PARTNERSHIP FOR MARKET READINESS (PMR)

Tool for Market Readiness Proposal (MRP)

Guidance Document (Version 3)
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Introduction to the Tool for Market Readiness Proposal (MRP)

1. A core objective of the Partnership for Market Readiness (PMR) is to help countries identify, prepare for, and implement suitable carbon pricing instruments\(^1\) to enhance greenhouse gas (GHG) mitigation efforts in line with their climate change mitigation goals and development objectives. This includes providing support to pilot and/or implement the “readiness components” needed for such carbon pricing instruments including, for example, capacity building for GHG accounting; monitoring, reporting and verification; stakeholder engagement; policy analysis; and institutional design and arrangement to support carbon pricing.

2. In order to support countries in the identification, assessment, preparation and piloting of both the readiness components and carbon pricing instruments, the PMR has created the Market Readiness Proposal (MRP), which is intended to provide a template for countries to detail a “roadmap” of the readiness activities they intend to undertake with PMR grant funding. The PMR has also created a Tool to guide in the completion of the MRP.

3. PMR-funded countries – called Implementing Country Participants – follow a two-phased approach:

   (a) **Preparation Phase for the Market Readiness Proposal (MRP):** An Implementing Country Participant formulates a Market Readiness Proposal (MRP) using PMR funding in the amount of US$350,000\(^2\) allocated by the PMR Partnership Assembly (PA), the governing body of the PMR; and

   (b) **MRP Implementation Phase:** An Implementing Country Participant implements the activities outlined in the MRP. Implementation is supported by PMR funding allocated by the PA. The amount of funding is determined by the PA in accordance with agreed-upon criteria.\(^3\)

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\(^1\) For the purposes of the PMR, carbon pricing instruments include emissions trading systems (ETS), carbon taxes and crediting instruments that may have both domestic and international market elements. This is not intended to constrain countries; it rather reflects discussions to date with PMR Participants. Innovation is welcome provided that it is consistent with the overall objectives of the PMR, as defined in the PMR Governance Framework.

\(^2\) As indicated in the PMR Notes on Key Steps in PMR Process and Guidelines for Allocation of PMR funding for Preparation Phase (PMR-NOTE-PA1-1), the types of activities covered by PMR Preparation Phase Funding are expected to include (i) studies and analytical work; (ii) consultations with relevant ministries, public and private entities and key stakeholders; (iii) development of terms of reference for “readiness components”; (iv) organizing management arrangements for PMR operations (e.g., via existing coordinating bodies or through establishment of a cross-sectoral and functional working group(s); as well as (v) training and workshops.

\(^3\) The criteria for allocation of the implementation funding were adopted at the second meeting of the PA (resolution PA-2/2011-3). These general criteria guide PA decisions on the allocation of the Minimum Amount of PMR implementation funding ($3 million). At its third meeting (PA3), the PA adopted additional Criteria and a Modality of Allocation of Implementation Funding (Resolution PA 3/2012-4) to guide PA decisions on the allocation of implementation funding above the Minimum Amount (i.e., $5 or $8 million). At its 14th meeting, the PA decided to broaden support to up to three new Implementing Countries Participants. Taking into consideration the time needed by new ICPs to prepare their proposals and to implement the activities thereunder before mid-2020, as well as the long-term projection for PMR funding until then, all implementation phase funding for new ICPs will be capped at US$3 million (resolution PA14/2016-7).
4. The MRP Tool is intended to help countries in the preparation of their MRP\textsuperscript{4}. It is meant to be flexible enough to accommodate countries’ domestic priorities while providing a consistent format for all funding proposals to the PMR.

5. Importantly, the MRP Tool can be used by countries evaluating how to make use of carbon pricing instrument(s) to achieve mitigation as part of their Nationally Determined Contributions (NDCs).

6. Recognizing that each Implementing Country Participant has its own national circumstances and capacities, as well as climate change and other development objectives and policies, the MRP Tool is a guidance document that can be used to:
   - Take stock of the development and implementation of domestic mitigation strategies and the potential role of one (or more) carbon pricing instruments in the implementation of such strategies, including in the implementation of the NDC. Identify capacity building needs and “readiness” gaps for using carbon pricing instruments to achieve mitigation objectives;
   - Support policy mapping to help provide a comprehensive perspective on the country’s climate change and development policies and key drivers in order to identify and explore specific carbon pricing instrument(s) for GHG mitigation through analytical/technical work/activities; and
   - Support and facilitate engagement with stakeholders and provide a framework for planning, designing and implementing carbon pricing instrument(s).

\textsuperscript{4} Countries are also eligible to request additional funding to support their MRPs when the following conditions are met: 33 percent of initial implementation funding has been contracted and requests for additional funding are received prior to April 2018. Additional funding will be allocated on a first-come, first-serve basis. Criteria for reviewing proposals for additional funding are detailed in PMR Note Pa14 2016-1. This MRP tool is also intended to assist countries in preparing their additional funding request consistent with the agreed templates included in Resolution PA14/2016-7.
7. Through the MRP preparation, an Implementing Country Participant does the following:
   - Present context, relevant options and preliminary ideas;
   - Outline terms of reference and activities to be undertaken during the MRP Implementation Phase; and
   - Propose a total budget for the activities to be undertaken during the MRP Implementation Phase, which may be funded through the PMR and/or other sources of funding as well as an associated budget for all planned activities.

8. For this purpose, the Tool contains the following six building blocks (Figure):
   - Block 1: Country context to provide an overview of a country’s low emissions development strategy and its NDC GHG mitigation plan based on the Paris Agreement;
   - Block 2: Policy landscape and preparatory work to support and inform policy decisions on possible use of carbon pricing instruments: objectives, elaboration of criteria, analysis and impact assessment to support decision-making;
   - Block 3: Core readiness components to support carbon pricing instruments including technical, institutional, legal and administrative infrastructure developments and an assessment of readiness for the introduction of such instruments;
   - Block 4: Planning for carbon pricing instrument(s):
     - Part I: Assessment of target area(s) for the implementation of readiness components and carbon pricing instruments to be supported by the PMR;
     - Part II: Three modules – with possibility for variations within each module – for (i) a scaled-up GHG crediting instrument, (ii) a domestic ETS, and (iii) a carbon tax, to lay out essential readiness elements for the chosen instrument(s);
   - Block 5: Organization and consultation; and
   - Block 6: Summary of schedule and budget.

9. For each building block, the Tool provides a rationale, guidelines, and clarification on what information to provide in the MRP, and includes a section for a country to provide terms of reference (TOR) and an associated budget for all planned activities. Block 4 is comprised of three modules and for each a series of questions to highlight the types of issues a country may need to consider in the planning of carbon pricing instrument(s) (i.e., during the PMR Preparation Phase) and potentially consider for the subsequent design and implementation of such instrument(s).

10. Implementing Country Participants are encouraged to build on the assessments and information provided in their Organizing Framework for Scoping of PMR Activities, their NDCs, as well as materials and activities developed from other related initiatives in order to avoid duplication and ensure cross-fertilization and synergies.

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5 The Tool includes three modules for market-based instruments. This is not intended to constrain countries; it rather reflects discussions to date with PMR Participants. Innovation is welcome and, if necessary, another module can be added in so far as it is consistent with the overall objectives of the PMR, as defined in the PMR Governance Framework.

6 The Organizing Framework is prepared and presented by each Implementing Country Participant and forms the basis upon which the PMR PA decides on the allocation of funding for the country’s Preparation Phase (i.e., $350,000).

7 The funding allocation secured through the PMR may not be sufficient to fund all the carbon pricing readiness activities proposed by countries. However, through a solid and comprehensive MRP, Implementing Country Participants may be able to coordinate - and potentially leverage – additional funding from other sources.
11. As countries are at different stages of readiness for the introduction or implementation of carbon pricing instrument(s), have different opportunities and challenges, different development and mitigation priorities, different capacities and different objectives with respect to carbon pricing instruments, not all Implementing Country Participants will be in a position to develop in detail all building blocks of the MRP. Moreover, given the diversity of countries participating in the PMR, the building blocks may not all be (fully) compatible or appropriate in all cases. In drafting their MRPs, countries should therefore seek to follow the general structure of the Tool while adapting it to their particular circumstances, as needed.

12. The Tool is meant to outline key elements to be included in each MRP, but does not seek to be prescriptive in terms of the full content and level of detail of each MRP. The Tool (and its assessment) builds in flexibility to recognize countries’ different circumstances. Indeed, some PMR Implementing Country Participants may have already made a policy decision about what carbon pricing instrument(s) they intend to implement and will use the Tool for its detailed planning, designing and piloting. Others, however, may not have reached such a policy decision. These countries may use the MRP to support readiness activities that inform policy decisions on the use of one or more carbon pricing instruments. Notwithstanding, it is expected that each Implementing Country Participant’s MRP convey its interest and aim of exploring and developing a market-based instrument to support GHG mitigation along with a vision on its implementation. This sense of purpose and direction is to be articulated in the MRP, with the understanding that a country is not “locked-in”. In other words, it is understood that as a result of readiness activities, a country may determine coverage or type/design of a carbon pricing instrument).

13. As a general guide:

- Implementing Country Participants that have made clear policy decisions on the carbon pricing instrument they intend to pursue will be in a position to elaborate in detail Building Block 4 (Planning for a Market Instrument) and its relevant module(s), integrating relevant elements of Building Block 3 (Core Readiness Components) as appropriate (as a result, Building Block 3 may become a smaller part of the country’s MRP, noting appropriate cross-references to work undertaken under Building Block 4); and

- Implementing Country Participants that have not reached a policy decision on which instrument(s) to pursue may require greater elaboration in Building Blocks 2 and 3 in order to build general readiness capacity and to support and inform the policy decision-making process on the feasibility and appropriateness of such instrument(s), with Building Block 4 used to enable and support the exploration of one or more carbon pricing instruments and to inform the policy decision-making process on different design options and their respective economic, social and political implications.

14. In all cases, the formulation of a country’s MRP should be a significant, inclusive, forward-looking and coordinated effort reflecting the engagement of relevant ministries and/or agencies and in consultation with relevant stakeholders.

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8 A country’s MRP will form the basis of the PMR PA decision on the allocation of funding for the Implementation Phase, based on agreed criteria outlined in Resolution No. PA 2/2011-3 (Adoption of Criteria for Assessing MRPs and Endorsement of Process for Providing Feedback on MRPs) and the Additional Criteria outlined in Resolution PA3/2012-4.
15. Countries are encouraged to keep the length of the main body of the MRP within 70 pages and, where necessary, provide supporting material(s) in an annex. The PMR focal point should submit the completed MRP, using the MRP template, to the PMR Secretariat (pmrsecretariat@worldbank.org). Both the MPR Tool and the MRP Template are available on the PMR Website, www.thepmr.org.

16. The Tool may be revised as experience is gained from its use.
**Figure 1 - Draft Outline of Market Readiness Tool**

### General Information & Executive Summary

#### Building Block 1. The Big Picture: Country Context
1. Outline of development and climate change (mitigation) objectives
2. Overview of the country’s Nationally Determined Contribution (NDC) under the Paris Agreement; as well as any current mitigation targets or pledges under the Cancun Agreement (as appropriate) and details of any plans to implement those commitments
3. Overview and composition of country’s GHG emissions, including historic and projected emissions trends and emissions according to sector and region (as appropriate)
4. Relevant experience with and/or plans to use carbon pricing instrument(s) for GHG emission reductions, including the role they are expected to play in achieving the country’s NDC

#### Building Block 2. Policy Landscape and Objectives and/or Preparatory Work to Support and Inform Policy Decisions
1. Policy analysis of the role for carbon pricing in achieving the country’s NDC and longer-term mitigation strategies
2. Policy-mapping to develop a comprehensive picture of inter-dependent policies and issues affecting climate policy objectives
3. Identification of policy objectives and criteria to guide elaboration of carbon pricing instruments
4. Preparatory work to support and inform policy decisions on possible use of carbon pricing instrument, including preparation of tools and analysis, impact assessment, and implementation strategy, and process to support decision-making

#### Building Block 3. Core Technical and Institutional/Regulatory Readiness components
*The degree of applicability of the following will vary depending on the situation of an Implementing Country Participant; however, these are the core components for market readiness:*
1. Data
2. Goal-setting
3. Monitoring, Reviewing and Verification (MRV) system
4. Registry/tracking tool
5. Regulatory Framework
6. Institutions

#### Building Block 4. Planning for a Carbon Pricing Instrument
**Target Area: Assessment and Rationale for Focus on Sector(s)/Sub-sector(s)/Program(s)/Region(s)**

*For each target area, provide a:*
1. Rationale for focusing on target area and
2. Policy context/analysis, role and implications of using carbon pricing instruments to achieve mitigation goal(s)

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3. Executive Summary (3 to 5 pages)

Please provide a summary of the MRP, including a short description of the proposed carbon pricing instrument(s) and Target Area(s), assessment of the status of implementation, outputs for each building block (and sub-component) relevant to your country’s case, the total funding requested, and the anticipated timetable for implementation.
Building Block 1. The Big Picture: Country Context

1. Outline of development and climate change (mitigation) objectives
2. Overview of the country’s Nationally Determined Contribution (NDC) under the Paris Agreement; as well as any current mitigation targets or pledges under the Cancun Agreement (as appropriate) and details of any plans to implement those commitments
3. Overview and composition of country’s GHG emissions, including historic and projected emissions trends and emissions according to sector and region (as appropriate)
4. Relevant experience with and/or plans to use carbon pricing instrument(s) for GHG emission reductions

A. Rationale and guidelines

The purpose of this building block is to outline the country’s broader development and mitigation objectives. This is an introductory building block that is intended to provide background and context. It should draw on existing material and is not intended to identify new readiness activities. These will be detailed in the subsequent building blocks (as appropriate).

Carbon pricing instruments are one tool available to policy-makers to achieve policy objectives. A solid understanding of the big picture, including the political context of a country’s development and climate change mitigation objectives, is important for planning, designing and successfully implementing a carbon pricing instrument(s). Development of carbon pricing instruments should take into account a country’s practical realities, including other policy tools being used to achieve mitigation, and offer meaningful opportunities to lower emissions cost-effectively and support sustainable development.

Through NDCs to the UNFCCC, many countries have identified carbon pricing instruments as a tool they intend to explore and/or use to meet their GHG mitigation pledges. Information on a country’s mitigation plans and status of implementation, as well as its plans for tracking GHG reductions associated with its mitigation activities, is important context for its readiness activities.

Through Building Block 1, a country should present its emissions trends, explain key drivers for emissions, and describe the status and plans for undertaking mitigation actions and meeting climate change mitigation objectives. The country should explain the rationale for planned mitigation actions highlight possible barriers to achieving these objectives and outline plans to use one or more carbon pricing instruments (to be elaborated later in the Tool).

As many countries have been preparing low emission development strategies or low carbon studies, a country is encouraged to draw from – and build upon – these strategies or studies, as appropriate.

B. Information to be included

For Building Block 1, countries should provide the following information, as appropriate (3 to 5 pages):

- The country’s climate change mitigation and low emission development policy objectives, including an overview of the country’s NDC, and any other mitigation commitments. Please include information on how the mitigation objectives have

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been set, as well as, information on the coverage with respect to sectors, key policies and measures, GHG emissions and timeframes.

- Information on the country’s action plan for the implementation of the NDC toward achieving the mitigation contribution within the stated timeframe, including any plan to use carbon pricing instruments.
- Assessment of historic and projected emissions trends, and key drivers of the country’s GHG emissions. Use the most recent information on historic GHG emissions trends, including inventory data (if available), emissions and energy projections and other quantitative modeling on mitigation measures. Key assumptions underpinning such projections and modeling exercises should be highlighted.\(^\text{10}\)
  - The country may wish to indicate any other circumstances, including political context, relevant for the country’s GHG emissions trajectory and its climate change and development policies.
- Please detail the country’s experience with the Clean Development Mechanism (CDM) if irrelevant; and
- Please detail the country’s experience with other carbon pricing instruments (such as carbon tax), and policy measures that consequently reduce GHG emissions, such as feed-in-tariffs, vehicle efficiency standards, and fossil fuel subsidy removal). Please also indicate how this previous experience has been taken into account in preparing the MRP.

\(^\text{10}\) Given a country’s specific circumstances, definitions and assumptions, it is recognized that there may be differences in how countries provide this information.
Building Block 2. Policy Landscape and Objectives and/or Preparatory Work to Support and Inform Policy Decisions on Carbon Pricing

1. Policy analysis of the role for carbon pricing in achieving the country’s NDC and longer-term mitigation goals
2. Policy- mapping to develop a comprehensive picture of inter-dependent policies and issues affecting the climate policy landscape.
3. Identification of carbon pricing objectives and criteria to guide the assessment and elaboration of a carbon pricing instrument(s).
4. Preparatory work to support and inform policy decision on the use of carbon pricing instruments, including preparation of tools, analysis, impact assessment, and implementation strategies and process to support decision-making.
5. Where a decision has already been made, describe the carbon pricing instrument to be implemented and the rational for the type and scope of the instrument.

A. Rationale and guidelines
Policy decisions are often influenced by—and dependent upon—various domestic and international considerations and circumstances, combined with an overall assessment of opportunities, benefits and costs. Final policy decisions need to consider how to best balance different goals (such as economic, environmental and social goals) and assess potential trade-offs. Policy decisions should also be informed by sound analysis of different options and implementation strategies, as well as a good understanding of their respective implications.

In considering potential suitable policy measures to achieve domestic mitigation goals, some Implementing Country Participants are considering domestic emissions trading systems, carbon taxes, offset crediting instruments or a combination of these. In this context, mapping policy measures that contribute to GHG mitigation can help provide a comprehensive perspective of a country’s overall climate policy landscape, identify inter-related policies and key drivers (as well as possible obstacles) to meeting climate policy objectives.

For countries that have made a decision on which instrument(s) to pursue, such policy mapping can help highlight the contribution of the selected instrument to the country’s policy objectives in the context of its overall policy mix. Through this exercise, countries can put into context and provide the rationale for the objectives and criteria that will be important for the elaboration and design of the selected instrument.

Policy mapping may also be relevant for countries that are exploring, but have not made a decision on, the implementation of a particular instrument. Analysis to inform such a decision would typically involve, inter alia, the definition of objectives to be pursued, identification of potential scenarios and assumptions, and the appropriate tool(s), as well as identification of appropriate institution(s) to carry out the work. This dimension may require data collection and modeling
work\textsuperscript{11} to understand potential implications under different scenarios\textsuperscript{12}. This work is often a key input into the decision-making process and, as such, can be a critical part of a country’s readiness to adopt a carbon pricing instrument.

A decision to implement a carbon pricing instrument(s) as a means to achieve GHG mitigation must take into account policy interactions, demonstrate policy coherence, and compare such an instrument(s) with other potential policy instruments. For example, consideration of an emissions trading system to help meet a country’s GHG pledge according to its domestic context may also require the consideration of (and comparison with) alternative fiscal and/or regulatory policy options. Such different policy options should thus be analyzed and the rationale for a carbon pricing instrument(s) should be elaborated. This analytical work builds the groundwork toward informing policy discussions and ultimately informing decisions about the introduction of a carbon pricing instrument(s).

It is important to keep in mind that the policy development process, especially for instruments that can have broad implications, is not necessarily linear and can be iterative. Indeed, in such a process, key policy questions that are important for policy decisions can shape, and be shaped by, analytical and modeling work as well as stakeholder engagement outcomes. Planning, supporting and building the analytical capacity to go through such a process may be necessary for some Implementing Country Participants.

The decision to implement a carbon pricing instrument(s) may also require broad information and consensus building among stakeholders and policy-makers. Analytical and modeling work – if carried out robustly – combined with a process to further refine the design elements of a preferred carbon pricing instruments (as in Building Block 4) can help establish the credibility of mitigation policy objectives and of the use of a carbon pricing instrument(s) to help meet them cost-efficiently. Such a technical foundation can thus contribute to building a constituency around the instrument that may be important for political decisions.

The assessment(s) carried out in Building Block 2 should help prepare and inform a country’s decision on which type of instrument(s) to explore and/or implement. The outcome of this Building Block should be a clear rationale for the decision(s) to continue to explore a carbon pricing instrument(s), involving initial assessments, plans and rationale to pursue more in depth modeling or analytical work which serve to guide a country’s specific activities under the PMR.

For countries that have already made a policy decision(s) on the instrument(s) to be implemented, it may not be necessary to conduct (all) the analytical work outlined in Building Block 2. These countries should, nonetheless, provide in the MRP an overview of the policy landscape related to the selected carbon pricing instrument(s), as well as the rationale, along with criteria used (as appropriate) for the selected instrument(s).

\textsuperscript{11} Models can help improve the understanding of climate policy analysis, which is often complex, involving many variables interacting over time. However, it must be kept in mind that models are not perfect as they inherently reflect a simplification of reality. Also, any single model cannot answer all questions. Depending on the questions to be examined, a country may need to use different modeling tools.

\textsuperscript{12} For example, when considering broad-based market instruments, countries may need to examine potential impacts on income distribution and international industrial competitiveness under different scenarios.
B. **Information to be included**

Countries are encouraged to provide the following information pertaining the carbon pricing instrument(s) chosen for PMR readiness support, as appropriate:

- Overall policy context and landscape, analysis, role and implications of using carbon pricing instruments to achieve the mitigation goal. This may consist of:
  - Country’s pledged mitigation actions (including as part of its NDC) and its plan for implementation. If applicable, any plan for tracking domestic emission reductions should also be included\(^{13}\);
  - Outline of key policy context and considerations (e.g., relevant domestic climate policy, energy policy, social and economic and development policies etc.), as well as political considerations (e.g., overview of the political process for adopting new policies), including status of political consideration regarding carbon pricing;
  - Elaboration of key objectives and conditions for the establishment of a carbon pricing instrument(s) and criteria for its assessment\(^{14}\);
  - Explanation of obstacles to implementation of existing and planned policies and measures that may be relevant for the consideration of carbon pricing instrument(s) (e.g., examination of key target area’s degree of exposure to international competitiveness); and
  - Assessment of role/potential of a carbon pricing instrument.

- Analytical and modeling work conducted and/or planned to assess potential implications of implementation of a carbon pricing instrument(s):
  - Presentation of relevant analytical and modeling work, with key assumptions, results, and caveats.
  - Outline of remaining analytical and modeling needs, along with rationale, which may include:
    - Key policy questions to be examined;
    - Identification of scenarios (or modeling runs) to be assessed, including key assumptions;
    - Identification of tool(s) to be used and for which purpose;
    - Identification of data needs to conduct analysis and modeling (and plans to remedy any data gaps, if appropriate);
    - Identification of institution(s)/entity(ies) involved in the work;
  - Assessment (and/or plans for assessment) of role of carbon pricing instrument(s) and interaction with other policy instruments, including:
    - Rationale for using the instrument(s); including, for example, a comparison with alternative policy instrument(s), as appropriate; and
    - Analysis of interactions between carbon pricing instrument(s) and other technology- or sector-specific climate or energy policy measures (if appropriate); and
  - Presentation of plan and sequencing of analytical and modeling work to support decision making, outlining key decision points and associated considerations, as appropriate.

\(^{13}\) The elaboration of a registry/tracking tool is outlined in Building Block 3.

\(^{14}\) The elaboration of objectives and conditions in Building Block 2 can set the stage for the subsequent elaboration and analysis of the target areas for the selected market instrument(s) – including a crediting instrument - undertaken under Building Block 4.
Where a decision has already been taken, rationale for focusing on the selected instrument, including information on the following (as appropriate):

- Type and scope of the instrument
- Summary of the analysis and/or process that led to the decision
- Estimated emission reductions of the planned instrument;
- Relationship with country’s NDC and its mitigation targets;
- Political economy for supporting implementation of the planned instrument
- Identification of non-GHG sustainable development benefits and link with other policy objectives; 
- Identification of barriers for implementation and options for overcoming or managing them

Overview of the implementation strategy and process to support a decision on carbon pricing.

C. **Activities, deliverables and proposed budget**

Outline the activities, along with their respective expected deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.
Building Block 3. Core Technical & Institutional/Regulatory Readiness Components for Carbon Pricing

1. Data
2. Target/Goal setting for carbon pricing instruments
3. MRV system for carbon pricing instruments
4. Registry/tracking tool
5. Regulatory and institutional Framework

The purpose of Building Block 3 is to assess and develop (or strengthen) a country’s core readiness infrastructure and capacity for carbon pricing instruments.

As is the case for other financial instruments, the smooth operation of a carbon pricing instrument for GHG mitigation relies on the existence of supporting infrastructure and regulatory frameworks. The infrastructure covered in this building block includes technical components that must be developed or strengthened ex-ante in order to provide an appropriate framework for the sound functioning of the instrument. Also necessary is an assessment of both existing and needed regulatory and institutional capacity. Creation of this necessary infrastructure that primarily supports implementation of carbon pricing instrument(s) could also support countries in tracking progress made toward achieving their NDC and to account for any transfers of mitigation outcomes between countries.

Countries should use Building Block 3 to assess their technical, institutional and regulatory readiness for carbon pricing instruments and, in so doing, identify capacity gaps and options to mitigate or overcome those gaps. Opportunities to build on existing capacity should be identified.

The technical and institutional market readiness components to be implemented specifically for individual carbon pricing instruments (i.e., those associated with a crediting instrument, a domestic ETS, or a carbon tax) are elaborated in the Tool’s Building Block 4, Modules (a), (b), and (c). Countries may discover overlap in the information they are to provide in Building Blocks 3 and 4 – although they are not identical. Countries do not need to duplicate information; making appropriate cross-references would suffice to ensure coherence and consistency. As indicated in the Introduction to the MRP, a country that has already made a policy decision on the specific carbon pricing instrument(s) it wishes to pursue may further discuss or elaborate its elements in the relevant module of Building Block 4 (i.e., 4(a), 4(b) or 4(c)).

1. Data

   A. Rationale and guidelines

Reliable data are an essential foundation for ensuring the environmental integrity of a carbon pricing instrument(s). Robust historical emissions and output data (e.g., in the case of an intensity-based crediting baseline) are also key inputs needed to establish emission trends, which may be important for informing policy decisions.

For PMR-supported carbon pricing instruments, countries should have a good understanding of the emissions generated from key Target Area(s). Such an understanding is also critical in order to assess progress toward meeting mitigation objectives and developing a low emissions
development strategy. Such data are also important for the assessment of potential costs and efforts associated with particular GHG targets or goals.

Depending on the nature of the carbon pricing instrument (e.g., whether it is a crediting scheme, an ETS, a carbon tax or some other innovative instrument), data on emissions, as well as data on output, are critical. Entity-level or installation-level data are typically a key input for decisions on allocation of allowances in emissions trading systems and for assessment and determination of tax liabilities in carbon tax jurisdictions. Depending on the instrument and the scope, there may also be a need for data at a more aggregated level.

As the basis of (and/or input to a decision on) either an emissions cap for a domestic ETS, tax exemptions under a carbon tax or a crediting baseline, historical data (covering several years) are needed to identify emission trends.

GHG methodologies and measurement protocols exist to derive emissions data from underlying activity data. For example, guidelines from the Intergovernmental Panel on Climate Change (IPCC) have been developed for national GHG emission inventories. GHG inventory data – which provide an important overall picture of a country’s GHG emissions – offer a good point of reference. The steps involved in producing a national inventory (collection of data, estimation of emissions and removals, checking and verification, uncertainty assessment and reporting) can be supported by a variety of formal and informal data management approaches, ranging from spreadsheets to tailored software. All inventory reports and biennial update reports are available on the UNFCCC website.

While not sufficient, inventory data may be built upon to develop the necessary data infrastructure for carbon pricing instruments. There are also sector-specific GHG measurement protocols and calculations, such as the WRI-WBCSD15 GHG Protocol, the methodologies developed under CDM and methods used for the allocation of allowances in ETS.

When data are not readily available, an essential component of readiness for the carbon pricing instrument will be to establish a monitoring and reporting system to collect data in coming years, and a verification system to ensure that emissions (and any other relevant) data collected are accurate. Such a system for data collection, reporting and verification can be the basis for the implementation of a carbon pricing instrument in the future. In other words, accurate past data is not an absolute pre-requisite.16 However, as the basis of either an emissions cap for a domestic ETS, tax determination for introducing carbon tax or a crediting baseline (or crediting threshold) for a crediting instrument, identifying data trends is important; therefore, data from several years are necessary.

In addition, a need for accurate and reliable GHG data has been at the forefront of international discussions. Many countries have developed NDCs outlining their post-2020 mitigation goals and related GHG mitigation policies. The effective design and implementation of these policies can be supported by robust data management systems, which in turn provide the necessary infrastructure underpinning GHG reporting programs.

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15 WRI-WBCSD stands for World Resource Institute/World Business Council for Sustainable Development.
16 For example, a country may consider setting-up/improving its data and data collection processes in an initial piloting phase.
B. **Information to be provided**

Countries are invited to provide the following information, as appropriate (2-3 pages):

- Identify and assess existing relevant sources of data (and frequency of updates) and outline data gaps and needs. This may include sectoral/sub-sector/regional and/or installation-level data;
- Identify relevant GHG methodologies and quantification protocols for deriving GHG emissions;
- Identify instruments or estimation techniques used to monitor GHG production activities;
- Identify relevant data that is monitored and collected, as well as relevant sources of data:
  - Assess capacity and outline plans for data gathering and management (for supporting the selected carbon pricing instrument(s)). This may consist of (i) collecting existing, readily available data (e.g., energy statistics); and/or (ii) gathering additional data (e.g., via new surveys) to address identified data gaps. A country may also outline status (e.g., voluntary or mandatory) of relevant reporting, identify gaps and identify options and plans where appropriate for data reporting and data management systems; and
  - Outline steps to ensure data quality, as well as needs and options for data and methodology verifications.
- Describe an overview of the types of data management systems available in the country – namely, systems that support (1) national and sectoral level inventories, (2) facility-level reporting, and (3) carbon asset registries as well as other systems, for example, for supporting clean energy and energy efficiency policies, fuel pricing and/or taxes;

C. **Activities, deliverables and proposed budget**

Please outline the activities, along with their respective expected deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.
2. **Target/Goal-setting for Carbon Pricing Instruments**

   **A. Rationale and guidelines**

   *(This component has overlaps with Building Block 4, Modules (a) and (b). Countries that have made a decision on the carbon pricing instrument they wish to pursue as well as those that have a good understanding of the goals they are seeking to achieve with a carbon pricing instrument can skip this component. As mentioned above, a country may address the issues in this component in the appropriate module of Building Block 4 and insert here appropriate cross-reference.)*

   Carbon pricing instruments should be founded on an identified target/goal for Target Area(s). Setting these targets/goals typically involves technical assessments (e.g., in Building Blocks 1, 2 and 3) that inform the decision-making process, which ultimately may be political in nature.\(^\text{17}\) Target/goal-setting discussions typically engage relevant domestic stakeholders (a country may elaborate on such an engagement process in Building Block 5 and add appropriate cross-references as needed throughout its MRP).

   For the purpose of the MRP, this Building block’s activity of target/goal setting is *not* necessarily related to crediting. Carbon Pricing instruments may be one of the means of meeting targets/goals for the Target Area, where a threshold or “crediting baseline”\(^\text{18}\) is established in the case of a scaled-up crediting instrument, an “emissions cap” in the case of an ETS, and tax rate in case of carbon tax, as elaborated in Building Block 4. In addition, this could also be related to target setting as part of country’s NDC and how the carbon pricing instrument can help achieve that.

   At a technical level, targets/goals for carbon pricing instruments can be set on an absolute basis (tCO\(_2\)e) or on a relative or intensity basis (e.g., tCO\(_2\)e per unit of output). While setting such indicator, one needs to consider carefully that both the type of goal as well as the ambition of the goal is best suited to the national circumstance and at the same time be conscious of the implications for the design of the carbon pricing instrument to achieve it. In addition, varying levels and types of target setting under country’s NDCs can make design of such supporting carbon pricing instruments more challenging.

   A critical part of assessing a carbon pricing instrument for GHG mitigation and determining the goal to be used involves a cost-benefit analysis of the instrument. The technical assessments carried out in Building Block 2 and 4 for particular Target Area(s) can inform such an analysis.

   There are different methodologies and protocols to calculate baseline emissions levels\(^\text{19}\) and caps. Some options are here and elaborated upon in Module 4(a):

   - With regard to historical and projected emissions trends for a given sector/sub-sector/region; or

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17 For example, the development of a reference year (or period) for an emission cap or crediting baseline may be the result of a political process and may be elaborated in the relevant instrument module in this Tool (i.e., 4a or 4b).
18 The term “crediting baseline” is used in this Guidance document to represent the threshold below which emissions must be in order to generate emission credits. The overall target/goal for a Target Area may differ from the crediting baselines. The crediting baseline may be set to allow the generation of credits for emission reductions only beyond the overall target/goal in order to limit the portion of the emission reductions that can be sold on a (international or domestic) market.
19 See, for example, PMR *Technical Note 3: The Nuts and Bolts of Baseline Setting: Why, What, and How?*
• Emissions from a specific technology, change in technology (assuming such a change forms part of the assumptions modeled), costs of inputs, demand for outputs, macroeconomic conditions, policies or legal frameworks, and other relevant variables; or
• Emissions from target sector/sub-sector/region’s top performers or from a specific technology. This is often referred to as a “benchmark”.

A set of principles or methods may apply to a goal-setting process, for example, cost-efficiency, not penalizing early action, historical emission levels, and or BAU trends. The degree of environmental ambition and how the goal for a carbon pricing instrument may relate to a country’s broader GHG mitigation objective (such as may be elaborated in an NDC) is also important.

It should be noted that in the case of rapidly developing economies, it may be particularly important to understand the emissions profile of the Target Area, as well as the Target Area’s growth outlook. In such cases, the treatment of new entrants in the goal-setting process becomes a key issue.

B. Information to be provided
Countries are invited to provide the following information, as relevant:
• Assessment of goal-setting options for Target Areas, including the associated data and calculation methodologies used;
• Relationship between the target or goal set for the carbon pricing instrument and the country’s NDC (if any);
• Assessment of potential criteria and/or considerations for target/goal-setting; and
• Identifying steps, stakeholders, and input for informing a target/goal-setting decision.

C. Activities, deliverables and proposed budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

3. Monitoring, Reporting and Verification (MRV) for Carbon Pricing Instruments

A. Rationale and guidelines
In the context of international climate change negotiations, the 2007 Bali Action Plan refers to “measurable, reportable and verifiable” (MRV) as an important part of the international process intended to deliver concrete national actions to address climate change. Article 13 under the Paris Agreement also dictates establishment of a robust MRV system in order to ensure transparency of climate actions by countries. MRV is also necessary to support the design and implementation of carbon pricing instruments; except in this specific context the “M” typically

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20 For a more detailed discussion on the MRV requirements specific to a scaled-up crediting instrument and a domestic ETS, please see Module 4(a) and Module 4(b), respectively.
21 The scope and scale of provisions to measure, report and verify GHG mitigation actions, commitments and support are being negotiated.
refers to monitoring. It is important to note that MRV\(^\text{22}\) arrangements for carbon pricing instruments are typically associated with installation level or entity-level emissions.

A sound monitoring, verification and reporting (MRV) system is a critical readiness component for the carbon pricing instrument. The goal of an MRV system is to allow the domestic regulator to monitor emissions and to ensure compliance with domestic policy goals. It should also provide assurance to market participants and stakeholders that emission reductions under the emission cap of an ETS, in response to the carbon tax, or from the crediting baseline of a scaled-up crediting instrument are real. A robust MRV system is key for the environmental effectiveness of a carbon pricing instrument. A robust and transparent MRV system is also a pre-requisite for linking a domestic market instrument to that of another country or to an international system.

The monitoring component includes the process of gathering emissions and, if necessary, activity data in order to corroborate claimed mitigation achievements (e.g., electricity output for a fossil-fuel using generation plant). With the exception of plants using continuous emissions monitoring systems, CO\(_2\) emissions are estimated rather than measured, and data used for such estimates, and how they are collected, must be provided.

Reporting can encompass documentation requirements that are important for the integrity and transparency of a carbon pricing instrument; reporting is usually a key input into verification.\(^\text{23}\) Typically, reporting rules specify the format of the data, the deadlines for submission and penalties for late and incorrect submissions. It is important to note that sources (covered entities) often want activity data to be treated as confidential for commercial reasons. However, making activity data public enhances the credibility of the reported emissions data.

Verification is often conducted by a third party. In developing a verification system, countries may want to enlist the expertise of environmental and financial auditors. Third-party (independent) verification is typically conducted based on a pre-agreed verification standard, to be used by accredited verifiers to ensure consistency and credibility. Here again, in the case of an international scaled-up crediting mechanism, there may be international rules and guidelines that a country would need consider.\(^\text{24}\)

Countries are encouraged to also refer to the Guide for Designing Mandatory Greenhouse Gas Reporting Programs\(^\text{25}\) for more information to support the design of their MRV related activities. Please also refer to the PMR technical note Supporting GHG Mitigation Actions with Effective Data Management Systems\(^\text{26}\) for guidance on the design and development of effective data management systems.

**B. Information to be provided**
Countries are invited to provide the following information, as relevant (2-6 pages):

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\(^{22}\) It is also possible that the “reporting” to the regulatory authority of a market-based instrument occurs after the verification stage (i.e., MVR). The sequencing, i.e., MRV or MVR, is a function of the design choice for a carbon pricing instrument.

\(^{23}\) Depending on the design of the scheme’s regulatory framework (i.e., MRV or MVR), reporting may cover the submission of verified emissions data and related information to the regulatory authority.

\(^{24}\) It may be important, in anticipation of relevant international rules and guidance, for a country to collaborate with other countries interested in participating in an international scaled-up crediting mechanism and draw on experience of verification standards elaborated for the CDM and existing ETS.

\(^{25}\) https://openknowledge.worldbank.org/handle/10986/21981

\(^{26}\) https://openknowledge.worldbank.org/handle/10986/21828
Either in this building block or in Module 4a, 4b or 4c of Building Block 4, outline existing standards for monitoring, reporting and verification that may be used or built-upon (please cross-reference as appropriate);

Identify existing MRV capacity, gaps (along with options to address them), and needs (e.g., are there independent verifiers who could undertake the emissions report verification function in your country?); and

Describe how development of these MRV system(s) are expected to help the country meeting relevant requirements under the Paris Agreement, especially with implementation, tracking and accounting of targets under the NDC.

C. **Activities, deliverables and proposed budget**

Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

4. **Registry/Tracking Tool**

A. **Rationale and guidelines**

A registry/tracking tool may be needed to ensure appropriate treatment and accounting,\(^{27}\) as applicable, of (i) emission reductions associated with a domestic cap-and-trade scheme; (ii) emission reductions associated with a domestic carbon tax; (iii) emission reductions from a new scaled-up crediting instrument; (iv) Certified Emission Reductions (CERs) from CDM project activities, as well as (v) emission reductions from any other carbon pricing instrument. A registry/tracking tool also contributes to a country’s assessment of its domestic implementation.

A registry is an online database that issues, records, and tracks the carbon units that are exchanged within market mechanisms or financed through Results-Based Climate Finance (RBCF) programs. A Registry/tracking tool for emission allowances and/or credits is necessary to enable transactions among entities inside a country, in the case of a domestic ETS, and to be an interface with the international market\(^{28}\) – a role currently played by the CDM registry, for CDM projects. In the case of a domestic ETS, a registry/tracking tool provides the infrastructure to record transactions that take place during a trading period. In the case of a crediting instrument, a registry/tracking tool records credits issued. The registry/tracking tool enables the regulator to track the transactions in the carbon pricing instruments, and reconcile the actual emissions with emission “allowances” held at the end of each compliance period (or trading phase). A comprehensive and robust registry/tracking tool is a key market infrastructure component to ensure that there is no double-counting of emissions or emission reductions under a carbon pricing instrument.

It is important to note that this registry/tracking tool of emission allowances and/or credits should not be confused with the registry of mitigation activities as mentioned in the 2010 Cancún

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\(^{27}\) Experts (e.g., Erickson and Lazarus, 2011) point out that to maintain the environmental integrity of an international crediting mechanism and to achieve net emissions benefits, countries involved in international crediting transactions should “adopt consistent and rigorous rules for offset [credit] accounting” (not only offsets/credits, but emissions accounting in general). A country would thus need to ensure consistency between its accounting framework and any international accounting rules.

\(^{28}\) It has been suggested that the use of a common international transaction tracking mechanism for all credits counted towards mitigation pledges, with assignments of unique serial numbers to each ton of CO2e transacted could be a means of mitigating risks of double-counting (Erickson and Lazarus 2011).
Agreement, which is associated with the broader concept of NAMAs and their need for international support.\(^2^9\)

In a context where inaccurate accounting is one of the environmental integrity risks associated with carbon pricing instruments, an emissions trading registry is critical for avoiding “double counting”—the situation where a single GHG emission reduction (ER) or removal is used more than once to demonstrate compliance with mitigation targets.

Given the length of time and capacity needed for the development of a registry, it is essential for countries that are in the process of designing carbon pricing instruments to factor in specific regulatory, administrative, functional, and technical aspects of registry development.

Countries are also encouraged to refer to the PMR technical note Emissions Trading Registries: Guidance on Regulation, Development and Administration\(^3^0\) for more information on technical insights and guidance on how to support country-specific decision making and activities related to registry development.

### B. Information to be provided

Countries are invited to provide the following information, as relevant (3-7 pages):

- Outline purpose and key features of a registry/tracking tool, making reference to relevant linking considerations (domestically and/or internationally)
  - Outline steps and key considerations for decision-making, as appropriate;
- Address following questions that could help deciding various design options:
  - What type of registry system is most suitable;
  - What legal and administrative arrangements need to be put in place;
  - What resources are required for implementation;
- Preliminary plan(s) to acquire or develop a registry/tracking tool software to track emission units.

### C. Activities, deliverables and proposed budget

Please outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block in the MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

### 5. Regulatory and Institutional Framework

#### A. Rationale and guidelines

The development and implementation of carbon pricing instruments demands a clear regulatory framework that can signal entities covered by the carbon pricing instrument, as well as assign clear responsibilities for the functioning of the carbon pricing instrument. The regulatory framework must also provide a credible enforcement system (e.g., domestic penalties for non-compliance).

The regulatory framework must be accompanied by effective governance to ensure transparency and enhance stakeholder participation including active private sector participation. An important

\(^2^9\) The Cancún Agreements includes a decision to “set-up a registry to record nationally appropriate mitigation actions seeking international support and to facilitate matching of finance, technology and capacity-building support for these actions” (FCCC/CP/2010/7/Add.1).

\(^3^0\) [https://openknowledge.worldbank.org/handle/10986/25142](https://openknowledge.worldbank.org/handle/10986/25142)
role of the instrument’s institutional set-up will be to provide confidence to market participants (and stakeholders) that emissions are adequately monitored, reported and verified and that appropriate action is taken in cases of non-compliance – in accordance with the overall regulatory framework.

Key institutional activities\(^{31}\) can include, for example: (i) assigning responsibility for collecting emissions data; (ii) verifying GHG emissions and activity data; (iii) issuing allowances or credits, (iv) tracking the movement of units as a result of trading and (v) assessing and enforcing compliance. These functions will differ for a scaled-up crediting instrument and a domestic ETS.

B. **Information to be provided**
Countries are invited to provide the following information, as relevant:

- Outline key steps and elements of a regulatory framework and identify regulatory gaps (along with options to address them) and needs.
- Present (options for) regulatory responsibilities that would be required to carry out the technical and policy/legal aspects associated with carbon pricing instruments (information may be provided in Building Block 4 Module (a), (b), or (c); please cross reference as appropriate).
- Identify which institutional activities will be done by public sector bodies and which can be done by the private sector, with public oversight if/as needed;
- Identify existing relevant institutions that could be used in the context of the implementation of market-based instruments (including market readiness components); and
- Outline institutional gaps, along with options to address them, and needs.

C. **Activities, deliverables and proposed budget**
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

\(^{31}\) There may be cases where these institutional activities may be needed at both national and local levels.
Building Block 4. Planning for a Carbon Pricing Instrument

PMR Implementing Country Participants may opt to lay out their proposed roadmaps of activities for one or more carbon pricing instrument through the module(s) outlined below.

As discussed in the Introduction to the Tool, countries are at different stages of development and have different capacities and objectives with respect to carbon pricing instruments. Some countries may have already made a policy decision on which carbon pricing instrument to pursue, while others may be assessing and exploring different options. For the latter, this building block is designed to support such decision-making by examining options for different components. For countries that have already made this decision, this Building Block aims to support the planning, the design and piloting of selected carbon pricing instrument(s). Such countries should provide a description of the proposed instrument(s), a rationale for its choice (also provided in Building block two), and an explanation of how the instrument is to function. In addition, countries are invited to elaborate on the specific technical, policy, or regulatory components of relevant design elements.

The building block consists of three modules: 4(a) for a scaled-up GHG crediting instrument; 4(b) for a domestic ETS and 4(c) for carbon taxes. Each module contains components that are essential to consider for designing and setting up a robust functioning carbon pricing instrument. Note that these instruments are not mutually exclusive. One instrument may be applicable in one sector and another in a different sector. It is also technically feasible that one may be linked with another.32

Each module in Building Block 4 includes a series of components relevant to the consideration and implementation of the respective carbon pricing instrument. Each component is organized in the following way:

a) Rationale and guidelines: to briefly explain the purpose of the component and its key elements;

b) Questions/issues for consideration: to highlight the questions that a country may need to consider for the design and implementation of the instrument. While it may be important for a country to have these questions/issues in mind during the PMR Preparation Phase, a country is not expected to necessarily respond to them in its MRP; rather the questions/issues are expected to be addressed in the MRP Implementation Phase;

c) Information to be provided: to outline the information that a country is requested to provide in its MRP, as appropriate.

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32 For example, a country may choose to implement a scaled-up crediting instrument to link to the international market (e.g., in the energy sector) and, to achieve the threshold objectives (crediting baseline) of the Target Area(s), choose to implement a domestic ETS (e.g., covering the entire Target Area of in a subsector and/or region). Similarly, within an overarching scaled-up crediting instrument, there might also be a domestic-only crediting mechanism to incentivize and reward actions in specific sub-sectors or regions up to the threshold (crediting baseline) that creates credits for international sale.
d) Activities, deliverables and proposed budget

Given the diversity of situations among the countries, the modules may not be (fully) compatible/applicable in all cases. Countries have flexibility in adapting the module(s) to their particular circumstances. Moreover, it is important to note that this Building Block should not limit or constrain a country’s choice in instrument. The options presented in Modules 4(a), 4(b) and 4(c) are not meant to be exhaustive. Innovation is welcome in so far as it is consistent with the overall objectives of the PMR as defined under the PMR Governance Framework.

Module 4a. Scaled-up GHG Crediting Instrument

1. Technical and policy components, including identification of incentives for participation, Coverage and boundary (including treatment of CDM project activities), determination of crediting baseline, and MRV
2. Estimate of potential emission reductions generated from the program and preliminary plan for achieving emission reductions, including an investment plan
3. Regulatory and institutional framework
4. Schedule for implementation

A crediting instrument “credits” reductions of GHG emissions against a pre-established threshold (referred to as a “baseline” or “crediting baseline” in this Tool) that can then be used to compensate for, or to offset, emissions made elsewhere. Crediting instruments can be used at the international level (for example, under the framework of Article 6 established by the Paris Agreement) or at the domestic level. In the latter case, crediting is most often referred to as an “offset” instrument and is used to provide additional flexibility to the emitters covered by other climate policy instruments such as a carbon tax or an ETS in order to meet their emissions liabilities.

Scaled-up crediting refers to an international policy instrument that can generate credits at a sector-wide (or sub-sector) level. Such credits can then be sold internationally. A scaled-up crediting instrument can enhance the cost-effectiveness and promotion of mitigation actions in host countries, consistent with their respective mitigation and development objectives. Such instruments can provide an additional revenue stream associated with the sale of GHG credits corresponding to the emission reductions generated by the eligible activities in a Target Area. Experience to date with project-based/program-based crediting instruments (e.g., the CDM), suggests that such “carbon finance” can both complement and leverage other financial resources to unlock low emission investments in a host country.

In the context of its climate change mitigation strategy, a country may decide to implement and seek to (partially) finance mitigation in one or more target area or nationally appropriate mitigation actions (NAMA) through a scaled-up crediting instrument or a mechanism to contribute to the mitigation of GHG emissions and support sustainable development. In accordance with the

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33 The PMR has published several technical notes related to crediting and offsets, including Crediting Mechanisms Overview; Overview of Carbon Offset Systems: Similarities and Differences; Options to Use Existing International Offset Programs in a Domestic Context; Crediting-Related Activities Under the PMR: Status and Support for Implementation; and Carbon Credits and Additionality: Past, Present, and Future.

34 For example, in the case of the CDM (including both projects and programs of activities) and Joint Implementation, as well as Green Investment Schemes, the World Bank Group experience shows that carbon finance revenues enhance the overall financial viability of climate-friendly activities and, as performance-based payments, create positive incentives for good management and operational practices to sustain emission reductions over time (World Bank 2010).
Article 6 of the PA, the international crediting instrument could also be used to achieve the goals of the NDC while avoiding double counting and ensuring that the correspondent adjustments are made by countries to their reported GHG emissions.

The use of scaled-up crediting instruments might have several objectives, including achieving transformational changes in a specific sector (through, for example, the facilitation of new market segments, modification of entrenched behavior, and creation of enabling conditions for private sector engagement) and attracting/leveraging additional international finance, essentially in the form of a revenue stream based on emission reduction credits that accrue as a result of the mitigation policy/action under the crediting program (from a pre-agreed baseline). These credits can then be sold on a carbon market. Demand for such credits may come from international governments and entities. Some countries may look at establishing a crediting mechanism that could (also) be linked to (possible future) domestic demand. (As mentioned above, there is room for variation within the module.)

Article 6.4 of the Paris Agreement highlights key objectives of a new market instrument or a mechanism that is expected to function under the supervision of the UNFCCC bodies, and that includes (a) promoting the mitigation of GHG emissions while fostering sustainable development; (b) incentivizing and facilitating participation in the mitigation of GHG emissions by public and private entities authorized by a Party; (c) contributing to the reduction of emission levels in the host Party, which will benefit from mitigation activities resulting in emission reductions that can also be used by another Party to fulfil its NDC; and (d) delivering overall mitigation in global emissions.

Article 6.2. of the Paris Agreement provides a broader mechanism for voluntary cooperative actions that can be implemented through bilateral or multilateral cooperation (e.g., “carbon clubs”). Such actions may result in a transfer of ITMOs that can be used to achieve NDCs and could potentially take form of crediting as well.

The process to design and develop a scaled-up crediting instrument typically includes the following steps:

- Define and describe of the overall instrument: its main objective, how it works, including identification of incentives to participate and potential linking considerations;
- Determine the coverage and/or boundary of the program (or programs) for the instrument, including the regions, sectors, sub-sectors, and/or targeted facilities or systems, gases covered and capacity thresholds for entities covered by the system, clarification of how CDM will be treated (or other credited activity, and its relationship and impacts on the emission sources covered by the NDC;
- Identify the approach and methods to derive and establish the following: (i) a GHG emissions reference level\(^{35}\) for the sectors or measures targeted under the program(s), considering business-as-usual emissions trends;\(^{36}\) and (ii) a crediting baseline used to determine creditable GHG emission reductions. The crediting

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\(^{35}\) The methodological needs of crediting can also be addressed by developing a baseline only, without the construction of a “crediting line.”

\(^{36}\) There is no agreed-upon approach (or definitions) for establishing business-as-usual emissions trends. As such, this process may vary country to country.
baseline should be established with the aim of ensuring environmental integrity and an ambitious mitigation goal;

- Determine quantification and MRV standards and systems, including the accounting approach and the principles for correspondent adjustments as applicable;
- Outline the plans or framework/mechanism to track and account the emission reductions generated from the crediting program that may be sold as credits to international carbon markets (this may be linked to work elaborated under Building Block 3), for those countries that have NDC mitigation commitments, particularly those expressed in quantitative terms;
- Explain the accounting mechanism to ensure no double counting, including through the implementation of correspondent adjustments (as per the provisions of Article 6 of the Paris Agreement, as applicable);
- Describe the standard(s) and approach for quantifying, monitoring, verifying, and reporting GHG emission reductions achieved by eligible measures and activities under the program(s); and
- Describe the institutional structures as well as legal frameworks and enforcement mechanisms for establishing legal status and property rights and applicable fiscal treatment for such credits and ensuring adherence to the standards and methods used to quantify, monitor, and verify credited GHG reductions at the national and international level, as applicable.

How a country proceeds to address the issues outlined above and the options a country may adopt to generate credits will ultimately determine to which market (or demand) its scaled-up crediting scheme can be linked. It is also possible that a country may choose to implement a scaled-up crediting instrument as a tool to pursue domestic policy goals with emission reductions credits sold to provide additional financing if the country exceeds its pre-defined goals (i.e., the baseline established for the crediting program or the unconditional targets in its NDC).

A country may decide to implement a crediting instrument to support the implementation of a new policy or to facilitate increased ambition of an existing policy that has an impact of GHG emissions (so called “policy crediting”). In this case, the scaled-up crediting instrument might focus on the incentives to the government directly and credit the mitigation outcomes of one or more domestic policies. “Policy crediting” is an experimental approach that could require substantial effort to develop relevant GHG quantification and MRV methodologies. The potential advantage of this approach is that the strategic transformational impacts of policies could be achieved in a targeted sector (with a broad coverage of emitters) and ensure that the mitigation policies are sustainable, ambitious and systematically monitored and enforced.

If a country chooses to devolve the GHG goal/target and “crediting incentive” to entities, it may also need to, _inter alia_, determine the specific measures and activities that would be eligible for crediting under the program(s), along with participants or actors who would be expected to undertake it, as well as address related issues, for example, the treatment of new entrants.

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37 A full description of the need for and design of MRV systems can be found in Building Block 3, Main Component 3. Implementing Country Participants should reference this discussion when completing Module 4(a) of their MRPs.
38 Such a domestic policy may take various forms (e.g., a price-support mechanism, a fiscal instrument or regulatory policy).
39 The scaled-up crediting mechanism (e.g., Credited NAMAs) may not always/necessarily involve the devolution of the GHG goal/target to entities.
A country interested in exploring and piloting a scaled-up crediting instrument, is encouraged to carefully identify and assess prospective sources of demand, its expected characteristics, as well as the options for approaches and standards, such as for methodologies and MRV during the PMR Preparation Phase. A comprehensive design (including the determination of appropriate methodologies and MRV system), which can be geared to a specific scheme, may be carried out during the MRP Implementation Phase.

The PMR also recognizes that countries may not be in a position to take a political decision with regard to a specific carbon pricing instrument during the MRP Implementation Phase due, in particular, to a high level of uncertainty with regard to potential for international demand for credits and the lack of clarity on the rules and procedures for the cooperative mechanisms established by the Paris Agreement. In this situation, however, readiness might and can effectively progress through the implementation of the no-regret crediting-related activities that might have broader use (applied by other instruments of climate policy that requires quantification of emission reductions (e.g., results-based climate finance or mitigation programs included in the NDCs that require a sectoral baseline) or bring other policy benefits to the mobilization, coordination and implementation of mitigation actions and policies in a country.

It is expected that, as a result of going through this module, a preferred option or the main objectives and coverage of non-regret readiness activities will be identified. Ideally, ToRs for the relevant components will be developed. A country may further develop a financial plan and a preliminary schedule for implementation if it is in a position to do so. A country is encouraged to identify, as possible, potential targets and scope for piloting activities during the MRP implementation phase, e.g., to test different elements of the crediting instrument infrastructure and collect feedback necessary to fine tune their design and implementation features. The module may need to be repeated for each Target Area (or for each individual scaled-up crediting program, as appropriate).

1. **General Description of Instrument and Participation**
   A. **Rationale and guidelines**
   At the outset, provide a general description of the instrument: its objectives, how it functions, incentives to participate, and linking considerations.

   It is important to identify the eligible participants of a crediting instrument, i.e., the various actors who are responsible or authorized to undertake eligible mitigation activities. Different actors may be responsible for different types of measures or actions. For example, government agencies may be expected to adopt and implement policy measures that effect GHG emission reductions across an entire sector, whereas private companies or facility owners may take actions to reduce emissions at the facility (or system of multiple facilities) level. Private-sector actors or NGOs may also play a role in coordinating or aggregating mitigation activities. Identification of eligible participants should reflect decisions about how incentives will be structured and how the contributions from various (potentially overlapping) actions will be accounted for.

   Assuming reasonable transaction costs and attractive market prices for credits, the scaled-up crediting instrument ought to provide an incentive for sellers (governments and/or private entities) to participate. In planning for its scaled-up crediting instrument, a country will need to consider the incentives to purchase the credits generated by the crediting instrument, i.e., identifying source(s) of demand outside the crediting scheme itself. In this context, a country will
need to carefully consider any requirement or constraints from the demand-side (buyers) at the international level in order to link its crediting scheme to a broader source of demand. A country may also consider potential domestic sources of demand, as appropriate.40

**B. Information to be provided**

Countries are invited to provide the following information, as appropriate, to complete Module 4a:

- Provide a general description of the proposed scaled-up crediting instrument;
- Provide a brief explanation of how it is expected to work, including key conditions and considerations (including policy and/or political), as appropriate;
  - Identify potential obstacles and options to mitigate them; and
  - Identify options for potential market linkages and relevant considerations.
- Outline the rationale (for country and entities) to participate in a scaled-up crediting instrument (it may be appropriate to identify different potential scenarios/options to explore/keep in mind);
- Describe how the proposed scaled-up crediting instrument impacts GHG mitigation and other sustainable development goal;
- Detail the key conditions and considerations for design and implementation, and what are the potential barriers/obstacles (and how can they be overcome);
- Identify the incentive(s) required to encourage domestic mitigation for the generation of GHG credits;
- Identify which participants or actors will be eligible to undertake mitigation measures and activities to receive credits (e.g., government agencies, sub-national entities, private sector facility managers, NGOs, etc.) and identify possible eligibility criteria, as appropriate;
- Decide to which entities credits from a scaled-up instrument will be issued (e.g., individual project developers, government agencies or coordinating bodies, or a combination of both);
- How will individual GHG reduction activities (e.g., installations or sub-national entities) be incentivized (e.g., through direct issuance of emission credits, government-administered support or subsidy programs, coordination and investment by aggregators, etc.)
  - In the case of devolution of the GHG goal/target and “crediting incentive” to entities, what will be the penalty for entities that do not reduce their emissions below their crediting baselines?
  - How will certainty regarding incentives to mitigation efforts be provided (e.g., how to address the possibility that some participants undertake significant efforts to generate emission reductions but the emissions of the whole Target Area covered by the scaled-up crediting instrument actually increase?);
- Identify potential sources of demand and how they could be linked to a scaled-up crediting scheme? Describe the requirements or constraints that need to be considered;
- Describe a risk mitigation strategy, as necessary;
- In cases where emission credits are expected to be sold in other countries, identify the implications for meeting the Implementing Country Participant’s overall GHG

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40 In a period of market uncertainty, a country may also find it useful to explore possibilities for performance-based payments, where and when appropriate (e.g., in a piloting phase).
strategy and/or GHG target/goal and describe how the accounting will ensure avoidance of double-counting.

- Estimate potential emission reductions, strategy for implementation, including the objectives and scope of a piloting phase as applicable, and financial plan;
- Identify the need institutional set-up and regulatory framework including gaps that may need to be filled; and
- Clarify a schedule of implementation and budget.

C. Activities, deliverables and proposed budget

Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Module during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

2. Scope/Coverage and Boundary - Determination of Target Area Covered by the Scaled-up Crediting Instrument

A. Rationale and guidelines

Determining the appropriate scope and coverage of an instrument can depend on many factors, including the type of targeted activity(ies), homogeneity or heterogeneity of outputs of activities covered in the scheme and, importantly, the capacity and ambition of the country. The scope of the scaled-up crediting instrument can vary as follows:

- A broad scope could, for example, cover an entire sector (e.g., the electricity generation sector); or
- A narrow scope could focus on the types of activities/policies to be supported by a scaled-up crediting instrument, narrowing down eligibility to more program- or area-based efforts within a given sector.

An important consideration for the determination of the boundary for a Target Area is the need to limit the risk of leakage, i.e., a situation whereby credited emission reductions result in increased emissions outside the boundary of the Target Area. Minimizing the risk of leakage enhances the environmental integrity of the scaled-up instrument.

To ensure that the scaled-up crediting instrument assists in meeting GHG reduction objectives and to ensure that actions are in line with national development strategies, a country may clarify the role of the Target Area in a more general (e.g., sectoral, national) strategy or framework. More specifically, the Target Area needs to be defined in a way to ensure consistency and avoid overlapping with the sectors/sub-sectors covered by the NDC, taking into account the issues of double counting and direct/indirect impacts on the emission sources covered by the NDC. It does not necessarily mean that the crediting programs should be developed only outside of the NDC coverage.

The design of a scaled-up crediting instrument also includes determining which activities (e.g., mitigation activities in installations of a certain size, with certain production processes/feedstocks, with certain entities, specific policy action) within the Target Area will be covered by the instrument and be able (eligible) to generate GHG credits. It may make sense to limit the scope of crediting to only certain gases or certain types of activities, or to activities in a particular geographic region. It may also be important to consider a process for the inclusion of

41 E.g., a threshold for the size of an electricity/heat generating plant (in MW).
new activities in the Target Area (the consideration of new entrants may be particularly critical in the case of fast growing economies). Such decisions may take into account GHG mitigation potential and cost, data availability and quality (along with associated levels of uncertainty), as well as monitoring and related transaction costs and capacity. Considerations of associated development benefits may also be important and should be identified.

B. **Questions and issues for consideration**

- What regions, sectors, sub-sectors, and/or targeted facilities or systems will be covered by the scaled-up crediting instrument? Which GHGs will be covered? What share of emissions do they represent?
- How do the proposed crediting programs/activities complement the country’s overall mitigation strategy, including the NDC objectives?
- What options are available to ensure that risks of GHG leakage are limited and confidence in the environmental integrity of the instrument is increased?

C. **Information to be provided**

Countries are invited to provide the following information, as appropriate (4-8 pages):

- Clarify the potential sectors and GHG gases to be covered in a scaled-up crediting instrument (a country may provide a cross reference, as appropriate to information provided in other Building Blocks);
- Outline the rationale for the boundary definition for the Target Area (e.g., credited NAMA) and provide an (initial) assessment of the scale of the Target Area in the context of a country’s more general (e.g., sectoral) strategy or framework, including NDC;
- Outline options for the types of measures or activities that may be eligible and why;
- Outline options for the treatment of CDM project activities; and
- Assess potential risk of leakage and explain potential options to limit it.

D. **Activities, deliverables and proposed budget**

Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

3. **Defining the Crediting Baseline(s)**

A. **Rational and guidelines**

The crediting baseline (or threshold) is a key component of any crediting scheme; it establishes the basis for calculation of GHG credits that might be transferred internationally. Credits will be generated according to the extent to which actual GHG emissions for Targeted Area(s) fall below the crediting baseline. The crediting baseline is essential to determining the level of environmental ambition of a crediting mechanism. It might also inform on the level of the overall mitigation benefits achieved by the crediting program (i.e., for the activities implemented under

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42 A Baselines Working Group was established in May 2012. Its aim is to provide guidance or tools for the development of baselines. This work may become useful for PMR Implementing Country Participants planning to elaborate and determine crediting baselines during their Implementation Phase.
Article 6.4 of the Paris Agreement. Typically, it is measured as the difference between BAU emission trends and the crediting baseline.

The level of aggregation of a crediting baseline(s) will depend on a number of factors, including:

- The nature and formulation of any Target Area; and
- The type of activities covered by the crediting program and its geographic focus (e.g. entire country or one or more jurisdictions).

There is no single way of establishing crediting baselines that would be equally appropriate to all national and sectoral circumstances. The crediting baseline(s) in a scaled-up crediting instrument may be specified in absolute (or fixed) terms (e.g., tons of CO₂e per year), or in terms of emissions intensity (e.g., tons of CO₂e per unit of output per year). The appropriate metric may depend on a country’s overall mitigation objectives and desired level of aggregation, reflecting the nature and formulation of any NAMAs (which may, for example, focus on reductions in GHG intensity rather than absolute reductions) and on the formulation and metric used in the NDC (as applicable). However, it is conceivable for an intensity-based NAMA to be supported by measures based on absolute emission goals, and vice versa.

If a country opts to define a crediting baseline in terms of emissions intensity, care must be taken to choose an appropriate denominator for establishing intensity. Different intensity-based metrics may be possible for a given sector, and the metric ultimately selected must be applicable to all targeted facilities or systems (e.g., tons CO₂e/MWh for power generation facilities). Metrics may be different within the same sector depending, for example, on whether an entire manufacturing process is included in the scope of a mechanism, or only a specific step in the manufacturing process.

There are advantages and disadvantages associated with both absolute and intensity-based crediting baselines. A crediting baseline set in absolute terms makes assumptions about the underlying activity level of the emissions source in the future. As a result, these assumptions mean that any changes in activity level that occur as a result of exogenous forces (e.g., an unexpected slowing or acceleration of the GHG-emitting activity due to more or less economic growth than expected) are not taken into account. An “absolute” crediting baseline would allow the generation of more emission credits resulting from lower levels of output.

Although the use of an intensity-based crediting baseline would not face the rigidity of a fixed goal, it cannot ensure a reduction of total emissions. For example, a boost in total output – even if each unit of output is associated with fewer GHG emissions, may result in an increase in overall GHG emissions (in absolute terms).

There are different approaches (which may also be combined) for methodologies or protocols to calculate/determine crediting baseline emission levels, including:

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43 At the same time, other methodological approaches could be selected and agreed upon to demonstrate the overall mitigation benefits of the international transfers of credits.

44 However, as noted earlier, there is no agreed upon definition or approach for the development of business-as-usual emissions trends, so any comparisons should take this caveat into account. The development of BAU emissions trends can be complex as there can be a range of plausible future pathways and projections can be sensitive to exogenous factors such as economic growth and international commodity prices (Prag et al., September 2011).

45 Drawn from Prag et al. (September 2011).
• Projecting forward, based on historical trends in emissions. This approach typically consists of basing a crediting baseline on (a reduction from46) emissions associated with projected trends in a given sector/sub-sector/region; or
• Emissions from a specific technology or based on modeled approaches that take into account expected changes in technologies, costs of inputs, demand for outputs, macroeconomic conditions, policies or legal frameworks, and other relevant variables; or
• Emissions from top performers in the Target Area (e.g., the average of the top X percent of performance category) or from a specific technology. This is often referred to as a “benchmark.”47

The details of any approach will depend on the scope/coverage of the crediting mechanism and the nature of the sectors, regions, and targeted facilities or systems involved. The data requirements may differ for each approach. As such, it may be useful to consider data requirements for each approach and compare these with current data availability in order to identify gaps and future capacity building needs (building on data assessment in Building Block 3). A country may need to examine the implications/feasibility of various options in order to gain a better understanding of the possible impacts of its decision (e.g., in terms of stimulating desired GHG mitigation and producing associated development benefits).

**B. Questions and issues for consideration**

• What is (are) the appropriate metric(s) for the activities covered by the crediting instrument? Will the metric be defined in absolute or relative terms? If in relative terms, what are the options?
• What approach makes sense for the activities to be covered under the scaled-up crediting mechanism?
• What are the data implications? Are there any significant data gaps or quality issues?
• What would be the link – if any – to the formulation of the crediting baseline and the overall mitigation objective (or NDC, NAMAs, LEDS) of a country?
• What are the implications of different levels for the crediting baseline? What are the key considerations to take into account for determining the level of the crediting baseline(s)?
• What processes are expected to guide the determination of the crediting baseline, e.g., international processes, domestic processes, or both; what would these processes look like?
• How will relevant guidance, preferences, and recommendations – if any – be integrated into the development of crediting baseline(s)?
• How does the crediting baseline compare to projected BAU trends (if these exist) and how it is compatible/compared with the BAU used in the NDC?

**C. Information to be provided**
Countries are invited to provide the following information, as appropriate (6-12 pages):

46 To ensure net GHG reductions and environmental ambition of a scaled-up crediting instrument, a crediting baseline would need to be set at a lower emissions level than projected business-as-usual trends. Notwithstanding, identifying business-as-usual trends may not be necessary if it can be demonstrated otherwise that the crediting baseline is ambitious.
47 See PMR Technical Note Options and Guidance for the Development of Baselines
- Rationale for whether crediting baseline level emissions should be defined in absolute or relative terms. If in relative term, outline options, rationale and considerations for the metric(s) that could be used to define emissions intensity;
- Linkage opportunities (if any) with a country’s mitigation objective (NDC, NAMA, LEDS, etc.), as appropriate;
- Approach to develop the crediting baseline and provide rationale;
- Data gaps and needs;
- Key considerations (policy or other) to consider in the determining the level of the crediting baseline(s);
- Options for defining crediting baseline(s) (and level of environmental ambition). As appropriate, outline options and rationale for the level of the crediting baseline(s) and any comparison with projected BAU trends, if appropriate/applicable.

D. Activities, deliverables and proposed budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

4. Quantification of Emission Reductions and Establishing a System for Monitoring, Reporting and Verification
An MRV system is essential to ensure that emission reductions from the crediting baseline level are of high quality (including quantifiable and verifiable). Quantifiable and verified emission reductions are, in turn, important considerations for potential credit buyers. Moreover, it is important to keep in mind that rules for MRV for a new international crediting mechanism (e.g., credited NAMAs) may be developed and agreed upon internationally.

In the case of an international scaled-up crediting mechanism, rules and guidelines for MRV may be developed at the international level to enhance consistency and overall environmental integrity. A country seeking to participate in such an international scaled-up mechanism would need to take into account in its planning, as appropriate, any such international rules and guidance.\(^{48}\)

The following are some principles that define good practice for the quantification of emissions and emission reductions and an MRV system. In designing an MRV system countries are encouraged to build on their existing capacity and to benefit from the efforts of others in this area. The following should be considered:

- **Consistency**: data, methods, criteria, and assumptions should allow meaningful and valid comparisons of the GHG emission reductions achieved by different projects;
- **Transparency**: sufficient information should be disclosed to allow reviewers to make decisions about the credibility and reliability of GHG emission reduction claims with reasonable confidence;
- **Accuracy**: uncertainties and bias should be reduced as far as is practical. Greater accuracy in estimating GHG emission reductions will help ensure credibility of reduction claims;

\(^{48}\) In anticipation of such rules and guidance, a country may benefit from collaboration with other countries interested in participating in an international scaled-up crediting instrument, as this may serve as a reference/input for MRV rules developed internationally for such mechanisms.
Conservativeness: Conservative assumptions, values, and procedures should be used to ensure that GHG emission reductions are not over-estimated; and

Practicality and efficiency: whenever possible, minimize transaction costs.

Countries may wish to take stock of existing MRV standards (for existing crediting and emissions trading systems) and their applications and requirements – in order to assess whether existing approaches are suitable and appropriate (or can be built upon), starting, for example, with a review of existing monitoring methodologies for relevant emissions sources and identification of gaps and/or need for modifications. Ultimately, requirements for quantification and MRV will depend on the requirements of the program(s) to which the scaled-up instrument will be linked.

This component examines, in turn, the quantification of emissions and emission reductions; monitoring; reporting; and verification.

1. Quantification of emissions and emission reductions

A. Rationale and guidelines

Under a crediting instrument, it is important to have clear guidance on the parameters of the scope, eligible entities, and activities that are to be measured and to outline the methodologies to quantify emission reductions compared to crediting baseline levels. Such guidelines need to be clear to ensure consistency among different possible participants (or different activities/programs using the instrument).

Specific methodological requirements may vary depending on the level of quantification (aggregate, policy-level, or project-level). However, each methodology should have certain common components, including:

- Methods and/or criteria to determine the eligibility of individual entities and activities covered by the instrument. (Such methods may need to balance the need for fairness and recognition of early actors with the need to prevent gaming);
- Identification of the GHG sources that may be affected by the mechanism as a whole, or by individual measures or activities (taking into consideration possible unintended effects, such as leakage);
- Methods to estimate baseline GHG emission levels at sources affected by a measure or activity. (In the case of NAMA crediting, this is already established as the crediting baseline is at the aggregate level.); and
- Methods to determine (e.g., through measurement, calculation, and/or estimation) actual GHG emissions from sources included in the scope of the scaled-up crediting instrument.

B. Questions and issues for consideration

- Which sources will be considered in quantifying GHG reductions? For each source, will GHG emissions be measured, calculated, or estimated? How will possible leakage effects be accounted for?

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49 “Early actors” or “early movers” refer to entities that have undertaken GHG-reducing improvements prior to the beginning of any crediting of emission reductions.

50 Gaming refers to situations where entities hold-off, or postpone, making BAU improvements because they expect to be credited for such actions later.

51 How to design such methods (e.g., choosing between standardized or project-specific methods) could be the subject of a separate PMR technical note.
• How will crediting baseline emissions for the NAMA be estimated? Are crediting baseline assumptions sufficiently conservative to avoid over-crediting?
  o In the case of devolution of the NAMA goal to entities, how will their crediting baseline emissions be estimated?
• How will actual GHG emissions be determined? What data and parameters will need to be monitored? Is data available and verifiable? Are there default values that could be used?

C. **Information to be provided**

Countries are invited to provide the following information, as appropriate (4-8 pages):

• For the crediting instrument as a whole, and for each eligible measure or activity, outline initial assessment of:
  o The GHG sources likely to be affected, including those associated with possible leakage;
  o Method options for estimating crediting baseline emissions at each GHG source, as appropriate;
  o Method options to determine actual emissions at each GHG source;
  o Method options to quantify any leakage (if calculated separately); and
  o Method options or approaches to determine the eligibility of potential activities.

D. **Activities, deliverables and proposed budget**

Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

5. **Monitoring (M)**

A. **Rationale and guidelines**

The monitoring of measures and activities under a crediting instrument is generally conducted by the entity responsible for the activity: government agencies or coordinating bodies monitor the effects of government policies and measures; and private actors (project developers) monitor specific activities. Monitoring methods must produce data compatible with the methods used to estimate baseline emissions, determine actual emissions, and quantify GHG emission reductions. Monitoring reports form the basis for verification by a third-party entity.

The nature of monitoring activities and requirements will depend on the level of effects being monitored (e.g., aggregate, policy, or activity level) and the types of measures or activities being undertaken (e.g., supply- or demand-side energy measures). Practicality and cost considerations are important, as high monitoring costs may inhibit implementation of targeted mitigation activities.\(^{52}\) In some cases, it may be preferable to adopt simplified measurement or estimation methods and conservatively adjust the results to balance accuracy with the need for cost-effectiveness.

B. **Questions and issues for consideration**

• What methods will be used to monitor the performance of eligible measures or activities? What data are required to inform quantification methods?

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\(^{52}\) At the same time, it is important to maintain confidence in the environmental integrity of the mechanism and, thus, confidence in the high quality of the credited emission reductions.
Will separate methods be employed to monitor leakage effects?
What parameters should be considered? Are data available and verifiable? Which sources would be regularly monitored and which ones could be estimates (e.g., are there conservative estimation methods or default values that could be used)?
How will data quality be managed (and uncertainties)?
How frequently will monitoring be conducted?

C. Information to be provided
Countries are invited to provide the following information, as appropriate (3-5 pages):
- Outline an initial assessment of existing relevant monitoring methods and guidelines for the eligible measures and activities, along with the types of data that will be collected. Outline an initial assessment of whether such existing guidelines may be applicable and implementable in the country context.

D. Activities, deliverables and proposed budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

6. Reporting (R)

A. Rationale and guidelines
For emission reductions by eligible activities to generate credits that can be sold on a carbon market or used for compliance, a successful verification report needs to be submitted to the administrator or regulator of the crediting instrument. Reporting is important for the integrity and transparency of a crediting instrument.

B. Questions and issues for consideration
- What will be the reporting documentation requirements for a country and its covered entities?
- What information, if any, beyond actual emissions and calculated emission reductions will be reported? Reporting activity data can enhance transparency and credibility but may disclose information that covered entities consider confidential.
- At what stage(s)/time will reporting be needed?
- How frequently will reporting occur?

C. Information to be provided
Countries are invited to provide the following information, as appropriate (3-5 pages):
- Outline and assess options for reporting documentation (i.e., what types of documents and who will review them); and
- Outline and assess options for key elements/considerations to be reported.

D. Activities, deliverables and proposed budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.
7. Verification (V)\textsuperscript{53}

A. **Rationale and guidelines**
Verification of monitoring is typically conducted by independent third parties. Such a process aims to provide credibility to the claimed emission reductions under a crediting instrument. There is existing experience to build upon, often drawing on the expertise of financial and environmental auditors, as well as professional verification bodies established under existing (project-based) crediting instruments or emissions trading systems. Typically, third-party verification is conducted by an accredited verifier based upon agreed-upon verification standard(s). This process may require the development of accreditation standard(s) if new verification standards are developed specifically for the country’s policy instrument.

B. **Questions and issues for consideration**
- What are the verification requirements specific to each type of eligible measure or activity? What kind of flexibility – if any – should be provided (e.g., will site visits be required, or are desk reviews acceptable; is verification required at every eligible facility or system, or would auditing a sample be sufficient)?
- Who will conduct the verification of aggregate GHG emission reductions (measured against the crediting baseline) and how will such reductions be verified?
- Who will pay for verification services at the aggregate, policy, and project levels?
- Are there confidentiality issues that need to be addressed?

C. **Information to be provided**
Countries are invited to provide the following information, as appropriate (3–5 pages):
- Outline and assess existing options for verification guidelines/standards for the eligible measures and activities of Target Area(s), as appropriate.

D. **Activities, deliverables and proposed budget**
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during the MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.


A. **Rationale and guidelines**
A country may want to estimate the potential emission reductions from a program(s) and the contribution to this from the scaled-up crediting instrument. Such an estimate will depend, *inter alia*, on the crediting baseline and associated considerations.

It is important to ensure that investment pathways are properly designed to ensure that carbon finance is efficiently and effectively deployed in order to drive the implementation of individual GHG-reducing activities. In cases where a country’s scaled-up crediting instrument targets specific policies (e.g., a feed-in tariff), it may be important to identify budgetary implications (as that may be the initial source of funding; while carbon finance may ensure funding for subsequent periods). A country may thus develop an investment plan (and/or budget requirements, as appropriate) to achieve the desired mitigation objectives in the Targeted Area. In this context, it may be important

\textsuperscript{53} In project-based crediting schemes (e.g., the CDM), the “V” typically also represents validation requirements – which take place prior to the registration of the project activity.
to consider and assess different possible financial resources for the targeted activities. The contribution by the scaled-up crediting instrument will require an assessment of the expected emission reductions achieved below the crediting baseline and estimates of price(s) for these credits.

B. Questions and issues for consideration

- What is the estimated impact of the program supported by a scaled-up crediting mechanism in terms of emission reductions? How will it contribute to reaching strategy goals in terms of emission reductions, taking into account the need to avoid double-counting?
- How can revenues from the scaled-up crediting instrument help finance the activities envisioned to meet development and mitigation goals and under which circumstances?

C. Information to be provided

Countries are invited to provide the following information, as appropriate (5-7 pages):

- Outline key factors/assumptions and possible investment and financing scenarios.

D. Activities, deliverables and proposed budget

Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

9. Regulatory and Institutional Framework

A. Rationale and guidelines

Regulatory frameworks and enforcement mechanisms are necessary for establishing property rights for generated credits and ensuring adherence (compliance) to the standards and methods used to quantify, monitor, and verify credited GHG emission reductions. For example, a country would need to allocate responsibility to:

- Implement the crediting mechanism as a whole and provide general oversight;
- Collect relevant activity and emissions data for the Target Area; and
- Accredit and oversee verification bodies (possibly in conjunction with the program(s) to which the crediting mechanism will be linked).

In addition, legal and regulatory frameworks are required to establish and/or clarify ownership claims to GHG emission reductions and ownership rights to any GHG credits issued in relation to such reductions. They are also needed to provide penalties and/or corrective actions in cases of non-compliance where, for example, GHG reductions are over-reported due to fraud, malfeasance, or negligence on the part of project developers or verifiers.

Implementing a scaled-up crediting instrument will require institutional capacity in a country. It may be possible to build on existing institutions (a favored approach to limit costs to the government); it may also require new institutions and capacity-building.
To support a scaled-up crediting instrument, institutional capacity will be required in a number of different areas\textsuperscript{54} in order to carry out functions and responsibilities allocated in the regulatory framework, including:

- Provide general market oversight to ensure fair and efficient conditions for all market participants. This is achieved by way of transparency requirements as well as by preventing and sanctioning market misconduct;
- Collect relevant data on activities and emissions for the Target Area. As much as possible, a country may wish to build on existing institutions and data collection mechanisms – which may be located in different ministries or even different jurisdictions (e.g., municipal governments). Depending on the approach and standard for MVR selected, a country may need to allocate responsibility (and develop capacity) for the development and review of activity measurement and MVR systems. If such activities are new, a country may need to plan for training and outreach sessions, as well as to respond to stakeholder questions on the instrument. In such cases, it is important to clearly identify tasks and responsibilities and associated budgets; and
- Establish recording/tracking systems for (i) tracking data related to the crediting mechanism as whole, as well as individual measures and activities; and (ii) issuing credits for verified GHG reductions and facilitating their transfer among registry participants and to linked programs.

B. Questions and issues for consideration

- What are the institutional tasks and responsibilities that need to be planned for?
- Who will be responsible for overall oversight of the development and implementation of the instrument?
- How will the separation of functions be adequately ensured?
  - What will be required to establish appropriate legal and regulatory frameworks?
- What are the existing institutions/capacities upon which it may be possible to build?
- To what extent will/must institutional functions be coordinated with bodies established under linked programs?
- What will be required to establish appropriate legal and regulatory frameworks? Which ministries/agencies will be involved?

C. Information to be provided

Countries are invited to provide the following information, as appropriate (5-8 pages):

- Specify who (or options for whom) will be responsible for overall oversight of the instrument;
- Outline key features of the regulatory framework and identify who will be responsible for its development;
- Outline options to ensure separation of functions;
- Identify what will be required to establish appropriate legal and regulatory frameworks;
- Outline key institutional requirements;

\textsuperscript{54} In some cases, it may be possible to contract out some of the functions. Necessary arrangements may depend on the requirements of linked (credit buying) programs.
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- Outline institutional set-up and identify options for who may undertake which tasks;
- Specify who (or options for whom) will be responsible for overall oversight of the instrument; and,
- Outline budgets and training/communication needs.

D. **Activities, deliverables and proposed budget**
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

10. **Schedule for Implementation**
Countries should develop an implementation schedule for their scaled-up crediting instrument and clearly identify milestones, tasks, responsibilities, and summary of the budget proposed under this module.
Module 4b. Domestic Emissions Trading (cap-and-trade)\textsuperscript{55}

Components for the design of a domestic emissions trading system (ETS)

1. Scope and coverage
2. Setting a cap
3. Allocation of allowances
4. System for domestic monitoring, verification and reporting (MVR) and compliance
5. Enabling trading and fostering stability
6. Institutional arrangements
7. Technical and legal infrastructures
8. Use of offsets
9. Linking
10. Policy Review
11. Schedule for implementation

An emissions trading system (ETS) can be broadly defined as a system where liable entities—those responsible for emissions—must hold allowances that match their actual emissions for a compliance period. A cap on the total number of allowances sets a limit on the total quantity of emissions by liable entities during each compliance period. Liable entities can sell or acquire allowances in order to minimize their cost of compliance. Scarcity of allowances establishes a market price for emissions and trading promotes least-cost actions to meet the cap.\textsuperscript{56}

This module provides a list of components that are essential for the design of a domestic ETS. Under each component, guidelines are provided, which include a brief explanation of the relevant component and a set of questions to be addressed in the design of an ETS. Some questions are more relevant if a country seeks to develop the general design of a domestic ETS through PMR support, e.g., for a country seeking to inform a policy decision on a domestic ETS, while other questions may be more targeted to countries that seek to develop, through PMR support, specific elements of an ETS, rather than analysis on a general design of a domestic ETS.

Countries are encouraged to provide information under the relevant components, including:

- Status of preparation or implementation;
- Assessment of options;
- Choice of options and justification (if applicable); and
- Terms of reference (ToRs) for activities to be undertaken and budget.

As the preparation of a domestic ETS covers a wide range of issues that depend in some cases on a country’s institutional and legal framework, not all components included in this Building Block may be relevant to all countries’ plans and circumstances.


\textsuperscript{56} This module is also relevant for a country opting for a mandatory domestic “baseline and credit” (i.e., each covered entity is assigned a target emissions level/pathway – or a baseline – and is liable for meeting it and may receive credits corresponding to the emission reductions below the mandatory baseline. An entity with emissions above its mandatory baseline may achieve compliance by purchasing credits equal to its excess emissions.
1. Scope and Coverage

A. Rationale and guideline
An ETS may cover one or more sector(s); it may cover all GHGs, or only CO₂. The choice of sector(s) and GHG coverage typically depends on the (i) intended objective of the scheme; (ii) availability and quality of data for the sectors; (iii) costs and benefits of including small sectors and small sources of emissions; (iii) sectors with the greatest potential for abatement and ability to respond to price signals; (iv) wider range of coverage to achieve least-cost abatement; and (v) political acceptability of inclusion.

B. Questions and issues for consideration
- What sectors and/or GHGs should be regulated by the system? What is the share of the planned regulated sector(s) in the country’s total actual and projected emissions? What is the reliability (and uncertainty) associated with data from this sector(s)? What are the estimated ranges of abatement costs associated with this sector(s)? Where would the “points of obligation” (i.e., those being regulated) be set: upstream (e.g., at the level of the fossil fuel supplier) or at the point of emissions?
- How are the regulated entities defined (for example, installations or companies)? Will it be possible to identify all regulated entities at a very early stage or is there a need for generic definitions and a stepwise discovery approach? Are there links between permitting (i.e., defining the regulated entities under the ETS) under the domestic emissions trading system and other regulations? Should there be emissions thresholds to avoid including too many small entities? Where should the reporting obligation be placed?
- If the Target Area includes installations registered as CDM project activities, how would these be treated?

C. Information to be provided
Countries are invited to provide the following information, as appropriate:
- Assessment of potential sectors and GHG gases to be covered in an ETS;
- If choice of coverage has been made, provide background information and rationale for the choice of such sectors and gases;
- Outline options for points of obligation (i.e., those being regulated); and ways to regulate them; and
- Outline options for treatment of any registered CDM project within the Target Area.

D. Activities, deliverables and proposed budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

2. Setting a Cap

A. Rationale and guidelines
Cap-setting (i.e., the nature and the level of the cap) is one of the most critical decisions in designing an ETS. The cap represents the level of emissions that will be allowed under the system during each compliance period. Determining the nature of the cap typically includes: (i) an absolute cap on the quantity of emissions; or (ii) an output-based cap (in the form of emission
intensity. The stringency of the cap (i.e., how much it constrains emissions) will directly affect a market demand for allowances and (potentially) a market price for allowance; except in cases of a relatively small domestic ETS fully integrated in a broader international market. To achieve environmental goals, the cap may need to become more stringent over time (i.e., future compliance periods may have lower caps).

A set of principles may apply to the cap-setting process, for example, cost-efficiency, burden sharing and other distributional aspects, historical emission levels, BAU trends. The fundamental consideration underlying cap ambition is how far and how quickly the jurisdiction wants to reduce global GHG emissions.

In the case of rapidly developing economies, it may be particularly important to understand the emissions profile of covered sectors, as well as the growth outlook for these sectors. In such cases, the treatment of new entrants and how they “fit” under the cap becomes a key issue.

B. Questions and issues for consideration

- Shall the cap be derived from existing policy targets? What adjustments have to be made?
- How ambitious can cap setting be after taking into consideration the (i) trade-offs between emissions reduction ambition and system costs; (ii) aligning cap ambition with target ambition; (iii) share of mitigation responsibility borne by capped and uncapped sectors; and (iv) potentially, the intended share of domestic emissions abatement efforts;
- Is cap setting absolute or intensity based? How aligned is the cap setting with overall mitigation target? What data considerations and uncertainties with input/output metric should be included?
- What are the principles upon which the cap-definition should be based (e.g., cost-efficiency, equal burden and other distributional aspects, historical emission levels, BAU trends)? If the cap is based on BAU trends, how robust/reliable are BAU projections? Can emissions from the covered sector(s) be monitored with a sufficient level of accuracy?
- Is the cap-setting process based upon top-down procedures (starting point is the emissions inventory) or bottom-up data collections (starting points are emissions reports from the regulated entities)? To what extent should data uncertainties and biases be reflected? What kind of adjustment process/feedback-mechanisms will be necessary in the cap-setting process?
- How should new entrants be considered in the cap-setting process?

C. Information to be provided

Countries are invited to provide the following information, as appropriate (6-12 pages):

- Assessment of cap ambition;
- Assessment of approaches to cap setting;

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57 The literature also refers to the possibility of a negotiated cap: target for each participating entity is negotiated on a case-by-case basis, using the information on the technical and economic potential of entities to reduce emissions. However, in practice, this type of approach is considered complex and difficult to implement for various reasons, including information asymmetries (between the regulator and regulated entities) and confidentiality issues.

58 The domestic system would be a price taker in such a case.

59 For example, in the case of an overall domestic mitigation objective for reducing emissions by a certain percentage, should each sector also reduce its emissions by the same percentage, or should there be adjustments to take into account specific circumstances, such as opportunities and costs, of the sectors?

60 For instance, if the scope of the scheme is subject to changes, bottom-up data collection results in differences for emissions levels and may demand a mechanism to reflect such changes.
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- Description of the process for cap setting (including data requirements) and principles that may be adopted; and
- Description of administration and legal options.

D. Activities, deliverables and budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during the MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

3. Allocation of Allowances

A. Rationale and guidelines
The allocation of emission allowances to regulated entities generally follows some combination of the following two methods: (i) free allocation, typically based on a historical reference level, a sectoral benchmark or on future conditions; and (ii) auctions. The allocation principles should be clear and may include, for example, achieving distributional goals, avoiding competitive distortions. Allocation principles are also typically accompanied by provisions for new entries, exits and early action by existing regulated entities. The allocation method may change over time. A rising share of auctioned allowances is common.

The cost-efficiency, as well as the distributional implications of allocation provisions, should be specified and analyzed for the specific proposed domestic ETS.

B. Questions and issues for consideration
- What is (are) the general allocation method(s)? What is the rationale for the allocation principles? Which entities will be regulated and which will receive allowances?
- Is there one general set of allocation principles? Are sector-specific allocation provisions planned?
- Which approaches to allocation will be implemented for existing regulated entities (incumbents)? What are the guiding principles for the allocation to existing regulated entities? Are there provisions to recognize early action? How will distributional impacts be considered? How will sectors be identified to protect against leakage?
- What allocation approaches will be implemented for new entrants? What are the guiding principles for new entrant allocation? Are plant closure provisions foreseen?

C. Information to be provided
Countries are invited to provide the following information, as appropriate (3-6 pages):
- Assessment of allocation approaches and principles;
- Assessment of distributional impacts; and
- If free allocation is anticipated, is there any plan to transit to auction?

D. Activities, deliverables and proposed budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

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61 Regulated entities will typically lobby authorities for favorable allocation method and quantity. Emissions-intensive trade-exposed entities are the most vulnerable to adverse economic impacts as a result of introducing a domestic ETS.
4. System for Domestic Monitoring, Reporting and Verification, and Compliance

A. Rationale and guidelines

An ETS requires detailed provisions on how to collect data at the appropriate points of obligation, as well as the ability to process and verify the data. Indeed, a robust MRV system at the installation level is crucial for ensuring the credibility of the scheme.

Methods for monitoring may be (i) measurement-based (e.g., through meters) or (ii) calculation-based (e.g., using indirect data such as fuel consumption to calculate and estimate emissions and emissions reductions).

Clear and appropriate reporting guidelines must be communicated to regulated entities, including the type of data/parameters and information to be reported, templates and reports, and the methods and timelines (i.e., deadlines for submission of reports).

The procedures for verification must also be clarified, including the frequency with which verification should occur and a process for determining eligibility to verify reports from regulated entities and how the accreditation and quality assurance of verifiers shall be organized, as appropriate.

Regulators must ensure that covered entities surrender the correct amount of eligible units by the relevant compliance date. To keep track of transactions in the market and the units that have been surrendered, an ETS requires a registry where transfers of units are recorded and monitored. At the end of each compliance period, regulated entities can then transfer (or surrender) units via the registry to the ETS regulator to meet their emissions liability for the period.

An enforcement and penalty regime needs to be in place. It is important that the cost of non-compliance be significantly greater than the cost of compliance. A high penalty helps avoid situations in which regulated entities find it more cost-effective to pay the penalty than to respect the cap (allocated allowances). This potentially undermines the environmental integrity and the economic efficiency of the ETS. In addition to a penalty, covered entities may be obligated to surrender missing allowances in order to safeguard the overall environmental effectiveness of the ETS.

B. Questions and issues for consideration

- What monitoring methods could be used for the different types of entities covered by the ETS?
- What are the general compliance mechanisms? For example, for such things as reporting and surrendering allowances?
- What data collection provisions for allocation shall be implemented (guidelines, generic parameters, consistency with monitoring provisions for compliance reporting, reporting formats etc.)? What flexibility (e.g., using site-specific versus generic/default emission factors) should be allowed for the regulated entities to prevent “data gaming”?
- What procedures shall be implemented to enable a high-quality (third-party) verification (for example, guidelines, accreditation of verifiers, and liabilities of verifiers)?
- What type of provisions shall be set-up for non-compliance (penalties, buy-out payments, etc.)? What level of penalty is planned? What information on non-compliance should be disclosed to the market?
C. Information to be provided
Countries are invited to provide the following information, as appropriate:

- Approach that may be used for monitoring (i.e., calculated and/or measurement-based) and rationale;
- Reporting standard that may be adopted for the participating entities;
- Plan for third-party verification;
- Plan for provisions on non-compliance and enforcement; and
- Plan for market oversight provisions to secure fair and efficient trading conditions for all market participants (e.g., ensuring transparency requirements as well as preventing and sanctioning market misconduct, in particular insider dealing and market manipulation).

D. Activities, deliverables and proposed budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

5. Enabling Trading and Fostering Stability

A. Rationale and guidelines
Robust prices are crucial for the efficiency and effectiveness of an ETS; it is thus important to enable a market with sufficient depth and liquidity. The ability to incentivize cost-effective emission reductions is one of the most important advantages of an ETS. One key design aspect is providing entities with temporal flexibility as to when emissions reductions are achieved. Temporal flexibility can also reduce price volatility. Moreover, these advantages can be realized, in many cases, without having any significant detrimental effect on the ability to reduce the risks of climate change. Flexibility in compliance through banking rules (i.e., provisions for saving allowances for a future trading phase or compliance period) and deciding on length of a compliance period can help smooth supply and demand within and between the compliance periods.

ETS can be organized into trading phases (or compliance periods), which can provide an opportunity to introduce such systems stepwise, enabling learning and adjustments, as appropriate. Within a compliance period, banking and borrowing are generally unlimited, making the length of the compliance period an important determinant of temporal flexibility. Longer periods provide the same opportunities and the same risks as greater banking and borrowing do between periods. However, compliance periods should also provide for broad price discovery. Mechanisms need to be in place to enable broad price discovery and create robust secondary allowance markets (e.g., emission exchanges).

B. Questions and issues for consideration
- Will the system be organized in phases? What phases are planned? Is a pilot phase planned?
- Which entities shall be eligible to trade allowances (e.g., regulated entities as well as secondary market players such as financial institutions)?
- What oversight mechanisms may be considered necessary to avoid fraud and abuse of market power within trading activities (market oversight)?

62 Exchanges are typically a private sector activity, which should emerge with need. A country may find it useful to engage with these stakeholders early on, as they will play an important role in supporting the ETS.
• How will the allocation, reporting to authorities, and reporting to the market/public calendar be organized? How often will compliance be planned?
• What provisions are planned for banking and borrowing of allowances (within certain trading periods or between compliance periods)?
• Is the use of mandatory trading platforms planned?
• Are there specific activities needed to set-up and maintain secondary markets for emission allowances?
• Should stability provisions (cost containment) be introduced? What are the implications of this (barriers to linking, prevention of carbon leakage and other distributional effects)?
• Are mechanisms envisioned to avoid excessive price spikes? Under what specific conditions would price spikes be triggered? Are there guidelines?
• What capacity-building needs are identified for institutions and possible approaches to meeting these needs? Is there a possibility to introduce pilot or voluntary systems first, and the necessity to evaluate and review capacity-building activities?

C. Information to be provided
Countries are invited to provide the following information, as appropriate:
• What mechanisms are in place to enable price discovery?
• If applicable, describe the nature and status of the entities that may serve as a platform for emissions trading. If no such trading form exists, describe plans for setting up the trading platform63;
• Specify any mechanism envisioned to foster market stability and provide rationale for its use. Explain how such mechanisms would be triggered; and
• As applicable, explain the plan introducing the ETS in phases (including plans for a pilot phase).

D. Activities, deliverables and proposed budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during the MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

6. Institutional Arrangements

A. Rationale and guidelines
The complex and, in some cases, interdependent design issues and provisions of an ETS require careful and comprehensive institutional arrangements, as well as strong regulatory and enforcement capacities up to judicial review procedures. This applies to rule-making, administration, third-party involvement, and market oversight on one hand, and clear distinction of competencies and responsibilities (in some cases ‘Chinese Walls’ between different institutions and/or procedures), on the other hand.

B. Questions and issues for consideration
Countries will need to determine the institutional arrangements for the domestic ETS:

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63 It may not be necessary for an ETS to specify the trading platform. Allowances and credits may be traded “over-the-counter” by brokers. In such cases, it may be desirable to ensure that the brokers and exchange(s) are regulated if it is not already the case.
• What general institutional arrangements will be used to assure, for example, clearly separated procedures of rule-making, administration, third-party involvement, compliance enforcement, market oversight, and operation of the registry?
• What institutional arrangements will be used for cap-setting, allocation, and the separation of these procedures?
• What institutional arrangements shall be used for setting-up and operating the monitoring framework (institutional responsibilities, legal procedures, etc.)?
• What institutional arrangements shall be used for setting-up and operating the third-party verification of data (institutional responsibilities, including accreditation of verifiers, legal procedures, etc.)?
• What institutional arrangements shall be used for a market oversight framework (institutional responsibilities, legal procedures, interaction or responsibilities of existing market oversight bodies, etc.)?

C. **Information to be provided**
Countries are invited to provide the following information, as appropriate:
• Plan for institutional arrangement(s) for rule-making, administration, MRV and market oversight. Which institution is responsible for what?
• What kind of training/capacity is needed for those institutions?

D. **Activities, deliverables and budget**
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

7. **Technical and Legal Infrastructures**

A. **Rationale and guidelines**
ETSs are policy instruments for quantity control of politically-defined and, to some extent virtual commodities. The establishment of an ETS thus requires carefully designed technical and legal infrastructures, such as registries (for emissions reporting, allocation, compliance, and tracking), trading platforms, and clear legal definitions (e.g., on the legal nature of allowance and the related taxation, liability, and accounting issues). Some of these issues are also relevant for activities listed under Building Block 3 (core technical and institutional/regulatory market readiness components).

The respective technical and legal infrastructures need to be in place well in advance of the beginning of trading for an ETS to function properly.

B. **Questions and issues for consideration**
• What design and implementation strategy will be established for the registry and what will be the requirements (e.g., general features, disclosure provisions, and security features)?
• If necessary, what mandatory provisions will be introduced for a trading platform?
• What is the legal nature of allowances (commodities, financial tools, etc.) and how will allocation fit into the general regulatory and legal framework?
• What provisions and guidelines will be introduced for the legal treatment of allowances and transactions (taxation, accounting, liabilities, etc.)?
C. **Information to be provided**
Countries are invited to provide the following information, as appropriate:
- The status and planning for acquisition (or setting-up) of a registry for the ETS;
- Plan for regulations on ETS and relationship with other relevant regulations;
- Specify legal nature of allowances; and
- Specify fiscal and accounting treatment of allowances.

D. **Activities, deliverables and proposed budget**
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

8. **Use of Offsets**

A. **Rationale and guidelines**
Offsets can be used for by regulated entities to meet compliance rules under a domestic ETS. If offsets can be available at reasonable cost, their eligibility may provide a form of cost-containment in the ETS.

It needs to be decided whether or not offsets will be recognized for compliance; that is, will they be fungible with allowances from the ETS. If they are to be recognized for compliance, which standard will be used: domestic and/or international? This will also require clarifying whether or not restrictions or limits will be imposed. Restrictions could be placed on the type of offset (for example, those from a certain sector or type of mitigation activity) or the amount each regulated entity may use for compliance in any trading phase. In addition, it is necessary to assess the economic and policy implications of allowing offsets into the domestic trading scheme.\(^64\)

B. **Questions and issues for consideration**
- What international/domestic emission credits,\(^65\) if any, should be allowed for compliance use? Should offsets from sectors and sources uncovered be included?
- What will be the timeline for allocation, reporting to the authorities, reporting to the market/public, and compliance?
- If the use of offsets is to be allowed, what needs to be done to implement the offset system? Should there be quantitative limits on the use of offsets?
- Will international and/or domestic allowances and credits be used for compliance in the planned scheme?

C. **Information to be provided**
Countries are invited to provide the following information, as appropriate:
- Clarify whether offsets will be recognized to meet compliance under the ETS. If so, please clarify which standard will be recognized; and

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\(^64\) A country may establish a quantitative limit on offsets allowed into the scheme to ensure that part of its mitigation activities are done domestically, as well as to protect against a crash in the price of allowances should there be an oversupply of lower cost offsets.

\(^65\) The consideration and elaboration of a domestic offset/crediting system would essentially follow the components and steps outlined in module 4(a).
• Specify whether there are (or considerations to determine whether there will be) limits to the types and/or quantities of offsets that are eligible for compliance under each compliance period

D. **Activities, deliverables and proposed budget**
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

9. **Linking**

A. **Rationale and guidelines**
In designing its ETS, a country may consider the possibilities and implications of linking to other ETS. Linking to similar trading systems can contain potential price spikes by providing greater liquidity, limit distortions to competitiveness, and contribute to the overall efficiency of the ETS. However, linking an ETS can be a complex challenge and may require careful consideration and compromises (this may be particularly the case for a smaller ETS for which linking to one or more larger schemes may place it in a situation of becoming a price taker, depending on the degree of linking). It is generally best to consider possibilities of linking at the design stage – even if any decision on whether or not to link with another scheme (and if so to what extent) - only occurs in the future. This will necessitate taking stock of the design elements and restrictions of other existing (as well as planned) ETSs. At the time of making a decision on linking, the country will need to assess the economic and policy implications.

B. **Questions and issues for consideration**
- What links, if any, should be established with, for example, foreign ETSs;
- Are there plans for linking to other market mechanisms? What would be the prerequisites/conditions for linking? What are the critical elements required for eventual linking that need to be considered at the design stage of the ETS;

C. **Information to be provided**
Countries are invited to provide the following information, as appropriate:
  - Clarify whether provisions for (potential) linking with one or more other ETS are examined; and
  - Outline considerations (or conditions) that may guide (or will need to be examined) to enable decisions on linking.

D. **Activities, deliverables and proposed budget**
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

10. **Policy Review**

A. **Rationale and guidelines**
Opportunities to review and amend an ETS are important. The most successful systems will be those that have an efficient and politically acceptable process to respond to new information on program performance and to changing local and global circumstances. Reviews provide an
opportunity to balance the trade-off between predictability and flexibility that is inherent in all aspects of ETS design. Ideally, they need to be “predictably flexible”—a robust and predictable process for evaluation and review provides flexibility for making policy changes at a predefined point. Other aspects of ETS design can support predictability outside of the review process. For instance, issuing some units a long way in advance and including provisions for banking can give firms a vested interest in maintaining the ETS and keeping a stable price in the long term. There are three main types of review that can be performed in order to review and make changes to the program:

1. Comprehensive reviews that amend fundamental aspects of the ETS;
2. Regular reviews that amend administrative or technical aspects; and
3. Evaluations that support both comprehensive and regular reviews.

B. Questions and issues for consideration

- What types of review will likely be needed to be undertaken once the ETS has been implemented? What will be the scope of each type of review to be undertaken?
- What are the data requirements needed to support those reviews? How will these data be collected? What indicators would allow the impact and effectiveness of the ETS to be measured?
- How often should reviews be undertaken?
- Who should conduct the review? Should an independent body be responsible? What other stakeholders would need to be involved?
- Will the reviews be specified in legislation or regulations? If not, how will they be governed?
- What are the expected financial and human resources required to undertake the reviews?
- If adjustments are to be made how will these occur?
- What automatic adjustments/changes could be considered? How would these work in practice? Do they need to specify in legislation or regulation?
- What might be the scope of adjustments? Who has the authority to make adjustments? What is the process for determining these? What notification or communication would be given to stakeholders?
- What is the process for determining legislative amendments? What would be the scope of these adjustments? What might be the lead time for such adjustments? How much notification would be given of the adjustment?

C. Information to be provided

Countries are invited to provide the following information, as appropriate:

- The types of reviews and changes that are to be considered and the likely scope of those;
- Plans for determining the legislative and institutional arrangements to support the reviews; and
- The expected financial and human resources required to undertake the reviews and potential source of funding.

E. Activities, deliverables and proposed budget

Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.
11. Schedule for Implementation

The country should develop an implementation schedule for its ETS and clearly identify milestones, tasks and responsibilities, and a summary of the budget proposed under this module.
Module 4c. Carbon Tax

Components for the design of a carbon tax
1. Define the tax base
2. Determine the tax rate
3. Measure to prevent carbon leakage
4. Determine use of revenue
5. Institutional arrangements
6. System for MRV
7. Ensure compliance
8. Policy review
9. Schedule for implementation

A carbon tax is a tax that explicitly states a price on GHG emissions or that uses a metric directly based on carbon (that is, price per tCO2e). While they vary in approach, a typical carbon tax places a direct link between the GHG emissions of a product or process and the tax that must be paid on it. This provides a financial incentive for taxpayers to lower their emissions in order to reduce their tax obligations, whether through switching to more efficient practices, choosing cleaner fuels or, in the case of consumers, changing lifestyle habits. In contrast to an ETS, a carbon price through a tax is fixed, but there is no limit placed on the amount of emissions that can be emitted, so long as the tax is paid.

This module provides a list of components that are essential for the design of a carbon tax. Under each component, guidelines are provided, which include a brief explanation of the relevant component and a set of questions to be addressed in the design of a carbon tax. Some questions are more relevant if a country seeks to develop the general design of a carbon tax through PMR support, e.g., for a country seeking to inform a policy decision on a carbon tax, while other questions may be more targeted to countries that seeks to develop, through PMR support, specific elements of a carbon tax, rather than analysis on a general design. Countries are also encouraged to refer to the PMR Carbon Tax Guide for further information on the design and implementation of a carbon tax.

Countries are encouraged to provide information under the relevant components, including:

- Status of preparation or implementation;
- Assessment of options;
- Choice of options and justification (if applicable); and
- Terms of reference (ToRs) for activities to be undertaken and budget.

As the preparation of a carbon tax covers a wide range of issues that depend in some cases on a country’s institutional and legal framework, not all components included in this Building Block may be relevant to all countries’ plans and circumstances.

1. Define the tax base

A. Rationale and guidelines
The tax base of a carbon tax refers to the sectors and specific entities that will be liable for making carbon tax payments. Defining the tax base is among the first and crucial decisions taken in designing a carbon tax.
Carbon taxes are typically applied to the production, import or sale of fuels, or to emissions from specific processes, such as those from electricity generation, industrial processes or waste disposal. Deciding whether to apply the carbon tax to fuels, to processes, or to a combination of both will often be the first step in determining the tax base, since a range of other design choices depend on the broad approach that is taken on this question.

A carbon tax may cover one or more sector(s); it may cover all GHGs, or only CO₂. The choice of sector(s) and GHG coverage typically depends on the (i) intended objective of the scheme; (ii) availability and quality of data for the sectors; (iii) costs and benefits of including small sectors and small sources of emissions; (iii) sectors with the greatest potential for abatement and ability to respond to price signals; (iv) wider range of coverage to achieve least-cost abatement; and (v) political acceptability of inclusion.

B. Questions and issues for consideration

- **Which emissions should be taxed?** A carbon tax can be applied to a range of products or activities that produce emissions, and jurisdictions need to determine which emissions to target. Taxing the production, import and sale of fossil fuels is the most straightforward way to tax carbon, since most jurisdictions can “piggyback” the tax on existing systems and will only need limited additional tax administration capacities. Targeting other emissions such as electricity generation, industrial processes and waste may require more administration, but may also allow for targeting a greater amount of emissions in certain jurisdictions. Which option (or combination of options) works best will depend on factors such as policy objectives, the emissions profile of the jurisdiction, existing and planned climate, energy and tax policies, the structure of key sectors and government capacities for tax administration and measurement, reporting and verification (MRV).

- **At which point of the supply chain should the tax be placed?** The tax can be applied to a range of different actors along the supply chain, from importers and producers (upstream) to distributor or electricity generators (midstream) and consumers (downstream). Where the tax is applied to fuels it is common to place the obligation upstream or midstream, since this is the approach followed under existing excise tax rules. For taxes applied on other emissions there may be a number of options. Decisions will take into account, on one hand, which actors have emissions mitigation options and are likely to be responsive to the price signal of the tax, and, on the other hand, the implications for MRV and administration of the tax at different points in the supply chain.

- **Which actors will be legally responsible for tax payment?** Even at a specific point in the supply chain there may be a number of legal entities involved in trading fuels or producing emissions. The government must therefore determine which will be legally responsible for paying the tax. In taxes on fuels this will generally follow existing rules on the payment of excise taxes. In taxes on emissions from a facility, such as from power plants, landfills or factories, the two main options are targeting those with ownership of the facility and those with operational control. Decision makers will also need to decide whether to require self-identification of entities or government-led identification, and how to apportion emissions in highly-interconnected facilities.

- **Will thresholds be applied below which no tax is payable?** A threshold is a minimum level of activity that will trigger responsibility for paying the tax, usually adopted to reduce costs of reporting and administration. The use of thresholds is common in the case of carbon taxes applied directly to emissions (i.e., not to fuel) and where a carbon tax is applied at a point where there are a relatively high number of actors, there is significant variety in their size and capabilities, and applying the tax to smaller emitters would result
in a disproportionate burden for the government and small emitters relative to the mitigation benefit of including them.

C. **Information to be provided**
Countries are invited to provide the following information, as appropriate:
- Assessment of potential sectors and GHG gases to be covered in a carbon tax;
- If choice of coverage has been made, provide background information and rationale for the choice of such sectors and gases;
- Outline options for points of obligation (i.e., those being regulated) and legal entity; and
- Outline options for possible use of thresholds.

D. **Activities, deliverables and proposed budget**
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

2. **Determine the tax rate**

E. **Rationale and guidelines**
Perhaps one of the most important elements of carbon tax design is determining the tax rate. The choice of the tax rate, coupled with the decision on the coverage of the tax, will determine the amount of abatement achieved, the revenue raised, and to a great extent the economic impact of the tax.

In practice, policy makers have adopted a wide range of tax rates in practice. Decisions will depend on a range of factors, including policy goals, economic factors, and political feasibility.

F. **Questions and issues for consideration**
- **What is the basis for setting the original carbon tax rate?** Policymakers have generally adopted one of four basic approaches to setting a carbon tax rate:
  - The social cost of carbon (SCC) approach matches the carbon tax rate to estimates of the social costs that emissions cause. This approach is in principle among the most economically efficient, but in practice the approach can be challenging because there is a wide range of estimates of SCC.
  - The abatement target approach involves choosing a carbon tax level that is expected to lead to abatement levels consistent with the jurisdiction’s emissions reduction goals. This is a good choice for jurisdictions seeking to meet specific mitigation targets.
  - The revenue target approach is designed to produce a particular amount of revenue from the carbon tax. This approach is particularly useful for jurisdictions that are motivated by the need for additional public funds.
  - The benchmarking approach links the tax rate to carbon prices in other jurisdictions, particularly neighboring countries, trading partners and competitors.
- **How will the tax rate be adjusted over time?** The main options include:
  - A static carbon tax rate that remains constant over time. The tax rate may or may not be tied to the rate of inflation;
E. Rationale and guidelines

Carbon leakage occurs when a mitigation policy causes a reduction in emissions in the jurisdiction where it is implemented but inadvertently leads to an increase in emissions in other jurisdictions that do not have equivalent policies in place. When it occurs, carbon leakage has the potential to undermine the environmental effectiveness of the carbon tax. However, not all carbon leakage will. Carbon pricing is designed to put certain emissions-intense activities at a competitive disadvantage. Increased market share for less emission-intensive firms, whether inside or outside the jurisdiction, can be considered “efficient leakage”, and is, in fact, the intended outcome of a carbon tax. In addition, some losses in short-term competitiveness may be acceptable even if they result in leakage, if they support the taxing jurisdictions making long-term competitiveness gains through being an early mover in adopting efficient forms of production.
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While there has yet to be much evidence of leakage occurring in practice, the potential risk of leakage remains a concern for many jurisdictions and as such policy makers may decide to develop measure to reduce the risk of carbon leakage.

Countries are also encouraged to refer to the PMR technical note Carbon Leakage: theory, evidence and policy design for more information on the design of measures to prevent carbon leakage.

F. Questions and issues for consideration

- What is the assessment or evidence of carbon leakage? What is the rational for developing measures to reduce the risk of leakage? How might this change over time?
  Not all goods and services that face a carbon price will be at risk of leakage. For example, carbon taxes frequently apply to direct purchases of goods by non-commercial consumers (e.g., vehicle and home heating fuel). These types of taxes generally do not pose leakage risks. Policy makers might like to undertake economic modelling to assess the risk of leakage and inform the design of any measures to reduce it. The risk of leakage is also not likely to remain the same over time, for example, as more countries take action to reduce their emissions the risk of leakage can be expected to reduce. As such, policy makers may also consider how any leakage measures might be adjusted over time and on what basis,

- If a leakage prevention measure is to be designed and implemented, what sectors or entities will the measure target/apply to? Many jurisdictions that adopt leakage mitigation measures adopt a set of eligibility criteria for those measures. While most jurisdictions have focused on emissions intensity and exposure to international trade, other important criteria include cost pass-through capacity, sector competitiveness, mobility of capital, and the climate policies of major competitors.

- If a leakage prevention measure is to be designed and implemented, what will be the type of the measure(s) to be explored? Where jurisdictions determine that a significant leakage risk exists, there are a range of measures available to mitigate those risks. These measures can be broadly distinguished into four categories:
  1. Tax reducing measures, such as exemptions and reductions, directly eliminate or reduce the tax burden faced by the liable entity;
  2. Tax counteracting measures, such as support programs and other subsidies, do not reduce the actual tax burden, but instead provide a separate form of support that leads to reduced costs of the liable entity in complying with the tax;
  3. Tax broadening measures, such as border carbon adjustments, that extend the effective reach of the tax by subjecting imports to the same tax as domestic goods, so as to directly eliminate the leakage risk; and
  4. Tax coordinating measures, such as reciprocal arrangements on carbon pricing with other jurisdictions, reduce the risk of leakage by reducing or eliminating the price differential with competing jurisdictions that is the main underlying factor of the leakage risk.

G. Information to be provided

Countries are invited to provide the following information, as appropriate (3-6 pages):

- Assessment of the risk of carbon leakage, rational for any leakage prevention measures and how these measures might be adjusted over time;
- An indication of the sectors or entities that might be targeted by any leakage prevention measures; and
- Outline the options of leakage prevention measures to be considered.
H. Activities, deliverables and proposed budget

Please outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block in the MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

4. Determine use of revenue

11. Rationale and guidelines

Carbon taxes can raise significant revenue. Given the magnitude of funds involved, it is important for policymakers to carefully consider how the revenue will be used. The choice has profound implications for the overall economy, the efficiency of the tax system and public welfare. There are three basic strategies for using carbon tax revenue:

- Revenue neutrality where any revenue from the carbon tax is either passed directly to payers or offset by reductions in other taxes. Revenue neutrality is generally achieved by rebates to households or businesses, or through reductions in other taxes;
- Increased spending where carbon tax revenue is used to support government initiatives and pursue public policies that could relate to climate change or be unrelated. Increased spending can be achieved by moving the revenue to the general budget, by earmarking the revenue for a particular use, or to reduce national debt; or
- Foregoing revenue by permitting the use of offsets. Offset programs allow tax liable entities to reduce the tax obligation by surrendering a credit that corresponds to an emissions reduction.

In practice, jurisdictions have employed all of these approaches and, in many, have combined multiple approaches according to policy needs and priorities.

12. Questions and issues for consideration

- What is the likely magnitude of the revenue that is to be raised by the carbon tax and how is this expected to change over time?
- What are the specific objectives for use of revenue and how might these change over time?
- What are the different options to be considered for the use of revenue?
- Are there any legal restrictions for how the carbon tax revenue can be used?
- If revenue is to be used to reduce other taxes, what are the opportunities for efficiency-enhancing tax reform? Policy makers may need to assess their tax structures and evaluate their marginal costs of public funds.
- If revenue is to be used for rebates who will receive these? (e.g., strongly effected businesses or low-income households).
- If earmarking is to be considered what are the priority areas for this spending and how can this be implemented/assured over time?
- What would be the benefits of paying down national debt with the carbon tax revenue?
- What international or domestic offset credits, if any, should be allowed for use? Should there be a limit on their use? What needs to be done to implement the offset system?
- Do any of the potential revenue uses require additional administrative capacity?

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66 The consideration and elaboration of a domestic offset/crediting system would essentially follow the components and steps outlined in module 4(a).
E. Information to be provided
Countries are invited to provide the following information, as appropriate:

- How the magnitude of the revenue will be estimated;
- The objectives to be achieved through the use of revenue; and
- Outline the options to be considered for the use of the revenue.

F. Activities, deliverables and proposed budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

5. Institutional Arrangements

F. Rationale and guidelines
Effective tax administration requires effective institutions and processes to implement the tax. Determining the right institutional arrangements will depend on the scope of the tax, how it is designed, and the existing legal and administrative context of each jurisdiction.

In developing this building block countries may like to consider the five main steps in the overall development of institutional arrangements for carbon tax implementation:

- Map required roles and functions. These functions can broadly be understood under three headings: determining tax liability, overseeing tax administration and tax enforcement, though specific needs will depend on the scope of the tax and how it is designed.
- 2. Map existing competences and assign functions. This allows jurisdictions to determine which existing institutions can assume those functions and where new structures are needed.
- 3. Establish procedures. Issues such as MRV of emissions, tax assessment and payment, audits of tax reports and determining eligibility for rebates and exemptions require procedures. These may follow existing rules or require new or adapted rules.
- 4. Strengthen capacities. New or strengthened capacities will often be needed both in the government and in liable entities and other parties such as external verifiers.
- 5. Ensure coordination. Carbon taxes often have interactions with multiple sectoral policies and so coordination between government departments responsible is important throughout the processes. This will typically be a greater concern for broader carbon taxes with a range of novel design features.

G. Questions and issues for consideration
Countries will need to determine the institutional arrangements for the carbon tax:

- What are the functions needed to administer the carbon tax? (e.g. policy formulation, determining the tax liability, overseeing tax administration, and tax enforcement);
- What are the existing institutions with relevant competencies and institutional capacities to carry out the functions? Is there a need for any new institutions or adjustments to existing institutions to implement the carbon tax? How to ensure appropriate separation of roles?
What rules and procedures are needed to guide tax administration? What form should these take (e.g., legal instruments or policy guidance documents)?

What are the capacity building needs for the carbon tax institutions, including government institutions involved, liable entities, and other entities involved?

How can coordination between different government entities be achieved? Who needs to be involved and what processes can be put in place?

H. Information to be provided
Countries are invited to provide the following information, as appropriate:

- Plan for institutional arrangement(s) for rule-making, administration, MRV and compliance. Which institution is responsible for what?
- A plan for the rules and procedures to be developed.
- The kind of training/capacity that is needed for institutions.
- A plan for the effective coordination of institutions involved.

I. Activities, deliverables and budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.


A. Rationale and guidelines
Central to ensuring the integrity of the carbon tax is establishing a robust framework for MRV. This can also be conceived in five main steps, as follows:

- Program coverage. The sectoral scope of the tax and the point of regulation are major determining factors in the type of MRV that will be needed.
- Emissions quantification. Carbon taxes may apply direct monitoring or calculation-based approaches, and the sectoral scope and point of regulation are important factors in determining this choice.
- Reporting procedures. In either case reporting templates and timelines will need to be established by the government, whether for reporting actual emissions or proxies such as fuel sales.
- Reporting platform. Regulating authorities need to develop a data management system that collects and stores corporate-level GHG inventory data from liable entities.
- Quality control and assurance. This includes both auditing of tax declarations and, where liable entities are responsible for measuring and reporting emissions, then verification will be required to ensure the accuracy of measurement.

Countries are encouraged to also refer to the Guide to Designing Mandatory Greenhouse Gas Reporting Programs and Greenhouse Gas Data Management: Building Systems for Corporate/Facility Level Reporting for more information that will assist in developing their MRP activities.

B. Questions and issues for consideration
- What is the sectoral scope and point of regulation for the carbon tax and what does this mean for the scope and nature of the MRV system? Should the MRV system include
sources of emissions not currently covered by the carbon tax, for example to allow for future expansion?

- Is there a need for a new MRV system or can the carbon tax rely on data already collected and systems established for other taxes, for example for excise taxes?
- What approach will be used to quantify emissions and tax liability (calculation based approach or direct measurement)? What flexibility will be provided in the monitoring guidelines? How will these be updated over time?
- What data is to be report? How is data to be reported? What is the reporting period and timeline for submitting data?
- Will a reporting platform be used? If so what are the key functions? Can an existing platform be adjusted to incorporate the carbon tax or is a new one necessary?
- What systems and requirements are needed to ensure the quality of the data reported? Is there a case for third party verification? What is required for the tax administrator to verify data reported and tax liabilities?

C. Information to be provided
Countries are invited to provide the following information, as appropriate:
- Approach that may be used for monitoring (i.e., calculated and/or measurement-based) and rationale;
- Reporting standard that may be adopted for the participating entities;
- The plan for the development of the reporting platform;
- Plan for third-party verification and/or verification by the tax administrator;

D. Activities, deliverables and proposed budget
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

7. Ensuring compliance

E. Rationale and guidelines
For a carbon tax to be effective, it is essential that liable entities comply with their tax obligations. Countries can consider three mutually reinforcing strategies to promote compliance:

- Ensure that liable entities understand their obligations. Not all tax non-compliance is intentional. To comply, liable entities must understand their obligations under the carbon tax. Jurisdictions can develop public information campaigns to promote awareness. By establishing public education initiatives and capacity building in the private sector, the jurisdiction enables entities to understand the processes by which their tax liabilities are determined and met.
- Design the carbon tax to minimize non-compliance. By understanding the strategies and avenues by which liable entities avoid compliance it may be possible to design the tax structure such that it limits opportunities for illegal behavior.
- Include clear and meaningful penalties for non-compliance. Some liable entities might intentionally avoid payment. To discourage this behavior, jurisdictions should specify clear penalties that are sufficient to make compliance more attractive than non-compliance. This section focuses on the latter two strategies for controlling intentional non-compliance – tax design and penalties.
F. **Questions and issues for consideration**

- What are the potential avenues of non-compliance (non-reporting or mis-reporting of emissions data, providing false information to auditors, non-payment of tax liability, smuggling of carbon-intensive goods etc.)?
- Are there options for tax design that increase simplicity and transparency making non-compliance and corruption more easily detected? What systems and processes can be employed to make the carbon tax more transparent? What data can be provided to third party observers?
- What are the institutional and technical capacities to deter non-compliance and detect it when it occurs? Can tax rates be harmonized? Would it encourage early full compliance if tax rates started low and increased over time? Can benchmarks be used to detect non-compliance?
- What penalties can be used to deter con-compliance (publishing non-compliance, requiring tax repayments, imposing fines or other penalties, or criminal charges)? Who will be responsible for enforcement?

G. **Information to be provided**

Countries are invited to provide the following information, as appropriate:

- The potential avenues for non-compliance or plans to identify these;
- Options to be considered to design the carbon tax to reduce non-compliance; and
- The types of penalties that will be explored.

H. **Activities, deliverables and proposed budget**

Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

8. **Policy Review**

A. **Rationale and guidelines**

The design and implementation of a carbon tax can be a complex undertaking, subject to considerable uncertainty. As such, after implementation of a carbon tax policy makers should plan to conduct reviews of the program’s performance and impacts. They may also choose to build in procedures for adjustments to the policy into the process. Consideration of these should be a part of the design of the carbon tax.

Broadly there are three types of reviews policy makers could consider including in their policy design and implementation:

- Impact evaluations assess the performance of the tax and support the other reviews. These are analyses that identify primary indicators and evaluate impacts. Primary indicators can include emissions levels, revenue levels, and energy price changes. Impacts include those on a range of factors, including economic growth, social costs and their distribution across income classes and regions of the jurisdiction, trade effects, and technological innovation and diffusion effects. All of the results can be used to inform the other reviews, particularly the comprehensive review.
- Comprehensive reviews are designed to amend fundamental elements of the carbon tax. Any of the results of the impact evaluation might be useful to identify opportunities to consider the need for structural changes to the carbon tax design. Review of important
performance factors, such as emissions levels and revenue levels or impacts such as economic costs and burdens on low-income households, could lead a jurisdiction to adjust carbon tax rates or emissions goals, or to restructure other taxes.

- Regular reviews amend administrative or technical elements of the carbon tax. Regular reviews are an opportunity to review stakeholder and administrator experience regarding the management and administration of the tax itself, the ease of reporting, transparency of requirements and information support systems. These reviews can be scheduled periodically (e.g., annually) or held as needed to respond to new issues such as conflicts with other laws or unanticipated loopholes.

A primary reason to conduct reviews is to identify opportunities for adjustments to the carbon tax design. There are various approaches to managing the modification process, including:

- Automatic adjustments. This approach provides a prescribed formula for adjusting factors in the carbon tax design, such as tying the tax rate adjustments to emissions and revenue levels.
- Administrative adjustments. Some jurisdictions might choose to vest authority to adjust carbon tax design modifications in the administrating agency. This approach emphasizes the technical expertise of the agency in evaluating the performance of the program.
- Legislative adjustments. In some cases, particularly where the cost of the carbon tax is expected to be high or the impacts are politically sensitive, the legislative branch might choose to retain the power to modify all or some elements of the program.

In both the review process and management of adjustments to the carbon tax design, policymakers should be aware that covered entities benefit from predictability in their tax liabilities. For this reason, jurisdictions should seek review and adjustment processes that balance both flexibility to respond to experience and changes in circumstances, and providing as much predictability as possible. Systems with clearly defined processes and responsibilities for review and adjustment will tend to provide “predictable flexibility.”

**B. Questions and issues for consideration**

- What types of review will likely be needed to be undertaken once the carbon tax has been implemented? What will be the scope of each type of review to be undertaken?
- What are the data requirements needed to support those reviews? How will these data be collected? What indicators would allow the impact and effectiveness of the carbon tax to be measured?
- How often should those reviews be undertaken?
- Who should conduct the review? Should an independent body be responsible? What other stakeholders would need to be involved in the reviews?
- Will the reviews be specified in legislation or regulations? If not, how will they be governed?
- What are the expected financial and human resources required to undertake the reviews?
- If adjustments are to be made how will these occur?
- What automatic adjustments could be considered? How would these work in practice? Do they need to specified in legislation or regulation?
- What might be the scope of administrative adjustments? Who has the authority to make administrative adjustments? What is the process for determining these? What notification or communication would be given to stakeholders?
What is the process for determining legislative amendments? What would be the scope of these adjustments? What might be the lead time for such adjustments? How much notification would be given of the adjustment?

C. **Information to be provided**
Countries are invited to provide the following information, as appropriate:
- The types of reviews and adjustments that are to be considered and the likely scope of those;
- Plans to determine the legislative and institutional arrangements to support the reviews; and
- The expected financial and human resources required to undertake the reviews and potential source(s) of funding.

G. **Activities, deliverables and proposed budget**
Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.

9. **Schedule for Implementation**
Countries should develop an implementation schedule for its carbon tax and clearly identify milestones, tasks and responsibilities, and a summary of the budget proposed under this module.
Building Block 5: Organization, Communication, Consultation and Engagement

A. Rationale and Guidelines

The purpose of Building 5 Block is to:

- Outline and plan for the organization and coordination of the PMR grant funded activities and any other planned carbon pricing readiness activities and clarify the related decision-making process;
- Identify any cross-cutting activities to support the country’s carbon pricing readiness, including:
  - Identify training needs and capacity building requirements;
  - Plan and develop a communications strategy and any necessary tools to accompany the planning and roll-out of a carbon pricing readiness components and/or instrument; and
  - Plan and organize a solid consultative and engagement process among relevant government agencies and stakeholders
  - Identify plan to manage reform or decision processes to support implementation of carbon pricing.

The planning, design, and implementation of readiness components and instruments requires the involvement of different ministries and agencies within government. It may require developing a new coordination and decision-making process among the relevant ministries and/or agencies or adapting an existing process, for example, one used for the formulation and implementation of the NDC. Such a process may be necessary – from the beginning – to ensure appropriate linkages and information flows with relevant ministries and/or agencies. Training activities may also be part of this building block.

A decision to implement a carbon pricing instrument as a policy tool to help meet a country’ GHG mitigation objectives requires informing and building consensus among key stakeholders and policy-makers. In such cases, it may be essential to plan for information dissemination, awareness raising, as well as meaningful and substantive consultations with regional and/or local government authorities, covered entities and other relevant stakeholders to seek input to develop practical and implementable policies and proposals.

Engaging early with representatives from the private sector may be essential in many countries. Indeed, private entities can often provide a more competitive as well as stronger dynamic to get mitigation projects and activities off the ground than what is possible through public sector interventions only. Carbon pricing instruments, if designed well, can help stimulate private sector involvement in GHG mitigation activities and associated financing.

Engaging with civil society may also be critical to ensure the successful implementation.

It may be necessary to gain political support to move forward with carbon pricing readiness building blocks and instruments. This building block may be important for informing, awareness raising, coalition building and adapting the design of carbon pricing readiness components and instruments as necessary. While it is the last Building Block in the Tool, it is expected that the
activities covered in this Building Block will span the entire elaboration of the MRP – from start to finish.

B. **Main Elements**

Countries are invited to provide the following information, as appropriate:

- Describe the intended arrangements for managing the PMR grant and related readiness activities, including:
  - The institutional arrangements to be employed. For example, the government ministries and/or agencies that will have responsibilities, details of the management unit (e.g., number and skills of staff), and any planned committees.
  - Clarify the mechanism for coordination and decision-making during the Implementation Phase;
  - Indicate how progress will be monitored over time.

- Identify any cross-cutting activities that are necessary to support the country’s carbon pricing readiness, including:
  - Training and capacity building requirements;
  - Communication needs, as well as, needs to facilitate awareness-raising among key stakeholders and the public in order to support consultations;
  - Consultation plans to be carried out during the PMR Implementation Phase. This information may include: objectives, desired outcomes, agendas, participants, time requirements, as well as a plan to integrate stakeholder feedback in the process of developing a market instrument (including carbon pricing readiness components).
  - Stakeholder engagement plans that identify key sub-national governments and/or agencies (e.g., municipality authorities) that may be important for the consideration and/or implementation of a market instrument (including carbon pricing readiness components). Identify the key private sector entities and/or associations that may be affected by a new market instruments (including carbon pricing readiness components) that would need to be consulted. Identify key civil society representatives (e.g., environmental organizations) that would need to be consulted and engaged;

C. **Activities, deliverables and proposed budget**

Outline the activities, along with their corresponding deliverable(s) and estimated budget, to be undertaken under this Building Block during MRP Implementation. The same information, along with a timeline, should be included in Building Block 6.
Building Block 6. Summary of Activities, Timeline and Budget

A. Rationale and guidelines
Please provide the following information from the various MRP elements outlined in each Building Block using Table 1 below as a template:

- An outline of planned activities (as identified in previous building blocks) for the MRP Implementation Phase, along with the corresponding deliverable(s) for each activity;
- A schedule (timeline) to fulfill these activities;
- A budget summarizing the financial requirements to support these activities; and
- The funding sources to cover these financial requirements as follows:
  o Using Table 2 below as a template, highlight the PMR funding request as well as other (confirmed and/or potential) funding sources (including from the national government, other governments and/or donors (as appropriate)); and
  o Identify other activities undertaken or planned that are related to your planned PMR activities and indicate the sources of funding for these other activities.

<table>
<thead>
<tr>
<th>Building Block</th>
<th>Activity</th>
<th>Expected Deliverable</th>
<th>Time required for completion (# days/# months)</th>
<th>Estimated Completion date</th>
<th>Estimated overall budget</th>
</tr>
</thead>
<tbody>
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</tbody>
</table>

TOTAL Estimated Budget

<table>
<thead>
<tr>
<th>Building Block</th>
<th>Activity</th>
<th>Party Responsible for Ensuring Action</th>
<th>Sources of Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>PMR Funding Request</td>
<td>National government</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Other (if applicable)</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

TOTAL
Annex I
Useful references (not comprehensive)


California Air Resource Board, Cap-and-Trade website, www.arb.ca.gov/cc/capandtrade/capandtrade.htm


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