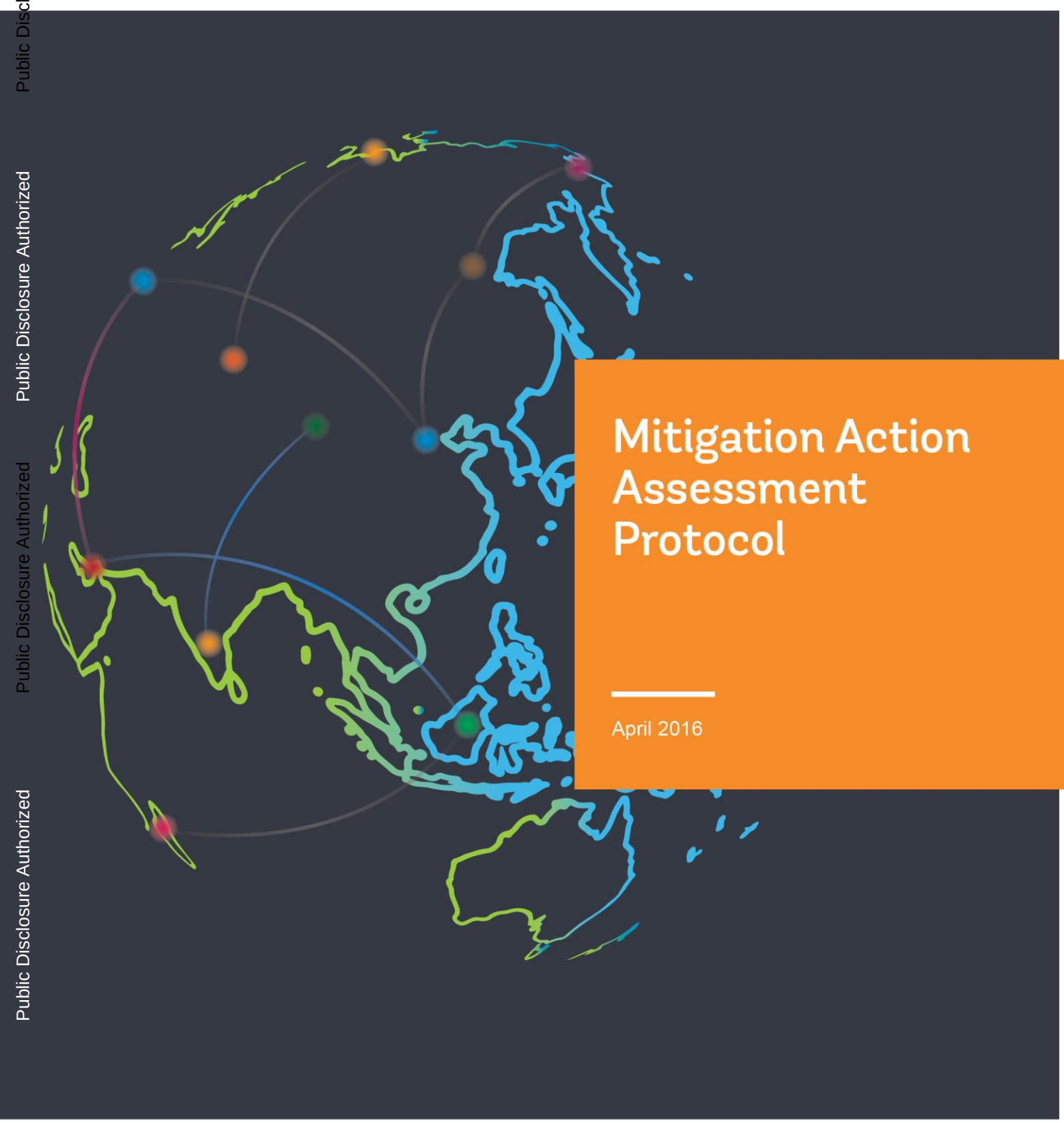
Networked Carbon Markets



Mitigation Action Assessment Protocol

April 2016

WORLD BANK GROUP
Climate Change

This document was prepared by DNV GL Energy for the World Bank Group and has been expert reviewed by the International Institute for Sustainable Development and the New Climate Institute.

It identifies a series of modules, indicators and methodologies for assessing different mitigation actions to contribute to achieving the goal of an internationally accepted system for comparing carbon assets and eventually, their trade and exchange.

It is expected that the modules, indicators and methodologies outlined in this document will evolve based on discussions with stakeholders, further technical work, and practical application. This document will be periodically updated and uploaded to: http://www.worldbank.org/en/topic/climatechange/brief/globally-networked-carbon-markets.

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Acknowledgements

This report is the outcome of a World Bank project led by Chandra Shekhar, Marcos Castro and Bianca Sylvester.

The report benefited from the guidance provided by Vikram Widge and Neeraj Prasad, and the valuable contributions and perspectives of our colleagues, ensuring the quality and clarity of this report, Pablo Benitez, Eduardo Dopazo, Johannes Heister, Wendy E. Hughes, Klaus Oppermann, Harikumar Gadde, Borja Garcia Serna and Mandkhai Bayarsaikhan. Technical editing was carried out by Maite Lasa Garcia.

The report builds upon work commissioned to a DNV GL team led by Miguel Rescalvo, and also consisting of Edwin Aalders, Sofia Aguado, Ramiro Barrios, Eduardo Dopazo, Michael Lehmann, and Pablo Reed. Detail written contributions and comments were provided by Frederic Gagnon-Lebrun (International Institute for Sustainable Development) and Seton Stiebert (New Climate Institute).

Last but not least the team would like to acknowledge the participation and inputs provided by all relevant stakeholders that participated in the consultation process and the several working groups and workshops that were organized to discuss early drafts.

The report was edited by Tasha Eichenseher.

This analytical work and report was financed by the CF-Assist Fund, a multidonor trust fund administered by the World Bank and cosponsored by Switzerland and Spain.

Executive Summary

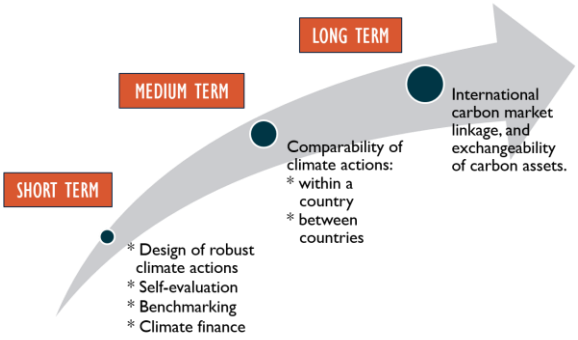
The new international climate policy architecture that is expected to emerge from the Paris Agreement, appears to leave considerable discretion to Governments as to the form and scope of their mitigation contributions. In response, carbon markets are expected to undergo a significant transformation in an effort to enhance transparency and compare a patchwork of different approaches.

Kyoto Protocol mechanisms created a top-down system for measuring emissions reductions in what could be called the first generation of carbon markets. But the current limited functionality of such mechanisms has led to the development of several bottom-up approaches in local, regional, and national climate policy frameworks. These strategies promote emissions reductions through the implementation of mitigation actions. The recent climate change agreement reached in 2015 in Paris sets the pace for the next generation of carbon markets.

Unlike commitments under the Kyoto Protocol, the Nationally Determined Contributions (NDCs) submitted by countries in the context of the Paris Agreement reflect the considerable discretion left to national governments on the form, scope, and timing of their mitigation contributions. While this enables broad participation, it also means that a patchwork of different targets, policies, and programs has been proposed in the 195 NDCs that have been submitted. There is also wide variation, particularly among developing countries, in how the NDCs are to be achieved and implemented. For example, while 40 countries (plus 23 sub-national jurisdictions) are designing or implementing different types of carbon pricing instruments, others are choosing crediting mechanisms, renewable energy standards, and/or energy efficiency measures. While ambitious, the Paris Agreement offers little technical guidance about how to ensure adequate design and implementation of these actions. This, therefore, places significant demands for a well-functioning framework to guide, measure, compare, and track the progress of mitigation actions and carbon assets, within countries and between them.

Against this backdrop, this Mitigation Action Assessment Protocol (MAAP) is proposed as a key tool for achieving transparency in how these climate actions are designed and how they compare in terms of mitigation value. The long-term goal is to have the MAAP serve as an internationally accepted system for comparing carbon assets and, eventually, the trade potential and exchangeability of carbon credits. Such a framework does not yet exist, but is a much-needed step in effectively and efficiently addressing climate change on a global scale.

Short, Medium, and Long-Term Goals and the Scope of the MAAP:



The MAAP focuses on the mitigation value of a particular type of carbon asset—carbon credits. Carbon credits are generated when jurisdictions reduce carbon emissions below a baseline level. The increasing number and diversity of mitigation actions that are emerging has accelerated the need for independent analyses of the various initiatives and the mitigation value of the carbon credits they generate. The approach presented in this document falls within the broader scope of work from the World Bank Group's Networked Carbon Markets (NCM) initiative.

The proposed MAAP can be applicable to a range of mitigation actions, as well as the evolution of those actions over time. As already stated, the ultimate goal of the MAAP is to compare carbon credits from jurisdiction to jurisdiction and inform linking decisions. However, in the short term, given the current efforts by different jurisdictions toward the design and implementation of mitigation actions, the MAAP is first and foremost intended to be a tool to facilitate prioritization, benchmarking, and better-designed mitigation actions. It can also be used to assist different stakeholders in defining the elements of a robust mitigation action and the level of development expected of the different components required for an acceptable level of confidence in the success of the action. The MAAP could help inform the design of regulatory instruments, such as Nationally Appropriate Mitigation Actions (NAMAs). Doing so at the incipient development stage of mitigation actions will surely serve not only to establish the basis for comparing tradable units

for future crediting mitigation programs, but also to assist in the development of sound, supported, or unilateral mitigation actions.

The **Networked Carbon Markets (NCM)** initiative complements the World Bank Group's ongoing low-carbon development activities and its efforts to promote carbon markets as critical to achieving climate mitigation at large scale and in an effective and cost-efficient way. Its end goal is to collaboratively develop the post-2020 services and institutions needed for an international carbon market that links climate actions in a way that is inclusive, transparent, efficient and has environmental integrity.

The three key components of the Program are:

1. Independent assessment framework to guide and assess the implementation of climate actions. The framework would provide countries with information needed to understand, compare, and eventually link heterogeneous climate actions.
2. International Carbon Asset Reserve (ICAR) to help domestic regulators manage market risks or address market failures.
3. International Settlement Platform to track cross-border trades and possible clearing house function.

These three key components of the NCM Initiative are to be introduced in a phased manner, initially supporting countries to design robust climate actions and facilitating comparability and linkage of their own domestic climate actions, before being extended to markets on a bilateral, regional and international basis.

The MAAP can be applied ex-ante and ex-post, that is, at the design stage or during or after implementation. At the design stage, the assessment looks at the future ability of the mitigation action to deliver its objectives and targets within a set time frame; while at the implementation stage and after implementation, the assessment looks at the achievements that have been reached since the last assessment, as well as at the processes in place to assure future deliverables1.

At the mitigation action level, the MAAP assesses the carbon integrity and the development benefits of a specific mitigation action. Carbon integrity is the extent to which the intervention is expected to result in real, measurable, and long-term emission reductions. Mitigation actions usually include social, environmental, financial, and other development benefits which, to a greater or lesser extent, are a key driver in the decision of financing and implementing such actions. Carbon assets might be only a part of the justification for implementing a mitigation action.

The assessment of the mitigation value is important if the carbon credits generated from the mitigation action are intended to be traded. The MAAP also proposes an approach to assess the mitigation value of an intervention, which is then not only determined by its isolated impact (carbon integrity) but also by its relevance in the context of jurisdictional effort. This combines analysis of the creditability of the actions implemented and the relative contribution to the global emission reduction effort, which is only likely to be relevant if the carbon assets are to be traded internationally. This examination is done within the specific context of the relative effort that each jurisdiction can actually make to contribute to climate change mitigation.

The MAAP is structured into independent modules that cover different risk categories, each of which includes a set of indicators that users can customize to their own interests. The assessment for each risk category is in the form of a score—an assigned value and relative weight to each key indicator in that risk category. Each indicator and risk category has default weight values assigned that can also be customized by the user.

The MAAP is formed by six independent modules. Four modules are applicable to the mitigation action itself, while two others cover the relative contribution of the executing jurisdiction, and, as already described, are only relevant if the carbon assets are intended to be traded internationally. This report focuses on the mitigation action program-level assessment, since that assessment is expected to be used in the short term as a tool to facilitate prioritization, benchmarking, and better-designed mitigation actions. In Annex 3 there is an initial approach to developing the modules related to the assessment of jurisdiction efforts toward mitigation.

The first four modules and their scope are the following:

Mitigation Action Program: This module´s assessment provides information on the quality of program design and the robustness of its implementation. It covers how the baseline scenario has been established and the mitigation alternatives considered, as well as how to select a portfolio of interventions, projects, and/or policies that form part of the mitigation action. It also addresses the methods proposed for calculating emissions reductions and the corresponding Monitoring, Reporting and Verification (MRV) plan.

[1] An important lesson learned after piloting the MAAP in Peru (see Annex 2) is that the ex-ante assessment will provide better insights beyond the concept stage and beyond the design of the mitigation action document. At least some level of clarity in institutional functions and capacity and/or some development in the intervention planning phase would be recommended.

Mitigation Action Management Entity: This module assesses the track record and capacity of the management entity to design and implement the proposed mitigation action program.

Investment Environment: this module of the MAAP covers the level of risk linked to the investment environment in the jurisdiction where the mitigation action is implemented.

The Mitigation Action Development Benefits module assesses the contribution of the program to sustainable development, beyond emissions reductions.

In the case of mitigation action assets that are intended to be traded internationally, as already described, the MAAP could then be used to provide a framework for the assessment of the mitigation value of the carbon asset on an international scale. If this is the case, the program level assessment is to be complemented with two additional assessment areas:

Jurisdiction Climate Change Mitigation Credibility: In order to evaluate the likelihood that the combined set of policies and implementation efforts will achieve the jurisdiction's stated targets, this module assesses a jurisdiction's credibility in the context of mitigation action.

A consideration of the Jurisdiction's contribution to the global emission reduction effort could also be considered, in the context of the current level of development and expected efforts.

The process to develop the MAAP has been inclusive, and has taken into account the different viewpoints of various experts from academia, think tanks, the private sector, development banks, multilateral organizations, donor countries, developing countries, and consultants. A group of technical peer reviewers from the Asia LEDS Partnership's Asia Training Center, IDEAcarbon, and the FC2E carbon fund was also invited to do an in-depth review of the proposed MAAP. Public consultation processes were organized in Latin America, Asia, and Europe during MAAP development. The MAAP was also reviewed by the International Institute of Sustainable Development and piloted in Peru during the preparation phase of the Partnership for Market Readiness.

Background

Mitigation Actions: a Bottom-Up Approach

The lessons learned through the top-down approach to global carbon markets led by the Kyoto Protocol have been useful to demonstrate that pricing carbon can redirect investment flows into low-carbon investments. However, the impact has been limited in scope, and the structure of the associated mechanisms[2], among other considerations, has not facilitated large-scale emissions reductions for the long-term.

Unlike commitments under this first generation of carbon markets during the Kyoto Protocol, the Nationally Determined Contributions (NDCs) submitted by countries in the context of the recent Paris agreement reflect the considerable discretion left to national governments on the form, scope and timing of their mitigation contributions. While this enables broad participation, it also means that a patchwork of different targets, policies and programs have been proposed in the 195 NDCs that have been submitted. There is also wide variation, particularly among developing countries, in how the NDCs are to be achieved and implemented. For example, while 40 countries (plus 23 sub-national jurisdictions) are designing or implementing different types of carbon pricing instruments, others are choosing crediting mechanisms, renewable energy standards, and/or energy efficiency measures. While ambitious and setting the pace for a new generation of carbon markets, the Paris Agreement offers little technical guidance about how to ensure adequate design and implementation of these actions. This, therefore, places significant demands for a well-functioning framework to guide, measure, compare and track progress of climate actions and carbon assets, within countries and between them.

Against this backdrop, this Mitigation Action Assessment Protocol (MAAP) is proposed as a key tool for achieving transparency in, firstly, how these climate actions are designed and, secondly, how they compare among each other and what their mitigation value is. In the long run, the MAAP is intended to contribute to achieving the goal of an independent and internationally accepted system for comparing carbon assets and eventually, trade and exchangeability of carbon credits. Such widely-used assessment framework does not exist yet but it is a much needed step in order to effectively and efficiently address climate change on a world wide scale.

Mitigation Action

Mitigation action is a broad definition that includes a wide range of interventions and/or instruments (policies, projects, programs, etc.) that result in emission reductions and which a jurisdiction undertakes as part of its commitment to reduce global greenhouse gas emissions. Mitigation actions can be designed and implemented not only at the national level but also at the subnational level, with an active role of cities, and at the supranational level, with an increased interest on using economies of scale to develop mitigation actions at the regional level. In the context of this document also referred to as intervention, effort or initiative.

The following is a non-comprehensive list that provides examples of mitigation actions and illustrates the broad sense of the definition:

- *Nationally Appropriate Mitigation Actions (NAMAs)*
- *Plans, ordinances, policies and regulations (national or subnational)*
- *Infrastructure projects (energy efficiency initiatives, renewable energy generation plants)*
- *Sectorial interventions (transport, buildings, industry, agriculture, forestry, water)*

The MAAP responds to this new reality of the carbon markets by exploring the concept of an independent assessment framework for a particular type of carbon asset – 'carbon credits'. Carbon credits are generated by reducing carbon emissions below a baseline. This is a counterfactual scenario that is determined through analyses of the socio-political economic situations in which an emission reduction program takes place, and the construction of a hypothetical future baseline emissions scenario. But it is a counterfactual scenario – so where counting starts and how the counterfactual is defined, will determine what the carbon credit is worth, not in terms of its financial value, but in terms of its impact on the climate. It is, therefore, important to be aware of the assumptions and methodologies that lie beneath the counterfactual scenarios in order to understand a carbon credit's impact on the climate or its 'mitigation value'.

A common and widely accepted assessment framework to determine the mitigation value of carbon credits with greater transparency in the carbon market and at the program level would contribute to:

- Facilitate prioritization and benchmark of mitigation actions, and improvement of their design and implementation.

[2] Such as Clean Development Mechanism (CDM) or Joint Implementation (JI)

- Enhance comparability across mitigation actions to compare different carbon credits and their mitigation value.
- Provide inputs for decisions related to trading and exchangeability of carbon credits.
- Increase confidence to investors on the viability and level of risk of different mitigation actions and related carbon credits ensuring environmental integrity.

In the short term, a mitigation action assessment framework can help any jurisdiction at the program level to systematically self-evaluate its mitigation actions and demonstrate its results. Jurisdictions are seeking guidance to ensure adequate mitigation action design and implementation, how to prioritize a menu of mitigation action options as part of their climate change strategic planning, or how to benchmark mitigation actions against others of similar characteristics to promote continuous improvements. In this sense, an assessment framework becomes relevant to assess environmental integrity (i.e. the extent to which the intervention is expected to result in real, measurable and long-term emission reductions) and to demonstrate achievements (either towards compulsory goals or voluntary pledges) through increased transparency. At the same time, mitigation actions usually bring additional social, environmental, financial and other development benefits, which to a greater or lesser extent are becoming a key driver for the decision of financing and implementing such actions, with the carbon credits only being part of the consideration for implementing the program. An assessment framework can also help jurisdictions assess the extent to which such development benefits associated with a mitigation action can contribute to maximizing the impact of funding allocated to a mitigation action.

In the medium term, and in a reality composed by multiple mitigation actions, implemented across jurisdictions, a [3]. The Mitigation Action Assessment Protocol (MAAP) is a first step to create a common assessment framework applicable to a wide range of mitigation actions and carbon credits and useful for a variety of users. Instead of common assessment framework would allow for comparability of mitigation actions across countries.

In the long term, a jurisdiction might consider allowing the use of certain carbon credits from outside its boundaries for compliance within the jurisdiction. Policymakers overseeing carbon markets might face the challenge to measure the exchangeability and comparability of efforts among markets and the relative merits of a variety of different approaches that may be developed across the globe. At this point, jurisdictions will be interested not only in the environmental integrity but also in the mitigation value of the intervention. The mitigation value of a mitigation action is not only determined by its isolated impact but also by its relevance in the context of the jurisdiction's level of effort and the NCM's alignment with the jurisdiction's goals and targets and their relevance for a global effort towards climate change mitigation. In a future networked market, exchange rates might also become relevant and will be agreed upon by the jurisdiction deciding to participate in the market, along with the process of converting scores or assessment results to discount rates and eventually, exchange rates.

Jurisdictions are continuously seeking ways to finance their climate change initiatives and solutions to address the concerns of investors. At a minimum, investors demand an understanding of the environmental integrity of the initiative and its associated development benefits, and investment security. When jurisdictions explore linking and trading opportunities among each other, investors will also seek an understanding of equivalence and comparability among the different mitigation actions promoted by different jurisdictions. The assessment framework can inform these needs too.

The MAAP is being led by the World Bank Group's Networked Carbon Markets (NCM) initiative.

[3] The Networked Carbon Markets (NCM) initiative complements the World Bank Group's ongoing low-carbon development activities and its efforts to promote carbon markets as critical to achieving climate mitigation at large scale and in an effective and cost-efficient way. Its end goal is to collaboratively develop the post-2020 services and institutions needed for an international carbon market that links climate actions in a way that is inclusive, transparent, efficient and has environmental integrity.

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a threshold approach that results in a yes/no conclusion, the MAAP proposes a risk based approach by which users assign a value to each carbon credit or mitigation action based on performance against indicators. The indicators are grouped in risk or assessment areas that assess the fundamental aspects to be considered when designing and implementing a mitigation action. The score assigned to the indicators is then weighted to obtain a final score for the environmental integrity and associated development benefits of the mitigation action. The modular structure of the MAAP will enable customization by the user, who may eliminate, change or add indicators and modify the default weights depending on the application of the MAAP.

At the stage of development presented in this document, the MAAP is recommended for ex-ante evaluations, that is, mitigation actions at design stage. However, an important lesson learned extracted after piloting the MAAP in Peru (further detailed in Annex 3) is that the ex-ante assessment will provide better insights beyond the concept stage and beyond the design of the mitigation action document. At least some level of clarity in the institutional functions and capacity, and/or some development in the intervention(s) planning would be recommended. The MAAP can also be adapted for ex-post evaluations after implementation.

The evolving nature of mitigation actions and carbon markets demands a flexible protocol open for improvements according to experts suggestions and lessons learned by users when applying the protocol. It is expected that the initial version presented here will continue evolving and improving as it is tested, adopted and applied across jurisdictions.

This document intends to familiarize potential users of the MAAP with its structure, assessment methodology, and potential applications. A user's guidance section will orient the user in how to apply this assessment depending on the desired application (such as ex-ante or ex-post assessment, or single project mitigation action or a program of interventions mitigation action) and what sources of information should be used to assess each indicator. Different users and uses of the MAAP are also discussed. In the annexes, the document explores other aspects that might be of interest to the reader, such as the results of initial review processes and pilot applications, and a proposed extension of the MAAP to assess mitigation value and the jurisdiction's level of ambition, which will be a relevant step towards carbon asset exchangeability in carbon markets.

Evaluation Tools: Rationale for the MAAP

The MAAP proposes an approach that goes beyond existing assessments or verification/validation tools. This is because it is applicable to a wide range of mitigation actions to reflect the existing diversity of interventions and ultimately help carbon markets develop by reducing regulatory fragmentation, improving market standards and enhancing risk analysis and transparency. Furthermore, it allows for comparability among mitigation actions, and eventually exchangeability.

This section explores other tools traditionally used for assessment or evaluation of carbon assets and climate change initiatives.

Other assessment and verification/validation tools:

Historically the carbon market evaluation of carbon assets has used validation and/or verification processes. The validation and verification of carbon assets, in the form of CERs from CDM, VERs from voluntary schemes or tradable units from emissions trading schemes, are an important part of how emissions reductions have been assessed as a form of carbon assets. At the project level, under the CDM and voluntary markets, validation and verification provide a yes/no outcome on whether the project will potentially achieve its envisaged emissions reduction targets or the actual reported emissions reductions. This process however does not identify the relative supporting mechanisms of the projects or measure how these are being addressed; it only attests whether those minimum requirements as set by the CDM and / or voluntary markets have been met and are delivering the promised emission reductions. It is therefore currently not possible for the market to differentiate among these projects that have met these minimum requirements, or to evaluate to what degree projects perform, vis-à-vis the threshold. Although this information gap is not a problem in the view of a compliance market, it does limit the ability to compare these projects and the markets' ability to apply any assessment to complement current valuation tools.

Unlike validation/verification, a mitigation action assessment will allow a range of possible outcomes, addressing the unique characteristics of each emission reduction intervention, with particular emphasis on risk profile and the ability of the users to apply it to their particular interest area. Assessed NCMs will no longer be unique and isolated, but will rather be comparable to other initiatives, thus allowing a wide range of asset classes to be compared, valued and benchmarked on the basis of uniform scoring principles. In this context, carbon asset assessments will be useful in providing stakeholders with key insights on a range of risk factors, as well as allowing the valuation of additional development opportunities.

In addition, the new mitigation initiatives being proposed around the globe give increased relevance to other

sustainable benefits beyond emissions reduction. For mitigation actions like NAMAs or similar instruments, the assessment should also be useful to evaluate the economic, local environmental and social development benefits, or so-called development benefits, that the intervention does or does not bring. However, while reducing emissions in a way that preserves environmental integrity contributes to sustainable development, the proposed MAAP clearly differentiates between the score related to environmental integrity and the evaluation of other development benefits that can be an integral part of the definition of the overall quality of the assets, and in particular of mitigation actions. From a national perspective, and from the perspective of impact for donors or investors, both climate change mitigation and development benefits may be important, and the assessment of each of these aspects would thus be of interest.

The consideration of these two aspects, environmental integrity and development benefits, leads to the importance of having an assessment protocol that is modular, and from which different users can select the relevant parts for the outcome sought, and emphasize those particular areas they see fit. In addition, a transparent assessment of mitigation actions and related carbon credits can enable project financing through enhanced analytics and performance measurement. The assessment can eventually further increase liquidity by attracting new, value-based corporate investors to the existing market.

To summarize, the MAAP represents an initial step to contribute to a globally used assessment framework that:

- Leads to a widely accepted mechanism to compare different assets on the basis of environmental integrity and development benefits. These assets will be different in nature, target different sectors and be geographically distributed.
- Create value for implementing jurisdictions to prioritize, select and benchmark mitigation actions.
- Become a widely accepted technical input for future exchangeability of different carbon assets.
- Facilitate continuous improvement and the identification of the level of effort required to improve the score results at a project or program level, as well as at the institutional level.

Ultimately, the MAAP should contribute to creating a more efficient international carbon market that offers access to a broader pool of abatement options, increased market liquidity and reduced price volatility.

Mitigation Action Assessment Protocol

Good Practice Guidelines

In order for this assessment approach to be broadly accepted, users should consider the following practices when applying the MAAP:

Be independent, transparent, and accountable, and make sure key players are engaged: Independence of the organizations that assess carbon assets will ensure fairness to all stakeholders. Transparency is necessary to clearly understand the rules, methods, and criteria. Accountability and engagement will create support to the system and make it move and evolve over time.

Provide as much certainty and predictability as is practicable: This will be important to ensure that the assessment is both useful and affordable at the same time.

Clearly define functions and a framework for assigning responsibilities: This includes responsibilities such as gathering of information, operation of the assessment framework, and more.

The following five fundamental accounting and reporting guidelines[4], defined by the GHG Protocol[5], are the result of a review of best practices for accounting and reporting the GHG effects of a mitigation action. They have been useful to ensure that the MAAP includes a comprehensive set of indicators to assess environmental integrity and development benefits.

Relevance: Ensure the GHG assessment appropriately reflects the GHG effects of the policy or action and serves the decision-making needs of users and stakeholders—both internal and external to the reporting entity. Apply the principle of relevance when selecting the desired level of accuracy and completeness among a range of methodological options.

Completeness: Include all significant GHG effects, sources, and sinks in the GHG assessment boundary. Disclose and justify any specific exclusion.

Consistency: Use consistent accounting approaches, data collection methods, and calculation methods to allow for meaningful performance tracking over time. Transparently document any changes to the data, GHG assessment boundary, methods, or any other relevant factors in the time series.

Transparency: Provide clear and complete information for internal and external reviewers to assess the credibility and reliability of the results. Disclose all relevant methods, data sources, calculations, assumptions, and uncertainties. Disclose the processes, procedures, and limitations of the GHG assessment in a clear, factual, neutral, and understandable manner through an audit trail with clear documentation. The information should be sufficient to enable a party external to the GHG assessment process to derive the same results if provided the same source data.

Accuracy: Ensure that the estimated change in GHG emissions and removals is systematically neither over nor under actual values, as far as can be judged, and that uncertainties are reduced, as far as practicable. Achieve sufficient accuracy to enable users and stakeholders to make appropriate and informed decisions with reasonable confidence as to the integrity of the reported information. Accuracy should be pursued as far as possible, but once uncertainty can no longer be practically reduced, conservative estimates should be used.

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[4] IISD Supplementary Note to Carbon Integrity Scorecard (2015)
[5] World Resource Institute (2014). *Policy and Action Standard: An accounting and reporting standard for*

Structure of the Mitigation Action Assessment Protocol

The different key components of the MAAP are the modules, the assessment areas, and the key indicators.

Scoring Modules: The MAAP is composed of four modules, each of which is divided into assessment areas, each with their own subset of key indicators.

Module 1—Mitigation Action Program: This module's score provides information on the quality of the program design and robustness of internal and external factors that might condition its implementation. It covers how the baseline scenario has been established, the mitigation alternatives considered, and the selected portfolio of interventions in the form of projects and/or policies that might form part of the mitigation action. It also addresses the methods proposed for the calculation of emissions reductions and the corresponding MRV plan.

Module 2—Management Entity: This block rates the track record and capacity of the management entity to design and implement the proposed mitigation action.

Module 3—Investment Environment: This block of the MAAP covers the level of risk linked to the investment environment in the jurisdiction where the mitigation action is implemented.

Module 4—Mitigation Action Development Benefits: This module assesses the environmental integrity of the mitigation action and rates its contribution to sustainable development, beyond emissions reductions.

Risk Modules: The MAAP covers four independent risk modules. The first three are applicable to the mitigation action itself and evaluate its environmental integrity, while the fourth covers the mitigation action development benefits. Each module has its own score, which is always derived from the score of each key indicator combined with assessment area scores included within the module. The structure of the modules of the MAAP enables customization by the user, who may opt to eliminate, change, or add indicators and modify the default weights, depending on the application of the MAAP.)

Assessment Areas: Each assessment area covers a specific risk area within a module, as illustrated in the figure below.

Key Indicators (KIs): Key indicators are specific occurrences that can individually or collectively affect the mitigation action. They are the relevant issues detailed under each assessment area.

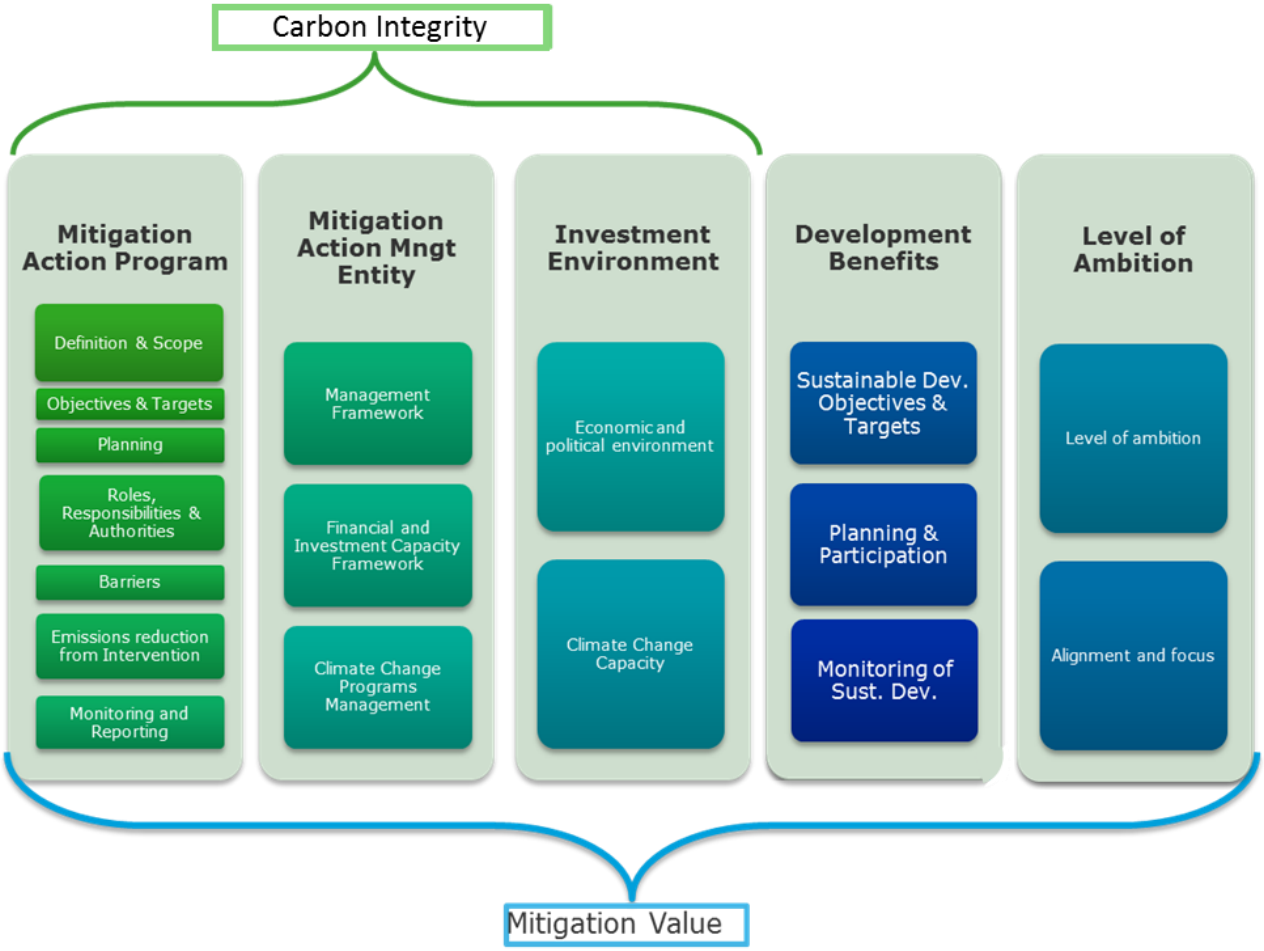
The scoring of different key indicators assists in concluding on a level of confidence for each module. As already pointed out, at the design stage, the assessment looks at the future ability of the Mitigation Action to deliver its objectives and targets within a set time frame; while at the implementation stage, the assessment looks at the achievements that have been reached since the last assessment, as well as at the processes in place to assure future deliverables.

The level of confidence can be translated to a level of implementation or development for each key indicator. For each key indicator, the MAAP includes a description of the possible level of implementation that can be observed during the assessment. For example, for the key Indicator "definition, planning and review of National Mitigation Action program objectives and targets," the highest score refers to the case of "the Mitigation Action objectives and targets that follow the SMART6 principle. Responsibilities and authorities related to the objectives are clearly defined. A plan exists for its implementation, and there is ample evidence of the periodic follow-up of the targets. In the case of a deviation of results, actions are decided upon and planned to correct the same." The lowest score, translating a lower level of confidence in the robustness of the program and the possibilities of success, relates to that case where the Mitigation Action does not include clear objectives and targets or, more commonly, those that are inconsistent across the program documentation, or are not communicated or deployed to the responsible units for implementation.

> ***Assessment of Mitigation Value (MV):*** *The MAAP can be used to enable comparability, linkage, and exchange of units generated by different mitigation actions. Governments that choose not to trade internationally may choose to apply MV to enable the comparability and linkage of mitigation actions within their own jurisdiction.*
>
> *MV has a unitary definition. It does not refer to the atmospheric impact of a ton of CO2e reduced. One expression that has been sometimes used in relation to the NCM Initiative and MV is that "a ton is not a ton". This has sometimes been interpreted as implying that a ton of GHG reduced in one place does not have the same environmental effect in terms of combating climate change. That is not the case and is not the intent. MV instead applies to carbon units and not of tons of carbon.*

[6] SMART: Simple, Measurable, Attainable, Relevant and Time measured.

Mitigation Action Assessment Protocol Modules and Assessment Areas



Assessment Area Weighting: This represents the relative importance of each risk area within a module. A higher weight assigned to an area will allocate more relevance to this area with respect to the other risk areas in the module. Areas with a larger impact on the level of confidence are to be allocated more weight.

The MAAP allows the user to predefine the weight of each module based on their scoring objectives. For example, for self-evaluation purposes of a national portfolio, the development benefits module may be the most relevant, followed by the mitigation action management entity module, in order to determine the most effective allocation of resources and investment to achieve reductions and drive additional sustainable development objectives. For a development bank supporting a mitigation action, the design and the management entity blocks may be the two key blocks to consider at this point.

Key Indicator Weighting: Each key indicator is also weighted within each area. A higher weight for a key indicator will assign a larger impact on the level of confidence for that specific indicator.

Score Range: The score range reflects the minimum and maximum scores for the observed level of development of the key indicator. The methodology assigns, by default, the midpoint as the score for the indicator. Nevertheless, the methodology allows for the user to provide a different score within the range (override score). In this case, the score is required to justify the basis for the deviation.

Level of confidence: Proposed, but not defined in detail here, is a further evaluation of the level of confidence the score has in the evidence provided, where the evidence is qualitative. This evidence can be through internal and/or external documentation. Where the evidence is quantitative, such as through past emissions reduction performance, the level of confidence can be enhanced through 3rd party assurance of said performance.

The scores are then calculated as:

$$KI\ score = KI\ weighting\ x\ if\begin{pmatrix} override\ score = '', median \\ (KI\ score\ range), override\ score \end{pmatrix}$$

$$module\ area\ score = \sum(area\ weighting\ x\ KI\ score_i)$$

$$module\ score = \sum(module\ area\ score_i)$$

In summary, each module is composed of risk areas that are weighted subject to their relevance. These elements, in turn, are assessed based on scores assigned to the key indicators (KIs) expressed as a range (proposed as 0-40; 40-60; 60-100).

Description of the Modules and Indicators

Module 1—Mitigation Action Program: This module provides information on the quality of the program design and robustness of its implementation. It is a key component to assess how environmental integrity is ensured. The key indicators included in this module cover how the baseline scenario has been established, the mitigation alternatives considered, and the portfolio of interventions in the form of projects and/or policies that are part of the mitigation action selected. It covers the MRV plan and the methods proposed for the calculation of emissions reductions.

The MAAP presented in this document includes the key indicators for scoring prior to implementation of the mitigation action (ex-ante). At the design stage, it addresses the scope, the mitigation program objectives and targets and their alignment with national policies and priorities. It also scores the planning of the program to evaluate the level of risk involved in its implementation and the proposed investment structure and planning. For ex-ante assessments, the user should bear that the assessment will be most informative if the mitigation action is not only reflected in documents but some level of implementation of the institutional arrangements has already started. For the post-implementation assessment, the focus is on the results achieved, the monitoring and reporting of emissions, and how corrections are handled when the results deviate from their established objectives and targets. A more in-depth discussion on ex-ante and ex-post assessment can be found in section “Applicability of the Mitigation Action Assessment Protocol: Uses and Users.”

The sets of indicators in this module have been classified in the following assessment areas (more detail of each key indicator can be found in Annex 1):

Definition and Scope: The mitigation action (MA) design should include a description of the intervention(s) and the timeframe for the implementation, geographical boundaries, and alignment with climate change mitigation institutional priorities, among other factors. These elements set the stage for developing the MA.

Objectives and Targets: The objectives should be defined, contribute to climate change mitigation, and be aligned with the jurisdiction’s priorities. Targets should also be quantified, taking into account a well-defined baseline, and be well justified.

Planning: Users should assess the extent to which their plan has been designed and implemented to achieve the MA’s objectives and targets. Plans should include a number of key elements, such as financing requirements and a description of each of the envisaged individual interventions.

Roles, Responsibilities and Authorities: Identification of the roles, responsibilities, and authorities needed to ensure successful implementation of the MA, including the definition of the entities best suited for each role and responsibility is critical. This will help ensure that the necessary resources are available.

Documents, Document Control and Records: Documentation procedures and systems are required to effectively manage the program and its components. There should also be an emissions reduction tracking system. The documentation that should be compiled and archived should also be listed.

Barriers: Plans should identify the challenges for implementation.

Emissions Reduction from Intervention(s): There should be a process to identify, develop, and evaluate each intervention and its impact on emissions reductions, including the necessary emissions reductions calculations methodologies.

Monitoring and Reporting: These indicators should assesses the extent to which an MRV action plan is adequately designed and implemented, including key performance indicators, GHG monitoring and reporting systems, third party periodic audits, and disclosure of results.

Module 2—Management Entity: This module rates the track record and capacity of the mitigation action management entity to design and implement the program. It covers its investment management capabilities,

technical expertise, and the assessment of the entity's management system.

The indicators in this management entity module have been classified in the following assessment areas (more detail of each key indicator can be found in Annex 1):

Management Framework: This indicator assesses the extent to which relevant entities have been identified, such as the MA Management entity, agencies responsible for monitoring, and others. Mandates, roles, and coordination among each other should also be well defined, along with an overall management system for the MA.

Financial and Investment Capacity Framework: The MA design should include methodologies to report and provide transparency on the financial flows of the MA and, in general, of relevant internationally financed programs.

Climate Change Program Management: This indicator assesses the role of the MA management entity in overall national climate change mitigation efforts, and the extent to which it has a dedicated area with adequate technical capabilities to promote MAs.

Module 3—Investment Environment: Within this module, the MAAP covers the level of risk linked to the investment environment in the jurisdiction where the program is implemented. It draws from internationally recognized ratings when possible related to the economic and political situation within the jurisdiction. It also assesses the climate change capacity at the jurisdictional level to the extent that can impact the success of the program in areas such as existence of registries or double counting.

Indicators in this investment environment module have been classified in the following assessment areas (more detail of each key indicator can be found in Annex 1):

Internationally Recognized Ratings: These measure how the jurisdiction ranks in several indexes on competitiveness, corruption, and human development.

Climate Change Infrastructure at the Program Level: This indicator assesses the extent to which the jurisdiction has an infrastructure to support new MAs, a mechanism to track all MAs and associated emissions reductions to avoid double counting, and transparency mechanisms to report on financial support received.

Module 4—Sustainable Development Benefits: This stand-alone module assesses the contribution of the mitigation action to sustainable development beyond emissions reductions. It covers the planning, implementation, and monitoring of the social, environmental, and financial benefits and how relevant stakeholders are taken into account. The types of development benefits that can be associated to any typical mitigation program are as variable as the different mitigation action options that might be feasible. Consequently, a standardized assessment of the development benefits is not possible and this module evaluates the process by the management entity to identify, plan, implement, and monitor specific development benefits of the respective mitigation action program. Good mitigation actions have a clear participatory approach in defining the development benefits with the appropriate stakeholders and interest groups.

At the same time, not all mitigation actions will be able to only have positive development benefits and as such this or other assessments will not be an assurance that no negative development benefits exists. Nonetheless, this assessment will have to assure that certain no-negative impacts criteria are being met by each individual program to assure that a minimum level is being met. Some of the no-negative impacts could be:

- No negative impact on red listed species

- No child labor in accordance with ILO criteria

- International accepted chemical waste disposal

These no-negative impacts will be assessed prior to the development benefits assessment and failing any of these criteria will result in a no-assessment.

The Indicators in this sustainable development module have been classified in the following rating areas (more detail of each key indicator can be found in Annex 1):

Development Objectives and Targets: These indicators assess the extent to which the MA specifically describes and measures its contribution to different aspects of sustainable development (social, economic, environmental), as well as potential negative impacts.

Planning and Participation: The MA should have a planning and implementation evaluation process in place to keep track of achieved results. There should be mechanisms for stakeholder engagement and participation throughout the MA design and implementation, including strategic partnerships and communication systems among participants.

Monitoring of Development Benefits: The comprehensive MA design should include indicators to measure contributions to sustainable development, mechanisms for accountability of stakeholders, and mitigation plans for negative impacts of the MA.

Sample Application of the Mitigation Action Assessment Protocol

The score for each module is the result of the aggregated scores of each set of key indicators within each assessment area. As already described, the assessment of the mitigation action program and the program management entity, together with the investment environment assessment provide an output related to environmental integrity, whereas the module related to other development benefits has a number of distinct scored elements that will assess the different social, local environmental, and financial development benefits.

By creating a matrix of the different key indicators and modules within the MAAP, each individual element will be assessed using predefined scoring criteria while the overall assessment result will be based on the customization the user applies to the weight of each module. This may change as the market matures and regulated markets develop around the concept and different stakeholders will have to agree on the weight of key indicators and modules to ensure exchangeability.

The following is an example of how the different areas of the 4 modules could be weighted:

Module	Rating Area	Weight	Number of Key Indicators
Mitigation Action Program	Definition and scope	14%	5
	Objectives and targets	20%	4
	Planning	22%	7
	Roles, responsibilities, and authorities	7%	5
	Barriers	7%	1
	Emissions reductions from interventions	20%	7
	Monitoring and reporting	10%	3
Mitigation Action Management Entity	Management framework	30%	2
	Financial and investment capacity framework	33%	3
	Climate change program management	37%	3
Investment Environment	Internationally recognized country ratings	45%	4
	Climate change infrastructure at the program level	55%	4
Development Benefits	Sustainable development objectives and targets	35%	7
	Planning and participation	45%	8
	Monitoring of development benefits	20%	6

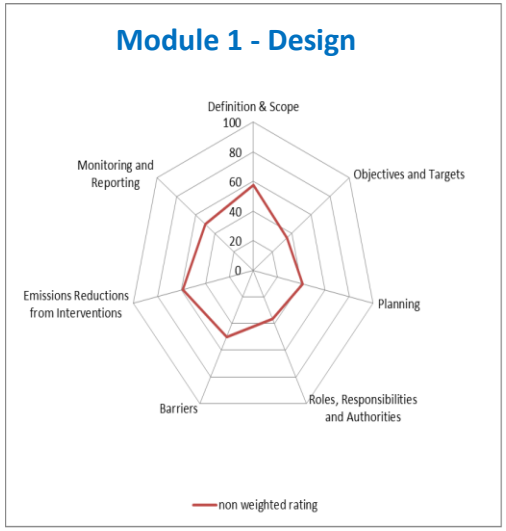
The following overview illustrates a potential model for the assessment of the scoring area "definition and scope" and some of its key indicators:

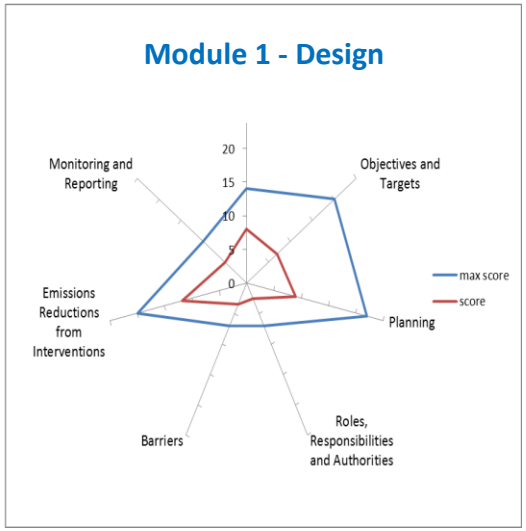
Module	Module Area	Area Weighting	Key Indicator	KI Weighting		Score Range	KI Score	Over-ride score	Level of Confidence	Over-ride Justification	KI Score
Program design	Definition and scope of the NAMA	20%	Scope of the NAMA and its contributions to Sustainable Development.	20%	The scope of the NAMA is clearly defined and documented.	60-100	40-60		high		10
					The scope of the NAMA is defined but it is not consistent along the documentation.	40-60					
					The scope of the NAMA is neither clearly defined nor documented.	0-40					
			Alignment with national priorities	20%	The scope of the NAMA is aligned with the country climate change mitigation priorities as defined by the government.	60-100	0-40	30	Low	Even when the NAMA addresses climate change mitigation and other benefits, it is taking place in a sector that is not a focus sector for the country as outlined in the National Climate Change Program	6
					The NAMA contributes to climate change mitigation but does not outline how it is aligned with the national priorities defined by the government.	40-60					
					The NAMA does not demonstrate how the scope is aligned with the national priorities defined by the government.	0-40					
			NAMA approval by relevant authorities	10%	The NAMAs have been developed and implemented with the approval of the national authorities (Approver in the UNFCCC NAMA Registry)	60-100	60-100		High		8

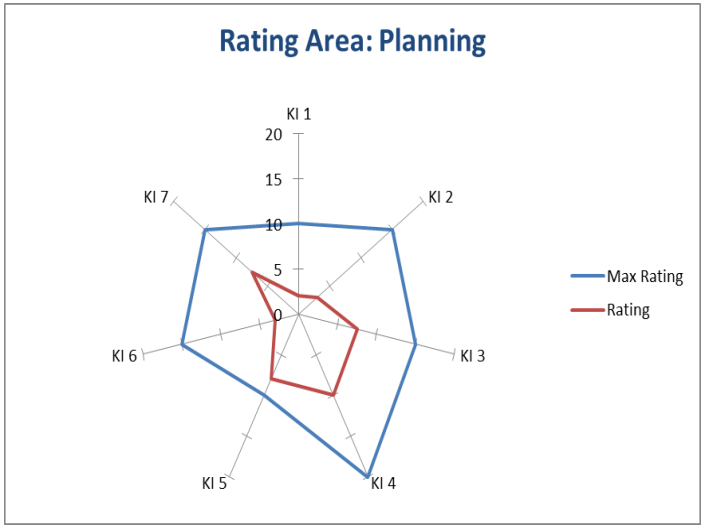
Module	Module Area	Area Weighting	Key Indicator	KI Weighting		Score Range	KI Score	Over-ride score	Level of Confidence	Over-ride Justification	KI Score
					The approval of the relevant national authorities has been requested but is still pending.	40-60					
					There is no evidence of the approval of relevant national authorities.	0-40					
			Starting date, milestone and duration of the Program	20%	The starting date of the NAMA is clearly defined and justified in terms of when the emissions reduction can be attributed to the NAMA. Milestones are included to allow progress and effectiveness to be reviewed.	60-100	0-40		High		4
					The starting date is defined but it is not possible to conclude that it is linked to the accounting of ER due to NAMA implementation.	40-60					
					The starting date is not clearly defined, is unjustified or is inconsistent across the NAMA documentation.	0-40					
			Boundaries for the Program in terms of geographical area	30%	The geographical boundary of the Program is defined in accordance to the jurisdiction authority of the NAMA Implementation Entity (NIE). The boundaries analysis includes the evaluation of possible double counting risk.	60-100	40-60	40	High	The geographical boundaries are defined. For proposed interventions, the NAMA identifies other possible jurisdiction that can be impacted. Nevertheless, the NAMA does not address how those	12
					The geographical boundary of the Program is defined but there is no justification of how it can	40-60					

Module	Modu-le Area	Area Weigh-ting	Key Indicator	KI Weight-ing		Score Range	KI Score	Over-ride score	Level of Confidence	Over-ride Justification	KI Score
					interact with the other ongoing programs and jurisdictions					cross effects in ER can be quantified.	
					The geographical boundary of the Program is not clearly defined.	0-40					

As an illustrative example, assuming a user decides to apply the MAAP with the weights provided in this report, the graphs bellow show assessment results for the design module. In this case, the program results in a low score in the risk area with the largest weight—the planning of the mitigation action. A closer look to the specific key indicators can facilitate the process of identifying those areas with a lower score and define a process to improve the results of a future new assessment:







Applicability of the Mitigation Action Assessment Protocol: Uses and Users

The MAAP is intended for a variety of uses and users, and to be applied throughout the lifetime of a mitigation action. For this reason, a balance has to be struck between including more details and elements to be assessed and ensuring that the assessment remains applicable to a wide range of mitigation actions. The assessment must also still remain fairly easy to update as the mitigation action evolves. In order to be useful to a wide range of users and different mitigation actions, the MAAP has been designed in a flexible and modular manner, which allows for adaptation.

The MAAP users are to define the level of consistency and comparability they want to see as a result of applying the MAAP across mitigation actions. For a nascent market, some experts recommend not allowing flexibility in the weighting of areas and their corresponding key indicators once consensus has been achieved for each version of the MAAP. This can be especially useful when the market wants to be able to compare the output. Users will know there was a uniform process in place, followed by a certain level of consistency by the different rating agencies involved.

An MAAP tool can have different degrees of sophistication. The more accessible forms (online, open code, etc.) will allow for broader use and recompilation of data. More restricted forms will impact benchmarking capabilities, allowing for more detailed information to be part of the assessment. The tool can easily be available through a stand-alone software package that can be run through Excel in order to have individual rating outcomes for each of the modules. However, it would be beneficial for the user to also be able to operate this assessment through an online version of the tool.

The design and implementation of mitigation actions are processes, which means various design elements of mitigation actions are likely to change over time. For that reason, there may be an interest in conducting multiple assessments at different stages of development of the mitigation actions. For example, ex-ante, during implementation, and ex-post. In this case, the MAAP used as a tool to measure progress toward safeguarding environmental integrity as the mitigation action is designed or implemented. At the design stage, that is, prior to implementation, the MAAP looks at the likelihood that the mitigation action will deliver its objectives and targets within a set time frame (e.g.. 1 year, 5 years, etc.). At the implementation stage, the assessment looks at the achievements that have been reached since the last assessment, and at the processes in place to assure future deliverables.

In any case, it is worth pointing out that assessing environmental integrity can be thought of as only an ex-post assessment to ensure that the claim of an emission reduction or removal for a mitigation action is for a reduction or removal that actually occurred. Ex-ante emission reduction or removal estimations are not of interest, as they do not have a direct bearing on how emission reductions or removals will be estimated and assessed during and after the implementation of the mitigation action. However, because there is an interest in evaluating environmental integrity risks as well as the environmental integrity of the mitigation action at the ex-ante stage, the MAAP indicators proposed evaluate risks such as those associated with setting a baseline from which emission reductions can be estimated, monitoring information to reliably estimate emission reductions, or achieving the intended development benefits.

The MAAP presented in this document is focused on mitigation actions at the design or early implementation stage, also referred to as “ex-ante.” This is aligned with the current status of most of these initiatives, at least those developed as NAMAs. The program will only assess the top level of development if there is already evidence of some implementation action, also referred to as “ex-post.” Even at the design stage of the program, it should still be possible to demonstrate how organizations have reacted in the past to deviations in planning and budget, and whether or not they have the capacity to handle the full implementation of the program. Programs that are documented with no implementation at all, can still get a good score, but not within the top tier. This is to reflect the evident risk related to programs that are just based on a documentation exercise[7].

When broadly used, the MAAP can provide useful information to compare different mitigation actions, improve the design of mitigation actions, and ultimately inform the mitigation value of carbon credits with potential for trade in carbon markets. Linking emissions trading schemes has also attracted interest as a means of

[7] Experience has already shown that these assessments do not to work too well for the typical case where a consultant develops a mitigation action (NAMA) fully documented and with the necessary processes comprehensively designed on paper but there has not been any implementation at all. Therefore, there needs to be some level of implementation prior to (ex-ante) emissions reductions actually happen.

Ex-ante and Ex-post Application of the MAAP

An ex-ante assessment can occur during or after implementation of a mitigation action. It is helpful to evaluate the likelihood that the intervention will deliver emissions reductions, and to assess the environmental integrity and related risks.

An ex-post assessment of a mitigation action occurs prior to achievement of any emissions reductions but ideally some degree of institutional implementation has already taken place and design is not limited to only documentation. It is helpful to measure the achievements and extent to which the intervention met its goals, and will assess the processes in place to ensure that future deliverables are met.

reducing compliance costs, accessing a broader pool of abatement options, expanding market size and liquidity, and reducing price volatility[8].

The modular approach followed by the MAAP facilitates its use by different users. The reason for assessing mitigation actions and the desired outcome will differ by user or stakeholder, as summarized below for implementing jurisdictions, developers and industry operators, regulators of carbon markets, and donor countries.

Implementing Jurisdictions: Jurisdictions willing to implement NAMAs or other supported mitigation actions typically seek to secure international finance to fund NCMs. But, it might also be the case that the jurisdiction has established a portfolio of mitigation actions different in nature and scope, and therefore it may not be easy to prioritize these for implementation and funding.

In such a case, the jurisdiction can scan the different mitigation action programs based on preselected scoring criteria. Due to the modular approach proposed in the MAAP, the jurisdiction has the possibility to define and apply the criteria most appropriate to its national objectives and context. Such design of the scoring system makes it applicable to a broad number of mitigation actions, which will obtain different scores during the assessment, allowing the jurisdiction to identify which actions best meet overall policy objectives.

Therefore, the value of the MAAP for mitigation action-implementing jurisdictions is manifold:

First, it can be used as a self-assessment tool to prioritize implementation and evaluate the weaknesses of different alternatives based on a set of jurisdiction-level accepted scoring criteria. The jurisdiction can now assess a broad range of mitigation actions and depart from a mere yes/no process.

Second, it can show transparently to international investors the prioritization process followed in each case, along with the value of each program based on an agreed-upon weighting system for scoring criteria. In this way, the jurisdiction can have wider market access, including the possibility of higher value and prices for its carbon assets.

Institutional investor: Investors often seek projects among a wide array of investment opportunities that can provide the best return on their invested money within their overall investment risk profile. Furthermore, mitigation initiatives can range from projects to multi-sectoral policy implementation programs. Each opportunity can be found in a different jurisdiction with different criteria or regimes for emissions reduction accounting, making comparison among them a complicated matter.

Using the MAAP, such programs can be evaluated at the design or implementation stage, providing a score as output based on preselected criteria and weights that can be customized depending on the investment strategy.

In this case, the value of the MAAP lies in the ability to prioritize investment opportunities, and in providing comparability among different program types.

Developer/Industry Operator: Project developers and industry operators often seek to make the best investments from a wide array of development opportunities. These private investors normally have limited capital to make any investments into developing such market opportunities or new, cutting edge technologies, even though their risk tolerance might also be higher due to the possible high rewards. Furthermore, private sector investment in mitigation initiatives tends to be somewhat limited by the technological experience of the organization, limiting its ability to venture outside of its zone of expertise. Nonetheless, many of these operators have a strong incentive to access to carbon credits, either as a salable commodity and/or for compliance purposes, and as such, maximizing their carbon asset return per invested USD may not be limited to their own field of expertise.

Using the MAAP, the developer can evaluate the carbon credit potential at the design or implementation stage and compare this potential with the operators' own current mitigation activities in order to determine whether it is best to continue developing their own activities, expand their

[8] Carbon Markets: Past, Present, and Future. Richard G. Newell, William A. Pizer, Daniel Raimi. RFF Discussion Paper 12-51 | December 2012

activities to other sectors, or enter into purchase agreements with other industry operators that are also generating carbon credits. Developers would be able to check the government's willingness to advance policies and measures that support the development of those activities. These operators need an output score based on preselected criteria and weights that can be customized depending on their market strategy.

In this case, the value of the MAAP lies in the ability to prioritize investment opportunities, and to provide comparability among different program types, particularly within its own sector.

Regulators of Carbon Markets: For those countries implementing a regulated carbon market, the MAAP can be the basis for the acceptance of specific carbon assets. The regulator can establish the minimum score for each module and therefore give a clear signal to the market of what type of assets will be accepted for compliance. This will also provide information to investors on what mitigation actions, such as NAMAs at the national level, they may consider supporting.

Donor Jurisdiction: Similar to private investors, donor countries tend to receive multiple investment opportunities in projects from multi-sectoral policy implementation programs. Some of these emissions reductions can be used for meeting national emissions reduction commitments. In this case, donor countries need a standardized framework to establish comparability between emissions reductions from different actions (such as NAMAs). Donor countries will also be able to use the MAAP to measure the implementing jurisdiction level of commitment with their pledges and the institutional capability to implement mitigation actions.

The MAAP would facilitate evaluation of the programs at the design or implementation stage, and provide a score as output based on preselected criteria and weights that can be customized depending on the investment approach.

In this case, the assessment allows for comparing different regimes while prioritizing diverse interventions based on a set of pre-defined criteria and donor jurisdiction priorities. The final score will allow for selection of ranges, as opposed to yes/no approaches.

User Guidance[9]

The user can choose between 2 types of assessments: 1) An ex-ante assessment or 2) an assessment during implementation or ex-post. All indicators are needed to conduct an assessment during implementation or ex-post, whereas only a sub-set of the indicators are relevant for an ex-ante assessment.

Guidance on assessing mitigation actions in early stage:

In assessing mitigation actions, it is important to make a distinction between design elements and processes that have been agreed upon by the main stakeholders and those that are only planned or still in discussion. An assessment can seek to assess mitigation actions based only on design elements that have been decided upon or also include in the assessment design elements that are planned or being discussed, making assumptions on which elements to assess as there are likely different options for each design element. The assessor should clearly state what is being assessed and any assumptions being made. In many cases the main benefit to an assessment of a mitigation action at an early stage is not to generate a reliable estimate of environmental integrity, but to identify steps that need to be taken and processes to ensure the environmental integrity of the mitigation action as it moves toward implementation. If the MAAP is applied only against documentation but no institutional implementation has yet begun, the user might have to consider producing a reduced version of the MAAP to assess only the design documents, since the whole set of indicators might not provide much value at this stage (see the case of Peru in Annex 3).

Guidance on multiple interventions:

Mitigation actions may include only one or several interventions. Many of the design elements that need to be assessed are intervention-specific. The assessor should seek to ensure that the interventions are well defined, as part of the module 1 assessment. In assessing each of the risk areas, the assessor should assess each intervention against each indicator. An assessor may choose to fill out an assessment matrix per intervention or provide an overall score for the mitigation action as a whole. In the latter case, the assessor should make a judgment call to provide an overall score for the mitigation action, considering the importance of each intervention, their respective scores and the level of risk they represent for the overall environmental integrity of the mitigation action. For example, if an intervention that poses serious risks to environmental integrity is expected to deliver only 5 percent of total emission reductions, the assessor may decide to give more weight to the other interventions' scores.

[9] IISD Scorecard

Should there be uncertainty regarding the number and/or type of interventions, the assessor should flag this as an area of concern, as this situation poses a significant risk to environmental integrity.

Score sources:

The score for each key indicator is to be decided by the user through a qualitative (based on professional judgment) or quantitative score (based on demonstrated measurements). The availability of quantitative data in the early stages of adoption can be limited until a sufficient pool of benchmarking data can be collected. Different users will establish different methods to score key indicators within the MAAP, and these methods are expected to evolve from more qualitative to more quantitative ones over time. To ensure that qualitative scores based on professional judgment are reliable, users are expected to establish different qualification and quality assurance processes that could eventually include, among other things, internal peer reviews, internal score decision groups, consultation with external experts, establishing an evaluation committee formed by internal, and external experts.

Assessment and risk materiality:

Assessment methodologies often include a first step before the assessment takes place to decide on the materiality of the risks in the context of the relevance for the organization, sector or program being assessed. The materiality will be a result of the probability of each of those risks having a negative consequence and the level of severity of the consequence itself. This first step helps to decide which risks should be the focus of the scoring process as well as the level of mitigation actions expected from the management entity to put in place to minimize the chances of that event happening.

The current incipient situation of the development of mitigation actions, most of them at the design stage or early implementation, has led to this report and the MAAP not to elaborate on a specific step-by-step methodology to cover this risk materiality assessment as of yet. In this context, most mitigation actions face similar risks and the MAAP includes an overall set of indicators that it thought to cover all relevant risk areas. It is left to the scorer to evaluate the need of a materiality assessment for the specific case or cases they may confront.

Conclusions

Actions to mitigate climate change are happening at different levels, from country level to city and regional efforts. Given the globally interconnected nature of greenhouse gas emissions and climate change, the quantification of these diverse initiatives leading to reductions in carbon emissions should be internationally comparable. The Kyoto Protocol mechanisms created a top-down system for measuring emissions reductions but given their current limited fungibility, numerous local, national, and regional climate policy frameworks have sprung up to promote emissions reductions within their own jurisdictions. In the context of the recent Paris agreement, 195 countries submitted Nationally Determined Contributions that have resulted in a wide variety of approaches, yet little guidance on how to adequately design, implement, track progress, and compare these actions. A framework for assessing, and thus comparing, the carbon credits of these different initiatives would provide a bottom-up approach to achieving the goal of an internationally comparable framework for quantifying carbon assets, which is needed to effectively and efficiently address climate change.

Against this backdrop, the MAAP presented in this document is proposed as a key tool for achieving transparency in, firstly, how these climate actions are designed and, secondly, in how they compare and what their mitigation value is. In the long run, the MAAP is intended to contribute to achieving the goal of an internationally accepted system for comparing carbon assets, and eventually the trade and exchangeability of carbon credits.

The MAAP focuses on environmental integrity and development benefits, both key components of most of the mitigation actions under development. The MAAP covers the assessment of the risks associated with mitigation action programs, the capacity and capabilities of mitigation action managing entities, the level of confidence associated with the investment environment, and the claimed development benefits.

In the case of emissions reductions from different mitigation actions aiming at entering international markets, it is important to take into account the mitigation value of the interventions beyond their environmental integrity. The mitigation value will be determined by the contribution of the mitigation action's GHG emissions reduction in the context of the jurisdiction where it takes place and the jurisdiction's level of ambition towards climate change mitigation. This document does not fully develop how this level of ambition at the jurisdiction level is to be incorporated in the assessment. In Annex 4, there is an initial approach to the key components of an assessment of the credibility of the actions implemented by a jurisdiction to achieve its voluntary or mandatory mitigation targets.

The MAAP uses a modular approach so that it can be adapted by different users and the output they seek. While in the long term the intended use of the assessment is to become a key technical input for the comparability and exchange or carbon credits, one of the evident benefits at early stages of the development of new markets is that the assessment can serve as a mechanism to promote continuous improvement of the design and implementation of mitigation actions. The risk areas with low scores are those in which more focus is needed to increase the level of confidence. A mitigation action management entity can then identify where to focus its efforts, and external entities working on capacity building can also use these inputs for their programs.

Benchmarking is also a benefit of using assessment frameworks, even when commonly seen from a negative perspective when identifying low-level scores. On the positive side, being able to benchmark one's mitigation action with similar sector interventions or similar geographically focused interventions can surely be valuable to identify how to build on existing knowledge and increase the reliability of proposed mitigation actions.

Annex 1: Modules, Modules Areas, Key Indicators and Level of Development

In line with the flexibility provided by the MAAP detailed below, the indicators that follow can be customized by the user to fit the purpose of their application. These key indicators cover the main risk areas that should be taken into account to assess a mitigation action. The user can add, eliminate, or edit them as appropriate, including the possibility of breaking each key indicator into a number of more specific indicators to refine the assessment.

Module 1 — Mitigation action program

	Area	Key Indicator	Level of development
A1.1	1.Definition and scope of the MA	Description of the MA technology or change in practice	Description of the MA technology or change in practice is complete and there is no ambiguity in how and to the extent they will be implemented
			There is ambiguity in how and to the extent technologies or practices will be implemented
			Description of the MA technology or change in practice is limited or not defined
A1.2		Scope of the Mitigation Action (MA).	The scope of the MA is clearly defined and documented.
			The scope of the MA is defined but it is not consistent along the documentation of the program.
			The scope of the MA is neither clearly defined nor documented.
A1.3		Alignment with Jurisdictional priorities.	The scope of the MA is aligned itself with the jurisdiction climate change mitigation priorities as defined by the Government.
			The MA contributes to climate change mitigation but does not outline how it aligns itself with the Jurisdiction's priorities on climate change mitigation as defined by the Government
			The MA does not demonstrate how its scope is aligned with the jurisdiction climate change mitigation priorities as defined by the Government
A1.4		MA approval by relevant authorities	The MAs have been developed and implemented with the approval of the relevant authorities.
			The approval of the relevant jurisdictional authorities has been requested but is still pending
			There is no evidence of the approval of the relevant jurisdictional authorities.

	Area	Key Indicator	Level of development
A1.5		Starting date, milestones and duration of the MA, including duration of the crediting period if appropriate	The starting date of the MA is clearly defined and justified in terms of when the emissions reduction can be attributed to the MA. The duration of the crediting period is defined if appropriate. Milestones are included to allow progress and effectiveness to be reviewed.
			The starting date is defined but it is not possible to conclude that the starting date is linked to the accounting of due to the MA implementation.
			The starting date is not clearly defined, is unjustified or is inconsistent across the MA documentation.
A1.6		Boundaries for the MA in terms of a geographical area of implementation	The geographical boundary of the MA is defined in accordance to the jurisdiction authority of the MA Management Entity (MAME). The boundaries analysis includes the evaluation of possible double counting risk with other ongoing programs and jurisdictions.
			The geographical boundary of the MA is defined but there is no justification of how it can interact with the jurisdiction authority of the Mitigation Action Management Entity and do not take into account possible double counting risk with other ongoing programs and jurisdictions.
			The geographical boundary of the MA is not clearly defined.
A2.1	2. Objectives and targets	Definition review of MA objectives and targets	The MA objectives and targets are defined and follow the SMART principle. In the case of deviation of results, actions are decided and planned to correct the same.
			The MA objectives and targets follow the SMART principle. Nevertheless, there is no evidence of their implementation/follow up or actions are not taken when deviations occur.
			The objectives and targets for the program are not defined or are not justifiable.
A2.2		MA objectives related to reduction of GHG emissions.	The objectives clearly define the commitment to reduce GHG emission of the MA.
			There are not clear and specific objectives towards reductions of GHG emissions
			The objectives do not define clearly a commitment to reduce GHG emissions
A2.3		Alignment of the MA objectives and the jurisdictional priorities on Climate Change	There is a clear alignment of the MA's objectives with the jurisdiction priorities on climate change strategy and if applicable LEDS and in addition, sectorial policies and regulations applicable to the geographical scope of the program.
			The MA objectives respond to the needs of specific stakeholders (sector, sub national governments, markets, etc.) but it is not evidenced of the alignment of the MA objectives with the Jurisdiction objectives and targets towards climate change mitigation.

	Area	Key Indicator	Level of development
			There is no evidence of the contribution of the MA objectives to achieve relevant strategies and policies.
A2.4		MA targets	The MA's targets take into account the MA's baseline emissions and mitigation scenarios. The targets are based on, among others, a cost benefit analysis of the potential achievement through the intervention in different emission sources, its technological options, its financial, sectorial development goals and business requirements, and the views of interested parties.
			The MA has specific mitigation targets based on the baseline assessment but there is no evidence on how the different interventions planned are selected taking these targets into account
			The MA includes general objectives for mitigation but not specific targets.
A3.1	3. Planning	MA planning to achieve established targets	The MA defines, implements, and maintains a plan(s) for achieving its objectives and targets. The Plan(s) include: a) designation of responsibility for achieving objectives and targets at relevant functions and levels of the Program Managing Entity, and b) the means and time-frame by which they are to be achieved, and c) benchmarks for selected policies and projects, and d) an auditable process for stakeholder engagement, including a reasonable public comment period.
			The program establishes, implement, and maintain a plan(s) for achieving its objectives and targets; but it is not clearly defined: a) designation of responsibility for achieving objectives and targets at relevant functions and levels of the Program Managing Entity, and/or b) the means and time-frame by which they are to be achieved, and/or c) benchmarks for selected policies and projects, and/or d) a process for stakeholder engagement, including a reasonable public comment period.
			The program does not establish, implement, nor maintain a plan(s) for achieving its objectives and targets.
A3.2		Portfolio of interventions for the MA implementation	The achievement of the MA's Objectives and Targets is planned through the implementation of a portfolio of interventions (policies and/or projects) over a defined time period. The portfolio's components are clearly defined and it represents a combination of cost effective implementable actions which can contribute to achieve the level of commitment of the MA.
			The MA includes a general Implementation Plan but it is not clearly defined which are the interventions proposed and its scope and objectives.
			The MA does not include a defined Implementation Plan

	Area	Key Indicator	Level of development
A3.3		Planning of individual MA interventions	During the planning of the MA implementation, there is evidence of the following aspects being taken into account: a) Timeline for the incorporation of the Projects and Policies in the Program, b) Estimated mitigation potential, c) An analysis of barriers for the implementation which allow the planning to be classified in short (1-3 years) and long term (>3 years) execution, d) Periodic (e.g. annual) targets for the each Policy/Project, e) financial and investment needs for implementation, f) Monitoring and reporting system, and g) Assessment processes for the progress achieved by each Policy/Project
			The Plan includes some aspects of the items a) to g) above for the planning of implementation of Policies and Projects but it is not complete.
			The Plan makes little or no reference to the topic of planning MA interventions or it is found to be inconsistent
A3.4		Risk analysis for implementation, risk management and mitigation plan.	The MA clearly identifies the risks for implementation of the selected interventions and has designed a risk mitigation plan.
			The MA identifies all the potential risks for implementation but no action is planned to minimize the probability of those risks to happen or the actions proposed are not considered sufficient.
			The MA does not identify the potential risks for implementation.
A3.5		The MA investment planning	The MA design includes an evaluation of the investment requirements and possible investment structures. It includes a realistic investment plan based on justified and conservative assumptions.
			There is an investment plan developed but it is not totally transparent on the assumptions used or modelled outputs.
			There is no investment plan; or the existing investment plan is likely to be unrealistic.
A3.6		MA compliance with regulatory requirements	The MA processes include the evaluation of regulatory and legal compliance of the interventions proposed under the program, including when applicable, environmental impact assessments. The processes are implemented.
			The process exists but there is no evidence of its application to ongoing interventions.
			Regulatory and legal compliance has not been taken into account.
A3.7		Process for the involvement of local stakeholders in the development of Policies and Projects under the	A process for the consultation of local stakeholders is established and implemented, including the criteria for stakeholder identification and selection. Stakeholder feedback has been analyzed and incorporated, in the design and/or implementation of the MA.

	Area	Key Indicator	Level of development
		MA, including a public comment period.	The process to involve local stakeholders is mentioned but no reference on how it would be implemented.
			There is no reference to a process for the involvement of local stakeholders
A3.8		Resources available for implementation.	The Mitigation Action Management Entity has documented commitment to ensure the availability of resources essential to establish, implement, sustain and improve the MA. Resources including human resources with specialized skills, training and capacitation of existing staff, organizational infrastructure, technology and financial resources. Resources must be available also for MAME and for implementation of GHG estimate and MR activities.
			The Mitigation Action Management Entity is committed to ensure the availability of resources essential to establish, implement, sustain and improve the MA but there is no clear definition of the different resources or where and how they are being secured.
			There is no certainty as to the availability of resources essential to establish, implement, sustain and improve the MA.
A4.1	4. Roles, Responsibilities And Authorities	Definition of roles, responsibilities and level of authority for MA design and implementation	The MA clearly defines and document roles, responsibilities and level of authority within its scope and boundaries; it also defined the communication paths in order to facilitate effective management.
			The MA clearly defines and document roles, responsibilities and level of authority within its scope and boundaries; but it does not define the communication channels to facilitate an effective management.
			Roles, responsibilities and authorities are not defined, documented or properly communicated
A5.1	5. Documents, document control and records Documents, document control and records	MA operational and management documented system	The PME has established and is operating a management system which includes (if appropriate) documented procedures for the implementation of the MA. The management system is aligned with the PDAC (Plan, Do, Act, Check) cycle and is both auditable and verifiable.
			The PME has established a management system for the implementation of the MA, but it does not cover all areas of management required to ensure proper functioning.
			The MA has not implemented a management system.
A5.2		The MA design documentation	The MA documentation includes a complete set of controlled documents or refers to other controlled documents which include, among others: a. Documentation of the boundary for the MA in terms of a geographical area within which all interventions under the MA will be implemented and GHG effects of the MA. b. The MA objectives, targets and plans. c. A description of responsibilities and authorities. d. Feasibility study and detailed design documents, including financial and investment information e. Baseline, intervention design and methodologies for GHG emissions accounting.

	Area	Key Indicator	Level of development
			e. MRV plan, including records and records quality procedures, and documentation of baseline activity data. f. Documented procedure to avoid double accounting
			Documents that would be relevant for the MA are referred to, but the list is incomplete or controls are inadequate.
			The Program documentation does not include or refer to other documents relevant for the MA,
A5.3		The MA's provisions for tracking emissions reduction transactions	A program registry tracks emissions reductions from the different interventions including possible transactions of emissions reductions from interventions included in the MA.
			There is a tracking system for emissions reductions from MA 's interventions but it is not complete.
			There is not a centralized record by the MAME of emissions reductions.
A6.1	6. Barriers	Identification of barriers for implementation	The MA justifies that it faces barriers for its implementation and that it would not take place without external financial support. The barriers are justified based on independent data that can be verified. It is demonstrated that in the absence of the MA support: i) the proposed voluntary measure would not be implemented, (ii) the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the jurisdiction, (iii) the MA will lead to a greater level of enforcement of the existing mandatory policy /regulation; or (iv) the MA will allow for the reduction of emissions exceeding the mandatory reductions required under existing policy or regulations.
			The MA argues that it faces barriers for its implementation but it is not justified how additional support would assist in overcoming those barriers.
			No reference to barriers.
A7.1	7. Emissions reductions from interventions	MA's Interventions development process	The MA includes the implementation of interventions that contribute to the MA objectives and targets. The MA has defined and implemented a process to develop, approve, implement and periodically evaluate those interventions, including the definition of responsibilities and authorities.
			The MA includes a process to select and develop interventions but it has not been implemented yet.
			The MA has a vague definition of what exact interventions will be part of the program or these are not properly developed to ensure their implementation
A7.2		Inclusion criteria (if applicable)	In those cases when the MA design includes a process to include different interventions over time, the eligibility criteria for each type of policy or project allowed under the MA are defined and there is evidence of its implementation. These criteria include the type and/or extent of information (e.g. indicators, variables, parameters or measurements) to be provided by each intervention in order to ensure its eligibility.

	Area	Key Indicator	Level of development
			The criteria are defined but there is no evidence yet of the application of the system proposed to different interventions.
			Criteria are not defined or an inclusion process has not been defined.
A7.3		MA interventions boundaries and GHG effects	The MA includes a process for the identification of: - Geographical boundaries for each intervention. - GHG sources or sinks affected by the intervention. - GHG effects (within or outside the intervention boundaries or jurisdiction). - Assessment process of significance of GHG effects and selection of GHG boundaries. The process has been implemented and is correctly applied.
			The process is designed but it has not been applied yet or it implementation needs improvement actions.
			There is no process in place for the definition of boundaries and GHG effects or it has been systematically incorrectly used.
A7.4		GHG estimation and calculation methodologies	The MA uses internationally recognized methods for the emissions reduction estimation/calculation. The method includes a process for the identification of other policy and non-policy drivers that may affect the intervention and a process for deciding its inclusion or not in the emissions reduction (ER) estimations. The methodology allows for the ER to be calculated with a level of accuracy defined for the MA.
			Emissions are calculated based on internationally recognized and approved methodologies but there is not a level of accuracy defined for the calculations.
			A methodology for the calculation of ER has been developed and the MA program includes a mechanism for the approval of the methodology that ensure the methodology is technically sound.
A7.5		The MA baseline scenario estimation and calculation methodologies	The ER calculation methods set the basis for the calculation of a baseline scenario that represents the most likely scenario in the absence of the interventions included in the MA. The baseline methodology should take into account the accuracy of the baseline emission factors and global warming potentials used, the baseline technology or practice alternatives, and emission drivers such as market and trade effects or demand/consumer effects. The baseline scenario is calculated conservatively and defines relevant national/local and/or sectorial policies and circumstances that could affect the estimated baseline emissions have been taken into account.
			The ER calculation methods set the basis for the calculation of a baseline scenario that represents the most likely scenario in the absence of the interventions included in the MA. The baseline scenario defines relevant national/local and/or sectorial policies and circumstances that could affect the estimated baseline emissions have been taken into account but is not calculated conservatively.

	Area	Key Indicator	Level of development
			The methodologies for the estimation of the baseline scenario do not have into account other drivers of future ER.
A7.7		MA uncertainty approach and methodologies	The level of uncertainty accepted in the MA GHG estimations and future ex post calculations is defined. The MA GHG estimation methods include quantitative or qualitative uncertainty assessment methods and there is an evidence of its correct application.
			The level of uncertainty is defined but there is not a defined method for the calculation of uncertainty or it is not correctly used.
			Uncertainty is not addressed in the MA documents
A7.8		The MA mechanism to ensure permanence (if applicable)	The MA has planned a process for the possible consideration of permanence when the MA design and ER methods consider a risk of non-permanence of achieved ER over time. The process is designed and implemented.
			Permanence is addressed but there is no evidence of the application of the process.
			Permanence has not been addressed by the MA design.
A8.1	8. monitoring and reporting	The MA Key performance indicators process	There is a defined process to identify, implement and periodically evaluate key performance indicators to demonstrate that the MA results are in line with its objectives and targets, including oversight of: - planning and implementation. - financial and investment. - emissions reductions. - sources and sinks - other identified sustainable development benefits Actions are taken to correct any deviation
			Key indicators identify but no evidence of its periodic evaluation or the key indicators do not cover all aspects of the MA objectives and targets.
			Key indicators have not been defined.
A8.2		Monitoring and Reporting (MR) enforcement mechanism	There is evidence of the design and implementation of a process for making GHG monitoring and reporting mandatory for all relevant sources and sinks.
			Mechanism for encouraging GHG MR for some relevant sources and sinks
			No mechanism defined to enforce MR for any sources and sinks
		The MA program planning includes a procedure to legal compliance	The MA establishes implements and maintains a procedure(s) for periodically evaluating compliance, when applicable, with legal requirements for the interventions within the MA.
A8.3		The MA Action MRV plan	The MA includes an MRV plan for monitoring, reporting and verify (if applicable) ER from interventions, the plan includes - parameters to monitor

	Area	Key Indicator	Level of development
			- responsibilities - frequency - uncertainty calculation - quality and accuracy of data - data management processes - internal review and corrective actions the process is designed and has been implemented The MRV plan ensures that the level of uncertainty reached when reporting ER is in accordance with the uncertainty level defined for the MA.
			The MRV plan is incomplete or has not been implemented or it cannot be justified that its implementation will ensure the level of uncertainty of the reported ER established for the MA.
			No MRV plan has been proposed as part of the MA design
A8.4		Publication of MR findings and quality of disclosure	Publication of detailed monitoring data and evaluation against predefined key performance indicators. Clear and complete information on data sources, calculations and assumptions to enable external reviewers to reproduce emission reduction estimates
			Partial publication of summary or aggregated findings and data. General availability of data sources, calculations and assumptions with some limited exemptions
			Limited or no publication of monitoring data. No information to judge the quality or incomplete information on data sources, calculations and assumptions.

Nature Module 2—Mitigation action management entity

	Area	Key Indicator	Level of development
B1.1	1. Management Framework	Legal mandate of the MA management entity (MAME)	MAME has a clearly defined mandate to implement the MA, including a detailed mandate on GHG estimate and MR
			MAME has a clearly defined mandate to implement the MA
			No mandate is specified
B1.2		MAME, other relevant stakeholders and MR supporting agencies identified	MAME, and any existing relevant stakeholders and MR supporting agencies not specified
			There is ambiguity or inconsistency across the documentation about the MAME. Some of all stakeholders and MR supporting entities are listed, but there are relevant ones for GHG estimate and MR activities that are omitted or not identified yet.
			MAME is clearly specified. A comprehensive list of all stakeholders and MR supporting agencies, if any, that are relevant for conducting for GHG estimate and MR activities is provided.

B1.5		Roles, responsibilities and authorities within the MAME	The MAME has a documented and approved framework of roles, responsibilities and authorities clearly defined and followed to implement the MA.
			There are some roles, responsibilities and authorities recognized within the MAME but not all along the organizational structure; or although they are clearly defined, not all have been implemented.
			Roles, responsibilities and authorities within the MAME are not clearly defined.
B1.6		Coordination between the MAME and the entities responsible for MR	There are no rules or processes to ensure coordination between the MAME and the entities responsible for MR
			There are some vague rules or processes to ensure coordination between the MAME and the entities responsible for MR
			There are rules and processes in place for the entities responsible for MR to coordinate and report back to the MAME
B1.9		The MAME Management System	The MAME has an implemented Management System audited by a third party entity
			There is evidence of the existence and implementation of a Management System but it is not audited by a third party entity
			The MAME has not implemented a Management System at all
B2.1	2. Financial and investment	The MAME methodologies to reporting and transparency of financial flows received and used to date, including actual disbursement, etc.	The MAME has methodologies to reporting and transparency of financial flows received and used to date (including actual disbursement) and complies with them
			The MAME has methodologies to reporting and transparency of financial flows but does not comply with them
			The MAME does not have methodologies to reporting and transparency of financial flows.
B2.2		Past experience in the management and implementation of internationally financed programs	The MAME has a wide and recognized experience in the management and implementation of internationally financed programs
			The MAME has some experience in the management and implementation of internationally financed programs but is still strengthening its capabilities
			The MAME has no experience in the implementation of internationally financed programs
B2.3		International or national rating of the MAME (if available)	
B3.1	3. Climate change programs management	Climate Change related responsibilities and authorities	The MAME has a specific area devoted to Climate Change Programs and there is evidence of historical performance improvements and active participation in CC programs and initiatives.
			The MAME has a specific area devoted to Climate Change Programs but there is no evidence of historical performance improvements and active participation in CC programs and initiatives.

			The MAME has an area devoted to general environmental / sustainable subjects but with no specific Climate Change experience
B3.2		Management Structure and capacity including inter-institutional or sectorial coordinating capabilities	The MAME has an active role within the national mechanism of interinstitutional coordination to accomplish C mitigation goals.
			The MAME is enrolled in the national mechanism of interinstitutional coordination but there's is no evidence of an active contribution.
			The MAME is not part of the national mechanism of interinstitutional coordination.
B3.3		The MAME technical capability.	The MAME has a documented process in place to be able to identify best practices and apply this- upkeep and oversight as to the appropriate use of appropriate methodologies, their latest versions, needs of MRV vs. baseline scenarios, etc.
			There is evidence of the adoption of methodologies and/or standards but there is no process in place to align them with best practices.
			The MAME has not a documented process in place to be able to identify best practices and there is no evidence either of the adoption of methodologies and/or standards

Module 3—Investment environment

	Area	**Key Indicator**	**Level of development**
C1.1	1. Internationally Recognized Jurisdiction Ratings	Sustainability-Adjusted Global Competitiveness Index (GCI) from the WEF	The results for the jurisdiction are among the top 25% developing countries
			The results for the jurisdiction are among the lower 75% developing countries
			The are no results of the assessment for the jurisdiction due to lack of data
C1.2		Corruption Perception Index	The result for the jurisdiction is a score higher than 75 points.
			The result for the jurisdiction is a score between 50 and 74 points.
			The result for the jurisdiction is below 50 points.
		Jurisdiction Economic index	(decision pending on source to be agreed w WB)
C1.3		Human development Index	The result for the jurisdiction is Human Development Index higher than 0.75.
			The result for the jurisdiction is Human Development Index between 0.50 and 0.74.
			The result for the jurisdiction is Human Development Index lower than 0.50.

C2.1	2. Climate change infrastructure at the program level	Climate change authorities and their responsibilities affecting the MA	There are clear definitions of authorities and their responsibilities towards decision making related to MA s and are functioning.
			Definitions seem unclear or insufficient
			There are not this definition yet
C2.2		National MA Registry and authorities towards UNFCCC MA Registry (If applicable)	The jurisdiction has established a MA registry to track ongoing initiatives from the very early stage of development. There is an implemented process for interested parties to propose a GHG mitigation program as a MA and get the government approval
			A MA registry exist but there is not a clear process for the communication of initiatives to the Government
			A MA registry or other mechanism to track MA s initiatives does not exist
C2.3		Registry and double counting	The jurisdiction has in place a registry or a similar mechanism to track all ongoing initiatives at the National and Sub National level related to GHG emissions mitigation. This mechanism has documented procedures for the registration of initiatives and for dealing with potential double counting of ER. these provisions has been communicated and disseminated to interested stakeholders
			The jurisdiction has in place a registry or a similar mechanism to track all ongoing initiatives at the National and Sub National level related to GHG emissions mitigation and to serve as a mechanism to avoid double counting. Nevertheless, these has not been communicated to interested stakeholders
			The jurisdiction has not defined procedures for the registration of CC mitigation initiatives and to document how the jurisdiction ensures that the risk of double counting is minimized.
C2.4		Transparency on climate financial support received	The Jurisdiction has established the methodologies to reporting and transparency of financial flows received for climate change mitigation support. There are documented procedures, guidelines and mechanisms in place, indicators are defined and properly calculated and tracked and reports are accessible to the interested parties
			There are guidelines and mechanisms in place, but there are significant challenges in the indicators and reports or those are not publicly available
			There are no guidelines or mechanisms in place

Module 4—Development benefits

	Area	**Key Indicator**	**Level of development**
D1.1	1. Development Objectives and targets	MA contribution to sustainable development	The scope of the MA includes a contribution to sustainable development.
			There is s general, vague reference to the scope of the MA and the potential contributions to development or no reference at all.

			The scope of the MA does not include a contribution to development.
D1.2		The MA sustainable development objectives and targets	The MA has clearly identified and defined its development benefits and set specific goals and objectives for those that it intends to promote/report upon.
			The MA has clearly identified and defined its development benefits but it has not set specific goals and objectives for those that it intends to promote/report upon.
			The MA does not identify its contribution to sustainable development.
D1.3		MA s evaluation of environmental impacts, including trans-boundary impacts.	The MA has a documented procedure to identify and assess the environmental impacts of the interventions under its implementation, including trans-boundary impacts. The evaluation provided is in accordance with the applicable regulations.
			The MA identifies and assesses the environmental impacts of the projects under its implementation, including trans-boundary impacts. The evaluation is not in accordance with the applicable regulations or is not provided.
			The MA does not identify or assess the environmental impacts of the projects under its implementation.
D1.4		MA non GHG related environmental benefits (if applicable)	There are clearly - identified, measured and reported - environmental benefits (non GHG related)
			The MA mentioned other environmental benefits non GHG related but they are not counted nor reported.
			The MA does not identify non GHG related environmental benefits.
D1.5		The MA consideration of Social responsibility principles	The MA has taken into account and established a commitment to all Social Responsibility Principles: Accountability, Transparency, Ethical behavior, Respect for stakeholder's interests, Respect for the rule of law, Respect for international norms behavior, and respect for human rights.
			The MA takes into account and establishes a commitment to several Social Responsibility Principles, but the list is incomplete or the commitment is vague.
			The MA does not take into account a commitment to any of the Social Responsibility Principles.
D1.6		The MA economic benefits of its implementation.	The MA identifies and assess the major economic benefits of its implementation such as private investments, employment, local, sub-national or national economic growth and technology transfer.
			Major economic indicators included
			Vague references to economic benefits
D1.7		The MA must guarantee to be exempt of negative environmental/social/economic impacts	The PME guarantees the MA to be exempt of the any negative impact such as but not limited to: Impacts on Red listed species, child labor, and it states compliance with the International regulations on those matters

D2.1	2. Planning and participation	MA planning process for development benefits goals achievement.	The MA includes a planning process to ensure the implementation of actions to achieve the proposed development objectives. There is evidence of the implementation of this planning and the periodic evaluation of the same by the proper responsible entities as defined by the PME
			The MA design planned for the implementation of actions to reach the established goals but there is no evidence of its real performance
			Sustainable development goals are identified but there is no planning function to unsure its achievement.
D2.2		Responsibilities and authorities	Responsibilities and authorities to reach the established sustainable development goals are clearly defined and implemented. This includes mechanisms to allocate responsibilities to entities within and outside the MA Managing Entity when appropriate.
			Responsibilities and authorities have been defined but there is no evidence of their implementation over time.
			Responsibilities and level of authority to ensure the success in the achievement of the proposed development goals are not defined.
D2.3		The MA includes the participation of the interested parties.	There are specific and documented Participation Objectives and Mechanisms for all interested parties (including stakeholders identification, convocation, participation and accounting).
			Participation is considered, although it is not clearly defined the extension and the process to reach out to different stakeholders
			Participation of interested parties is not considered
D2.4		Participation mechanisms established	The mechanisms that allow participation in the process are clearly defined in the MA well as the relevant parties involved in the process
			Relevant actors have been identified but there are no specific activities for their involvement.
			There are no Participation mechanisms established
D2.5		Capacity and motivation strengthened within civil society as well as among government and private sector for holistic and integrated natural resources management approach.	The Program explains how communication and CB will be carried out.
			The MA makes reference to communication w stakeholders but not detail on how it will be implemented or reference to all sectors to be reached out.
			Vague reference to the communication w stakeholders.
D2.6		Strategic partnerships, coalitions and alliances established to effectively engage in policy, decision making, and monitoring and evaluation processes.	All strategic partnerships and alliances are identified and clearly explained
			The MA mentions the most relevance alliances but does not present any detail on how those alliance would be implemented.
			Vague reference to strategic alliances in general.
D2.7		Stakeholders engagement in the development of the institutional character of	Stakeholders have been identified and involved in the appropriated steps of the development process

		resources policy development design, monitoring and evaluation	
			Stakeholders have been identified but there is no evidence of their involvement
			No formal exercise of stakeholder identification has been done
D3.1	3. Monitoring of development benefits.	The MA specifies development indicators according to its scope, boundaries and sector involved.	The MA has established specific development indicators according to its scope, boundaries and sector(s) involved.
			The MA has established general development indicators but it lacks of the level of detail demanded for this action.
			The MA does not include development indicators.
D3.2		MA contribution to Life Conditions Improvements and public welfare	The MA includes explicit and detailed references on its contribution to life conditions improvement and public welfare taking into account subjects like public health, social inclusion, security, linking to academic and government institutions, among others.
			The MA makes reference to its contribution to life conditions improvement and public welfare but no detail or relevant information is included.
			The MA does not make any reference to its contribution to life conditions improvement or public welfare.
D3.3		The MA contribution to strengthening public policy, institutional growth and capacity building of the actors/stakeholders involved.	The MA states very clearly its contribution to strengthening public policy, institutional growth. It also includes detailed information on the capacity building programs to reach those objectives.
			The MA states its contribution to strengthening public policy, institutional growth but it does not include detailed information on the CB MA´s to reach those objectives.
			The Program does not include its contribution if any to strengthening public policy, institutional growth.
D3.4		Accountability	The MA includes a plan for holding different parties accountable in case of the sustainable objectives are not implemented or achieved and the consequences of it.
			The MA includes a plan for holding different parties accountable in case of the sustainable objectives are not implemented or achieved but there are no consequences described.
			Vague reference to accountability.
D3.5		Consideration of possible negative impacts of the MA	The MA consider possible negative impacts of its implementation and has a mitigation plan.
			The MA consider possible negative impacts of its implementation but has not a mitigation plan.
			The program does not consider possible negative impacts of its implementation.
D3.6		Flexibility	There is evidence that the MA is flexible enough to incorporate stakeholders' feedback that turns in actual changes to the MA.
			The MA has gathered stakeholders' feedback but there is no evidence that it has led into changes.

			There is no evidence that the Program is flexible enough to incorporate stakeholders' feedback that turns in actual changes to the program.

Annex 2: Review Process

This annex reflects the living nature of the MAAP and describes the evolution of the assessment over time. Despite its short life, it has been subject of a three phase consultation process, a customization and application in Peru to evaluate and select sector mitigation actions for crediting purposes (i.e., pilot initiatives to be supported as part of Peru's Market Readiness Proposal presented to the Partnership for Market Readiness (PMR)), and an exhaustive analysis of the MAAP's indicators to assess environmental integrity by the International Institute for Sustainable Development (IISD). The IISD also carried out two pilot projects in which the MAAP was tested in a project and a program for climate change mitigation, respectively.

DNV GL

DNV GL's MAAP went through a three phased consultation process before the final version was submitted. The feedback received can be summarized in two areas:

The need to include other mitigation actions beyond Nationally Appropriated Mitigation Actions (NAMAs) and develop a first assessment framework not only focused on NAMAs and developing countries, as normally seen in an UNFCCC context, but in mitigation actions in general and a system applicable to both developed and developing countries. An example would be the application to mitigation action plans in cities, indifferently of the country.

The assessment of level of ambition at the country or jurisdiction level needs to be totally independent of the modules related to the mitigation action itself.

This feedback was incorporated and explains why the present document refers to Mitigation Actions in general, and does not discuss the assessment of level of ambition in detail. However, a set of indicators was proposed for initial discussion and can be found in Annex 4.

The first phase of the consultation process was a series of stakeholder consultations held at various internal climate change fora, such as Carbon Expo. In a second phase, progress was presented to a working group formed by experts from the Networked Carbon Markets team during group working sessions and webinars. In addition, three technical peer reviewers provided technical reviews to the draft report and components of the MAAP. These reviews were performed by representatives of Asia LEDS Training Center, IdeaCarbon and FC2E Carbon Fund who were selected based on the presence in developing countries, experience in ratings/assessments and ability to provide the point of view of the financial/private sector respectively.

International Institute for Sustainable Development (IISD)

The IISD has reviewed, commented and piloted the MAAP submitted by DNV GL in two case studies. IISD focused exclusively in the assessment of environmental integrity risks and from this perspective created a Scorecard with indicators building on the MAAP developed by DNV GL. DNV GL focused not only in the assessment of emissions integrity but also in the development benefits and overall implementation risk of the MA. Therefore, IISD's Scorecard is much more narrowly focused, borrows some indicators form DNV GL's MAAP and adapts others, and provides a more nuanced approach to assessing the methodologies and calculations of emissions reductions and baselines of MAs.

The following table provides detail of the risk categories covered in the Scorecard10:

Risk Categories	Weights	Number of Indicators	Explanation
Characterization Risks	10%	4	Risks related to the general characteristics of the MA

[10] Scorecard to Assess Carbon Integrity Risks. Supplementary Note (IISD, 2015)

Risk Categories	Weights	Number of Indicators	Explanation
Governance and Management Risks	20%	12	Risks related to the governance and management of the MA that impact the GHG estimate and MR activities
GHG Assessment Boundary Risks	20%	6	Risks related to the mapping of GHG effects and the identification of sources and sinks
GHG Estimation Risks	20%	13	Risks related to the baseline methodology and baseline data. The estimation of the emission reduction ex-ante is not covered as it is not relevant for assessing carbon integrity risks
GHG Monitoring Risks	20%	7	Risks related to monitoring the emissions and removals from all the relevant sources and sinks
Reporting Risks	10%	3	Risks related to the quality and frequency of reporting

To respect the idea of the evolving nature of the initial MAAP and its continuous adaptation to the needs and suggestions of users and experts, the protocol in Annex I has been revised to incorporate some of the indicators and suggestions made by IISD. This revision, however, has been done respecting the initial spirit of DNV GL's higher level approach and keeping manageable the number of indicators in the MAAP.

IISD piloted the Scorecard in two mitigation actions, namely Sri Lanka's Renewable Energy Program and Costa Rica's coffee NAMA. The idea was to apply the Scorecard to both a project and a program that includes a portfolio of interventions.

The review process and the application of the Scorecard to the two MAs provided the following lessons learned:

There were significant challenges to obtain relevant information about both mitigation actions. This led IISD to develop a completeness checklist prior to applying the Scorecard to assess if a mitigation action is mature or developed enough to be assessed and that enough basic information is available. The completeness checklist can be seen in the table below:

MA Design Elements	Completeness Checklist

Concept	• Designation and mandate of Lead Implementing Entity, as well as supporting entities
	• Concept note that outlines:
	  ○ MA objective
	  ○ Key interventions proposed that lead to expected GHG emissions reductions and co-benefits
	  ○ The sectoral, temporal and geographical scope of the MA
	  ○ The baseline definition from which to establish a target or measure progress
	  ○ An organizational structure for MA development that outlines institutional, technical, and supporting roles (e.g. inter-ministerial cooperation)

MA Design Elements	Completeness Checklist

Planning	• Detailed planning of MA including:
	  ○ Defining a policy framework that specifies the design of specific interventions (e.g., regulations, economic incentives, disseminating information etc.)
	  ○ Responsibilities of different actors in monitoring and reporting emissions and removals
	  ○ Timeline for activities
	  ○ Expected MA impacts
	• Financing Plan and budget
	• Monitoring and reporting plan and identification of relevant stakeholders responsible for monitoring and reporting

Implementation	• Measurement systems in place to collect and record data to assess performance indicators • Publication of monitoring reports that estimate emission reductions/removals and other performance indicators
Closure	• Final assessment of MA emissions reductions

The application of the Scorecard based on secondary information has a limited use and needs to be complemented with on the ground assessments.

The findings were also limited and of little use due to the fact that both mitigation actions were in very early stages of development.

Annex 3: Application and Customization of the Protocol in Peru— Lessons Learned

Peru used the MAAP to evaluate a portfolio of mitigation actions with the objective of prioritizing and selecting three of them that would be then incorporated in the Partnership for Market Readiness11 proposal. To that end, Peru customized the MAAP according to the country's development and climate change mitigation and budgetary objectives, taking into account the current level of development of the proposed mitigation actions in Peru and the adopted the Peru Mitigation Action Evaluation Framework. Due to the participatory approach of the evaluation of the mitigation actions, in which the agencies responsible for each mitigation action participated, the assessment proved not only useful to prioritize mitigation actions, but also to identify areas of improvement according to the different scores obtained by each indicator. The Peru Mitigation Action Evaluation Framework was not only intended to be used to evaluate these mitigation actions and the selection of those proposed to receive further support from the PMR, the framework was established with a view to be one of the mainstays of a future Mitigation Action Registry in Peru. The adapted framework is proposed to be a key component in selecting which future mitigation actions will be accepted in the proposed registry and is formed by the Evaluation Protocol and the Assessor Evaluation Guidelines. The latter includes a detailed explanation of the different concepts used in the MAAP, the mechanics for the use of the evaluation protocol and the most common means of assessment sought after to confirm the level of development of each key indicator.

As a preliminary step, up to 84 mitigation actions developed by various Ministries were evaluated. The result was the shortlist of ten mitigation actions for a detailed assessment. The short list was based in 5 selection principles: scope, development phase, mitigation action management entity selected, alignment with the sector and carbon credit potential. The evaluation took place through an interactive process between the management entity for each mitigation action and a consulting team. Consultations and interviews were supplemented by desk review of program documentation. The participation in the evaluation process was presented as an opportunity for the management entities to identify areas of improvement by analyzing the areas of the evaluation protocol where the score was not optimal. The Evaluation Protocol shows the components required to achieve the highest score so a comparison with the actual result shows what is necessary to advance to a higher level.

The ten mitigation actions short listed passed to a second phase of assessment based on the Peru Mitigation Action Evaluation Protocol, and three were finally selected to be included in the PMR proposal, two NAMAs and another mitigation action. The short listed actions were in different development phases. Seven of them were at concept stage, and three were more advanced (at different stages of design, negotiation or implementation). As a result of this pilot, the consulting team highlighted the need to develop a short tool for mitigation actions in the conceptual stage since design information was lacking for the mitigation actions at the conceptual stage and only a few indicators were relevant to assess the level of definition of these actions. Hence, two different versions of the MAAP were customized, one for each group of mitigation actions. The indicators selected for the short tool can be found in table 2 below, which showcases its application to one of the selected three mitigation actions.

As mentioned above, the extended version of the MAAP was adapted to the particularities of Peru and deviates slightly from the MAAP initially proposed by DNV GL, thus reflecting its applicability to different uses via customization of the modules, indicators and weights. In the Peruvian case the protocol reflects a similar structure to DNV GL´s MAAP. It is divided in 4 modules although the module Investment Environment has been eliminated and substituted by the new module Alignment with budgetary priorities, to assess compatibility with "results based budgeting system". Also, in module Mitigation Action Program the scoring area Barriers in DNV GL´s MAAP was eliminated. A more detailed comparison at indicator level will also conclude that some indicators have been eliminated and substituted by others in the scoring area Definition and scope, and in the module Development Benefits. Table 1 below summarizes the final MAAP designed by the consultant team for the case of Peru.

[11] PMR is a forum for collective innovation and action and a fund to support capacity building to scale up climate change mitigation. It provides support to prepare and implement climate change mitigation policies in order to scale up GHG mitigation. Serving as a platform to share lessons, countries work together to shape the future of cost-effective GHG mitigation. (www.thepmr.org)

Table 1: Modules, Areas of Assessment and Relative Weights for the Customized Assessment Protocol in Peru

Module	Area of Evaluation		Relative Importance
Mitigation Action Program	PM1	PM1. Definition and scope of the mitigation action	20%
	PM2	PM2. Objectives and goals	20%
	PM3	PM3. Planning	20%
	PM4	PM4. Available resources, roles, responsibilities, and authorities	10%
	PM5	PM5. Documents, document control, and records	10%
	PM6	PM6 Reduction of intervention emissions	10%
	PM7	PM7 Monitoring and reporting	10%
Mitigation Action Management Entity	EG1	EG1 Management framework	70%
	EG2	EG2 Management of climate change programs	30%
Alignment with Budgetary Priorities	PPR1	PPR1 mitigation action in the context of Peru's results based budgeting governance strategy, Presupuesto por Resultados (PPR)	30%
	PPR2	PPR2 Sector and management of PPR	70%
Contribution to Sustainable Development	BD1	BD1 Scope, objective, and goals for the contribution to sustainable development	40%
	BD2	BD 2 Planning and participation toward sustainable development	30%
	BD3	BD 3 Follow-up on the contribution to sustainable development	30%

The following NAMAs were selected and included in the proposal to the PMR assembly:

NAMA Waste (design stage)

NAMA Cement (design stage)

Mitigation action of photovoltaic distributed generation (conceptual stage)

The application of extended protocol for the NAMA Waste, at the design stage, and the application of the short tool for NAMA Solar photovoltaic distributed generation, at the conceptual stage are showcased in the paragraphs and graphs below.

Table 2: Application of the short assessment tool to the NAMA ¨Solar photovoltaic distributed generation¨

Table 2: Key Indicators

Module	Area	Relative Importance	Key Indicator	Relative Importance KI
Mitigation Action Program	PM1. Definition and scope of the mitigation action	20%	PM1.1 Scope of the mitigation action	30%
			PM1.2 Alignment with jurisdiction priorities for climate change	20%
			PM1.3 Approval of the mitigation action by the pertinent environmental authorities	5%
			PM1.4 Mitigation action supported by the authorities/entities that represent it	5%
			PM1.5 Start date, milestones, and duration of the program	10%
			PM1.6 Limits of the program in terms of geographic area of implementation	20%
			PM1.7 Limits of competencies for the programs in terms of jurisdictional authority	10%
	PM2. Objectives and goals	20%	PM2.1 Definition, planning, and revision of the objective and goals of the mitigation action	30%
			PM2.2 Objectives of the mitigation action related to i) reducing GHG emissions ii) contributing to sustainable development	20%
			PM2.3 Alignment of the objectives of the mitigation action with the jurisdiction's priorities for climate change	10%
			PM2.4 Goals of the mitigation action	40%
	PM3. Planning	20%	PM3.1 Planning of the mitigation action in order to achieve established objectives	30%
			PM3.2 Intervention portfolio for the implementation of the mitigation action	10%
			PM3.3 Planning of individual interventions of the mitigation action	15%
			PM3.4 Implementation risk analysis, risk management and mitigation plan	10%
			PM3.5 Investment plan for the mitigation action	20%
			PM3.6 Compliance of the mitigation action with regulatory requirements	10%
			PM3.7 Participation process of local stakeholders in the development of the program's policies and projects, including a period for public comments	5%

Module	Area	Relative Importance	Key Indicator	Relative Importance KI
	PM4. Available resources, roles, responsibilities, and authorities	10%	PM4.1 Available resources	50%
			PM4.2 Definition of roles, responsibilities, and level of authority of the design of the mitigation action and implementation of each program and each intervention	50%
	PM5. Documents, document control and records	10%	PM5.1 Operational documented system and management of the mitigation action	20%
			PM5.2 Documentation of the program design of the mitigation action	20%
			PM5.3 Provisions of the program for the follow-up of transactions reducing emissions	60%
	PM6 Reduction of intervention emissions	10%	PM6.1 NAMA development process	20%
			PM6.2 Inclusion criteria (where applicable)	20%
			PM6.3 Limits of NAMA and the GHG effect	30%
			PM6.4 Estimates of GHG emissions and calculation methodologies	20%
			PM6.5 The methodologies for estimating and calculating the base scenario of NAMA	10%
			PM6. 6 Level of uncertainty in the calculation of emissions	
			PM6.7 The NAMA mechanism to ensure the permanence of the emission reduction (if applicable)	
	PM7 Monitoring and reporting	10%	PM 7.1 Key indicators for follow-up	40%
			PM 7.2 Follow-up of compliance	30%
			PM 7.3 The MRV plan for the emission reduction of the NAMA	30%
Mitigation Action Management Entity	EG1 Management framework	70%	EG1.1 Responsibilities and authorities in the managing entity	30%
			EG1.2 The managing entity management system	20%
			EG1.3 The methodologies for reporting	30%
			EG 1.4 Prior experience in management and on a national level of the managing entity (if available)	20%
	EG2 Management of the change programs	30%	EG2.1 Responsibilities and authorities	20%
			EG 2.2 Capacity of the management structure	40%
			EG 2.3 Technical capacity of the entity	40%

Module	Area	Relative Importance	Key Indicator	Relative Importance KI
Alignment with Budgetary Priorities	PPR 1 Mitigation action in the context of the Peru's results based budgeting governance strategy, Presupuesto por Resultados (PPR)	30%	PPR1.1 Compatibility with PPR-Existence of a budgetary program with the capacity to include the mitigation activities	20%
			PPR1.2 Planning-consistency of the design methods of the mitigation activity with PPR methodologies	30%
			PPR1.3 MRV System-consistency of the monitoring and evaluation indicators of the mitigation actions with PPR methodologies	30%
			PPR1.4 Management Entity-Implementation Mechanisms (SNIP, APP, Oxl)	20%
	PPR2 Sector and management of the PPR	70%	PPR2.1 Experience of the sector in the use of the PPR mechanisms	30%
			PPR.2.2 Performance of the sector in the use of the PPR mechanisms	30%
			PPR2.3 Priority given by the sector to mitigation	20%
			PPR2.4 Level of coordination between the competent offices and administrations of the sector	20%
Contribution to Sustainable Development	BD1 Scope, objective, and goals for the contribution to sustainable development	40%	BD1.1 Contribution of mitigation actions to sustainable development	20%
			BD1.2 The objectives and goals of developing sustainable mitigation actions	
			BD1.3 Contribution of the mitigation action on social impacts, economic and environmental benefits (non-GHG)	20%
			BD1.4 The contribution of the mitigation action to the strengthening of public policy, institutional growth and creation of capacities of the stakeholders involved	20%
			BD1.5 Evaluation of environmental impacts of the mitigation action, including transboundary impacts	20%
			BD1.6 The mitigation action is free of negative environmental/social/economic impacts	20%

Module	Area	Relative Importance	Key Indicator	Relative Importance KI
	BD 2 Planning and participation toward sustainable development	30%	BD 2.1 Planning process for mitigation actions to achieve the goals of the development benefits	20%
			BD 2.2 Responsibilities and authorities	15%
			BD 2.3 The mitigation measurement program includes the participation of the stakeholders.	20%
			BD 2.4 Established mechanisms of participation	15%
			BD 2.5 Capacities and strengthened motivation in civil society, as well as in the government and private sector, for a global and comprehensive approach to resource management	10%
			BD 2.6 Associations, coalitions and strategic alliances established to effectively engage in policy, decision making, monitoring and the evaluation process	10%
			BD 2.7 Performance of stakeholders in the development of the institutional character of the design, monitoring and evaluation of the development of a resource policy	10%
	BD 3 Follow-up on the contribution to sustainable development	30%	BD 3.1 The mitigation action specifies the development indicators according to their scope, limits and sector involved.	20%
			BD 3.4 Responsibility	15%
			BD 3.5 Consideration of possible negative effects of the mitigation action.	15%
			BD 3.6 Flexibility	15%

The resulting scores were summarized in a spider diagram as shown below:

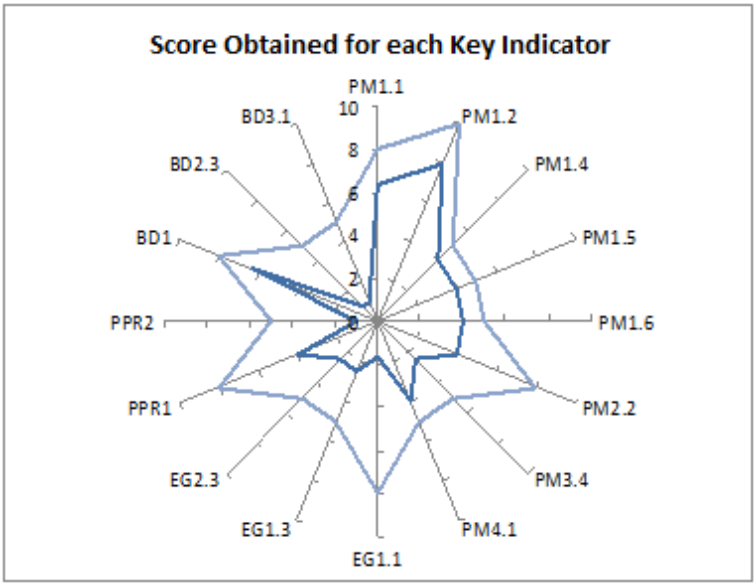
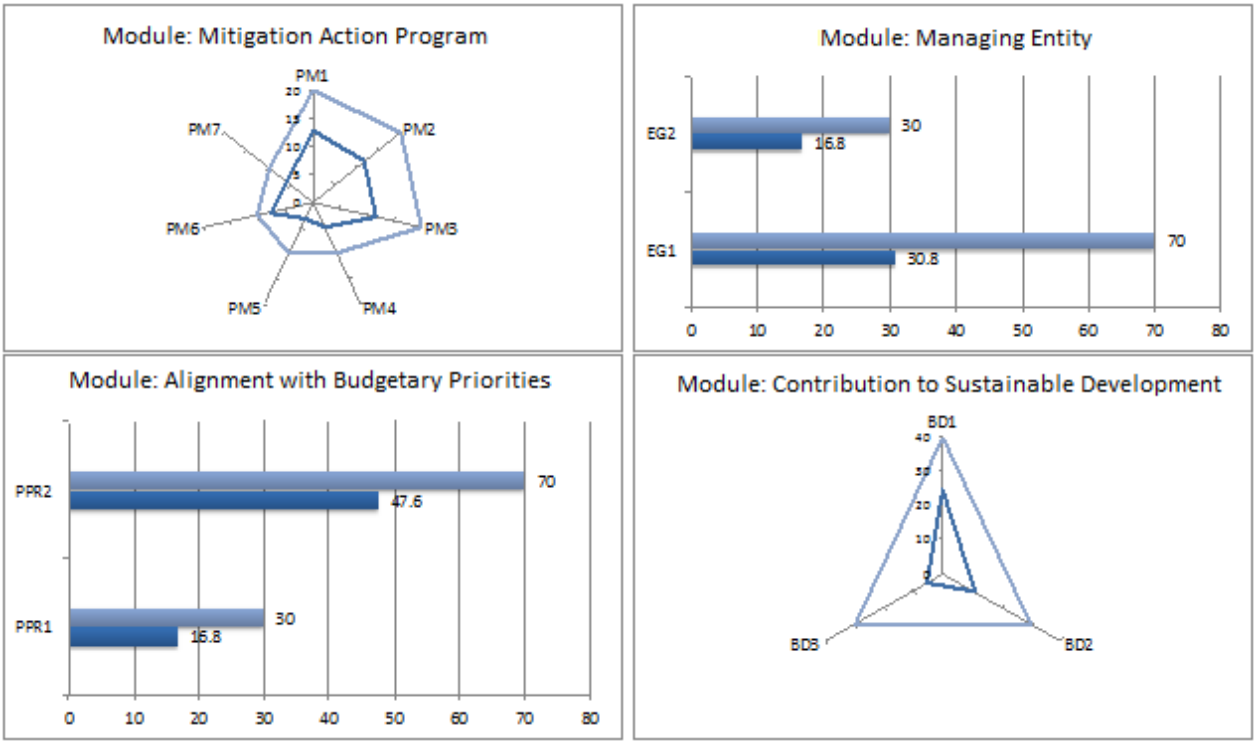


Table 3: Application of the short assessment tool to the NAMA Waste

Module	Area of Evaluation		Relative Importance	Evaluation Score	Relative Score	Maximum Score	Module Score
Mitigation Action Program	PM1	PM1. Definition and scope of the mitigation action	20%	63.5	12.7	20	58.1
	PM2	PM2. Objectives and goals	20%	59	11.8	20	
	PM3	PM3. Planning	20%	59	11.8	20	
	PM4	PM4. Available resources, roles, responsibilities, and authorities	10%	50	5	10	
	PM5	PM5. Documents, document control, and records	10%	32	3.2	10	
	PM6	PM6 Reduction of intervention emissions	10%	77	7.7	10	
	PM7	PM7 Monitoring and reporting	10%	59	5.9	10	
Mitigation Action Managem-ent Entity	EG1	EG1 Management framework	70%	44	30.8	70	47.6
	EG2	EG2 Management of climate change programs	30%	56	16.8	30	
Alignment with Budgetary Priorities	PPR1	PPR1 mitigation action in the context of Peru's results based budgeting governance strategy, Presupuesto por Resultados (PPR)	30%	56	16.8	30	64.4
	PPR2	PPR2 Sector and management of PPR	70%	68	47.6	70	
Contributi-on to Sustainab-le Developm-ent	BD1	BD1 Scope, objective, and goals for the contribution to sustainable 36.5development	40%	62	24.8	40	41.45
	BD2	BD 2 Planning and participation toward sustainable development	30%	36.5	10.95	30	
	BD3	BD 3 Follow-up on the contribution to sustainable development	30%	19	5.7	30	

The resulting scores when applying the (extended) protocol to the NAMA Waste are summarized in the following graphs below:



In conclusion, the pilot in the Peru case shows that the MAAP at its current stage can be applied ex-ante (design or development stage) to mitigation actions as it was intended. It also shows that a certain level of development is required to be able to obtain valuable information and more importantly, to provide results in a somehow broad scale so it is possible to compare mitigation actions. This does not actually require that the mitigation action is already being implemented and emissions reductions produced (ex-post assessment) but that the assessment team can evidence that the required components are in place for when actual emissions reductions happen (as an example, the roles of responsibilities can be well defined and documented, the implementation plan developed and in progress, etc. during this development stage). A good number of key indicators places the score at the top assessment level only when there is evidence of implementation. As a result, most key indicators for mitigation actions at the concept stage are scored, at best, within the middle assessment level and, in the case of having to compare multiple actions at the concept stage, the conclusions are not easily noticed. In the case of Peru, as already described, a short version of the MAAP was produced with sixteen key indicators what actually provided a better picture of the status of those actions at the design stage. This short version could be used to generalize a MAAP for similar cases.

Annex 4: Jurisdiction-level Assessment

As described in this report, in the case of carbon assets entering the international market, the goal of this assessment system is to provide a framework for the assessment of the mitigation value of the carbon assets. In this context, it is necessary to take into account the level of ambition of the jurisdiction where the assets originate and the level of commitment to climate change mitigation, considering the reality and particularities of each jurisdiction. The MA program level assessment is then to be complemented with additional inputs to assess the jurisdiction level of ambition and the likelihood that the combined set of policies and implementation efforts will achieve the jurisdiction's stated mitigation goals. Both the level of ambition assessment and the assessment of the jurisdiction actions credibility are still concepts under development by the World Bank group for a Networked Carbon Market. It is thought that the level of ambition can be factored in through a level of ambition index that takes into account economic, social and political parameters. This index would then be a corrective factor to the jurisdiction climate initiatives credibility accounting also for the expected level of effort of a jurisdiction compared to others.

The assessment of the jurisdiction climate mitigation efforts evaluates the effectiveness of the ongoing actions to achieve voluntary or mandatory mitigation targets and seeks to confirm the alignment of the different initiatives with the climate change strategy on climate change, taking into account the results of the jurisdiction GHG inventory and those sectors where more effort is required. This assessment can be based, for example, on a protocol similar to the one developed for the assessment at the program level. In this case the quantification of the net effect of the different policies and actions to achieve the climate mitigation targets can be specially challenging and will broadly depend on the quality and availability of data in the jurisdiction. In cases where quality data do not exist, the assessment exercise can become a lengthy process of data analysis coming from very different sources. In better cases, the jurisdiction will have an overview of the different initiatives, its effect quantification and a method to analyze the cross effects of different policies and actions.

Key Indicator	Level of development
Institutional coordination, information sharing and consultation to interested parties	There are mechanisms implemented for institutional coordination among different governments levels, to ensure alignment of climate change interventions, information sharing and consultation to interested parties
	These mechanisms are created but there is no evidence of its correct implementation.
	Mechanisms for institutional coordination are not defined
Climate change authorities and their responsibilities	There are clear definitions of authorities and their responsibilities which appear to be sufficient and in line with the jurisdiction's commitments and there is evidence of their implemented. These responsibilities include, among others, those related to MA s development.
	Definitions seem unclear or insufficient or not in line with the jurisdiction's commitments or are not yet implemented
	There are no set definitions for these in place
Capacity building	The jurisdiction has a process in place for capacity building at the appropriate levels of the public and private sector to ensure that resources are available for the implementation and MRV processes related to mitigation targets and interventions
	There are climate change mitigation capacity building actions and programs but those do not seem to be centrally coordinated or being planned taking into account the overall jurisdiction priorities
	There is no evidence of a capacity building program for climate change actions
Jurisdiction level MRV system	The jurisdiction has defined requirements and set mechanisms to ensure monitoring, reporting and verification (MRV) of its mitigation goals and targets, the GHG inventory and climate change mitigation interventions including the projects, actions, programs, policies. Resources (including financial, staff and capacity building) are planned and available.
	The jurisdiction has set mechanisms but those seem to be partial, unreliable or not yet implemented, or there is no evidence of the availability of sufficient resources
	The jurisdiction does not have MRV system provisions in place
GHG registry and double counting	The jurisdiction has a system in place for the registry of GHG emissions reductions from different initiatives under its jurisdiction. This GHG registry includes inclusion processes that evaluate possible double counting. The GHG registry is operational.
	A national level registry is designed. Nevertheless, it does not cover all actions ongoing within the jurisdiction’s jurisdiction or there are not criteria defined to avoid double counting.
	A national level registry does not exist or is not operational
Past experience in the management and implementation of internationally financed climate programs	The jurisdiction has a wide and recognized experience in the management and implementation of internationally financed programs
	The jurisdiction has some experience in the management and implementation of internationally financed programs but is still strengthening its capabilities
	The jurisdiction has no experience in the implementation of internationally financed programs

Jurisdiction participation in, national and, if applicable, international climate change mitigation commitments and pledges	The jurisdiction has accepted a binding GHG emissions mitigation commitment (in the form of objectives and targets) as part of its participation in national or international (if applicable) processes
	Mitigation commitments are set as a voluntary objective or conditioned to availability of external support.
	No mitigation commitments are set as part of the jurisdiction participation in international climate change negotiations
Past performance of National climate change commitments and pledges	The jurisdiction has periodically reported its performance against the agreed mitigation pledges. The performance with respect to those objectives and targets has consistently improved due to actions taken by the jurisdiction. The performance against those objectives and targets is periodically evaluated and deviations assess and a plan to correct the same over time is agreed upon and executed
	The jurisdiction has periodically reported its performance against the agreed mitigation pledges. The jurisdiction has deployed different instruments to achieve those objectives and has agreed to specific targets. Nevertheless, there is no evidence of the continuous evaluation of the process and the actions taken to correct possible deviations.
	No mitigation commitments are set as part of the jurisdiction participation in international climate change negotiations or if exist, there is no evidence on the actions taken to reach the agreed targets, its planning, execution and continuous improvement process.
Legal framework for climate change mitigation	The jurisdiction has designed and implemented a legal framework to ensure the implementation of actions/interventions towards reaching the agreed mitigation objectives and targets. The designed top-down framework contains policy and regulatory elements which has benefited from a bottom-up approach where inputs have been sought from different stakeholders. The legal framework includes provisions, as feasible as possible, to protect these commitments from political changes.
	There is a legal framework but there is no evidence of its alignment with the jurisdiction goals. There is no evidence of the involvement of stakeholders in the process.
	There is not a legal framework yet.
Strategic planning	The legal framework has been deployed to different parts of the public and private sectors through strategy development, planning and evaluation processes. The jurisdiction goals and targets achievement has been planned using long term strategic planning (e.g. Multiyear strategy development) and shorter term implementation planning (egg. Annual or biannual planning processes). There is evidence of the deployment of these plans in the public and private sector.
	The planning exercise has been done but there is not a consistent approach to implementation of the actions agreed across the involved parties
	While there are specific goals and targets, these have not been planned at the long and short term to secure their achievement
Enforcement of legal framework	There is evidence of the enforcement of the legal framework and actions taken when there are deviations from the agreed objectives and targets.
	The enforcement of the legal framework is concentrated in isolated parts of the economy. Past deviations from critical sectors of the economy are consistently not addressed.

	The legal framework is proposed and approved but there is no evidence of its enforcement.
Jurisdiction's GHG inventory	The jurisdiction's GHG inventory is reported based on internationally accepted standards and/or UNFCCC standard; and is periodically updated.
	The jurisdiction's inventory is not done based on a reliable process or it has not been updated in the last 5 years
	A national inventory has not been updated in the last 10 years
Jurisdiction's GHG inventory as the basis for GHG mitigation targets	The GHG inventory is the basis for establishing specific mitigation targets. These specific targets cover different sectors which are the major emitting sectors as defined by the GHG Inventory. The National objectives and targets consider, among others: the level of emission in each sector of the economy, a cost benefit analysis of the potential achievement through the intervention in different emission sources.
	There is no evidence of the alignment of the mitigation targets and the results of the GHG inventory, specifically how targets address the largest emitting sectors.
	the GHG inventory is not part of the inputs for the agreed mitigation targets
Economic development inputs for mitigation targets	Expected economic development under different scenarios has been considered when establishing mitigation targets. The proposed mitigation targets are dynamic and aligned with the growth scenarios both for the overall economy and for the major emitting sectors.
	Future development has been considered as an input for defining overall mitigation targets but not at the sector level.
	Mitigation targets exist but do not consider future growth scenarios.
Development benefits and participation	In addition to the GHG inventory and future development, the contribution to sustainable development beyond GHG emissions reduction and the views of interested parties are part of the inputs to agree on mitigation targets
	GHG reduction and other benefits are being considered but using only a top down approach with no participation of the interested parties.
	Only GHG emissions reduction considerations are the basis for the agreed targets
Planning and interventions	The jurisdiction legal climate change framework in place to reach the agreed mitigation objectives and targets leads to a process for the implementation of specific interventions towards reducing GHG emissions. It is possible to map the top down approach connecting the mitigation goals and targets, the legal framework for their achievement and how the interventions are aligned both with the legal framework and the agreed targets.
	The jurisdiction legal climate change framework in place to reach the agreed mitigation objectives and targets leads to a process for the implementation of specific interventions towards reducing GHG emissions. Nevertheless, it is not possible to justify how these interventions are decided and there is no evidence of the existence of a systematic process for the identification, selection, planning, execution and periodic evaluation of the actions.
	A number of individual actions towards climate change mitigation are proposed in the jurisdiction but there is no evidence of the alignment between the agreed intervention, the jurisdiction's inventory results and its possible contribution to reach the jurisdiction's mitigation objectives and targets.

Selection process for mitigation interventions	A process to select specific mitigation interventions is in place and is applied to form a portfolio of mitigation policies and actions. This process applies a risk approach to select mitigation initiatives considering: GHG inventory Mitigation objectives and targets Actual and projected level of emissions in top emitting sectors of the economy Cost benefit analysis Feasibility of implementation In addition to emissions and relevance of the sector, interventions are selected taking into account: Technological options Financial and business requirement for relevant sectors of the economy Contribution to sustainable development beyond emissions reductions
	A number of interventions has been selected to contribute to achieve the jurisdiction's objectives. Nevertheless, the selection process is not systematic or does not take into account all aspects above.
	Even when there may be isolated mitigation initiatives ongoing in the jurisdiction, there is no evidence of being coordinated efforts towards achieving the agreed targets.
Definition of interventions	The Interventions have been defined to a level that provides a reasonable level of confidence on the emissions reduction contribution. The definition of policies and actions include: Scope Direct GHG effects Cross effects with other climate and non-climate related policies and actions. Boundaries Methodology for the estimation and ex post calculation of emissions reduction, taking into account the desired level of accuracy in reported emissions. Estimation of ER Measurement, reporting and verification requirements in line with the level of accuracy desired and ensuring an acceptable level of traceability in the reported data.
Deployment of the portfolio of policies and actions	An overall plan to deploy interventions in different parts of the public and private sector has been agreed and is implemented. This plan includes the assignment of resources and capacity building actions at the required levels.
	The portfolio of intervention is agreed but no coordinated effort is being done to ensure a consistency implementation to ensure the targets are achieved and the results can be properly reported.
	No specific actions implemented
Evaluation of the mitigation portfolio	There is a periodic evaluation at the national level of the implementation results of the portfolio of interventions and its progress against the agreed objectives and targets. There is evidence of actions taking to correct deviation when the targets are not being achieved
	A periodic evaluation of mitigation progress is done based on the portfolio of policies and actions but there is no evidence of the actions implemented to correct deviations.
	The portfolio of interventions agreed is being implemented but there has not been any periodic evaluation of the results achieved so far.

http://www.worldbank.org/en/topic/climatechange/brief/globally-networked-carbon-markets

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