliance; registries; and relevant funding and offset mechanisms. • Regulatory and institutional infrastructure for participation in Article 6, including registry, national MRV, and other capacity strengthening. • Just transition, awareness raising and other cross-cutting capacity building.
Carbon pricing developments in the country FY23	PMI launch workshop, March 10, 2023

MALAYSIA	
Project duration	3 years
PMI country focal point(s)	<ul style="list-style-type: none"> • Treasury • Ministry of Investment, Trade, and Industry
Other core institutions	Ministry of Natural Resources, Environment, and Climate Change
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> • No high-level policy framework currently exists, however, Malaysia published a guidance report for voluntary carbon trading in 2021. • Design of carbon pricing instruments are at a preliminary stage with most key elements remaining open. • Malaysia can build on experience with the Clean Development Mechanism and other associated initiatives. • There is high-level and definitive political commitment to the implementation of carbon pricing through its inclusion in the 12th Malaysia Plan.
Scope of PMI work	<p>Readiness support, including support across carbon pricing assessment (tax, ETS, and carbon crediting). The scope includes the following key elements:</p> <ul style="list-style-type: none"> • Impact analysis and policy design, including carbon pricing impact analysis and a review of international experiences and lessons learned from carbon prices applied worldwide. • MRV and registry, including investigation into the functionality requirements and core elements of supporting infrastructure. • Crediting, including support on use of existing carbon crediting standards and protocols and review of the potential to incorporate nature-based credits into national compliance mechanisms. • Cross-cutting, including assessment of capacity requirements, a communication strategy, education and outreach activities.

MALAYSIA CONTINUED	
Carbon pricing developments in the country FY23	<ul style="list-style-type: none"> • Design of carbon pricing in Malaysia is at a preliminary stage with most key elements remaining open. • The most significant development was the launch of Malaysia's Bursa Carbon Exchange in December 2022; a Shariah-compliant carbon exchange, managed by Bursa Malaysia, which held its first auction in March 2023.

MONTENEGRO	
Project duration	3 years
PMI country focal point(s)	Ministry of Ecology, Spatial Planning, and Urbanism
Other core institutions	<ul style="list-style-type: none"> • Environmental Protection Agency • Ministry of Capital Investments • Ministry for Agriculture, Forestry, and Water Management • Ministry of Finance • National Council for Sustainable Development
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> • ETS was established in 2020 in industry and power sectors. • It covers coal power, aluminum, and steel plants, and establishes a floor price for an ETS allowance (24 euros). • The Law on Protection against Negative Impacts of Climate Change was adopted in December 2019, which sets the legal basis for ETS. • The Decree on Activities for Which a GHG Permit is Issued, adopted in February 2020, determines sectoral coverage and inclusion thresholds, rules governing permits trade, allocation rules for auctions, benchmarking, and a market stabilization reserve for ETS.
Scope of PMI work	<p>Impact assessment of carbon pricing:</p> <ul style="list-style-type: none"> • Assessment of carbon pricing impact to improve understanding of the implications of joining the EU ETS, implementation of the EU carbon border adjustment mechanism, and any non-ETS carbon pricing instrument deployed by Montenegro. • Evaluation of the interactions of carbon pricing on generation planning of Elektroprivreda Crne Gore, the coal-fired thermal power station. • High-level assessment of potential synergies between carbon pricing and the forestry and tourism sectors. <p>Analytical work to support the enhancement of carbon policy and legal-regulatory framework, including:</p> <ul style="list-style-type: none"> • Further update of the existing national ETS until full compliance with the Energy Community acquis, joining of the EU ETS and implementation of EU carbon border adjustment mechanism, including analysis of the potential expansion to other sectors (buildings, transport). • Domestic carbon offset scheme in the forestry sector, including evaluation of the design options for the domestic crediting mechanism and development of the implementation plan. • Carbon tax design, including the national policy evaluation and options analysis and regulatory requirements for the carbon tax. <p>Cross-cutting activities:</p> <ul style="list-style-type: none"> • Technical assistance to the state institutions, private companies, and other key players involved in carbon pricing implementation. • Support in developing a communications strategy to generate public acceptability and awareness of carbon pricing.

MONTENEGRO CONTINUED

Carbon pricing developments in the country FY23	<ul style="list-style-type: none"> • Following comments from the World Bank task team, the government made the decision not to buy ETS allowances for a coal power plant (public company) from an aluminum plant (private company) in 2023, and instead decided to buy ETS allowances from the market stabilization reserve, creating public funds for climate mitigation projects. • The government decided to update the Law on Protection against Negative Impacts of Climate Change and received initial comments from the World Bank task team. The task team proposed that the updates be postponed until the finalization of the carbon pricing impact assessment, full analysis of EU carbon border adjustment mechanism rules, and initial decisions on the introduction of a carbon tax and domestic crediting mechanism.
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PAKISTAN

Project duration	3 years
PMI country focal point(s)	Ministry of Climate Change
Other core institutions	
Country carbon pricing policy framework—planned and/or existing	Although carbon pricing is not explicitly mentioned in Pakistan’s NDC, there are several policy documents in place that do make reference to carbon pricing and markets, notably the National Climate Change Policy. A National Committee on the Establishment of Carbon Markets was established but is not fully operational—it is meant to oversee the development of the carbon market landscape in Pakistan.
Scope of PMI work	<p>Readiness support, with a focus on enabling activities for international carbon credit trading and development of market infrastructure:</p> <ul style="list-style-type: none"> • International carbon markets: development of country policy framework and institutional arrangements. • MRV and registry: assessment of options for registry systems including the suitability of open-source tools; customization and piloting of core registry to support carbon credit trading. • National carbon pricing policy: technical assessments around feasibility and impact of implementing an allowance-based emissions trading program in Pakistan, including preparation of a pilot to support stakeholder engagement. • Cross-cutting: development and execution of capacity-building plan, communication strategy, knowledge management/outreach activities.
Carbon pricing developments in the country FY23	Pakistan is engaged in readiness activities for international carbon trading (voluntary carbon market and Article 6), including signature of memoranda of understanding with partner countries and reputable market standards, and piloting of ERC registry prototypes.

PANAMA	
Project duration	3 years
PMI country focal point(s)	<ul style="list-style-type: none"> • National Secretariat of Energy • Ministry of Environment
Other core institutions	
Country carbon pricing policy framework—planned and/or existing	<ul style="list-style-type: none"> • Executive Decree 100 of October 20, 2020, establishes the Reduce Your Footprint National Program, Panama’s national low-emissions development program and MRV system. Article 50 also provides a legal mandate to the Ministry of Environment to design and implement a domestic carbon market in Panama. • The Ministry of Environment’s Resolutions DM-0358-2020 of November 17, 2020, and DM-0382-2021 of July 19, 2021, create the First 50 Carbon Neutral Organizations Declaration, a commitment by organizations to become carbon neutral by 2050. • Cabinet Resolution 93 of November 24, 2020, adopts the Energy Transition Agenda and outlines a roadmap for the low-emissions development of the energy sector. • The Ministry of Environment’s Resolution DM-0224-2021 of May 5, 2021, adopts the technical standard and tools for the operations of the Reduce Your Footprint Corporate—Carbon Program, the national corporate footprint management program. • Executive Decree 142 of December 9, 2021, creates the structure for the operations of the National Carbon Market of Panama.
Scope of PMI work	<ul style="list-style-type: none"> • Support the implementation of the Reduce Your Footprint National Program, including strengthening the Sustainable System for National GHG Inventories. • Establish the institutional arrangements for the operations of Panama’s national carbon market, including policies for the definition of its scope and progressive implementation. • Develop legal and technical foundations for the operation of mitigation instruments in the energy sector, including a National EE Certificates Program and a National Vehicles’ Emissions Registration Program. • Strengthen the national knowledge base and the capacity of decision makers for the piloting of carbon pricing instruments and other mitigation instruments, in line with national climate and development priorities.
Carbon pricing developments in the country FY23	<ul style="list-style-type: none"> • The Minister of Environment, on behalf of the Presidential Cabinet, presented in the National Assembly the Climate Change Framework bill, which is expected to be enacted by the end of 2023. • The Ministry of Environment has signed four MOUs with standards: Verra, Gold Standard, Plan Vivo and Climate Action Research. This is for technical exchanges for periodic meetings to review the mechanisms methodologies and see if they could apply to Panama’s national market. • The Ministry of Environment is also working on a virtual markets module on the Transparency National Platform with educational tools to create awareness. • Progress was made on adapting the forestry protocol of Mexico to Panama. This should be ready in the first half of 2024. • DM-0207-2022: appointing the board of directors of the Panama Carbon Exchange; Latinex was selected as the administration entity of the exchange.

SENEGAL	
Project duration	3 years
PMI country focal point(s)	Ministry of Environment, Sustainable Development, and Ecological Transition
Other core institutions	
Country carbon pricing policy framework—planned and/or existing	Not formally in place; the NDC (2020) emphasizes the importance of carbon market mechanisms.
Scope of PMI work	<ul style="list-style-type: none"> • Roadmap for operationalization of carbon tax, including definition of objective, scope and impacts, and stakeholder engagement and awareness raising. • Regulatory and institutional infrastructure for participation in Article 6, including registry, national MRV, and other capacity strengthening. • Just transition consideration and other cross-cutting capacity building.
Carbon pricing developments in the country FY23	PMI launch workshop, May 26, 2023



Window 3: Targeted support

BOSNIA AND HERZEGOVINA	
Project duration	1 year
Activity/grant status end of FY23	Final report due to be submitted in FY24 Q1.
PMI country focal point(s)	Ministry of Foreign Trade and Economic Relations of Bosnia and Herzegovina
Other core institutions	<ul style="list-style-type: none"> • Ministry of Finance • Ministry of Energy
Recent carbon policy developments triggering just-in-time support	<ul style="list-style-type: none"> • EU acquis alignment requirements as part of EU accession talks • Roadmap for ETS implementation developed with Energy Community (2026 implementation) • Mandate to transpose EU ETS MRV regulations as part of Energy Community obligations
Scope of PMI work	Computable general equilibrium modeling and qualitative analysis on macroeconomic impact of different cap options for Bosnia and Herzegovina national ETS (design options based on EU ETS design).

BRAZIL	
Project duration	1 year
Activity/grant status end of FY23	<ul style="list-style-type: none"> • Energy MRV: Just-in-time activity proposal submitted and discussed; grant allocated. Procurement ongoing. • ETS targeted support under consideration.
PMI country focal point(s)	<ul style="list-style-type: none"> • Ministry of Finance • Ministry of Energy
Other core institutions	
Recent carbon policy developments triggering just-in-time support	<ul style="list-style-type: none"> • Since 2021, several bills on carbon markets have been presented to Congress. • Current government has made renewed and broad commitment to implementing an ETS, including statements from Brazil's president, vice-president, and several ministers. • Interministerial Committee on Climate Change reinstated and to establish working group on carbon markets. • Bill of law for domestic ETS expected before COP28.
Scope of PMI work	<p>Energy MRV:</p> <ul style="list-style-type: none"> • MRV of corporate GHG emissions, including development of a detailed step-by-step process and critical path for the design and implementation of the module. • Stakeholder coalition building to advance the domestic regulated carbon market in Brazil. <p>Scoping on ETS support regarding:</p> <ul style="list-style-type: none"> • Updating of macroeconomic modelling of ETS impacts (from PMR). • Support stakeholder engagement process. • Capacity building on ETS design elements and ETS implementation roadmap.

ECUADOR	
Project duration	1 year
Activity/grant status end of FY23	Just-in-time activity proposal submitted and discussed; grant allocated.
PMI country focal point(s)	Ministry of Environment, Water and Ecological Transition
Other core institutions	
Recent carbon policy developments triggering just-in-time support	Launch of a voluntary carbon footprint program in 2021 and finalization of provisions for a carbon crediting mechanism under the program to foster the implementation of emission-reduction measures in the private and public sector in June 2023.
Scope of PMI work	Identify gaps and strengthen capacities in the private sector to join the voluntary carbon footprint program and implement corporate mitigation strategies, including the use of domestic offsetting.

INDIA	
Project duration	1 year
Activity/grant status end of FY23	Just-in-time activity proposal submitted and discussed; grant allocated.
PMI country focal point(s)	Bureau of Energy Efficiency, Ministry of Power
Other core institutions	World Bank India Country Office
Recent carbon policy developments triggering just-in-time support	<ul style="list-style-type: none"> • July 2022: Bureau of Energy Efficiency, designated nodal agency for the development of carbon markets in India, linked to the Perform Achieve, and Trade Scheme. • June 2023: Bureau of Energy Efficiency released the framework for the Indian Carbon Credit Trading System, including institutional arrangements and mandates for operationalization of the market.
Scope of PMI work	<ul style="list-style-type: none"> • Advise on the design of carbon market registry infrastructure. • Assess market stability mechanisms and design options.

PHILIPPINES	
Project duration	1 year
Activity/grant status end of FY23	Just-in-time activity proposal submitted and discussed; grant allocated.
PMI country focal point(s)	Department of Finance
Other core institutions	<ul style="list-style-type: none"> • Department of Energy • Department of Transport • Department of Trade and Industry • Department of Environment and Natural Resources
Recent carbon policy developments triggering just-in-time support	ETS readiness work program builds on preceding technical cooperation with the World Bank on low-carbon development and enabling policies, through the PMR (2019-20) and the NDC Support Facility (2021-22).
Scope of PMI work	<ul style="list-style-type: none"> • Targeted technical support for the assessment and design options of planned Philippines ETS.

