SUPPORTING CARBON PRICING POLICY ACTION
The Partnership for Market Readiness is a World Bank Group multidonor trust fund. It builds capacity in developing and emerging economies to support the preparation and implementation of climate change mitigation policies, including carbon pricing instruments, to scale up greenhouse gas mitigation efforts. The World Bank Group acts as a secretariat and delivery partner in participating countries through its operational units.

The report covers the period from July 1, 2016, to June 30, 2017 – the financial year 2017 (FY17) for the World Bank Group, unless noted otherwise.

All amounts in $ are United States dollars unless stated otherwise.

The map was produced by the Map Design Unit of the World Bank Group. The boundaries, colors, denominations, and any other information shown on the map do not imply, on the part of the World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.

ACRONYMS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>CGE</td>
<td>Computable general equilibrium</td>
</tr>
<tr>
<td>ETS</td>
<td>Emissions trading system</td>
</tr>
<tr>
<td>FY</td>
<td>Financial year</td>
</tr>
<tr>
<td>GHG</td>
<td>Greenhouse gas</td>
</tr>
<tr>
<td>ICAP</td>
<td>International Carbon Action Partnership</td>
</tr>
<tr>
<td>INDC</td>
<td>Intended nationally determined contribution</td>
</tr>
<tr>
<td>MRP</td>
<td>Market readiness proposal</td>
</tr>
<tr>
<td>MRV</td>
<td>Monitoring, reporting, and verification</td>
</tr>
<tr>
<td>NDC</td>
<td>Nationally determined contribution</td>
</tr>
<tr>
<td>PA</td>
<td>Partnership Assembly</td>
</tr>
<tr>
<td>PMR</td>
<td>Partnership for Market Readiness</td>
</tr>
</tbody>
</table>

TABLE OF CONTENTS

Acronyms 1

Supporting Carbon Pricing Policy Action 2

Introduction from the PMR Secretariat 3

Quick Facts 4

Objectives 4

Year in Review 5

How We Work 7

Bringing Key Players to the Same Table 8

Participants and Process 8

Countries’ Focus on Readiness Activities 10

Preparing Countries to Implement Carbon Pricing Policies 11

Technical and Policy Work to Complement Country Programs 17

Technical Work Program to Enhance Country Support 18

Analytical Work to Support MRPs and Inform NDC Implementation 20

Knowledge Management to Create and Disseminate Information 24

Knowledge Products 25

Knowledge Exchanges 26

Secretariat Manages Operations and Administration 29

Trust Fund Administration and Financial Summary 30

Outlook for FY18 32

- PMR ANNUAL REPORT 2017 -
INTRODUCTION FROM THE PMR SECRETARIAT

Now that the Paris Agreement – signed in 2015 – has been ratified, the international community’s focus has shifted to developing and negotiating the guidelines that will govern the operationalization of the accord, including the cooperative approaches to mitigating emissions under Article 6 of the Agreement, shaping the way forward for international market mechanisms. The Partnership for Market Readiness (PMR) Secretariat is encouraged by the momentum it is witnessing as national and subnational jurisdictions implement new carbon pricing initiatives.

Since 2010, the PMR has been working alongside leading countries that see carbon pricing as a priority policy tool to tackle climate change. In the PMR, countries have a trusted partner to understand, test, and develop carbon pricing instruments to help achieve their climate change mitigation objectives. We are proud to be at the forefront of facilitating the design and development of carbon pricing instruments in about 20 countries.

With only four of these 20 countries still in the preparation phase, we are focused on implementation, which has led to a surge in readiness activities around the globe. We introduced the PMR Exchange Forum for countries to report on their progress and share knowledge, experiences, and lessons with other countries.

Our Policy Analysis and Technical Work Programs provide in-time support. The former program contributed, prior to the Paris Agreement, to policy analyses and modeling exercises relevant to the development of intended nationally determined contributions (INDCs) and the assessment of carbon pricing instruments in Brazil, Chile, China, Colombia, Costa Rica, Morocco, Paraguay, South Africa, Thailand, Turkey, and Vietnam. The PMR remains committed to using this program to help countries further define and achieve their nationally determined contribution (NDC) targets.

The Technical Work Program supports countries in dealing with the technical challenges of implementing market readiness proposal (MRP) activities. The program encompasses three work streams – emissions trading systems (ETSs), carbon taxes, and crediting instruments and offsets. Publications and knowledge exchanges are key aspects of this program. The focus on implementation has led to an increased demand for customized training opportunities and workshops. In FY17, the PMR hosted the first in-country training workshop on an ETS in Kiev, Ukraine, and launched three new technical notes, including the much-anticipated Carbon Tax Guide: A Handbook for Policy Makers.

During the year under review, we held two meetings of the Partnership Assembly (PA): one in October 2016 in Hanoi, Vietnam, and the other in March 2017 in New Delhi, India, to take stock of the progress made. Chile and China requested additional funding to expand their readiness activities; India submitted its final MRP, which has been approved; Argentina joined as an implementing country participant; and participants decided on a modality for adding technical partners to broaden the partnership.

This year, we also focused on streamlining the process for monitoring program results and outcomes. Following up on feedback from participants and recommendations from the first independent evaluation of the PMR, the Secretariat instituted a log frame to measure and monitor its progress; enhanced the country dashboard so that the content and status of each country’s project is clear and accessible to the public; and revised the original PMR objectives to make them more results-oriented in a post-Paris environment. The Secretariat also launched the second independent evaluation of the PMR to assess the results so far and collect feedback that will guide the design of the program’s next phase. We expect to present the findings next year.

With all these measures, we are already looking beyond 2020, when the current mandate of the PMR ends. From a series of consultations with participants this year, the message is clear: the PMR should continue to find ways after 2020 to support implementation, as it remains a unique space for countries to support innovative efforts to design carbon pricing policies. In FY18, an important task for the Secretariat will be to articulate what that phase will look like.

Venkata Putti
PMR Secretariat
Quick Facts

36 national and subnational jurisdictions, and the European Commission

19 implementing country participants

13 contributing participants

$127 million in total capitalization

16 countries have completed road maps for carbon pricing readiness

$71.5 million allocated to governments to support readiness activities

19 technical notes produced

50+ knowledge exchanges hosted

Objectives

BUILD
countries' capacity to develop and implement carbon pricing instruments needed for greenhouse gas (GHG) mitigation and NDC implementation through grant funding.

CREATE
a knowledge base on carbon pricing instruments and facilitate information exchange through technical discussions and dissemination of knowledge products.

ASSIST
countries to identify and implement best practice approaches and, where relevant, achieve compatibility in design to support the development of carbon markets.

INFORM
the national and international policy discussions on GHG mitigation by sharing lessons learned and providing a platform for collective innovation on carbon pricing instruments.

The PMR allocated $12.35 million to governments in FY17 to help implement readiness activities.
## Year in Review

This section provides an overview of PMR highlights from July 1, 2016, to June 30, 2017.

<table>
<thead>
<tr>
<th>1</th>
<th>No. of new implementation country participants (Argentina)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>No. of technical workshops</td>
</tr>
<tr>
<td>9</td>
<td>No. of publications and newsletters</td>
</tr>
<tr>
<td>3</td>
<td>No. of countries that started the implementation stage (Indonesia, South Africa, Peru)</td>
</tr>
<tr>
<td>4</td>
<td>No. of training sessions</td>
</tr>
<tr>
<td>$12,350,000</td>
<td>Amount allocated to governments to implement readiness activities</td>
</tr>
<tr>
<td>30,889</td>
<td>No. of downloads of knowledge management products since inception</td>
</tr>
</tbody>
</table>

## HOW WE WORK

The PMR is a forum for innovation on climate change mitigation, bringing together more than 30 countries – including some of the world’s largest carbon emitters. It provides funding to countries to help them prepare and implement climate change policies that expand their mitigation efforts. It also facilitates the sharing of technical knowledge and experience on the design and implementation of carbon pricing instruments.

### PA MEETINGS

The PA is the PMR’s governing body. It consists of all contributing participants and implementing country participants. Meetings are held twice a year to provide strategic guidance, endorse the participation of new countries and their readiness proposals, and approve the allocation of PMR resources. Two PA meetings were held in FY17: PA meeting 15 was held in Hanoi, Vietnam, in October 2016 and PA meeting 16 was held in New Delhi, India, in March 2017.

### TECHNICAL WORKSHOPS

Technical workshops are an important platform for countries and stakeholders to discuss the technical, regulatory, and institutional aspects of carbon pricing. Four technical workshops were held in FY17.

### TECHNICAL TRAINING

Training sessions allow for hands-on learning. They use case studies and group exercises to examine the practical considerations of technical components such as monitoring, reporting, and verification (MRV) of mitigation efforts. The PMR hosted two tailored training workshops in Ukraine and Vietnam in the fiscal year.

### WEBINARS AND E-LEARNING

Webinars and e-learning are a convenient and cost-effective platform for practitioners to collaborate, share knowledge, and build capacity. In FY17, one webinar on carbon taxes and two e-learning modules focusing on the design of MRV systems and ETS were released.

### PUBLIC EVENTS

The PMR organizes public events and strategic dialogues on topics ranging from progressive domestic climate action to lessons learned from the use of carbon pricing instruments. These events offer a valuable forum for PMR participants to interact with a wider audience. The PMR, in collaboration with the government of Vietnam, hosted a strategic dialogue on NDC implementation and policy reform for low-carbon development in Vietnam in October 2016.

### TECHNICAL NOTES AND GUIDANCE DOCUMENTS


### NEWSLETTERS

The PMR’s electronic newsletters provide regular updates on activities at the program and country level. The PMR Newsletter contains information of interest to the community, including an overview of upcoming and past events. The China Carbon Market Monitor provides timely information across the seven Chinese pilot carbon markets and analysis of climate policy and market developments at the national level in China. The newsletter is published quarterly.

---

1 In 2015, countries committed to addressing climate change under the Paris Agreement. This commitment is expressed in each country’s NDC, which sets out its intentions and targets to help achieve the global goals set out in the Agreement.
The PMR consists of contributing participants, who provide financial support to the PMR Trust Fund and share their carbon pricing experience, and implementing country participants, who receive funding and technical support. Together, they make up the PA – the PMR’s decision-making body. Argentina joined the PMR as an implementing country participant in October 2016, bringing the total number of implementing countries to 19.

Following an initial expression of interest and the presentation of an organizing framework, the PMR process involves two phases: a preparation phase in which implementing country participants formulate an MRP, and an implementation phase in which they implement the activities identified in the proposal. MRPs are finalized and presented to the PA for feedback and a decision on the allocation of funding. Delivery partners and the Secretariat help the country participants prepare and implement the activities laid out in the MRPs.

Technical partners are countries or subnational jurisdictions that are at an advanced stage of preparing or implementing a carbon pricing instrument. This category includes jurisdictions that already have an effective carbon pricing instrument in place. Technical partners can engage with the PMR through collaborative activities. In some cases, they receive targeted technical support to enhance their domestic carbon pricing policies.

The map shows the different categories of participants and the stage in the process reached by each implementing country participant.
The PMR’s focus has shifted from preparing proposals and allocating funding to implementing market readiness activities.

The centerpiece of each implementing country participant’s program is the MRP, which serves as a road map for planning, designing, and piloting a carbon pricing instrument. So far, 16 countries have finalized their proposals. The PMR is also helping Kazakhstan, as a technical partner, address challenges in its national ETS. The focus of each country’s MRP is summarized below, with more details about each country program provided on the following pages. Because most implementing country participants are in the implementation phase, the PMR’s focus has shifted from preparing proposals and allocating funding to implementing market readiness activities. The PMR aims to enhance the implementation of country programs through effective monitoring of its own operations.

**PREPARING COUNTRIES TO IMPLEMENT CARBON PRICING POLICIES**

**COUNTRY PROGRAMS**

The centeriece of each implementing country participant’s program is the MRP, which serves as a road map for planning, designing, and piloting a carbon pricing instrument. So far, 16 countries have finalized their proposals. The PMR is also helping Kazakhstan, as a technical partner, address challenges in its national ETS. The focus of each country’s MRP is summarized below, with more details about each country program provided on the following pages. Because most implementing country participants are in the implementation phase, the PMR’s focus has shifted from preparing proposals and allocating funding to implementing market readiness activities. The PMR aims to enhance the implementation of country programs through effective monitoring of its own operations.

**ARGENTINA**
The PMR is assisting Argentina to explore policy instruments that support meeting the mitigation objectives of its NDC, such as assessing renewable energy and energy efficiency certificates trading and scoping out results-based financing approaches in key sectors.

**BRAZIL**
Brazil is exploring various carbon pricing instruments by carrying out analytical studies on alternative policy design options, assessing their impacts, and building modeling capacity.

**CHILE**
The PMR has been instrumental in preparing and implementing Chile’s carbon tax. PMR activities also include building capacity in the public and private sectors for the design and implementation of an MRV framework and GHG registry.

**CHINA**
PMR funding is supporting the design and implementation of key building blocks for China’s national ETS, with a particular focus on including the electricity sector and state-owned enterprises.

**COLOMBIA**
Colombia is using PMR support to develop nationally appropriate mitigation actions in the transport sector and a domestic offset scheme. It is also working on introducing vehicle performance standards.

**COSTA RICA**
Costa Rica is developing a domestic carbon market by stimulating demand through promoting voluntary actions, assessing regulatory instruments, and fostering supply.

**INDIA**
The PMR is helping India build a centralized GHG data management system; develop a registry that can support various market-based instruments; assess instruments such as renewable energy certificate projects; develop a policy package for India’s low-carbon development goals; and select, design, and pilot a new market-based instrument for one of its sectors.

**INDONESIA**
PMR funding in Indonesia is being used to explore suitable carbon pricing or market-based instruments to achieve mitigation and to design an MRV framework in the power and pulp and paper sectors.

**JORDAN**
The PMR is supporting Jordan in developing an integrated MRV framework and providing technical assistance to enhance the capacity and readiness of public and private sector actors for climate financing and carbon market instruments.

**KAZAKHSTAN**
With support from the PMR, Kazakhstan has built modeling tools and capacity to analyze the role of various policies in reaching national climate mitigation targets. It has addressed key challenges facing its national ETS (including developing emissions benchmarks) and is building an online platform for emitters to report their GHG emissions electronically.

**MEXICO**
In Mexico, PMR funding is being used to establish a national GHG emissions registry and develop an MRV system for crediting nationally appropriate mitigation actions for urban housing and transport.

**MOROCCO**
The PMR is supporting Morocco to pilot market-based approaches in selected sectors, build carbon market infrastructure (GHG registry and MRV framework), and explore ways to integrate with international markets.
The PMR is supporting Peru in developing the building blocks of a national mitigation action management system, including a GHG data reporting and emissions registry, and designing GHG crediting instruments for pilot mitigation actions.

**SOUTH AFRICA**
The PMR is helping South Africa refine the design of its carbon tax through analytical work, develop a related carbon offset plan, and enhance its data management and MRV systems.

**SRI LANKA**
The PMR is helping Sri Lanka develop a national MRV system and registry, build institutional and regulatory capacity, and enhance its domestic voluntary carbon offsetting scheme.

**THAILAND**
The PMR is supporting the design of an energy performance certificate plan and preparation of a GHG database and MRV system infrastructure. The PMR is also supporting a study on the legal framework for an ETS, preparing the Low Carbon City Program and Fund, and conducting policy analysis on carbon pricing options for the country.

**VIETNAM**
In Vietnam, PMR support is strengthening capacity for carbon pricing approaches to mitigation, including using market-based instruments, in the energy-intensive industrial and solid waste sectors.

### OPERATIONS MONITORING SYSTEM
The operations monitoring system, launched in 2015, helps the PA and Secretariat monitor each country’s progress toward implementing activities outlined in their MRP, as well as highlight lessons learned from the implementation experience.

In the past, the system focused on market readiness preparation and included two tools: a country dashboard that aggregated the status of the various milestones associated with preparing a PMR grant and a template for project implementation status reports. In FY17, the Secretariat started developing a more rigorous monitoring system that provides information on the status of the PMR’s different work programs (i.e., country work, policy work, and technical work) and on the progress made toward the PMR’s expected results (using the PMR’s logical framework). These additions will make it easier for the World Bank and the PA to track the progress of the program and better identify challenges, trends, and lessons to share.

The PMR Secretariat also enhanced the country dashboard to better capture and show each country’s progress toward achieving its unique objectives, not just the status of its funding disbursement. As of FY17, the annual report provides an analysis of country progress (see page 13).

### PROJECT IMPLEMENTATION STATUS REPORT
Project implementation status reports are a uniform means for countries to regularly update the PA on the implementation status of their MRPs. Countries complete at least one implementation status report a year for presentation at a PA meeting. These reports are publicly available on the PMR website.

In FY17, 11 countries submitted project implementation status reports: Brazil, Kazakhstan, Morocco, Thailand, Turkey, and Ukraine presented at PA15; and Chile, China, Costa Rica, Jordan, and Turkey presented at PA16. Each country’s report provides information on the progress of activities, based on the indicators and objectives outlined in their MRPs and formalized in their implementation arrangements.

### COUNTRY DASHBOARD
The dashboard monitors key milestones associated with the preparation and implementation of the PMR grants, and provides information on the content and status of countries’ PMR projects.

### TABLE 1: PMR DASHBOARD: PROJECT MILESTONES BY COUNTRY AS OF OCTOBER 18, 2017

<table>
<thead>
<tr>
<th>COUNTRY PARTICIPANT</th>
<th>INITIAL STEPS (19 implementing country participants)</th>
<th>PREPARATION PHASE (15 completed MRPs)</th>
<th>IMPLEMENTATION PHASE</th>
<th>COMPLETION (1 country complete)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ARGENTINA</strong></td>
<td>PA15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BRAZIL</strong></td>
<td>PA1</td>
<td>PA9</td>
<td>Electronic</td>
<td>May</td>
</tr>
<tr>
<td><strong>CHILE</strong></td>
<td>PA1</td>
<td>PA4</td>
<td>PA5</td>
<td>Sep</td>
</tr>
<tr>
<td><strong>CHINA</strong></td>
<td>PA1</td>
<td>PA4</td>
<td>PA5</td>
<td>Aug</td>
</tr>
<tr>
<td><strong>COLOMBIA</strong></td>
<td>PA1</td>
<td>PA8</td>
<td>PA9</td>
<td></td>
</tr>
<tr>
<td><strong>COSTA RICA</strong></td>
<td>PA1</td>
<td>PA4</td>
<td>PA5</td>
<td>Sep</td>
</tr>
<tr>
<td><strong>INDIA</strong></td>
<td>PA2</td>
<td>PA5</td>
<td>PA10</td>
<td></td>
</tr>
<tr>
<td><strong>INDONESIA</strong></td>
<td>PA1</td>
<td>PA6</td>
<td>PA7</td>
<td>Aug</td>
</tr>
<tr>
<td><strong>JORDAN</strong></td>
<td>PA3</td>
<td>PA13</td>
<td>PA14</td>
<td>May</td>
</tr>
<tr>
<td><strong>MEXICO</strong></td>
<td>PA1</td>
<td>PA4</td>
<td>PA5</td>
<td>Aug</td>
</tr>
<tr>
<td><strong>MOROCCO</strong></td>
<td>EXMTG</td>
<td>PA8</td>
<td>PA9</td>
<td>Jul</td>
</tr>
<tr>
<td><strong>PERU</strong></td>
<td>PA5</td>
<td>PA12</td>
<td>PA14</td>
<td>Oct</td>
</tr>
<tr>
<td><strong>SOUTH AFRICA</strong></td>
<td>PA3</td>
<td>PA10</td>
<td>PA11</td>
<td></td>
</tr>
<tr>
<td><strong>SRI LANKA</strong></td>
<td>PA14</td>
<td>PA17</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>THAILAND</strong></td>
<td>PA1</td>
<td>PA27</td>
<td>PA8</td>
<td></td>
</tr>
<tr>
<td><strong>TUNISIA</strong></td>
<td>PA8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TURKEY</strong></td>
<td>PA1</td>
<td>PA6</td>
<td>PA5</td>
<td>Dec</td>
</tr>
<tr>
<td><strong>UKRAINE</strong></td>
<td>PA2</td>
<td>PA9</td>
<td>Electronic</td>
<td>Apr</td>
</tr>
<tr>
<td><strong>VIETNAM</strong></td>
<td>PA3</td>
<td>PA6</td>
<td>PA10</td>
<td></td>
</tr>
</tbody>
</table>

**TOTALS:** 19 17 16 561 15 1

| **KAZAKHSTAN**      | N/A                                                |                                       |                      |                                 |

**2011**  PA1  PA2  **2012**  PA3  PA4  EX MTG  **2013**  PA5  PA6  PA7  **2014**  PA8  PA9  Electronic  PA10  **2015**  PA11  PA12  PA13  **2016**  PA14  PA15  **2017**  PA16  PA17
COUNTRIES’ FOCUS ON READINESS ACTIVITIES

FIGURE 2: PMR DASHBOARD: AGGREGATED MILESTONES AS OF OCTOBER 18, 2017

Table 2: PMR Dashboard: Project Components by Country as of June 30, 2017

**Table 2: PMR Dashboard: Project Components by Country as of June 30, 2017**

<table>
<thead>
<tr>
<th>Core Technical Components</th>
<th>Supporting Components</th>
<th>Carbon Pricing Instruments Supported by PMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRV</td>
<td>DMB/INSTRUMENTS</td>
<td>BENCHMARKING</td>
</tr>
<tr>
<td></td>
<td>INSTITUTIONS &amp; GOVERNANCE</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GHG CREDITS DEVELOPMENT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>POLICY OPTION ASSESSMENT &amp;/ OR POLICY INTERACTION</td>
<td></td>
</tr>
<tr>
<td></td>
<td>STAKEHOLDER ENGAGEMENT &amp; COMMUNICATIONS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CARBON TAX</td>
<td>ETS</td>
</tr>
<tr>
<td></td>
<td>CREDITS</td>
<td></td>
</tr>
</tbody>
</table>

- BRAZIL
- CHILE
- CHINA
- COLOMBIA
- COSTA RICA
- INDIA
- INDONESIA
- JORDAN
- KAZAKHSTAN (TP)
- MEXICO
- MOROCCO
- PERU
- SOUTH AFRICA
- THAILAND
- TURKEY
- UKRAINE
- VIETNAM

Preparation phase (scoping, developing terms of reference, hiring consultants)
In progress (project has started and is ongoing)
Completed

*Includes financing provided under original MRP and/or additional financing, where appropriate. PMR countries include implementing country participants and assistance-receiving technical partners. Only includes countries with approved MRPs.*
The PMR assists countries with the design, development, enhancement, and/or implementation of new or already existing carbon pricing instruments. The PMR aims to facilitate the sharing of experiences and knowledge, develop practical guidance, and build institutional and technical capacity.
TECHNICAL WORK PROGRAM TO ENHANCE COUNTRY SUPPORT

Through its Technical Work Program, the PMR provides support on the technical challenges faced by many countries in implementing MRP activities. The program aims to facilitate the sharing of experience and knowledge, develop practical guidance, identify good practice and shared standards, and build institutional and technical capacity.

A wide range of activities – selected based on country need – has been carried out under the Technical Work Program. Drawing on country experience, global experts, and in-house resources, the PMR generates knowledge products and organizes knowledge exchanges. The program focuses on three work streams: ETSs, carbon taxes, and crediting instruments and offsets, as well as the various components that support them, such as MRV, data management and registries, baselines, benchmarks, and stakeholder engagement. This section provides a summary of the activities that were carried out under each work stream in the last fiscal year. A more detailed description of each knowledge product and exchange can be found in the section on knowledge management.

TECHNICAL WORKSHOP ON POST-2020 ACCOUNTING: IMPLICATIONS FOR CARBON PRICING AND REGISTRIES, VIETNAM, OCTOBER 2016

THREATMIC WORK STREAMS IN CARBON PRICING

ETS

This work stream focuses on the design and implementation of cap and trade systems, building on the extensive experience gained to date among participants. In these systems, GHG emissions are capped and companies pay penalties if they exceed the cap. Companies are also able to buy and sell allowances that permit them to emit a certain amount of GHGs. In partnership with the International Carbon Action Partnership (ICAP), the PMR held its first in-country training in the Ukraine in April 2017 that helped to build local stakeholder capacity and knowledge on ETSs. It also released an ETS bite-sized e-learning module in FY17 outlining 10 steps for designing an effective ETS.

CARBON TAXES

This area of work focuses on the design and implementation of carbon taxes, building on previous PMR activities and international experience. A highlight of the year was the publication of a comprehensive carbon tax guide for policy makers and the hosting of a webinar and technical workshop on designing and implementing carbon taxes.

CREDITING AND OFFSETS

Many PMR participants are pursuing some form of crediting instrument, such as an offset program to complement an ETS, carbon tax, or other domestic policy, or a scaled-up crediting instrument to drive emission reductions. The crediting and offsets work stream focuses on the design and implementation of these crediting instruments. In FY17, the PMR organized a workshop at the Invest4Climate Conference in Barcelona on “New Perspectives on International Cooperation: Carbon Markets and Climate Finance under the Paris Agreement.” The workshop explored new approaches to design and finance transformative mitigation, including results-based financing and scaled-up crediting systems.

CROSS-CUTTING WORK STREAMS ON TECHNICAL COMPONENTS

MRV

This area of work focuses on the design and implementation of facility- or entity-level reporting programs. The PMR released an e-learning module in October 2016: Designing MRV Systems for Entity-level GHG Emissions. The module aims to support policy makers and practitioners in developing economy-wide or sector-specific GHG reporting programs.

DATA MANAGEMENT AND REGISTRIES

This work stream supports the development of robust data management and market infrastructure. In FY17, the PMR published Emissions Trading Registries: Guidance on Regulation, Development, and Administration to help support country-specific decision making and activities related to registry development. It also hosted a technical workshop in Vietnam in October 2016 on Post-2020 Accounting: Implications for Carbon Pricing and Registries.

BASELINES

This area of work focuses on the development of baselines for carbon pricing. The PMR Secretariat continued to work on the technical notes Establishing Scaled-up Crediting Baselines under the Paris Agreement: Issues and Options and Assessing and Mobilizing Sources of Demand for Scaled-up Crediting Programs. These notes provide an analytical background for new, comprehensive crediting guidance being prepared by the PMR. The draft notes were shared with the participants of the PMR working groups on crediting and offsets and were discussed at the technical dialogue in Barcelona. Participants’ comments and suggestions helped to improve the drafts. Establishing Scaled-up Crediting Baselines under the Paris Agreement: Issues and Options was released for publication in November 2017.

BENCHMARKS

This work stream focuses on the development of benchmarks to support carbon pricing. The PMR released A Guide to Greenhouse Gas Benchmarking for Climate Policy Instruments.

STAKEHOLDER ENGAGEMENT AND PREPAREDNESS

This area of work supports participants with their stakeholder engagement, particularly interactions with the private sector. This year the PMR partnered with the Business-PMR (International Emissions Trading Association) to develop the Carbon Market Readiness Training Guide for private sector actors, and hosted four technical workshops and two training events for stakeholders on various aspects of low-carbon development.
Policy analysis provides a comprehensive picture of a country’s climate policy landscape and can help identify packages of effective and cost-efficient policies to achieve climate change goals. Economic and policy analysis is critical for countries to make informed decisions about the design of carbon pricing instruments.

The program supports activities at two levels:

- Program-level activities, which address analytical and modeling issues with international dimensions and cross-country implications.
- Country-specific support, which is tailored to a country’s needs and is carried out after a formal request has been submitted by the country and endorsed by the PA.
The objectives of the workshop were to:

- Identify critical gaps and common challenges with respect to analytical/modelling tools and technical readiness at the international and country levels, taking into account relevant Paris Agreement milestones.
- Share NDC-relevant analytical approaches and modelling tools based on experiences gained under the PMR and through the international research and policy-making communities.
- Provide hands-on, interactive training on these analytical approaches and modeling tools.
- Expand the network of colleagues, peers, and experts, and provide a forum for sharing experiences and perspectives on planning for NDC implementation.

**EXAMPLE OF CROSS-COUNTRY ANALYTICAL WORK**

As countries refine and implement their NDCs according to the milestones and process set out in the Paris Agreement, there is a need for technical and analytical capacity to support the NDC cycle through its development and submission, implementation, and monitoring, as well as catching up the ambition level (Figure 7). The ability to conduct modeling and analytical work is critical to determining the scale, scope, and pace of transitioning to alternative low-emission pathways and the associated costs and benefits. Such work is also fundamental to putting together an enabling framework of policies and measures, including carbon pricing instruments, with a view to implementing NDCs. Under the Paris Agreement, countries commit to evaluating how their NDCs perform over time and to what extent and how the NDCs can be strengthened to help close the current global mitigation gap.

Against this backdrop, the PMR’s Policy Analysis Work Program aims to support countries in refining the analytical underpinning of their NDC target setting and implementation road maps. It does so by building technical capacity, developing and sharing relevant analytical approaches and tools, and supporting the modeling and analysis of policy instruments, recognizing the crucial role of carbon pricing in effectively implementing NDCs. Activities under this program are largely tailored to countries’ needs, depending on the status of their NDCs. The Work Program also facilitates and fosters the exchange of experiences and knowledge, and discussions on establishing NDC emissions scenarios and carbon pricing modeling.

The technical workshop “Paving the Way for NDC Implementation: Analyzing Policy Options and Modeling Carbon Pricing” organized by the PMR Secretariat in collaboration with the Ministry of Environment and Energy of Costa Rica, brought together policymakers and technical practitioners who are involved in the analytics underlying NDC implementation planning efforts in their respective countries, and international experts working on this topic.

The workshop's objectives included:

- Countries are putting more emphasis on capacity building than in the past.
- Countries have used state-of-the-art tools in the NDC preparation phase and have started applying them to NDC implementation, but no country has a consistent and coherent NDC analytical/modeling framework in place for the entire NDC cycle.
- The economics of NDCs are ad hoc and fragmented when assessing cost-benefit, investment needs, and financing.

**EXAMPLE OF COUNTRY WORK**

Turkey submitted its INDC on September 30, 2015, in which it pledged to reduce GHG emissions by 21 percent below business as usual by 2030. To achieve this target, the government of Turkey requires a clear plan for GHG mitigation actions in the major economic sectors (for example, industry, energy, and transport). This necessitates understanding the overall abatement costs of meeting Turkey’s INDC target, the most efficient and cost-effective mitigation options available for key sectors, and the potential emissions reduction associated with each option.

The PMR Policy Analysis Work Program is supporting Turkey’s Ministry of Environment and Urbanization to build marginal abatement cost curves, which will help the ministry compare sectoral mitigation options and scenarios, and recommend a climate mitigation strategy and action plan to guide the country toward a low-carbon path through 2030. The project will also deliver a user-friendly modeling tool and manual, and train the ministry’s staff and other stakeholders in using the model and understanding the resulting marginal abatement cost curves for updates and further work.

**TABLE 3: OVERVIEW OF COUNTRY POLICY ANALYTICAL WORK AND MODELING**

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>DESCRIPTION</th>
<th>FRAMEWORK</th>
<th>RELEVANCE FOR NDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHILE</td>
<td>Modeling policy options and developing implementation plan for NDC in energy sector</td>
<td>Bottom-up energy and computable general equilibrium (CGE) models in tandem (2050)</td>
<td>Energy sector contribution and action plan</td>
</tr>
<tr>
<td>COLOMBIA</td>
<td>Macroeconomic modeling of carbon pricing instruments</td>
<td>CGE adaptation and soft-linking with bottom-up energy (2040)</td>
<td>Inform choice of carbon pricing instruments to support economy-wide NDC mitigation targets</td>
</tr>
<tr>
<td>COSTA RICA</td>
<td>Developing modeling framework, database, and technical capacity for exploring decarbonization pathways to achieve NDC target</td>
<td>Bottom-up model with focus on energy and transport; aggregation framework for other sectors (2050)</td>
<td>Energy and transport sector contributions, policy actions toward NDC</td>
</tr>
<tr>
<td>MOROCCO</td>
<td>Developing NDC implementation strategies</td>
<td>Bottom-up model with current focus on the building sector (2030); plan to cover other NDC-relevant sectors, investors’ perspective approach</td>
<td>Support NDC implementation</td>
</tr>
<tr>
<td>THAILAND</td>
<td>Reviewing and developing economic modeling for carbon tax and ETS with and without crediting mechanism as a part of ETS/carbon tax (for offsetting purpose) to contribute to Thailand’s NDC mitigation goal</td>
<td>E3-Thailand model, including detailed sector coverage with two-way feedbacks between energy-environment economy</td>
<td>Refine NDC and support NDC implementation</td>
</tr>
<tr>
<td>TURKEY</td>
<td>Support for strengthening local modeling capacity and tools for effective NDC implementation</td>
<td>Marginal abatement cost curve tool (linked with CGE under MRP activity); investors’ perspective approach</td>
<td>Support NDC implementation and clarify role of carbon pricing in achieving GHG reduction objectives</td>
</tr>
<tr>
<td>VIETNAM</td>
<td>Assessing policy and reform packages that stimulate investments to meet NDC targets</td>
<td>Bottom-up energy model (power, industry) and marginal abatement cost curve tool (2050)</td>
<td>Support NDC implementation</td>
</tr>
</tbody>
</table>
The PMR strengthened its knowledge base in FY17. It generated and disseminated a range of knowledge products and facilitated the sharing of knowledge through technical workshops and meetings, training sessions, public events, webinars, and e-learning platforms.

**KNOWLEDGE PRODUCTS**

In FY17, the PMR published four reports and guides, as well as four issues of the quarterly *China Carbon Market Monitor*.

- **Emissions Trading Registries: Guidance on Regulation, Development, and Administration**
  October 2016
  This report provides technical insights and guidance on how to support country-specific decision making and activities related to registry development. An emissions trading registry is an online database that issues, records, and tracks the carbon units exchanged within market mechanisms or financed through results-based climate finance programs. The report helps countries design market mechanisms that factor in specific regulatory, administrative, functional, and technical aspects of registry development.

- **Carbon Tax Guide: A Handbook for Policy Makers**
  March 2017
  This report provides comprehensive, step-by-step guidance on how to design and implement carbon taxes. It also provides an in-depth survey of the ways in which carbon taxes are being used to achieve a range of policy goals. By 2008, only a few European countries had adopted explicit taxes on GHG emissions. By February 2017, 24 countries and subnational jurisdictions had adopted or were scheduled to adopt a carbon tax.

- **A Guide to Greenhouse Gas Benchmarking for Climate Policy Instruments**
  May 2017
  This book provides policy makers with guidance on developing benchmarks in climate policy instruments to set targets and thresholds for environmental performance, and to determine the distribution of instrument benefits and obligations. It draws on more than a decade of global experience and covers practices in 16 jurisdictions using or developing a benchmarking approach.

- **Carbon Market Readiness Training Guide**
  May 2017
  The International Emissions Trading Association and representatives from PMR partner countries developed this comprehensive training guide for private sector actors operating in regions planning for or developing carbon markets. The PMR Secretariat supported this initiative and partnered with Business-PMR to facilitate public-private discussions to help launch the next wave of carbon pricing systems. A series of videos to accompany the guide were also released.

- **China Carbon Market Monitor**
  Issue 6 (Q3 2016); Issue 7 (Q4 2016); Issue 8 (Q1 2017); Issue 9 (Q2 2017)
  The *China Carbon Market Monitor* provides quarterly analysis of the performance of the country’s seven pilot markets, reporting on each market and benchmarking it against others. It highlights actions taken by each market in anticipation of the new national system. The newsletter tracks the policy and regulatory development of the national ETS and the issuance of Chinese Certified Emissions Reductions for domestic offset projects. It is published in English and Chinese.
KNOWLEDGE EXCHANGES

The PMR provides a platform for countries to share their knowledge and experience in building institutional and technical capacity. The objective is to support the design and implementation of innovative instruments to expand GHG mitigation.

Technical Workshop on Carbon Tax: Design and Implementation in Practice, New Delhi, India, February 2017


This technical workshop gave participants the opportunity to explore the concepts of accounting in the context of the Paris Agreement and discuss the implications for carbon pricing and tracking registries. Under the Agreement, countries account for their NDCs and any international transfers of mitigation outcomes to avoid double counting. The accounting system will have implications for how carbon pricing instruments are designed and implemented, and vice versa.

**Paving the Way for NDC Implementation: Analyzing Policy Options and Modeling Carbon Pricing**
San José, Costa Rica, December 2016
This workshop brought together policy makers and technical practitioners involved in the analysis underlying NDC implementation planning efforts in their respective countries, and international experts working in this field. The PMR Secretariat organized the workshop in collaboration with Costa Rica’s Ministry of Environment and Energy.

**Carbon Tax: Design and Implementation in Practice**
New Delhi, India, February 2017
The Carbon Tax Guide: A Handbook for Policy Makers was launched at this workshop, which focused on carbon tax developments around the world. It built on the previous workshops held in Cologne, Germany, in 2014 and Zurich, Switzerland, in 2016, allowing participants to share their experiences in designing and implementing carbon taxes.

**New Perspectives on International Cooperation: Carbon Markets and Climate Finance under the Paris Agreement**
Barcelona, Spain, April 2017
This two-day workshop was organized by the PMR and other initiatives led by the World Bank focusing on carbon and climate finance. The workshop followed on from discussions and technical workshops on scaled-up crediting and results-based climate finance that took place in Paris in 2016. It aimed to broaden understanding of the new generation of carbon markets and climate finance policies needed to support implementation of NDCs and strengthen international cooperation on the Paris Agreement goals. Participants also discussed methodologies, including modeling tools and benchmarking, for quantifying mitigation outcomes and setting baselines for climate policies and actions.

**In-country ETS Training**
Kiev, Ukraine, April 2017
This training workshop aimed to build local stakeholder capacity and knowledge on an ETS. The three-day training was delivered with ICAP and was the first in-country training on an ETS organized by the PMR. About 40 participants from ministries, public agencies, business associations, and firms nominated by Ukraine’s Ministry of Ecology attended the training.

**Strategic Dialogue on NDC Implementation and Policy Reforms for Low-carbon Development**
Hanoi, Vietnam, October 2016
This public event provided an opportunity for local stakeholders and representatives from PMR countries to discuss the relevance of carbon pricing in the context of implementing their NDCs and the policy reforms needed for low-carbon development. This event was an important contribution to Vietnam’s national dialogue on the implementation of its national climate change strategy and NDC. The presentations and panel discussion touched on NDC implementation strategies, analytics and implementation planning, investment and financing, and carbon pricing. The government of Vietnam and the PMR co-hosted this strategic dialogue.

**Designing MRV Systems for Entity-level Greenhouse Gas Emissions**
October 2016
This e-learning module aims to support policy makers and practitioners in developing economy-wide or sector-specific GHG reporting programs that address national and subnational priorities and objectives. The concept of MRV has become increasingly important in the design and implementation of climate change policy in recent years, particularly since the Paris Agreement. GHG reporting programs gather emissions data from entities and help mainstream emissions measurement and reporting.

**ETS Bite-sized Learning**
May 2017
This e-learning module uses a bite-sized learning approach to showcase the importance of an ETS. It presents the 10 steps for designing an ETS as a credible and transparent tool for helping to reduce emissions at low cost, and in ways that mobilize private sector actors, attract investment, and encourage international cooperation.

May 2017
This webinar provided an overview of the Carbon Tax Guide: A Handbook for Policy Makers, which was published in March 2017.
TRUST FUND ADMINISTRATION AND FINANCIAL SUMMARY

The World Bank Group serves as the trustee for the PMR Trust Fund. It administers funds and manages an annual budget and expense report, administrative agreements for pledged contributions from contributing participants, and grant distributions to implementing country participants.

SOURCES OF FUNDING
PMR funding consists of contributions from 13 contributing participants and interest income. As of June 30, 2017, total committed contributions amounted to about $125.8 million, while total received contributions equaled $116.8 million. The total investment income earned since the inception of the PMR until October 31, 2017, is an estimated $2.82 million.

BUDGET APPROVAL PROCESS
Per the Governance Framework, the Secretariat is responsible for proposing a budget for the PMR’s annual operations and presenting it for endorsement by the PA before the start of the fiscal year.

For FY17, the PA approved a budget of $7.424 million; actual expenses totaled $6.884 million. For FY18, the PA approved a budget of $6.942 million. The following goals for FY18 drive this budget.

Promote Good Practices through Knowledge Management Activities
Following the increase in knowledge management activities in FY17, the PMR will continue to support the carbon pricing instruments that implementing country participants are pursuing. By grouping countries by their readiness activities, the knowledge management activities in FY18 will provide targeted and timely support, and help prepare and implement country programs and activities.

Provide Systematic Support to PMR Countries through the Continuation of the Policy Analysis Work Program
The first phase of the Policy Analysis Work Program demonstrated that analyzing impacts and policy interactions to inform decisions on the selection and design of carbon pricing instruments is a key component of each country’s market readiness process. Going forward, the Secretariat will streamline the program’s activities, and continue to provide support for both the analytical and modeling work, as well as for analyzing the interactions between carbon pricing and other policies. These activities are expected to be carried out at both the country level and the program level.

Policy Analysis Work Program: These costs include staff time from both the Secretariat and delivery partners, consulting fees associated with the MRP Expert Feedback process, and travel costs.

Knowledge management: Costs associated with the Technical Working Groups, Expert Meetings, Technical Training, and other events.

CONTINGENCY: A contingency amount is included to cover any unforeseen expenses that the PA deems appropriate.

TABLE 4: FY17 OPERATING BUDGET EXPENSES AND FY18 BUDGET (IN $ THOUSAND)

<table>
<thead>
<tr>
<th>USE OF FUNDS</th>
<th>FY17 BUDGET</th>
<th>FY17 ACTUAL EXPENSES*</th>
<th>FY18 PROPOSED BUDGET</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA Meetings, Workshops</td>
<td>656</td>
<td>496</td>
<td>640</td>
</tr>
<tr>
<td>Country Delivery Support and Advisory Services</td>
<td>2,543</td>
<td>2,853</td>
<td>2,007</td>
</tr>
<tr>
<td>MRP Expert Feedback Process</td>
<td>70</td>
<td>10</td>
<td>50</td>
</tr>
<tr>
<td>Country Delivery Support</td>
<td>2,473</td>
<td>2,843</td>
<td>1,957</td>
</tr>
<tr>
<td>o/w: Secretariat Country support</td>
<td>1,513</td>
<td>713</td>
<td>1,127</td>
</tr>
<tr>
<td>Delivery Partner Support</td>
<td>960</td>
<td>2,130</td>
<td>830</td>
</tr>
<tr>
<td>Knowledge Management</td>
<td>1,303</td>
<td>711</td>
<td>1,079</td>
</tr>
<tr>
<td>Policy Analysis Work Program</td>
<td>2,004</td>
<td>1,410</td>
<td>2,222</td>
</tr>
<tr>
<td>Management and Communications</td>
<td>768</td>
<td>889</td>
<td>844</td>
</tr>
<tr>
<td>Contingency</td>
<td>150</td>
<td>525</td>
<td>150</td>
</tr>
<tr>
<td>Total Use of Funds</td>
<td>7,424</td>
<td>6,884</td>
<td>6,942</td>
</tr>
</tbody>
</table>

*Actual expenses up to June 30, 2017
OUTLOOK FOR FY18

In FY18, the PMR will continue to promote innovation in climate change mitigation and support countries to achieve their mitigation goals.

It will continue to drive country progress by increasing its delivery support. PMR activities are likely to increase significantly in FY18 as implementation phase funding has been allocated to 16 of 19 implementing country participants and one technical partner.

The Secretariat will streamline the Policy Analysis Work Program’s activities, and continue to provide support for both the analytical and modeling work. The PMR will further strengthen its knowledge base on carbon pricing instruments in FY18 by generating and disseminating knowledge products and holding technical workshops, training sessions, and public events. Upcoming knowledge products include deep dives on the communication of carbon pricing and the use of carbon pricing revenues. These knowledge management activities will support countries in the preparation and implementation of PMR activities.

Finally, the PMR will focus on developing a strategy for its work after 2020, when its current mandate ends. The independent evaluation of the PMR that will be conducted in FY18 will inform the new strategy.

LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1</td>
<td>PMR Participants by Category and Implementation Status</td>
<td>8</td>
</tr>
<tr>
<td>Figure 2</td>
<td>PMR Dashboard: Aggregated Milestones as of October 18, 2017</td>
<td>14</td>
</tr>
<tr>
<td>Figure 3</td>
<td>Status of Core Technical and Supporting Components Supported by the PMR</td>
<td>16</td>
</tr>
<tr>
<td>Figure 4</td>
<td>Number of Core Technical and Supporting Components Supported by the PMR</td>
<td>16</td>
</tr>
<tr>
<td>Figure 5</td>
<td>Number and Type of Carbon Pricing Instruments Supported by the PMR</td>
<td>16</td>
</tr>
<tr>
<td>Figure 6</td>
<td>Technical Work Program Quick Facts</td>
<td>20</td>
</tr>
<tr>
<td>Figure 7</td>
<td>NDC Implementation Cycle</td>
<td>21</td>
</tr>
</tbody>
</table>

LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td>PMR Dashboard: Project Milestones by Country as of October 18, 2017</td>
<td>13</td>
</tr>
<tr>
<td>Table 2</td>
<td>PMR Dashboard: Project Components by Country as of June 30, 2017</td>
<td>15</td>
</tr>
<tr>
<td>Table 3</td>
<td>Overview of Country Policy Analytical Work and Modeling</td>
<td>23</td>
</tr>
<tr>
<td>Table 4</td>
<td>FY17 Operating Budget Expenses and FY18 Budget (in $ thousand)</td>
<td>31</td>
</tr>
</tbody>
</table>