

Technical Sub-group on MRV and Climate Change of the Pacific Alliance
(SGT-MRVCC)

The Anticipated Role of Market & Non-Market Mechanisms to Achieve the NDCs

Chile - México - Perú - Colombia

Technical Discussion

Mexico City, March 2019

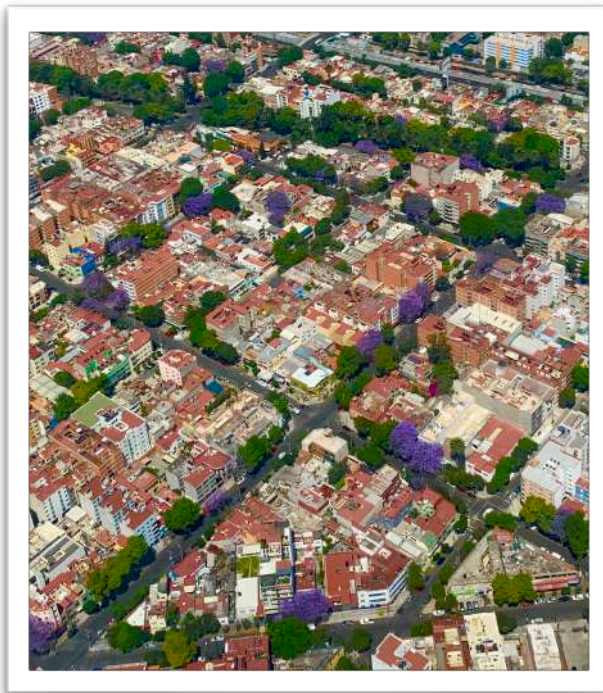
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Resource List

- PA Country Interviews 2019 - COP24 Article 6 Reflections
 - [Peru](#)
 - [Chile](#)
 - [Mexico](#)
 - [Colombia](#)
- [White paper](#) "Understanding and Implementing Article 6 of the Paris Agreement.
- [Info resource](#): Confidence in Mitigation Programmes (EDF)
- [Synthesis](#): Guide to Linking Emissions Trading Systems (ICAP)
- [SGTMRV Overview](#): Context and Activities of the SGTMRV
- Country Presentations:
 - [Mexico](#) - Climate Policy Progress. Carbon Pricing/ Markets
 - [Peru](#) - Advances in the MRV System
 - [Peru](#) - MRV Experiences in the Energy Sector
 - [Colombia](#) - Status and Gaps in the MRV System for Achieving the NDC
 - [Chile](#) - MRV Considerations; the NDC, Green Taxes, and future projects
 - [Canada](#) - Operationalizing Article 6: Negotiation Status & Opportunities to Support NDC Implementation
 - [Canada](#) - Emissions MRV, Technologies & Practices to Support Credible Reductions and Trading
- [Discussion Framework](#): Carbon Market Mechanisms Role Play
- [2018 Meeting Report](#): SGT-MRV Workshop Report, Bogotá, March 2018



Setting the Scene

Originating from the recommendations produced during the [March 2018 Bogota Meeting](#) of the Technical Subgroup on MRV and Climate Change of the Pacific Alliance (SGT-MRVCC)¹, Environment and Climate Change Canada (ECCC)² supported a peer exchange technical discussion in Mexico City on the 12th and 13th of March, 2019; between national delegates of the countries of the Pacific Alliance. Materials for this peer to peer discussion in Mexico City can be found on the [PA-Wiki](#).

The learning objectives of the meeting included:

- Improve understanding of the potential pathways and cooperative approaches to implement market mechanisms as part of an NDC strategy.
- Increase familiarity with the concepts, and the benefits and risks of domestic and international carbon markets and the key role of MRV management and coordination structures:
 - What types of information will partners need in order to have confidence in each other and the process of market and non-market mechanisms?
 - How do proposed mitigation activities relate to the scope and coverage of the NDC, as well as the requirement for a corresponding adjustment?
 - What information needs to be shared/accessible/managed?
- Explore the relationship of project-level MRV and NDC-level accounting to market mechanisms.
- Define methods to make MRV of market mechanisms more robust.
- Share reflections on piloting bilateral activities and Article 6 implementation.
- Identify approaches, roles and provisions for potential bilateral agreements.
- Specify capacity building needs to inform the 2019 work plan of the SGT-MRV.
- Generate research questions (RQs) relevant to the development of standards and guidelines for the use of MRV to support market and non-market mechanisms for achieving NDCs.
- Reaffirm the objectives of the SGTMRV, familiarize new officials, and establish links with new policies under new national governments in the PA countries. Update the PA2020 SGTMRV Roadmap

¹ Subgrupo Técnico informal de MRV y Cambio Climático

² Fourth Biannual Report on Canadian Cooperation Projects with the Pacific Alliance. June, 2018.
<https://collaborase.com/attachments/11710?1530291605>

Preparatory Materials

To shape the agenda and target the technical discussions at the meeting in Mexico City, two informational resources were prepared for the delegates in advance of the meeting. These included; A) Pacific Alliance Country Interviews, “Post COP24 Reflections on Article 6”, and B) the white paper “Understanding and Implementing Article 6 of the Paris Agreement.”

A) PA Country Interviews - COP24 Article 6 Reflections

Brief topical interviews were conducted with each country focused on expectations for Article 6, general impressions on the main outcomes of COP24, particular country priorities and challenges, and key negotiation topics. (individual links below) The officials interviewed from each country include:

Peru

- **Mr. Lorenzo Eguren**, Project Coordinator; Department of GHG Mitigation. Ministry of the Environment.
- **Ms. Berioska Quispe**, Specialist Officer, REDD+ Institutional Strengthening; Department of Climate Change, Desertification and Water Resources. Ministry of the Environment.

Chile

- **Ms. Jenny Mager**, Head of GHG and SLCP Mitigation and Inventories; Climate Change Office, Ministry of Environment.

Mexico

- **Ms. Sandra Guzmán**, Director General for Climate Change Policies. Secretariat of Environment and Natural Resources.
- **Mr. Saul Pereyra**, Deputy Director of Actions Monitoring to Promote Sustainable Development; General Direction of Climate Change Policy. Secretariat of Environment and Natural Resources.

Colombia

- **Mr. Sebastián Carranza**, Specialist Officer; Department of Climate Change and Risk Management. Ministry of Environment and Sustainable Development.

[Peru \(link\): COP24 Reflections - Summary](#)

- Priority areas for Peru in the negotiations are mitigation & transparency. There is a need to define when the mitigation efforts will be recognized. And, a need for common reporting timelines to define when mitigation counts towards a baseline or when they count as part of the implementation of actions that are recognized as a contribution to national mitigation.
- Important challenge is the explanation of long-term projections- BAU issues.
- Markets mechanisms are most important for Peru- need clear rules. There are sectors in which mitigation actions are not implemented due to lack of a resources— market mechanisms would be beneficial.
- MRV of mitigation activities is a challenge; must have clarity regarding GHG reductions and define if these reductions will be in compliance with NDCs or if they will be transferred as ITMOs. Need more emphasis on avoiding double counting.
- Peru has established emissions inventory (INFOCARBONO) and the Peru Carbon Footprint, soon will implement the National Registry of Mitigation Measures. These systems will be as compatible as possible with the other systems of the AILAC countries and the Pacific Alliance.

[Chile \(link\): COP24 Reflections - Summary](#)

- Within the negotiations, Chile seeks the approval of the most ambitious modalities, procedures and guidelines (MPG) of Article 13 for developing countries. Supports the vision of a gradual implementation of the flexibility within MPG's to reach common rules.
- Chile aligns their negotiation position with AILAC³, and is willing to compromise on mandatory use of the 2006 IPCC Guidelines for GHG inventories, including projections in mitigation, evaluation of long-term commitments and the level of information for mitigation activities.
- Art. 6 is a priority and will influence how Chile will adjust its NDC to the new Rules. One issue is communication of NDCs, and how to generate and manage the biennial transparency reports in addition to updating and implementing new and more ambitious NDC.
- Wants to increase their participation in vulnerability and adaptation negotiations, and definition of indicators.
- Chile is open to use market mechanisms, but mainly to comply with NDC objectives. These mechanisms should encourage mitigation activities in areas that are not covered by national efforts (i.e. new investment projects, complementary to the mitigation activities defined by the country.)
- Market mechanisms are a positive tool. Most complex issue is the transaction of mitigation outcomes. Key issue is how to define accounting rules and avoid double counting. Likewise, Chile is considering the implementation of an internal offset market for domestic carbon taxes.

[Mexico \(link\): COP24 Reflections - Summary](#)

- Mexico is working to increase its own climate ambition & join the High Ambition Coalition.
- Within the negotiations, the guidelines for the revision of NDCs puts Mexico in a new reality, since the information generated at the national level must be harmonized so that the contributions really reflect the mitigation & adaptation activities.
- The new administration has redefined its priorities, which will focus on implementation of measures/policies to comply with commitments.
- Mexico has two priorities; first to conduct a structural review of the NDC to assess the best way to implement actions, and two, strengthen access to financial mechanisms. International financing has been the main source for climate action in the country. Negotiations should define better access routes to existing funds.
- Mexico intends to implement multilevel coordination at the domestic level with all actors, to achieve compliance with national commitments. Financing mechanisms should be accessible to all actors.
- It is necessary to have an international market that allows an exchange that generates mitigation activities.
- Mexico is preparing to implement a domestic market scheme. This will connect to the international market, and have clear rules to avoid double counting, verify reductions and ensure equitable participation of all actors.
- Mexico believes the work done by the SGTMRV is beneficial.

[Colombia \(link\): COP24 Reflections - Summary](#)

- A key priority for Colombia is to stop deforestation, which is mainly linked to illicit activities.
- Other important issues for Colombia are electrifying public transport and the renewable energies increment into the electricity matrix.
- No expectations in terms of market mechanisms due to the existing uncertainty regarding Art 6 management.
- Colombia (in line with AILAC position) expects that carbon credits will not include vintage projects and apply to only intermediate-high quality offsets.

³ [Independent Association of Latin America and the Caribbean \(AILAC in Spanish\)](#)
[TOC](#)

- Key to avoid double counting. Mitigation actions can lose their effectiveness by compromising environmental integrity and double counting.

B) Understanding and Implementing Article 6 of the Paris Agreement

A background [white paper](#) was produced for the participants in the run up to the Mexico City workshop, to provide a review of cooperation schemes for enhanced mitigation action relevant to the Pacific Alliance countries, and a brief analysis of the building blocks and key considerations of Article 6.

This document highlights the importance of clear and transparent disclosure of; key environmental integrity features under cooperative approaches, and of robust MRV and accounting procedures to build trust among early movers. Among other impacts, this critical disclosure will help ensure that activities implemented will be recognized under future modalities and procedures to be adopted by the COP.

The report concludes that the implementation of Article 6 will only improve if early movers cooperate with complete openness; exchanging views, and sharing the experiences and lessons learned. The white paper recommends that the SGTMRV discuss the implications of early Article 6 pilots before “final rules” under the UNFCCC are defined. The report presents the questions, “Would an early Article 6 engagement modify the prospects for more ambitious NDCs by 2020, or would that deter any progress on ambition?” These questions have not been addressed yet in the region and should be brought forward for discussion.



Mexico City – Peer Exchange

With Chile as the current chair of the SGTMRV, the two-day peer exchange in Mexico City commenced with Ms. Jenny Mager from the Ministry of Environment (MMA) in Chile giving the opening remarks. She highlighted the importance of continued cooperation on MRV issues, to support the PA national governments to achieve their GHG emissions reduction targets and to benefit from the evolving market and non-market based mechanisms. The SGTMRV has a pivotal role to play, especially related to progress and institutional memory given the fact that since the group's meeting last year, there is now actually a new national government in every one of the PA countries. Ms. Mager emphasized the importance of utilizing the opportunity provided by this workshop to develop concrete work objectives and to update and continue the implementation of the work plan commenced in Bogota.

On behalf of Mexico, Ms. Sandra Guzmán from the Secretariat of Environment and Natural Resources (SEMARNAT) in Mexico welcomed the participants to Mexico City. She expressed the enthusiasm of the new administration for the work of the SGTMRV of the Pacific Alliance.

Overview of the SGT-MRV

Mr. Francisco Pinto from the Ministry of Environment (MMA) in Chile then [presented the group an overview](#) of the SGTMRV, its position inside the other working groups of the Pacific Alliance, its mandate, and an update on the progress the SGT-MRV has made during 2018.

He emphasized the opportunities of the SGTMRV, in collaboration with the initiatives of the Carbon Pricing in the Americas (CPA), and the Partnership for Market Readiness (PMR)— to strengthen MRV cooperation between the countries, to showcase the region, to facilitate information sharing and follow up, and to better involve the private sector in achieving the NDCs. Mr. Pinto shared the interest of Germany to support a technical workshop in Chile to help advance work on MRV, this is a great opportunity for collaboration that the SGT-MRV seeks to convene.



Mr. Pinto also provided more detail on the different types of Climate MRV, including; MRV of emissions, MRV of mitigation actions, and the MRV of climate finance and support provided. He emphasized the opportunity to accumulate lessons learned from different countries and mechanisms in order to see how best to prepare for Article 6.

He concluded his presentation by challenging the participants to contemplate and determine how to demonstrate progress when they present activities and results again this year to the SGTMRV's parent Working Group on Environment and Green Growth (GTMACV) of the Pacific Alliance, as well as with COP25 coming to Chile.

Country Presentations

Each country was invited to prepare a presentation for the workshop to share with their PA colleagues on the actual status and potential gaps in the national climate MRV systems to achieve the NDC and any expectations on the potential role of market and non-market mechanisms. The full presentations are available to download, with summaries presented below.

Colombia⁴

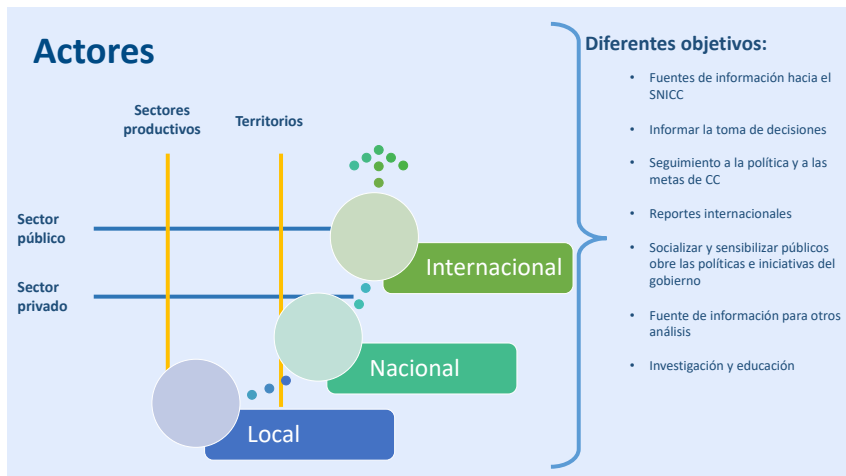
- Colombia's carbon tax has been in place since 2017 and it also recently approved legislation to create an emission trading system (ETS).
- Colombia noted that their MRV conceptual framework is based on the transparency framework within the Paris Agreement.
- Colombia passed several laws that allow the government to enact various reporting and accounting requirements for greenhouse gas emissions and standardize the collection of information at the national level. e.g [Ley 1931 of 2018](#) that establishes, among other responsibilities, the mandate of the Ministry of Environment to regulate the process of verification and registration of emission reductions. The law also creates the National Programme of Emission Credit Transfers (PNCTE). Another example is [Res. 1477 of 2018](#). This resolutions regulates the MRV system of mitigation action at the national level. Through this regulation all mitigation initiative title holders who intend to opt for payments for results or compensations, or demonstrate compliance with national goals on climate change under the UNFCCC, must carry out the MRV of their GHG mitigation actions in accordance with the principals of the MRV System of mitigation actions at the national level and the accounting rules established in such regulation.
- Colombia is experiencing an explosion of mitigation projects across the country but is having difficulty tracking them at the national level in order to follow up on the mitigation component of their NDC.

Colombia Presentation
'State and Gaps of MRV Systems for Compliance with the NDC'
Sebastian Carranza and Camila Rodriguez
Dirección Cambio Climático
Ministerio de Ambiente y Desarrollo Sostenible
República de Colombia

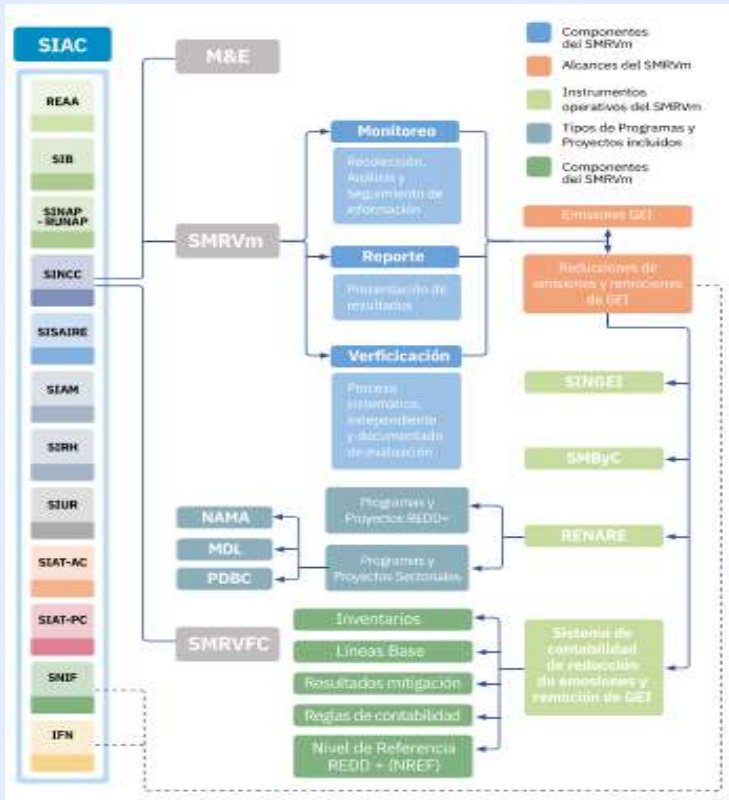


⁴ Ms. Rodriguez and Mr. Carranza joined the SGT-MRV Mexico City meeting via teleconnection.

- The country is undertaking significant institutional efforts, focused on the technical aspects of carbon pricing, to get prepared to be in alignment with Paris requirements. Major gaps remain in the quantification and accounting of greenhouse gas emissions.
- Colombia has made significant efforts to advance the standardization of reporting and accounting requirements for greenhouse gas emissions, this is in alignment with the framework of the Paris Agreement.
- With the goal to resolve potential overlaps between REDD+ projects and other mitigation programmes and to prevent double accounting, Colombia has created an executing agency role and can exclude the areas of projects.
- However, Colombia is facing challenges in keeping a formal registry of mitigation projects across the country and, as a result, it is difficult to track progress related to the mitigation component of their NDC.



¿Cómo avanzamos en el componente de mitigación de la Política Nacional de CC – NDC mitigación?



Mexico

- Mexico is currently working on its National Development Plan, which has a strong climate change component. They plan to follow this with sector-specific programs.
- Mexico's Ministry of Environment is responsible for the implementation of their planned emission trading system (ETS), which will start with a 3-year pilot phase, with mandatory participation from direct-emitters.
- Since October 2014, facilities with annual emissions above 25,000 tCO₂e have been reporting their GHG emission to the National Emission Registry (RENE).
- Mexico intends to publish the national ETS regulation in May 2019. This will have a 3 year pilot phase.



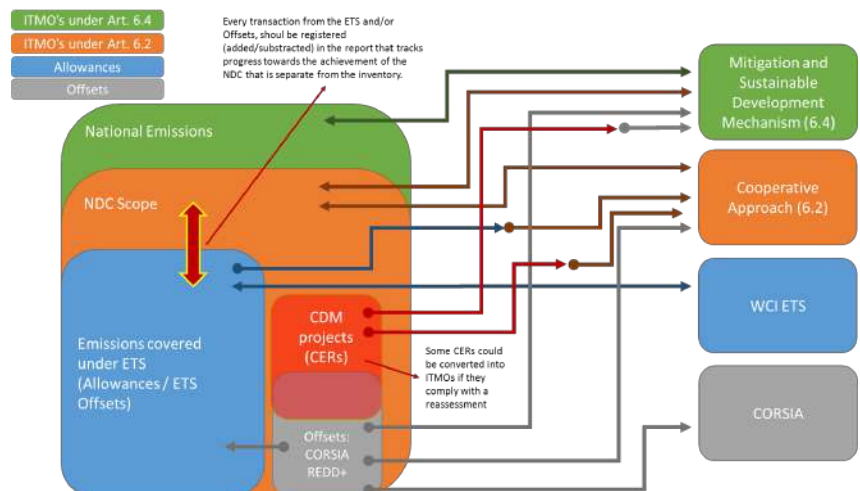
- Mexico also noted that some of those CERs would be sold to Japan to help them comply with their NDC.
- Mexico is struggling to align national and subnational mitigation actions. It is currently working on a system that will gather all information at the national and subnational level on all actions being carried out in contribution to the NDC to help avoid duplication and visualize the actions in its NAMAs.

Mexico Presentation

'Climate Policy Progress – Carbon Pricing and Markets'

Victor Escalona
Dirección Cambio Climático
Secretariat of Environment and Natural Resources (SEMARNAT), México

- The design of the ETS covers the energy and industry sectors at the facility level. It establishes an absolute CAP.
- Allocation of emission limits will be free based on grandfathering to all participants, to later be reduced after the pilot.
- Offset use is limited to 10% for compliance.
- Mexico has 192 projects registered with the Clean Development Mechanism (CDM) and is currently researching how the resulting Certified Emission Reductions (CERs) (33.4 million CERs between 2008-2019) could be used to help companies comply with their domestic carbon tax and future ETS.
- The carbon tax on different fossil fuels ranges from US\$0.33/ tCO₂ (oil coke) to US\$2.71 /tCO₂ (aviation fuel). From 2014 through Jan 2019, the carbon tax in Mexico has produced US\$1.8 billion.



Peru

- In April 2018, Peru passed its first framework law on climate change, which institutionalized a strategy to fight climate change. Consultations with Indigenous peoples was integral to the development of this strategy.
- Three challenges are present; multi-sectoral approach, for which a Multi-sectoral Working Group was created; multi-level approach, highlighting the importance of articulating work with local and regional governments; and multi-actor approach, defining how to involve the private sector, indigenous groups, civil society and others.
- The Climate Law establishes that Peru's climate management instruments—the National Strategy on Climate Change (ENCC), the regional strategies for climate change (ERCC), and the Nationally Determined Contribution (NDC) under the Paris Agreement—are binding and mandatory commitments for the appropriate government authorities and should be considered in their institutional budgets.
 - For this reason, Peru noted that it “wants an improved definition of what an NDC is at a national scope.”
- Peru's primary instrument to measure progress toward NDC implementation is through a national digital GHG inventory known as Infocarbono, which includes guidelines for different sectors on how to prepare for national GHG inventories. These guidelines rely heavily on AP 42 emission factors.

Peru Presentation

'Advances in MRV'

Freddy Garro

Ministerio del Ambiente

'MRV Experiences in the Energy Sector'

Alfonso Cordova

Ministerio de Energía y Minas
República del Perú



- Peru uses a system titled Huella de Carbono to help track emission at an organizational level. However, Peru faces measurement challenges in that not all of its sectors are using 2006 IPCC guidelines.
- Peru is also implementing a National Registry for Mitigation Activities, as well as a National Registry for Climate Finance.
- There are concerns in Peru on whether their default emission factors will satisfy future market mechanism requirements/forces. Peru plans to start assessing which emission factors are most effective for the country and, to that end, some work on this has already started in the transportation sector.
- It was noted that some disconnect exists between government departments in Peru, particularly on work being undertaken on MRV.
- The NDC includes 4 NAMAs related to energy; energy efficiency, grid-connected renewable energy, universal access to sustainable energy, and electrifying transportation. Several studies have been conducted with more planned on the impact of electrifying transportation.

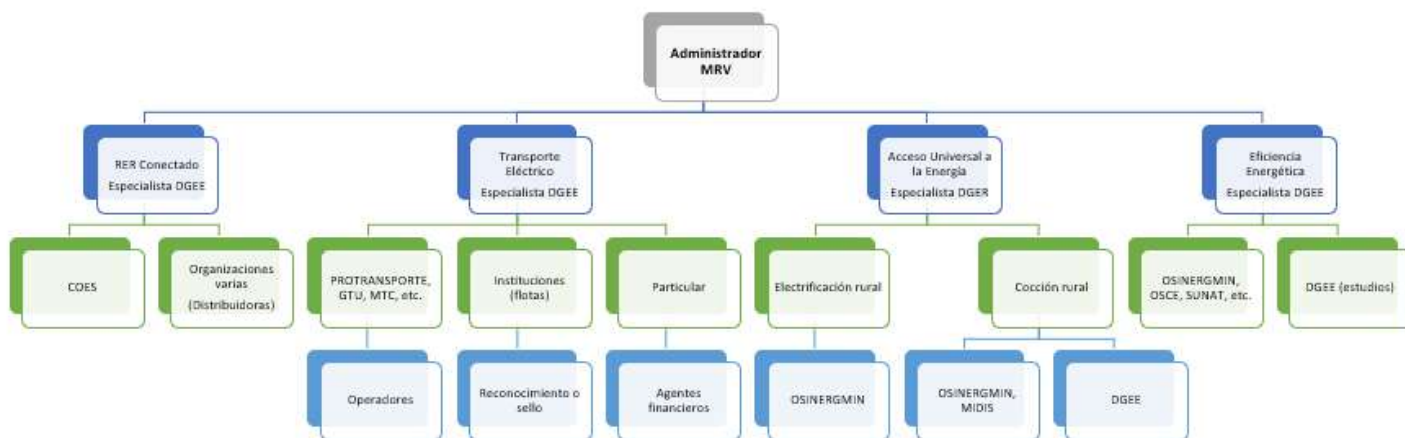
Herramientas para la Medición, Reporte y Verificación en Mitigación (en propuesta)



EL PERÚ PRIMERO

PROXIMOS PASOS

- Definir la estructura y roles del sistema nacional de MRV del sector energía.
- Elaboración de estudio sobre rendimiento de taxis.
- Elaboración de estudio que permita crear una plataforma única de MRV, revisión de libros de cálculo actuales y análisis de sistemas informáticos recomendados como blockchain.



Chile

- Chile developed an MRV framework that ensures approaches for individual mitigation actions are developed using a uniform process based and common sectoral assumptions. Chile uses the same assumptions in the national GHG inventory to keep consistency.
- Chile noted that the new Article 13 transparency guidelines are good, but that flexibility will be important for them when working towards their full implementation.
- Chile participates in the Capacity Building Initiative for Transparency (CBIT). They intend to soon define specific activities and outputs of the programme.
- Two key challenges for Chile include:
 - Strengthening MRV systems – currently Chile has no technology that will allow it to do emission projections on a permanent basis; and
 - The institutionalization of public climate expenditures – there is a need for enhanced government transparency on climate change expenditures.
- Chile noted that it wants to move away from emission intensive indicators in its NDC and determine when it intends to peak its emissions. It also noted the importance of having sectoral allocations of emissions in an NDC.
- The green tax in Chile applies to local contaminants (PM, SO₂, and NO_x), CO₂ (US\$ 5/t), and mobile sources (NO_x)
- Chile intends to implement two improvements to the Green Tax, namely the elimination of the “threshold of technological characteristic” and the development of an offset proposal.
- In 2017, the green tax generated US\$191.3 million.

Chile Presentation

MRV Considerations; the NDC, Green Taxes, and future projects

Francisco Pinto & Rodrigo Bórquez

División Cambio Climático

Ministerio del Ambiente

Chile



- However, with only one year of data, Chile has not yet evaluated the impact of the Green Tax on GHG reductions and where those reductions are happening.
- Chile has made great progress in creating MRV processes that foster consistency between individual mitigation actions and the national GHG inventory. Chile is committed toward collaborating with PA countries on standardizing these practices across the region.
- Chile is also currently developing a GHG report that covers local entities and considers a bottom up approach.

Case Example: MRV Technologies to Support Market Mechanisms

Mr. Michael Layer of the Office of Energy Research and Development of Natural Resources Canada delivered a [presentation](#) that shared several specific examples demonstrating the why high quality, standardized, and replicable MRV is imperative. Jurisdictions are monetizing emissions and developing carbon taxes, off-set credit systems, and cap-and-trade mechanisms that are integrating market forces to verifiably reduce GHG emissions.

Mr. Layer presented how Canada and Mexico collaborated to demonstrate the world's only field deployable technology to quantify black soot from stack gas flares. This system showed the ability to correlate black carbon emissions to recoverable methane and VOC liquids and their associated revenue potential. The results from the NAMA in Mexico 2011-2013 at one flare site demonstrated emission reduction potential of 1.3 MtCO₂e per year and US\$ 237 million per year in avoidable hydrocarbon losses.

Results from Colombia's 2011-2013 NAMA on Heavy Oil Production included solutions to avoid significant VOC and Methane emissions from production storage tanks. The GHG mitigation outcome potential was 70% below BAU, in addition to US\$ 49.8 million per year in savings from avoidable hydrocarbon losses.

There is an important opportunity for the SGT-MRV to collaborate on capacity building opportunities associated with the 2017-2022 Mexico Project on NDC implementation for the oil and gas sector and black carbon and methane reduction.



Mexico 2011-13 NAMA Results – Refinery Flare

- Reduction potential from one flare site
 - 1.3 Mt per year CO₂e emission reduction
 - \$237 million USD per year avoidable hydrocarbon losses
- Avoidable steam losses from the soot suppression system
 - 22 kt per year GHG emissions reductions
 - \$18.9 million USD per year avoidable energy costs
- Potential to switch from steam to compressed air as the flare assist gas
 - 15.7 kt per year energy related GHG emissions reductions
 - \$1.3 million/yr in avoidable energy consumption



© Her Majesty the Queen in Right of Canada, as represented by the Minister of Natural Resources, 2017

Operationalizing Article 6

The [presentation](#) prepared by Melanie Mitchell of ECCC was trimmed from the agenda due to time constraints. A brief summary of the key points is presented here.

- Article 6 enables “cooperative approaches” towards NDC achievement on a voluntary basis. Key elements include:
 - Article 6.2 - Requires that Parties using ITMOs promote sustainable development, ensure environmental integrity and transparency (including in governance), and apply robust accounting to avoid double counting.
 - Article 6.4 - Establishes “a mechanism” under the Conference of Parties (COP) to contribute to mitigation efforts. Requires a “share of proceeds” be allocated to vulnerable countries and for administration under the new mechanism.
 - Article 6.8 - Establishes a framework for “non-market” based approaches to sustainable development to promote mitigation and adaptation ambition in the context of NDCs.
- Cooperative approaches are mutually beneficial
 - Benefits for Parties who *host* mitigation activities; attract investment to help meet NDC, gain access to new clean technologies/capacity, and realize environmental/health/economic benefits
 - Benefits for Parties who *support* mitigation activities; achieve lower-cost emission reductions, enhance climate ambition, and find new export opportunities
- MRV is critically important to cooperative approaches and is linked with environmental integrity issues. It underpins confidence in partners, programmes, and transfers.

9

Robust MRV to support EI

Partner

- Demonstrates **transparency** to a potential partner
- Enhances the **attractiveness** of **investment** and cooperation
- Helps potential partners **assess risk** and return on investment

Program

- Demonstrates that the market-based activity is **generating real emission reductions** – not “hot air”
- Proves the **effectiveness** of a program/project
- Gives partners **assurance** they are investing in a **credible** program

Transfer

- Gives partners **confidence** that mitigation outcomes can be **traced** back to program-level actions
- Enhances the **transparency** of reporting for all partners



Environment
Canada

Environnement
Canada

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Canada

Group Discussion: Linking MRV with NDC Achievement

Mr. Franck Portalupi from ECCC facilitated the discussion and commenced by presenting the country delegates some general questions relating to how Parties anticipate reporting on the progress toward their NDC, and how MRV can support this process.

General comments from participants included:

- Parties themselves need to be able to identify how specific actions are contributing to GHG reductions.
- Any actions undertaken by a Party need to be in compliance with the policies and proposals set out in the NDC.
- Parties need strong, accurate data in order to determine how various mitigation actions are interacting with each other so that there is no duplication or double claiming of emissions.
- Transparency will be key. Parties need to be able to clearly demonstrate how they are measuring and specific methodologies they are utilizing to adjust emission reductions.
- Parties need to identify what actions need quantification, as well as to implement a method to track those actions.



The discussion progressed, and the moderator noted that pre-Paris, MRV used to be the responsibility of the industries undertaking the mitigation actions. Now, the onus is on Parties to ensure robust MRV. Comments included:

- Parties need to accurately understand what they are using MRV for, i.e., GHG inventories, emission reduction actions, or climate finance needs/effectiveness.
- Parties need reliable quality data, both from top down and bottom up, to facilitate tracking the achievement of emission targets and setting new objectives that are sector-specific.

The moderator noted Article 6 gives Parties the flexibility to determine how deeply they would like to engage the private sector or other Parties in the achievement of their own NDC. Comments included:

- Parties need to determine what projects could realistically create internationally transferable mitigation outcomes (ITMOs) without undercutting the host party's achievement of the NDC.
- Minimum requirements for ITMO trading (including methodology to quantify ITMOs) will need to be established before trading can take place.
- Potential host Parties generally do not view ITMOs as a new revenue source– their primary concern is achieving their own NDC, and that needs to be communicated to their private sector.
 - The principal focus should be on closing the emissions gap and including more sectors within the scope of the NDC.
- Parties should think about what the final objective of the market system should be:
 - Not just to help Parties comply with their NDCs – but to foster certain types of actions. Through market-based projects, Parties can access certain technologies not otherwise available.
 - Parties need to be cautious that they are not generating ITMOs in an already-profitable industry.

The moderator noted that ITMOs can be used as a way to engage the private sector, create climate investments in your country, and speed up NDC implementation. Comments included:

- One participant noted that ITMOs should only be pursued after the achievement of the NDC. It should be used as a means to go above-and-beyond.
- Arriving to an agreement on specific MRV actions among the PA group could demonstrate to other Parties at COP that the Pacific Alliance is taking concrete measures toward facilitating a functional Article 6 mechanism.
- PA countries want to know what the opportunities of Article 6 are without having to forgo their priorities of developing robust MRV systems and achieving their NDCs.

Key takeaways:

- Parties need systems and methodologies that generate reliable quality data to identify how specific actions are contributing to GHG reductions as well as to facilitate tracking the achievement of emission targets and setting new objectives that are sector-specific.
- Any actions undertaken by a Party need to be in compliance with the policies and proposals set out in the NDC.
- The PA Countries do not want to be viewed simply as “offset providers”
- ITMOs are an important opportunity to accelerate technology transfers, as well as to engage with the private sector on profitable mitigation opportunities.
- Arriving to an agreement on specific MRV actions among the PA group could demonstrate to other Parties at COP that the PA is pursuing concrete measures toward facilitating a functional Article 6 mechanism.
- PA countries want to know what the opportunities of Article 6 are without having to forgo their priorities of developing robust MRV systems and achieving their NDCs.



Carbon Market Mechanisms Role Play

On the morning of Day 2, the group participated in some structured game play to explore the potential benefits and risks of utilizing market mechanisms as an appropriate part of an NDC Strategy. The session learning objectives were to:

- Improve comprehension of the potential pathways and importance of cooperative approaches to implement market mechanisms as an appropriate part of an NDC strategy.
- Increase familiarity with the concepts, and the benefits and risks of market mechanisms and the key role of MRV management and coordination structures.
- Understand perspectives of diverse stakeholders.
- Increase familiarity with the concepts, and the benefits and risks of domestic and international carbon markets and the key role of MRV management and coordination structures:
 - What types of information will partners need in order to have confidence in each other and the process of market and non-market mechanisms?
 - How do proposed mitigation activities relate to the scope and coverage of the NDC, as well as the requirement for a corresponding adjustment?
 - What information needs to be shared/accessible/managed
- Generate research questions and identify targeted MRV capacity building priorities for the 2019 SGT-MRV work plan.

In this exercise participants adopted 'new roles' and discussed emerging market mechanism scenarios, following a [discussion framework](#) to help advance the issues and challenge the participants. The framework included detailed checklists for key market mechanism factors including; competence, MRV methodologies, setting baselines, double accounting, leakage, non-permanence, validation and verification, caps, compliance, offsets, traceability, and exceptions to compliance.

Scenario A: State-wide Cap & Trade Market

Context: The national government has passed a new law in the national legislature that sets a regulated GHG emissions cap – a set tonnage that Large Industrial Emitters (LIE) must stay under = 80,000 tCO_{2e} per year. The program requires LIEs to comply with the emissions cap or face steep penalties. LIE's have the option to either cover their compliance obligations by making internal emission reductions (i.e. investing in clean technologies) or they can purchase offsets from the state-run National Registry.

Timeline & Scenario Details

- In 2013, the City of Azuelo purchased 8 hybrid (biodiesel-electric) buses to test them side-by-side with standard buses running in the city. The demonstration showed that the hybrid technology lead to fuel savings that can reach up to 30% on average, as well as a corresponding reduction in GHG emissions. The City of Azuelo then decided to purchase 500 biodiesel-electric hybrid buses for a total value of \$471.3 million.
- In 2015, the City of Azuelo registered their Carbon Offset Project on the National Registry and completed the Offset Project Plan, the Offset Project Reports and completed the verification of the generated offsets for 2016 and 2017 and now they wish to sell these offsets on the registry market.

Roles:

- Project Developer – Azuelo Municipal Bus Company
- Azuelo Municipal Bus Company Legal Representatives
- The Governing Body of the State
- The Offset Registry Personnel
- The Project Verifier
- Agri Corp Legal Representative
- Environmental NGO

- In 2018 – Agri Corp – A Fertilizer Production company (a LIE) has exceeded the cap regulated by the state government by 10,000 tCO₂e and they now wish to purchase offsets from the National Registry to ensure that they stay in compliance with the regulations and avoid paying penalties.

Over the 45-minute exercise the group identified a number of research questions:

1. Large Industrial Emitter – What are the real costs of failure? Is it cheaper for some industries to pollute?
2. Governing Body – How do we ensure that penalties to pollute are set at an appropriate (fair) amount? How do we ensure that a portion of the income generated from the transfer goes to improvement within the sector? How do we ensure that the supply of allowances does not breach the cap?
3. Verifier – How do we track other SDGs and environmental integrity when verifying the Carbon Offsets generated from the project? What other co-benefits should be quantified/verified?
4. Project Developer – How do we ensure that there is policy permanence/ certainty?
5. Local NGO - How can we ensure there is partnership to guarantee the income generated from the transaction is going to be reinvested equitably in the green economy?
6. Is there a confidence level to ensure certainty that the offsets are real, permanent, measurable, unique and verifiable?
7. How to generate a clear understanding of the potential for emission reductions in each sector?



Scenario B: Project-based Government to Government Trading

Context: A country with a firm emission reduction target wishes to invest in a low-cost emission reduction project in a host country which will surpass the emission reduction target they had originally set and therefore wishes to sell their additional offsets.

Timeline & Scenario Details

- In 2017, The Republic of Cantou determines that they will not meet their emission reduction target by the end of 2018 and therefore they decide to invest in a project with a partner country, with the intent of eventually owning and retiring the mitigation outcomes.
- Cantou determines that they would like to invest in a renewable energy project (PV solar) and begins to research potential partner countries.
- Cantou begins discussions with the Island Nation of Tartuan to discuss the possibility of the project. They conclude that the bundled project activity will involve the installation of centralized generation PV plants across the island with a total installed capacity of 100 MW. The electricity generated by this project will be used in the island's electricity grid, and therefore displace an equivalent amount of electricity that is currently diesel generated.
- Transfer: Cantou and Tartuan now need to negotiate the details of the transfer.

Roles:

- Project Developer – Government of Cantou
- Cantou Legal Representative
- Project Validator/Verifier
- Tartuan Country Representative
- Tartuan Legal Representative
- International Governing Body
- Local NGO from Tartuan

Over the 45-minute exercise the group identified a number of research questions:

1. Tartuan (host country) – How can we ensure that we are treated as an equal during this transaction? How do we communicate to the public to ensure they understand and support the project? How do we ensure that we transfer knowledge capacity?
2. Local NGO: How do we ensure the exchange maintains the principles of environmental integrity?
3. To what extent can the funds generated from the transfer be used for adaptation funds in the host country?
4. What systems do we need to put in place to measure, report and verify relevant emissions?
5. How will the mitigation outcome be accounted for in the NDC calculation?
6. How can the public ensure that the ITMOs generated are going to be subtracted from the host NDC and added to the buyers?

Background

How to have confidence in the Programme - “Real, quantifiable, measurable, verifiable”

Double counting can occur in multiple ways;

- *Double claim* – when two or more entities claim the same mitigation outcome. This might occur by:
 - the originating Party (where the mitigation activity took place) transferring mitigation outcomes for use by other Parties towards their NDCs, without making a corresponding adjustment.
- *Double use* – when the same mitigation outcome is used two or more times. This might occur by:
 - two entities using the same mitigation outcome towards their NDC accounting; or
 - the same mitigation outcome is used towards targets in two different systems (e.g. achievement of an NDC, and compliance with CORSIA obligations).
- *Double registration* – when the same mitigation activity is registered in 2 or more different programmes (which may contribute to two different mitigation objectives).
- *Double issuance* – when credit is issued two or more times from the same mitigation outcome. Double issuance may occur as a result of double registration.
- *Risk of reversal* - e.g. forest removals only store carbon until the wood burns or decays. Where there is a risk of non-permanence, measures should be in place to address this risk. e.g. provisions to compensate if a mitigation outcome is reversed.
- *Leakage* - One way of addressing this issue is by using baselines, caps, or reference levels that aggregate emissions and mitigation activities (for example aggregation at a national level, would capture any shifts in activity from one sub-national area to another). In Scenario A what happened to the old diesel busses? Were they re-sold to other cities?

Factors relating to governance and transparency that may increase confidence in a mitigation include: public decision-making and/or statements of reasons; procedures to manage conflicts of interest for decision makers, staff and contractors; the use of independent advice; transparent procedures for stakeholder input; record-keeping and procedures to enable access to records; and records of authorizations / competence for the programme.

How to have confidence in Transfer of Units

Integrity of accounting – ensuring that the numbers that are accounted for are an accurate reflection of what occurred (i.e. of the environmental outcome achieved) and that this can be demonstrated.

Integrity of transfers – ensuring that transfers themselves are recorded, reliable, secure and authorized.

Actions within a programme may not automatically be reflected in accounting for NDCs. If Parties wish to claim mitigation delivered by programmes towards NDCs, they have to deliberately account for it. For these claims to have credibility there must be a clear link between: the accounting for a tonne of mitigation at the NDC level; and the achievement of (at least) a tonne of mitigation by a programme. This requires transparent, accurate and complete information.

Accounting for NDCs must be transparent, including when using markets. Regarding transfers, the numbers that show up when accounting for NDCs must be able to be traced back to actions at the programme level.

Features of programmes that may aid this traceability include unique identifiers and/or identifiers with embedded information (e.g. year, host country, authorization, issuing programme, unit type, metric, methodology, mitigation action). Traceability may also be facilitated by a robust registry system/tracking system that keeps/holds serialized mitigation outcomes/compliance units and tracks their movement from creation to final use and retirement.

Registries

A registry is an IT data recording system in which holdings, transfers and cancellations of units can be recorded.

Typically, registries allow for limitations to be placed on access and transfers, as well as being built with IT security in mind. The computerized nature of a registry allows information in it to be interrogated, and some tasks (such as identification of unusual transfers, reconciliation of transactions) can be automated. The use of common specifications (e.g. the draft Data Exchange Standards) means many existing registries have some degree of compatibility.

A registry system is not strictly needed to facilitate transfers. For example, one can imagine that a cooperative approach involving a government-to-government arrangement that results in a single annual transfer. Protocol could be established to ensure the accounting and transfer integrity of this approach, and a computerized registry may not be necessary.

However, as the number of actors or transfers involved in a cooperative approach increase, a computerized registry system is likely to become an attractive solution. For example, while an ETS could function like a pre-computer stock exchange, all ETS use computerized registry systems.

Research Questions Template

To support the design of the Market Mechanisms Role Play Exercise of the group, the [Synthesis](#) of the “Guide to Linking Emissions Trading Systems” proved helpful as a “coordinating framework” and provided valuable lexicon to help facilitate the creative discussion.⁵

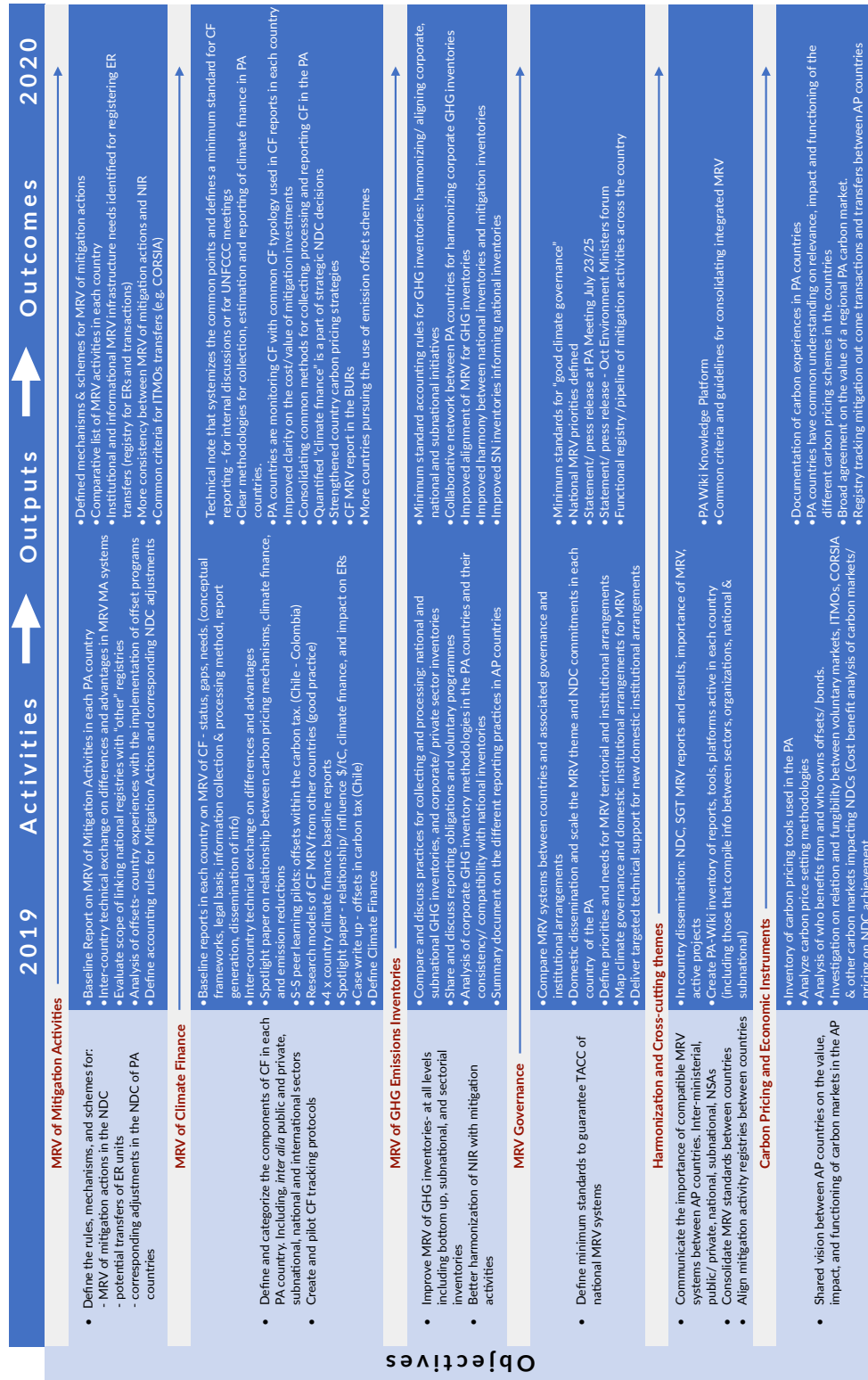
	Parnters/ Stakeholders	Programme	Transfers
Benefits & Risks			
Process and Pathways			
Design Alignment			
Partner & Stakeholder Perspectives			
Form and Content of Market Mechanism			
Management of Market Mechanism			

⁵ Further sources on emissions trading schemes and international cooperation On cap-and-trade schemes
 • International Carbon Action Partnership and Partnership for Market Readiness, 2016. Emissions Trading in Practice: A handbook on design and implementation. https://icapcarbonaction.com/en/?option=com_attach&task=download&id=364

On linking cap-and-trade schemes
 • International Carbon Action Partnership, 2018. A Guide to Linking Emissions Trading Systems. https://icapcarbonaction.com/en/?option=com_attach&task=download&id=572

Summary – the PA 2020 SGTMRV Roadmap

On the last day of the technical discussion the country delegates updated the PA 2020 SGTMRV Roadmap (created at the 2018 Bogota Meeting). This will continue to evolve in response to maturing priorities and emerging opportunities. In effect, the 2020 Roadmap is intended to serve as a dynamic coordinating framework, enabling efficient collaboration between different organizations, while matching country and regional priorities with international donors and official development assistance.



Objectives

Key Takeaways

- There is an important opportunity for the SGTMRV to collaborate on capacity building opportunities for trading mitigation outcomes associated with the 2017-2022 Mexico Project on NDC implementation for the oil and gas sector and black carbon and methane reduction.
- Article 6 markets mechanisms will be important but we still need to define clear rules – there is too much uncertainty.
- Participants note that market mechanisms should encourage mitigation activities especially in sectors that are not covered by national attention/programmes (i.e under-funded sectors). Market mechanisms are an important opportunity for technology transfer.
- Continued cooperation on MRV issues is important to support the PA national governments to achieve their GHG emissions reduction targets and to benefit from the evolving market and non-market based mechanisms.
- All countries noted their desire for ongoing cooperation and the SGTMRV has a pivotal role to play, especially related to progress and institutional memory given the fact that since the group's meeting last year, there is now a new national government in every one of the PA countries.
- Transparency is key. Parties need to be able to clearly demonstrate how they are measuring and specific methodologies they are utilizing to adjust emission reductions
- Parties need to clearly identify what actions need quantification, as well as to implement a method to track those actions.
- PA countries want to know what the opportunities of Article 6 are without having to forgo their priorities of developing robust MRV systems and achieving their NDCs.
- The PA2020 SGTMRV Roadmap can be a useful coordinating framework for the various organizations seeking to support MRV and transparency advances in the region.
- It is important to continue supporting countries of the PA to be aware and understand the opportunities that cooperative approaches generate. Efficient coordination is an important goal between the different initiatives active in the region; for example, in addition to the Pacific Alliance, this includes the Partnership for Market Readiness, Carbon Pricing in the Americas, the Carbon Pricing Leadership Coalition, and others. This will strengthen the domestic MRV systems and contribute to achieving the NDCs, and are fundamental for potential instruments for consistent carbon pricing.

Appendix 1 – Participant List

Participant	Country	Organization/Ministry
Mager, Jenny	Chile	Ministerio de Medio Ambiente (MMA)
Bórquez, Rodrigo	Chile	Ministerio de Medio Ambiente (MMA)
Pinto, Francisco	Chile	Ministerio de Medio Ambiente (MMA)
Cordova, Alfonso	Peru	Ministerio de Energía y Minas (MINEM)
Garro, Freddy	Peru	Ministerio de Medio Ambiente (MINAM)
Escalona, Victor	Mexico	Secretaría del Medio Ambiente y Recursos Naturales (SEMARNAT)
Guzman, Diana	Mexico	Secretaría del Medio Ambiente y Recursos Naturales (SEMARNAT)
Urtaza, Barbara	Mexico	Secretaría del Medio Ambiente y Recursos Naturales (SEMARNAT)
Guzman, Sandra	Mexico	Secretaría del Medio Ambiente y Recursos Naturales (SEMARNAT)
Carranza, Sebastian*	Colombia	Ministerio de Medio Ambiente (MMA)
Rodriguez, Camila*	Colombia	Ministerio de Medio Ambiente (MMA)
Layer, Mike	Canada	Natural Resources Canada (NRCAN)
Marroquin, Lisa	Canada	ClimateCHECK
McKay, Amanda	Canada	Environment and Climate Change Canada (ECCC)
Mitchell, Melanie	Canada	Environment and Climate Change Canada (ECCC)
Muller, Scott	USA	ClimateCHECK
Portalupi, Franck	Canada	Environment and Climate Change Canada (ECCC)

* Joined by teleconference



Appendix 2 – Mexico City SGTMRV Agenda

Agenda Day 1 – March 12

Time	Sessions	Speakers
8:30 - 9:00	Registration & Welcome Coffee	
9:00 - 9:20	Opening & Welcome Words	TBD – SEMARNAT Mexico Jenny Mager - MMA Chile
9:20 - 9:40	Introductions and Ice Breaker	Scott Muller & Lisa Marroquin - Canada
9:40 - 10:40	SGT-MRVCC Update <ul style="list-style-type: none"> - The Presidential Mandate - Recap of Bogota Workshop - Short Review of the SGT-MRVCC 2020 Roadmap - Short-review of the On-going Project Work Themes 	Scott Muller & Lisa Marroquin – Canada Jenny Mager & Francisco Pinto - MMA Chile
10:40 - 11:00	Coffee Break	
11:00 - 11:10	Introduction to the Panel Session: Country Presentations on the Status and Gaps of MRV Systems Components to achieve the NDC <ul style="list-style-type: none"> - The role of market mechanisms, for example cap and trade, carbon tax, offsets, bilateral agreements and Integrated approaches - sub-national, public, private, etc. 	Scott Muller - Canada
11:10 - 11:40	Mexico Presents	Moderator: Jenny Mager, MMA Chile Presenters: TBD - SEMARNAT
11:40 - 12:10	Colombia Presents	Moderator: Freddy Garro, MINAM Peru Presenters: Sebastian Carranza & Camila Rodriguez, MMA Colombia
12:10 - 12:40	Peru Presents	Moderator: TBD - SEMARNAT Presenters: Freddy Garro, MINAM Peru & Alfonso Cordova, MINEM
12:40 - 1:10	Chile Presents	Moderator: Sebastian Carranza, MMA Colombia Presenters: Francisco Pinto & Rodrigo Bórquez, MMA Chile
1:10 - 2:10	Lunch	
2:10 - 2:20	Negotiation Status & Opportunities to Support NDC Implementation	Franck Portalupi & Melanie Mitchell - ECCC Canada
2:20 - 2:35	Integrating MRV Technologies and Practices for the development and exchange of creditable ITMOs	Mike Layer - Natural Resources Canada
2:35 - 2:50	Why are we here? <ul style="list-style-type: none"> - The role of MRV in Market Mechanisms Introduction to the Roundtable Sessions	Scott Muller & Lisa Marroquin - Canada

2:50 - 4:10	Roundtable 1: What types of information will partners need in order to have confidence in each other and the process of market and non-market mechanisms? <ul style="list-style-type: none"> - What attributes must the MRV system have to provide that information? - Is it necessary for both Parties to use the same NDC accounting approach? - What are implications of other programs, e.g. CORSIA? 	Table Moderator: Camila Rodriguez, MMA Colombia
	Roundtable 2: How do proposed mitigation activities relate to the scope and coverage of the NDC, as well as the requirement for a corresponding adjustment? <ul style="list-style-type: none"> - How will the prospective seller determine which activities can generate transferable mitigation outcomes, and which proportion of the mitigation outcomes can be transferred? - How is the corresponding adjustment to be done (and how does it depend on the accounting approach chosen)? - What are implications of other programs, e.g. CORSIA? 	Table Moderator: Jenny Mager, MMA Chile
3:20 - 3:40	Coffee Break (Break during the roundtables)	
4:10 - 5:00	Roundup Session: Reflections on the roundtable discussions	Nominate Presenters from the Tables Moderators: TBD - SEMARNAT & Alfonso Cordova (MINEM, Peru)
5:00 - 5:15	Closing Remarks	Jenny Mager - MMA Chile TBD - SEMARNAT Mexico
5:15 - 7:15	Cocktails & Appetizers to follow on the Patio	

Agenda Day 2 – March 13

Time	Sessions	Speakers
8:30 - 9:00	Registration & Welcome Coffee	
9:00 - 9:15	Welcome and Recap from day 1 <ul style="list-style-type: none"> - Group Reflections on Day 1 	Lisa Marroquin & Scott Muller - Canada
9:15 - 9:25	Introduction and objectives of the Role Playing Exercise, the Scenarios and the resources (Check-lists) provided	Lisa Marroquin & Melanie Mitchell
9:25 - 10:25	Round tables: Market Mechanisms - Role Play Scenarios	Round Table Leaders - TBD
10:25- 10:40	Coffee Break	

10:40 - 11:00	<p>Group reflections on the role play:</p> <ul style="list-style-type: none"> - Discuss research questions relevant to the development of standards and guidelines for the use of MRV to support market mechanisms - What issues require further reflection? - What further research needs to be conducted? 	<p>Moderators: Table Leaders and Jenny Mager - MMA Chile</p>
11:00 - 12:30	<p>SGT-MRV 2019 Workplan Meeting: Chair Report & Mandate Current Project Workstreams and the Theory of Change and Impact</p>	
12:30 - 1:30	<p>Lunch</p>	
Afternoon	<p>SGT-MRV 2019 Workplan Meeting Continued: Potential Synergies – Active Country-specific MRV Capacity Building Programmes Review Roadmap 2020 2019 Priority Project Activities and Spotlight Papers</p>	
	<p>Closing Remarks</p>	<p>Amanda McKay – ECCC Canada Jenny Mager - MMA Chile TBD - SEMARNAT Mexico</p>

