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Crediting-Related Activities under the PMR

Status and Support for Implementation

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Abbreviations

CDM	Clean Development Mechanism
EEDP	Energy Efficiency Development Plan
EPC	Energy Performance Certificate
ETS	Emissions Trading Systems
EU	European Union
GHG	Greenhouse Gas
INDC	Intended Nationally Determined Contributions
LCC	Low Carbon City
MBI	Market-Based Instrument
MEF	Ministry of Economy and Finance
MRP	Market Readiness Proposal
NAMA	Nationally Appropriate Mitigation Action
NESDB	National Economic and Social Development Board
NMM	New Market-Based Mechanism
NMT	Nonmotorized Transport
NNRRG	National Network for Recycling of Refrigerant Gases
NPV	Net Present Value
PCCM	Politique du Changement Climatique au Maroc
PMR	Partnership for Market Readiness
RBB	Results-Based Budgeting
RBF	Results-Based Finance
SEI	Stockholm Environment Institute
UNFCCC	United Nations Framework Convention on Climate Change

Executive Summary

Policy analysts and decision-makers have long expressed interest in market-based mechanisms as tools to achieve greenhouse gas (GHG) emission reduction objectives in a cost-effective and accountable manner. Crediting instruments represent one such mechanism. By issuing transferable credits for verified emissions reductions, they can enable wider participation and greater cost-effectiveness in achieving mitigation goals.

Existing mechanisms such as the Clean Development Mechanism (CDM) have built extensive capacity, knowledge, and experience related to crediting. A number of developing countries are now considering the further development of crediting instruments in their own domestic contexts, as well as international markets. The design and operation of crediting instruments requires the establishment of numerous program elements, from quantification methods to data management and collection, and design and implementation processes that engage relevant stakeholders and are informed by timely and appropriate studies.

The Partnership for Market Readiness (PMR) is currently supporting eight countries in the development of crediting instruments: Colombia, Costa Rica, Mexico, Morocco, Peru, Thailand, Tunisia, and Vietnam. With this support, each country has drafted an extensive Market Readiness Proposal (MRP); they are at different stages, from final approval to early implementation. In light of the extensive planning efforts to date, and the ongoing evolution of both PMR and the broader carbon market, PMR commissioned the Stockholm Environment Institute (SEI) and Ecofys to undertake a study of crediting-related activities planned or being undertaken by the PMR's Implementing Country participants.

The objectives of this study are threefold: 1) to review and compare the PMR crediting-related activities presented in MRPs; 2) to assess whether and how these crediting-related activities can stimulate scaled-up mitigation by creating a domestic environment (technical, regulatory and institutional) that can support a range of climate policies; and 3) to identify opportunities for the PMR to provide further support. To achieve these objectives, the SEI/Ecofys team reviewed the MRPs, conducted a broader literature review, and interviewed numerous actors, from the PMR Secretariat to practitioners in the field of crediting and staff of programs that share the PMR's broader goal of enhancing readiness for low-carbon policy and investment.

This paper begins with an in depth look at the eight MRPs that currently focus on crediting, drawing out commonalities and differences in their approaches and activities. All have relied on thorough policy analysis as well as stakeholder engagement to inform instrument design, establish institutional and regulatory frameworks, and set up monitoring, reporting, and verification (MRV) systems. However, not surprisingly, national circumstances and priorities have driven important differences in sectors targeted, the role of domestic climate policies, and how demand risk is addressed.

While supporting the development of crediting instruments is an important part of the PMR's overall work program, the future of crediting has become increasingly uncertain, particularly with respect to the sources and scale of credit demand. Demand will be driven by the timing and ambition of future climate policies, the importance of markets in delivering these targets, and the ability to implement the relevant policies (supply and demand side) effectively. All such factors are currently in flux.

Given these uncertainties, the notion of minimizing regrets and maximizing benefits has become of greater interest for market readiness activities. Crediting-related activities that are being supported by the PMR also have the potential to support a broader range of climate policies than just crediting instruments. For example, the quantification approaches and MRV systems developed with PMR support could also prove invaluable for results-based financing. Mitigation potential assessments and stakeholder engagement efforts undertaken with the intent of supporting development of specific crediting instrument could also be relevant, and even build support for a broader emissions trading scheme or carbon tax. A range of crediting-related activities can thus create readiness for a host of climate actions, minimizing the risk of regrets and potentially providing multiple benefits.

In this study, we use these two criteria—minimizing regrets and maximizing benefits—to assess 15 types of crediting-related activities that are currently being supported in MRPs, and the extent to which they could contribute to creating readiness. We develop and apply a rubric for evaluating each activity and its contribution to the criteria, including its importance in supporting multiple climate policies. We find, for example, that countries with a clearer preference among instruments and willingness to commit to them (and in so doing, perhaps risk greater future regret) appear to have greater alignment with the maximizing benefits criterion. Five countries are setting up an institutional and regulatory framework, which scores high in our assessment of benefits, and also is a medium priority in terms of minimizing regrets. GHG data management and collection and registry development are also widely chosen as activities, and these offer a balance of minimizing regrets and delivering wider benefits and readiness.

While this paper provides a method for examining the relationship between specific crediting-related activities and the no-regrets concept, this analysis cannot in itself provide direction to the PMR or Implementing Countries on where and how to invest in future activities. Instead, it should be considered together with individual country contexts and aspirations, the future trajectory of the PMR, and synergies with other international and domestic initiatives.

The PMR should continue and perhaps even expand its support for a mix of activities that both support specific crediting instruments and bring wider benefits by paving the way for broader mitigation policies. This assessment has demonstrated that it is not possible to create a single approach that is optimal for all—the variety of factors involved in understanding which activities to choose is vast, and is based not only on different desired, and uncertain outcomes, but also on each country's starting point.

The PMR should consider more explicitly using the criteria described here: creating readiness while minimizing regrets, and maximizing benefits. In practical terms, this can help countries and the PMR to work together to limit over-investment in some activities that have highly uncertain returns. It also means more explicitly expanding the goals of PMR activities, to the extent possible within their terms

Crediting-Related Activities under the PMR

of reference. Wider goals could support activities that serve multiple instruments, such as baseline and MRV activities that consider application for results-based finance or for regulatory systems.

The PMR has contributed unique value in recent years, even as the carbon market has weakened, because it has offered constructive dialogue and worked towards real action on the ground. This assessment demonstrates that there is merit in actively pursuing a full range of activities under the auspices of the PMR, provided that they are fit for purpose in each country and are assessed over time.

1. The Context for PMR Support for Crediting-Related Scaled-Up Mitigation Initiatives

1.1. The Role of Crediting Instruments

Policy analysts and decision-makers at the international, national, and sub-national levels have long expressed interest in market-based mechanisms as tools to achieve GHG emission reduction objectives in a cost-effective and accountable manner. The PMR was established with a focus on such market mechanisms, including two broad categories: *emissions trading systems* (ETS) and *crediting instruments*.

An ETS puts a cap on the total emission of a national or regional system and allows the participants flexibility in adhering to this cap. An ETS can be implemented as a stand-alone instrument—the demand for emissions reductions comes from within the capped system.

Crediting instruments can be project- or sector-based and provide credits for emissions reductions below an agreed baseline. A crediting instrument needs to be linked to an external source of demand.

Crediting instruments have been attractive to policy-makers for a number of reasons. They offer flexibility to meet emission targets or commitments by being a source of cost-effective emission reductions, and they support host countries transition to a low-carbon economy. They can also commoditize emission reductions independently from market demand through results-based finance (RBF), where credits earned are the proof of results.

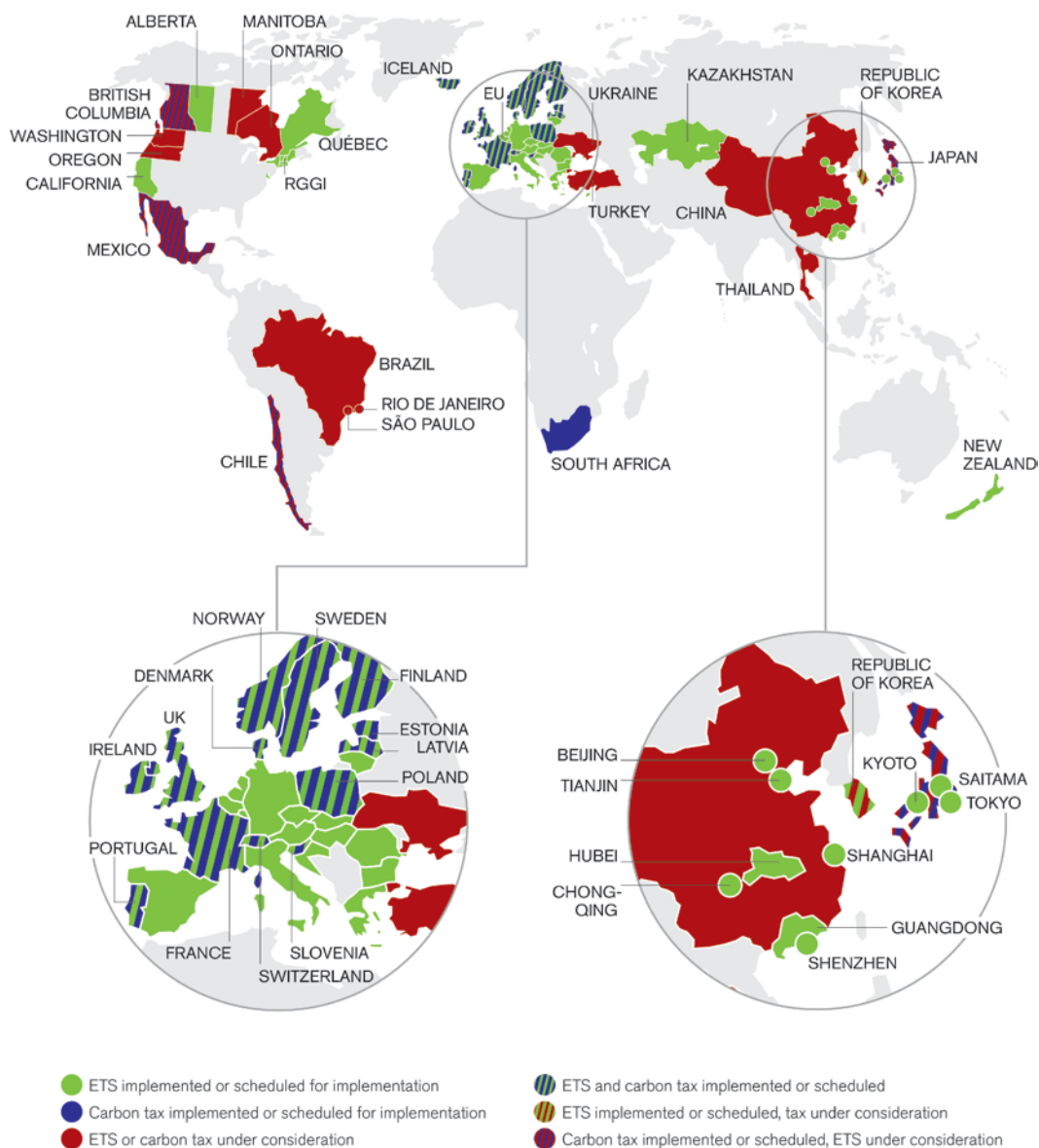
Creating Demand

The demand element is essential—without demand, a crediting instrument will not deliver. There are several ways to create (domestic or international) demand for credits.

- Compliance markets: countries or companies are obliged to comply with emission obligations set under e.g., an ETS, a carbon tax or other GHG compliance mechanisms. If the obligation scheme allows the use of credits, companies may be better off buying such credits than reducing emissions directly. Map 1 below shows that crediting instruments, ETS and carbon taxes often work in tandem, offering flexibility for compliance with emission reduction obligations.
- Voluntary markets: companies, institutions or end-users voluntarily want to “offset” their emissions (e.g., from industrial activities, or air travel) by buying credits from emission reductions elsewhere.
- Climate finance: finance to support mitigation can be granted through the purchase of carbon credits, which serve as “receipts” for emissions reductions under a RBF scheme.

Over time a wide range of instruments have been developed that put a price on carbon. These instruments include ETS and crediting but also carbon taxes, Nationally Appropriate Mitigation Actions (NAMAs) with a crediting element, and RBF. It is important that the PMR now considers its role in providing support to a wider set of policy outcomes than those initially envisaged, i.e., ETS and crediting.

Map 1. Existing, Emerging and Potential Regional, National and Subnational Carbon Pricing Instruments (ETS and Tax)



Source: © 2015 International Bank for Reconstruction and Development/ World Bank. This map was taken from *Carbon Pricing Watch 2015*, developed by the World Bank and Ecofys (World Bank. 2015. *Carbon Pricing Watch 2015*. Washington, DC: World Bank).

1.2. Crediting Can Play a Role in Climate Change Mitigation Policy Development

Countries can use crediting instruments in a number of ways to contribute to their wider climate change mitigation policy and strategy. For example, they can help to identify lower-cost mitigation actions, and build capacity and institutions to support these actions. This can in turn support the development of other

policy instruments, both market and non-market-based, from ETS and carbon tax systems to regulatory and incentive-based approaches to reducing GHG emissions.

The possible pathways from crediting instruments to an expanded suite of mitigation policies are many. The figures below show three conceivable pathways by which crediting instruments could serve as a stepping stone to more comprehensive mitigation policies.

In this first example, shown in figure 1, climate finance can support the implementation of a NAMA. Climate finance can be disbursed in the form of RBF, which in turn could evolve into a crediting instrument, possibly under a future United Nations Framework Convention on Climate Change (UNFCCC) Framework for Various Approaches (FVA) or New Market-based Mechanism (NMM), once there is sufficient international demand for carbon credits. Once the conditions are appropriate for domestic targets and demand to drive a domestic system, the market institutions and capacities established through the crediting system could help in launching a domestic ETS. The ETS could then replace, or continue to work in tandem with, the crediting approach.

In this second example, shown in figure 2, the CDM is the starting point. International demand is then replaced by domestic demand through a domestic project-based crediting system, which might then extend into sectoral coverage and evolve into a broad and flexible regulatory regime that achieves widespread reductions through multiple possible compliance strategies (market or non-market).

Figure 1. Potential Role (A) of Crediting in Climate Change Mitigation Policy Development

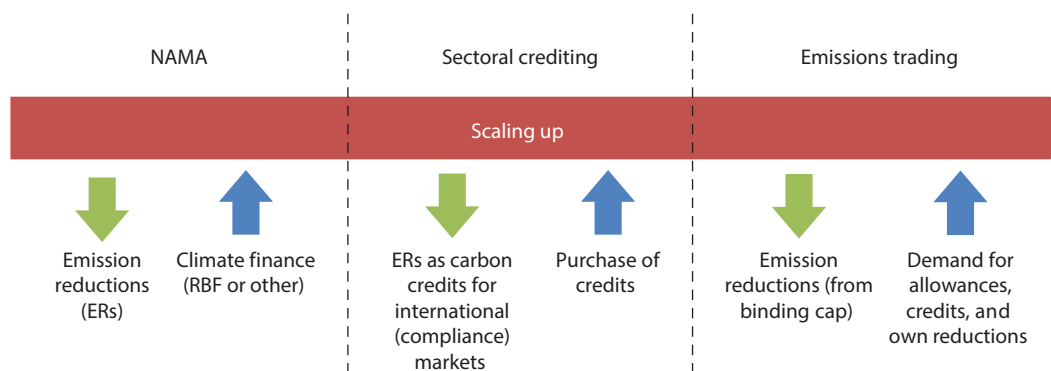
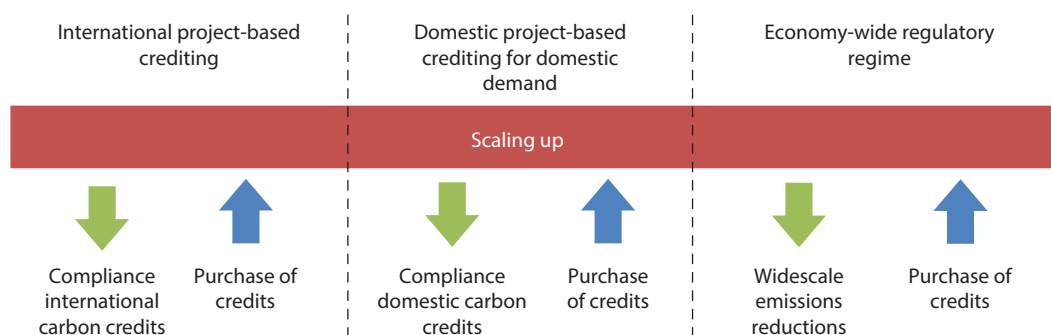


Figure 2. Potential Role (B) of Crediting in Climate Change Mitigation Policy Development



1.3. Factors Determining the Future of Crediting

The success of crediting instruments, now and in the future, relies on adequate demand for carbon credits, both in terms of volume and price. We identify three factors that will be crucial to future demand for credits:

1. **Levels of ambition in climate agreements:** The number of countries that take targets, whether these targets are binding, the stringency of these targets in relation to cost-effective GHG mitigation potential, and the timeline for achieving these targets will all affect future demand for credits. The expected Paris agreement this year has particular significance in this regard. The Intended Nationally Determined Contributions (INDCs) that countries have been asked to put forward this year will provide an indications of the magnitude of intended emissions reductions and the role of markets. At the national level, the ambition in the sectors with a target and the volume of the domestic voluntary market will influence the domestic demand.
2. **The role of crediting in future targets and the policies used to meet these targets:** Beyond the ambition of future targets, the critical question is whether credits will be viewed as a valid means to comply with targets, and if so, the extent to which there could be quantitative and qualitative restrictions on the use of carbon credits. This requires policy choices on the types of mitigation instruments. Some instruments, e.g., carbon tax and ETS, lend themselves better to the use of credits than, for instance, renewable energy or energy efficiency policies, where GHG emission reductions are not (yet) the sole or primary metric. The demand is also influenced by quantitative and qualitative restrictions on the acceptance of credits. For example, the European Union (EU) decision to limit the use of CERs for compliance, followed by a ban on international credits in phase 4 (from 2020 onwards), had a significant impact on demand.
3. **The ability to implement policies:** In practice the demand for credits will also be affected by countries' ability to implement policies such as ETS or carbon taxes that allow the use of credits as a means of compliance. Political preferences for the sources of credits and macro-economic conditions will also be important. Similarly, the supply of credits will depend on the ability of participants in the crediting instruments to generate credits that meet buyers' requirements. This aspect is of particular interests to the PMR, which aims to build readiness on the supply side and in domestic demand.

It is clear that the future of crediting—an important part of the PMR's work—is uncertain, particularly in terms of future demand. Still, crediting instruments have the potential to support the development of a wide range of climate policies, so there is merit in continuing to help develop them. With at least eight countries interested in doing this under the PMR's support program, it is important to understand what activities might be relevant, and how these can contribute to the wider mitigation agenda. These topics are examined in sections 2–4.

2. Features of Crediting-Related Activities in Eight PMR Countries

This section, draws lessons from crediting-related activities in eight PMR countries, looking at commonalities and differences in the countries' approaches, as well as some of the factors that account for them.

2.1. Key Features of Crediting Instruments Supported under the PMR

Crediting instruments such as Clean Development Mechanism (CDM) have helped build capacity and experience with market mechanisms specifically, and with the development, quantification, and monitoring of climate change mitigation activities more broadly. This experience has facilitated interest in exploring and pursuing various crediting approaches, which has led to the emergence of various crediting instruments at the domestic level. This evolution can be observed under the PMR, where 11 of the 17 current Implementing Countries are contemplating a crediting instrument, and undertaking, or planning to undertake, crediting-related activities.

This study focuses on the eight countries where crediting is the principal market-based instrument put forward under the PMR. The three others are developing domestic credit markets as a compliance option for a carbon tax or emissions trading systems (ETS), and are not explored here.¹

Table 1 lists the types of instruments, sectors of focus, and expected sources of credit demand for each of these countries. The analysis presented is based on the review of the Market Readiness Proposals (MRPs) prepared by the eight countries and interviews with country focal points within the PMR Secretariat.

Main Features

Figure 3 depicts the progress towards the implementation of the MRP and, where applicable, the crediting instrument(s) used in the selected eight countries.

For each country the main features of the crediting instruments under the PMR are examined and documented in full country profiles (see appendix B).²

These profiles provide an overview of the type of instrument(s) proposed, the lead institutions and the principal stakeholders, and the timeline for implementation. There is a brief discussion of the rationale behind the choice of instrument and sectors covered as well as the role of crediting in future targets. The source of demand is discussed and a timeline and roadmap to implementation is provided. The aggregated findings are captured in the following section.

¹ The CCER scheme in China and the offset component of the South African carbon tax are not covered. Mexico is covered through its NAMAs but the offset component of the carbon tax is not covered.

² The appendix B reflects the information collected and reviewed as of February 2015.

Table 1. Overview of Crediting Instruments in Eight PMR Implementing Countries

Country	Type of instrument(s)	Sectors covered	Sources of credit demand currently envisaged
Colombia	NAMAs with a crediting component Domestic offset scheme Possible permit scheme for vehicle importers	Urban transport	Domestic (for domestic offsets through fuel carbon levy; vehicle importer/ producer standard) International (NAMAs with crediting component)
Costa Rica	Project-based crediting instruments for multiple sectors with some voluntary domestic demand	1st Phase: power generation, agriculture, solid waste, transport, and sustainable construction	Domestic (entities committing to carbon neutrality); Some activities may be supported via (crediting) NAMAs
Mexico	NAMAs with a crediting component	Urban communities; urban transport; refrigeration	International Domestic (compliance with tax or ETS)
Morocco	Sectoral crediting	Electricity, cement, phosphates	International
Peru	NAMAs with a crediting component	Provisional scope: energy supply, housing, industry, waste and transport	International and possibly Domestic (under consideration)
Thailand	Project-based crediting	Municipalities and communities	Domestic (pooled funds; voluntary market)
Tunisia	Sectoral crediting	Electricity; cement	International
Vietnam	NAMA with a crediting component	Steel; solid waste	International

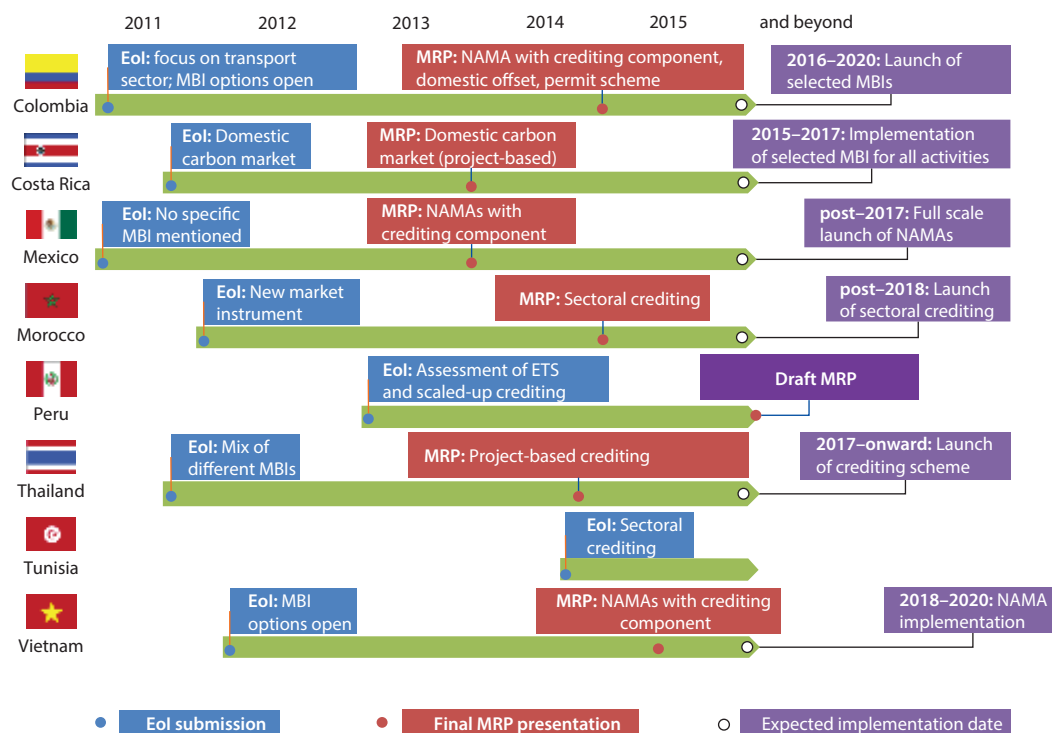
2.2. Summary of Commonalities and Divergences

The eight PMR countries display many commonalities in their approach to crediting instruments, but the design choices also reflect different national circumstances and considerations. The experiences and choices of the countries to date illustrate that there is no single preferred model, and show the extent to which countries can tailor the design to suit their institutional, economic and political contexts.

Based on the assessment of crediting-related activities in eight countries, we identify four differentiating elements:

- There is no general blueprint for the design of crediting instruments.
- The choice of sectors reflects national priorities.
- Countries use crediting in alignment with, and to support, their particular domestic climate policies.
- A portfolio of measures exist to mitigate risks from an uncertain international demand.

Figure 3. Timeline and Progress of the Activities under the PMR



We also find four common elements:

- Use of policy analysis to underpin the crediting instrument.
- Enabling an institutional and regulatory framework.
- Establishment of MRV capacity and systems.
- Establishment of a GHG data management system and/or registry.

Choice of Instrument: There Is No Common Blueprint for the Design of Crediting Instruments

Most countries point to similar factors in their choice of instrument: past experience with carbon markets, convergence with other domestic policies, interest in market-based instruments (MBIs), perceived readiness for crediting and trading instruments, a desire to enhance other national and international climate change initiatives, and the opportunity to acquire additional finance.

Nevertheless, each country has specific settings and defines different key sectors. As a result, even when similar factors are taken as a starting point, the results are remarkably diverse.

Examples

- Morocco and Tunisia are examining sectoral crediting, building on their experience with CDM, and significant economic activity and interest in key emissions-intensive sectors.

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- Driven by its strong emission reduction commitment and a history of pioneering offset efforts, Costa Rica is implementing a domestically oriented, project-based crediting system.
- Thailand is looking at a similar energy performance certification scheme for key sectors, combined with a city-oriented project-based crediting program that builds on its already established Voluntary Emission Reduction program.

In Morocco, Tunisia, Costa Rica, Vietnam and Thailand alike, the crediting instrument considered under the PMR is seen as a main instrument for GHG mitigation and a stepping stone towards another market-based instrument.

- In contrast, in Mexico and Peru, crediting complements existing, broader NAMA initiatives as a way to provide an additional source of finance to enable further implementation; in Mexico's case, PMR activities may be only one part of country's more ambitious climate policies, where a carbon tax has been approved and ETS is under consideration.
- Vietnam considers NAMAs with a crediting component as an intermediate instrument that could lead to an ETS in the long term.
- Like Thailand, Colombia is exploring multiple crediting instruments through the PMR, with a focus on the transport sector: from crediting NAMAs to a domestic offset scheme supported by a carbon levy, and a possible vehicle performance standard.

Instruments pursued under the PMR could evolve in response to new developments. Several countries are undertaking comprehensive assessments of policy options through the PMR as well as stakeholder discussions that could inform future changes. In addition, several of the eight countries examined have recently changed national governments. Such political changes could—and have—also influenced changes in approaches to climate policy. Signals regarding international demand for credits that could emerge from changes in carbon markets or new international agreements could have a similar impact.

Choice of Sectors: The Sectors Covered Often Reflect National Priorities

The eight countries have many criteria in common for selecting sectors for activities under the PMR, including:

- Significance in the total GHG emissions and energy consumption,
- GHG mitigation potential,
- Existing carbon market and MRV capacities,
- Willingness of entities in the sector to participate,
- Development of co-benefits,
- Potential to contribute to the development of MBIs, and
- National priorities and synergies with other ongoing initiatives aiming to support mitigation efforts.

Examples

- Both Morocco and Tunisia have particular emphasis and activities in renewable energy which contribute to a focus on the power sector.
- In Vietnam the steel and waste sectors, the focus of PMR activity, are a government priority for investment and reform.

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- Likewise, cities and the industrial sector are priority areas in the national energy efficiency development plan of Thailand, and along with the building sector, and the focus of PMR activities.
- Furthermore, many countries are proposing NAMAs in the selected sectors and are looking to explore the synergies between the NAMA activity and the PMR activity in the sectors chosen, such as cement in Tunisia, transport in Colombia, and the focus sectors of Vietnam and Mexico.
- There are also regional commonalities in the choice of sectors, such as the electricity and cement sector in the Maghreb (Morocco and Tunisia) and urban transport in Latin America (Colombia and Mexico). The countries interested in transport and urban development activities under the PMR often have large, congested cities with planning challenges and have a history of innovation in urban transport, such as in Mexico and Colombia; mitigation activities in these sectors could result in many co-benefits.
- Peru and Costa Rica have a broader scope for sectors of focus under the PMR. The rationale behind this is either seeking a broad domestic effort, in the case of Costa Rica, or keeping the options open for future activities, as with Peru, which is still at an early stage of engagement with the PMR.

Role of Crediting Instruments: Crediting Supports Domestic Climate Policy and/or Markets

Given uncertainties in the future ambition of international climate change commitments, most PMR countries mainly intend to use the crediting instruments to strengthen their domestic climate policy. However, in the longer term, these instruments could also contribute to any international commitments that they make.

Examples

- Costa Rica, Mexico, Peru, Thailand, and Tunisia have national climate change strategies. In Costa Rica and Tunisia these strategies envision an important role for market-based instruments.
- Morocco, Colombia and Vietnam also put forward strategies to decouple GHG emissions from economic growth. In these domestic climate policies a significant contribution is expected from the selected sectors for activities under the PMR.
- In Peru, Mexico and Vietnam, crediting activities are also intended to enhance the proposed NAMAs.
- Domestic climate policies in the eight PMR countries include different types of targets. The Latin American countries have targets for GHG emissions, Vietnam uses GHG emission intensity targets, and the Thailand targets focus on energy savings and renewable energy. These countries view crediting instruments as ways to help achieve these targets, mindful of the fact that emission reductions achieved cannot be counted towards such targets if corresponding credits are sold internationally and used to meet other countries' targets.

Sources of Demand: Different Ways to Mitigate Risks from Uncertain International Demand

Most countries recognize that the large uncertainties in future international credit demand mean that they cannot count on a high volume or high price for credits sold, at least in the near term. PMR countries have taken different actions to mitigate these risks.

Examples

- Some countries turn to domestic buyers as the primary source of demand as in Costa Rica and Thailand, though uncertainty in demand remains.
- Instead of relying solely on the demand for credits, Vietnam, Peru, Colombia and Mexico are using other ways to obtain international funding for their activities.
- Rather than directly developing a crediting instrument, some countries focus on generating emission reductions that can be bought through RBF in the short-term before transferring these emission reductions into compliance-recognized credits once there is adequate demand.
- Unlike the other countries, Morocco, Vietnam and Tunisia are not yet explicitly considering domestic demand or NAMAs with crediting (still an undefined concept) as a source of funding. The international carbon market remains the principal anticipated source of demand for any sectoral credits in these two countries.

In recognition of the uncertainty surrounding the future international regime for climate change, the World Bank Group is developing a proposed piloting fund for scaled-up crediting in order to test new instruments to generate emission reductions at scale and at low cost, while also incentivizing developing countries to make long-term contributions to global mitigation and build their carbon pricing infrastructure. The Fund will support large-scale crediting programs in developing countries at a national, subnational, sectoral or city-wide level, by providing payments for carbon credits. While providing lessons for future mechanisms, these programs will also achieve significant mitigation in their own right.

Roadmap to Implementation: Common Activities

The MRPs for all eight countries share a few activities in common, though they may differ in approach or focus. These activities include:

Analyzing the policy context

Assessing in more detail which instrument is appropriate (policy analysis), including the coherence with existing and planned policies and initiatives. The objective of the analysis is to select the most suitable mitigation instrument(s) for the country.

Examples

- In Thailand and Vietnam, the analysis covers not only activities planned under the PMR, but the future development of the mitigation instrument, such as a potential future ETS.
- In the countries that have clearly selected a particular mitigation instrument, the upstream policy analysis focuses on how PMR activities can strengthen the instrument, as in Peru, where NAMAs has been selected.

Setting up a regulatory framework

An enabling institutional and regulatory framework is needed to lift regulatory barriers and strengthen institutional capacity. These activities are not limited to solely enabling activities under the PMR, but also aim to support countries' domestic climate policy.

Crediting-Related Activities under the PMR

Examples

- Lifting barriers that prevent investment in clean technology in Morocco and Tunisia.
- Assigning roles and responsibilities in relation to the crediting instrument in Thailand and NAMA development in Peru and Mexico.

Building MRV capacity

Building capacity and systems for the MRV of GHG emissions is essential to monitor mitigation actions and provide confidence that all mitigation activities meet a set of standards.

Examples

- Setting up a sectoral MRV system for three sectors in Morocco.
- The planned MRV activities can go beyond GHG emissions. For example, in Peru the MRV framework should cover development and climate impact, and in both Peru and Colombia, the MRV framework should also cover NAMAs.

GHG data management

Implementing a GHG data management system and/or registry ensures that reliable GHG emissions data are collected to inform future policy decisions.

Other shared activities

Several other activities are being pursued by more than one country; examples are provided below.

- *Setting of baselines and quantifying mitigation potential* are among the planned activities of many countries, including Mexico, Morocco, Peru, Thailand, Tunisia and Vietnam, as it is necessary to determine the GHG mitigation opportunities and costs and impact of mitigation activities.
- Most MRPs included mitigation *instrument design* activities, such as sectoral crediting mechanisms in Morocco and Tunisia, crediting components of NAMAs in Peru and Vietnam, and a potential ETS for Thailand.
- Colombia, Tunisia, Morocco, Thailand and Mexico are considering “piloting” their market-based instrument to some degree under the PMR, although in the latter two countries this is not covered in the first tranche of PMR funding.
- Costa Rica is already piloting its market-based instrument and is focusing on developing its *domestic carbon market infrastructure* for full implementation. Wider market readiness capacity-building activities are included in Colombia, Costa Rica and Mexico.
- Countries with instruments relying on voluntary domestic demand, such as Thailand and Costa Rica, are planning *outreach activities* under the PMR to strengthen demand.
- Vietnam, Tunisia, Peru and Mexico are also explicitly planning activities to increase *stakeholder participation* in the planned initiatives.
- *Strengthening the financial infrastructure* is included in the MRPs of Mexico, Colombia, and Peru; this covers *exploration of investment frameworks* for mitigation action, looking at how results-based budgeting with GHG metrics could work.

Crediting-Related Activities under the PMR

It is important to note that the activities discussed above have not been implemented yet, so it is not possible to assess the barriers to their implementation, or their ultimate success. However, it is helpful to understand whether the activities that these countries are undertaking will prepare them well for the wide range of policies they may eventually adopt. The extent to which these different crediting-relating activities can be considered no-regrets is explored in section 3.

3. Elements of a No-Regrets Market Readiness Work Program of the PMR

Given the many uncertainties surrounding crediting instruments, the notion of pursuing “no-regrets” readiness activities has emerged. The no-regrets term has a long history in the realm of climate policy. In the past, it has been used to refer to mitigation activities or investments that are desirable and justifiable for reasons other than GHG emission reductions: in other words, actors would not “regret” pursuit of an activity even if anticipated climate policies or carbon revenues did not ultimately materialize. Typically a no-regrets mitigation activity is one that yields a net economic benefit (positive Net Present Value) or is financially attractive (Internal Rate of Return above a certain threshold). It could also be justified due to social or non-climate environmental benefits. Cost-effective energy efficiency measures are the classic no-regrets activity.

In the context of readiness for crediting instruments under the PMR, “no-regrets” activities take on a similar meaning but in a different context. A crediting or market readiness-related activity can be considered “no-regrets” if it is desirable and justified for purposes other than supporting the implementation of a crediting instrument. In other words, actors would not “regret” pursuit of a crediting-related activity—such as upstream policy analysis or development of an MRV system—even if the targeted crediting instruments did not materialize as hoped (e.g., due either lack of implementation or lack of market).

A no-regrets activity could, for example, have value in laying the groundwork for other existing or future policies or mechanisms. These policies could include emissions reporting regulation, voluntary incentives, or the further development of other market mechanisms at the national or international levels. A key characteristic of a no-regrets activity is thus that it may yield multiple benefits, beyond those associated specifically with the targeted mechanisms, i.e., adaptable capacity and institutions. Ensuring that activities yield outputs that are credible, consistent and compatible—the “3Cs” that underpin PMR support—is also central to reducing the potential for future regret and opportunity costs.

This section develops criteria for assessing no-regrets market readiness efforts, and explores these criteria in more detail. Some conclusions are drawn about how to balance the priorities of minimizing regrets and maximizing benefits.

3.1. Criteria for Assessing No-Regrets Market Readiness Efforts

Ultimately, assessment of what one might or might not “regret” depends on uncertainties about future climate policies, economic development, and other market signals and factors. Criteria must thus include the ability for readiness activities to accommodate or adapt to circumstances that could be reasonably expected to occur. They should also reflect the readiness needs of different actors, such as government and the private sector, which can be addressed partly through some crediting-related activities, such as capacity building or institutional development. These are discussed further below.

In the next sub-sections, we consider the range of activities currently undertaken in the context of support for crediting instruments under the PMR, or those that might be considered in the future, and assess the extent to which they might:

1. **Create readiness** by facilitating frameworks for scaled-up mitigation and assisting in the implementation of various mitigation-related policies, including market and non-market instruments. At the same time, activities should minimize potential “regrets” by avoiding risks of missed opportunities or inefficient journeys, e.g., by considering a wide range of potential future policy frameworks, being adaptable to changing circumstances, creating realistic expectations, and avoiding over-investment in activities highly dependent on uncertain market rules.
2. **Maximize potential benefits** by increasing institutional or political momentum for low-carbon investment, strengthening stakeholder engagement in mitigation opportunities, promoting synergies among mitigation-related activities, or even through the learning that can take place when implementing mechanisms of limited duration.

Because they are very closely linked, we have combined the concepts of creating readiness and minimizing regrets. Put succinctly, readiness creates conditions for increased mitigation, while regrets can undermine those conditions by reducing interest or instilling a sense of futility due, for example, to perceptions of wasted effort. By enhancing readiness for increased mitigation that could be pursued through multiple policy options, well-designed activities should effectively reduce the risks of regret.

3.2. Crediting-Related Instruments and Other Policy Outcomes

To help evaluate the robustness of the crediting-related activities described in terms of contribution to readiness for a variety of possible climate policies, we consider the relevance of crediting-related activities to a range of climate policies, which include market and non-market instruments.

In most MRPs, these crediting-related activities are implemented to prepare for a specific crediting instrument, e.g., domestic project-based crediting in Costa Rica or sectoral crediting in Morocco. These fall into one of four categories:

- Domestic project-based crediting (e.g., to support an ETS, a carbon tax, or voluntary program);
- Domestic sectoral crediting (e.g., to support an ETS or a carbon tax);
- International project-based crediting (e.g., the CDM or a reformed CDM);
- International sectoral crediting (e.g., as might be implemented through the New Market-based Mechanism).

This analysis also considers the following additional possible future policies:

- ETS (domestic or regional);
- Carbon tax (likely domestic);
- Results-based finance (this is generally not a policy in itself, but as shown in figure 2, it can be a bridge to crediting).

In addition, some crediting-related activities can help countries assess and set of mitigation goals and pathways, e.g., Intended Nationally Determined Contributions (INDCs), and subsequently monitor and track achievement. Crediting-related activities can also be beneficial for NAMAs with a crediting component, which may be any kind of national mitigation policy that includes a methodology and approach to generate credits.

3.3. Crediting-Related Activities

In this section, we describe a range of crediting-related activities, and consider how their design and implementation may be relevant to other policy instruments, such as those noted in the prior sub-sections. This review, in turn, informs our assessment of how these activities might satisfy two criteria: 1) creating readiness while minimizing regret, and 2) maximizing benefits. We consider 15, in some cases overlapping, activities:

- 1. Instrument design:** This activity involves the elaboration of specific design elements of a crediting instrument: the sequenced implementation of many of the activities that follow (MRV, baselines, etc.), which can lay the ground work for other, closely related policies. For example, the design elements of an international sectoral crediting system design could be easily transferred into a domestic sectoral crediting system. The coordinated implementation of MRV and baseline methodologies can be useful for assigning emission reduction benefits to non-market instruments such as RBF. However, for other more complex policies, such as a full ETS, the design of a crediting instrument would only provide some of the elements needed.
- 2. Mitigation potential assessment:** Such an assessment can be used to inform the scale and nature of emission reductions that might be expected from a crediting instrument. It can be undertaken at any point, from design through to implementation and evaluation. A mitigation potential assessment for a crediting instrument may be useful for other policies, depending on the methodology used. While mitigation potential assessment is a part of good policy practice, it is not necessarily essential for the development of an individual policy. However, it is useful for a country's development of targets and actions, such as INDCs and NAMAs. By identifying the extent of low-cost or potentially cost-effective mitigation, a mitigation potential assessment can also help to build momentum for more ambitious climate policies.
- 3. Data collection:** This activity covers the collection of data, such as emissions, energy consumption, activity data, emission factors, etc., needed expressly for the design or implementation of a crediting instrument (e.g., for setting baselines). Nearly all climate-related policy instruments require data collection for successful implementation, but the data sets are likely to be different in scope, depending on the instrument, and on level of detail, and possibly even on the timing of data collection. For example, some approaches, such as the EU Emissions Trading System (EU ETS), require ex-ante data, while others, such as RBF, may rely largely on ex-post data. That said, robust data collection systems, and the associated institutional and professional capacities developed in their implementation, can often remove key obstacles to progress in adopting more comprehensive policies.

- 4. Data management:** The management of data can involve setting up systems or tools and processes and may overlap to some degree with MRV and data collection. The management of data, in the case of a crediting-related activity, relates directly to a data management approach and structure that is relevant for the crediting instrument considered. The transferability of the data management approach is most likely where similar sectors are covered, and at a similar point of obligation.
- 5. MRV:** A crediting instrument requires the design and delivery of a monitoring, reporting and verification system for the emissions, activities, and other determinants of emission reductions relevant to the planned crediting instrument. It must consider what processes, actors, and institutions are involved, what they do and how they do it. This task can also lead to concrete implementation activities, such as registries and capacity-building (see other activities listed here). The MRV framework for the crediting instrument can be designed in a way that enables further expansion later on or starts off broad, enabling flexibility. For example, in many countries mandatory reporting of GHG emissions is introduced for industrial facilities over a certain threshold in advance of clear legislation on, e.g., an ETS, a tax or a crediting instrument.
- 6. Regulatory and institutional frameworks and coordination:** This activity involves the development of the institutional structures, including relationships between institutions, and apportioning of roles and responsibilities for the planned crediting instrument. This includes a clear structure legislative framework, and the initial steps towards developing them. In some countries this type of legislation can be quite broad, enabling or stimulating the development of a range of related guidance documents. In other contexts, such legislation will be quite narrowly defined, and therefore less flexible for use for other purposes.
- 7. Quantification approaches (including baseline-setting):** This is the development of methodologies, using existing data, or proxies, to set a baseline and quantify emissions either in preparation for the activity or once the crediting instruments is running. This activity may be linked to MRV. The development of a baseline for a given sector with a crediting approach in mind could be useful for the development of benchmarks, or caps within the context of an ETS, for example. As noted above, quantification approaches developed for crediting programs can have wide utility for other policies and actions. Indeed, the CDM and other offset program approaches have been widely considered for other purposes, such as in the development of impact assessment methods for climate finance (e.g., Green Climate Fund).
- 8. Crediting methodologies or protocols:** Codification of quantification approaches, eligibility requirements, and other procedural aspects into clear and transparent methodologies is an essential feature of a crediting instrument. This activity may be linked to MRV developments and registries. These crediting methodologies, particularly quantification approaches they contain (per above), tend to be highly transferrable among policy instruments.
- 9. Approaches to achieve net emission reductions:** This is the delineation of approaches to delivering net emission reductions as part of the crediting instrument. This is not yet an operational concept in existing crediting instruments (see appendix A).
- 10. Registries for crediting projects and units:** This activity involves the development of a registry that is fit for purpose, as well as safe and secure. Whilst the broader structure of a registry can be

useful for a range of purposes, for example it could be modified to store domestic credits as well as international credits, sectoral or project credits, the functional specificity may need modification, e.g., for use in an ETS. The skills and institutions involved in developing and operating a crediting registry can prove valuable in other contexts. For example, the California Climate Action Registry was established in 2001 and closed in 2010 having evolved into a voluntary corporate emission registry (the Climate Registry) and the principal offset program registry, and methodology developer for the California ETS (Climate Action Reserve).

- 11. Creation or strengthening of domestic demand:** This activity involves the implementation of complementary policies (e.g., regulatory requirements, financial incentives, or promotional programs such as carbon-neutrality schemes), or strengthening of existing policies in order to stimulate domestic demand for credits that arise from the instrument.
- 12. Investment frameworks:** This activity involves the elaboration of specific frameworks for public finance, or finance vehicles that can attract private sector participation in crediting instruments. These investment frameworks should operate well within the existing financial frameworks and environment to channel money safely to and from crediting investments. Finance approaches are likely to be very specific to the intended crediting instrument, and therefore will be quite different from e.g., the finance vehicles required for project-based or ETS-type instruments.
- 13. Capacity-building, engagement, and stakeholder participation:** These activities can consist of a range of engagements, from preliminary soundings, to intense discussions about plans, data collection activities and target-setting. These activities can also include training, workshops and outreach with sectors participating in a crediting instrument, as well as those who may have a role as it develops, e.g., certain government departments, private-sector players (such as verifiers). The general engagement as well as specific capacity-building for a crediting instrument may have varying degrees of relevance for other policies. In many of the PMR countries, the pool of stakeholders, across all sectors, is quite small, and therefore undertaking such activities for crediting is likely to impact a range of players who are also involved in other, broader mitigation topics.
- 14. Piloting activities:** This represents a limited-scale implementation of the crediting instrument, generally with some type of upfront funding, with the intention to test many of the design elements as described above. Such pilots can also deliver mitigation results and credits. Piloting should have a clear evaluation mechanism so that it can be used to test the viability of certain approaches. Piloting activities have the potential to test some transferrable elements of the crediting system, such as institutions, some methodological issues, but already show a significant commitment to one policy outcome.
- 15. Implementation activities:** These activities are the actual implementation of the crediting instrument, such that it generates credits that can be used as intended, domestically or internationally. At this stage, the flexibility to steer towards other instruments is already most limited.

3.4. Criterion 1: Creating Readiness while Minimizing Regret

In this section, we consider how the range of crediting-related activities might contribute towards readiness for a suite of policy instruments, while minimizing regrets. It is important to underscore, however, that definitive evaluation of these activities in terms of this criterion would be extremely challenging and possibly counter-productive. Initially, we attempted such an evaluation, but we found limited basis for

clear and replicable determinations. There is a wide variety of crediting instrument designs, country contexts, and implementation approaches. For example, “instrument design” for an international sectoral crediting, which is likely to rely to some extent on internationally set rules, will differ significantly from the design of domestic, project-based system, with its larger set of domestically defined rules.

With these caveats in mind, we developed an approach that enables one to consider the extent to which an activity (e.g., MRV system) designed with one crediting instrument in mind (e.g., domestic sectoral crediting) might prove valuable under a range of alternative policy instruments (e.g., project-based crediting or a carbon tax). To illustrate this approach, table 2 depicts how activities designed for the purpose of supporting implementation of a domestic sectoral crediting instrument might contribute to the design and implementation of the targeted instrument as well as five alternatives. We then assess whether, for a given instrument, the associated activity might be required or helpful. In principle, activities that are required, or to a lesser extent, helpful, for multiple instruments could—but do not necessarily—create readiness while minimizing regrets, as defined above. As noted however, the devil is in the details: good design and delivery of a given activity, and an eye towards other instruments in doing so, will be more consequential than the relatively simple assessment this table provides.

Table 2. Illustrative Assessment of the Relevance of Crediting-Related Activities Undertaken to Develop a Domestic Sectoral Crediting Approach to Other Policies and Funding Approaches

Options for crediting-related activities	Domestic sectoral crediting	International sectoral crediting	International project-based crediting	ETS	Carbon tax	Results-based finance
Instrument design	Required	Required	Helpful	Helpful	Helpful	Helpful
Mitigation potential	Helpful	Helpful	Helpful	Helpful	Helpful	Helpful
Data collection	Required	Required	Helpful	Required	Required	Helpful
Data management	Required	Required	Helpful	Required	Required	Required
MRV	Required	Required	Helpful	Required	Required	Required
Regulatory and institutional framework	Required	Helpful		Required	Required	Helpful
Quantification (+baseline)	Required	Required	Required	Required	Helpful	Helpful
Crediting methodology	Required	Required	Helpful	Helpful	Helpful	Required
Net emission reduction approach	Helpful	Helpful	Helpful			Helpful
Registries	Required	Required		Required		Helpful
Domestic demand	Required			Required		
Investment frameworks	Helpful	Helpful	Helpful			Helpful
Capacity building	Required	Required	Helpful	Required	Required	Required
Piloting activities	Helpful	Helpful				Helpful
Implementation activities	Helpful	Helpful		Helpful	Helpful	Helpful

Note: This table provides a subjective assessment based on the authors own interpretation of how each activity would look under domestic crediting, and the extent to which this development would be necessary or contribute to other potential policies and funding approaches.

How the Assessments Shown in Table 2 Were Developed

Required: The activity, as it is implemented for domestic sectoral crediting, is directly in line with the requirements of the alternative policy outcome considered. For example, taking the “required” square at the intersection of “data collection” and “international sectoral crediting” means that developing a data collection system for a domestic sectoral crediting instrument would involve designing elements that would also be essential part of the requirements of an international sectoral crediting instrument.

Helpful: The activity, as it is implemented for domestic sectoral crediting, can provide some assistance in the implementation of the alternative policy instrument. However, it might not exactly map onto the needs of this alternative policy instrument, so may need to be slightly supplemented. Or, this activity is not needed but carried out with crediting in mind, it may assist, and will not detract from this alternative instrument. For example, developing a clear crediting methodology for a domestic sectoral crediting instrument could be used for the methodologies that are essential for an international sectoral crediting approach, or for results-based financing at the sectoral level. However, under an international sectoral crediting instrument rules or guidance to develop methodologies are likely to be set top-down. These methodologies could also be helpful in a broad sense for other systems where credits might be generated, e.g., as complementary part of an ETS or tax, but it would not be essential.

Not required: This activity, as it is implemented for domestic sectoral crediting, will have little or no influence on this alternative policy instrument on the basis of our current understanding of what this policy instrument involves. For example, the development of a net emissions reduction approach for a crediting mechanism will not provide any value to an emerging ETS or carbon tax, although it could help inform other crediting policy instruments.

The entries in table 2 should be viewed as best guesses based on the judgment of report authors but not necessarily the “right answer.” Crediting instruments and their contexts, and thus the need for specific elements (e.g., crediting baselines) can vary widely.

The following general observations can be drawn from table 2, and from the review of activities in the preceding section 3.2:

All of the crediting-related activities can contribute to preparing to more than one possible policy instrument and so whichever activities are chosen, some flexibility remains.

Some of the workstream options have quite broad applicability, notably, data management, MRV and capacity building. These elements are required for almost all policy outcomes and for these elements the types of activities undertaken for crediting could deliver equally for other elements.

A role for crediting-related activities could be possible in the context of a carbon tax or an ETS and therefore there are possible synergies, however, the extent to which these synergies will really come into play will depend on how a crediting instrument is combined with a tax or ETS. The CDM is already quite established and therefore the international project-based mechanism appears to benefit less from many of the workstream activities. Nevertheless, the actual impact of an activity will depend on the level of CDM capacity and knowledge available in the host country.

RBF is a flexible tool that can be applied both to sectoral and project-based approaches. The level of stringency for RBF might not need to be as high as for an offset mechanism. As such many of the crediting-related activities are helpful rather than required. In practice this will, however, depend on the agreement between the host country and the funder providing RBF.

Some of these workstream activities are necessary for all of the possible outcomes but the work done from a crediting perspective will not necessarily deliver for other outcomes as table 2 shows, the instrument design that is needed for a crediting element, is so different from the policy design required for an ETS or a carbon tax, it does not actually create a platform to build upon.

As the workstream activities get more specific, they become less flexible which is especially true for piloting, implementing actions and also financial vehicles. There can be some cross-learning but it will not be highly transferrable.

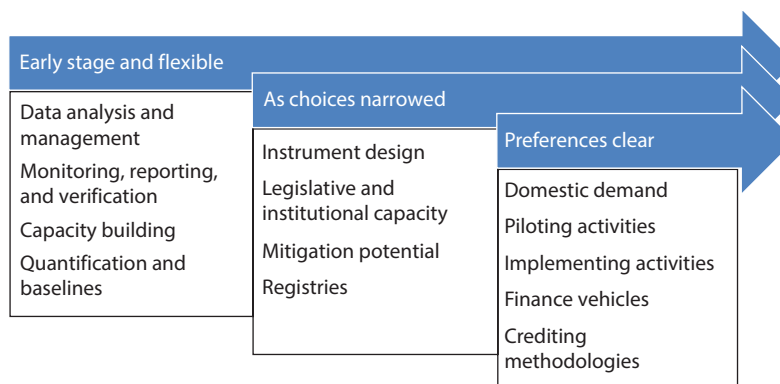
Using the analysis in table 2 as a starting point, it is possible to imagine a sequenced pathway of actions *if the goal is to maintain flexibility*. This is shown in figure 4.

This theoretical ordering considers criterion 1 only. It can also be argued that such an approach is very non-committal, and can signal a lack of certainty of action to other actors, including those in the private sector. These weaknesses could undermine, or at least slow, effective action on the climate agenda.

An Empirical Perspective: A Country Focus

It is informative to compare these theoretical findings to the experiences of the MRP countries outlined in section 2. In at least five countries, activities relate to building the institutional and regulatory framework and capacity in the recipient countries. These changes, in most cases, are planned in a broad manner, i.e., covering institutional capacity for investment in clean technology in Morocco and Tunisia. The focus is more on the institutional side, than the legislative side, again making the implementation of this activity quite open and perhaps aligning better with the concept of capacity building, than with the

Figure 4. A Possible Sequencing of Activities Consistent with Criterion 1



notion of developing an institutional and legislative structure—which is more constricting according to the theoretical framework.

All of the eight countries have included some type of data management system and/or registry. The data management element is recognized to be one of the activities that promotes readiness most.

In addition to the detail of the individual activities pursued, the experience from the eight MRPs investigated underlines the truism that the route towards successful implementation of policies is as related to the political context as it is to the technical elements. The changing face of many policies in the countries investigated is related to high-level political decisions. It is therefore heartening to see that many investments provide broad readiness and can withstand the test of political changes by contributing to a wide range of potential outcomes.

So it seems that some activities are implemented in a way that strives to minimize regrets. On the other hand, five of the eight countries, are considering instrument design in detail, which could be less consistent with criterion 1, to the extent it is taken literally. Costa Rica has already started piloting its instrument, and a further five countries are considering piloting their market-based instruments under the PMR, but only three in the first tranche of funding.

Some countries are clearly keeping options open, but other countries are engaging in activities that show commitment to their choices of instruments and indicate that this readiness and no-regrets perspective is not the only criterion used. It is evident that despite the risk identified in the construction of the theoretical sequencing, countries are willing to make more concrete choices, and for them, preferences are clearer and criterion 1 may not be quite as important as other criteria or priorities.

3.5. Criterion 2: Maximizing Benefits

This second criterion considers the benefits of different activities, in addition to their direct contribution to the development of a crediting instrument. These benefits can include:

- **Increasing political momentum for low-carbon developments:** Certain activities, if undertaken for crediting, can demonstrate a political will to take action on low-carbon development as a whole, and it may also act as a demonstration to politicians and policy-makers who are not already convinced, that low-carbon developments are possible and desirable.
- **Providing confidence to stakeholders that can stimulate low-carbon investment:** Certain activities can provide investors in the private sector with confidence that they should invest in the low carbon sector in a given country. Concrete measures or clear financial structures are most likely to send this signal.
- **Broad support for mitigation policies:** Several activities can support a broader mitigation agenda, the example of an assessment of mitigation potential earlier in this report already indicated that this general activity can help policy-makers make better choices about policies. Other institutional and regulatory developments may also have a positive impact across the mitigation policy landscape.

These impacts should also contribute to more effective mitigation activities and more rapid achievement of emissions reductions.

- **Improving stakeholder engagement:** Many of the activities could use, or need the active participation of stakeholders. This engagement can be seen as an additional benefit of the activity itself, helping compliance participants, and others understand the opportunities and risks of new changes from the earliest moment.
- **Improving co-ordination of mitigation activities and promoting synergies:** Activities undertaken for crediting may also automatically relate to other mitigation activities and help with efficient and effective policy formulation.
- **Learning by doing, leading to better policy design and implementation more rapidly:** Some of the concrete activities undertaken by crediting will test different structures, methodologies and approaches in the field in a way that reveals lessons that would be unlikely to arise in a different context.

This criterion captures the benefits of crediting-related activities that are not directly relevant to one policy but which, however, might be important to the policy-maker. For example, understanding the mitigation potential of a crediting approach may not, at face value, add benefit to a policy that is not related to crediting. However, from a policy-maker's perspective, having a good understanding of the mitigation actions of each policy is important in developing a sufficient portfolio of climate mitigation actions that will help reach a target. And as noted above, knowledge of potential cost savings that such assessments often reveal, especially for energy savings investments, can build political support for action.

All of these broad benefits are directly relevant for the development and implementation of NAMAs and informing the setting of INDCs as well as tracking and monitoring their progress.

The achievement of any economy-wide or sectoral mitigation goal/pledge/objective within or beyond the UNFCCC legal agreement will rely on a full portfolio of policies and measures, and a range of crediting activities could bring broad benefits that will help in the successful structuring of INDCs and with their implementation.

Similarly, NAMAs can provide a structure for developing a wide range of different mitigation policies. Therefore crediting-related activities could create an enabling environment for NAMAs to be effective, but could also make a specific contribution to NAMAs that may be developed with a crediting component.

An assessment of these benefits is subjective, to a certain degree all activities will involve the engagement of stakeholders, for example, and all will also create political momentum. In the initial phase of this analysis a structured analysis was attempted, but the subjectivity involved did not lead to robust conclusions. So, instead some general statements seemed more appropriate.

Activities are considered to provide **political momentum** where the activity requires or will motivate a significant increase in momentum, e.g., through the decision-making process on domestic demand, or to set up finance vehicles. The activities which provide the greatest benefit here are the most concrete: regulatory frameworks, capacity building, domestic demand, finance vehicles, piloting and implementation activities.

Investor confidence can be improved wherever activities relate to concrete policy decisions or details, and moves towards implementation. Activities such as setting the regulatory framework, but also developing a source of domestic demand and clear finance vehicles can all encourage investors. Some of the softer, earlier stage measures such as policy analysis or data collection can act as signals to investors, and may stimulate interest, but not necessarily create confidence.

Several of the early stage policy and infrastructure activities for crediting, such as data collection and management, mitigation potential, development of domestic demand approaches and setting up MRV structures can all **support broader climate change strategies and policies** for a country. Developing regulatory and institutional frameworks and capacity building can also provide significant benefits for the overarching set of climate change strategies. These benefits can be seen as additional to the readiness for specific policies, as assessed for criterion 1, and are particularly relevant to the support of INDCs.

Policy synergies can be improved by activities that can deliver advantages for other policies too, e.g., registries, instrument design, broad policy analysis and crediting baselines. There is some correlation of this benefit to the ability to create readiness for a range of policies.

Improved stakeholder engagement is assumed to take place where the activity absolutely requires stakeholders to be involved, rather than where they could or should be involved, e.g., data collection, data management and the implementation of an MRV structure. However, in some cases stakeholders might be involved in an insufficient manner, which could be detrimental, or only a sub-set of stakeholders might be involved, again to the detriment of other policies or strategies.

Each activity has quite a unique set of benefits. Data collection and MRV activities are quite detailed actions that will engage a small pool of stakeholders and stimulate learning by doing, but are unlikely, on their own, to propel greater political support for mitigation activity, nor to create significant increased investor confidence. The quantification of baselines is a sufficiently concrete measure to encourage investors and engage stakeholders, but nonetheless has broad relevance and applicability to other crediting policies. As such, this activity can create knowledge that could also be used in target-setting, non-crediting policies and strategies, e.g., INDCs and ETS.

Several activities deliver significant co-benefits, including institutional and regulatory frameworks and some of the measures that do not minimize regrets but are quite far down the pathway of crediting development, e.g., investment frameworks, piloting and implementation activities.

3.6. Conclusions

In this section, we considered the range of crediting-related activities and the extent to which they could contribute to creating readiness, while minimizing regrets, and to maximizing benefits. We also referred back to the eight countries who have considered crediting as part of their MRPs.

The criterion of maximizing benefits leads to a different emphasis among activities than the creating readiness/minimizing regrets criterion would. In fact, we see this in play among the MRPs considered. Countries with clearer preferences among instruments and willingness to commit to them (and in so doing

Crediting-Related Activities under the PMR

perhaps risk greater future regret) appear to have greater alignment with criterion 2. For example, five countries are setting up an institutional and regulatory framework, which scores highly in our assessment of benefits, and also is a medium priority in terms of minimizing regrets. GHG data management and collection and registry development are also widely chosen as activities, and these offer a balance of minimizing regrets and delivering wider benefits and readiness.

The analysis presented in this section arguably helps to clarify the relationship between specific crediting-related activities that countries undertake with support from PMR and their contribution to two broad criteria: creating readiness while minimizing regrets and maximizing benefits. However, this analysis cannot in itself provide direction to the PMR or Implementing Countries on where and how to invest in future activities. To do so, it needs to be coupled with individual country contexts and aspirations and with the future trajectory of the PMR.

4. How Can Future PMR Support for Crediting-Related Activities Support Scaled-Up Mitigation?

This section explores possible implications of the foregoing analysis for the PMR's future program of support for crediting-related activities.

Some lessons can be taken from the experiences of other international readiness efforts, such as the FCPF, NAMA Facility, EBRD PETER project, as well as GIZ Climate Finance Readiness Programme. These other readiness efforts suggest the importance of continuous learning with overlapping phases of instrument developing, testing and piloting activities.

The experiences of PMR countries thus far with crediting, as well as the evolving context, may lead to a change in priorities for the PMR participants. Their choices about which types of activities the PMR could support should be based on a number of considerations:

- **Goals:** The PMR may wish to more explicitly embrace support for a broader suite of policy instruments, even where crediting-based activities are the principle focus of MRPs. Furthermore, the PMR may wish to even more explicitly stress the importance of the process compared to the results, reflecting a lesson from other readiness initiatives. There is value at every stage of readiness from the identification of activities, including their review in the light of political and economic developments, through stakeholder engagement all the way to implementation.
- **Realistic expectations on pace of implementation:** The PMR, as well as other readiness initiatives, has often seen slower progress than originally hoped for. PMR Implementing Countries may require more support and investment than originally anticipated, as well as clearer political signals both domestic and international, before they are willing to make the political and resource commitments needed to ensure success. Some MRPs (e.g., Morocco) have explicitly sequenced crediting-related activities accordingly, so that progress can be made on less sensitive or challenging activities (e.g., data collection and management) while the conditions are established for more ambitious elements.
- **Stage of assessment:** As not all of the MRPs have yet been formalized in grant agreements and funds transferred, the assessment of the eight MRPs has only considered what has been planned rather than what has been undertaken. Consequently it is difficult to make broad generalizations or draw definitive conclusions at this early stage. Conversely, there is greater opportunity to consider these cross-MRP observations, should opportunities of adjustments arise.
- **Evaluation and Evolution:** Some of the existing MRPs that have addressed crediting have changed over time, e.g., due to political changes, even before the implementation phase. It is important that the PMR finds a way to support this inevitable change in national priorities without compromising the overarching goals of the partnership. An approach that supports a variety of activities related to crediting, and also acknowledges the process as well as the outcomes can enable more changes along the way.

- **Synergies with other initiatives:** To avoid duplication of efforts and ensure maximum added value/complementarity of PMR activities, it is key that the PMR works actively with other initiatives, such as those of the GCF and the NAMA Facility, as well as potential scaled-up crediting fund, to build bridges with those initiatives.

The findings of the prior sections suggest that the PMR should continue and perhaps even expand its support for a mix of activities that both support specific crediting instruments and bring wider benefits by paving the way for broader mitigation policies.

Under this approach the PMR could choose to strongly support certain outcomes in countries that are ready to be early actors, e.g., by piloting funds for crediting. At the same time, the PMR could continue to provide the no-regret support actions that are most supportive of a range of measures, namely: MRV, capacity building, data collection, capacity building and quantification (e.g., baselines), in countries that are at an earlier stage. It should be acknowledged, however, that these no-regrets activity do not always deliver the most benefits.

This case-by-case approach also allows the PMR to engage at the right speed. Where the PMR is concerned about adding more momentum to this process, there is also an argument for supporting some of the activities that are more concrete, e.g., financial instruments, piloting. However, if a slow and steady approach is more appropriate, taking the speed cue from Implementing Countries, then the activities that minimize regrets but also bring other benefits could be chosen, e.g., institutional and regulatory development. This approach would also allow the crediting instrument to be fully integrated into a wider mitigation strategy. The risk is, however, that action on climate change is delayed too long, and that recipients do not see the inward flows of investment that they were hoping for.

The process of this assessment has demonstrated that it is not possible to create a general approach—the variety of factors involved in understanding which activities to choose is vast, and is based not only on different desired, and uncertain outcomes, but also on each country’s starting point. This attempt to create a common and general rationale seems to go some way to demonstrating that activities do need to be selected on a country-by-country basis.

The PMR should consider more explicitly using the criteria described here: creating readiness while minimizing regrets and maximizing benefits. In practical terms, this can help countries and PMR to work together to limit over-investment in some activities that have highly uncertain returns. It also means more explicitly expanding the goals of PMR activities, and support activities that serve multiple instruments such as baseline and MRV activities that consider application for RBF or for regulatory systems within their terms of reference.

The PMR has contributed unique value in recent years, whilst the carbon market was weak, and the UNFCCC processes stalled. The PMR continues to offer a safe and constructive dialogue, working towards real action on the ground. Currently the PMR is supporting a mix of these activities and multiple goals. This assessment demonstrates that there is merit in actively pursuing a full range of activities under the auspices of the PMR, provided that they are fit for purpose for each country and assessed over time.

Appendix A: Terminology

In this study, the following terms are used:

- *Readiness*: Readiness activities are those which can create the conditions necessary to scale-up investment in the target outcome, in this case the development of crediting instruments. Some readiness activities will need to de-risk investment opportunities to encourage private sector players to invest at scale. This de-risking includes providing a sound and certain policy, legislative and institutional infrastructure, which requires investment as well as clear commitments.
- *Project-based crediting instrument*: an instrument that issues credits based on the performance (relative to a baseline) of a project or program. This baseline is generally independent from the performance of the sector as a whole. Projects and programs can involve one to several actions or investments. Under a program, the exact number of the actions or investments is not known ex-ante. The project-based approach requires project related data to set the baseline. The baseline needs to be set at the installation³, project or program level. Standardization, e.g., in the form of standardized baselines, can limit the costs linked to the development of individual baselines. The credits are allocated directly to the project or program by an international body (e.g., the CDM Executive Board under the CDM, the VCS under the VCS) or by a domestic body (e.g., the government or a body appointed by the government). Project-based crediting has historically been an offset instrument. All crediting programs currently in operation can be considered project-based instruments.
- *Sectoral crediting instrument*: an instrument that would issue credits based on the performance (relative to a baseline) of a sector as a whole. By aggregating emission sources and sending market signals across a broader sector, sectoral crediting seeks to spur deeper emission reductions than might be achieved through project-based approaches. However, this approach requires more extensive data on an entire sector in order to set the baseline, measure performance, and issue credits. At this stage the details of how the sectoral approach would translate at the country level are undecided. In one model, the credits would be allocated by an international body to the host country government. The government could then decide to allocate credits to the installations/companies based on installation-level baselines or other performance based related metric. No sectoral crediting instrument is in place.
- *Policy crediting*: an instrument that would issue credits for the emission reductions that result from the implementation of specific policies (e.g., a renewable energy tariff or energy efficiency standard). Policy crediting can requires many assumptions in order to demonstrate a causal link between to the implementation of a policy and its attendant emission reductions. No policy crediting instrument is currently in place, and, due to its complexity, the concept is not widely discussed.

³ An installation is defined as the entity that reduces emission, e.g., a wind farm, a cement plant, a cookstove, or a solar water heater.

- *NAMA with a crediting component*: Crediting can be a source of finance that supports NAMA implementation. This concept is sometimes referred to as “NAMA crediting” or “credited NAMAs.” NAMAs are in many cases broad in nature as they intend to promote transformational change in the economy, so the carbon market support is likely to come along other sources of financing, e.g., bilateral and multilateral sources, investments from the private sector, foreign direct investments and domestic funding. In this case only part of the NAMA is supported by crediting, hence the term “NAMA with a crediting component.”
- *Domestic instrument*: an instrument developed, defined, and implemented within a country. Demand for the credits would likely come largely or exclusively from domestic sources.
- *International instrument*: an instrument for which rules are defined by an international body (e.g., UNFCCC, VCS, and Gold Standard), that is implemented and managed by a multi-national institution, and for which demand for credits may come from buyers outside the country where the emissions are reduced.
- *Compliance unit or credit*: a unit or credit that can be used to fulfill an emission reduction obligation or a carbon liability.
- *Voluntary unit or credit*: a unit or credit that can be used to fulfill a voluntary emission reduction target or to voluntarily offset emissions.
- *Net mitigation*: a concept first adopted by UNFCCC Parties in the Cancun Agreements in 2010, which called for “one or more market-based mechanisms” capable of “ensuring a net decrease and/or avoidance of global greenhouse gas emissions.” Crediting instruments can contribute to net mitigation through a number of means, such as discounting the compliance value of credits (more than 1 credit needed to offset 1 ton of emissions) or through ambitious baselines, or crediting thresholds, set sufficiently below the business-as-usual baseline. This is not a strict definition as the concept of net mitigation is not operational yet.
- *Piloting activities*: This is a small-scale implementation of the crediting instrument, with guaranteed funding, to test many of the structures defined above. Such a pilot would be funded, and would deliver mitigation results and could deliver credits for the funders, but could also be testing the functioning of the processes, without generating credits. This activity should have a clear evaluation mechanism. Piloting activities have the potential to test some transferrable elements of the crediting system e.g., institutions, some methodological issues, but already show a significant commitment to one policy outcome.

Appendix B: Country Profiles

Colombia

At a glance

Selected instrument	A suite of instruments for the urban transport sector are under consideration and development: 1) credited NAMAs; 2) a domestic offset scheme (for performance based transport projects) supported by a transport fuel carbon levy (carbon pricing); and 3) assessment of a performance standard for vehicles combined with tradable allowances between importers and producers.
Lead institutions	<i>Institutions:</i> Ministry of the Environment and Sustainable Development (MADS; focal point for the PMR), Ministry of Transport (MinTrans; sector ministry), Ministry of Finance and Public Credit (MinHac), National Planning Department (DNP); National Infrastructure Agency (ANI)
Principal stakeholders	<i>Industries:</i> The involvement of specific industrial association or stakeholders has not been discussed in detail yet.
Timeline for implementation	<p>Phase I (short-term, 2014–16): PMR implementation phase to include NAMA Development Steps (Design and piloting in priority cities; preparatory work for domestic offset scheme; creating and enabling political and institutional environment; increasing know-how and MRV preparedness; institutional and regulatory reforms; design of performance standard based on international experiences and domestic requirements and preferences)</p> <p>Phase II (mid-term, 2016–20) (not funded): Operational launch of domestic offset scheme including carbon pricing instrument; phased introduction of NAMA to fully operational by 2020; implementation of performance standard.</p>

Rationale

Choice of instrument	<p>Credited NAMAs are viewed a good option for acquiring additional finance for transport projects and for establishing a MRV system that be used in parallel with a domestic offset scheme.</p> <p>A domestic scheme to use revenue from a low carbon tax to purchase offsets is viewed as a way to support the credited NAMAs or other transport projects with attendant emissions and other sustainability benefits.</p> <p>A performance standard is considered of interest due to its ability to reduce emissions and to be effectively combined with an MBI.</p> <p>Other options, such as a fuller carbon tax/carbon pricing instrument in the transport sector, or inclusion of transport in an emissions trading systems, are not considered viable options due to low GHG impact combined with significant economic and political cost.</p>
Choice of sectors	<p>The transport sector is one of the prioritized sectors in the Colombian Low Carbon Development Strategy (CLDS/ECDDB) and is the focus sector for PMR due to:</p> <p>Considerable and expanding share in national GHG emissions.</p> <p>Preparedness of sector for Low Carbon Development action, with final Mitigation Action Plan submission completed and moving forward in structuring NAMAs and achieving NAMA finance.</p>

Climate change mitigation efforts in transport are politically well received at the ministerial level.

Prior experience with the Clean Development Mechanism transport sector projects providing technical knowledge at the local level, placing the sector in a good position for implementation of other market mechanisms.

Ability to build on an innovative set of transport policies, including support for large-scale mass transit projects, transport demand management (TDM) and nonmotorized transport (NMT)

Potential for replicability elsewhere in the world.

Role of crediting instrument(s) in climate change mitigation policy mix

Domestic climate policy	Colombia’s Climate Change agenda is structured around 4 pillars, the most relevant of which is the CLDC/ECDBC. The ECDBC is a medium and long term development program led by MADS, the DNP, and sectoral ministries with the aim of implementing plans and policies for promoting national economic growth with low GHG emissions. As part of the ECDBC, the MinTrans has submitted a Transport Sectorial Action Plan (PAS), the first submitted PAS. Participation in an international crediting mechanism (e.g., via NAMA Crediting) is anticipated to help attract climate finance to scale up the country’s mitigation efforts.
Anticipated evolution of the instrument	The phase beyond PMR implementation (2016 on) could see implementation of the performance standard and the domestic offset scheme based on a carbon tax. Further evolution is not yet specified.

Ambition and demand

International demand	Crediting NAMAs will target international demand.
Domestic demand	The domestic offset scheme will be domestically funded through a transport fuel carbon levy. Tradable allowances for importers and producers under a performance standard for vehicles could also create demand domestically.

Roadmap to implementation—Summary of MRP activities

	Description	Objective
NAMA Development	NAMA design and piloting on priority cities, including baseline studies, MRV concept and validation, and financial structuring.	Establish NAMAs and MRV systems ready for full-scale implementation.
Political and Institutional Development	Strengthen the coordination of stakeholder activities at the local level; link existing policy & regulatory landscape to objectives and activities of the MRP; Establish an Inter-Ministerial Committee to coordinate stakeholder involvement and endorse important decisions related to operation of the MBIs.	Create an enabling political and institutional environment that involves all stakeholders and relevant institutions.
Upstream policy analysis	Prepare for domestic offset scheme by assessing feasibility of and testing upstream carbon pricing instrument.	Develop a comprehensive picture of inter-dependent policies and issues affecting climate policy objectives in the transport sector.

Capacity building	Increase domestic know-how and MRV preparedness, strengthen modeling capacity regarding carbon tax structures and fiscal and distributional impacts; address multiple identified capacity building needs of the Urban Mobility Unit; develop capacity for public information campaign and awareness through development of a communications strategy.	Establish a robust MRV structure to monitor impacts and increase chance for early implementation once NAMA finance is available on a large scale; Ensure acquired know-how and skills are developed and retained through capacity building measures.
Regulatory and institutional framework	Carry out necessary institutional and regulatory reforms (i.e., strengthening the Sustainable Urban Mobility Unit of the MinTrans and limiting overlapping and contradictory regulations); Develop specific regulations to implement performance standards.	Lay the legal ground for the development of the proposed MBIs, including the performance standards.
Implementation	*Domestic offset scheme launched into fully operational scheme with carbon pricing instrument by 2020, following phased implementation; Performance standard implementation.	Full mobilization of NAMA to realize low carbon growth goals in transport sector.

Sources: Government of Colombia. 2014. *Colombia FINAL Market Readiness Proposal (MRP)*. <https://www.thepmr.org/system/files/documents/PMR%20CO%20Final%20with%20annex.pdf>;

PMR website, National Context, <http://www.thepmr.org/country/colombia-0>.

Note: * indicates activities that are part of Colombia's roadmap to implement MBIs but that will not be covered by a first tranche of PMR funding. They might be part of a second request for funding to the PMR.

Costa Rica

At a glance

Selected instrument	A domestic carbon market with five priority sectors (energy, agriculture and livestock, solid waste management, transport, and sustainable construction). The voluntary carbon market will include the creation of a Costa Rican Carbon Offset Unit (COU).
Lead institutions	<i>Institutions:</i> Directorate of Climate Change (DCC) of the Ministry of the Environment and Energy (MINEC), Costa Rican Electricity Institute (ICE), Ministry of Agriculture and Livestock (MAG), Ministry of Public Works and Transportation, National Forest Finance Fund (FONAFIFO), Foundation Environment Bank (FUNBAM)
Principal stakeholders	<i>Industries:</i> The involvement of specific industrial association or stakeholders has not been discussed in detail yet.
Timeline for implementation	<p>2013/14: Pre-operation phases for all activities (various domestic market infrastructure, demand strengthening, and sector readiness activities)</p> <p>2013–15: Initial implementation, including pilot project for C-Neutrality certification of initial companies (first 9 companies were issued official C-Neutral brand as of October 2013), and scaling up of offset program.</p> <p>2015–17: Implementation phase for all activities continues, with latest activities including: outreach activities in private sector for C-Neutrality, and sector offset program studies for participation in carbon market.</p>

Rationale

Choice of instrument	<p>The domestic carbon market offers a credible and flexible alternative to the CDM and voluntary carbon market, presenting new opportunities and reducing barriers to participation. It enables offsets to be generated in new sectors not sufficiently covered by the CDM (e.g., transport) and offers opportunity of unlock investment in new sectors previously overlooked by the CDM.</p> <p>Approval and issuance of COUs designed to be flexible and less complex than the CDM, reducing costs and barriers to entry, particularly for small scale projects.</p>
Choice of sectors	<p>Sectors were selected based on: GHG emission reduction potential; availability of emissions data and acceptable methodologies for MRV; extending coverage as widely as possible, to attract investment in low emissions technology, research development and commercialization; investment in new sub-sectors and activities; and consideration of feasibility and transaction costs.</p>

Role of crediting instrument(s) in climate change mitigation policy mix

Domestic climate policy	<p>Costa Rican National-Strategy on Climate Change (NCCS) seeks to align climate change and economic competitiveness strategies for long-term planning. This includes a pledge to become carbon neutral by 2021, which was incorporated into the 2011–14 National Development Plan (NDP). The domestic carbon market is viewed as the primary policy tool to achieve the Carbon Neutrality target.</p>
Anticipated evolution of the instrument	<p>Not specified at this point (i.e., the instrument would be fully established through the MRP). Goal is to establish domestic offset programs in key sectors, although highest emphasis on C-Neutrality program for companies.</p>

Ambition and demand

International demand	<p>Some sector mitigation programs may lend themselves for international support rather than through domestic carbon market incentives. A particular priority for the Carbon Board regarding the role of supported/credited NAMA instruments in the domestic market is avoiding double counting.</p>
Domestic demand	<p>Domestic demand, together with the Carbon Neutrality target, are the primary drivers for the domestic carbon market.</p>

Roadmap to implementation—Summary of planned activities

	Description	Objective
Data management and MRV	Design and implement a GHG reporting system for major emitters along with a registry and tracking system.	<p>Reliable data to ensure environmental integrity of the domestic carbon market.</p> <p>MRV system essential to provide confidence to market participants, allow domestic regulators to monitor emissions, and ensure compliance with the domestic policy goals.</p>
Regulatory and institutional framework	<p>Establish legal, institutional and economic framework.</p> <p>Appoint Carbon Board and implement institutional arrangements and technical support of the carbon board.</p>	Lay the groundwork for the development and enforcement of the domestic offset programs.

Domestic market infrastructure	Generate protocols and methodologies for sector offset programs. Pilot C-neutrality certification for initial 'CHAMPIONS' companies.	Determine best approaches for domestic offset market and establish infrastructure for full implementation.
Strengthening of demand	Design and implement strategy of policy options for C-Neutrality and low emissions development strategy. Disseminate information and raise public awareness, including engagement of private sector for C Neutrality adoption and scale-up pilot offset program from initial companies.	Increase stakeholder and public awareness, engagement, and participation for greater impact of programs.
Sector readiness activities	Conduct studies on market participation of the sector; Improve GHG data generation and management; Institutional capacity building and social awareness; Engage stakeholders through consultation process; Formulate sector offset programs.	Prepare sectors for effective implantation of offset programs.

Sources: Costa Rica Ministry of Environment and Energy. 2013. *Costa Rica Market Readiness Proposal (MRP) Partnership for Market Readiness Final Report*. https://www.thepmr.org/system/files/documents/Costa%20Rica_MRP_Final_19-02-2013_0.pdf; Costa Rica Ministry of Environment and Energy and Directorate of Climate Change. 2013. *Costa Rica PMR Update*. https://www.thepmr.org/system/files/documents/Costa%20Rica_MRP%20Implementation%20Update%20Oct%202013.pdf.

Note: * indicates activities that are part of Costa Rica’s roadmap to implement MBIs but that will not be covered by a first tranche of PMR funding. They might be part of a second request for funding to the PMR.

Mexico

At a glance

Selected instrument	Three unilateral, large scale crediting NAMAs (Integrated Urban Mobility NAMA, Domestic Refrigerator NAMA, Urban NAMA), along with a NAMA Registry Tracking Tool (RTT). The <i>Integrated Urban Mobility NAMA</i> seeks to optimize existing conventional public transport systems in 29 high-density urban centers; the <i>Domestic Refrigerator NAMA</i> seeks to introduce energy efficient refrigerators with low or zero GWP refrigerants (HFCs) and to capture and safely dispose of HFCs from retired refrigerators; the <i>Urban NAMA</i> will build new, green field residential communities throughout Mexico with an aim to reduce energy demand and improve emissions efficiency, including housing, water services, waste management, and public lighting.
Lead institutions	<i>Institutions:</i> Secretariat of Environment and Natural Resources (SEMARNAT); Inter-Ministerial Climate Change Commission (CICC); National Bank of Public Works (BANOBRAS; for Integrated Urban Mobility NAMA); National Housing Commission (CONAVI; for Urban NAMA)
Principal stakeholders	<i>Industries:</i> National Association of Appliances Manufacturers (ANFAD; Domestic Refrigeration NAMA); National Network for Recycling of Refrigerant Gases (NNRRG; Domestic Refrigeration NAMA)

Timeline for implementation	<p>Through 2014: Development, testing, and deployment of fully operational RTT for MRV; Initial phases for three NAMAs: 1) Policy context/considerations, institutional strengthening and capacity building, co-benefits assessment; 2) Scope/coverage/boundary definitions, crediting baseline construction, quantification of emissions reductions potentials, design and testing of specific MRV systems, investment plan strategies, regulatory and institutional framework building;</p> <p>2014–17 (not yet funded): Post initial-PMR funding phases for <i>Urban NAMA and Integrated Mobility NAMA</i>: Methodology development for MRV and co-benefits quantification, pre-investment studies, pilot financial infrastructure, pilot project development and deployment, training/capacity building; <i>Urban NAMA</i> final phase, up to full-scale launch: MRV Capacity Building, financial structures and markets, technology package development, training and certification office creation, finalized rules and regulations.</p> <p>TBD and Post-2017 (not yet funded): Integrated <i>Urban Mobility NAMA</i> final phase: Financial structures and markets, certification office, and full scale NAMA launch; <i>Domestic Refrigerators NAMA</i> pilot implementation.</p>
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Rationale

Choice of instrument	<p>Crediting NAMAs and other new market mechanisms can increase the scale of activities and participants, address entire sectors of the economy, and provide co-benefits, such as the national capacity development.</p> <p>Enhancing new market mechanisms like crediting NAMAs will foster the MRV system and bring credibility to international investors and multilateral bodies.</p> <p>Compared with CDM project-based approach, greater ability to help achieve national climate change and sustainable development goals.</p> <p>Capacity for setting up and implementing unilateral large scale NAMAs with a sectoral approach has been developed over the last 5 years, as shown by the design and implementation of the PECCC 2009–12.</p>
Choice of sectors	<p>The three sectors (households, transport, appliances) were chosen due to:</p> <ul style="list-style-type: none"> • Likely future economic growth, leading to significant increase in GHG emissions. • Involvement and willingness to participate by local governments and the private sector. • Existing institutional and financial capacity, based on previous programs, allowing the NAMAs to move fast (full implementation within 2 years). • Ability to scale up for maximum nationwide impact. • Likely replicability in related in-country sectors or similar sectors in other PMR countries. • Ability to generate synergies across the three NAMAs.

Role of crediting instrument(s) in climate change mitigation policy mix

Domestic climate policy	<p>Mexico has committed to reduce emissions 30% below baseline levels by 2020 and 50% below 2020 emissions by 2050, dependent on the provision of international support and participation in external markets. Since the MRP was approved (March 2013), a new Special Program for Climate Change (PECC) covering 2013–18 has been announced and the National Climate Change Strategy (ENCC) was launched. In November 2013, a carbon tax on fossil fuels was approved, eligible to be paid through CDM CERs and a voluntary carbon exchange platform was launched. NAMAs and supporting infrastructure for current and future carbon markets are expected to play an important role in the low emissions growth goals developed in both the ENCC and the new PECC.</p>
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Anticipated evolution of the instrument Mexico is creating a National Office for NAMA management to streamline NAMAs as key elements in mitigation strategies and to attract international financial assistance. The MRP envisions new institutional infrastructure and capacity building setting the stage for rapid implementation of a National emissions trading systems (ETS) when conditions allow, and it is anticipated that NMMs will enhance the scale of activities and participants. A Mandatory Emissions Registry is currently under development and will start operating in 2015.

Ambition and demand

International demand Mexico anticipates the need for large-scale international financial and technological support to achieve emissions reductions goals, including loans, donations, and emissions reduction credits derived from new market mechanisms. While Mexico has been active in the CDM, crediting NAMAs are anticipated to have a broader impact in national GHG reductions, with a sectoral rather than project-based approach.

Domestic demand Mexico has established a carbon tax and may implement a National ETS when conditions allow, which could create additional domestic demand.

Roadmap to implementation—Summary of planned activities

	Description	Objective
Data management and MRV	Ongoing analysis of MRV system for NAMAs, inventories, LEDS; design and testing of MRV RTT. *Development of MRV methodologies and verification processes for NAMAs.	MRV system to provide assurance that all projects and programs meet clear standards, bringing credibility for attracting international financing.
Baselines and quantification	Development of crediting baselines; evaluation of the mitigation potential for each of the three NAMAs/sectors, including boundary definitions, data collection and needs, and modeling efforts.	Enhance understanding of mitigation opportunities and costs, and support development of GHG
Upstream policy analysis	Analysis of mitigation instruments and governance, and development of recommendations.	Selection of best policies for implementation.
Regulatory and institutional frameworks and strengthening	Support the establishment of a regulatory framework for mitigation measures in the three sectors, including capacity-building, trainings, collaborator engagement, creation of NAMA agents, and strengthening financial infrastructure; barrier analysis and workplan development; analysis of current rules.	Limit regulatory barriers, engage and prepare stakeholders for mitigation programs associated with NAMAs.
Training, capacity building, and institutional strengthening	Trainings on market instruments for relevant stakeholders, community developers (Urban NAMA)	Prepare stakeholders for effective implementation of NAMAs.
Piloting	*Pilot implementation of the refrigerator NAMA, including incremental cost funding	

Sources: Mexico Secretariat of Environment and Natural Resources. 2013. *Market Readiness Proposal (MRP) Mexico*. https://www.thepmr.org/system/files/documents/Mexico_MRP_Final_19-02-2013_0.pdf.

Note: * indicates activities that are part of Mexico's roadmap to implement crediting NAMAs but that are not expected to be covered by first tranche of PMR funding. They might be part of a second request for funding to the PMR.

Morocco

At a glance

Selected instrument	<p>Sectoral crediting in the following sectors: electricity generation, cement production, and phosphates extraction and processing.</p> <p>This initial plan will be confirmed after a more extensive assessment of the MBI options appropriate for Morocco in general, and for these three sectors in particular.</p>
Lead institutions	<p><i>Institutions:</i> Ministry of General Affairs and Governance (MAGG), Ministry of Economy and Finance (MEF), Deputy Ministry to the Minister of Energy, Mining, Water and Environment in charge of the environment (MdE).</p>
Principal stakeholders	<p><i>Industries:</i> Electricity and Water Office (ONEE), Electricity Branch; National Phosphates Company (OCP); and Professional Association of Cement Producers (APC) and APC Members (cement producers).</p>
Timeline for implementation	<p>2014: <i>May:</i> implementation funding granted by the PMR. <i>Rest of the year:</i> grant agreement signature and preparation of the PMR grant disbursement.</p> <p>2015–17: setting the foundation for sectoral crediting (or other MBIs).</p> <p>After 2018: design and operation of sectoral crediting (or other MBIs).</p>

Rationale

Choice of instrument	<p>Experience with crediting through the CDM: CDM DNA established in 2002. 14 CDM projects and 3 PoAs registered (as of October 2013). Wind energy, biomass energy, waste management, solar energy. However, challenges with complexity of the mechanism and its constantly changing rules, the criteria for proving financial additionality, the transaction costs, and the limited experience available in the country. Concerns over the uncertainty around long-term price signal.</p> <p>Interest in new market instruments: expression of support for both project-based and sectoral approach under the New Market-based Mechanism (NMM) in Morocco’s submission on NMM to the UNFCCC in March 2013.</p> <p>Emissions trading systems (ETS) is not an option at this stage: required preconditions not in place (e.g., targets), numbers of participants in each sector too low, low international ambition.</p>
Choice of sectors	<p>The reasons for selecting the three sectors are presented in the table below:</p>

Reasons	Description
Significant mitigation potential	The three sectors selection present a significant mitigation potential.
Existing experience to build upon on MBIs and MRV	<p>The three sectors have had experience with the CDM, which will facilitate the preparation to sectoral crediting: several registered projects and PoAs in the electricity sector; one registered project in the cement sector; and opportunities in the phosphates sector but issues with financial additionality.</p> <p>The three sectors, and especially electricity and cement, are represented in many countries around the world. Lessons learned from other international emissions reduction schemes can be applied in Morocco to fast-track preparation to carbon markets (e.g., CDM for the three sectors, CSI for cement).</p> <p>The three sectors have MRV systems in place, which can act as the basis for a sectoral MRV system. Activity monitoring is embedded in the day-to-day business of all three sectors, and GHG emissions are monitored and reported by most cement companies through their involvement in the CSI and in case of OCP as part of their internal carbon footprint system.</p>

MBIs promising compared to other alternative approaches	An MBI is likely to be the most appropriate way to reduce emissions within the sectors, compared to other possible approaches such as emission standards, financial incentives or capacity building.
Sector organization suitable for the implementation of readiness activities	Actors in the sectors are concentrated and few, and/or the sector is centrally organized: ONEE is responsible for around 50% of the electricity generation and is fully responsible for transmission; all cement groups are members of APC to which they regularly report data; and the OCP is solely in charge of production and sales of phosphates and derivatives in Morocco. The coordination efforts needed to implement readiness activities are likely to be less significant than in other sectors involving more actors and sites.
Lessons learned in the sectors can help fast track the development of MBIs in other sectors	Carbon market development efforts in all three sectors may involve and impact other related sectors (e.g., demand side management for the electricity generation sector; construction, waste management and transport in the cement sector; and transport in the phosphates sector). Learnings in the three selected sectors can therefore contribute to market readiness and development of MBIs in other sectors.

Role of crediting instrument(s) in climate change mitigation policy mix

Domestic climate policy	The Government has published a climate change policy, Politique du Changement Climatique au Maroc (PCCM). The PCCM will be based on two principles: 1) decoupling economic growth from GHG emissions, particularly through the use of clean technologies; and 2) preserving the country’s territory and ecosystems in the most appropriate manner. The PCCM mentioned market-based instruments as a possible long-term option to incentivize private options.
Anticipated evolution of the instrument	In the medium term (2020–22), after two years of operation, the sectoral crediting mechanisms in the 3 selected sectors might be expanded to cover other sectors. They might link to the international market, e.g., under the form of an NMM. In the longer term (after 2022) they might expand to national scheme, crediting and/or ETS, which could link to other ETS around the world.

Sources of demand

International demand	The international carbon market is currently the principal target (i.e., source of demand) for the mechanism. The decision to go ahead with sectoral crediting will depend on the evolution of the international carbon market, which the government will monitor, and on the assessment of the mitigation instruments that will take place in the initial phases of the PMR project. In the meantime, the government is willing to explore the possibility of piloting the instruments if there are other sources of demand for credits, e.g., in the form of a purchase program/fund (i.e., RBF).
Domestic demand	Domestic buyers have yet to be considered as a possible source of demand.

Roadmap to implementation—Summary of planned PMR activities

	Description	Objective
Data management and MRV	Design of a MRV system, and piloting of the MR in the three sectors covered by the MRP (electricity, cement and phosphates). *Design and pilot of following systems: a verification and accreditation system; an IT platform for data management and MRV; and a national registry.	Build the capacity and tools in the institutions and the sectors to effectively monitor and report GHG data.

Baselines	Development of a baseline for each of the three sectors and evaluation of the mitigation potential in the three sectors.	Increase the understanding of mitigation opportunities and costs, and support the definition of GHG reduction targets.
Upstream policy analysis	Analysis of mitigation instruments (carbon pricing and others) and MBI governance for Morocco, and recommendations.	Assist the government in making an informed decision on MBIs (confirmation of the initial selection of sectoral crediting, or alternatives) and setting up a governance system for MBIs.
Regulatory and institutional framework	Support for the establishment of a regulatory framework for mitigation measures in the three sectors.	Lift regulatory barriers preventing investment in clean technologies.
Instrument design	*Design and piloting of a sectoral crediting mechanism for the three sectors.	Provide experience with sectoral crediting in three key sectors.
Piloting	The PMR funding will cover the piloting of the MR system. The government is willing to consider designing and piloting the sectoral mechanisms if a demand for credits is created.	Provide experience with the use of MR tools in three key sectors and identification of learnings for other sectors. Create demand for the credits generated.

Source: Final MRP, May 2014.

Note: * indicates activities that are part of Morocco's roadmap to implement MBIs but that will not be covered by a first tranche of PMR funding. They might be part of a second request for funding to the PMR.

Peru

At a glance

Selected instrument	<p>Under the PMR Peru is exploring the possibilities of developing a crediting component in proposed NAMAs in the following sectors: energy supply, housing, industry, waste and transport.</p> <p>The form of the crediting-based approach will be further investigated in the PMR process to determine which of the proposed NAMAs could develop a crediting component.</p>
Lead institutions	<i>Institutions:</i> Ministry of Economy and Finance (MEF), Ministry of Environment (MINAM), Ministry of Mining and Energy, Ministry of Transport, Ministry of Agriculture.
Principal stakeholders	<i>Industries:</i> The involvement of specific industrial associations or stakeholders has not been discussed in detail yet.
Timeline for implementation	<p>2014–15: selection of NAMAs for crediting components and drafting of the MRP</p> <p>After 2015: allocation of PMR implementation funding to set up core market readiness infrastructure, ensure compatibility of the proposed NAMAs with other national initiatives and design crediting components for selected NAMAs. Other MBIs such as a scaled-up crediting mechanism or an emissions trading systems are being examined.</p>

Rationale

Choice of instrument

Experience with crediting through the CDM: 82 LoAs awarded that represent a reduction of 95 MtCO₂e, of which 30 CDM projects registered. Projects are in the sectors energy and industry, transport, waste and forestry, with majority of projects in hydroelectricity. Peru wants to explore innovative and more promising MBIs given their successful experience with the CDM.

Crediting can support existing climate initiatives: Peru has seven proposed NAMAs in the five selected sectors. It considers that adding a crediting component to some of the NAMAs may provide a cost-effective approach to achieve its targets and incentivize private sector participation. Crediting-based approaches could lay the groundwork for the government’s results-based budgeting (RBB) that is being considered.

Options for a carbon market in Peru are already being investigated: Peru is investigating the feasibility of a domestic carbon market through a study supported by the IDB for the long term.

Choice of sectors The reasons for focusing on the five sectors are presented in the table below:

Reasons	Description
Significant mitigation potential	The five selected sectors present a significant mitigation potential and/or the emissions are expected to grow significantly in these sectors.
Existing climate initiatives to build upon	The five sectors are in the NAMA development process and a crediting approach could be combined with some of the NAMAs. Synergies between the PMR and the funding for the proposed NAMAs can also be found. In several NAMAs monitoring systems are being investigated and developed. In the sustainable building NAMA for the housing sector a monitoring system of energy savings and GHG emission reductions is being established and the proposed NAMA in the construction material industry sector includes exchange of best practices in MRV system for that sector. In the solid waste management NAMA a sectoral GHG inventory will be developed.
Contribution to international commitments and aligned with national priorities	Peru has defined voluntary GHG reduction commitments in their energy consumption, forestry and waste sector. To meet the voluntary commitments, in the energy and industry sector several national initiatives are being introduced or have been put into place related to the promotion of less carbon-intensive fuels, renewable energy and energy efficiency. In the waste sector national initiatives have also been developed and Peru is involved in an international initiative in the forestry sector (see domestic climate policy below).
Sustainable development co-benefits	In the five selected sectors an MBI can lead to development co-benefits such as increasing employment and income, contributing to rural electrification, limiting water and air pollution, reducing resource consumption, improving health and quality of life, improving energy security and increasing Peru’s competitiveness.
Potential responsiveness to market signals	Preliminary analysis shows that the construction material industry and waste sectors may be responsive to market signals to reduce GHG emissions.

Role of crediting instrument(s) in climate change mitigation policy mix

Domestic climate policy	<p>Peru established the National Strategy for Climate Change (ENCC) in 2003 and updated it in 2013. The updated ENCC includes voluntary commitments for GHG emissions reduction for 2021: Zero net emissions in LULUCF, 40% energy consumption from non-conventional renewable energy and hydropower, and the capture and reuse of methane from disposal of municipal waste. Together these commitments represent a 40% GHG emission reduction by 2021 compared to 2000 levels. In 2010 MINAM put forward the Action Plan on Climate Change Adaptation and Mitigation, which describes proposals of programs and projects to tackle climate change. MEF created a Climate Change Unit, which is tasked with efficient allocation of resources and implementation of climate change action, and identification of the potential climate risks in Peru. Other relevant policy context include the General Law for Environment in 2005, establishment of MINAM in 2008 and creation of the National Policy for the Environment in 2009.</p> <p>With the support of international organizations, Peru has proposed NAMAs in the energy sector on bioenergy and diversification of the energy supply, in the housing sector on sustainable housing and buildings, in the construction industry on energy efficiency and best-practices, in the waste sector on solid waste management and in transport on low carbon transport in Lima and Callao.</p>
Anticipated evolution of the instrument	<p>No concrete timeline has been established for the crediting instruments under consideration. In the short term crediting is planned as a component of the NAMAs. The feasibility of a domestic carbon market is currently being investigated.</p>

Sources of demand

International demand	<p>Potential sources of international demand for credits are international funds by securing public funding to leverage international support for the proposed NAMAs.</p>
Domestic demand	<p>Potential source of domestic demand are public funding as part of the priority actions set out the ENCC. The potential domestic demand in a domestic carbon market is currently being investigated.</p>

Roadmap to implementation—Summary of planned PMR activities

	Description	Objective
Data management and MRV	<p>Design of an MRV framework for development and broader climate impact, and M&E procedures for domestic and international purposes.</p> <p>Technical assistance to develop an integrated GHG data collection/reporting (registry) system consistent with requirements of international carbon markets.</p>	<p>Build the capacity and tools in the institutions, assess the GHG data needs, and develop MRV methodologies.</p>
Baselines	<p>Develop metrics to measure the development and climate impact and development results of GHG mitigation action.</p>	<p>Support the development of GHG metrics and determine how these can be included in Peru’s RBB system consisting of sectoral budget programs.</p>
Upstream policy analysis	<p>Identify and select NAMAs most suitable for a crediting component and ensure coherence with key national processes.</p>	<p>Assist the government in making an informed decision on developing a complementary crediting component in the proposed NAMAs, identify market readiness needs and capacity gaps, and analyze the relationship with the development priorities and RBB.</p>

Regulatory and institutional framework	Support for the establishment of a regulatory framework and assess adequacy of the institutional infrastructure in the five selected sectors.	Lift regulatory barriers, establish institutional procedures and protocols at sector level, and determine roles and responsibilities to support the proposed NAMAs and ENCC.
Coordination of activities	Coordinate PMR activities with activities under other national and international initiatives.	Avoid duplication of efforts with other support programs in the five selected sectors.
Stakeholder management	Promote and position activities to increase private sector engagement.	Increase private sector participation and investments in climate change mitigation actions.
Instrument design	Develop crediting components in NAMAs most suitable for MBIs.	Explore how crediting can be applied in the context of NAMAs to incentivize private sector participation. Exchange experiences with other PMR countries.

Sources: Government of Peru. 2012. *Template for Expression of Interest and Market Readiness Capacity Questionnaire*, October. https://www.thepmr.org/system/files/documents/PA4_Peru_Eoi.pdf;
 Government of Peru. 2012. *Presentation of PMR Expression of Interest*. https://www.thepmr.org/system/files/documents/PA4_Eoi_Peru_Presentation_0.pdf;
 Government of Peru. 2013. *Organizing Framework for Scoping of PMR activities*. https://www.thepmr.org/system/files/documents/PA5_Organizing_Framework_Peru_0.pdf.

Thailand

At a glance

Selected instrument	Thailand is looking to implement two instruments: 1) a voluntary energy performance certificate (EPC) scheme in the energy production, manufacturing and large commercial buildings sector, and 2) a project-based crediting mechanism named Low Carbon City Program (LCC) for municipalities and local communities, a new program under the existing Thailand Voluntary Emission Reduction Program (T-VER). Additionally, as part of the PMR activities Thailand is planning to establish a fund to support the LCC financially and technically. The preparation for setting up the EPC, LCC and LCC fund will be part of the first phase of PMR process. In the second phase the implementation of the EPC, LCC and LCC fund is planned. The EPC is intended to act as the precursor for a domestic ETS.
Lead institutions	<i>Institutions:</i> National Committee on Climate Change Policy (NCCC), Office of Natural Resources and Environmental Policy (ONEP—Ministry of Natural Resources and Environment), Thailand Greenhouse Gas Management Organization (TGO—Ministry of Natural Resources and Environment), Office of the National Economic and Social Development Board (NESDB), Department of Alternative Energy Development and Efficiency (DEDE—Ministry of Energy), Energy Policy & Planning Office (EPPO—Ministry of Energy), Department of Industrial Works (DIW—Ministry of Industry), Fiscal Policy Office (FPO—Ministry of Finance), Public Debt Management Office (PDMO—Ministry of Finance), Office of Transport and Traffic Policy and Planning (OTP—Ministry of Transport).
Principal stakeholders	<i>Industries:</i> Federation of Thai Industries (FTI), The Thai Chamber of Commerce (TCC), Municipalities and National Municipal League of Thailand (NMT), Electricity Generating Authority of Thailand (EGAT), Provincial Electricity Authority of Thailand (PEA), Metropolitan Electricity Authority (MEA).

Timeline for implementation

2014: March: implementation funding granted by the PMR. *Q2 and Q3:* grant agreement signature and preparation of the PMR grant disbursement.

Q4 2014–16: preparation for setting up the EPC, LCC and LCC fund as well as preparation of legal framework and other components for a domestic ETS.

2017–19: implementation of the EPC demonstration, operation of LCC and LCC fund (2017-onward), and continuation of developing market readiness components for a domestic ETS.

2020–onward: preparation for setting up a domestic ETS. Continuation of EPC will depend on the outcome of the EPC demonstration.

Rationale

Choice of instrument

Experience with crediting through the Clean Development Mechanism (CDM), VER and a domestic crediting mechanism: 221 LoAs awarded that represent a reduction of 13 MtCO₂e, of which 148 CDM projects registered as of October 2013. There are also 34 VCS projects and 54 Gold Standard projects in Thailand as of January 2014. Challenges with the CDM projects were no clear criteria for project approval and a modest contribution to low-carbon urban development in municipalities and communities. Thailand therefore launched a domestic project-based GHG crediting mechanism, the Thailand Voluntary Emission Reduction Program (T-VER), in 2013. The LCC will be part of the T-VER to ensure GHG abatement in cities will be rewarded equally and impartially. As of February 2014 there are 18 projects in the T-VER pipeline.

Selected instruments support existing national policies: An Energy Conservation Act and two development plans related to energy are in place in the sectors selected for the EPC and LCC. To support the achievement of the energy savings target (under domestic climate policy), an energy performance scheme was selected. Additionally, the Thailand Carbon Offsetting Program (T-COP) is running. The T-COP is a platform through which voluntary participants can buy voluntary credits, including GS, VCS and T-VER credits and, in the future, credits from LCC, to offset their carbon footprint. Participants can be individuals, organizations, products, services or events. The contributions to the T-COP will be used to support GHG reduction programs, in particular domestic projects under the T-VER.

Options for a domestic ETS in Thailand are foreseen for the future: Thailand intends to use the EPC as a demonstration pilot for a nation-wide ETS.

Choice of sectors The reasons for focusing on the five sectors are presented in the table below:

Reasons	Description
Significant share in energy consumption and GHG emissions	The energy production, manufacturing industry and buildings sector account for more than half of the total energy consumption and national GDP. GHG emissions in large cities are expected to grow significantly as a part of urbanization.
Significant mitigation potential	Industry and the large commercial buildings sector are considered to have a better energy saving potential than the other sectors and be more suitable for the EPC. Through LCC a large reduction potential in municipalities and local communities can be unlocked.
Existing climate initiatives to build upon	The MRV system in the EPC can be built upon experience from China, the UK and India where energy savings certificate schemes have been operational. The LCC will be part of Thailand Voluntary Emission Reduction (T-VER) crediting mechanism and can build on the methodology under the T-VER.

<p>Contribution national priorities</p>	<p>Thailand identified energy efficiency, renewable energy and low carbon city as the priority areas. In the Energy Efficiency Development Plan (EEDP) the industrial sector is the target of the largest reduction energy intensity. Large commercial buildings are also covered under the plan. The EEDP will also apply to buildings in cities. Furthermore, a development plan for renewable energy has also been put in place with a large role for municipalities and local communities. The EPC and LCC will contribute to achieving the targets in the energy efficiency and renewable energy development plans (see Domestic climate policy).</p>
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Role of crediting instrument(s) in climate change mitigation policy mix

<p>Domestic climate policy</p>	<p>Thailand released the first National Strategic Plan on Climate Change in 2008 for the period 2008–12 to raise awareness and capacity on climate change issues. Building on this experience, Thailand developed the Climate Change Master Plan of Thailand for the period 2014–50, a framework of integrated policies and action plans to tackle climate change and move towards a sustainable low carbon society by 2050. This is already being approved by the NCCC. The Master Plan is currently being considered for approval by the Cabinet.</p> <p>Thailand does not have specific targets on GHG reduction, but on energy savings and renewable energy. In the EEDP Thailand set an energy intensity reduction target of 25% by 2030 from the base year, with the industry sector expected to account for 42% of the target, large commercial buildings 9% and small commercial and residential buildings 9%. The EPC is expected to play an instrumental role in achieving the targets in first two sectors and the LCC in the latter. With the Alternative Energy Development Plan Thailand aims to increase renewable energy in the final energy consumption to 25% by 2021.</p> <p>Thailand has submitted NAMAs to the UNFCCC in December 2014. As a result of NAMAs, it is expected to reduce GHG emissions at least 7% below the business as usual in energy and transportation sectors by 2020 and possibly up to 20% with additional international support.</p>
<p>Anticipated evolution of the instrument</p>	<p>The LCC and LCC fund are expected to be fully operational from 2017 and cover all municipalities. The EPC will gradually evolve in a mandatory nation-wide ETS with the ETS preparation starting in 2020 and the actual compliance from 2026. Firms under the EPC will not be covered by the LCC. Compliance entities in the ETS would be able to use credits from the LCC as carbon offsets.</p>

Sources of demand

<p>International demand</p>	<p>No direct sources of international demand for credits are foreseen. International voluntary buyers can indirectly purchase credits from the LCC fund.</p>
<p>Domestic demand</p>	<p>The voluntary EPC may include a sink fund that buys allowances against a guaranteed minimum price (floor price) to encourage energy savings. The sink fund will be funded by the Energy Conservation Promotion Fund and other funds. Carbon credits generated under the LCC may be sold to financial institutions in return for project finance or sold into the LCC Fund. The LCC Fund subsequently sells it to buyers through the T-COP or directly to other voluntary buyers such as CSR-oriented companies.</p>

Roadmap to implementation—Summary of planned PMR activities

	Description	Objective
Data management and MRV	Evaluate the existing data reporting and MRV system. Develop a data reporting system for the EPC and future ETS. Analyze existing T-VER MRV system applicability to the LCC, and ensure the LCC MRV system is consistent with international standards. Develop LCC project design documents. Develop a registry system. Develop sector-specific verification protocols.*	Build the capacity and tools in the institutions, assess the GHG data needs, and develop MRV methodologies and MRV systems building on existing systems.
Baselines	Propose a baseline and target setting and allowance allocation methodology for the EPC.	Support the setting of a target on a sector level, develop a methodology for determining the allowance allocation for each firm under the EPC and identify data gaps.
Policy analysis	Develop a proposal on the legal framework and administrative guidelines for a Thai ETS. Study on detailed design elements for a Thai ETS. Evaluate the success or failure of the EPC and incorporate lessons learnt in the Thai ETS design.*	Review other ETS designs and develop a detailed design for a domestic nationwide ETS.
Regulatory and institutional framework	Assess the current legal and institutional framework and propose required changes to implement the EPC and LCC fund.	Lift regulatory barriers and establish a project management unit coordinating the EPC and LCC.
Stakeholder management	Outreach activities for the EPC and LCC. Engagement and consultation with potential EPC and LCC participants.	Enhance participation in the EPC and LCC to increase energy savings and GHG reductions under the schemes and build capacity.
Instrument design	Analyze the scope and potential reduction in the EPC and LCC and develop action plans for GHG mitigation projects for LCC participants. Prepare documents detailing the full EPC (including the sink fund), LCC and LCC fund design.	Determine the potential energy and GHG reduction that can be achieved under the EPC and LCC. Prepare for the implementation of the EPC and LCC.
Implementation and piloting	Implement the LCC and LCC fund. Launch the EPC demonstration scheme.*	Provide experience to EPC participants and identify improvements for the future ETS.

Sources: Government of Thailand. 2014. *Thailand's Market Readiness Proposal (MRP)*. https://www.thepmr.org/system/files/documents/Final%20MRP_Thailand_07022014.pdf;

Government of Thailand. 2014. *Update on MRP implementation*. <https://www.thepmr.org/system/files/documents/Update on Thailand%27s%20MRP Implementation %28PA9%29.pdf>.

Note: * indicates activities that are part of Thailand's roadmap to implement the MBIs but that will not be covered by a first tranche of PMR funding. They might be part of a second request for funding to the PMR.

Tunisia

At a glance

Selected instrument	<p>Tunisia is exploring the possibilities of sectoral crediting in the following sectors under the PMR: electricity generation and cement production.</p> <p>The type of crediting instrument will be further investigated in the PMR process to choose the most appropriate MBI option for Tunisia in these two sectors. Options under consideration include sectoral crediting, technology-based approach and NAMA with a crediting component.</p>
Lead institutions	<p><i>Institutions:</i> Ministry in charge of Environment and Climate Change (UNFCCC National focal point), National Agency for Energy Conservation (ANME), Ministry of Finance, Ministry of Industry—General Directorate of Energy, Ministry of Development and International Cooperation, Presidency of the Government, Ministry of Agriculture, National Sanitation Utility (ONAS), National Waste Management Agency (ANGed).</p>
Principal stakeholders	<p><i>Industries:</i> Tunisian Company for Electricity and Gas (STEG), National Chamber of Cement Manufacturers (CNP), Tunisian Company of Petroleum Activities (ETAP), Tunisian Refining Industries Company (STIR), Tunisian Chemical Group (GCT), Tunisian Association for Energy Conservation.</p>
Timeline for implementation	<p>2014–15: drafting of the MRP</p> <p>After 2015: allocation of PMR implementation funding to set up a national coordination entity for mitigation policy, development of institutional capacity and an MRV system, and design and pilot of a sectoral crediting mechanism (or other MBIs).</p>

Rationale

Choice of instrument	<p>Experience with crediting through the Clean Development Mechanism (CDM): 6 CDM projects and 1 PoA registered, equivalent to 5% of the potential national CDM portfolio. Wind energy, transport, biomass energy, landfill gas, solar heating. Main challenges were little private sector engagement and difficulty to find buyers for project credits. Significant improvements were made in capacity building in public institutions and other actors, and in the institutional framework. In combination with the unregistered CDM projects and PoAs, this can be used as a starting point for developing MBIs.</p> <p>Interest in new market instruments: Confirmation of engagement for the NMM in Tunisia's submission on NMM to the UNFCCC in March 2013. Recommended clear but pragmatic governance and technical rules and encouraged the adoption of common international rules at the 19th Conference of the Parties in November 2013. Initiative to assess the possibility of developing a NMM/NAMA in the cement sector started in 2012 and a study on NAMAs on renewable electricity generation in 2013.</p> <p>Options of sectoral crediting are already being investigated, ETS is being considered in the long term: Tunisia is exploring the possibilities of GHG reduction instruments in the electricity sector supported by UNDP (NAMAs and sectoral crediting). The National Climate Change Strategy (SNCC) foresees initial thinking and discussion on an ETS in the energy sector to start in the medium term (2017–21). The implementation of such an ETS would be considered from 2030 onwards.</p>
Choice of sectors	<p>The reasons for focusing on the two sectors are presented in the table below:</p>

Reasons	Description
Significant mitigation potential	The two selected sectors present a significant mitigation potential.
Existing experience to build upon on MBIs and MRV	<p>The two sectors have had experience with the CDM, which will facilitate the preparation to sectoral crediting: two registered projects in the electricity sector and one registered project in the cement sector.</p> <p>The two sectors have MRV systems in place, which can act as the basis for a sectoral MRV system. The cement sector already has monitoring systems in place for the production process, and some cement companies already monitor and report the emissions under the CSI protocol, WRI GHG protocol, CDM and monitoring of air pollutants. Activity in the electricity sector is monitored through the Energy Information System by the ANME.</p>
Willingness of actors in the sector	<p>Firms in the cement sector are willing to work together and engage in mitigation efforts. In the electricity sector the growing energy deficit and electricity demand makes energy security and energy conservation a priority in national policy. The PMR activities would be a continuation of the efforts the sectors have already started: the assessment of possibilities for an NMM in the cement sector started in 2012 and the study on NAMAs on renewable electricity generation started in 2013.</p>
Sector organization suitable for the implementation of readiness activities	Actors in the sectors are concentrated and few, and/or the sector is centrally organized: STEG produces the majority of the electricity and is responsible for transmission; the CNP represents the cement sector and the sector is comprised of nine companies with monitoring equipment. The coordination efforts needed to implement readiness activities are likely to be less significant than in other sectors involving more actors.

Role of crediting instrument(s) in climate change mitigation policy mix

Domestic climate policy	Tunisia has a national strategy on climate change and is one of the few countries that have recognized climate change in their constitution. The National Climate Change Strategy (SNCC) focuses on decreasing the economy's carbon intensity by employing an anticipatory approach to adaptation and proactive mitigation policies. MBIs are considered as key in the strategy, particularly in the energy sector. Additionally, NAMAs have been or are being developed in the buildings, waste, agriculture, forestry as well in the selected sectors electricity and cement. A feed-in tariff for renewables is also being discussed.
Anticipated evolution of the instrument	No concrete timeline has been established for the crediting instruments under consideration. In the short term piloting and testing of the credit instruments in the electricity and cement sector are foreseen. There is a desire to explore to possibilities of linking the feed-in tariff to the crediting instrument in the electricity sector. In the long term (from 2030 onwards) an ETS for the energy sector is being considered.

Sources of demand

International demand	The potential source of demand for credits has not been considered so far.
Domestic demand	Domestic buyers have yet to be considered as a possible source of demand.

Roadmap to implementation—Summary of planned PMR activities

	Description	Objective
Data management and MRV	Design of a detailed MRV system for the proposed crediting mechanism that is internationally recognized, and coordination with existing initiatives in the two sectors. Technical assistance to develop a reliable national registry.	Build the capacity and tools in the institutions and the sectors to effectively monitor and report GHG data, and monitor mitigation actions, based on the existing systems in place.
Baselines	Defining national guidelines for establishing baselines and mitigation scenarios.	Increase the understanding of mitigation opportunities and costs, and support the definition of GHG reduction targets.
Upstream policy analysis	Analysis of regulatory bottlenecks and most appropriate crediting mechanism option, and exploring the possibilities of linking feed-in tariffs to the carbon market.	Assist the government in making an informed decision on MBIs (confirmation of the initial selection of sectoral crediting, or alternatives).
Regulatory and institutional framework	Support for the establishment of a regulatory framework for mitigation measures in the two sectors.	Lift regulatory barriers preventing investment in clean technologies and setting up a coordination entity for national mitigation policies.
Stakeholder management	Developing and implementing voluntary agreements with the cement sector.	Develop individual performance contracts for each cement plant and support the access to finance.
Instrument design and piloting	Designing, piloting and testing of a crediting mechanism for the two sectors.	Provide experience with sectoral crediting in two selected sectors and test the economic, legal, institutional and organizational framework. Exchange experiences with other PMR countries.

Sources: Government of Tunisia. 2014. *Expression of Interest of Tunisia*. <https://www.thepmr.org/system/files/documents/PMR%20-EOI%20-%20Tunisia%20.pdf>;

Government of Tunisia. 2014. *Organizing Framework for Scoping of PMR Activities*. https://www.thepmr.org/system/files/documents/OF-%20Tunisia_0.pdf;

Ministry of Environment Tunisia and GIZ. 2012. *Stratégie Nationale sur le Changement Climatique*. http://www.environnement.gov.tn/fileadmin/medias/pdfs/dgeqv/chang_climatique_3.pdf.

Vietnam

At a glance

Selected instrument	Vietnam has targeted two sectors for crediting NAMAs to be developed (waste, steel), as well as emphasizing activities related to design of a carbon pricing instrument in the power sector. The steel sector crediting NAMA is intended to set the stage for a cap-and-trade system from 2020 onwards.
Lead institutions	<i>Institutions:</i> Ministry of Planning and Investment (MPI, focal point), Ministry of Natural Resources and the Environment (MONRE, focal point), Ministry of Industry and Trade (MOIT; steel), Ministry of Construction (MOC; solid waste management), Ministry of Finance (MOF; steering committee), Ministry of Transport (MOT; steering committee), Urban Environment Companies (URENCO, steering committee).
Principal stakeholders	<i>Industries:</i> The involvement of specific industrial associations or stakeholders has not been discussed in detail yet, although the Vietnam Steel Association is mentioned in relation to crediting NAMAs and company piloting in the steel sector.

<p>Timeline for implementation</p>	<p>2015–18: Establish legal frameworks; pilot crediting NAMAs in steel and waste sectors; establish data management and reporting systems; assess different MBIs and institutional and regulatory frameworks in the waste sector; capacity building; design and implementation of strategies for stakeholder engagement; prepare for cap-and-trade in steel sector; activities to inform eventual decision on carbon pricing in the power sector.</p> <p>2018–20: NAMA implementation in steel sector.</p> <p>Post-2020: Operational cap-and-trade system for the steel sector; carbon pricing in the power sector.</p>
<p>Rationale</p>	
<p>Choice of instrument</p>	<p>MBIs can help to achieve climate change related policy goals and improving resource allocation, incentivizing participation by enterprises, attracting capital, and supporting the implementation of the Green Growth Strategy. MBIs are considered based primarily on: 1) competitiveness, where the preference is for potential crediting rather than trading instruments at the initial stage; 2) cost-effective mitigation; 3) donor coordination to avoid overlap with existing initiatives. Partnership with the PMR can accelerate deployment of MBIs.</p> <p>Prior experiences, capacity building, and lessons learned from Clean Development Mechanism (CDM) can be applied in Vietnam for new market mechanisms. These include capacity created for baseline determination, MRV, and familiarity with an MBI which pays based on achieved results. Around 250 CDM projects have been registered (as of November 2013), the 4th largest number worldwide and 7th largest number of CERs (9 million). The vast majority of projects are related to renewable energy (mostly hydropower), and the remainder were mainly methane capture from waste. One of the first CDM Afforestation/reforestation projects was initiated in Vietnam. Many of the projects were registered relatively late (resulting from lengthy validation and registration processes), at a time of declining CER market prices resulting in lower than expected financial impact. Promotion of projects with wider development impacts is desired.</p>
<p>Choice of sectors</p>	<p>Sectors considered based on several criteria: 1) alignment with Sustainable Development Strategy; 2) interest of stakeholders in the sectors; 3) experience with MBIs to date; 4) technical and MRV capacity; 5) donor coordination to avoid overlap with existing initiatives.</p> <p>Of the industrial sectors, the steel sector is most important in terms of GHG emissions, has significant abatement potential, and is a government priority sector. The sector has created a voluntary emission reduction target.</p> <p>The waste sector, a government priority sector, has significant know-how and capacity based on 6 registered NAMA projects and two NAMAs under preparation, along with significant abatement options.</p>

Role of crediting instrument(s) in climate change mitigation policy mix

Domestic climate policy	The Vietnam National Green Growth Strategy (VGGs), approved in 2012, outlines strategic tasks, solutions, priority actions, and a goal of reducing GHG emissions per unit of GDP by 8–10% without, and 16–20% with, international support, by 2020. The ongoing Green Growth (and Low Carbon Development) strategy process includes NAMA development in priority sectors, and assessment of the form and role of market based instruments.
Anticipated evolution of the instrument	As Vietnam has finalized its MRP. MBIs are viewed as an important component for meeting environmental aims. As noted above, there is interest in ultimately developing a comprehensive carbon trading scheme. Two main bottlenecks for the development of MBIs are reforms for state-owned sectors and the introduction of regulatory incentives and pricing instruments to effectively allocate resources.

Sources of demand

International demand	The likely source of demand for crediting NAMAs.
Domestic demand	Vietnam is considering a cap-and-trade scheme in the steel sector, development of a business model for emissions reductions from solid waste management, and carbon pricing in the power sector.

Roadmap to implementation—Summary of planned PMR activities

	Description	Objective
Data management and MRV	Establish a reliable data collection platform and management system for detailed GHG emission data. Data availability is currently coarse and scattered and data collection limited and based on aggregated emissions. Establish national and sectoral MRV systems and the capacity to manage these systems. Establish accreditation standards and evaluate options for registry development.	Reliable data collection and reporting for GHG data to inform sector-based strategy development, monitor mitigation actions. Support various NAMAs under development for waste, steel, cement, chemical fertilizer, wind power, and biogas.
Baselines	Prepare emissions profiles and BAU emissions trajectories.	Increase the understanding of mitigation opportunities and support the definition of GHG reduction targets.
Upstream policy analysis	Study potential MBIs for the chosen sectors and integrate with development planning and policy. Assess viability, principles, and elements of a carbon pricing instrument. Assess option for steel sector cap-and-trade system.	Identify emissions reduction options and potentials and assess compatibility with other development aims to inform government decision making.
Regulatory and institutional framework	Strengthen market readiness capabilities in terms of technical, institutional, and legal frameworks of both central ministries and local authorities.	Lift regulatory barriers to implementing MBIs and achieving emissions reduction. Strengthen legislative enforcement and effectiveness of implementing institutions.

Stakeholder management	<p>Increase stakeholder awareness of MBIs and develop network of supporting actors engaged in the development of MBIs. Stakeholders from the steel industry and local level governments are of particular emphasis.</p> <p>Pilot a voluntary reporting system in the steel sector with partner companies, and crediting NAMAs for 3 cities waste disposal sites.</p>	<p>Generate increased support for the necessary emissions reductions.</p> <p>Set the stage for a cap-and-trade system in the steel sector.</p>
Instrument design	<p>Study, deploy, and prepare for implementation NAMAs and MBIs for identified sectors and regions. Includes case studies of other participating countries, notable Mexico.</p> <p>Build capacity for management of the instruments.</p>	<p>Prepare the sectors for subsequent scaling-up of MBI programs to achieve targeted emissions reduction goals.</p>

Sources: Vietnam Department of Science, Ministry of Planning and Investment. 2012. *Organizing Framework for Scoping of PMR activities*. https://www.thepmr.org/system/files/documents/PMR_PA3_Vietnam_OrganizingFramework.pdf;

Dr. Pham Hoang Mai, Vietnam Ministry of Planning and Investment. 2013. *Progress on the Viet Nam Green Growth Strategy*. https://www.thepmr.org/system/files/documents/PA5_InfoSharing_Vietnam_GreenGrowthStrat.pdf.

Vietnam Ministry of Natural Resources and Environment and Ministry of Planning and Investment. 2014. *Partnership for Market Readiness Progress Update—Vietnam*. PA8 Mexico City. https://www.thepmr.org/system/files/documents/PMR%20PA%208%20Update%20progress_%20Vietnam2.pdf;

Vietnam Ministry of Natural Resources and Environment and Ministry of Planning and Investment. 2014. *Market Readiness Proposal (MRP) Vietnam*.



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