Lessons Learned: The Chile - Canada Experience

The Generation and Transfer of ITMOs, NDC Accounting and Article 6 Mechanisms

This report shares key takeaways and reflections from a series of trainings and exchange-of-views organized as a south-south collaboration between the Technical Subgroup on MRV and Climate Change of the Pacific Alliance[1] and the West Africa MRV[2] Programmes. This was arranged in close collaboration with the Governments of Chile and Canada as a part of their bilateral cooperation.

The 4 sessions held in March through April 2021, enjoyed simultaneous translation in French, English and Spanish, enabling very active participation from public officials and key stakeholders from all the nations. This report presents an overview of key points. The agendas, presentations and full recordings are available at the links in the text.

Summary

Within the Pacific Alliance and West Africa nations, several countries are engaging in pilots for internationally transferred mitigation outcomes (ITMOs). In an effort to share lessons learned and accelerate implementation of Nationally Determined Contributions (NDC) strategies, Environment and Climate Change Canada (ECCC) funded an intensive series of 4 global discussions on the subject.

At the core of the series was the experience of the Governments of Chile and Canada with a fictive Article 6 pilot, **"the Roadmap for Canada-Chile Cooperation under Article 6.2"** that commenced in 2018 as an innovative bilateral learning process. Since that time, the activities have proved an invaluable experience to more clearly;

- identify opportunities and opportunity costs with exporting ITMOs;
- elaborate potential NDC accounting rules to manage corresponding adjustments for ITMO transfers, and;
- anticipate institutional capacity challenges.

This bilateral pilot helped Chile revise their NDC, with new strategies to better capture potential benefits from utilizing Article 6 mechanisms. These strategies were developed by Chile through roundtable discussions to address, governance, transparency and coordination issues. The product of this dialogue was an internal document framing national guidelines on Chile's participation in market mechanisms under Article 6. As for Canada, they are still exploring the potential role for ITMOs in achieving their NDC. Nevertheless, they will continue to collaborate with and support other countries working on similar decisions— as this bilateral exchange with Chile has proved a valuable learning process.

Throughout the **four training and exchange-of-views sessions** of the south-south collaboration (SSC) discussion series between the Pacific Alliance and the West Africa MRV Programme, Chile and Canada shared insights from their fictive Article 6 pilot. These first hand experiences, were used to deliver technical trainings as well as stimulate reflections and sharing from other bilateral Article 6 pilots. During the SSC, officials from Colombia, Mexico, Ghana, Senegal and Nigeria shared, compared and contrasted their own experiences with various Article 6 pilots.

[1] Mexico, Peru, Colombia and Chile

[2] Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, The Gambia, Ghana, Guinée, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, and Togo

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The participatory format facilitated the exchange of observations and knowledge. Early in the discussions, an often overlooked, fundamental point emerged—that while Article 6 mechanisms present opportunities to accelerate decarbonization, any **international transfers of mitigation outcomes are secondary to the fundamental domestic actions necessary to achieve the NDC targets**. While ITMOs can complement transformative national decarbonization strategies and make important contributions to sustainable development goals, I**TMOs are not stand-alone solutions. Domestic activities for low-carbon local economies must be at the heart of NDC pursuit.**

With that said, the mitigation activities that are most appropriate for ITMOs are generally those measures that are too difficult to implement due to financial and technical barriers. These **are 'ambitious measures' - beyond the unconditional and conditional measures committed in the NDCs**. However, at the same time, Article 6 indeed can create new opportunities to help finance additional co-benefits, sustainable development activities and other measures beyond the reach of local economies and capacities.

These facts called attention to the importance of enhancing the clarity and transparency of the NDC. **Only after clear analysis to prioritize greenhouse gas (GHG) and short-lived climate pollutants (SLCP) mitigation activities for implementation of the NDC, will it be possible for a country to determine what actual role Article 6 might play**. Without such foundation, the alignment of views between government departments and sectors on the potential role of ITMOs can be an insurmountable challenge. What's more, various countries conveyed the interest of the private sector to benefit and engage with Article 6 mechanisms. **The utility of developing national frameworks to guide the potential engagement of these diverse actors was recognized as important** many times during the sessions.

The need for clear and transparent NDC planning in turn, emphasized the **importance of sovereign, national climate MRV programmes**. This includes not only the MRV of GHG and SLCP emissions, but also the MRV of mitigation activities[3], and the MRV of climate finance[4]. This integrated, coordinated capacity will be able to support effective and efficient procedures for regular reporting of NDC emissions accounting and balance calculations. **Coordinated MRV will build trust between partners**; enabling a cooperative approach among national actors to achieve the NDC and allow for additional support from Article 6 mechanisms for more ambitious actions. **National, sovereign Climate MRV is necessary in order to guide the transition of the local economy, but also to establish and implement the rules and guidance for operationalizing Article 6**.

There was also broad recognition that **pilot projects are important and useful to better "discover" and understand the specific challenges for a potential implementation**—considering that the Paris Agreement does not specify

[3] MRV of mitigation actions is concerned with tracking implementation, and accurately assessing, the impacts of GHG & SLCP mitigation projects on national climate emission targets. Can encompass a broad range of measures, from polices to hard new infrastructure; and can be ex-ante, in progress or ex-post.

[4] Climate finance can be defined as capital flows, from international and domestic sources, directed towards low carbon and climate resilient development interventions with direct or indirect GHG or SLCP mitigation or adaptation benefits. Includes public, private and blended sources.

how Article 6 mechanisms might actually work in practice. For example, participants discussed how countries actually have different types of NDC targets, and different metrics as well. In some cases, countries have more than one NDC target. Some of the pilots have shown the need to clarify the main NDC target or to define the way that different targets will be combined. Clarifications is fundamental to effectively generate, and transfer ITMOs, and then make the necessary corresponding adjustments.

Much discussion during the sessions was on the topic of corresponding adjustments; an essential principal to ensure mitigation outcomes are not double counted. **Applying corresponding adjustments raises the question of trade-offs that exist for a host country;** between applying the emission reductions from a mitigation outcome towards its NDC, or authorizing the exportation of the mitigation outcome (transferred abroad as an ITMO)— and therefore, subsequently not applying the emission reductions to the NDC.

This is one area, where bilateral Article 6 pilots can be very helpful. Even though **the application of a corresponding adjustment to the emission balance is a requirement of the Paris Agreement, there are still several open questions as to how to make this operational.** In the case of the Chile-Canada fictive pilot, ITMO transfers in the context of single-year targets were addressed considering two approaches; namely the emissions trajectory approach and the rolling average approach. This pilot exercise demonstrated that while the the two approaches are equivalent from the perspective of environmental integrity, the actual accounting leads to different numbers used to conduct the adjustments. A key lesson learned was that **both the export and the import country need to report on: 1) ITMOs transferred or acquired on a yearly basis; and 2) the adjusted emissions at the time of applying the corresponding adjustment.**

Session Topics

March 22, 2021 *(detailed agenda)* *(session recording: English, Spanish, French)*

- Importance of MRV for domestic public policy
- Rationale of market based mechanisms and opportunities presented by Article 6
- Articles 6.2 and 6.4: How to participate and key concepts requiring further work
- Opportunities to pilot Article 6
- Introduction to the Chile-Canada roadmap and Chile's Article 6 roundtable
- Complementary perspectives; Canada, Ghana and Colombia

March 29, 2021 *(detailed agenda)* *(session recording: English, Spanish, French)*

- NDC targets, mitigation actions and their implications for Article 6
- Methods for applying the corresponding adjustment
- Integrating Article 6 considerations into Chile's revised NDC
- Complementary perspectives: Senegal, Mexico and Canada
- The voluntary market and implications for NDC accounting

April 20, 2021 *(detailed agenda)* *(session recording: English, Spanish, French)*

- Revising Chile's NDC: formulating target and actions to participate in Article 6
- Deciding what mitigation outcomes can become ITMOs; Chile's NDC implementation plan and the public-private roundtable.
- Complementary perspectives: Colombia and Canada

April 27, 2021 *(detailed agenda)* *(session recording: English, Spanish, French)*

- Unpacking the corresponding adjustment in a fictive ITMO transfer
- Corresponding adjustment approaches for different types of NDC targets
- Timing of the adjustments
- Tracking progress and demonstrating NDC achievement
- Complementary perspectives: Nigeria, Mexico and Senegal

Discussion

National Consultations and Draft Frameworks

During the discussions, it was emphasized that **the NDC review process is an opportunity to consider future participation in Article 6 market mechanisms,** by clarifying the scope of the NDC and the implementation plan. Ms. Carolina Urmeneta, Chief of the Climate Change Office within Chile's Ministry of the Environment, recalled the three-year process that led to Chile's updated NDC. She highlighted the importance the National Scientific Committee played to align the new NDC targets with science. **The consultative process produced a clearly formulated and transparent NDC** that **served to frame the climate discussion and necessary public investments in Chile**.

Mr. Felipe Diaz, International Negotiator for Chile's Ministry of the Environment, explained how their first NDC was expressed as a 2030 intensity target. This meant that absolute emissions could continue to grow (if the economy grew at a faster rate). National consultations helped spark the realization that this situation was not aligned with science, and led Chile to reformulate its NDC to include a carbon budget with an emissions peak target for 2025 and a 2030 absolute target. The NDC revision was a joint effort of all government departments with significant input from the Scientific Committee. Mr. Francisco Dall'Orso León from Chile's Ministry of Energy also highlighted the critical role of public roundtables on Article 6 to align views across all sectors within the government. Chile also recognizes **the need for private investors to have clarity on opportunities for using Article 6**, so in addition to the previous NDC consultations, Chile is planning to establish a public-private roundtable to consult private actors. This process would culminate with the development of a national policy on using Article 6 mechanisms.

In Senegal, Mr. Ousmane Fall from the Rural Electrification Agency discussed the consultations with stakeholders to increase the country's climate action ambition to update the NDC. This process identified sectors (notably oil and gas) and the corresponding mitigation actions that were to be included in the updated NDC. These consultations helped to identify some of the immediate needs for effectively implementing market mechanisms under Article 6; namely, local capacity-building, training on procedures, a robust MRV system, a governance framework, and private-sector involvement. **The process also helped to highlight the fundamental prerequisite, to build trust with entities interested in participating in Article 6 mechanisms.** The creation of a clear national framework to guide participation and the use of Article 6 is the next step.

In the case of Canada, consultations have taken place to develop a draft ITMO Framework to guide the Nation's international engagement on Article 6 and its potential implementation. **Canada is still exploring the potential role for ITMOs in achieving their NDC.** The national consultation started internally, within the Government of Canada; including the ministries of environment, global affairs, finance, natural resources, transport, and others which resulted in the creation of the first draft framework. The draft framework was used to then expand the consultations externally across the country; with sub-national governments, indigenous peoples, heavy industry, project developers, clean tech industry, and civil society. Today, Canada is taking stock of the feedback and ideas that emerged; in order to identify next steps for this Draft Framework. Once finalized, the Framework will help guide Canada's international participation in all matters relating to Article 6 of the Paris Agreement, including negotiations and potential implementation, as well as participation in peer reviews, technical exchanges and capacity building initiatives.

Bold Ambitions

Canada's draft ITMO Framework does indeed set out high expectations to which the Nation aspires, and that Canada would set for any other countries for whom they would consider as trading partners. Including, for example, a strong and complete national climate MRV system; while recognizing that this requires a certain level of technical, institutional and systemic capacity (i.e. institutional arrangements). This includes key attributes such as uncompromising, sensible accounting in the National Climate MRV System— with of course, corresponding adjustments (no double accounting).

In this context there is **the "Ambition Principle"; and that is to ensure that participation in international markets does not undermine any country's ability to achieve its NDC**, or that could create a perverse incentive to reduce emission reduction ambitions—whether by the buyer or the seller. While this and other principles are generally straight forward on paper, **the challenge for parties contemplating Article 6 is how to actually implement them in practice**. Many of these challenges are new in the Paris Agreement context and countries are nervous about this - both developed and developing, both buyers and sellers. It is challenging for countries to determine if they have maximized all their mitigation opportunities utilizing all forms of climate finance, before entertaining the idea of importing or exporting international credits. Even then, if those options are maximized, and the subsequent decision is made to import or to export international credits, the question becomes, "**How do the parties track the ITMOs and the corresponding adjustments?"**

During the sessions, Chile and Canada pointed out that they do not have all the answers to these questions—no country has all the answers. Hence the value of bilateral pilots. Canada does firmly believe that; better data, better MRV systems, better national planning processes, and shared learning exercises like this one will help each country find their own answer in line with their national circumstances and development priorities; and consistent with the high ambition of the Paris Agreement.

In the case of Ghana, Mr. Benefor, the Deputy Director, Climate Change and Energy Resources Unit, Ghana Environmental Protection Agency highlighted that from their perspective, market mechanisms under **Article 6 represent interesting opportunities to finance sustainable development** and participate in the global effort to mitigate GHG emissions. Therefore, **Ghana's updated NDC includes considerations for using Article 6 instruments** and mentions the two pilots undertaken in cooperation with the Swedish and Swiss governments respectively. Concerning the pilot with the Swiss government, it is the first time ever that Ghana has signed an agreement with another country to generate emission reduction credits.

Lessons learned from the Ghana Article 6 pilots highlighted the needs to:

- Mobilize key ministries, agencies and stakeholders to participate in this process and ensure national ownership.
- Develop a country's own definitions or understanding of certain concepts, such as environmental integrity and corresponding adjustment.
- Design activities that are eligible for negotiations to better promote NDC implementation.
- Enable the implementation of the agreement through capacity-building and awareness-raising.

During one of the trainings, Mr. Francisco Dall'Orso León from Chile's Ministry of Energy, discussed **the importance of planning NDC implementation such that the opportunity cost of transferring ITMOs abroad is clearly assessed and understood.** He described the results of a modelling analysis that was conducted to prioritize mitigation actions in the energy sector according to their cost effectiveness. Chile's NDC now defines mitigation measures with an implementation schedule to achieve the NDC targets. This level of detail in scheduled NDC implementation, in turn, provides the clarity Chile sought to explore opportunities for Article 6

cooperation that would not negatively interfere with its NDC. This has resulted in the position that **Chile will consider transferring ITMOs from actions that support either an earlier implementation phase of the NDC measures or measures that are not expected to play a role in achieving the NDC targets.** For example, the measures to promote green hydrogen is scheduled for 2028, but implementation perhaps could be brought forward thanks to ITMO revenues.

Domestic and Voluntary Market Challenges

Various mentions were made during the sessions of the sale of carbon credits within a domestic market, and the growing opportunities and interest in international voluntary markets. This **presents questions that apply to both developing and developed countries regarding; NDC ambitions, NDC targets, credit exports/imports and corresponding adjustments**. Article 6, paragraph 3 of the Paris Agreement clearly says that any ITMO used by a country towards the NDC must be voluntary and authorized by the participating parties. So any emission credit transfer presents the double accounting issue. **If a carbon credit is exported and will be used by another country towards their NDC, the export needs to be authorized by the host country government and include a corresponding adjustment made to the national GHG emissions levels in its biennial transparency report.**[5] Part of the challenge that countries are dealing with, is that there are many different types of cooperative approaches. Not just the Clean Development Mechanism (CDM) under Kyoto, and the new 6.4 mechanism under Paris, but also a variety of other public and private sector mechanisms under Article 6.2. So, whether it is voluntary or government markets, there are potentially many different ways to trade emission credits with a single country. **There are also still questions on whether a corresponding adjustment for sales of carbon credits on the voluntary market should lead to the application of corresponding adjustment as the host country accounts for its NDC.** These questions constitute uncertainty for project developers and host countries.

Mr. Marco Heredia, Director General of Policies for Climate Change of the Secretariat of the Environment and Natural Resources of Mexico (SEMARNAT) shared some of Mexico's experiences regarding market mechanisms, including their 2019 pilot program to implement an Emissions Trading Scheme (ETS) with the support of the California and Quebec subnational governments. An ETS can reduce GHG emissions by setting a cap on emissions and allowing for transactions of emission allowances between regulated markets under the cap. The pilot will run for three years, with two years as the pilot phase and one year for transitioning into the fully operational ETS (scheduled to launch in 2023). Mexico is also exploring the possibility of linking its ETS with the California-Quebec carbon markets. To that end, a memorandum was signed with California and Quebec; and Mexico is reviewing the operational rules and modalities for potential participation.

Regarding national carbon markets, the initial lesson from various pilots to date is that **national-scale carbon markets are very difficult and present policy questions.** They require a lot of capacity in terms of MRV and administration. In the short term, for countries that are implementing domestic carbon markets, there are opportunities to work together and collaborate on building and aligning technical, institutional and systemic capacities. This **collaboration should be the immediate priority**, such as Mexico, Chile, Quebec, California, and Canada are working on. Then at a certain point perhaps consider how countries can link and expand the systems together.

[5] From 2024 onward, countries have to communicate about progress made in implementing their NDC in their Biennial Transparency Reports (BTRs) under Article 13 of the Paris Agreement; the BTRs contain a National Inventory Report (NIR) and an information report used to track NDC implementation progress.

Mexico's GHG mitigation policy focuses on local activities and efforts to achieve GHG targets, before utilizing mechanisms and instruments from abroad. Nevertheless, Mexico is engaged in discussions on a participation in Article 6 with Switzerland and the World Bank.

In the end, each country will need to figure out which emission credits it wants to authorize to export for use to another country's NDC and apply a corresponding adjustment to their own national emission levels. Or, at the same time, they may want to determine which types of emission reductions they do **not** want to authorize for export, in order to be able to count them toward their own NDCs. But even in the latter case, the country might be able to market emission reductions as **results based payments or as credits on international voluntary markets; and those emission credits could not be used by the purchasing countries towards their NDC targets**.

So indeed, GHG emissions tracking might happen separately in each individual system. But as to how a country can determine if they can or can not export the credit, the Paris Agreement is clear that each country has the right to say yes or no and at this point, the Paris Agreement does not specify exactly how in practice, what infrastructure or procedures are required, or would be put in place, to handle these questions.

Different Types of NDCs/ Multiple Goals

It is important to recognize that **there are different types of legitimate NDCs and targets**. For example, Canada released its first NDC in 2015, with the commitment to reduce GHG emissions by 30% below 2005 levels by 2030. This was recently revised and now commits to reduce GHG emissions by 42-45% by 2030. Specifically, the target is a percent reduction of emissions relative to 2005 levels, in other words Canada will track it's progress by comparing annual emissions as a percent reduction compared to the base year level of 2005. And then, should Canada decide to utilize Article 6 mechanisms, they would apply their corresponding adjustments to those annual emission levels— to reflect the ITMOs that the Nation bought or sold.

In some cases, parties also include other milestones or parameters in their NDC. Such as; specific sectoral targets, or peaking years, or a combination of targets and budgets. In the case that a nation has an NDC with multiple targets or multiple goals, there are basically two options to potentially utilize Article 6 mechanisms. The first option is that in the NDC the nation must clarify what is the main target and this will be the principal target that will be used to track progress against. It must also define the category for the emission levels you will compare against that target. Once the main target is established, any other targets are just supplementary targets; to provide explanatory, indicative, or sector specific progress. The other option is to take all of the targets and convert them into a single aggregate target or carbon budget. But if countries choose this method, they will also have to explain how that budget or that trajectory is consistent with the different parameters that are in the NDC. This was one of the key changes made by Chile in their updated NDC. They adopted a carbon budget for the period 2020-2030, which will ease NDC accounting, including the application of the corresponding adjustment. More specifically, Chile's NDC has three objectives:

1. a ten-year emissions budget covering 2021 to 2030[6],
2. a commitment to peak emissions in 2025, and
3. a target emissions level for 2030.

[6] The NDC sets a carbon budget from 2020-2030; from January 1, 2021 to December 31, 2030 (10 years)

Chile could choose to account for each of these targets individually and apply corresponding adjustments for all three of them or, they could account for all of these objectives together. They could account using their budget, while also explaining how the budget represents an emissions trajectory that peaks in 2025 and then falls to the level of the 2030 target.

However, it should be noted that some NDC objectives might not fit into an aggregate target or budget. For example, if the reduction of black carbon is part of the NDC, the Paris Agreement guidance[7] says it needs to be tracked as a separate target, because black carbon cannot be converted into CO_2 values. Black carbon reductions can not fit into a single, overarching carbon budget number. So in that case a country would have to use option one, with a main GHG emissions reduction target, and track the progress of the black carbon separately, as a supplemental target.

The Corresponding Adjustment

Once sectors and gases covered by the main target of the NDC are clarified, then arises the critical question, **"Is a corresponding adjustment necessary?" yes or no… and in what circumstances.** In that question there are really two parameters:

1. There is the **origin of the ITMO**; whether it comes from inside or outside the sectors covered by the NDC.
2. There is the **use case for the ITMO**; whether that ITMO will be used towards another country's NDC target; or instead, towards a corporate or voluntary target, or a results-based payment.

The origin case is still a subject of discussions in the negotiations. Many countries say that corresponding adjustments are always required, whether the ITMO originates from 'inside' or 'outside' the host country's NDC. Other countries say that there should be some exceptions to this rule, for example, for ITMOs from 'outside' the NDC that are sold through the new 6.4 mechanism during a time-limited 'opt-out' period. Interestingly, Canada's **draft ITMO Framework proposes that,** regardless of the outcome of the negotiations on Article 6, **they would only purchase ITMOs that come with corresponding adjustments, period.** Canada would not use ITMOs towards their NDC that do not come with corresponding adjustments in the host country.

In the other **use case**, the ITMO is used by a business and/or voluntary market and in this scenario, if emission reductions are sold as offsets to them, the exporting country might, or might not, need to make a corresponding adjustment. Much of this will depend on the parameters of that pledge or the rules of that particular voluntary market. Similarly, there may be cases where Canada might still purchase credits that do not come with corresponding adjustments, but without using these toward their NDC. For example, Canada could decide to make results-based payments, which is a form of climate finance. Many forestry conservation funds issue credits that represent results-based payments, while some are also moving toward NDC-eligible crediting.

In summary, there **will likely emerge different carbon markets for different types of units; in some cases corresponding adjustments will be necessary, in some cases perhaps not.** This will be determined by the particular rules of each market. There will be emission reduction credits that come with corresponding adjustments and can be used towards NDCs— and those will fetch a higher price. And then there will be credits that do not come with corresponding adjustments and cannot be used for NDCs, but might be used for results based payments in climate finance, or maybe in voluntary markets in some cases—those will likely fetch a lower price.

[7] Decision 4/CMA.1, Annex I, paras. 5.d and 5.f.iii

In one of the training sessions, **the participants explored and debated how to apply corresponding adjustments.** As an example to spark discussion, the framework from the fictive Chile-Canada Article 6 pilot was presented. A scenario was created whereby fictive ITMOs generated in Chile were acquired by Canada, and a joint proposal was developed as to how the corresponding adjustments would be applied between the two countries—considering the fact that Chile and Canada have different types of NDC targets.

Current NDC Target

Chile	Canada
Three targets: • GHG emission budget not exceeding 1,100 $MtCO_2eq$ between 2020 and 2030; • Annual GHG emissions maximum (peak) by 2025; and • GHG emissions level of 95 $MtCO_2eq$ /yr by 2030.	• reduce annual GHG emissions by 42-45% below 2005 levels by 2030.

For the pilot scenario, in the context of single-year targets for both Chile and Canada, **the two approaches for ITMO transfers proposed in the latest draft decision text for Article 6.2 were considered; the emissions trajectory approach and the rolling average approach.**[8]

Emissions Trajectory vs Rolling Average methodologies

Baseline emissions

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	**Cumulative** *(10 yrs)*
Emissions covered by NDC (tCO_2 eq)	9.0	9.0	9.0	8.0	8.0	8.0	7.0	7.0	7.0	6.0	**88 tCO_2 eq**
ITMOs generated (tCO_2 eq)	1.0	1.0	1.0	2.0	2.0	2.0	3.0	3.0	3.0	4.0	**22 tCO_2 eq**

Scenario 1: Adjustment with Emissions Trajectory methodology (where the Party has a multi-year NDC)

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	**Cumulative** *(2021-2030)*
ITMOS transferred (tCO_2 eq)	1.0	1.0	1.0	2.0	2.0	2.0	3.0	3.0	3.0	4.0	
Annual corresponding adjustment (tCO_2 eq)	1.0	1.0	1.0	2.0	2.0	2.0	3.0	3.0	3.0	4.0	**22.0 tCO_2 eq**
Adjusted annual emissions balance covered by NDC	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	**100.0 tCO_2 eq**

[8] For more information on the application of corresponding adjustments see paragraph 8 (a), (b) of the Annex to the Draft CMA decision on guidance on cooperative approaches referred to in Article 6.2 of the Paris Agreement. DT.CMA2.i11a.v3. SBSTA 51, December 2019, Madrid. https://unfccc.int/sites/default/files/resource/DT.CMA2_.i11a.v3_0.pdf

Scenario 2: Adjustment with Rolling Average methodology (where the Party has a single year NDC)

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
ITMOS transferred (tCO_2 eq)	1.0	1.0	1.0	2.0	2.0	2.0	3.0	3.0	3.0	4.0
Indicative corresponding adjustment (tCO_2 eq)	1.0	1.0	1.0	1.25	1.4	1.5	1.71	1.88	2.0	2.2
Adjusted emissions balance (tracking)	10.0	10.0	10.0	9.25	9.4	9.5	8.71	8.88	9	8.2
Final corresponding adjustment for Target Year 2030	**2.2 tCO_2 eq**									
Adjusted emissions balance covered by NDC 2030 target	**8.2 tCO_2 eq**									

For the purpose of the simulation, Chile **adopted the emissions trajectory methodology.** This means that the corresponding adjustment for the ITMOs transferred year after year, results in an equivalent annual increase to the final GHG emissions inventory covered by the NDC. Concurrently, Canada **chose to test the rolling average methodology**. This choice was motivated by a willingness to explore the implications of two participating Parties using different methods. The rolling average method consists of calculating the total ITMOs generated since the beginning of the NDC period and dividing it by the number of elapsed years to obtain a yearly rolling average to generate an indicative annual adjustment used principally to track progress towards the single year NDC target. Then the actual final corresponding adjustment is applied to the NDC target year.

The exercise demonstrated that **while the numbers used for the annual corresponding adjustments do not match between the participating Parties—and can make assessing the integrity of ITMO transfers challenging, this is ameliorated by ensuring that that the reporting of ITMOs transferred by Chile, must match the volume of ITMOs acquired by Canada in the same year.** This ensures the two approaches **are equivalent from the perspective of environmental integrity.** Therefore it is extremely important to describe in detail the specifics of an Article 6 cooperative approach in the Biennial Transparency Reports (BTRs) and annual Article 6 reports.

Several other key takeaways from this virtual simulation between Chile and Canada were shared and discussed.

Canada

Independent of the corresponding adjustment method used, the absolute number of ITMOs **transferred** by Chile corresponds to the number of ITMOs **acquired** by Canada year after year. For that reason, **the environment integrity of the transfers is safeguarded.**

It is therefore of utmost importance to **decouple the reporting of transfers and the application of the corresponding adjustment**. Each country needs to report on: (1) ITMOs transferred or acquired on a yearly basis; and 2) the adjusted emissions at the time of applying the corresponding adjustment.

The concept of "**Banking ITMOs" from one NDC period to the next may encourage early investments** by providing certainty that the ITMOs generated will have value overtime. However, it could also extend the life of lower-integrity carbon offsets, which would depress market prices and crowd out future ambition.

Chile

One potential challenge described by Chile is the **gap between the year of actual generation of a mitigation outcome and the year of its eventual transfer**. This can lead to great variations in adjusted emissions year after year, and complicate application of the corresponding adjustment to all three NDC targets simultaneously.

Chile's corresponding **adjustments would be applied simultaneously to both the annual emissions and the cumulative emission totals, in order to compare to each of the three NDC targets**.

The time of the transfer of the ITMOs is the trigger to apply the corresponding adjustment.

No decision on if the adjustment would be applied to the year of the transfer, or to the year when the ITMO was generated. While this has no impact on the emissions budget, or the 2030 target, it may shift the peak.

To safeguard against over-selling;
Chile would only generate ITMOs from mitigation activities that the country does not intend to use for the NDC.
With the ITMO revenue, **Chile would create an investment fund to support additional mitigation activities if necessary**.

Building on this exercise, some complementary perspectives were shared from other countries on conducting corresponding adjustments for ITMO transfers.

Ms. Asmau Jibril, from the Mitigation Division Department of Climate Change in the Ministry of Environment of Nigeria presented the virtual pilot with the Swedish Energy Agency to explore the role Article 6 mechanisms can play in promoting electrification. The electricity sector is one of the most important sectors considered in Nigeria's NDC, which is expressed as a 2030 target. She emphasized that **Nigeria's corresponding adjustment should be performed based on the emissions balance of the year in which the transfer occurs and expressed a preference for using the rolling average approach** for it appears most suitable and simpler considering the Nigerian context. The final decision will depend on the Paris Agreement final rulebook.

Mr. Marco Heredia said that Mexico is focusing on establishing the appropriate framework for the transfer of ITMOs, they are exploring bilateral and regional initiatives with several countries, notably Switzerland and Japan in addition to jurisdictions in North America. He also indicated that a roadmap for the implementation of the NDC will be developed and will consider bilateral and regional ITMO pilots as well as a national emissions trading system. He also mentioned that they are mindful about the need for robust accounting but **Mexico has not yet reflected on the method to use for the corresponding adjustment.**

Mr. El Hadji Mbaye Diagne, Lead Negotiator on Article 6 for the Africa Group from Senegal noted that the Government of Senegal is collaborating with Switzerland on a pilot on Article 6 and is engaged in discussions to establish a bilateral agreement, which will tackle technical issues such as the corresponding adjustment approach to be used. **Senegal has not yet decided how the corresponding adjustment should be applied**, but it is considering what is already proposed in the draft Article 6.2 decision text.

Emerging Categories of Mitigation Activities

Indeed there is a challenge for countries to both have their NDC target defined, and then a need for an NDC strategy that defines how that NDC will be achieved, including how that strategy will be financed. A bit of a cartography of different approaches can be discerned, **with perhaps 3 different categories**.

1. The first category of GHG mitigation activities is what a country has committed to implement on its own; with its own authorities, or its own resources that it can finance domestically. This is essentially **the unconditional NDC**. For example, a country can pass laws to restrict pollution, prohibit deforestation in some areas, or reduce fuel subsidies and implement fuel surcharges. These measures help reduce emissions while being low-cost or cost-saving. When a country implements such measures on its own, the resulting emission reductions are counted toward the country's own NDC; **the mitigation outcomes are not transferred nor sold to anyone else**.

2. The second category includes those **mitigation activities that are more difficult, and less economically feasible; for which the country will need some additional finance**; whether grants, loans or results based payments. While payments are received, the **resulting emission reductions are also counted toward the country's NDC; the mitigation outcomes are not transferred nor sold.** So the second category of mitigation measures in a national strategy are those that depend on additional financing for their realization.

3. Mitigation activities that fall into the 3rd category are those considered **the most difficult and ambitious activities. These go far beyond the country's aspirations and beyond the country's immediate capacities and priorities**. Such activities will require significant external financial support. These might be **good candidates for ITMOs that require corresponding adjustments** by each party in their NDC. The rationale for this is that these can be exported, and corresponding adjustments can be applied without risking the country's ability to achieve their NDC**. An ITMO-generating activity should bring innovation, co-benefits and help increase ambition in the long term.**

These are the general three categories of activities in an NDC implementation strategy. In some cases there may be some uncertainties with determining in which category an activity belongs. Perhaps in some cases there may be need for some blending; some of these activities a country can implement themselves, but may require help with additional finance, and or may sell some results as ITMOs to recover expenses. But this will depend on the specific activity.

> "How do we officials determine that we have squeezed as much mitigation as possible out of our domestic industries -- and using other sources of finance, domestic and international -- before we open the door to the possibility of importing or exporting international credits, for which we would need to apply corresponding adjustments?"
>
> - Grégoire Baribeau
> Environment and Climate Change Canada
> Session 1 Discussions; March 22, 2021
> *"Opportunities to Pilot Article 6, South-South*

Ms. Adriana Gutiérrez, Advisor to the Directorate of Climate Change and Risk Management of the Ministry of the Environment and Sustainable Development of Colombia, explained how the country is conducting analyses to identify mitigation activities that could lead to ITMO transfers, including the development of a carbon budget. She shared that one of the **challenges they anticipate is monitoring; both the implementation of the NDC over time, as well as the MRV of the mitigation actions that generate ITMOs**. In response, Mr. Felipe Diaz reiterated that there are different instruments to assess opportunities to transfer ITMOs and identify actions that go beyond those is needed for the NDC. For example, defining a carbon budget is one of them, but there are also other types of analyses that can provide insights for countries with single-year targets, such as analyzing the cost effectiveness of different measures. Different ways of applying the corresponding adjustment have implications and complexities that most countries have not thought through carefully; more sessions on this specific topic would be very useful.

The **training and exchange-of-views sessions** facilitated immense south-south collaboration and exchange of observations, knowledge and opinions between participants. And a fundamental point —that while Article 6 mechanisms present opportunities to accelerate decarbonization, any **international transfers of mitigation outcomes are secondary to the fundamental domestic actions necessary to achieve the NDC targets. ITMOs are not stand-alone solutions. Domestic activities for low-carbon local economies must be at the heart of NDC pursuit.**

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Annex 1. Session 1 'Training Webinar' Agenda

NDC Accounting and Mechanisms of Article 6: Lessons from the Chilean Experience

SESION 1: Training (March 22 – 14:00 GMT)

Time	Topics	Speakers	Workshop
5 min.	Opening remarks	**Carolina Urmeneta** Chief of the Climate Change Office, Chile's Ministry of the Environment **Francisco Pinto** SGT-MRV Coordinator	**The Chile-Canada roadmap on Article 6: Tackling Key Concepts of NDC Accounting and Article 6**
5 min.	Brief introduction to the West African MRV Program	**Rachel Boti** West Africa MRV Program Coordinator	
10 min.	SGT-MRV: Importance of MRV for domestic public policy	**Francisco Pinto** SGT-MRV Coordinator	
10 min.	Rationale of market-based mechanisms and opportunities presented by Article 6	**Frédéric Gagnon-Lebrun**	
25 min.	Article 6.2 and Article 6.4: How to participate and key concepts requiring further work	**Frédéric Gagnon-Lebrun**	
10 min.	Opportunities to pilot Article 6	**Frédéric Gagnon-Lebrun**	
15 min.	Introduction to the Chile-Canada roadmap and Chile's Article 6 roundtable	**Felipe Díaz** International Negotiator, Climate Change Office, Chile's Ministry of the Environment	
20 min.	Complementary perspectives	**Grégoire Baribeau**, Senior Economic Advisor, Environment and Climate Change Canada. **Daniel Benefor** Deputy Director, Climate Change and Energy Resources Unit, Ghana Environmental Protection Agency **Adriana Gutiérrez** Advisor to the Directorate of Climate Change and Risk Management of the Ministry of the Environment and Sustainable Development of Colombia	
20 min	Q&A and discussion	**Frédéric Gagnon-Lebru**n	

Annex 2. Session 2 'Training Webinar' Agenda

NDC Accounting and Mechanisms of Article 6: Lessons from the Chilean Experience

SESION 2: Training (March 29 – 14:00 GMT)

Time	Topics	Speakers
5 min	Opening remarks	**Francisco Pinto** SGT-MRV Coordinator
10 min	Setting the scene	Frédéric Gagnon-Lebrun
45 min	Unpacking the corresponding adjustment in a fictive ITMO transfer: • Corresponding adjustment approaches for different types of targets • Timing of the adjustments • Tracking progress and demonstrating NDC achievement	**Francisco Dall'Orso**, Climate Change Expert, Division of Energy and Environmental Policies and Studies, Ministry of Energy of Chile **Felipe Diaz**, International Negotiator, Climate Change Office, Ministry of the Environment of Chile **Grégoire Baribeau**, Senior Economic Advisor, Environment and Climate Change Canada
15 min	Respondents	**Ms. Asmau Jibril**, Overseeing Head, Mitigation Division Department of Climate Change, Ministry of Environment, Nigeria **Mr. Marco Heredia**, Head of Planning and Environmental Policies, SEMARNAT, Mexico **Mr. El Hadji Mbaye Diagne**, Lead Negotiator on Article 6 for the Africa Group, Senegal
45 min	Q&A and discussion	**Frédéric Gagnon-Lebrun**

Time	Topics	Speakers	Workshop
5 min.	Opening remarks	**Francisco Pinto** SGT-MRV Coordinator	
5 min.	Takeaways from Session 1	**Frédéric Gagnon-Lebrun**	
10 min.	NDC targets and mitigation actions and their implications for Article 6	**Frédéric Gagnon-Lebrun**	
10 min.	Methods for applying the corresponding adjustment	**Frédéric Gagnon-Lebrun**	
20 min.	Presentation on integrating Article 6 considerations in the revised NDC	**Felipe Díaz** International Negotiator, Climate Change Office, Chile's Ministry of the Environment	**The Chile-Canada roadmap on Article 6: Tackling Key Concepts of NDC Accounting and Article 6**
40 min.	Complementary perspectives and Q&A	**Ousmane Fall Sarr** Director of Studies and Planning, Senegalese Rural Electrification Agency **Marco Heredia** General Director of Policies for Climate Change of the Secretariat of the Environment and Natural Resources **Grégoire Baribeau** Senior Economic Advisor, Environment and Climate Change Canada	
15 min.	The voluntary market and implications for NDC accounting	**Frédéric Gagnon-Lebrun**	
15 min.	Q&A and discussion	**Frédéric Gagnon-Lebrun**	

Annex 3. Session 3 'Exchange of views' Agenda

NDC Accounting, Mechanism of Article 6 and ITMOS: Lessons from Chile-Canada Experience

SESSION 3: Exchange (20 April – 14:00 GMT)

Annex 4. Session 4 'Exchange of view' Agenda

NDC Accounting, Mechanism of Article 6 and ITMOS: Lessons from Chile-Canada Experience

SESSION 4: Exchange (27 April – 14:00 GMT)

Time	Topics	Speakers
15 min	Opening remarks	**Carolina Urmeneta** Chief of the Climate Change Office, Chile's Ministry of the Environment **Francisco Pinto** SGT-MRV Coordinator
15 min	Revising an NDC: formulating a mitigation target and actions to participate in Article 6	**Francisco Dall'Orso**, Climate Change Expert, Division of Energy and Environmental Policies and Studies, Ministry of Energy
20 min	Q&A	
20 min	Deciding what mitigation outcomes can become ITMOs: the NDC implementation plan and the public-private roundtable	**Felipe Diaz**, International Negotiator, Climate Change Office, Ministry of the Environment of Chile
40 min	Complementary perspectives and Q&A	**Adriana Gutiérrez**, Advisor, Climate Change and Risk Management Division, Ministry of Environment and Sustainable Development **Grégoire Baribeau**, Senior Economic Advisor, Environment and Climate Change Canada
15 min	Q&A and discussion	**Frédéric Gagnon-Lebrun**