

Article 6

Market Approaches under the Paris Agreement



Benito Müller

with contributions by Túlio Andrade, Martin Hession,
Kelley Kizzier, Jose Miguez

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Author: Benito Müller, Managing Director, Oxford Climate Policy; Convener, International Climate Policy Research, University of Oxford, UK; benito.mueller@philosophy.ox.ac.uk.

Contributors: Túlio Andrade (Brazil), Martin Hession (EC), Kelley Kizzier (Ireland), Jose Miguez (Brazil).

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EXECUTIVE SUMMARY

The role of market mechanisms in the Paris Agreement was far from certain in the lead up to 2015 Paris Conference. The UNFCCC market negotiations (on the New Market Mechanism, the Framework for Various Approaches and Non-Market Approaches) had made little substantive progress after 2011, and essentially reached a stalemate by the 2014 Lima Conference. The lack of momentum reflected the breadth of views on the topic, outstanding concerns by a number of Parties on the environmental integrity of approaches being proposed, differing levels of technical understanding, and an emerging assessment that in the absence of provision for market mechanisms in the Paris Agreement, Parties could engage in international cooperation through markets without UNFCCC oversight.

The array of seemingly irreconcilable positions meant that few Parties expected a consensus to emerge from the 21st Conference of Parties (COP21) to the UNFCCC in Paris. This view coupled with the level of technical detail in the markets discussions discouraged Ministerial engagement and at the outset of COP21, market mechanisms, so central to the rules base of the Kyoto Protocol, did not feature prominently as a political priority.

The aim of this policy brief is to give an account of how Article 6 came into being, and propose some basic options of how it could be operationalised with a view to address some of these seemingly irreconcilable positions.

The genesis of Article 6, as witnessed by the author and contributors, is described in Part I of this policy brief. Section 1.1 describes, in particular, the role of Brazil and the EU in the run up to Paris, and Section 1.2. describes what happened in Paris.

Negotiated outcomes are often only possible if one allows for a degree of vagueness and of “constructive ambiguity”, where the agreed outcome is deliberately left vague and open to contradictory interpretations. However, when it comes to operationalisation, vagueness is not helpful. The objective of the second part of this policy brief is to clarify the basic concepts involved in the Article 6 debate, starting, as it were, from scratch with an analysis of the most fundamental notion: ‘a Party using an Internationally Transferred Mitigation Outcome (ITMO) towards achieving a Nationally Determined Contribution (NDC)’.

This involves looking at the different roles of Parties (Section 2.1) and dissecting pertinent features of NDCs (Section 2.2), leading to two distinct possible interpretations of using ITMOs to achieve NDCs (Section 2.3): under a ‘target-based’ conception, the acquiring Party adds the ITMO amount to the target level of its NDC; under the alternative ‘tally-based’ interpretation, the acquiring Party removes the ITMO amount from the final tally of its NDC.

These concepts are then (Section 2.4) used to analyse two key notions pertaining to the issue of the environmental integrity of ITMO usage: to effect ‘corresponding adjustments’; and to avoid ‘double counting’. The section concludes that the environmental integrity of the regime (target- and tally-wise) can be safeguarded by mandating that originating Parties:

- subtract the ITMO amount from their NDC target level (carry out a ‘corresponding adjustment’) if the acquiring Party has added the amount to its target level; or
- “take on” the amount removed by the acquiring Party by adding it to their final tally (and thus not use the underlying mitigation outcome (MO), so as to avoid ‘double counting’).

With these measures, the two interpretations essentially give rise to basic versions of what in the current negotiations is referred to as ‘target/budget-based accounting’ and ‘emission-based accounting’, respectively. This conceptual analysis of ‘ITMO use’ considers ITMOs at a “macro level”, where they are simply amounts to be added or subtracted within quantitative scopes of NDCs.

The final two sections of this ITMO-usage analysis use fictional examples, set in J. R. Tolkien’s *Middle Earth*, of the issues discussed in the preceding sections (Section 2.5), and compare the terminology used with a recent ‘strawman’ proposal (Section 2.6).

Article 6.4 establishes “a mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development”. Following an emerging trend, it is here referred to as the ‘Sustainable Development Mechanism’ (SDM). While it would be possible to carry out an analysis of MOs generated by specific activities (‘micro MOs’) and their international transfer without reference to the SDM, our analysis focuses on micro MOs generated through SDM activities, which, as such, are referred to as ‘Certified Emission Reductions Units’ (CERUs).

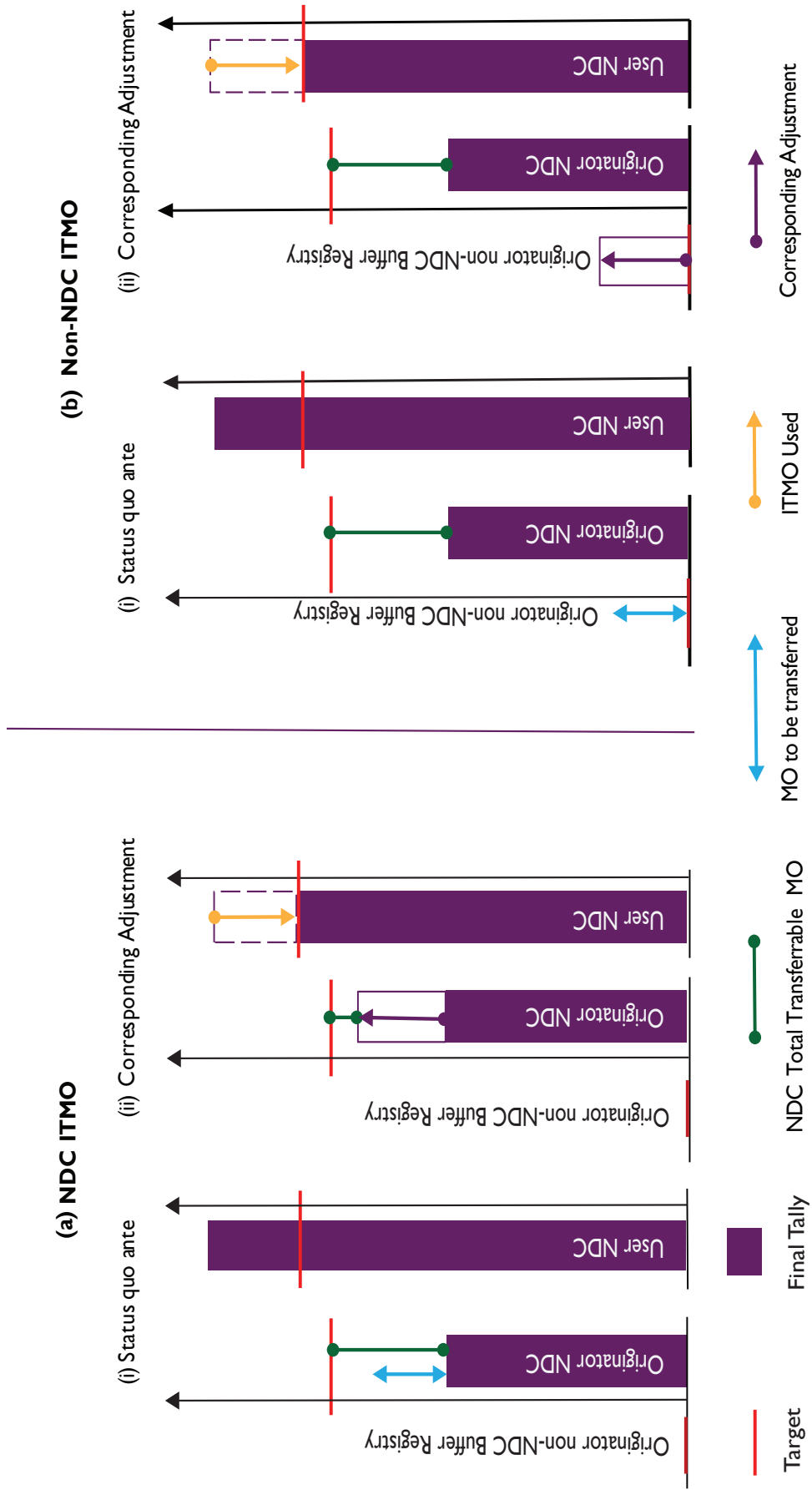
The micro-level analysis begins in Section 2.7 with the introduction of a basic terminology for the SDM, as adapted from the CDM Glossary. Equipped with this basic conceptual toolkit, the focus then turns, in Section 2.8, to the main issue at hand: micro MOs, in the form of SDM CERUs, being internationally transferred and used to achieve NDCs. While this does not mean that CERUs could not also be used for other purposes, for example to offset aviation emissions under the ICAO Carbon Offsetting and Reduction Scheme for International Aviation (CORSA) scheme (as illustrated in Section 2.9), the focus here is on how CERU MOs could be transferred between Parties and used to achieve NDCs.

In order to reflect whether the CERUs in question are generated **inside** or **outside** the scope of the host Party’s NDC, a terminological distinction between ‘iCERUs’ and ‘oCERUs’, is introduced. While the usage of iCERU-ITMOs, and their environmental integrity, can be relatively easily interpreted in the context of macro-level ITMO usage, the situation is not as straightforward for oCERU-based ITMOs. However, a thought experiment involving the introduction of a hypothetical quantitative scope (‘non-NDC’) for the relevant host Party emissions outside its NDC, and a baseline taken to be a mock target, allows for a straightforward macro-level interpretation of the use of oCERU-ITMOs.

The key finding based on this thought experiment is that it is possible to reconcile what, at first sight, appear to be mutually contradictory positions taken by Parties with regard to whether the use of an oCERU-ITMO should or should not be compensated by the host Party with a corresponding adjustment. The reconciliation is based on using a **tally-based interpretation of ITMO use**, as opposed to the target-based variety used in the Kyoto Protocol. This interpretation allows for mandatory corresponding adjustments for all ITMO usage, but not necessarily (in particular for oCERU-ITMOs) of host Party NDC levels. As illustrated in Figure 1 below, this reconciliation can be achieved by:

- introducing mandated corresponding adjustments to the final tally of the originator NDC, for (Article 6.2) macro ITMOs, or micro ITMOs generated within the originator NDC (such as iCERU-ITMOs); and
- introducing a Buffer Registry for corresponding non-NDC adjustments, for micro ITMOs generated outside the originator NDC (such as oCERU-ITMOs).

Figure 1. Compensating Adjustments for ITMOs under a tally-based approach



PART I. THE GENESIS OF ARTICLE 6

The role of market mechanisms in the Paris Agreement was far from certain in the lead up to COP21. The UNFCCC market negotiations (on the New Market Mechanism or NMM, the Framework for Various Approaches or FVAs, and Non-Market Approaches or NMAs) made little substantive progress after 2011 and had essentially reached a stalemate by COP20 in Lima. The lack of momentum reflected the breadth of views on the topic, outstanding concerns by a number of Parties on the environmental integrity of approaches being proposed, differing levels of technical understanding, and an emerging assessment that in the absence of provision in the Paris Agreement, Parties could engage in international cooperation through markets without UNFCCC oversight. The array of seemingly conflicting positions meant that few Parties expected a consensus to emerge. This view coupled with the level of technical detail in the markets discussions discouraged Ministerial engagement and at the outset of COP21, market mechanisms, so central to the rules base of the Kyoto Protocol, did not feature prominently as a political priority.

I.1. Brazil and the EU in the run up to Paris

In submissions and interventions in the run up to Paris, both Brazil and the EU were vocal in defending robust guidance, modalities and procedures to govern the use of market mechanisms under the Paris Agreement.

Brazil, together with many countries from the G77 & China, considered the use of market mechanisms under the Paris Agreement as an opportunity to give continuity to their positive experience with the Clean Development Mechanism (CDM) of the Kyoto Protocol. From the perspective of a host country of CDM project activities, the mechanism enabled additional mitigation results that were accompanied by sustainable development benefits. These countries viewed with concern, however, the environmental integrity risks posed by proposals by a number of Parties solely in favour of multilateral recognition of domestic and regional emissions trading schemes that were not subject to UNFCCC oversight.

The EU, with a purely domestic NDC, had no immediate need for a framework for market mechanisms, but was a major proponent of a robust rules base to ensure the integrity of the NDCs. In the run up to Paris the EU focused on two objectives elaborated in submissions under the Subsidiary Body on Scientific and Technological Advice (SBSTA) and the Working Group on the Durban Platform for Enhanced Action (ADP):

- a clear and undifferentiated route to count the result of international trading towards NDCs; and
- accounting rules, applicable to all Parties, ensuring the avoidance of double counting.

Many developed country Parties, and some developing country Parties, had long sought recognition for bilateral initiatives, while many members of the G77 & China saw this as a threat to the credibility and effectiveness of the international climate change regime. Negotiations, in the ADP and previously in the FVA, stalled because of disagreement as to the adequacy, scope and legal nature of any applicable guidance. Some Parties were against market-based approaches for tackling climate change in their entirety. Others did see them as useful, provided that environmental integrity concerns were fully addressed through multilateral governance and rules.

Brazil, in particular, believed that a bottom-up framework for monitoring, reporting and verification (MRV) would not provide the assurances that the top-down rules-based system of the Kyoto Protocol did in relation to international emissions trading and the multilateral certification of emission reductions under the CDM. Some countries supported non-prescriptive guidance without obligatory accounting rules. Accountability for the use of market mechanisms would be based on transparency only without strict accounting rules governing the counting of results of international trading. Others, and particularly the

United States and Canada, had a significant concern with regard to federal accountability for cross border trading at the sub-national level, for which they had little oversight. The EU, on the other hand, underlined that accounting rules – and in particular the avoidance of double counting – were key and focused asks and an obligatory part of a rules based approach to mitigation. For Brazil, if a robust Kyoto-like top-down accounting system was established, no concerns related to double counting could subsist. Other Parties, notably the Environmental Integrity Group, wanted guidance on cooperative approaches to include standards to ensure the environmental integrity of the approach itself. For the EU, such an approach is overly prescriptive at the point at which the UNFCCC is granted a voice in the design and development of the EU's domestic carbon market.

Initially, Brazil, who also had concerns about sub-national trading, was not open to the possibility of bilateral trading between developed and developing countries via an accounting route, and was prominent in resisting accounting rules applicable to all Parties. Supported by many developing country Parties, Brazil focused most acutely on proposing a centralised mechanism in the Paris Agreement as an update to the CDM. They also proposed a path for use of such reductions by those Parties with absolute economy wide targets. The [Brazilian submission in 2014 on concentric circles](#) called for emissions trading for those with absolute economy-wide targets and a 'CDM plus' for others developing countries.

Brazil and the EU had long been key co-interlocutors in the CDM Executive Board, and in the markets negotiations under the Kyoto Protocol and under the Convention. At the same time, the two Parties represent different interests in these discussions and clashes emerged. As a host country of CDM activities, Brazil represented mainly the perspective of project-developers who face the challenges of engagement on the ground. As a potential buyer of certified emission reductions (CERs) units, the EU represented mainly the perspective of stakeholders who wanted guarantees in relation to credits acquired and of designated operational entities interested in reducing risks related to the verification and certification of additional emission reductions.

Over several years, the EU took an increasingly hard line on CDM reform, demanding among other things an examination of the question of reflecting a host Party contribution to mitigation (own contribution) in the mechanism. Brazil firmly resisted that the mandate to “review the CDM” was turned into a “CDM reform”, which it believed implied perverse incentives, restriction of national prerogatives in relation to sustainable development, and difficulties for new project activities. Differences led to a series of “no-conclusion” results in negotiations on the review of the CDM.

In the markets discussions under the Convention (NMM, FVA, and NMA), the EU and Brazil clashed again. Brazil feared that if market approaches were prematurely established under the UNFCCC but outside the Kyoto Protocol or the Paris Agreement, the bottom-up nature of the Convention's MRV framework would be incapable of providing environmental integrity guarantees similar to those arising from the robust accounting rules under Kyoto. In the Brazilian view, the model of the Kyoto Protocol would be the only to avoid “green washing” in the issuance of tradable units and to prevent one tradable unit from being used twice. The EU pushed for a post-2020 accounting discussion under the FVA while Brazil held that this would pre-empt discussions on accounting under the Paris Agreement. The EU pushed for the elaboration of modalities and procedures for the NMMs while Brazil questioned the urgency for such rules in light of a lack of global demand for a new mechanism.

By COP20 in Lima, the positions of all Parties had hardened in anticipation of the new Agreement. The formal and informal discussions on markets were creating confusion regarding the scope of the rules needed in the agreement. As a result, a proliferation of parallel initiatives emerged offering a fall back should no market provision be agreed. These initiatives had particular appeal for those Parties concerned

with the prescriptiveness of UNFCCC oversight and to those Parties weary or reluctant to entertain the complexities of Kyoto rules for certification and accounting, especially considering that the system would be made more complex by the variety of NDC types and coverage. In the absence of a provision on market mechanisms, Parties would be free to cooperate through markets without having to comply with complex guidance in the UNFCCC. The idea also resonated for those Parties, such as the United States and Canada, concerned about the Federal government being held accountable for sub-national trading for which it had little oversight function.

As Paris approached, against a backdrop of apparently fundamental disagreement, Brazilian and EU officials understood that some agreement was necessary; based on a common understanding that in the absence of an EU-Brazil agreement, given the emerging views of others, the likely result was a free for all on markets. In Paris, Brazilian and EU officials worked to find language to underpin a robust accounting for markets and a centralized certification mechanism to succeed the CDM, while respecting each other's' redlines and those of other Parties.

In negotiating the joint proposal in Paris, the EU and Brazil built upon a heavily bracketed draft text of 3 December 2015 which included two basic provisions supported by the EU and Brazil respectively, on accounting and on a market mechanism and alternative non-market provisions sponsored by Bolivia. What resulted was a game changing proposal on 8 December 2015 including: a clear accounting provision for the use of internationally transferred mitigation outcomes (ITMOs) towards NDCs, secured with acceptable additional protections proposed by Brazil; and, an ambitious proposal on a mechanism based on the Kyoto Protocol Article 12 provisions for the CDM, which was acceptable to the EU because of a nod to own contribution "beyond the NDC" and a provision explicitly banning the use of one same certified emission reduction unit by two Parties. The proposal made plain that broader agreement was possible on markets and quickly became the focus of discussion. Nonetheless, a range of additional interests, tacked on to both market elements by a range of Parties, still needed resolution before agreement on text would be possible.

The joint proposal also did not cover a non-market provision which was ultimately essential to an agreement on Article 6 in order to provide the balance necessary for proponents of non-market approaches. The non-market approach was only agreed in the last hours of COP21 with significant effort by the United States and Bolivia. The final version of Article 6 firmly anchors market mechanisms in the Paris Agreement. Parties now need to address the compromises made, the impact of the other articles and extent, nature and detail of the rule book to be developed.

1.2. Article 6 of the Paris Agreement

Article 6.1 of the Paris Agreement is a general introduction to cooperation in the implementation of NDCs. Though it is not associated with a work programme, it was included to reassure Parties that cooperation is voluntary and is explicitly related to higher ambition, sustainable development and environmental integrity. It also reflects balance between mitigation and adaptation action. It is not operative in the sense that it represents recognition rather than an obligation, yet it frames the other paragraphs in general terms.

(i) Cooperative Approaches through ITMOs

The joint proposal began with what would become the basis for counting the results of emissions trading and crediting from projects or programmes abroad toward NDCs, though the eventual Article 6 language covers a broader set of concerns and benefits. It is undifferentiated and applies to all Parties regardless of NDC type, and specifically mandates additions and subtractions in the form of a "corresponding adjustment".

Joint EU-Brazil Proposal: Many Parties wanted to avoid international licence for use of international trading. The proposal made by the EU and Brazil reflected that operative guidance is focussed on the establishment of robust accounting to ensure the avoidance of double counting. Parties are obliged to apply robust accounting (“*shall apply*”).

Second, as sub-national trading was an issue for several Parties, in order to establish governance with respect to a Party’s ability to account for its NDC, the proposal ensures that the use of this sort of cooperation is voluntary and subject to authorisation by participating Parties.

The restricted application of guidance to the *use of internationally transferred* mitigation outcomes towards NDCs means that the focus of application is on *use*, and on *international* transfer, and only for outcomes used towards the NDC. The guidance does not govern other use or transfer, nor does it relate to domestic transfers.

The proposal also introduced the language on “corresponding adjustment” as a way to implement the avoidance of double counting. In the Agreement, this language is moved to decision 1/CP.21 in relation to internationally transferred mitigation outcomes only. The language in decision 1/CP.21 essentially reflects the need for double entry book keeping (in Kyoto speak - additions and subtractions) to ensure that the transferring Party could not also benefit from an outcome used by another Party. The previous language introduced by the EU referred to an “equivalent adjustment”, but was changed to reflect concerns regarding potential complexities related to the variation in NDC scope and type. The reference to covered emissions and removals here reflects compromise (and potentially constructive ambiguity) related to the impact of the scope of the NDC on the corresponding adjustment. It also clarifies that, though an internationally transferred mitigation outcomes can be defined broadly, the accounting is still based firmly on emissions and removals. It is important to note that in Paris, Brazil and the EU agreed reference to “double counting” to be included only in Article 6.2 regarding the use of ITMOs towards NDCs, and not to the mechanism established under paragraph 4 of Article 6 of the Paris Agreement, which was inspired by the Brazilian proposal for a “CDM plus” mechanism. Instead, language was included as reflected in Article 6.5 which ensures that “*emission reductions resulting from the {Article 6.4} mechanism referred to in paragraph 4 of this Article shall not be used to demonstrate achievement of the host Party’s nationally determined contribution if used by another Party to demonstrate achievement of its nationally determined contribution*” (see below). This was duly reproduced in the final text of the Paris Agreement and of decision 1/CP.21. In addition, negotiations that unfolded after Paris kept three agenda items fully corresponding to previous decision and negotiations in Paris.

Paris Agreement: The language on cooperative approaches in Article 6 is complex as the result of a range of concerns and interests. Many members of the G77 & China expressed strong reservations over the use of ITMOs towards NDCs involving emissions trading schemes that are not subject to multilateral oversight. To address such concerns, the final text of Article 6.2 was introduced with reference to “governance”. On the other hand, to reflect the position of other Parties that the Paris Agreement should not constitute an international license to engage in international trading, non-permissive language is used with regard to cooperative approaches, “where engaging”. The Article also includes additional obligations on Parties relative to the joint proposal which focussed on robust accounting. The Article obliges Parties to promote sustainable development and to ensure environmental integrity and transparency, including in governance.

Parties must *apply* robust accounting to ensure, inter alia, avoidance of double counting. The inclusion of “inter alia” signals the concerns of some Parties that the avoidance of double counting is not necessarily the only obligation related to the application of robust accounting. As many Parties were keen to avoid operative rules in respect of interests beyond accounting, they sought to restrict guidance to accounting. There is argument as to whether or not this is achieved.

(ii) The Mechanism

Joint EU-Brazil Proposal: In addition to introducing multilateral safeguards to the use of ITMOs towards NDCs, the establishment of a CDM-like mechanism under the Paris Agreement was Brazil’s main priority in the negotiations related to markets. The mechanism laid out in the joint proposal essentially represented a successor for the CDM which, along with the other mechanisms of the Kyoto Protocol, is not directly referenced in the agreement. The mechanism under Article 6.4 of the Paris Agreement mainly reflects the Brazilian proposal for a CDM+ mechanism. The basic structure of the drafting comes from that of article 12 of the Kyoto Protocol. It retains from CDM essentially unchanged such concepts as *voluntary participation* authorized by each Party involved; the need for *real, measurable, and long-term benefits* related to the mitigation of climate change; *reductions in emissions that are additional* to any that would otherwise occur; and the *verification and certification of emission reductions*. It also provides for supervision by a body under the authority of the COP, and for a share of the proceeds for administrative expenses and adaptation.

The issue of the application and use of the mechanism by certain Parties was left open in the joint proposal and the text differentiating its applicability was bracketed so that the question was left open for negotiation by all Parties.

The mechanism is supervised by a body under the supervision of the Conference of Parties serving as the meeting of the Parties to the Paris Agreement (CMA), similar to the governance structure of the CDM. The joint proposal also establishes a list of aims.

The role and involvement of public and private entities “authorised by the Party” is potentially strengthened in the joint proposal and Article 6 relative to the CDM. Where the CDM allows their involvement, Article 6 “incentivises and enables” their participation. Moreover, the CDM eligibility criteria originality restricted direct access to the mechanism to State Parties having ratified the Kyoto Protocol. This excluded non-State stakeholders, thus representing a restriction in the demand for CERs. The new mechanism was designed to favour universal engagement by state and non-state actors, providing a potential doorway for stakeholders including from countries outside the Paris Agreement to continue to engage within the multilateral framework, while strengthening the international climate change regime.

Brazil included a provision which it viewed as key to retaining the logic of the CDM in the new Paris mechanism, with the aim to contribute *to the reduction of emission levels in the host Party, which will benefit from mitigation activities resulting in emission reductions that can also be used by another Party to fulfil its nationally determined contribution*. The idea behind this provision, which was exhaustively negotiated among Parties until the very final stages of COP21, is that the host Party will benefit from the positive mitigation impacts resulting from certified emissions reduction activities. From Brazil’s perspective, tradable units from such activities can be used by a third Party towards its own NDC. In this case, contrarily to what occurs under Article 6.2 and to Kyoto’s Joint Implementation mechanism, for example, no corresponding adjustments are

applicable to the host country. But the units themselves can be used towards NDCs only by one single Party. The EU has a different perspective with regard to the application of corresponding adjustment in this regard.

The Brazil-EU joint proposal also makes clear that the aim of the new mechanism includes an incentive to supplement the mitigation of greenhouse gases “beyond the NDC”. This was a crucial step forward in terms of compromise as it bridged the long-standing conflict between the EU and Brazil with regard to the question of own contribution. This text, as proposed, did not survive the broader negotiations and got push back from a broad set of Parties both for lack of clarity (it didn’t go far enough towards explicit net mitigation) and because of its restrictive nature (there was push back by many Parties who did not want the mechanism to be an explicit ratcheting device with regard to scarcity).

One of the key components of the agreement on both the joint proposal and on Article 6 was the explicit ban on the double claiming of emission reductions. Several Parties, including the EU, the Umbrella group, Independent Association of Latin America and the Caribbean (AILAC) and Alliance of Small Island States (AOSIS) were concerned about the potential for double claiming under the Cancun pledges, where both the host Party and acquiring Party could potentially claim the results of project activities. With this formulation the potential for double claiming is clearly proscribed. At the same time the formulation avoids an overt reference to accounting or double counting which could not be supported by Brazil. In the Brazilian view there was no possibility of double counting when using an [International Transaction Log \(ITL\)](#) system like in the Kyoto Protocol because it is not possible to transfer the unit and keep the unit (“you cannot make an omelette without breaking the eggs”). From Brazil’s perspective, the repetition of this idea (like a mantra repeated to exhaustion) led other Parties to start repeating this wrong assumption and this is still cause of confusion in the development of rules, modalities and procedures.

Paris Agreement: The formulation of the mechanism in the joint proposal was heavily negotiated in the days following the proposal. A major difference between the joint proposal and the mechanism in Article 6 is that it is undifferentiated, and there are significant changes to the general objective which no longer relate to the specific needs or interests of a group of Parties. The objectives now focus on shared interests in mitigation and sustainable development, rather than meeting differing interests of one or other groups of Parties.

Second, there are significant changes with respect to key issues, including a more tortured drafting of the provision related to “beyond the NDC”, and inclusion of an extra sub-paragraph with an overt reference to “overall mitigation”.

(iii) Non-Market Approaches

The joint proposal did not include provision for non-market approaches. This was not a priority issue for either the EU or Brazil and did not present the potential for internal trade-offs. Of course, the non-market approaches were ultimately critical in Agreement on Article 6 to reflect the balance between market and non-market approaches which was vital for the Bolivarian Alliance for the Americas (ALBA) and other non-market proponents.

PART II. CONCEPTUAL ANALYSIS

Negotiated outcomes are often only possible if one allows for a degree of vagueness and of “constructive ambiguity”, where the agreed outcome is deliberately left vague and open to contradictory interpretations. It is thus not surprising that the language in Article 6 (see Annex I) is replete with vague terminology – to wit notions such as ‘mitigation outcome’, ‘double counting’, and ‘transfer’. Indeed, the compilation of elements concerning *Internationally Transferred Mitigation Outcomes* (ITMOs) by the Article 6 of the negotiations on Article 6 (hereafter referred to as the ‘ITMO Note’) contains the following list of fundamental terms that could benefit from clarification through a definition:

- ‘Acquiring Party’
- ‘Cooperative approaches’
- ‘Corresponding adjustment’
- ‘Creating/issuing Party’
- ‘Double counting’
- ‘Environmental integrity’
- ‘Internationally transferred mitigation outcome’
- ‘Overall mitigation of global emissions’
- ‘Transferring Party’
- ‘Using Party’

Accordingly, this second part of the Policy Brief considers what these fundamental terms could mean by subjecting them to a conceptual analysis, a technique from the field of analytic philosophy developed for precisely this purpose. The idea is to focus on these basic concepts and to elucidate how they relate to each other while abstracting from features that are not essential in that context. Many issues have been raised in the Article 6 debate – see, for example, the table of content of the ITMO Note (Box 1) – all of which important in their own right, but not all pertinent to this analysis of the basic concepts. However, the elements addressed in sections 8, 9, and 12 (bold headings in Box 1) are key – although they largely duplicate each other.

Having said this, the conceptual analysis carried out here is not based on the elements put forward in the ITMO Note. It starts from scratch, with an analysis of the most fundamental notion in the Article 6 debate: that of ‘*a Party using an ITMO towards achieving an NDC*’.

This involves looking at the different roles of Parties (Section 2.1) and dissecting pertinent features of NDCs (Section 2.2), leading to two distinct possible “macro-level” interpretations of using ITMOs to achieve NDCs (Section 2.3). The concepts thus defined are then (Section 2.4) used to analyse two key notions pertaining to the issue of the environmental integrity of ITMO usage, namely to effect ‘corresponding adjustments’; and to avoid ‘double counting’.

The final two sections of this macro-level analysis provide fictional numerical examples, set in J. R. Tolkien’s *Middle Earth*, of the issues discussed in the preceding sections (Section 2.5), and compare the terminology used with a recent ‘strawman’ proposal (Section 2.6).

The simplified sketch emerging from this analysis is considered to be at “macro level” (see Box 2) because it is based on two interpretations of ITMO-usage defined with reference to macro-level parameters, namely levels of NDC quantified scopes and targets.

BOX I: Table of Contents, ITMO Note

(Emphasis added)

1. Preamble
2. Principles
3. Scope and purpose
4. Scope
5. Purpose
6. **Definitions**
7. Governance
8. **Guidance for a party using ITMOs towards its NDC / guidance for a party transferring in ITMOs**
9. **Guidance for a party creating/issuing ITMOs / guidance for a party transferring out ITMOs**
10. Infrastructure
11. Participation requirements
12. **Accounting**
13. Reporting
14. Review and assurance of consistency with guidance on the creation and use of ITMOs towards NDC
15. Application of share of proceeds for adaptation
16. Overall mitigation of global emissions in context of article 6.2
17. Environmental integrity
18. Social integrity
19. Sustainable development
20. Adaptation ambition
21. Addressing negative social and economic impacts
22. Mitigation co-benefits resulting from parties' adaptation actions and/or economic diversification plans
23. Multilateral governance and rules-based system
24. Guidance for transfers
25. Guidance for participation of other actors
26. Guidance for avoiding use of ITMOs/emission reductions for more than one purpose
27. Avoiding use of emissions reductions resulting from mitigation activities by more than one party
28. Emissions reductions applied to purposes other than towards achievement of NDCs

Article 6.4 establishes “a mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development”. Following an emerging trend, it is here referred to as the ‘Sustainable Development Mechanism’ (SDM). While it would be possible to carry out a conceptual analysis of micro MOs and their international transfer without reference to the SDM, the analysis here focuses on ITMOs based on micro mitigation outcomes generated through SDM activities, and, as such, referred to, without prejudice, as ‘Certified Emission Reductions Units’ (CERUs) in conformity with paragraph 37(e) of Decision 1/CP21 (see Annex I).

The main point in this context is that, regardless of whether MOs are identified at the macro level, or at the micro level by reference to a mitigation activity, if they are to be internationally transferred as ITMOs then their usage towards achieving an NDC is a macro-level activity, as described in Sections 2.1 to 2.5 below.

The micro-level analysis begins in Section 2.7 with the introduction of a basic terminology for the SDM, as adapted from the CDM Glossary. The main analytic work is carried out in Section 2.8, looking at the generation of SDM micro mitigation outcomes (CERUs) as the basis for ITMOs (‘CERU-ITMOs’). The analysis focuses on a controversial issue which has led to seemingly irreconcilable positions: the use of CERUs generated outside of the host Party NDC, and whether there should be corresponding adjustments. The outcome is a proposal of how the positions could be reconciled, provided the usage of such CERU-ITMOs is interpreted not in terms relating to NDC targets/budgets, but in terms of quantity/emission levels.

Section 9, the final section of the micro-level analysis, returns to Middle Earth to provide some fictional numerical examples of CERU-ITMO usage, and also to illustrate how the “buffer registry approach” referred to in the ITMO Note could be applied in this context.

BOX 2: The ‘Macro’/‘Micro’ Distinction

The ‘macro’/‘micro’ distinction used here is borrowed from economics, insofar as the latter relates to activities and the latter to parameters that emerge from collective outcome of these activities.

Macro-level concepts here are essentially those pertaining to the ‘quantitative scope’ of NDCs with regard to ITMO usage in achieving them, such as ‘target level’ and the final level (‘tally’) used to determine whether the target has been achieved or not. This final tally is determined by (‘micro-level’) activities in ways that are not always directly attributable.

Take the case of an NDC with an absolute cap on the country’s emissions over a given time period. While the final emission outcome (tally) as determined by emission activities is simply the sum of emissions by the relevant sources over that period, the situation gets trickier if one looks at the final tally as the result of mitigation activities.

If the final tally is below the relevant target level, then it determines a ‘macro’ mitigation outcome – given by the difference between the two levels – that could in principle be internationally transferred. But it can be very difficult to attribute this macro outcome to different mitigation activities and their (micro) mitigation outcomes. Differences between a macro assessment and a sum of micro, activity-based assessments could, in particular, be due to tiny reactions of many dispersed actors on mitigation policies that are not captured by activity-related assessments, and by shifts between economic sectors leading to the growth or contraction of specific sectors, which is not reflected in specific activities.

The **International Emission Trading** mechanism of the Kyoto Protocol is a real-world example of a macro-level scheme (by no means the only one). The Kyoto Protocol also provides some very useful examples of how such a macro-level scheme can relate to ‘micro-level’ schemes involving activity-based generation of mitigation outcomes, through the **Joint Implementation (JI)** mechanism and the **Clean Development Mechanism (CDM)**.

The micro-macro distinction used in this analysis is therefore about whether the parameter in question is identified through a particular activity, or with reference solely to the quantified NDC. The distinction is not about scale: the quantitative scope of an NDC could be quite small in scale, say covering only a particular source, while a micro-level activity could be the implementation of an economy-wide policy.

THE MACRO LEVEL

2.1. Party Roles in ITMO Transfers and Usage

According to the first three paragraphs of Article 6, ITMOs are transferred between Parties to the Paris Agreement. The Parties involved have been characterized in a number of different ways. Parties transferring ITMOs out of their jurisdiction have been called ‘host Parties’, ‘generating Parties’, ‘originating Parties’, or ‘transferring Parties’, while those receiving them have been referred to as ‘acquiring Parties’, or ‘using Parties’.

The term ‘host Party’ is borrowed from the CDM, where ‘host’ is used primarily in the context of entities executing a project (‘project host’). As such, it is close in its connotations to ‘generating Party’ in the sense that the mitigation outcomes being transferred were produced/generated in some fashion. Indeed, some have argued that being mitigation outcomes, ITMOs must be “retrospective” reflecting “emission reductions achieved, rather than allowances to emit”. Not everyone is of that opinion, however. Hence ‘**transferring Party**’, as used in the ITMO Note, is more appropriate as a general term, as it is also ambivalent with regard to whether the mitigation outcome being transferred originates in the transferring Party or not.

The ITMO Note refers to Parties in which the transferred mitigation outcome originates as ‘creating/issuing Parties’, arguably covering the two different types, i.e. micro outcomes that are generated, and macro outcomes that are issued. For the purposes of this analysis, the term ‘**originating Party**’ (or ‘**originator**’ for short) is used to cover both.

As to the transfer recipients, the ITMO Note uses ‘**acquiring Party**’ to refer to recipients in general, and ‘**using Party**’ to recipients that are using the ITMO to achieve their NDC. For the purposes of this analysis, ‘**recipient**’ and ‘**user**’ will be used as short forms.

2.2. Pertinent features of Nationally Determined Contributions

(i) ‘NDC Quantifications’

The defining feature of ITMOs is that they can be used by an acquiring Party towards achieving its NDC. In that context, NDCs have been associated with a “scope” (identifying what the NDC “covers”), and “quantifications” (either of the NDC as a whole, or of components thereof). The latter lies at the heart of what ‘using an ITMO towards achieving an NDC’ amounts to, and the following definitions are to apply for the purposes of this analysis:

- A ‘**quantification**’, in this context, is given by the specification of:
 - (a) a ‘**quantitative scope**’, that is a measurable, extensive (see Box 3) quantity variable associated with the NDC, together with
 - (b) a ‘**target level**’, that is the level of this quantity variable that needs to be reached for the NDC **to be achieved**.

BOX 3: Extensive Quantities

Extensive properties are properties that are additive with respect to aggregation, in the sense that if X and Y are, say, countries and $X \oplus Y$ is the aggregate of the two, then q is an extensive property of countries if $q(X \oplus Y) = q(X) + q(Y)$.

Examples:

(a) Let $e(X)$ = emissions of X over a set time period, i.e. total emissions emanating from the sovereign territory of X over the time period in question. Then we have: $e(X \oplus Y) = e(X) + e(Y)$.

Hence $e(X)$ is an extensive property of (territorially disjoint) countries, and so is $g(X)$ = GDP of X during a specified time period.

(b) Let $p(X)$ = population of X, and $epc(X) = e(X)/p(X)$ ['emissions per capita of X'].

$epc(X \oplus Y) = [e(X \oplus Y)]/[p(X \oplus Y)] = [e(X) + e(Y)]/[p(X) + p(Y)]$, which is only the same as $epc(X) + epc(Y)$ if both $e(X) = e(Y) = 0$.

So emissions per capita, and for that matter emissions intensities (emissions per unit of GDP), are not extensive quantities. This matters, because the standard notion of aggregating quantities in this context presupposes we are dealing with extensive quantities (e.g. 'corresponding adjustments' of intensive quantities do not preserve environmental integrity).

(ii) 'Achieving a Quantified NDC'

To discuss what it means for a quantified NDC 'to be achieved', we need to introduce a concept for the actual (measured) level of the respective quantity that determines, by its relative position to the associated target level, whether or not the NDC has been achieved, with respect to the quantitative scope in question. We propose to call this the '**final tally**' of the quantitative scope in question.

(iii) Simplifying Assumptions

While it is, in principle, possible that achieving a quantified NDC requires more than just reaching the relevant target level(s), for the sake of simplicity, it is assumed that:

[A.1] We are dealing with NDCs which have **only one quantitative scope**, referring to **emissions measured in units of CO₂e**; and that

[A.2] The NDCs final tally reaching its target level, is both a necessary and a sufficient condition for NDC achievement.

Furthermore, while there can be instances where achieving an NDC means going below the target level, to simplify matters we shall assume that:

[A.3] Achieving a quantified NDC is associated with a final tally of the quantitative scope that is less than or equal to the target level.

2.3. 'Using ITMOs towards achieving an NDC'

With the tool kit of definitions and simplifying assumption of the preceding section, we are now in a position to analyse the defining feature of ITMOs, namely their use in achieving NDCs.

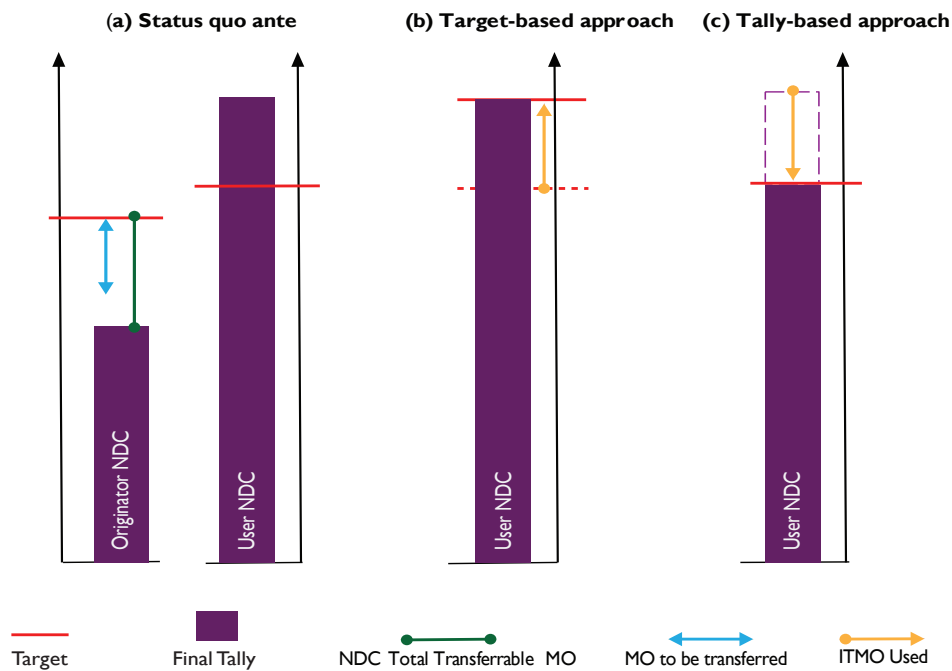
While it may, in principle, be possible to think of ways in which an ITMO could be used towards achieving a non-quantified NDC, we believe that for the purposes of Article 6, ITMOs should only be used to achieve an NDC with a commensurate quantified component. Given this, two interpretations (or conceptions) of '**using an ITMO towards achieving an NDC**' suggest themselves, namely:

- as changing the relevant target level by adding the ITMO amount to it; or
- as changing the relevant final tally by subtracting the ITMO amount from it.

Let us refer to these as the ‘**target-based**’ and the ‘**tally-based**’ interpretation/conception respectively (see Figure 2). It is important to highlight that these are ‘**macro-level**’ interpretations, treating ITMOs purely as amounts of the relevant quantitative scopes, without any micro-level attributes regarding, for example, how the outcome in question was brought about or generated.

Figure 2 illustrates the two approaches with reference to the ‘*status quo ante*’– that is, the situation before the transfer from the originating Party (‘Originator’) to the acquiring and using Party (‘User’).

Figure 2. The target- and tally-based approaches to ITMO usage



2.4. Safeguarding Environmental Integrity

(i) Environmental Integrity’

In the context of an activity, ‘environmental integrity’, roughly speaking, refers to whether the activity compromises the environmental situation in question. Concerning ITMO transfer/usage, at least three types of environmental integrity can be discerned, which can be referred to as ‘**target integrity**’, ‘**tally integrity**’, and ‘**global integrity**’.

The first two pertain to the environmental integrity of the regime which – given our simplifying assumptions (Section 2.2.iii) – can be defined as follows:

- An ITMO transfer/use ‘**infringes the target integrity of the regime**’ if it leads to a greater sum total of target levels of the regime’s NDCs than what would have been the case without it.
- An ITMO transfer/use ‘**infringes the tally integrity of the regime**’ if it leads to a greater sum

total of final tallies of the regime's NDCs than without it.

Global environmental integrity refers to whether, *ceteris paribus*, the global environmental situation – usually **global aggregate GHG emissions during a specified period** – would be the same with or without the ITMO transfer/usage.

(ii) 'Corresponding Adjustments' & Target Integrity

If an acquiring Party follows the target-based interpretation of using an ITMO by adding the ITMO amount to the target level of its NDC, then by definition the target integrity of the regime will be compromised if there is no 'corresponding adjustment' (in the opposite direction) of some other target level under the regime. The obvious candidate for making such a corresponding adjustment in its target level is, of course, the ITMO's originating Party (see Figure 3.b). In short, a compulsory corresponding adjustment of the originator's target level assures the target integrity of the regime.

The best-known example of such compulsory corresponding adjustments to target levels is the transfer of 'assigned amount units' under the International Emission Trading scheme of the Kyoto Protocol.

(iii) 'Double Counting' & Tally Integrity

As mentioned already, a key issue in the Article 6 environmental integrity debate is that of 'double counting'. Roughly speaking, we take this in the present context to refer to the usage of an ITMO by an acquiring Party and the usage of the corresponding Mitigation Outcome (MO) by the originating Party. The notion of 'using an ITMO' has been explicated above (Section 2.3), but what exactly does it mean for an originator to 'use an MO in achieving its NDC'?

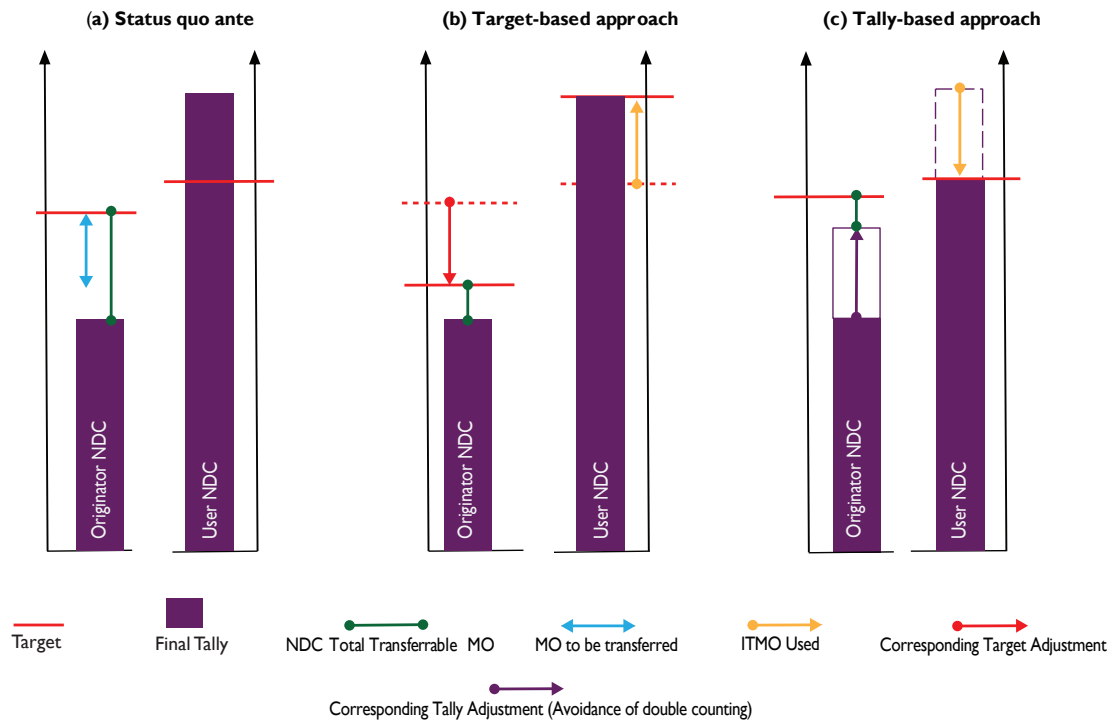
In a first instance, as in the case of using ITMOs, let us assume the use of MOs is, in this context, restricted to quantified NDCs. Second, mirroring our macro-level explication of an acquiring Party using an ITMO (Section 2.3), the aim here is to give a macro-level interpretation of what it could mean for an originator 'to use the MO corresponding to the transferred ITMO'. In short, the MO is conceived as an amount of the originator's quantitative NDC scope, indeed the *same* amount as that of the ITMO.

Given this, the straightforward (macro-level) interpretation of (an originating Party) '**using an MO towards achieving its NDC**' seems to be tally-based, namely that the MO has (or will have) lowered the relevant final tally by its amount. Not using the MO, accordingly, means that without it, the final tally would have to be MO-units higher.

Now, if an acquiring Party uses an ITMO by reducing its final tally and the emissions thus removed are not "reallocated" to the tally of another NDC, then the transfer by definition infringes the regime's tally integrity. One way of safeguarding the tally integrity of the regime under the transfer is therefore to require the ITMO amount be added to the final tally of the originating Party (see Figure 3.c). Given the above definition of what it means to 'use an MO towards achieving an NDC', this is tantamount to requiring that there be no double counting.

One way in which such compulsory avoidance of double counting could be operationalised – under the tally-based conception of (IT)MO usage – is by mandating a transfer of ownership of the emissions removed from the user's final tally to that of the originator.

Figure 3. Compensating Adjustments for NDC ITMOs



(iv) ‘Hot Air’ & Maximum MOs

What is the maximum MO that an originating Party would or should be able to transfer internationally? In good faith, Parties should only transfer MOs that they can afford to transfer. That is, if their final tally is below their target level, they transfer no more than the difference between the two. However, there are good reasons why one may wish to add some further restrictions on what can maximally be transferred internationally: not every unit of the difference between the target level and the final tally may be a genuine “mitigation outcome”, as some may be regarded as “hot air”, due, for instance, to the choice of an unambitious target level.

To discuss this, however, we need to introduce a hypothetical concept referring to the level the final tally would have been at had there been no (qualifying) mitigation with respect to the quantitative scope of the NDC in question. Let’s call this the ‘**NDC Baseline Level**’.

The maximum MO that a Party could claim – say the ‘**Total Mitigation Outcome**’ (TMO) – is then given by the difference between the baseline level and the final tally (assuming the latter is lower than the former, otherwise there is nothing to be transferred).

The TMO is the maximum amount a Party is allowed to claim as MO, and as such it depends on the definition of the NDC baseline level; this could, for example, exclude mitigation from qualifying if it is not additional to business-as-usual. However, in order to safeguard ambition, one could restrict the maximum MO eligible for transfer even further, by restricting transfer to MOs to only those that go beyond the target level, with target levels that go beyond the baseline (no ‘hot air’).

The ‘**Total Transferrable Mitigation Outcome**’ (TTMO) would then be the difference between the target and the final tally (assuming that the latter is lower than the former, otherwise there is nothing to be transferred).

2.5.A Visit to Middle Earth



To give some simple examples that avoid irrelevant complexities of what Article 6.2 ITMOs could look like in light of our analysis, let us visit the fictional world of Middle Earth created in Oxford by Professor J.R.R. Tolkien as the stage for *The Hobbit* and *Lord of the Rings*. More precisely, let us consider what, given our analysis, an Article 6.2 transfer of a 10-unit Mitigation Outcome (MO) from the Kingdom of Rohan to the Kingdom of Gondor might involve.

The Status Quo Ante, that is the situation before the transfer and usage of the 10 ITMOs, is described in Table 1.a. As both kingdoms have a target below their baseline, final tally levels below the targets thus reflect genuine mitigation outcomes.

Rohan’s final tally is 10 units below its target, while Gondor has overshot its target by the same amount, and thus will not be able to achieve its NDC without acquiring 10 ITMOs to cover the gap. Neither Kingdom has transferred or acquired ITMOs at that point in time, as reflected in the relevant ‘ITMO registry entries’.

At the time of transfer, the ITMO registry of Rohan is debited with 10 units and that of Gondor credited with the same amount, thus leaving them with -10 and $+10$ units respectively. As discussed above, Gondor has the choice of using the credited ITMOs in two different ways:

- changing its target level by adding 10 units, (‘target-based use’, Table 1.b) or
- changing its final tally by subtracting them (‘tally-based use’, Table 1.c).

In either case, the change has the effect of Gondor achieving its NDC, and Gondor’s 10 credits are cancelled from the ITMO registry (indicated by the bracket notation). However, in order to safeguard the environmental integrity (or rather integrities) of the regime, Rohan is meant to undertake some compensatory changes in the respective levels (i.e. target or final tally) of its own NDC, as illustrated in Tables 1.b and 1.c, respectively, which in turn leads to the cancellation of Rohan’s 10-unit debit in the ITMO registry.

| Table 1: ITMOs transferred from Rohan and used by Gondor | | | | |
|---|----------------------|--------|-------------|---------------|
| a. Status Quo Ante | | | | |
| | NDC Quantified Scope | | | ITMO Registry |
| | Baseline | Target | Final Tally | |
| Rohan | 50 | 40 | 30 | 0 |
| Gondor | 100 | 80 | 90 | 0 |
| Aggregate | 150 | 120 | 120 | 0 |
| b. Target-based interpretation of 'ITMO use' with corresponding target adjustment | | | | |
| | NDC Quantified Scope | | | ITMO Registry |
| | Baseline | Target | Final Tally | |
| Rohan | 50 | 30 | 30 | (-10) |
| Gondor | 100 | 90 | 90 | (+10) |
| Aggregate | 150 | 120 | 120 | 0 |
| c. Tally-based interpretation with corresponding tally adjustment | | | | |
| | NDC Quantified Scope | | | ITMO Registry |
| | Baseline | Target | Final Tally | |
| Rohan | 50 | 40 | 40 | (-10) |
| Gondor | 100 | 80 | 80 | (+10) |
| Aggregate | 150 | 120 | 120 | 0 |
| d. Tally-based interpretation with corresponding target adjustment | | | | |
| | NDC Quantified Scope | | | ITMO Registry |
| | Baseline | Target | Final Tally | |
| Rohan | 50 | 30 | 30 | (-10) |
| Gondor | 100 | 80 | 80 | (+10) |
| Aggregate | 150 | 110 | 110 | 0 |
| e. Target-based interpretation with corresponding tally adjustment | | | | |
| | NDC Quantified Scope | | | ITMO Registry |
| | Baseline | Target | Final Tally | |
| Rohan | 50 | 40 | 40 | (-10) |
| Gondor | 100 | 90 | 90 | (+10) |
| Aggregate | 150 | 130 | 130 | 0 |

Importantly, a target- (tally-) based use by the acquiring Party (Gondor) has to go hand-in-hand with a target- (tally-) based compensating change by the originating Party (Rohan). Mixing the two will either lead to an infringement of the target integrity (Table 1.e) or an apparent improvement of aggregate ambition due to leakage (of the emissions subtracted from Gondor's final tally) as illustrated in Table 1.d.

While it is not impossible to ensure such coordinated compensating changes by the originating Party, in practice it would probably be better just to mandate the use of one of the two interpretations. In keeping with the strong preference of some (groups of) real-world Parties (see a.4 in Annex II), for ITMOs to reflect "emission reductions achieved, rather than allowances to emit" [AOSIS Round Table Presentation], the Middle Earth regime might well opt for the tally-based interpretation. Note in this context also, that the figures highlighted in yellow in Table 1.c would presumably correspond to what some real-world Parties refer to as an "ITMO accounting table" listing "ITMO-adjusted emissions" (see d.7 in Annex II).

This concludes the macro-level analysis of ITMOs, but it is not where the Article 6 story ends. That story

also includes micro elements, and in particular micro mitigation outcomes generated under the Article 6.4 Sustainable Development Mechanism, which is the topic of the second part of this conceptual analysis.

2.6.A Visit to Oz

In February 2018, Andrei Marcu and Peter Zaman published a '*Straw man' guidance on cooperative approaches referred to in Article 6, paragraph 2 of the Paris Agreement* (hereafter referred to as 'Strawman'), intended "to provide a useful background to discuss the structure, components and options for an Article 6.2 negotiating text".

Given that one of the main aims of the Strawman is "to make sense of the relationship between Corresponding Adjustment (CA) and NDC Accounting" it may be useful to compare our conceptual analysis with that of the Strawman. For one, the Strawman identifies four types of Parties:

Acquiring Party: A Party that is participating in a Cooperative Approach, who receives by way of transfer-in an ITMO from another participating Party, and who may or may not also be the Using Party.

Using Party: A Party that is participating in a Cooperative Approach who has received the ITMO, accounted for the receipt in accordance with Article 6.2 accounting guidance, and applied it towards its NDC.

Issuing Party: A Party that is participating in a Cooperative Approach, in whose jurisdiction the mitigation action or avoidance of GHG [etc.] has occurred.

Transferring Party: A Party that is participating in a Cooperative Approach and transfers out an ITMO to an Acquiring Party, for potential use towards its NDC. For the avoidance of doubt with respect to the very first international transfer of an ITMO, the Issuing Party is also the first Transferring Party.

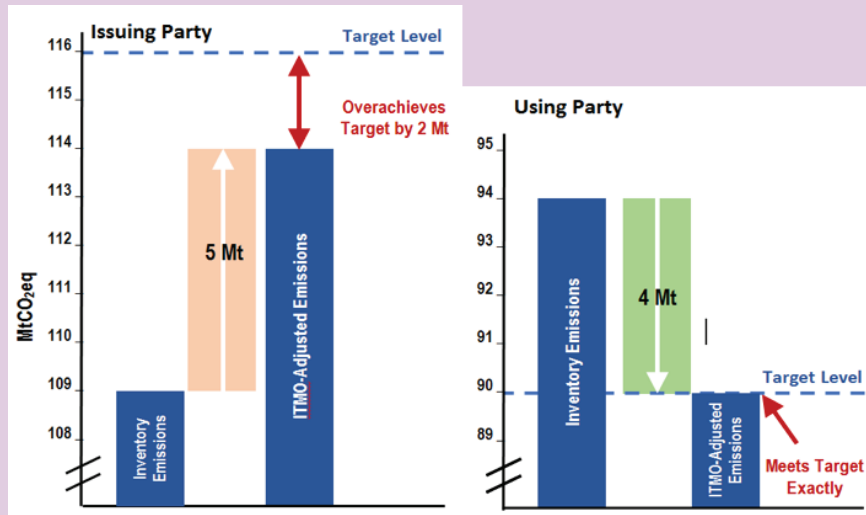
This is clearly compatible with the analysis of Party roles carried out in Section 2.1, except that we have chosen the term 'originating Party' instead of 'issuing Party' because of our distinction between macro outcomes being 'issued' and micro outcomes being 'generated'.

As a basis for the discussion of corresponding adjustments, the Strawman introduces the following approaches:

- **A Target [NDC] based approach:** Applying corresponding adjustments to an NDC amount [expressed in the form of a budget that corresponds to the GHG emission level of the NDC][of the Transferring Issuing Party (or possibly to any budgets in non-GHG metrics) and the Acquiring Issuing Party], resulting in an NDC Adjusted Number (NDC(AN)) (i.e. where $NDC(AN) = NDC \pm$ number of ITMOs) [to the emissions budget].
- **An Emissions [Inventory] based approach:** Applying corresponding adjustments to the total net GHG emissions level as reported [by the Transferring Issuing Party] through its GHG inventory [(or any non- GHG indicators used to track progress towards NDCs) and the Acquiring Using Party], resulting in an Inventory Adjusted Number (I(AN)) (i.e. where $I(AN) =$ Inventory \pm number of ITMOs) through a (+/-) to the reported GHG emissions level.
- **Buffer account approach:** Addition or subtraction of ITMO transfers and acquisitions from an established balance [separate from emissions inventory or NDC], with a starting balance of zero.

Again, these approaches are essentially the same as the ones described above, with one important exception. The inventory-based approach of the Strawman – as elaborated through an example reproduced in Box 4 – refers to NDC emission inventories (the final tally of the quantitative scope of the NDCs in question).

BOX 4: Visualisation of accounting using an inventory-based approach



The accounting on an emissions-based approach is shown in the Figure above. For the Using Party, there is a subtraction, and for the Issuing Party there is an addition. For the Using Party, of the 5Mt purchased, only 4Mt is required to cover the gap between inventory emissions and the target level, so the Using Party can transfer 1 ITMO and meet its target exactly. The Issuing Party's inventory emissions (e.g. of 109Mt CO₂-eq) are 7Mt lower than its target of e.g. 116Mt CO₂-eq, so even after selling 5Mt to the Using Party it still over-achieves its target by 2Mt.

Source: Strawman, pp. 6f.

However, the tally-based interpretation of ITMO usage, and of avoiding double counting described in Sections 2.3-4 of this analysis are not tied to NDC inventories. They can be applied to non-NDC scopes, as in the case of micro MOs generated outside NDCs (as discussed in Sections 2.8-9).

THE MICRO LEVEL

The focus of our analysis now turns to micro MOs, i.e. MOs not derived from a difference in macro-level parameters (NDC tallies and targets) but generated by a specific activity. While particular attention will be given to micro-generation of MOs through activities under the mechanism created under Article 6.4 (the Sustainable Development Mechanism), the main focus of the analysis remains on how such micro MOs fit into the Article 6.2 ITMO architecture. The issue here is not so much the specifics of the SDM (for more on that see the relevant co-chairs text), but how its “products” could fit into the Article 6.2 architecture. It is important to highlight in this context that while macro MOs are by definition part of the originator’s NDC scope, micro MO, such as those generated by the SDM, can also be outside it.

2.7. The SDM: Basic Terminology

The relevant language adopted in Paris, in particular in §37, suggests that the basic terminology used to describe the workings of the CDM might be a good starting point to develop a basic conceptual scheme for the SDM. For this reason, we base the following exposition of how the SDM could work on the **CDM Glossary** compiled by the UNFCCC Secretariat. There may be a need to develop this terminology further, beyond what was envisaged for the CDM, but for the present illustrative purposes, the following will have to do.

(i) Procedural Terms: ‘Activity’, ‘Verification’, ‘Certification’, etc.

A core notion, subsuming a variety of CDM concepts (such as ‘project activity’, ‘programme of activities’, ‘small scale project’), is that of an ‘SDM **activity**’, which for the present purposes we assume to be “*an operation or action that aims to reduce emissions*” – thus, for simplicity’s sake, leaving out other mitigation activities such as emission removals from sinks – where by ‘**emissions**’ we mean “*greenhouse gas emissions from sources*”. However, as mentioned above (Box 2), it is also important to keep in mind that the activities associated with micro MOs could be large-scale, such as the implementation of an economy-wide policy.

Following in the footsteps of the CDM architecture, there are a number of different actors involved in generating MOs through such activities under the SDM (as conceived here). For one, Article 6.4 stipulates that the CMA shall designate a supervisory body for the mechanism, say the ‘**SDM Board**’. Then there are **host Parties** of activities: Parties “*on whose territory an activity is physically located*”. Each host Party has a **Designated National Authority** (DNA) which has to approve activities on behalf of the host Party in order for them to become SDM activities. Moreover, “*a Party involved, or a private and/or public entity authorized by the DNA of a Party involved, that participates in an activity*” is called an ‘**activity participant**’ who, as such, will own a share of the mitigation outcome generated by the activity.

Last, but not least, there are also **Designated Operational Entities** (DOEs) which are “*designated by the CMA, based on a recommendation by the SDM Board, as qualified to validate proposed activities, as well as verify and certify reported emission reductions*” (as referred to in §37.e), which brings us to the administrative procedures involved in generating SDM activity-based MOs.

In a first instance, activities have to be **registered** (accepted by the Board or validated by a DOE) as an SDM activity. The next step is the **verification** of the MO – namely “*the periodic independent evaluation and ex post determination by a DOE of monitored emission reductions that have occurred as a result of the registered activity*”. This is followed by the **certification** of the outcome (“*The written assurance by a DOE that, during a specified time period, the activity achieved the emission reductions, as verified.*”) and the **issuance** in the course of the ‘**crediting period**’ of a specified quantity of **Certified Emission Reductions** (CERUs) to be used under the SDM.

(ii) Operational Terms: ‘Activity Scope’, ‘Baseline’, ‘Additionality’, etc.

The issuing of CERUs thus lies at the end of the SDM activity cycle, but what is involved substantively in generating the underlying mitigation outcomes? Following the CDM model, the key concepts in this micro (activity focused) discourse are ‘scope’, ‘baseline’, and ‘additionality’.

The **‘scope of an activity’** is “*the physical delineation and/or geographical area of the activity and the specification of GHGs and sources under the control of the [activity] participants that are significant and reasonably attributable to the activity, in accordance with the applied methodologies and, where applicable, the applied standardized baselines*”.

According to the CDM Glossary, baseline emissions are the “*emissions that would occur in the baseline scenario*”, where the latter refers to the “*scenario for the activity that reasonably represents the emissions that would occur in the absence of the activity*”. However, as there are methods other than scenario-based ones to determine such baseline emissions for an activity, we shall for the present purposes use the term **‘baseline emissions’** of an activity simply to refer to the level that would have been reached by the scope of the activity in the absence of the activity. Note, however, that ‘activity scopes’ have to be quantified. Indeed, for the present purposes, they are assumed to be measured in CO₂-equivalent terms.

We shall use the term **‘final tally’** of the activity scope to refer to the level which, if below the activity’s baseline emission level, determines the activity’s **‘(micro) mitigation outcome’** defined as the difference between baseline and final tally level.

The CDM Glossary interprets ‘additionality’ as “*the effect of the activity to reduce emissions below the level that would have occurred in the absence of the activity*”.

So, any micro mitigation outcome will, by definition, satisfy the CDM Glossary conception of ‘additionality’, but there is more to that term (as used in the context of the CDM) than that. The point is that even if the activity generates a micro mitigation outcome in this sense, it may still fall foul of some systemic SDM additionality criteria. For example, the technology used in generating it may not be admissible (for instance if it is judged to have become the industry standard) or the specific type of greenhouse gas involved may not be eligible (for instance, because they are covered by government activities). In short, it may well be the case that only a part (or no part) of a micro mitigation outcome is eligible certification under the SDM. Certified SDM MOs, as reflected in the issuance of CERU in the context of the activity in question, can thus be considerably less than what one might associate with the activity in the absence of these systemic certification constraints.

2.8. CERU-based ITMOs

(i) iCERUs versus oCERUs

Eligible activity-generated micro MOs are meant to be usable by Parties (other than the host Party) to fulfil their NDCs, according to Article 6.4.c. As concerns the user, MOs transferred in the form of CERUs are essentially the same as any other ITMOs, to be used as described in the preceding chapter – that is to say, either by subtracting the respective amount of emissions from the user’s final NDC tally, or by adding it to the user’s NDC target level.

The situation on the host Party side is somewhat more complicated. Unlike in the case of ITMO transfers discussed earlier, where MOs (eligible for transfer) were by definition part of the quantified NDC scope of

the originating Party, MOs generated under the SDM can be **outside the host Party NDC**. The scope of an activity generating CERUs under the SDM need, in principle, not be fully part of the host Party’s quantified NDC scope. In practice, it might not always be easy to ascertain whether, or in what proportion, an activity-based MO is generated under the host Party NDC. Yet it should not be beyond human ingenuity to develop certification methodologies for this. For the present purposes, it is thus assumed that:

[A.4] each CERU is issued with a **provenance**, identifying not only its host Party, but also whether it was generated inside or outside the host Party’s NDC.

If a distinction is necessary, ‘**oCERU**’ or ‘**iCERU**’ will be used for the present purposes to refer to **CERUs generated outside or inside the host Party NDC** (otherwise we will continue to use just ‘CERU’)

(ii) iCERU Generation: Micro Baselines versus Macro Baselines & Targets

As in economics, “macro phenomena” in the present context generally do not come about in the absence of (micro) activities “on the ground”; and – as in economics – the relationship between the micro- and the macro-level is not always straightforward. In particular, there are issues pertaining to safeguarding environmental integrity that need to be taken into account when designing the certification methodologies for SDM micro MOs (see Box 5).

BOX 5: Safeguarding Environmental Integrity in the context of iCERU Generation

It may not be straightforward to establish whether a micro MO generated by a particular SDM activity under the host Party NDC has contributed to the host Party’s *Total Transferrable Mitigation Outcome* (TTMO, a macro-level construct introduced in Chapter 1). If it hasn’t – say because it can be identified as part of the MO used to achieve the host Party’s NDC target – then arguably it should not be certified as eligible for transfer. It is also conceivable that the aggregate of activity micro-baseline emissions inside the NDC is higher than the NDC macro-baseline emissions. That is to say, the micro- and macro-baseline methodologies might allow for a micro-generation of hot air (as opposed to the macro-generation of setting the NDC target level above the NDC baseline). Obviously such micro hot air should also not be certified for transfers under the SDM in order to safeguard the environmental integrity of the regime.

It will also generally not be possible – short of rejecting (in contravention of Article 6.5) the generation of CERUs under the host Party’s NDC altogether – to come up with SDM certification rules that prevent “*over selling*” of CERUs, in the sense that the total amount of CERUs transferred (*ex ante*) is larger than the final TTMO. But this is not only a problem of the SDM: *ex ante* ITMO transfers under Article 6.2 involve the same risk management issues for originating Parties.

Fortunately, these are by no means new issues in the world of project-based mechanisms: they are well known, for example, in the context of the **Joint Implementation** (JI) mechanism, where the host Parties have economy-wide caps on emissions as their target level, referred to as their ‘Assigned Amounts’ (AAs). It therefore stands to reason that the JI verification procedures should be a useful starting point for the SDM to deal with these issues in the context of micro MOs generated under the host Party NDC.

However, this discussion of how to design sufficiently robust micro methodologies, although very important, is also extremely complex and, what is more, not a prerequisite for the present purposes. This is why in what follows the design of the SDM certification process is simply assumed to be sufficiently robust to ensure that:

[A.5] iCERUs are (by design) part of the host TTMO (see Section 2.4.iv).

It is therefore *ipso facto* assumed that the environmental integrity of iCERU-ITMOs (ITMOs based on MOs generated by SDM activities inside the host Party NDC) is essentially the same as the macro-level issue dealt with in the earlier macro-level analysis.

(iii) oCERU Generation: Micro Baselines versus non-NDC emissions & non-NDC Baselines

The international transfer of **MOs from outside the scope of the relevant NDC** has not been touched upon in this analysis so far. Thus, we cannot simply refer to what has been said earlier with respect, say, to discussing the environmental integrity of such transfers. Indeed, the type of environmental integrity that is most pertinent in this context, namely **Global Environmental Integrity** has, thus far, not really been conceptually analysed beyond its initial description as referring to “*whether, ceteris paribus, the global environmental situation – usually **global aggregate emissions during a specified period** – would be the same with or without the ITMO transfer/usage*”.

For a more thorough analysis, some additional concepts pertaining to being “outside an NDC” or “outside the regime” need to be introduced. To talk about what would have been the case if an MO outside the NDC had not been generated, we need to introduce quantification for these scope notions, as we had to introduce quantified scopes for NDCs to discuss the environmental integrity of using ITMOs at the macro level (Section 2.4).

For the purposes of this analysis, and keeping to our previous simplifying assumptions, we shall therefore use the following terminology:

- **‘Relevant non-NDC emissions of a Party’**: The (hypothetical) quantitative scope given by the emissions of that Party during the relevant contribution period that are outside the quantitative scope of the Party’s NDC.
- **‘Relevant (non-) NDC emissions of the regime’**: The aggregate of the relevant (non-) NDC emissions of all Parties (where ‘NDC emissions’ are the emissions falling under the quantitative scope of the NDC in question).
- **‘Relevant global emissions’**: The aggregate of the relevant NDC and non-NDC emissions of the regime, together with the aggregate emissions of all non-Parties over the relevant period of time.

For each of these quantitative scopes, we use the terms **‘final tally’** and **‘baseline’** in analogy to the way in which they were used in the context of the quantitative scopes of NDCs.

As in the case of iCERU-ITMOs discussed in the preceding section, an analysis of the environmental integrity of **oCERU-ITMOs** would have to focus on how the micro level, given by the activity baseline and certification methodologies, relates to the macro phenomena – i.e. to the non-NDC baseline and final tally. Conceptually, the macro-level is therefore slightly less complex than in the case of the iCERU-ITMOs, as there isn’t a separate target level to be considered. However, for the purposes of a conceptual analysis, it is useful to introduce the macro baseline itself as mock target level in this context:

The non-NDC baseline is to serve as **mock target** for non-NDC emissions.

This allows us to transfer, *mutatis mutandis*, the analysis of the preceding section to the current case. In particular, it means that we can assume that:

[A.6] the **non-NDC TTMO** (Section 2.4.iv) is the difference between the non-NDC baseline and its final tally (if the latter is smaller than the former, otherwise there is nothing to transfer).

Moreover, it allows us to assume – in analogy to [A.5] – that the design of the SDM certification process is sufficiently robust to ensure that:

[A.7] the non-NDC baseline is (by design) higher, or equal to, the final non-NDC tally plus the relevant total of oCERUs.

In short, it allows us again to avoid the unnecessarily complicated issue of how to design such robust micro methodologies, and instead to simply assume that all oCERUs are legitimately transferrable.

(iv) oCERU-ITMO use, Corresponding Adjustments, and Accounting

As discussed in Section 2.3, ITMOs can be used to achieve an NDC in two ways: by adding the transferred amount to the user's NDC target level (referred to as 'target-based use'), or by removing it from the final user's NDC tally ('tally-based use'). This applies regardless of the provenance of the MO being transferred – in particular, regardless of whether it is from inside or outside the originating Party's NDC.

In the CDM, as in the case of JI, a MO is used by adding its amount to the user Party's AA. However, unlike the case of JI, there is no corresponding adjustment of the host Party's AA, for the simple reason that under the CDM, only non-Annex 1 Parties are eligible to host CDM activities, and non-Annex 1 Parties do not have AAs. As such, the CDM would appear to be the more appropriate model for oCERU-ITMOs than JI.

But since in the Paris Agreement all Parties have an NDC and thus a target level (given the assumptions in Section 2.2), it is clear that following the CDM target-based interpretation of what it means to use an oCERU-ITMO to achieve the user NDC without having a corresponding adjustment somewhere in the regime would infringe the **target integrity** of the regime. It could thus be argued, on the basis of wanting to safeguard the target integrity of the regime, that there **should be** a corresponding adjustment of the host Party's NDC target level.

However, one could also legitimately argue that since the MO that generated the oCERU was outside the scope of the host Party's NDC, it could not possibly lead to double counting (i.e. also be used towards achieving the host Party's NDC), and that accordingly there **should not be** a corresponding adjustment of the host Party's NDC target level.

Indeed, the question of whether there should or should not be a corresponding adjustment for the use of oCERU-ITMOs is one of the main sticking points in the current Article 6.4 negotiations. Is there a way of reconciling these contradictory positions? Not if one stays with the Kyoto Protocol target-based interpretation of ITMO usage. But what about the alternative tally-based interpretation?

With the mock non-NDC targets and non-NDC baseline assumptions introduced in the preceding section, the controversy regarding corresponding adjustments for oCERU-ITMO usage can be discussed in the context of the relevant macro-level discussion, in particular with regard to the discussion on avoidance of double counting and ensuring the tally-integrity of the regime.

Under the tally-based interpretation, an acquiring Party uses an oCERU-ITMO by removing the corresponding amount from its final NDC tally. In the previous discussions, this was meant to be accompanied by a compensating final tally adjustment by the originating, in this case host, Party to avoid double counting. Given the provenance of oCERUs, this cannot be about achieving the originator's NDC target, but it is pertinent to the achievement of its non-NDC mock target. This means that the originator

should compensate the use of a transferred oCERU – *not* by adding the amount to its final NDC tally (as in the case of an iCERU transfer/use), but to its final *non*-NDC tally.

It is easy to see that under this sort of tally-based interpretation, the transfer/use of oCERU-ITMOs would respect not only the target and tally integrity of the regime, but also what we referred to as ‘global environmental integrity’. This is a way of using oCERU-ITMOs while respecting environmental integrity and avoiding double counting without involving a corresponding adjustment of the host Party’s NDC target – but only if one abandons the Kyoto Protocol-inspired target-based interpretation of what it means to use (oCERU-) ITMOs towards achieving one’s target.

This, it could be argued, might be fine for conceptual purposes, but by requiring a quantification of non-NDC emissions, it would simply not work “in the real world.” Fortunately, these quantified non-NDC scopes had to be introduced only to get a clearer picture of how the use of oCERU-ITMOs could be understood. For accounting purposes, all that is really needed is an ITMO registry to serve as an accounting balance, along the following lines:

Parties wishing to engage in ITMOs must have an **ITMO registry account**, registering ITMOs in accordance to provenance (in other words, whether they are from within the originating Party’s NDC or not).

When an MO is transferred internationally, the ITMO registry account of the acquiring Party is credited with the ITMO amount, and that of the originating Party is debited by the same amount.

When an ITMO is used to achieve an NDC, then the relevant credit in the ITMO registry account of the using Party is cancelled.

Any final debits in ITMO accounts represent emissions that either need to be taken into account in establishing whether the Party’s NDC is achieved (in the case of Article 6.2 or iCERU-ITMOs), or as representing user emissions that the host Party has taken responsibility for by transferring offsets (in the case of oCERU-ITMOs).

In other words, it is possible to operationalise the SDM (and indeed micro-ITMOs in general) on the basis of a virtual tally-based interpretation of (CERU-) ITMO usage that ought to reconcile the above-mentioned contradictory positions. In practical terms, this could be achieved, as illustrated in Figure 1, by:

- Introducing mandated corresponding adjustments to the final tally of the originator NDC, for (Article 6.2) macro-ITMOs, or micro-ITMOs generated within the originator NDC (such as iCERU-ITMOs).
- Introducing a Buffer Registry for corresponding non-NDC adjustments (for micro-ITMOs generated outside the originator NDC (such as oCERU-ITMOs).

2.9. Return to Middle Earth



Equipped with the conceptual toolkit developed in the preceding two sections, let us return to Middle Earth to consider how the SDM could be implemented there.

The Status Quo Ante is given in Table 2.a. As reflected in the CERU Registry, SDM activities hosted by **Rohan** have generated 15 Certified Emission Reduction (CERU) units: 5 (iCERUs) inside the Rohan NDC, and 10 (oCERUs) outside it.

Rohan's NDC baseline is 50 units, its target 40, and its final tally 30. This means the total *MO* in the period in question is 20 units, 10 of which – the difference between the target and the final tally – are transferrable as NDC ITMOs. In keeping with our assumption [A.5] about SDM certification, the 5 iCERUs are taken to be part of this *Total Transferrable Mitigation Outcome* (TTMO). As regards Rohan's relevant emissions outside its NDC (its non-NDC emissions), the final tally is 40 units, and the relevant TTMO is assumed to have been achieved through the SDM activities and be equal to the 10 oCERUs.

The status quo ante situation of **Gondor** is still the same as on our initial visit: it has overshot its NDC target by 10 units and thus needs to acquire 10 ITMO units in order to achieve its NDC.

Transfer. At the time of the transfer, the iCERUs are removed from Rohan's CERU Registry listing and instead included as a debit in the ITMO Registry, with a corresponding credit for Gondor (Tables 2.b and 2.c).

Usage. For the reasons discussed in the preceding section, the Middle Earth Article 6 regime employs a tally-based interpretation of 'using an ITMO to achieve an NDC'. ITMO usage is thus given by a reduction of the final tally of the using Party (Gondor), with a mandated compensating final tally adjustment by the host Party (Rohan). Once used by Gondor, the credit in its ITMO registry entry is cancelled (bracketed). Correspondingly, once the compensating tally adjustment is carried out by Rohan, its ITMO registry debit is cancelled.

Table 2. CERUs generated by Rohan, and used by Gondor

| a. Status Quo Ante | | | | | | | |
|--------------------|----------------------|--------|-------------|-------------------|-------------|----------------|-------------|
| | NDC Quantified Scope | | | Non-NDC | | National Total | |
| | Baseline | Target | Final Tally | Target (baseline) | Final tally | Target | Final tally |
| Rohan | 50 | 40 | 30 | 50 | 40 | 90 | 70 |
| Gondor | 100 | 80 | 90 | 300 | 300 | 380 | 390 |
| Aggregate | 150 | 120 | 120 | 350 | 340 | 470 | 460 |

| | ITMO Registry | | CERU Registry | |
|-----------|---------------|-------|---------------|-------|
| | incl. iCERU | oCERU | iCERU | oCERU |
| Rohan | 0 | 0 | 5 | 10 |
| Gondor | 0 | 0 | 0 | 0 |
| Aggregate | 0 | 0 | 5 | 10 |

| b. Using CERUs generated inside the host Party NDC (i.e. iCERUs) | | | | | | | |
|--|----------------------|--------|-------------|-------------------|-------------|----------------|-------------|
| | NDC Quantified Scope | | | Non-NDC | | National Total | |
| | Baseline | Target | Final Tally | Target (baseline) | Final tally | Target | Final tally |
| Rohan | 50 | 40 | 35 | 50 | 40 | 90 | 75 |
| Gondor | 100 | 80 | 85 | 300 | 300 | 385 | 385 |
| Aggregate | 150 | 120 | 120 | 350 | 340 | 470 | 460 |

| | ITMO Registry | | CERU Registry | |
|-----------|---------------|-------|---------------|-------|
| | incl. iCERU | oCERU | iCERU | oCERU |
| Rohan | (-5) | 0 | 0 | 10 |
| Gondor | (+5) | 0 | 0 | 0 |
| Aggregate | 0 | 0 | 0 | 10 |

| c. Using CERUs generated outside the host Party NDC (i.e. 'oCERUs') | | | | | | | |
|---|----------------------|--------|-------------|-------------------|-------------|----------------|-------------|
| | NDC Quantified Scope | | | Non-NDC | | National Total | |
| | Baseline | Target | Final Tally | Target (baseline) | Final tally | Target | Final tally |
| Rohan | 50 | 40 | 30 | 50 | 50 | 90 | 80 |
| Gondor | 100 | 80 | 80 | 300 | 300 | 380 | 380 |
| Aggregate | 150 | 120 | 110 | 350 | 350 | 470 | 460 |

| | ITMO Registry | | CERU Registry | |
|-----------|---------------|-------|---------------|-------|
| | incl. iCERU | oCERU | iCERU | oCERU |
| Rohan | 0 | (-10) | 5 | 0 |
| Gondor | 0 | (+10) | 0 | 0 |
| Aggregate | 0 | 0 | 10 | 0 |

Regarding the real-world debate as to whether there should or should not be compensatory adjustments for the usage of CERU-ITMOs, the answer on Middle Earth is unequivocally affirmative, **but** not necessarily with respect to the host Party's NDC. The choice of which final host Party tally is to be adjusted depends on where the transferred CERUs were generated:

- The use of iCERUs must be compensated with a corresponding adjustment of the final host Party's NDC tally (see Table 2.b).
- The use of an oCERU must be compensated with a corresponding adjustment of the host Party's final non-NDC tally (see Table 2.c).

Table 3. CERUs generated in Rohan, used by Air Mordor to offset its emissions under the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)

| a. Status Quo Ante | | | | | | | | | | |
|--------------------|----------------------|--------|-------------|-------------------|-------------|----------------|-------------|---------------|-------------|-------------|
| | NDC Quantified Scope | | | Non-NDC | | National Total | | Bunker | | Total Tally |
| | Baseline | Target | Final Tally | Target (baseline) | Final tally | Target | Final tally | CORSIA Target | Final tally | |
| Rohan | 50 | 40 | 30 | 50 | 40 | 90 | 70 | n/a | n/a | 70 |
| Air Mordor | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 200 | 215 | 215 |
| Aggregate | 50 | 40 | 30 | 50 | 40 | 90 | 70 | 200 | 215 | 285 |

| | CORSIA Registry | | CERU Registry | |
|------------|-----------------|-------|---------------|-------|
| | iCERU | oCERU | iCERU | oCERU |
| Rohan | 0 | 0 | 5 | 10 |
| Air Mordor | 0 | 0 | 0 | 0 |
| Aggregate | 0 | 0 | 5 | 10 |

| b. Offsetting Bunker Fuels | | | | | | | | | | |
|----------------------------|----------------------|--------|-------------|-------------------|-------------|----------------|-------------|---------------|-------------|-------------|
| | NDC Quantified Scope | | | Non-NDC | | National Total | | Bunker | | Total Tally |
| | Baseline | Target | Final Tally | Target (baseline) | Final tally | Target | Final tally | CORSIA Target | Final tally | |
| Rohan | 50 | 40 | 35 | 50 | 50 | 90 | 90 | n/a | n/a | 85 |
| Air Mordor | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 200 | 200 | 200 |
| Aggregate | 50 | 40 | 35 | 50 | 50 | 90 | 90 | 200 | 200 | 285 |

| | CORSIA Registry | | CERU Registry | |
|------------|-----------------|-------|---------------|-------|
| | iCERU | oCERU | iCERU | oCERU |
| Rohan | (-5) | (-10) | 0 | 0 |
| Air Mordor | (+5) | (+10) | 0 | 0 |
| Aggregate | 0 | 0 | 0 | 0 |

To be sure, this sort of SDM operationalisation assumes that all participating Parties have some final tally of the scope in which their oCERUs have been generated, and this might be too much to ask in the real world. But, as mentioned above, there is a solution: if the host Party (Rohan) does not have a final non-NDC tally, the debit would remain un-cancelled in the ITMO registry and could, as such, be used *in lieu* of the ‘corresponding final tally adjustment’. In other words, all that is needed is a registry for ITMOs generated outside the originating Party’s NDC. Alternatively, one could introduce a “buffer registry” [Annex II, c.3] to reflect corresponding non-NDC adjustments (see Figure 1).

Before we take leave of Middle Earth, let’s consider a brief illustration of how the SDM could also be used to generate offsets, say, for bunker fuel emissions. Let us have a brief look at how the Middle Earth SDM could be used to generate offsets for airlines that are subject to the Middle Earth CORSIA scheme.

The *Status Quo Ante* situation of Rohan (Table 3.a) is exactly as before. The national carrier of Mordor has a CORSIA target of 200 units, and a final tally of 15 units above that target level. Table 3.b describes the situation after the acquisition and use of Rohan’s 5 iCERUs and 10 oCERUs by Air Mordor, with which it achieves compliance with its CORSIA target.

CONCLUSIONS

2.10. Macro Level

Our conceptual analysis of ‘using an ITMO towards achieving an NDC’ led to two possible interpretations: under a ‘target-based’ conception, the acquiring Party adds the ITMO amount to the target level of its NDC; under the alternative ‘tally-based’ interpretation, the acquiring Party removes the ITMO amount from the final tally of its NDC.

On the basis of this analysis, it was also possible to explicate the meaning of two important concepts used in discussing the environmental integrity of ITMO transfers and usage, namely that of ‘corresponding adjustments’ and that of ‘(avoiding of) double counting’. It was, in particular, shown that these two concepts can be used to address two different types of environmental regime integrity:

- mandated corresponding adjustments can be used to address the issue of target integrity arising under the target-based interpretation of ‘using (IT)MOs’; while
- mandated avoidance of double counting addresses the issue of tally integrity arising under the tally-based interpretation of ‘using (IT)MOs’.

The sale of Assigned Amount Units under the Kyoto Protocol’s International Emission Trading scheme was mentioned as an example of how such mandated corresponding adjustments could be operationalised, while the operationalisation of mandated avoidance of double counting was exemplified by transfers of (actual) emissions between the Parties, or rather their final NDC tallies (registries).

Hence, all it would take to safeguard the environmental integrity of the regime (target- and tally-wise) is to mandate that originating Parties:

- subtract the ITMO amount from their NDC target level (carry out a ‘corresponding adjustment’) if the acquiring Party has added the amount to its target level; or
- “take on” the amount removed by the acquiring Party by adding it to their final tally (and thus not use the underlying MO, so as to avoid ‘double counting’).

With this, the two interpretations essentially give rise to basic versions of what in the current negotiations is referred to as “target/budget-based accounting” and “emission-based accounting”,⁴⁵ respectively.

It was highlighted that this conceptual analysis of ‘ITMO use’ dealt with ITMOs at the macro level where they are simply amounts to be added or subtracted within quantitative scopes of NDCs. They are, as it were, featureless with respect to micro-level attributes pertaining to their origin (for example, whether they were generated by the private sector or government, or whether they are “additional”, say in the sense that they would not have been generated in the absence of the ITMO regime).

Moreover, it is important to highlight that, apart from defining maximum MOs, the discourse at this macro level, in particular the description of transfers and usage of ITMOs, does not involve any hypothetical assumptions, but only stated target levels and measured final tallies.⁴⁶

2.11. Micro Level

Following the conceptual analysis of how ITMOs work at the macro level, the focus of attention shifted to the transfer and use of micro MOs – MOs not derived from a difference in macro-level parameters (NDC tallies and targets), but generated by activities. In that context, particular attention was given to MOs generated through SDM (Article 6.4), but the main focus of the analysis was not so much the particularities

of the SDM, but how its “products” could fit into the Article 6.2 ITMO architecture.

The first step of this micro-level analysis introduced a basic terminology to describe how the SDM might work, based on the conceptual scheme of the CDM, starting with procedural terms such as ‘activity’, ‘verification’, and ‘certification’, before turning to operational terms, such as ‘activity scope’, ‘activity baseline’, and ‘additionality’.

Equipped with this basic conceptual toolkit, the focus then turned to the main issue at hand, namely that of (micro) MOs, in the form of SDM Certified Emission Reduction Units (CERUs), being internationally transferred and used to achieve NDCs under the Paris Agreement. This does not mean that CERUs could not also be used for other purposes, for example to offset aviation emissions under the CORSIA scheme, but the focus here was on how CERU MOs could be transferred between Parties and used to achieve NDCs. In other words, the focus was on the nature and use of ‘CERU-ITMOs’.

A new distinction pertinent to CERU-ITMOs was introduced: CERUs generated inside or outside the scope of the host Party’s NDC, called ‘iCERUs’ and ‘oCERUs’, respectively. This distinction was not relevant to the earlier macro-level analysis of ITMOs, because all transferrable MOs there were, by definition, part of the scope of the originating Party’s NDC.

While there are some technical complications regarding the generation of iCERUs – in particular, whether they are eligible for international transfer, i.e. how they relate to the TTMO of the originating host Party – the usage of iCERU-ITMOs and their environmental integrity could easily be interpreted in the context of macro-level ITMO usage.

The situation was not as straightforward for oCERU-based transfers. The problem was resolved conceptually by a thought experiment involving the introduction of a macro quantitative scope (‘non-NDC’) for the relevant host Party emissions outside its NDC, and a baseline taken to be a mock target. Given these features, it was again possible to apply the macro-level ITMO analysis of to the use of oCERU-ITMOs.

The key finding based on this thought experiment was that it is possible to reconcile what, at first sight, appear to be mutually contradictory positions taken by Parties with regard to whether the use of an oCERU-ITMO should or should not be compensated by the host Party with a corresponding adjustment. The reconciliation is based on the choice of a tally-based interpretation of ITMO use, over the target-based variety used in the Kyoto Protocol. This interpretation allows for mandatory corresponding adjustments for all ITMO usage, but not necessarily (in particular for oCERU-ITMOs) of host Party NDC levels. As illustrated in Figure 1, this reconciliation be achieved by:

- (a) introducing mandated corresponding adjustments to the final tally of the originator NDC, for (Article 6.2) macro ITMOs, or micro ITMOs generated within the originator NDC (such as iCERU-ITMOs); and
- (b) introducing a Buffer Registry for corresponding non-NDC adjustments, for micro ITMOs generated outside the originator NDC (such as oCERU-ITMOs).

REFERENCES

1. For the purpose of cross-referencing, we shall use the following symbolism:
 - ‘Article’ and ‘§’ are used to refer to the Articles of the [Paris Agreement](#) and the paragraphs of the implementing [Decision 1/CP.21](#), respectively;
 - Single and double quotation marks are used to denote concepts, and quotations (including scare quotes), respectively.
2. Kizzier, K. & Sealy, H. (2017). [Draft elements for SBSTA agenda item 11 \(a\): Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement](#). *Informal Note by the Co-Chairs*. Third Iteration. 12 November 2017.
3. ITMO Note, section 6 (“Definitions”).
4. Unlike the case of Article 6.2, where the chosen terminology (‘ITMO’) is (deliberately) silent as regards intended precedents, Article 6.4 and, in particular, the relevant operational paragraphs in Decision 1/CP.21, are relatively clear about the intended ancestry of the new mechanism as the “*existing mechanisms and approaches adopted under the Convention and its related legal instruments*” [§37.f] – a clear reference to the Kyoto Protocol’s Clean Development Mechanism and Joint Implementation.
5. One of the contentious issues in the current debate is whether CERUs generated under the CDM should be recognised under the SDM. The nomenclature chosen here is meant to leave this, and the related question of the use of JI ERUs open.
6. [AOSIS Roundtable Presentation](#), Slide 6 on accounting approaches
7. A distinction is sometimes made between ‘transferring in’ and ‘transferring out’, but for the present purposes, transferring is always meant to be ‘transferring out’. ‘Transferring in’ is covered by ‘acquiring’.
8. For further comparisons, see Section 2.6
9. For instance, the amount of CO2 emitted during a calendar year by a specific set of sources (measured by weight).
10. For instance, the measured amount of CO2 emitted during 2016 by the set of sources specified in the respective quantitative scope.
11. NDCs could be associated with multiple quantitative scopes [“metrics” [Russian Roundtable presentation](#)] one for each quantified component, in which case reaching an attainment threshold is only a necessary, but not a sufficient, condition for achieving the NDC.
12. As mentioned in sub-section (i), and other extensive quantity, such as MWh of installed renewable power, could also be used, but for simplicity’s sake we shall use GHG emissions as measured in CO2e.
13. In principle, the situation could also be the other way round – that is, an achievement could be associated with going above the target level, such as in the case of NDCs measured in terms of installed renewable capacity. However, in light of [A.1], we can safely assume that achieving an NDC means having a final tally below the emission target level.
14. As such, these interpretations/conceptions are intimately linked to what, in the ITMO Note (Sections 8, 9, 12), is referred to as “target/budget” and “emission-based” approaches to accounting, respectively.
15. The term has also been interpreted more widely, including with reference to sustainable development.
16. Note that using (IT)MOs in this target-based fashion does not involve any changes in final tallies, and thus cannot infringe the tally-based integrity of the regime.
17. This does not mean that a target-based interpretation of using an ITMO presupposes assigned amounts; however, it does mean that transferring assigned amounts is a way of understanding how compulsory corresponding adjustments can be implemented.

18. For a more in-depth analysis of the notion see Schneider, L., Kollmuss, A. & Lazarus, M. (2014). [Addressing the Risk of Double Counting Emission Reductions under the UNFCCC](#). *SEI Working Paper*. April.
19. Note that using (IT)MOs in this tally-based sense does not involve any changes in target levels, and thus cannot infringe the tally-based integrity of the regime.
20. NB: This is not to say that the real-world operationalisation would need to be similar in all aspects to this Middle Earth variety. The example is merely to give a simplified description of what Article 6.2 ITMOs could involve, given our analysis, and to do so in very simple, stylised terms.
21. Note that ‘tally’ levels are an accounting tool, which can, but need not be identical with NDC inventories. In the example discussed here, the Status Quo Ante tally levels is taken to be the same as the NDC tally levels.
22. Senior Fellow at the International Centre on Trade and Sustainable Development and Director of the European Roundtable on Climate Change and Sustainable Transition.
23. Partner at Reed Smith LLP
24. Of course, if one is of the opinion that Article 6.2 only allows for the transfer of macro-outcomes, then the terminology of ‘issuing Party’ in the context of Article 6.2 would also be appropriate. But not everyone is of that opinion.
25. For an account of the current state of the Article 6.4 negotiations, see: Kizzier, K. & Sealy, H. (2017). [Draft elements for SBSTA agenda item 11 \(a\): Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement](#). *Informal Note by the Co-Chairs*. Third Iteration. 12 November 2017.
26. All quotations in this section, unless otherwise indicated, are taken mutatis mutandis from the CDM Glossary.
27. For more on upscaling SDM activities, see, for example See e.g. Michaelowa, A. (2017). [The Paris Market Mechanisms’ Contribution to Global Greenhouse Gas Mitigation: Complementarities and Tensions between Article 6.2 and Article 6.4](#); or Michaelowa, A. and Hoch, S. (2017). [Guardrails for the Paris mechanisms](#).
28. The choice of this CDM-based terminology is supported in paragraph §37.e. Note, however, that the use of ‘CERU’ here is not meant to prejudge the issue of whether CDM CERUs should be admissible under the SDM.
29. In the context of the CDM, this is referred to as ‘project boundary’, but given the usage of ‘scope’ in the macro context of NDCs, and in §37.c (“scopes of activities”), we have chosen to use ‘scope’ instead.
30. For more, see Müller, B. (2009). [Additionality in the Clean Development Mechanism: Why and What?](#) Oxford Institute for Energy Studies; or Michaelowa, A. & Butzengeiger, S. (2017). [Ensuring additionality under Article 6 of the Paris Agreement](#).
31. Note incidentally, that in the JI mechanism, using an ERU (‘Emission Reduction Unit’) towards achieving a Party’s Kyoto Protocol target involves the addition of the ERU amount to the Assigned Amount (AA) of the user Party, and the concomitant subtraction of it from the AA of the host Party. In other words, JI employs what we called a ‘target-based’ interpretation of what it is to use an ITMO.
32. Also, it should be kept in mind in this context that environmental integrity is not the only thing at stake. Sometimes it may have to be balanced against some other objectives of the SDM, such as “to promote the mitigation of greenhouse gas emissions while fostering sustainable development”. [Article 6.4.a] In other words, sometimes short-term environmental integrity may have to be balanced with longer-term benefits to sustainable development. For an in-depth analysis of these issues see Kollmuss, A., Schneider, L. & Zhezherin, V. (2015). [Has Joint Implementation Reduced GHG Emissions? Lessons Learned for the Design of Carbon Market Mechanisms](#). *SEI Working Paper*.
33. Section 2.4.i.
34. In particular:
- we are dealing “with ‘homogeneous’ quantified NDCs, that is to say with NDCs which only have one quantitative scope, referring to emissions measured in units of CO₂e”([A.1] Section 2.2.iii); and

- by ‘emissions’ we mean “greenhouse gas emissions from sources” (Section 7.1).
35. To be clear, as will be explained in Section 2.8.iv, in practice, no such non-NDC scope is needed to deal with oCERU-ITMO issues, but it is needed for the purposes of our conceptual analysis/thought experiment.
36. See Section 2.2.
37. That is: ITMOs based on MOs generated by SDM activities outside the host Party NDC.
38. See Section 2.4.v.
39. See Annex 1, b.3.
40. See Annex 1, c.3 or c.4.
41. Note that, as such, the situation in Rohan conforms with the demand by some real-world Parties that ITMO use should be supplemental to domestic action [Annex 1/a.11].
42. In keeping with [A.2.3], the non-NDC baseline/target is defined as the final non-NDC tally plus the oCERUs in the period under consideration.
43. To be quite clear, this use of CERUs ventures outside of the realm of ITMOs. The reason for mentioning it here is simply to show how this additional usage could be accounted for.
44. UNFCCC (2017). *Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement - Round-table discussion among Parties held on 5 November 2017. Informal document by co-facilitators of the round-table.*
45. See ITMO Note, Sections 8, 9, and 12.
46. This does not mean that if Parties are thinking of transferring ITMOs before the final tallies have been established they would not need to consider certain projections for the purpose of risk management, but simply that the actual transfers and usage of ITMOs does not depend on hypothetical assumptions.

APPENDICES

Annex I. The Paris Outcome

1. Paris Agreement, Articles 6.1 to 6.3

Art. 6.1. *Parties recognize that some Parties choose to pursue voluntary cooperation in the implementation of their nationally determined contributions to allow for higher ambition in their mitigation and adaptation actions and to promote sustainable development and environmental integrity.*

Art. 6.2. *Parties shall, where engaging on a voluntary basis in cooperative approaches that involve the use of internationally transferred mitigation outcomes towards nationally determined contributions, promote sustainable development and ensure environmental integrity and transparency, including in governance, and shall apply robust accounting to ensure, inter alia, the avoidance of double counting, consistent with guidance adopted by the Conference of the Parties serving as the meeting of the Parties to this Agreement.*

Art. 6.3. *The use of internationally transferred mitigation outcomes to achieve nationally determined contributions under this Agreement shall be voluntary and authorized by participating Parties.*

2. Paris Agreement, Articles 6.4 to 6.7

Art. 6.4. *A mechanism to contribute to the mitigation of greenhouse gas emissions and support sustainable development is hereby established under the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to this Agreement for use by Parties on a voluntary basis. It shall be supervised by a body designated by the Conference of the Parties serving as the meeting of the Parties to this Agreement, and shall aim:*

To promote the mitigation of greenhouse gas emissions while fostering sustainable development;

To incentivize and facilitate participation in the mitigation of greenhouse gas emissions by public and private entities authorized by a Party;

To contribute to the reduction of emission levels in the host Party, which will benefit from mitigation activities resulting in emission reductions that can also be used by another Party to fulfil its nationally determined contribution; and

To deliver an overall mitigation in global emissions.

Art. 6.5. *Emission reductions resulting from the mechanism referred to in paragraph 4 of this Article shall not be used to demonstrate achievement of the host Party's nationally determined contribution if used by another Party to demonstrate achievement of its nationally determined contribution.*

Art. 6.6. *The Conference of the Parties serving as the meeting of the Parties to this Agreement shall ensure that a share of the proceeds from activities under the mechanism referred to in paragraph 4 of this Article is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.*

Art 6.7. *The Conference of the Parties serving as the meeting of the Parties to this Agreement shall adopt rules, modalities and procedures for the mechanism referred to in paragraph 4 of this Article at its first session.*

3. Decision 1/CP.21, paragraphs 36 and 37

§36. *Requests the Subsidiary Body for Scientific and Technological Advice to develop and recommend the guidance referred to under Article 6, paragraph 2, of the Agreement for consideration and adoption by the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement at its first session, including guidance to ensure that double counting is avoided on the basis of a corresponding adjustment by Parties for both anthropogenic emissions by sources and removals by sinks covered by their nationally determined contributions under the Agreement;*

§37. *Recommends that the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement adopt rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Agreement on the basis of:*

- (a) *Voluntary participation authorized by each Party involved;*
- (b) *Real, measurable, and long-term benefits related to the mitigation of climate change;*
- (c) *Specific scopes of activities;*
- (d) *Reductions in emissions that are additional to any that would otherwise occur;*
- (e) *Verification and certification of emission reductions resulting from mitigation activities by designated operational entities;*
- (f) *Experience gained with and lessons learned from existing mechanisms and approaches adopted under the Convention and its related legal instruments;*

Annex II. Excerpts from co-facilitators' summary of the round table

Date of publication: 6 November 2017

Guidance on cooperative approaches referred to in Article 6, paragraph 2, of the Paris Agreement

Round table discussion among Parties held on 5 November 2017

SBSTA 47, agenda item 11(a)

Informal document by co-facilitators of the round-table

a. Aspects of ensuring environmental integrity

[a.1] Some Parties noted that requirements in relation to environmental integrity are needed so that the long-term rationale of the cooperation does not undermine the ambition of nationally determined contributions (NDCs). Some Parties said that the guidance should be guided by the bottom-up nature of the Paris Agreement and should not restrict the nature and scope of cooperation between Parties.

[a.2] Some Parties said Parties must report on the scope and quantification of their NDCs and make a timely corresponding adjustment in their “accounting balance” when internationally transferred mitigation outcomes (ITMOs) are transferred and used. Some Parties said regularity and comparability of reporting across cycles is needed.

[a.3] Some Parties considered that environmental integrity would be ensured through the transparency framework in Article 13 of the Paris Agreement and robust accounting. Some Parties questioned how that would deal with oversupply, for example in an emissions trading system. Some Parties said that reviews will happen via the expert review process under the transparency framework in Article 13 and that any anomalies would be resolved through technical expert review, or by the Article 15 compliance committee process. Some Parties considered that the Article 15 compliance committee was not relevant to Article 6.

[a.4] Some Parties said that ITMOs will not include allowances from cap-and-trade systems as they represent an allowance to emit and not an emission reduction. Some Parties said that cap-and-trade systems do deliver emission reductions where emission caps are set well below the ‘business as usual’ scenario, with stringent transparency principles, and robust compliance measures at the national level. In this context, some Parties expressed the view that while individual allowances would not be ITMOs, net transfers between linked cap-and-trade systems would be ITMOs.

[a.5] Some Parties said that environmental integrity would be ensured through the establishment of a centralized oversight body. This body would ensure Parties act consistently with CMA guidance in order to comply with “shall requirements”. The body would check the accounting of transfers by checking that the transferred mitigation outcomes are actual reductions, and by the operation of registries.

[a.6] Some Parties considered third party technical review before issuance of ITMOs would be required to ensure environmental integrity of transfers and use of ITMOs under Article 6, paragraph 2. Some

Parties considered that additions and subtractions should be recorded in a centralized database after being reviewed, and that compatible registry systems would be needed.

[a.7] Some Parties said that environmental integrity requires avoiding an overall increase in emissions. Some Parties consider that is achieved by ensuring ITMOs represent emission reductions that are real and verifiable.

[a.8] Some Parties raised the comparability of what is being transferred as an aspect of environmental integrity. Some Parties expressed the view that ensuring environmental integrity requires both avoiding double counting and full comparability of mitigation outcomes that are to be transferred, and that full comparability requires multilateral governance on the quantification and transfers. Some Parties said that comparability will be driven by the cooperating Parties who are both using the same metrics for that transfer (i.e. renewable energy or energy efficiency).

[a.9] Some Parties expressed the view that the guidance applies to the life cycle of an ITMO from creation, and includes its transfer, surrender and retirement. Some Parties expressed the view that the guidance applies to the transfer of ITMOs only, while the generation of the mitigation outcome is addressed through Article 4 of the Paris Agreement.

[a.10] Some Parties said that guidance is required so that the use of Article 6 does not erode NDCs – individually or as an aggregate. The guidance should ensure the quality of ITMOs and the quality of the systems through which they move and that they represent real, measurable, additional, verified, permanent emission reductions. Some Parties said that guidance will be needed to ensure “hot air” is not created and transferred. Some Parties expressed the view that common minimum standards are needed to ensure ITMOs are comparable and meet environmental integrity requirements.

[a.11] Some Parties said that the use of ITMOs should be supplemental to domestic action. Some Parties said that there should be quantitative restrictions on transfers, carryover and use towards NDCs, including restrictions on vintages. Other restrictions were also considered by participants.

b. Relevance of scope of NDCs

[b.1] Some Parties said that mitigation outcomes must only come from within the scope of the NDC of the generating Party in order to incentivize progression in the scope of the NDC. Some Parties said that it was important to not create perverse incentives for Parties to maintain sectors outside the scope of their NDCs, where they can be used to generate offsets that do not require corresponding adjustments and deter Parties from moving to economy-wide emission reduction or limitation targets.

[b.2] Some Parties said that ITMOs from non-NDC sectors are allowed, as this would maximize mitigation and sustainable development opportunities. Some Parties said that including ITMOs from non-NDC sectors would incentivize domestic mitigation by the host Party and lead to progression of mitigation efforts over time (by creating positive incentives to extend the scope of the NDC and increase ambition over time). Some Parties said that using ITMOs from non-NDC sectors could provide a transitional function for the host Party to discover further emission reduction potential, foster the inclusion of sectors /gases in future NDCs, and benefit from such long-term emission reductions for its future NDCs.

[b.3] Some Parties expressed the view that mitigation outcomes can come from both inside and outside the NDC of the generating Party but must be fully accounted for by the generating Party through a corresponding adjustment. Some Parties said that where mitigation outcomes come from outside the scope of the generating Party’s NDCs, no corresponding adjustment would be required as there would be no risk of double counting.

c. Aspects of accounting for internationally transferred mitigation outcomes

[c.1] In relation to accounting approaches, some Parties supported a target-based approach or quantifying the NDC into a budget approach. Some Parties consider that a target-based, or similar, approach would be unsuitable as it may prejudice national prerogatives associated with NDCs. Some Parties added that to adjust figures based on budget would not work as not all Parties have budget-based targets.

[c.2] Some Parties said that the use of an inventory for accounting was not suitable as it would affect the understanding of what the inventory represents.

[c.3] Some Parties proposed an approach of using a buffer registry or separate account with additions and subtractions to it from a starting point of zero in the metrics of the relevant transfers.

[c.4] Some Parties proposed using an “accounting balance”/ “national account” that is separate from both the inventory and the NDC, and that represents emissions and removals covered by the NDC, and which is adjusted to reflect the use and transfer of ITMOs.

[c.5] In relation to single-year NDC targets, some Parties explored options for guidance on the creation and/or use of ITMOs by Parties that have single-year NDC targets. These include: placing restrictions on vintage of ITMOs used; averaging or linearizing the amount of ITMOs created/transferred over the NDC implementation period; cumulatively creating/transferring ITMOs over the NDC implementation period; and using a proposed “locked ITMO” approach.

[c.6] Some Parties said that full quantification of an NDC into units is necessary for accounting and to ensure the avoiding of double counting. Some Parties said that the guidance should ensure all Parties to the Paris Agreement should be able to participate in Article 6, paragraph 2, regardless of the type of NDC. Some Parties considered double counting could be avoided through the establishment of an “accounting balance” representing emissions and removals covered by the NDC, against which transfers of mitigation outcomes would be adjusted.

[c.7] Some Parties said that mitigation outcomes must be quantified or be quantifiable in tonnes of CO₂ equivalent. Some Parties said that a full spectrum of possible mitigation outcomes is required, including emissions avoidance and co-benefits of adaptation, and including economic diversification and accommodation of various metrics.

[c.8] In relation to infrastructure for accounting, some Parties drew an analogy to emissions trading under Article 17 of the Kyoto Protocol. Other Parties referred to national registries and/or standard reporting.

[c.9] Some Parties said that a share of proceeds applies to Article 6, paragraph 2, activities, with some Parties addressing it to the Adaptation Fund, some mentioning the rationale of ensuring that Article 6, paragraph 4, activities are not unduly disadvantaged, and some saying the share of proceeds should not be levied on the first transfer between Parties but on subsequent transfers in increasing rates. Some Parties considered a share of proceeds should not be levied on Article 6, paragraph 2, transfers as this is not provided for in the Paris Agreement, under which transfer only applies to the Article 6, paragraph 4, mechanism.

d. Corresponding adjustment

[d.1] Parties considered what a corresponding adjustment requires. Some Parties considered that “corresponding” means that additions and subtractions must correspond. Some Parties considered that a corresponding adjustment should provide flexibility and the accounting approach should be facilitative and non-restrictive, accommodating all NDC types and cooperative opportunities.

[d.2] Parties addressed the issue of where a corresponding adjustment is required. Some Parties considered that corresponding adjustments are needed for mitigation inside the scope of NDCs. In relation to mitigation outside the NDC, Parties discussed a number of approaches.

[d.3] Some Parties considered ITMOs had to come from inside the NDC, because the guidance must incentivize progression in scope and ambition.

[d.4] Some Parties considered that if mitigation outcomes came from outside the NDC, they would need to be accounted for by a corresponding adjustment, as this would ensure avoidance of double claiming while also providing opportunities to implement emission reduction projects regardless of whether the sectors are covered under NDCs. This would thus provide incentives to cover more sectors in NDCs as stipulated in the Paris Agreement.

[d.5] Some Parties considered a corresponding adjustment was not required in respect of Article 6.4 activities until the first transfer between national registries. Other Parties considered it applies from the issuance or first international transfer.

[d.6] Some Parties considered how to do a corresponding adjustment, including through the additions

and subtractions from an “accounting balance” or from a target that is adjusted to reflect the transfer and use of ITMOs.

[d.7] In relation to reporting corresponding adjustments, some Parties consider ongoing reporting on ITMO transfer/acquisition captured in registries would be needed. Some Parties referred only to Article 13, paragraph 7. Some Parties consider that participating Parties should report “ITMO-adjusted emissions” and show corresponding adjustments in the “ITMO accounting tables” for the year of transfer and for all relevant years covered by the NDC period, concluding with a compilation table in accordance with guidance under Article 13. Some Parties said that tools such as the international transaction log would be useful in tracking transfers in real time to ensure lags in the reporting cycle/timing of reporting do not result in adjustments being lost, thus enhancing the transparency of the entire accounting system.

[d.8] In relation to when a corresponding adjustment should be made, some Parties considered it had to be upon issuance of a mitigation outcome, others upon transfer, and some upon use of the ITMO. In relation to doing the corresponding adjustment at use of the ITMO, some Parties considered the corresponding adjustment should be on international transfer because if it were at use, a dependency between the transferring Party and the using Party would be created. Some Parties noted this would mean the transferring Party would not be able to correspondingly adjust until the using Party used the ITMO towards the NDC, which is outside the control of the transferring Party.

e. Aspects of promoting sustainable development

[e.1] Some Parties said that the principles in Article 6 relating to NDCs and sustainable development should not be limited by the facilitative nature of guidance on environmental integrity, transparency and accounting.

[e.2] Some Parties said that sustainable development should be promoted through active and protective means such as the authorization by the cooperating Parties and prevention of negative socio-economic impacts, and ensuring a manageable sustainable development transition.

[e.3] Some Parties said that cooperating Parties could enhance the promotion of sustainable development by adopting a comparable reporting format, while retaining the national prerogative to define sustainable development.

Annex III. Joint proposal by Brazil and the European Union

{Cooperative approaches}

Where cooperative approaches involve the use of internationally transferred mitigation outcomes to demonstrate achievement of ### under this Agreement, the participating Parties shall, in order to safeguard environmental integrity, apply robust accounting to ensure, inter alia, that double counting is avoided, consistent with guidance to be agreed by the CMA.

The use of internationally transferred mitigation outcomes to achieve ### under this Agreement shall be voluntary and subject to mutual authorization by the participating Parties.

The guidance in paragraph 1 shall ensure that double counting is avoided on the basis of a corresponding adjustment by both Parties for anthropogenic emissions by sources and/or removals by sinks covered by their ### under this Agreement.

{Mechanism Article [3ter]}

A mechanism to contribute to the mitigation of greenhouse gas emissions and to support sustainable development [in developing countries] is hereby established. This mechanism shall be under the authority and guidance of the CMA, supervised by a body designated by the CMA, and would aim to:

(a) Promote mitigation of greenhouse gas emissions [in developing country] Parties, while fostering sustainable development;

(b) Enhance ambition [by developing country Parties], by incentivizing supplementary voluntary mitigation of greenhouse gas emissions, beyond their ###;

- (c) Assist Parties with a ### that reflects an absolute target in relation to a base year to fulfil their ##, through the use of emission reductions from mitigation activities [in developing countries];
- (d) Incentivize and enable participation in mitigation of greenhouse gas emissions by public and private entities authorized by a Party.

The CMA shall adopt modalities and procedures for the above-mentioned mechanism, on the basis of:

- (a) Voluntary participation approved by each Party involved;
- (b) Real, measurable, verified and long-term benefits related to the mitigation of climate change;
- (c) Reductions in emissions that are additional to any that would otherwise occur, certified by operational entities to be designated by the supervisory body;

The CMA shall ensure that a share of the proceeds from the certification of emission reductions is used to cover administrative expenses as well as to assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.

Emission reductions resulting from this mechanism cannot be used to demonstrate achievement of the host Party's ##, if used by another Party to demonstrate achievement of its ##.

Decision text:

Requests the [APA] to recommend a draft decision on the guidance for cooperative approaches, for adoption by the CMA at its first session.

Requests the [APA] to recommend a draft decision on the modalities and procedures for the sustainable development mechanism under Article [3 ter], for adoption by the CMA, at its first session.

Affirms that the sustainable development mechanism under Article [3 ter] may be used to support greenhouse gas emissions mitigation, including in international aviation and maritime transportation.