



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.

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ACRONYMS

CGE	Computable general equilibrium	MRP	Market readiness proposal
ETS	Emissions trading system	MRV	Monitoring, reporting, and verification
FY	Financial year	NDC	Nationally determined contribution
GHG	Greenhouse gas	PA	Partnership Assembly
ICAP	International Carbon Action Partnership	PMR	Partnership for Market Readiness
INDC	Intended nationally determined contribution		

SUPPORTING CARBON PRICING POLICY ACTION



We are focused on implementation, which has led to a surge in readiness activities around the globe.

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, Peru, 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 (ETs), 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

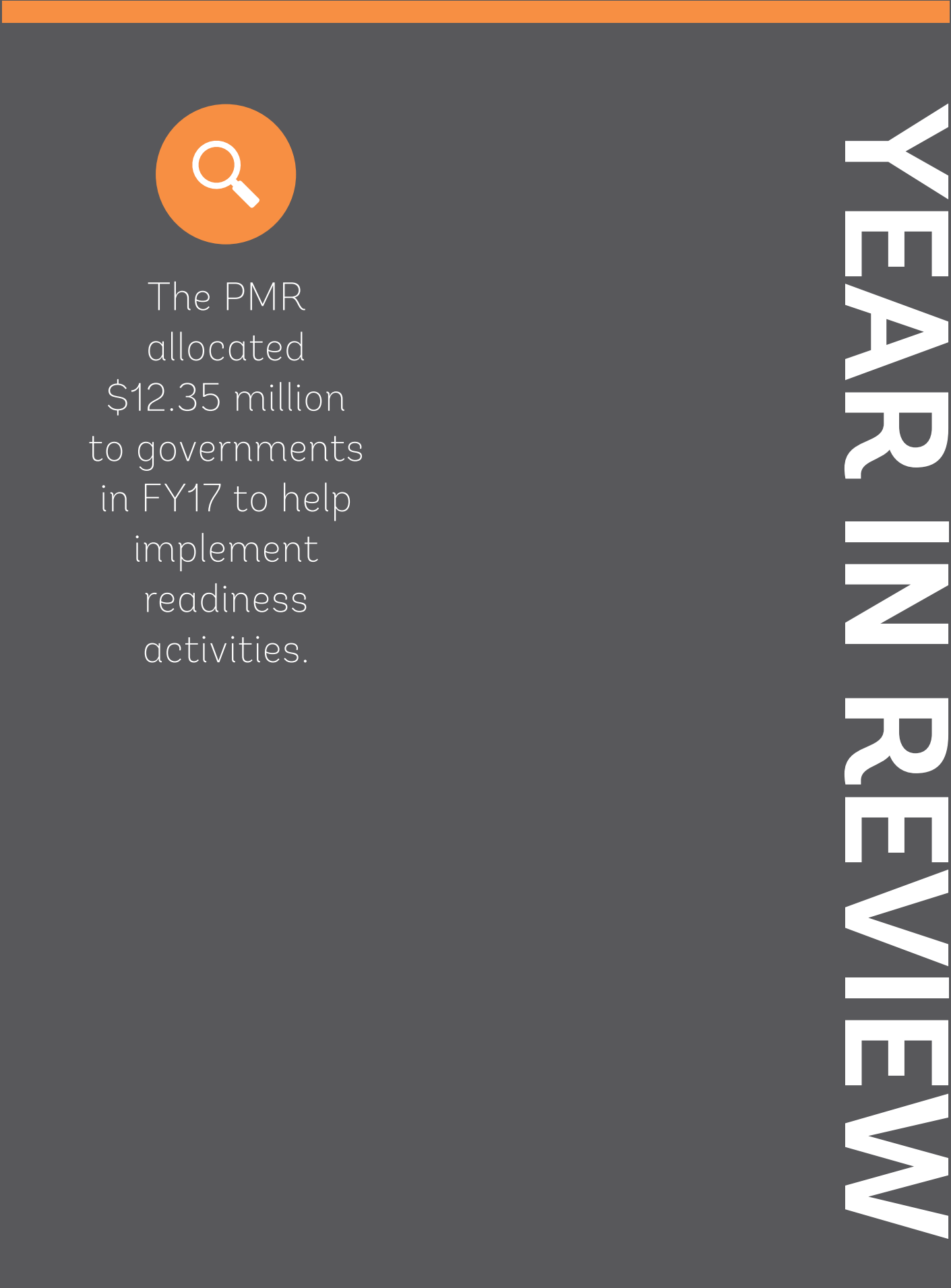


the progress made. Chile and China requested additional funding to expand their readiness activities; India submitted its final MRP, which has been approved; Argentina joined as an implementing country participant; and participants decided on a modality for adding technical partners to broaden the partnership.

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-orientated 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





BRINGING KEY PLAYERS TO THE SAME TABLE

PARTICIPANTS AND PROCESS

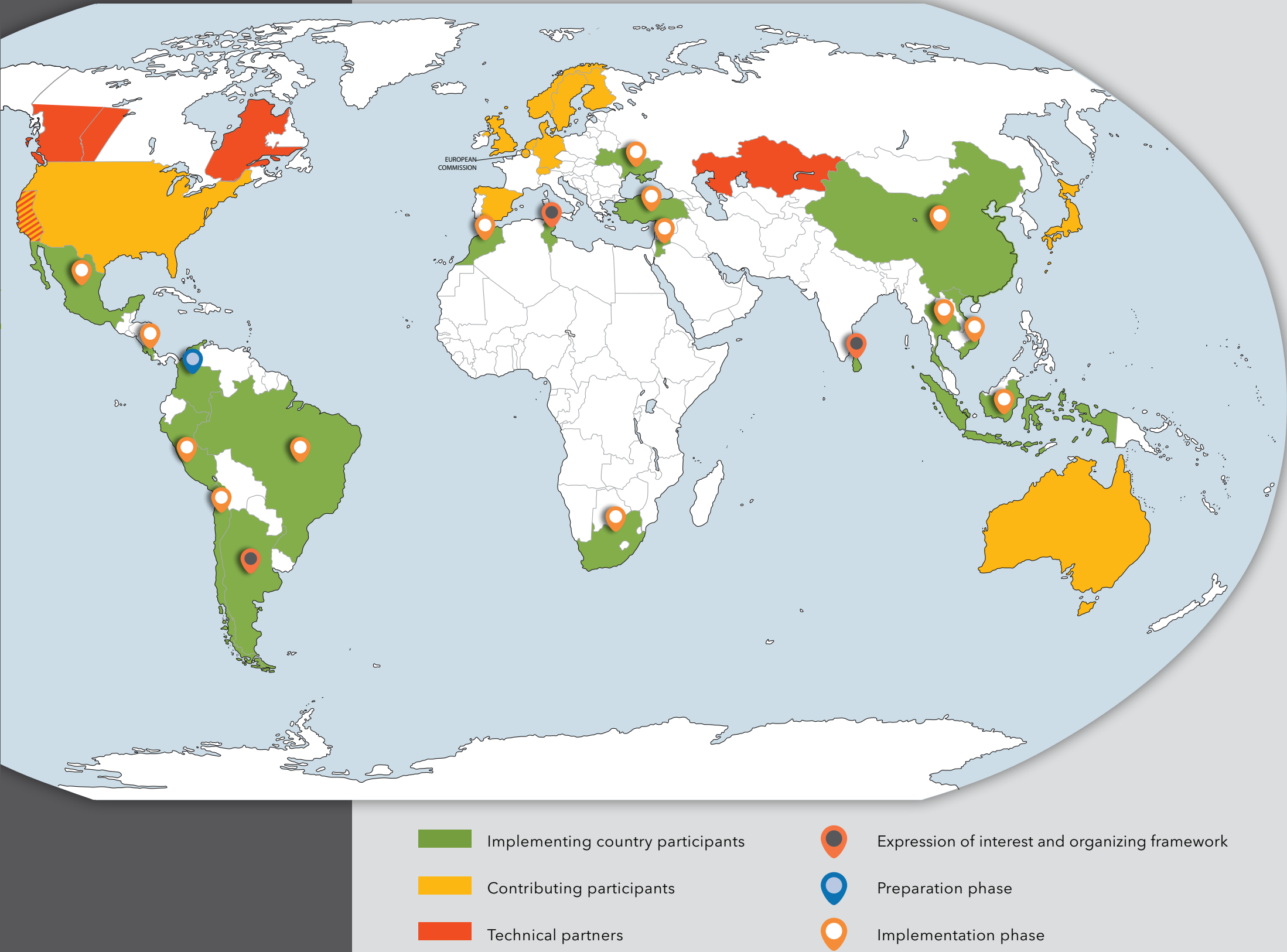
The PMR consists of contributing participants, who provide financial support to the PMR Trust Fund and share their carbon pricing experience, and implementing country participants, who receive funding and technical support. Together, they make up the PA – the PMR’s decision-making body. Argentina joined 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.

FIGURE 1: PMR PARTICIPANTS BY CATEGORY AND IMPLEMENTATION STATUS



- Implementing country participants
- Contributing participants
- Technical partners
- Expression of interest and organizing framework
- Preparation phase
- Implementation phase

COUNTRIES' FOCUS ON READINESS ACTIVITIES



The PMR's focus has shifted from preparing proposals and allocating funding to implementing market readiness activities.

PREPARING COUNTRIES TO IMPLEMENT CARBON PRICING POLICIES

COUNTRY PROGRAMS

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.



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.

 **PERU**
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.

OPERATIONS MONITORING SYSTEM

The operations monitoring system, launched in 2015, helps the PA and the Secretariat monitor each country’s progress toward implementing activities outlined in its 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.

 **TUNISIA**
The PMR is helping Tunisia develop crediting mechanisms in the cement and electricity sectors and a national registry of mitigation initiatives and financing sources.

 **TURKEY**
The PMR is providing support to Turkey to pilot MRV in several sectors, build capacity in carbon pricing instruments, and prepare design options and a road map for implementing an ETS and other carbon pricing instruments.

 **UKRAINE**
PMR activities in Ukraine focus on designing and implementing MRV regulations and systems in the energy and industry sectors, and building capacity in ETS.


 **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.

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

	INITIAL STEPS 19 implementing country participants	PREPARATION PHASE 15 completed MRPs			IMPLEMENTATION PHASE	COMPLETION 1 country complete
IMPLEMENTING COUNTRY PARTICIPANT	ORGANIZATION FRAMEWORK	DRAFT MRP PRESENTATION	FINAL MRP ENDORSEMENT	GRANT ALLOCATION (M USD)	GRANT ARRANGEMENT	
ARGENTINA	PA15					
BRAZIL	PA3	PA9	Electronic	3	May	
CHILE	PA1	PA4	PA5	3	Sep	Sep
CHINA	PA1	PA4	PA5	8	Dec	
COLOMBIA	PA1	PA8	PA9	3		
COSTA RICA	PA1	PA4	PA5	3	Sep	
INDIA	PA3	PA15	PA16	8	Aug	
INDONESIA	PA1	PA6	PA7	3	Oct	
JORDAN	PA3	PA13	PA14	3	May	
MEXICO	PA1	PA4	PA5	3	Aug	
MOROCCO	EX MTG	PA8	PA9	3	Jul	
PERU	PA5	PA13	PA14	3	Oct	
SOUTH AFRICA	PA3	PA10	PA11	5	Mar	
SRI LANKA	PA14	PA17				
THAILAND	PA1	PA7	PA8	3	Feb	
TUNISIA	PA8					
TURKEY	PA1	PA5	PA6	3	Dec	
UKRAINE	PA2	PA9	Electronic	3	Apr	
VIETNAM	PA3	PA9	PA10	3	Aug	
TOTALS:	19	17	16	\$61	15	1
KAZAKHSTAN	N/A		N/A	1		
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

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

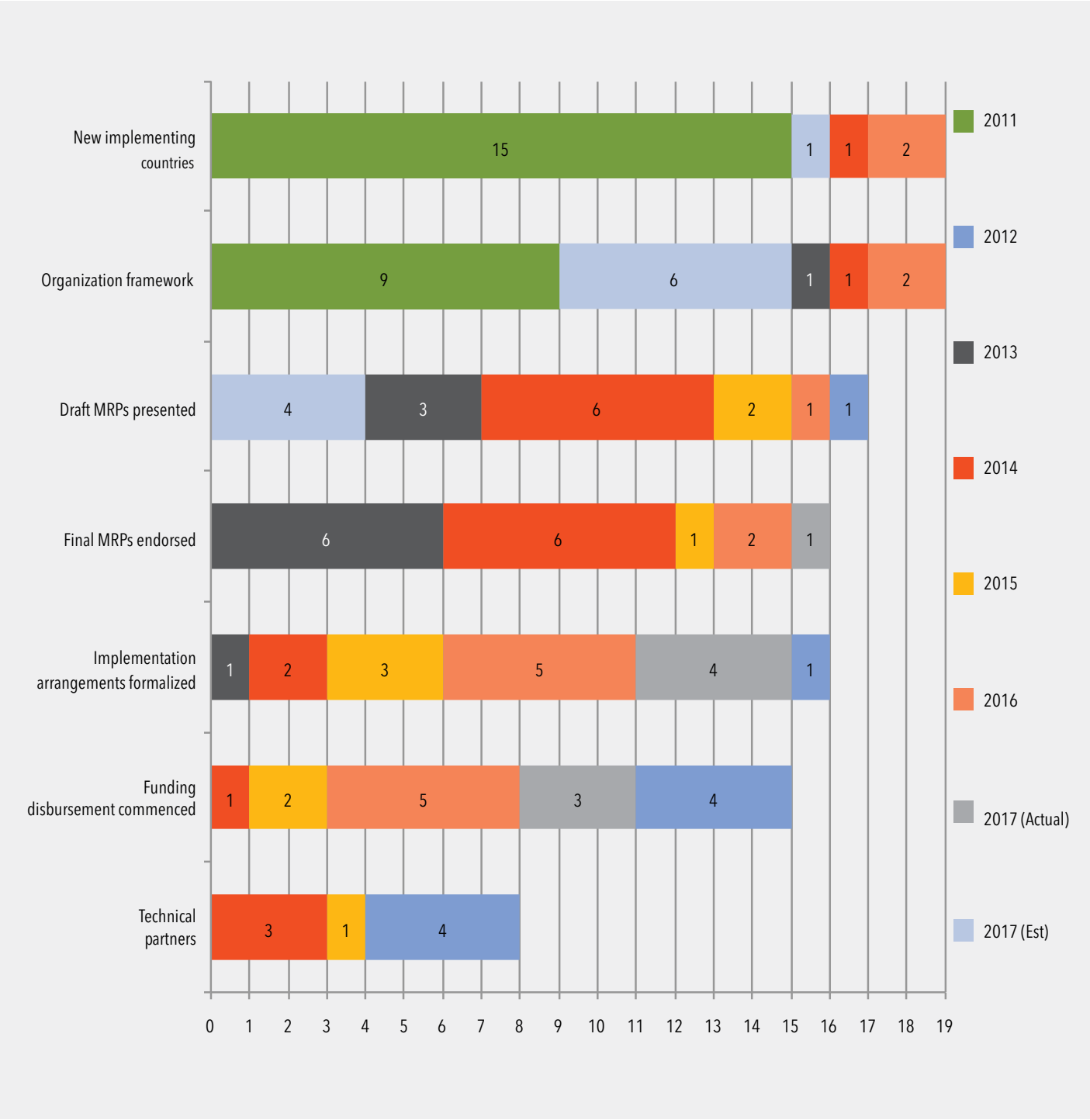


TABLE 2: PMR DASHBOARD: PROJECT COMPONENTS BY COUNTRY AS OF JUNE 30, 2017²

	CORE TECHNICAL COMPONENTS				SUPPORTING COMPONENTS				CARBON PRICING INSTRUMENTS SUPPORTED BY PMR		
	MRV	DATA AND REGISTRIES	BENCHMARKING	INSTITUTIONS & GOVERNANCE	GHG INVENTORY	EMISSIONS PROJECTIONS/NDC DEVELOPMENT	POLICY OPTIONS ASSESSMENT &/OR POLICY INTERACTION	STAKEHOLDER ENGAGEMENT/ COMMUNICATIONS	CARBON TAX	ETS	CREDITING
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

² 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.

FIGURE 3: STATUS OF CORE TECHNICAL AND SUPPORTING COMPONENTS SUPPORTED BY THE PMR

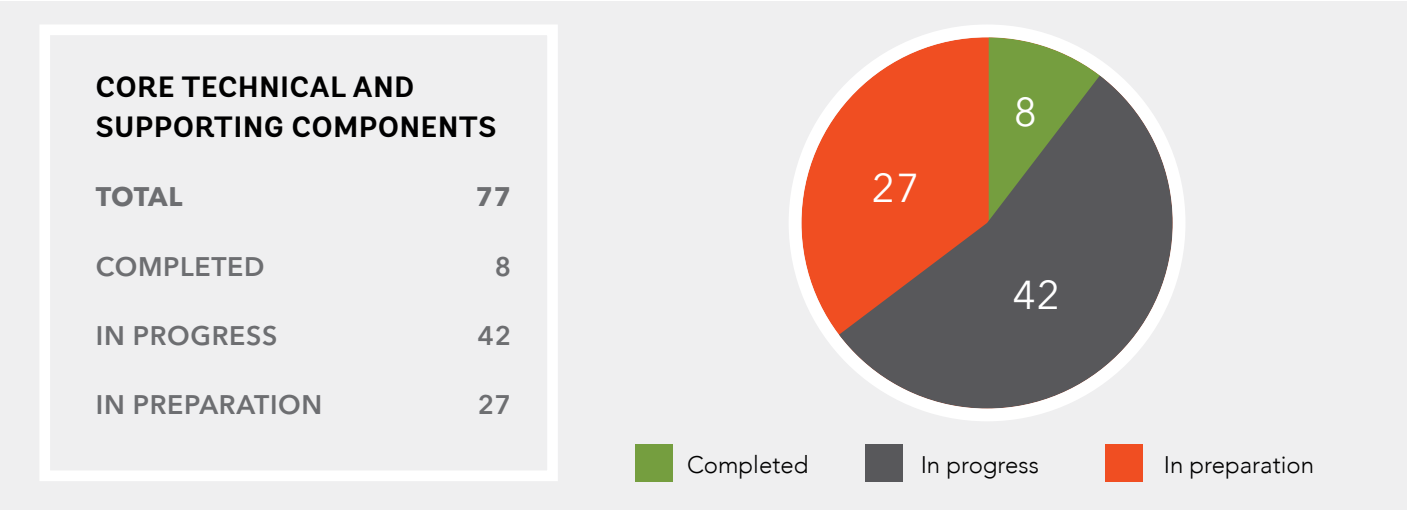


FIGURE 4: NUMBER OF CORE TECHNICAL AND SUPPORTING COMPONENTS SUPPORTED BY THE PMR

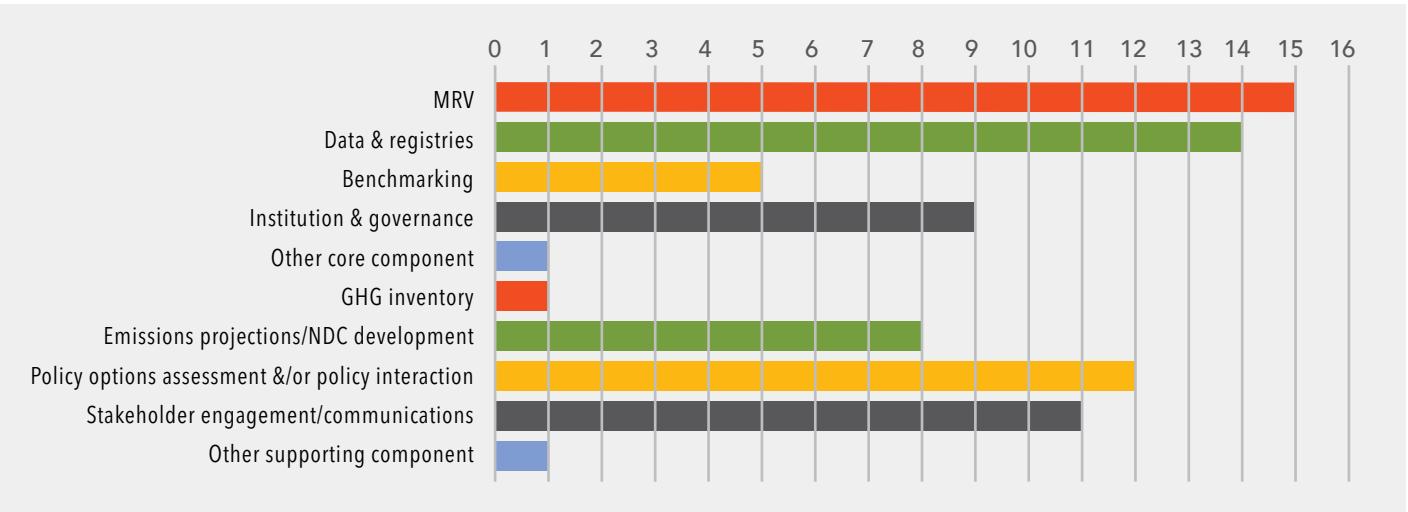
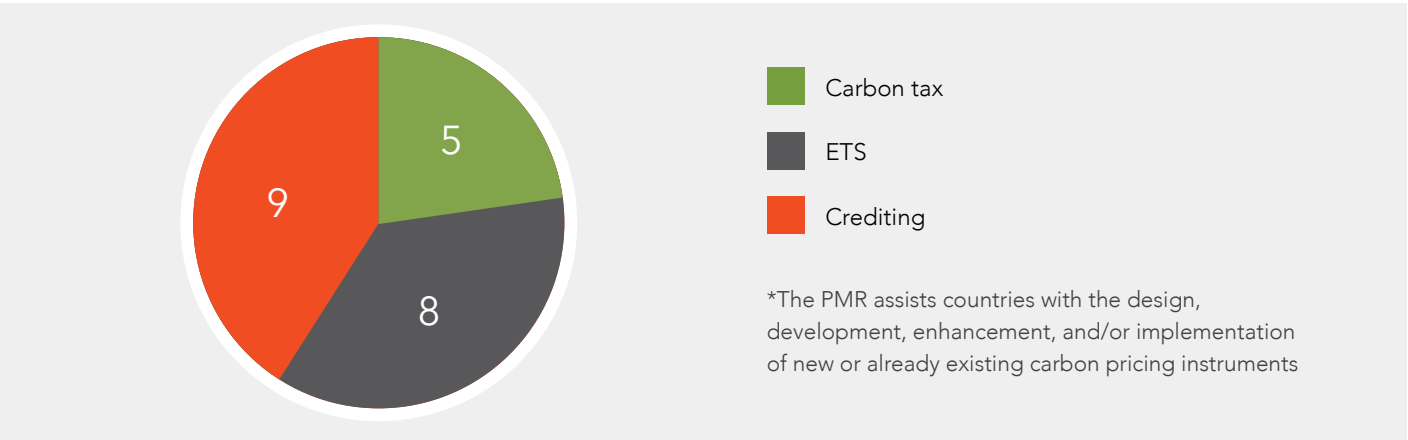


FIGURE 5: NUMBER AND TYPE OF CARBON PRICING INSTRUMENTS SUPPORTED BY THE PMR



The PMR aims to facilitate the sharing of experiences and knowledge, develop practical guidance, and build institutional and technical capacity.

TECHNICAL AND POLICY WORK TO COMPLEMENT COUNTRY PROGRAMS

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



THEMATIC 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.

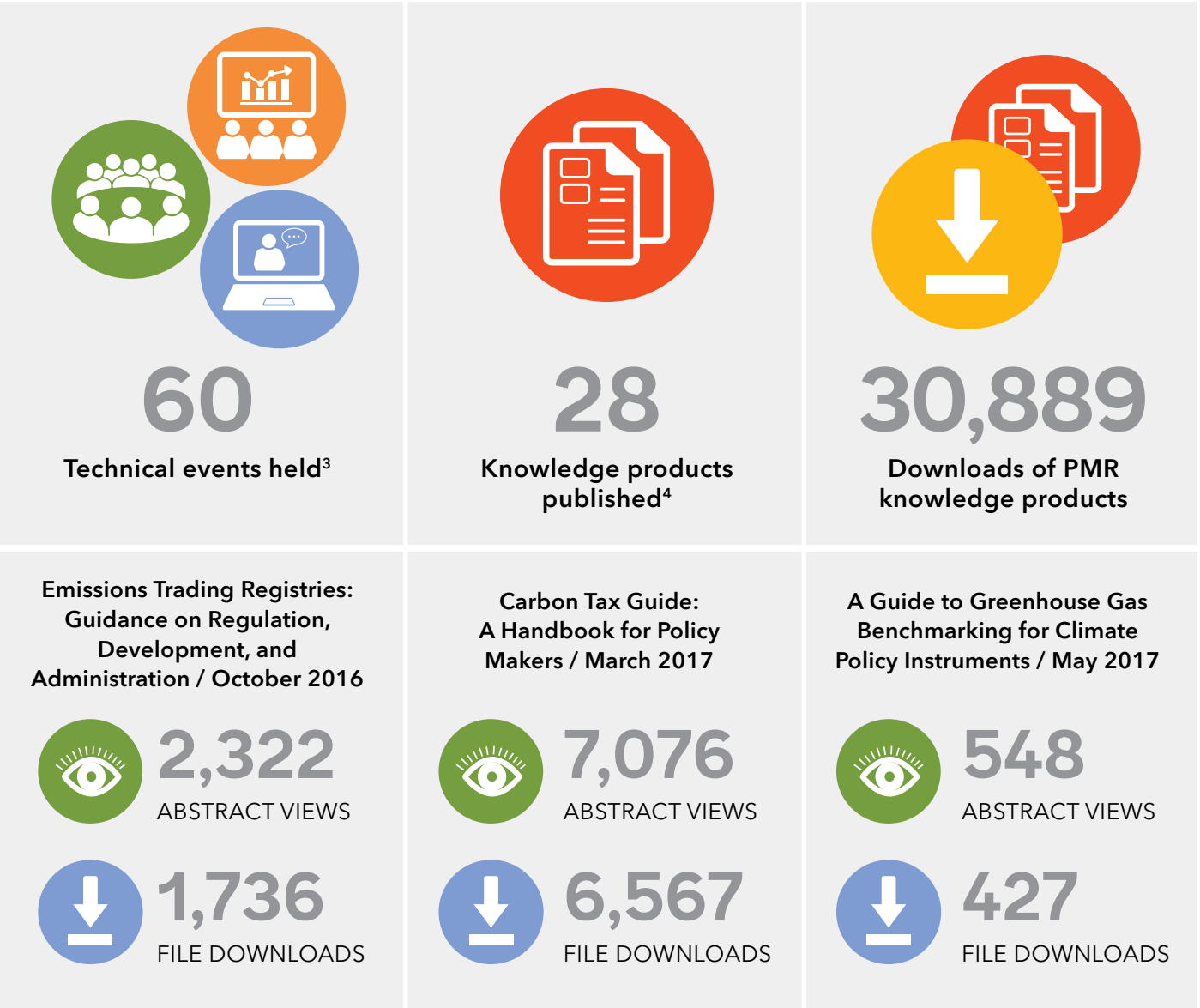
BENCHMARKS

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.

FIGURE 6: TECHNICAL WORK PROGRAM QUICK FACTS



³ These include technical workshops, trainings, webinars, and e-courses related to carbon pricing instruments/market readiness.

⁴ 27 by the Technical Work Program and 1 by the Policy Analysis Work Program.

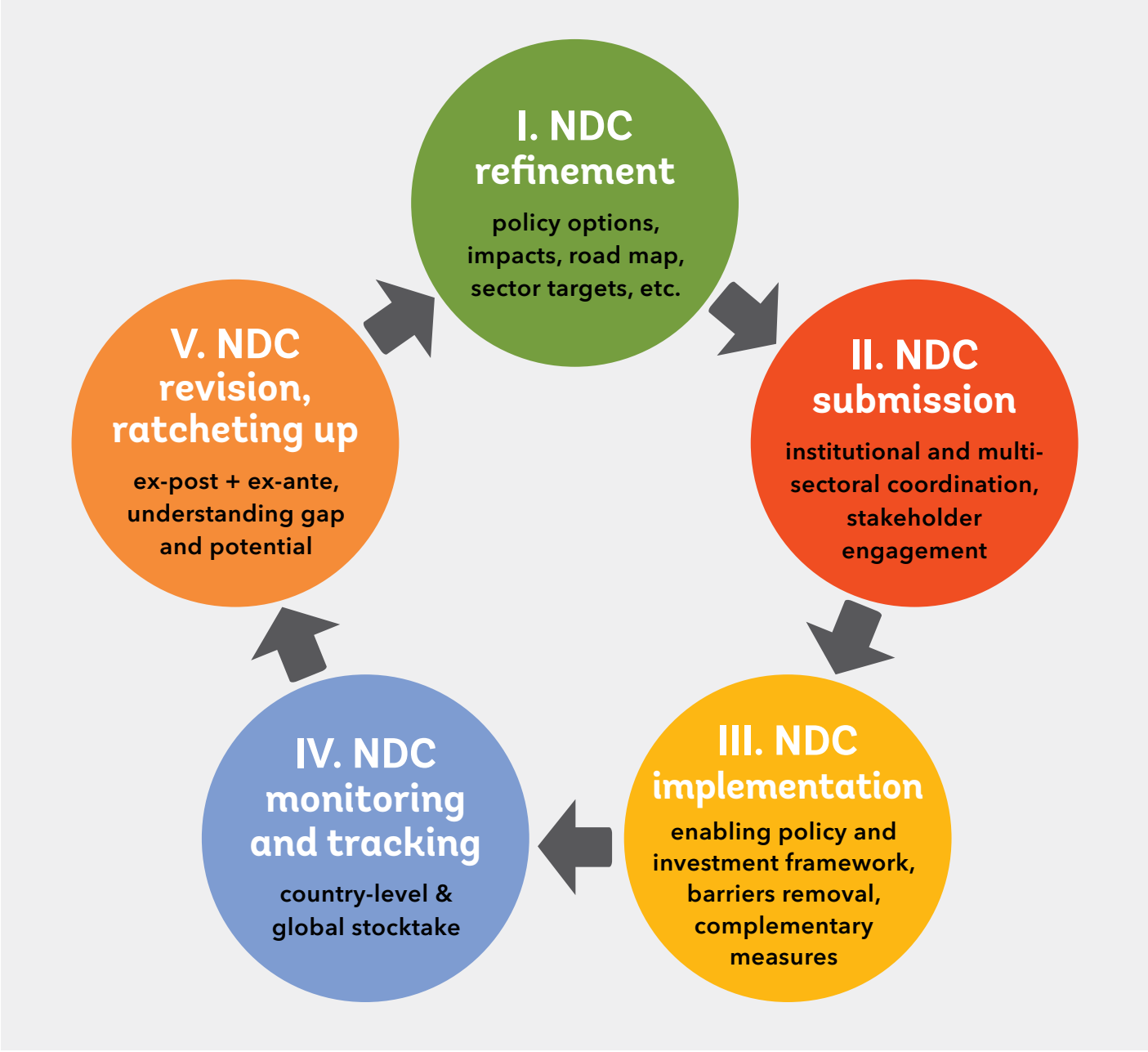
ANALYTICAL WORK TO SUPPORT MRPS AND INFORM NDC IMPLEMENTATION

POLICY ANALYSIS WORK PROGRAM

The strategic vision of the Policy Analysis Work Program is to provide timely and customized analytical support along the Paris Agreement milestones and throughout the NDC implementation cycle (including update and submission, implementation, monitoring and tracking, and increasing ambition), while recognizing that carbon pricing instruments are key to effective NDC implementation and the ratchet-up mechanism.

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.

FIGURE 7: NDC IMPLEMENTATION CYCLE



In the context of preparing and implementing NDCs, the Policy Analysis Work Program supports countries to:

- Build capacity to develop models for policy analysis.
- Analyze options to determine how best to integrate carbon pricing with existing sectoral and national policies.

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.

EARLY LESSONS LEARNED FROM THE PMR’S SUPPORT OF NDCS THROUGH THE POLICY ANALYSIS WORK PROGRAM

- 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 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 ratcheting 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 policy makers 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 objectives of the workshop were to:
- Identify critical gaps and common challenges with respect to analytical/modeling tools and technical readiness at the international and country levels, taking into account relevant Paris Agreement milestones.
 - Share NDC-relevant analytical approaches and modeling 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 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

COUNTRY	DESCRIPTION	FRAMEWORK	RELEVANCE FOR NDC
CHILE	Modeling policy options and developing implementation plan for NDC in energy sector	Bottom-up energy and computable general equilibrium (CGE) models in tandem (2050)	Energy sector contribution and action plan
COLOMBIA	Macroeconomic modeling of carbon pricing instruments Modeling ETS design options and designing road map	CGE adaptation and soft-linking with bottom-up energy (2040) Qualitative assessment; gap analysis	Inform choice of carbon pricing instrument/s to support economy-wide NDC mitigation targets
COSTA RICA	Developing modeling framework, database, and technical capacity for exploring decarbonization pathways to achieve NDC target	Bottom-up model with focus on energy and transport; aggregation framework for other sectors (2050)	Energy and transport sector contributions; policy actions toward NDC
MOROCCO	Developing NDC implementation strategies Rapid assessment of potential carbon pricing options	Bottom-up model with current focus on the building sector (2030); plan to cover other NDC-relevant sectors; investors’ perspective approach Policy analysis and road map for carbon pricing; qualitative assessment	Support NDC implementation
THAILAND	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	E3-Thailand model, including detailed sector coverage with two-way feedbacks between energy-environment-economy	Refine NDC and support NDC implementation
TURKEY	Support for strengthening local modeling capacity and tools for effective NDC implementation	Marginal abatement cost curve tool (linked with CGE under MRP activity); investors’ perspective approach	Support NDC implementation and clarify role of carbon pricing in achieving GHG reduction objectives
VIETNAM	Assessing policy and reform packages that stimulate investments to meet NDC targets	Bottom-up energy model (power, industry) and marginal abatement cost curve tool (2050) Investors’ perspective approach	Support NDC implementation

KNOWLEDGE MANAGEMENT TO CREATE AND DISSEMINATE INFORMATION



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

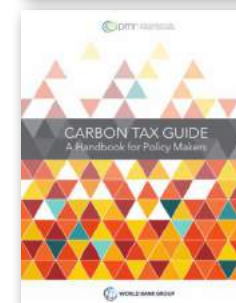
In FY17, the PMR published four reports and guides, as well as four issues of the quarterly *China Carbon Market Monitor*.



Emissions Trading Registries: Guidance on Regulation, Development, and Administration

October 2016

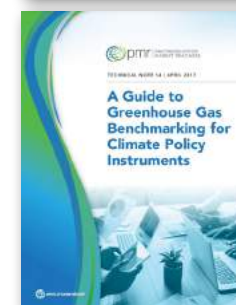
This report provides technical insights and guidance on how to support country-specific decision making and activities related to registry development. An emissions trading registry is an online database that issues, records, and tracks the carbon units exchanged within market mechanisms or financed 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



Technical Workshop on Paving the Way for NDC
Implementation: Analyzing Policy Options and Modeling
Carbon Pricing, San José, Costa Rica, December 2016



Technical Workshop on Post-2020 Accounting: Implications
for Carbon Pricing and Registries, Vietnam, October 2016





TECHNICAL WORKSHOPS

Post-2020 Accounting: Implications for Carbon Pricing and Registries

Hanoi, Vietnam, October 2016

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 analytics 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 to support implementation of NDCs and strengthen international cooperation on the Paris Agreement goals. Participants learned about new approaches to designing and financing transformative mitigation. They shared insights on documenting steps to support markets and effective climate finance delivery within the Paris "rule book." Participants also discussed methodologies, including modeling tools and benchmarking, for quantifying mitigation outcomes and setting baselines for climate policies and actions.



TRAINING AND PUBLIC EVENTS

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.



E-LEARNING AND WEBINARS

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.

Overview of the Carbon Tax Guide: A Handbook for Policy Makers

May 2017

This webinar provided an overview of the *Carbon Tax Guide: A Handbook for Policy Makers*, which was published in March 2017.



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

SECRETARIAT
MANAGES OPERATIONS
AND ADMINISTRATION

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.

Drive Country Progress through Increased Country Delivery Support

In FY18, the PMR will further enhance country delivery support to implementing country participants and technical partners. With PMR implementation phase funding now allocated to 16 out of 19 implementing country participants and one assistance-receiving technical partner, PMR activities in countries are expected to accelerate. In addition, the PA’s endorsement of a process to facilitate the allocation of additional funding is likely to result in several countries proposing new activities related to the design, preparation, and implementation of carbon pricing instruments. Lastly, additional support will be needed to help prospective assistance-receiving technical partners undergo the PMR process, prepare their proposals, and seek funding for the implementation of PMR activities.

CORE BUDGET COSTS

The Secretariat uses activity-based budgeting – that is, it tracks activities using a coding system – to monitor spending and prepare the budget. The budget consists of six core costs.

PA meetings, workshops, and other events: Costs associated with these events include catering, hiring a venue and audiovisual equipment, and travel and accommodation.

Country delivery support and advisory services: These costs cover MRP Expert Feedback expenses and the technical assistance provided by delivery partners and the Secretariat to implementing

country participants for the preparation and implementation of the activities laid out in the MRPs. Costs include staff time from both the Secretariat and delivery partners, consulting fees associated with the MRP Expert Feedback process, and travel costs.

Policy Analysis Work Program: These costs are associated with the country-level analytical work, common methodology and framework (including modeling), and technical workshops held by the program.

Knowledge management: Costs associated with the Technical

Work Program include preparing technical notes; organizing working groups, expert meetings, technical training, and other events; and the website’s design and maintenance.

Management and communications: The Secretariat’s day-to-day operating costs to manage and coordinate PMR activities, including already incurred and future monitoring and evaluation expenses, are covered here.

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)

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

*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.

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