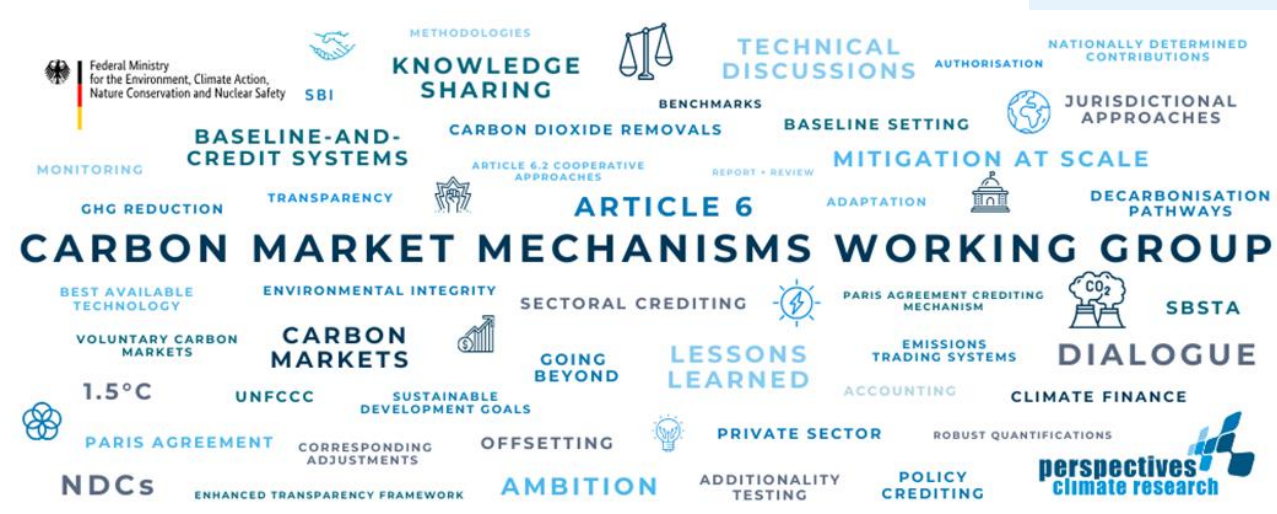


Applying corresponding adjustments: Methods and key implications

30.09.2026



Discussion paper

Hanna-Mari Ahonen, Alicia Schmid, Aayushi Singh,

IMPRINT

Publisher:

Perspectives Climate Research gGmbH

Date: 30.09.2026

DISCLAIMER

The analysis, results, and recommendations presented in this paper, funded by the Federal Ministry for the Environment, Climate Action, Nature Conservation and Nuclear Safety of Germany, reflect the views of the authors, and do not represent the position of the funder.

Artificial intelligence tools were used to generate comparative overviews of reports submitted by Parties to the UNFCCC. These AI-assisted outputs served as a supporting reference and were reviewed and verified by the responsible authors. All interpretations, conclusions, and final analysis remain the responsibility of the authors.

Artificial intelligence tools were used for editorial purposes in the preparation of this document. All editorial outputs were reviewed and verified by the responsible authors, and final content remains their responsibility.

Contact CMM-WG coordinator:

Juliana Keßler

kessler@perspectives.cc

Content

1. INTRODUCTION	1
2. PARIS RULEBOOK PROVISIONS FOR CORRESPONDING ADJUSTMENTS	2
2.1. GENERAL RULES FOR APPLYING CORRESPONDING ADJUSTMENTS	2
2.2. SPECIFIC RULES FOR CORRESPONDING ADJUSTMENT METHODS	4
3. LITERATURE REVIEW ON CORRESPONDING ADJUSTMENT METHODS	8
4. EARLY EXPERIENCES WITH CORRESPONDING ADJUSTMENTS	13
4.1. FIRST ITMO AUTHORISATIONS AND TRANSFERS	13
4.2. FIRST INITIAL REPORTS	13
4.3. FIRST ARTICLE 6 TECHNICAL EXPERT REVIEWS	16
4.4. FIRST BTRs WITH CORRESPONDING ADJUSTMENTS	17
5. DISCUSSION POINTS FROM THE CMM-WG WORKSHOP	17
REFERENCES	20

Figures

Figure 1. Applying corresponding adjustments	2
Figure 2. Time window for ITMO transactions and corresponding adjustments	3
Figure 3: Zimbabwe's structured summary: Tracking progress made in implementing and achieving the NDC under Article 4 of the Paris Agreement (Table 4.1.2)	17

Tables

Table 1: Possible effects on aggregated emissions from both countries for different combinations of ITMO engagement under averaging accounting approach	10
Table 2: Overview of initial reports of selected countries: Information relating to corresponding adjustments	14

Abbreviations

AEF	Agreed Electronic Format
AWD	Alternate Wetting and Drying
BAU	Business as Usual
BTR	Biennial Transparency Report
CA	Corresponding Adjustment
CARP	Centralized Accounting and Reporting Platform
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CMM-WG	Carbon Markets Mechanisms Working Group
CTF	Common Tabular Format
EU	European Union
FY	Fiscal Year
GHG	Greenhouse Gas
IR	Initial Report
ITMO	Internationally Transferred Mitigation Outcome
JCM	Joint Crediting Mechanism
LDC	Least Developed Country
LULUCF	Land Use, Land-Use Change and Forestry
NDC	Nationally Determined Contribution
OIMP	Other International Mitigation Purposes
SIDS	Small Island Developing States
tCO ₂ e	Tonnes of Carbon Dioxide Equivalent
TER	Article 6 Technical Expert Review
TERT	Article 6 Technical Expert Review Team
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

1. Introduction

Under the Paris Agreement, Parties communicate nationally determined contributions (NDCs), including single- or multi-year mitigation targets, with new or updated targets submitted every five years. The NDC implementation period is typically five or ten years. A single-year target sets a cap for the greenhouse gas (GHG) emissions of the final year of the NDC implementation period while a multi-year target sets a trajectory or budget for the cumulative emissions during the NDC implementation period. These caps, trajectories or budgets could be expressed as absolute emissions, e.g., as a percentage reduction from 1990 emissions, or in relative terms, e.g., as a percentage reduction relative to business-as-usual (BAU) (UNFCCC, 2025a). NDCs could also include mitigation targets that are not expressed in GHG metrics.

Article 6 of the Paris Agreement allows Parties to cooperate in the achievement of their NDCs, including through cooperative approaches involving internationally transferred mitigation outcomes (ITMOs). ITMOs are additional and verified mitigation outcomes (emission reductions and removals) that are authorised and first transferred by the host Party. ITMOs can be authorised for use towards NDCs of other Parties, or for other international mitigation purposes (OIMP) by authorised public and private entities.

In accordance with the relevant decisions under the Paris Agreement (“the Paris rulebook”), Parties are required to, inter alia, apply robust accounting, including to avoid double counting, when engaging in cooperative approaches. **To avoid double counting, participating Parties must apply corresponding adjustments to all mitigation outcomes that they have authorised and first transferred as ITMOs and/or that they use towards their NDC.** The Paris rulebook provides two methods for corresponding adjustments: the multi-year approach and the averaging approach. The multi-year approach is available for countries with single- or multi-year targets while the averaging approach is only available for countries with single-year targets.

This paper aims to support the development of a shared understanding among Carbon Markets Mechanisms Working Group (CMM-WG) members of the key issues relating to applying the corresponding adjustments method, including key implications for NDC accounting by host (transferring) and using (acquiring) Parties. It focuses on corresponding adjustment methods for NDC targets that are expressed in GHG metrics, given that the vast majority of NDCs are based on GHG metrics. The paper captures input from a CMM-WG workshop on this topic that was held in September 2026.

The rest of the paper is structured as follows: Section 2 summarises the key provisions in the Paris rulebook on corresponding adjustment methods. Section 3 presents a review of relevant literature. Section 4 looks at early practical experiences from reporting and review relevant for corresponding adjustments. Section 5 lists questions for discussion at the workshop.

2. Paris rulebook provisions for corresponding adjustments

2.1. General rules for applying corresponding adjustments

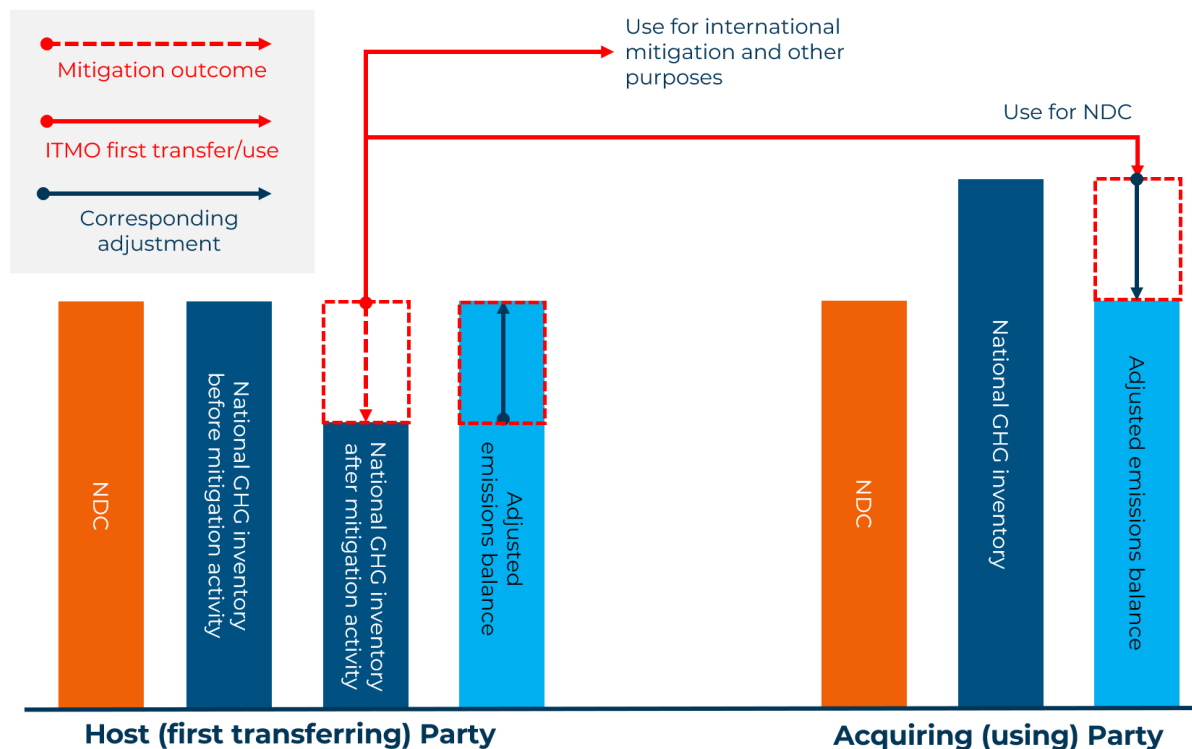


Figure 1. Applying corresponding adjustments

Adapted from: Ahonen et al. 2024

According to the Paris rulebook, Parties must apply corresponding adjustments to all ITMOs that they authorise and first transfer (as the host Party, i.e. “first transferring Party”), and all ITMOs that they use towards their NDC (as the acquiring and “using Party”) (UNFCCC, 2021, p. 16). **ITMOs must be used towards an NDC in the same NDC period in which the mitigation outcomes are generated** (UNFCCC, 2021, p. 16, 17). Corresponding adjustments are applied to the Party’s emissions and removals from the sectors and GHGs covered by its NDC, resulting in an emissions balance (see Figure 1). Corresponding adjustments must be applied regardless of whether or not ITMOs are from emission reductions and removals that are covered by its NDC (UNFCCC, 2021, p. 17).

The corresponding adjustments and the resulting emissions balance are reported in a structured summary as part of the Party’s BTR. **Parties must report about their corresponding adjustments and emissions balance as part of information to track progress made in implementing and achieving its NDC** (UNFCCC, 2021, p. 17, 21). This is provided in a structured summary, in an annex to the biennial transparency reports (BTRs).

BTRs must be submitted every two years by 31 December, starting in 2024 (UNFCCC, 2018, p. 18). The BTR also includes the national GHG inventory of emissions and removals,

with no more than two¹ years' lag in the latest data (UNFCCC, 2018, p. 27). For example, the BTR that includes the closing balance for the achievement of the 2030 target would need to be submitted by 31 December 2032.

Information on ITMO transfers and use must be reported annually in an agreed electronic format (AEF) by 15 April of the following year (UNFCCC, 2021, p. 19). Thus, the BTR submitted, for example, by the end of 2032, could include emission and removal data covering the period until the end of 2030 and ITMO transfers and use that occurred by the end of 2031. This implies that ITMO transactions would need to be completed by the end of 2031 for them to be reflected in the 2032 BTR. Figure 2 illustrates the possible time windows for ITMO transactions and corresponding adjustments.

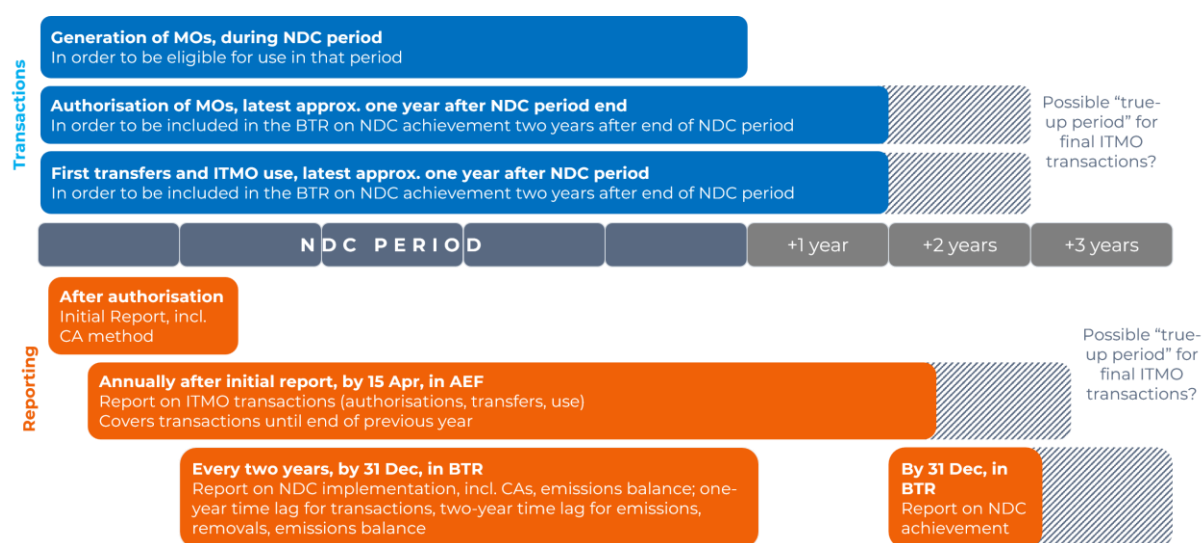


Figure 2. Time window for ITMO transactions and corresponding adjustments

Source: Authors

The **reported information is subject to two international reviews**: an Article 6 Technical Expert Review of the Article 6-specific reporting, followed by the Technical Expert Review of the full BTR. The reporting is deemed final after both Technical Expert Reviews have concluded. This could take a year, or even more (Schneider and Moosmann, 2026). For example, the final status of the implementation and achievement of an NDC period that ends in 2030 may only be known in 2034 or even 2035.

Parties have not yet agreed on the final deadline for making additions and subtractions to the emissions balance for an NDC period before the expert review process is started (Schneider and Moosmann, 2026). Such a "true-up period", similar to that provided under the Kyoto Protocol, could be useful for countries to allow trading ITMOs for an NDC period once they have clarity on how many ITMOs they can transfer or need to use in light of their NDC achievement.

¹ The Paris rulebook provides flexibility to those developing country Parties that need it in the light of their capacities, including for their reporting timelines. For least developed countries and small island developing states, BTRs are not mandatory.

The Article 6.2 guidance is scheduled for review in 2028. The topics that the Paris rulebook identifies for this review include, inter alia, possible methods for applying corresponding adjustments beyond averaging and multi-year approaches, as well as guidance on a single method to be applied from 2031 onwards (UNFCCC, 2021, p. 13).

2.2. Specific rules for corresponding adjustment methods

The Paris rulebook requires Parties to apply corresponding adjustments **“in a manner that ensures transparency, accuracy, completeness, comparability and consistency; that participation in cooperative approaches does not lead to a net increase in emissions across participating Parties within and between NDC implementation periods; and that corresponding adjustments shall be representative and consistent with the participating Party’s NDC implementation and achievement”** (UNFCCC, 2021, p. 16). Parties must describe how they ensure this, in their Initial Reports and regular reporting (BTR).

The quantity of ITMOs authorised and first transferred is added for the calendar year in which the mitigation outcomes occurred (vintage), while the quantity of ITMOs used towards the NDC is subtracted for the calendar year in which the mitigation outcomes are used, within the same NDC implementation period as when they occurred (UNFCCC, 2021, p. 17).

The **Paris rulebook specifies two types of methods for applying corresponding adjustments – averaging and multi-year approaches**. Countries with a multi-year NDC target must apply a multi-year approach, while countries with a single-year NDC target can choose between a multi-year approach or averaging (UNFCCC, 2021, p. 16). Parties can choose different methods for different cooperative approaches, and the selected approach must be applied consistently throughout the NDC period (ibid.).

In the Initial Report for the cooperative approach in question, Parties must communicate the ITMO metrics and the selected method for applying corresponding adjustments. In case of multi-year approaches, the methods must be described, including, as applicable, the methods used for establishing the indicative trajectory or budget and their relationship to the indicators to track progress towards the implementation and achievement of its NDC.

Multi-year approaches

This method entails calculating a **multi-year emissions trajectory**, trajectories or budget **that is consistent with the NDC**, and **annually applying corresponding adjustments** for the total amount of ITMOs first transferred and used for each year in the NDC implementation period and, in case of multi-year NDC targets, also cumulatively at the end of the NDC implementation period (UNFCCC, 2021, p. 16).

In case of single-year targets, the multi-year trajectory or budget is indicative. While it needs to be consistent with the implementation and achievement of the NDC, it does not change the NDC itself (Siemons and Schneider, 2022). It enables the Party to account for all years in the NDC implementation period, and not only for the target year. However, the NDC continues to be a single-year NDC, which the authors interpret to mean that its achievement is assessed only for the target year. By contrast, the achievement of multi-year target

NDCs would include the consideration of the annual as well as cumulative net emissions during the NDC period.

The Paris rulebook does not specify whether a country with a trajectory would need to keep its emissions below the trajectory in each year or cumulatively over the NDC period (Schneider *et al.*, 2026). **Multi-year trajectories could be equivalent to multi-year budgets, if trajectories are accompanied with rules that allow for banking and borrowing within the NDC period.** Without such flexibilities, multi-year trajectories could imply that the emissions balance must be at or below the target level for each year, without the possibility to balance underachievement in some years with overachievement in other years. Under the Kyoto Protocol, developed country Parties had multi-year targets, expressed as a multi-year emission budget.

The Paris rulebook does not explicitly specify how the emissions during the NDC period and in the target year are compared with a multi-year trajectory (Schneider and Moosmann, 2026). The Article 6.2 Reference Manual provides some numeric examples for possible methods for applying corresponding adjustments using the multi-year approach (UNFCCC, 2025a), for the cases of single-year and multi-year NDC targets.

Averaging

This approach is available only to single-year NDC targets. It **entails calculating the average annual amount of ITMOs first transferred and used over the NDC implementation period**, by taking the cumulative amount of ITMOs and dividing it by the number of elapsed years in the NDC implementation period and annually applying indicative corresponding adjustments equal to this average amount for each year in the NDC implementation period and applying corresponding adjustments equal to this average amount in the NDC year (UNFCCC, 2021, p. 16).

Under this approach, the amount of corresponding adjustment applied for the single target year would reflect the average transfer or use of the ITMOs during the entire NDC implementation period, rather than the actual amount transferred or used in the target year itself. To calculate this average, Parties need to annually apply “indicative” corresponding adjustments² and report them for all pre-target years. This reporting is distinct from accounting, in that **only the final average corresponding adjustments for the single target year will be accounted** by comparing the adjusted emissions balance with the target level (Siemons and Schneider, 2022).

The Article 6.2 Reference Manual provides some numeric examples for applying corresponding adjustments using the averaging approach for a single year NDC target (UNFCCC, 2025a).

NDC quantification

For NDCs using GHG metrics, **quantifying the NDC target in metric tonnes of carbon dioxide equivalent, tCO₂e, is a key step in the application of corresponding adjustments.** This is straightforward for Parties that have an absolute NDC target expressed in tCO₂e (e.g., x% reduction from 1990 emissions). NDC targets that are measured in tCO₂e but expressed

² The cumulative amount of ITMOs transferred and used divided by the years elapsed in the NDC period.

in relative terms (e.g., x% reduction from business-as-usual) can be more challenging to quantify in tCO₂e, due to the assumptions, uncertainties and dynamic nature of the reference level.

In its **Initial Reports**, the Party must quantify mitigation information in its NDC in tCO₂e, including the sectors, sources, GHGs and time periods covered by the NDC, the reference level of emissions and removals for the relevant year or period, and the target level for its NDC. Where this is not possible, the Party shall provide the methodology for the quantification of the NDC in tCO₂e. The information included in the Initial Report needs to be consistent with the information included in the Party's latest NDC.

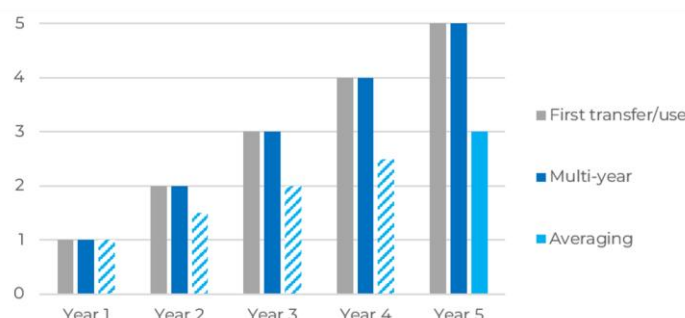
The Paris rulebook includes provisions, including for corresponding adjustments, also for NDC targets measured in non-GHG metrics (e.g., share of renewable energy). These are, however, outside the scope of this paper.

Numerical example: Calculation of corresponding adjustments and emissions balances with the multi-year and averaging methods

In this illustrative example, the host country and using country both have net emissions of 10 units per year, during an NDC period of five years. The host country first transfers one ITMO in year 1, two ITMOs in year 2, three ITMOs in year 3, four ITMOs in year 4 and five ITMOs in year 5. In this example, we assume for the sake of simplicity that ITMOs are first transferred in the year of their generation, and all of them are used towards NDCs in the year of their first transfer. Thus, the host country first transfers and the using country uses a total amount of 15 ITMOs towards its NDC over the NDC period.

In step 1, the amount of corresponding adjustments is calculated. Using the above assumptions, the amounts of corresponding adjustments differ depending on the method used but are the same for a host and a using country that use the same method. The calculations are shown in the figure and table below. Using the multi-year approach, the total amount of corresponding adjustments is equivalent to the total number of ITMOs first transferred or used. In this example, it amounts to 15 in total over the five-year period for both the host and using country applying this method. By contrast, under the averaging approach, the country would calculate average corresponding adjustments applied each year by dividing the cumulative amount of corresponding adjustments over the course of the NDC period by the number of years elapsed. This would result in indicative corresponding adjustments (shown in diagonal stripes in the figure) of one in year 1, 1.5 in year 2, two in year 3, 2.5 in year 4 and three in year 5. The total amount of corresponding adjustments, including indicative ones, is ten over the five-year period. The corresponding adjustments for years 1-4 are indicative (shown as diagonal stripes in the figure).

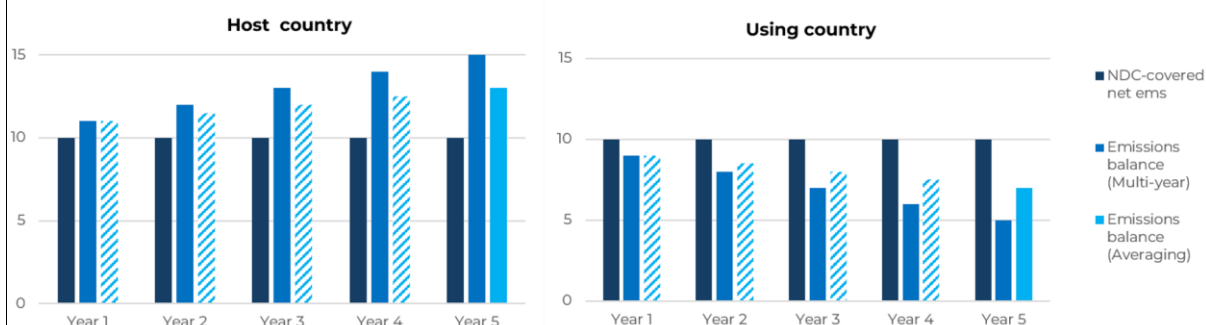
Step 1: Calculating corresponding adjustments



NDC period	First transfer or use	Multi-year Corr. adj.	Averaging		
			Cumulative first transfer or use	Years elapsed	Corresponding adjustments
Year 1	1	1	1	1	1/1=1
Year 2	2	2	1+2=3	2	3/2=1.5
Year 3	3	3	1+2+3=6	3	6/3=2
Year 4	4	4	1+2+3+4=10	4	10/4=2.5
Year 5	5	5	1+2+3+4+5=15	5	15/5=3
Total	15	15			1+1.5+2+2.5+3=10

In step 2, the countries calculate their emissions balance. This is done by adding first transferred ITMOs (host country) and deducting used ITMOs (using country) to the net emissions covered by the NDC for the year of generation or use. The figure below illustrates the emissions balances of host and using countries for multi-year and averaging approaches, applying the corresponding adjustments calculated in step 1 to the annual net emissions of 10 units. Calculations based on indicative corresponding adjustments are shown in diagonal stripes in the figure.

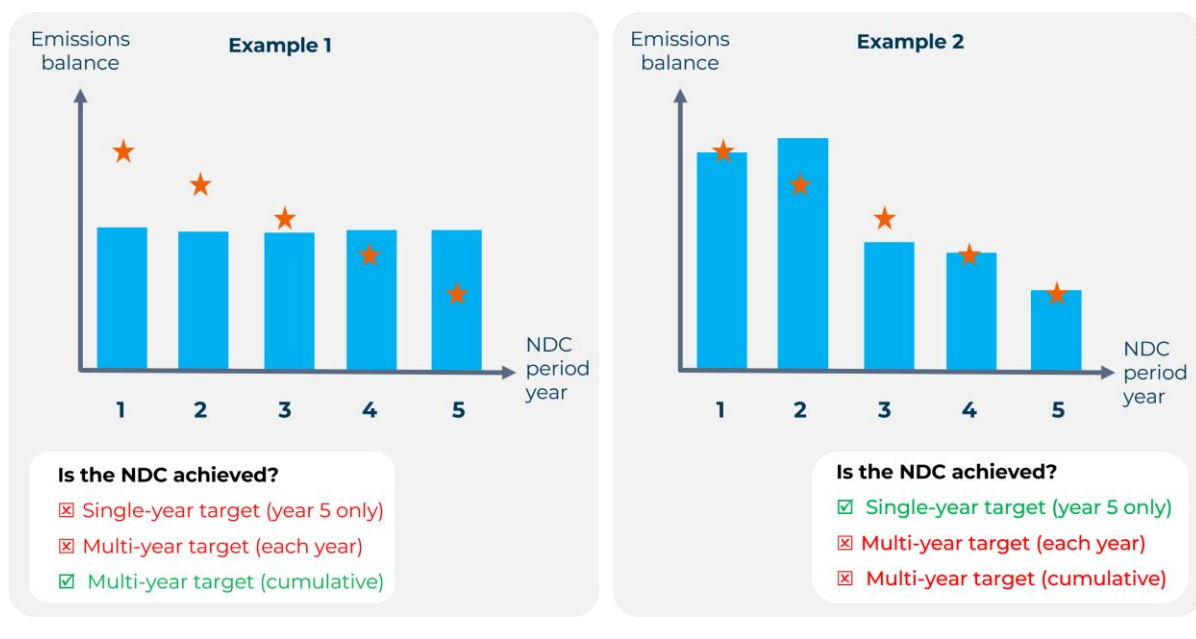
Step 2: Calculating an emissions balance



In step 3, the countries compare their emissions balances against their NDC targets to assess NDC achievement. Countries with single-year targets using the averaging method assess NDC achievement by comparing the target year's emissions balance against its NDC target. Countries with multi-year targets assess NDC achievement by comparing the annual and cumulative emissions balance against its NDC target. The Paris rulebook does not provide explicit guidance on how countries with single-year targets using multi-year methods assess their NDC achievement. The figure below provides

two illustrative examples of assessing emissions balances against a multi-year trajectory (indicated as stars) and indicates whether the NDC target is achieved in case of single-year target, multi-year target for staying within the trajectory in every year, and a multi-year target for staying within the cumulative budget associated with the trajectory.

Step 3: Comparing emissions balance to NDC targets



3. Literature review on corresponding adjustment methods

The literature addressing the methods for applying corresponding adjustments, and their implications for NDC accounting, remains limited. This is somewhat surprising given the centrality of corresponding adjustments to the integrity of Article 6 cooperation: the choice of method determines not only how emissions are reported, but also the extent to which the transfer and use of internationally transferred mitigation outcomes (ITMOs) can influence a Party's reported progress towards its NDC. Much of the available material is descriptive, restating the provisions of the Paris rulebook rather than analysing their consequences for environmental integrity or NDC achievement. Only a small number of sources explore substantively how the choice between the two available methods, averaging and multi-year accounting, affects the robustness of NDC accounting.

The **UNFCCC Secretariat's Article 6.2 Reference Manual** serves as the main practical guidance document in this space, intended to **help Parties and practitioners interpret and apply the corresponding adjustment provisions set out in the Paris rulebook** (UNFCCC, 2025a). The manual does not look into the implications of the choice of method, nor does it discuss the potential challenges associated with each approach or identify gaps in the existing rules. Such analyses are beyond the scope and purpose of the manual.

Siemons and Schneider (2022) provide the first dedicated piece of literature addressing the implications of the corresponding adjustment method choice. The paper assesses the

environmental integrity implications of the two accounting methods available to countries with single-year targets, the multi-year approach and the averaging approach, using a simplified two-country model in which a transferring and a using Party engage in ITMO cooperation over an NDC implementation period. The authors find that **aggregated emissions could increase, decrease or remain unaffected, depending on which corresponding adjustment method is chosen by the first transferring and the using country**; whether the generation or use of ITMOs decreases, increases, or remains constant during the NDC period; whether the countries' emissions in the target year are representative of their emissions trend; and what course of action countries take in the case of a possible over- or under-achievement of their NDC targets.

Siemons and Schneider (2022) demonstrate that, **under the multi-year approach, aggregated emissions do not change, as long as the multi-year targets or trajectories used are credibly defined**, since corresponding adjustments are applied annually against this trajectory or budget for each year of the NDC implementation period, regardless of how ITMO engagement evolves over the course of that period. Under the averaging approach, by contrast, ITMO transfers and use can lead to higher or lower total emissions compared to the case with no ITMO cooperation, even when the ITMOs represent additional mitigation. The reasoning behind this result is that, **under averaging, the corresponding adjustment applied in the target year is based on the average level of ITMO engagement across the entire NDC implementation period, rather than on the actual level of engagement in that year**. If a country's ITMO transfers increase over time, for example because it ramps up sales as the target year approaches, the average understates its actual engagement in the target year itself; the corresponding adjustment then fails to fully capture the mitigation outcomes transferred in that year, allowing the transferring country to run a higher emissions pathway in the years leading up to the target without this being reflected in its adjusted emissions balance. The mirror-image risk arises where engagement decreases over time. Only where both countries' ITMO engagement moves in the same direction (increasing or decreasing), or remains constant, does averaging avoid a net effect on aggregate emissions. Table 1 illustrates this for the sub-set of cases in which both the transferring and the acquiring country use averaging, showing how the direction of each country's ITMO engagement changes, whether increasing, constant, or decreasing.

Siemons and Schneider (2022) conclude that, **because Parties are free to choose whichever accounting approach** best suits their circumstances for each NDC implementation period, they could exploit this flexibility strategically by **selecting the method that requires the least mitigation effort to meet a given target, which in turn can undermine environmental integrity** at the level of the overall system even where individual Parties remain fully compliant with their reporting obligations.

Table 1: Possible effects on aggregated emissions from both countries for different combinations of ITMO engagement under averaging accounting approach

Acquiring country's engagement Transferring country's engagement	Increasing	Constant	Decreasing
Increasing	No change (effects even out)	Higher aggregated emissions	Higher aggregated emissions
Constant	Lower aggregated emissions	No change (effects even out)	Higher aggregated emissions
Decreasing	Lower aggregated emissions	Lower aggregated emissions	No change (effects even out)

Source: Siemons and Schneider (2022)

A further, related concern raised by the paper is the uncertainty that averaging creates around the availability of ITMOs. **Since most NDCs are single-year targets, a Party only knows whether it is on track to meet its target, and by how much, once its emissions for the target year are known, and it is this target year, rather than the NDC period as a whole, that ultimately determines the final corresponding adjustment under the averaging approach.** As a result, a Party cannot reliably estimate, in advance of the target year, how many ITMOs it can afford to transfer or will need to acquire in order to meet its NDC, since this depends on emissions outcomes that are only confirmed at the very end of the implementation period. This can also result in market distortions during the target year. **Under the multi-year approach, by contrast, Parties account against an indicative trajectory or budget established from the outset of the NDC implementation period, providing considerably greater predictability for both transferring and using Parties throughout.**

On this basis, the authors conclude that accounting for ITMOs is most robust where all Parties apply multi-year approaches, and that Parties engaging in Article 6 should move over time towards robustly defined multi-year trajectories or budgets rather than continuing to rely on averaging. The authors acknowledge that multi-year approaches are not risk-free, since Parties may be tempted to set unduly inflated trajectories or budgets, but they argue that this risk is more readily addressed, through international guidance on the establishment of trajectories and through international review processes.

Schneider et al. (2026) is a recent piece of literature that has applied the findings of Siemons and Schneider (2022) to concrete policy recommendations by examining how the European Union (EU) might define its own engagement with other countries as it considers using international carbon credits towards its prospective 2040 climate target. The paper illustrates that the **choice of corresponding adjustment method is not a purely technical afterthought but one of the factors a Party must weigh when deciding how, and with whom, to pursue cooperative approaches.** Because the EU's 2040 target, like most NDCs, is expected to take the form of a single-year target, the authors observe that it would face the same accounting challenge that Siemons and Schneider (2022) identify, namely that

carbon market cooperation is typically implemented over multiple years while the target itself is assessed at a single point in time. On this basis, they recommend that the EU adopt a multi-year trajectory or budget as its own accounting approach, an option they note is straightforward for the EU given that it already manages its domestic emissions through annual trajectories under the EU Emissions Trading System, the Effort Sharing Regulation and the LULUCF Regulation, and further recommend that the EU cooperate only with third countries that likewise commit to multi-year accounting rather than averaging.

The authors also identify a timing-related gap in the international rules. **While the rules specify a timeline for closing the emissions balance for an NDC period, requiring the BTR and the annual reporting of ITMO transactions to be submitted according to set deadlines, they do not otherwise specify by when, within or after the NDC period, the final transactions for that NDC period must take place.** To illustrate the resulting gap, Schneider *et al.* (2026) note that it would be possible for the EU to purchase in 2041 a mitigation outcome generated in 2038 and use it to meet its trajectory for 2036, since **nothing in the international rules prevents mitigation outcomes from being purchased on an ad hoc basis, even after the end of the NDC period, for use against earlier years within that period. The authors caution that this flexibility poses a practical risk, since delaying transactions until final demand becomes clear following the target year could leave a Party short of available high-quality credits, and that it undermines the benefit that Article 6 cooperation is meant to provide to selling countries, which depends on early, long-term partnerships rather than late, ad hoc transactions.** They therefore recommend that the EU establish purchase programmes early, rather than waiting until near the end of the NDC period, to secure supply and give effect to a genuine partnership with third countries.

Their analysis illustrates how the choice of corresponding adjustment method is likely to become a practical consideration, and, in the authors' view, should become a screening criterion, for a major prospective user of Article 6 as it structures its international carbon market engagement.

Schneider and Moosmann (2026) build on the findings of Siemons and Schneider (2022) and Schneider *et al.* (2026) and examine how the timing of GHG reporting and ITMO transactions affects corresponding adjustments for the case of the EU. On ITMO transactions, the authors point to a gap in the Article 6.2 rulebook on **how long ITMOs may be transacted after the end of an NDC period.** This matters because if a host country first transfers any ITMO after its emissions balance has been finalised, the respective additions would no longer be reported in the emissions balance, which would lead to double counting.

The authors recommend that: i) the **final emissions balance and NDC achievement should be reported as early as possible**, since reporting it several years after the period ends would undermine trust in the Paris Agreement's rules; ii) **information on emissions and removals for the last year of the NDC period should be made available before the ITMO transaction window closes**, thereby allowing buyer Parties to cover any remaining gap and host Parties to assess whether they still have scope to authorise and first transfer further mitigation outcomes; and iii) **Article 6 and 13 reviews for a given Party can only start once all its cooperating Parties have reported**, which can become complicated where some use the three-year flexibility. The **authors propose that Parties file an addi-**

tional BTR in the second half of 2043, containing only information related to NDC achievement. This would **enable countries to conduct ITMO transactions until the end of 31 December 2042**, by when countries should have sufficient information on their GHG inventory and by when carbon credits can reasonably be expected to have been issued. **They suggest that host and using Parties could include provisions on common timelines in their Article 6 cooperation frameworks.**

Regarding the choice of corresponding adjustment method, Schneider and Moosmann (2026) flag key implications on uncertainties impacting the country's ITMO strategy. **Under averaging, any unexpected deviation between actual and expected emissions in the target year would be magnified by the number of years in the NDC period. Under multi-year accounting, by contrast, the corresponding adjustment tracks the actual gap between emissions and the trajectory in each year directly, so a one-year deviation requires only a matching one-year adjustment, without this magnifying effect.** The authors note that real-world year-on-year emissions volatility, driven by factors such as weather-dependent energy demand, economic shocks, or land-use fluctuations, can be substantial enough that this magnification translates into materially larger and far less predictable ITMO purchase or sale volumes for Parties relying on averaging. Echoing earlier literature, the authors conclude that **multi-year accounting offers considerably greater certainty over the ITMOs needed or available**, reinforcing their recommendation that Parties on both sides of a cooperative approach adopt it.

In this policy brief, the authors also raise an important open issue. The **Article 6 rulebook is not explicit on how the emissions over the NDC period are compared to the trajectory and the emissions in the target year** (i.e., how NDC achievement is ultimately assessed). It remains unclear whether the adjusted emissions level must stay at or below the trajectory in every year of the NDC period, in which case an overachievement of the trajectory in one year would not compensate for an overshoot in another, or whether it is the cumulative adjusted emissions over the whole period that must remain below the trajectory.

Taken together, this literature converges on a clear recommendation that **multi-year accounting is the more robust choice for environmental integrity and predictability**, and that Parties should move towards it rather than relying on averaging. At the same time, it stresses that the advantages of multi-year accounting depend on **trajectories being credibly defined, grounded in Parties' NDCs and the emissions pathways under their domestic policies**. Further clarity is still needed from the CMA on the cut-off date for ITMO transactions relative to a given NDC period, and on how NDC achievement is assessed under the different accounting approaches, both matters that warrant attention now that countries have begun making their first ITMO transactions and the next round of BTRs is due soon.

4. Early experiences with corresponding adjustments

This chapter provides an overview of the first practical cases of authorisation of credits and reported corresponding adjustments implemented to date including insights from the first technical expert review of initial reports. These cases showcase how Parties are currently interpreting and implementing the Article 6.2 rules and can provide a basis to initiate a discussion around the potential need for additions or changes to the guidance.

4.1. First ITMO authorisations and transfers

The **first bilateral ITMO authorisation was issued in November 2022**, when Ghana authorised mitigation outcomes from a climate-smart rice cultivation activity for use by Switzerland (UNDP, 2022). One year later, in November 2023, Gold Standard designated the first credits issued under an independent crediting standard as authorised under Article 6, on the basis of a letter of authorisation from the Government of Rwanda for atmosfair's clean cooking activity (Gold Standard, 2023). **The first transfer of ITMOs for NDC use followed in December 2023**, when 1,916 ITMOs from the Bangkok E-Bus Programme in Thailand were credited to the KliK Foundation's account in the Swiss Emissions Trading Registry on 15 December 2023 (KliK Foundation, 2023).

The latest data from the UNFCCC authorisation page in CARP (UNFCCC, 2026a) indicate that **19 Parties** have submitted letters of authorisation to date between early 2024 and 31 July 2026³. The platform counts **50 unique identifiers** for cooperative approaches.

4.2. First Initial Reports

As of August 2026, **24 Parties have submitted an Article 6.2 initial or updated initial report**: Switzerland and Ghana were the first (2023), followed by Vanuatu, Thailand, Guyana, Suriname, Japan, Mongolia, Cambodia, Zimbabwe, Maldives, Malawi, Palau, Tunisia, Honduras, Sri Lanka, Rwanda, Uzbekistan, Madagascar, Gambia, Sierra Leone, Tanzania, and most recently Peru (1 June 2026) and Oman (29 August 2026) (UNFCCC, 2026d). The **NDC periods covered vary widely by country** with most clustering around **2021–2030**, but several fall outside that range, including Guyana (2016–2025), Uzbekistan (2010–2035), Palau (2020–2025), Suriname (2020–2030), Rwanda (2020–2024), Malawi (2020–2040), and Zimbabwe (2025–2035). Of the 24 initial reports, **16 select the averaging method** (Cambodia, Ghana, Honduras, Japan, Madagascar, Maldives, Mongolia, Oman, Palau, Peru, Sri Lanka, Suriname, Thailand, Uzbekistan, Vanuatu and Zimbabwe). **Only three** (Sierra Leone, Switzerland and Tunisia) select the **trajectory method**. The remaining five (Gambia, Guyana, Malawi, Rwanda and Tanzania) do not clearly specify a method yet. Table 2 provides a comparison of initial reports of selected host (Ghana, Thailand) and buyer countries (Switzerland, Japan), focused on their approach to corresponding adjustments.

³ Parties that have submitted authorisations as of August 2026: Peru, Madagascar, Sierra Leone, Gambia, Uzbekistan, Japan, Honduras, Tanzania, Tunisia, Palau, Malawi, Maldives, Zimbabwe, Cambodia, Ghana, Thailand, Switzerland, Suriname, and Guyana.

Table 2: Overview of initial reports of selected countries: Information relating to corresponding adjustments

	Chana (Host)	Thailand (Host)	Switzerland (Buyer)	Japan (Buyer)
IR version used (date)	Initial Report, dated 11 September 2023 (Government of Ghana, 2023)	Initial Report, Version 1.0, dated 7 December 2023 (Government of Thailand, 2023)	Initial Report, Version 1.0, dated 17 May 2023 (Government of Switzerland, 2023)	Initial Report, Version 1.0, dated 31 October 2024 (Government of Japan, 2024)
NDC target type	Single-year absolute target: 64 MtCO ₂ e by 2030 (2019 base year)	Single-year relative target: 30–40% reduction from BAU (reference year 2005) by 2030	Expressed as both single-year (–50% by 2030 vs 1990) and multi-year (–35% average, 2021–2030) target	Single-year absolute target: –46% by FY2030 vs FY2013
NDC implementation period	11 September 2021 – 31 December 2030	2021 – 2030	1 January 2021 – 31 December 2030	1 April 2021 – 31 March 2031
National caps/targets for ITMOs	• NDC-level: 64 MtCO₂e total target (24.6 MtCO₂e unconditional / 39.4 MtCO₂e conditional); Article 6 cooperation targets a minimum of 24 MtCO₂e towards the conditional target, plus ~12% of total national emissions from ITMOs outside the NDC scope ◦ 1% national buffer account on all issued ITMOs against overselling, with annual public reporting on buffer use • Project-level (AWD rice): gross baseline 2,639,544 tCO₂e; project emissions 1,374,762 tCO₂e; gross reductions 1,264,781 tCO₂e; net total after 0.89 conservativeness factor = 1,125,655 tCO₂e	• NDC-level: BAU2030 baseline ~555 MtCO₂e; unconditional target ~166.5 MtCO₂e (30%); conditional target up to ~222 MtCO₂e (40%) • Project-level (Bangkok e-bus): hard cap of 500,000 tCO₂e eligible for international transfer; annual schedule from 10,383 tCO₂e (2022) to 73,935 tCO₂e (2030).	• NDC-level: 1990 base year emissions 54,158.92 kt CO₂e; target –50% by 2030 • Project level: ◦ Ghana AWD rice (1,125,655 tCO₂e), ◦ Thailand e-bus (500,000 tCO₂e cap) ◦ Vanuatu solar electrification (97,217 tCO₂e by 2030, annual schedule 658–20,850 tCO₂e)	NDC-level/aggregate: targets ~100 million tCO ₂ e cumulative contribution via JCM by FY2030, against reference level 1,407 MtCO ₂ e (FY2013) and NDC target level 760 MtCO ₂ e (FY2030, i.e. –46%)

Applying corresponding adjustments: Methods and key implications
CMM-WG Discussion Paper

	Ghana (Host)	Thailand (Host)	Switzerland (Buyer)	Japan (Buyer)
	by 2030 (full annual schedule given).			
Authorised uses	Use towards NDCs and/or other international mitigation purposes (OIMP); use case confirmed case-by-case at examination stage	Use towards NDCs and/or other international mitigation purposes (OIMP)	ITMOs largely used for NDC achievement and voluntary compensation of the Swiss administration's own emissions (not counted towards the Swiss NDC for the Ghana/Vanuatu approaches)	Use towards NDC
Registry	National registry: Ghana Carbon Registry (GCR)	National registry: Thailand Carbon Credit Registry	National registry: Swiss Emissions Trading Registry	National registry: JCM Registry for Japan
Corresponding adjustment method	Averaging	Averaging	Multi-year trajectory applied to both single- and multi-year expression	Averaging
Additional information on corresponding adjustments			Describes an '(indicative) multi-year emissions trajectory' benchmarked to the -35% average; states Switzerland 'will update, as necessary'. <i>It implies periodic revision, but no year-by-year mechanics given.</i>	Formula given, codified in a dedicated domestic legal instrument ('Procedures for Corresponding Adjustments regarding the JCM'); point of use (trigger for CA) defined as transfer to the retirement account in Japan's JCM registry

4.3. First Article 6 Technical Expert Reviews

By August 2026, **Article 6 Technical Expert Reviews have been completed for 14 countries**. Of these, **5 were flagged with inconsistencies** (Guyana, Thailand, Vanuatu, Ghana, Switzerland) **or significant inconsistencies** (Rwanda, Sri Lanka, Tunisia, Palau, Malawi, Maldives, Zimbabwe, Cambodia, Mongolia). A few more recent submissions (Peru, Tanzania, Sierra Leone, Gambia, Madagascar, Uzbekistan, Honduras, Japan, Suriname) still have reviews pending. Some Parties, like Madagascar, Thailand, and Japan, have also submitted updated initial reports after their original filing.

Regarding the aspect of corresponding adjustments, the review teams frequently identified the **need for more capacity building specifically for corresponding adjustment methods** for several countries.

To illustrate findings of the technical expert review regarding corresponding adjustments the reports for Ghana, Switzerland and Zimbabwe were analysed for this paper. The review team found some shortcomings on transparency regarding corresponding adjustments (UNFCCC, 2025c, 2025e, 2026b).

For **Ghana**, the review team flagged that Ghana used its mitigation activity crediting period (2022–2030) as the denominator for averaging, rather than the NDC implementation period as required by the international Article 6.2 rules (UNFCCC, 2025d).

During the review, Ghana clarified its approach is consistent with subtracting ITMOs from the national GHG inventory on an averaged basis, and that this aligns with the relevant international rules once the receiving Party applies them at retirement. However, the review team still recommended Ghana to report explicitly how corresponding adjustments apply to each year of the NDC implementation period specifically.

For **Switzerland**, the review team flagged an inconsistency related to insufficient transparency on how Switzerland's emissions trajectory was established. During the review, Switzerland clarified that its single-year target is implemented as a 2021–2030 emissions budget equivalent to the average –35% trajectory (UNFCCC, 2025f).

For **Zimbabwe**, the review team identified no inconsistencies in the method for applying corresponding adjustments as such but flagged transparency gaps regarding the trigger and the timing of corresponding adjustments (UNFCCC, 2026b). Zimbabwe's carbon trading guidelines and regulations provide that a corresponding adjustment is applied to all authorised mitigation outcomes at the request of their owner or at the time of first transfer, whichever comes first; the review team did not find this sufficiently transparent and recommended that Zimbabwe clarify the alignment in its future reporting (UNFCCC, 2026c). A second issue concerns overlapping NDC implementation periods: Zimbabwe reported an implementation period of 2025–2035 for its latest NDC, while its letter of authorisation 00008 authorises ITMO use for both 2021–2030 and 2025–2035. For ITMOs with vintage years 2021–2024 it therefore remained unclear whether corresponding adjustments would be applied to the emissions balance tracking the previous or current NDC. Zimbabwe explained that it had worded the authorisation deliberately to avoid accounting gaps and that it will seek further guidance from the secretariat; the review team nonetheless recommended that the Party report how it will correctly apply these provisions and record the transition between NDC implementation periods (UNFCCC, 2026c).

4.4. First BTRs with corresponding adjustments

The **first BTRs were due by 31 December 2024** with the next round expected by 31 December 2026. The secretariat's **synthesis of the first BTRs indicated that in the last round merely two Parties reported transfers of ITMOs**. Most Parties reported that participation in cooperative approaches was not applicable in this reporting period, while some Parties stated that projects are still at an initial stage of development and indicated that they are planning to report on ITMOs in the next BTR submission (UNFCCC, 2025b, para. 145).

One country that included corresponding adjustments in its reporting is **Zimbabwe**. In the **common tabular format** (CTF) table 4 of the BTR (see figure 3 below), submitted 31 December 2024, Zimbabwe reports for 2021–2024 annual first transfers of ITMOs rising from 3,356 to 394,982 tCO₂e alongside a separate and larger stream of mitigation outcomes authorised for other international mitigation purposes (5,015 to 709,382 tCO₂e per year), no ITMOs used towards its own NDC in any year, and a constant corresponding adjustment of 256,718.4 tCO₂e applied annually under the single-year averaging method, which is *added* to its NDC-covered emissions to produce an annual emissions balance of, for 2022, 39,181.2584 kt CO₂e against unadjusted emissions of 38,924.54 kt CO₂e (Government of Zimbabwe, 2025a).

In its **Annex 4 to its BTR** dated 5 November 2025⁴, Zimbabwe reported its participation responsibilities, authorisation and registry-based tracking arrangements, one cooperative approach (CA0011) with 20,000 vintage-2022 ITMOs authorised for NDC and OIMP use, and corresponding adjustments applied to 12,884 of those ITMOs in May and July 2025 under the averaging method, with a resulting revision to its 2022 emissions balance (Government of Zimbabwe, 2025b).

		2020	2021	2022	2023	2024
Annual anthropogenic emissions by sources and removals by sinks covered by its NDC or, where applicable, from the emission or sink categories as identified by the host Party pursuant to paragraph 10 of annex to decision 2/CMA.3 (para. 23(a), annex to decision 2/CMA.3) (as part of para. 77 (d)(i) of the MPGs)	kt CO ₂ equivalent		51084.61	38924.54	48506.75	53,297.85
Annual quantity of ITMOs first transferred (para. 23(c), annex to decision 2/CMA.3) (para. 77(d)(ii) of the MPGs)	t CO ₂ equivalent		3356	210464	674790	394982
Annual quantity of mitigation outcomes authorized for use for other international mitigation purposes and entities authorized to use such mitigation outcomes, as appropriate (para. 23(d), annex to decision 2/CMA.3) (para. 77(d)(ii) of the MPGs)	t CO ₂ equivalent		5015	262904	709382	500141
Annual quantity of ITMOs used towards achievement of the NDC (para. 23(e), annex to decision 2/CMA.3) (para. 77(d)(ii) of the MPGs)	t CO ₂ equivalent		0	0	0	0
Net annual quantity of ITMOs resulting from paras. 23(c)-(e), annex to decision 2/CMA.3 (para. 23(f), annex to decision 2/CMA.3)	t CO ₂ equivalent		3356	210464	674790	394982
Total quantitative corresponding adjustments used to calculate the emissions balance referred to in para. 23(k)(i), annex to decision 2/CMA.3, in accordance with the Party's method for applying corresponding adjustments consistent with section III B, annex to decision 2/CMA.3 (Application of corresponding adjustments) (para. 23(g), annex to decision 2/CMA.3)	t CO ₂ equivalent		256718.4	256718.4	256718.4	256718.4
The cumulative information in respect of the annual information in para. 23(f), annex to decision 2/CMA.3, as applicable (para. 23(h), annex to decision 2/CMA.3)	t CO ₂ equivalent		313488.4	626976.8	940465.2	1253953.6
For metrics in tonnes of CO ₂ eq. or non-GHG, an annual emissions balance consistent with chapter III.B (Application of corresponding adjustment), annex, decision 2/CMA.3 (para. 23(k)(i), annex to decision 2/CMA.3) (as part of para. 77 (d)(i) of the MPGs)	kt CO ₂ equivalent		51341.3284	39181.2584	48763.4684	53554.5684

Figure 3: Zimbabwe's structured summary: Tracking progress made in implementing and achieving the NDC under Article 4 of the Paris Agreement (Table 4.1.2)

5. Discussion points from the CMM-WG workshop

The Paris rulebook sets out how corresponding adjustments are to be applied, but many open questions remain, including what the choice of method means for environmental integrity and Parties' ITMO transfer or purchase strategies, and how these methods are ap-

⁴ Different submission dates of the respective documents related to the BTR can lead to inconsistencies.

plied in practice. Practical experience of applying corresponding adjustments remains limited, and further international guidance is still pending. However, it is not clear where additional guidance for corresponding adjustments should be included in the Article 6.2 rules (e.g., during the 2028 review of the Article 6.2 guidance) and/or where other options, such as adding good practice examples in the Article 6.2 Reference Manual or providing dedicated capacity building formats for Parties, would be more appropriate.

This is an opportune time for the CMM-WG members to build a shared understanding of the key open questions, technical issues and policy implications relating to corresponding adjustments. This initial list of questions serves as the basis for discussion at a dedicated CMM-WG workshop.

Discussion points

The latest NDC synthesis report (UNFCCC, 2025g) shows that a large majority of Parties⁵ have single-year NDC targets; only a small share has multi-year targets with an established trajectory. This raises the **question of whether the choice between averaging and the multi-year method for applying corresponding adjustments matters** and if yes, why and how, in terms of environmental integrity and the (un)certainty of NDC achievement. Furthermore, it is important that the guidance is based on real cases and experiences. The implications of **NDC diversity** in terms of type, quality, detail and timeframes warrant further attention, especially how to deal with **overlapping NDC periods** and countries' differing **capacities** for inventories and reporting.

Choice of method

Siemons and Schneider (2022) argue that the choice of method does matter, for environmental integrity and for managing uncertainties relating to Parties' NDC achievement and consequent uncertainties for ITMO strategies. As mentioned in chapter 4, early experiences suggest that the averaging approach seems to be the more popular accounting approach. Averaging is typically associated with higher uncertainties for Parties' ITMO strategies, and it can, in some cases, lead to higher global aggregate net emissions compared with multi-year approaches, thus undermining environmental integrity. In principle, this **raises a risk that Parties with single-year targets choose averaging in cases where it requires less effort than multi-year approaches**. Despite ITMO transfers representing only a few per cent of global emissions, workshop participants considered this risk to be significant, given that it influences Article 6's contribution to the Paris goals. This raises the question of whether, for countries that have already chosen averaging, there are **options to apply the method in a way that safeguards environmental integrity and reduces uncertainty for the Party and its partners**.

Multi-year approaches

Siemons and Schneider (2022) suggest that multi-year approaches are more robust than averaging. Since corresponding adjustments are applied against an established trajectory or budget every year, aggregated emissions stay unaffected by ITMO cooperation as long as that trajectory or budget is credible. They further argue that multi-year accounting helps

⁵ A limited sample of 64 Parties' NDC submissions were analysed in the report.

Parties better navigate the uncertainty about transfer and use volumes that persists until the very end of the NDC period.

Given that uncertainty about NDC implementation and achievement is effectively universal, workshop participants suggested that **multi-year accounting should be the default choice** for all Parties **in the longer-term**, supported by sufficient **capacity** building to ensure robust multi-year approaches. More research and guidance are needed on the information and capacity required to implement multi-year trajectories or budgets robustly. Workshop participants noted that, in practice, **applying multi-year approaches can be complex**. For example, even where countries' NDCs are underpinned by multi-year approaches, sectoral trajectories or budgets may not add up at the economy-wide level.

Timing matters

A Party must select its corresponding adjustment method, and describe it, in its Initial Report at the point of first authorisation, well before the NDC period's outcome is known. Most Parties will not know their final emissions balance - and therefore their NDC achievement status - until two years after the NDC period ends, or even later. Workshop participants suggested that the **key factors that influence countries in their choice of method** are capacity limitations – with averaging considered technically simpler to implement than multi-year approaches – and opting for the same approach as their partner countries. This raises the question of whether, in practice, **countries have enough information to make informed and strategic decisions** on the method choice at the time of decision-making (typically at the start of the NDC period). Workshop participants flagged that the **reporting lag** undermines a Party's ability to accurately track whether it remains on course to achieve its NDC, making it difficult to determine the exact amount of ITMOs to transfer/use until after the end of the NDC period.

Paris rulebook gaps

Corresponding adjustments are applied annually throughout the NDC implementation period, yet for a Party with a single-year target, achievement of the NDC is assessed only in the target year. The **Paris rulebook does not specify** how, or indeed whether, the corresponding adjustments applied to the emissions balance in the interim years of the NDC implementation period bear on that assessment. For multi-year approaches, the Paris rulebook does not provide specific guidance. Workshop participants confirmed that countries need further clarity and guidance, especially (but not only) on multi-year approaches. These needs could be addressed through **additional guidance** in the rulebook as part of the **2028 review** as well as good practice guidance, capacity building and examples in the Article 6.2 Reference Manual, based on real-life examples and experiences. This raises the question of **what additional international guidance would be needed** to clarify these issues and, in the absence of further guidance, **how should Parties and reviewers examine progress towards NDC achievement for different target types and methods**, in a robust and consistent manner. Workshop participants stressed the importance of timely **coordination with partner countries**, to avoid inconsistencies in reporting and accounting and support learning-by-doing.

References

Gold Standard (2023) Beyond national commitments: Rwanda's first carbon credit aligned with Paris Agreement Article 6. Available at: <https://www.goldstandard.org/news/beyond-national-commitments-rwanda-first-carbon-credit-aligned-with-paris-article-6> (Accessed: 11 August 2026).

Government of Ghana (2023) Article 6, paragraph 2 initial report (AIR) referred to in chapter IV.A of the annex to decision 2/CMA.3: Promotion of climate-smart agriculture practices for sustainable rice cultivation in Ghana. Dated 11 September 2023. Accra: Ministry of Environment, Science, Technology and Innovation. Available at: https://unfccc.int/sites/default/files/resource/Ghana_s%20Article%206%20Initial%20Report_AWD.pdf (Accessed: 24 August 2026).

Government of Japan (2024) Article 6, paragraph 2 initial report referred to in chapter IV.A (Initial report) of the annex to decision 2/CMA.3. Version 1.0, 31 October 2024. Tokyo: Ministry of the Environment. Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/article-6/article-62/carp/reports> (Accessed: 24 August 2026).

Government of Switzerland (2023) Article 6, paragraph 2 initial report referred to in chapter IV.A (Initial report) of the annex to decision 2/CMA.3. Version 1.0, submitted 17 May 2023. Bern: Federal Office for the Environment (FOEN). Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/article-6/article-62/carp/reports> (Accessed: 24 August 2026).

Government of Thailand (2023) Article 6, paragraph 2 initial report referred to in chapter IV.A (Initial report) of the annex to decision 2/CMA.3. Version 1.0, 7 December 2023. Bangkok: Thailand Greenhouse Gas Management Organization. Available at: https://unfccc.int/sites/default/files/resource/202312071650---Article%206.2%20Initial%20Report_Thailand_V1.0.pdf (Accessed: 24 August 2026).

Government of Zimbabwe (2025a) Zimbabwe. 2024 Biennial Transparency Report (BTR). BTR1. Common tabular format for the tracking of progress made in implementing and achieving nationally determined contributions (CTF-NDC). Submitted 31 December 2024, published 28 November 2025. Harare: Government of Zimbabwe. Available at: <https://unfccc.int/documents/645286> (Accessed: 28 August 2026).

Government of Zimbabwe (2025b) Annex 4 (Information in relation to the Party's participation in cooperative approaches as applicable) to the biennial transparency report referred to in decision 2/CMA.3, annex, chapter IV.C (Regular information), paragraphs 21–22. Version 1.0, 5 November 2025. Harare: Ministry of Environment, Climate and Wildlife / Zimbabwe Carbon Markets Authority. Available at: <https://unfccc.int/sites/default/files/resource/Sixth%20A6%20Regular%20Information%20%E2%80%93%20Annex%204.pdf> (Accessed: 18 August 2026).

Klik Foundation (2023) First ever ITMOs for NDC use. Available at: <https://www.klik.ch/en/news/news-article/first-ever-itmos-for-ndc-use> (Accessed: 11 August 2026).

Schneider, L. et al. (2026) Using International Carbon Credits towards the EU 2040 Climate Target. Policy Brief. Freiburg: Oeko-Institut. Available at: <https://www.oeko.de/en/publications/using-international-carbon-credits-towards-the-eu-2040-climate-target/> (Accessed: 29 June 2026).

Schneider, L. and Moosmann, L. (2026) Using international carbon credits towards the EU 2040 target – Options for the timing of acquiring and using ITMOs towards NDCs or climate finance purposes. Oeko-Institut Working Paper. Freiburg: Oeko-Institut. Available at:

<https://www.oeko.de/fileadmin/oekodoc/WP-Using-international-carbon-credits-towards-the-EU-2040-target.pdf> (Accessed: 31 August 2026).

Siemons, A. and Schneider, L. (2022) 'Averaging or multi-year accounting? Environmental integrity implications for using international carbon markets in the context of single-year targets', *Climate Policy*, 22(2), pp. 208–221. Available at: <https://doi.org/10.1080/14693062.2021.2013154>.

UNDP (2022) Ghana authorizes transfer of mitigation outcomes to Switzerland. Press release, 12 November 2022. Accra: United Nations Development Programme. Available at: <https://www.undp.org/ghana/press-releases/ghana-authorizes-transfer-mitigation-outcomes-switzerland> (Accessed: 24 August 2026).

UNFCCC (2018) Decision 18/CMA.1: Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement. FCCC/PA/CMA/2018/3/Add.2. Bonn: UNFCCC Secretariat.

UNFCCC (2021) Decision 2/CMA.3: Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement. FCCC/PA/CMA/2021/10/Add.1. Bonn: UNFCCC Secretariat.

UNFCCC (2025a) Article 6.2 - Reference manual for the accounting, reporting and review of cooperative approaches. Version 3. Bonn: UNFCCC Secretariat. Available at: <https://unfccc.int/documents/634354>.

UNFCCC (2025b) Synthesis report on the information reported by Parties in their first biennial transparency reports. Bonn: UNFCCC Secretariat.

UNFCCC (2025c) Report on the technical expert review under Article 6, paragraph 2, of the Paris Agreement of the initial report referred to in chapter IV.A (Initial report) of the annex to decision 2/CMA.3 of Ghana. FCCC/A6/IR.TERR.1/2024/GHA. Bonn: UNFCCC Secretariat. Available at: https://unfccc.int/sites/default/files/resource/a6_irterr1_2024_GHAa01.pdf (Accessed: 24 August 2026).

UNFCCC (2025d) Report on the technical expert review under Article 6, paragraph 2, of the Paris Agreement of the initial report referred to in chapter IV.A (Initial report) of the annex to decision 2/CMA.3 of Ghana. Addendum. FCCC/A6/IR.TERR.1/2024/GHA/Add.1, 13 May 2025. Bonn: UNFCCC Secretariat.

UNFCCC (2025e) Report on the technical expert review under Article 6, paragraph 2, of the Paris Agreement of the initial report referred to in chapter IV.A (Initial report) of the annex to decision 2/CMA.3 of Switzerland. FCCC/A6/IR.TERR.1/2024/CHE. Bonn: UNFCCC Secretariat. Available at: <https://unfccc.int/documents/646768> (Accessed: 24 August 2026).

UNFCCC (2025f) Report on the technical expert review under Article 6, paragraph 2, of the Paris Agreement of the initial report referred to in chapter IV.A (Initial report) of the annex to decision 2/CMA.3 of Switzerland. Addendum. FCCC/A6/IR.TERR.1/2024/CHE/Add.1. Bonn: UNFCCC Secretariat. Available at: <https://unfccc.int/documents/646769> (Accessed: 24 August 2026).

UNFCCC (2025g) Nationally determined contributions under the Paris Agreement. Synthesis report by the secretariat. FCCC/PA/CMA/2025/8, 28 October 2025. Bonn: UNFCCC Secretariat. Available at: https://unfccc.int/sites/default/files/resource/cma2025_08.pdf (Accessed: 31 August 2026).

UNFCCC (2026a) Article 6.2 authorizations. Centralized Accounting and Reporting Platform (CARP). Bonn: UNFCCC Secretariat. Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/article-6/article-62/carp> (Accessed: 24 August 2026).

UNFCCC (2026b) Report on the technical expert review under Article 6, paragraph 2, of the Paris Agreement of the initial report referred to in chapter IV.A (Initial report) of the annex to decision 2/CMA.3 of Zimbabwe. FCCC/A6/IRTErr.1/2025/ZWE, 15 June 2026. Bonn: UNFCCC Secretariat. Available at: https://unfccc.int/sites/default/files/resource/irterr2025_ZWE.pdf (Accessed: 25 August 2026).

UNFCCC (2026c) Report on the technical expert review under Article 6, paragraph 2, of the Paris Agreement of the initial report referred to in chapter IV.A (Initial report) of the annex to decision 2/CMA.3 of Zimbabwe. Addendum. FCCC/A6/IRTErr.1/2025/ZWE/Add.1, 15 June 2026. Bonn: UNFCCC Secretariat. Available at: https://unfccc.int/sites/default/files/resource/irterr2025_ZWEa01.pdf (Accessed: 25 August 2026).

UNFCCC (2026d) Article 6.2 initial reports and updated initial reports. Centralized Accounting and Reporting Platform (CARP). Bonn: UNFCCC Secretariat. Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/article-6/article-62/carp/reports#Initial-reports-and-updated-initial-reports> (Accessed: 26 August 2026).



Perspectives Climate Research gGmbH

Hugstetter Str. 7 | 79106 Freiburg | Germany

info@perspectives.cc | www.perspectives.cc