Climate Action Tracker

Why Article 6 should increase climate action – not delay it

June 2025

CLIMATE ANALYTICS
NEW CLIMATE INSTITUTE
IESR Institute for Essential Services Reform

Why Article 6 should increase climate action – not delay it

How the Climate Action Tracker will treat Article 6 international carbon credits in its country assessments.

See Annex II for a detailed description of the Paris Agreement's Article 6 and its main elements

Article 6: a tool for climate action, not delay

The Paris Agreement sets clear expectations that each country's climate target – or NDC – will *"reflect its highest possible ambition"* and show *"a progression beyond the Party's then current nationally determined contribution"*, placing **ambition** at the core of international climate cooperation.

At the same time, the Agreement highlights the principle of **equity**, requiring that each government contribution *"reflect its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances"*.

Parties' pledged mitigation contributions will only be meaningful if they are of high **quality**, i.e. if they are transparent, offer demonstrably real, additional and permanent reductions, while contributing to sustainable development and environmental integrity.

In Article 6 of the Paris Agreement *"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"*.

Increasing ambition must then be at the very heart of cooperation under Article 6

The mechanism established under Article 6 is, to some extent, a legacy of the flexibility mechanisms under the Kyoto Protocol, which included Joint Implementation (JI), Emissions Trading (ET) and the Clean Development Mechanism (CDM). Under the CDM, emission reductions achieved through projects in developing countries could be used by developed countries – "Annex I Parties" – to meet their emission reduction obligations.

Unlike the Kyoto Protocol, which set emissions caps only for developed countries, the Paris Agreement brings both developed and developing countries together to achieve its long-term goal of limiting warming to 1.5°C. All mitigation-related provisions under the Paris Agreement – including cooperation under Article 6 – are constrained by this overarching objective, which is to be achieved by peaking global greenhouse gas emissions, reducing them rapidly, and achieving a balance between greenhouse gas emissions and carbon dioxide removals in the second half of this century.

Article 6 was agreed as a means to enhance climate action (ambition) through cooperation. However, early experience suggest that some countries are using its provisions to make up for a lack of domestic mitigation ambition, without providing clear information on the expected scale of credits to be bought, nor the longer-term implications for national emission trajectories. This becomes evident when governments with NDCs not aligned with 1.5°C domestic pathways seek to appear to increase ambition through the purchase of international carbon credits.

Instead of driving greater climate action, Article 6 risks becoming a loophole by enabling countries to delay, avoid or substitute domestic mitigation through the use of international carbon credits.

Unfortunately, overall rules developed under Article 6 do not introduce robust safeguards to ensure it drives actual mitigation (see Annex II). Article 6.2 allows for bilateral, decentralised cooperation with limited international oversight, raising concerns about transparency, accountability, and the integrity of transferred mitigation outcomes.

Rules on Article 6.4 put a higher bar on quality, but its credibility is at risk due to the large amount of CDM CERs[1] (Certified Emissions Reduction) – whose additionality is in question – to be carried over and the additionality of carbon credits to be potentially issued from countries with targets relative to a baseline.

Among the rules that govern Article 6, it is worth highlighting two in the context of this note. First, the need for a corresponding adjustment for any transfer of carbon credits, which translates into an effective increase in reported emissions by the selling country. Second, while Article 6.4 includes a requirement to cancel 2% of emission reductions for "overall mitigation in global emissions", this minimal share will not yield meaningful climate benefits.

The CAT has shown that the current 2030 NDCs, even if they were fully implemented, collectively put the world on a pathway to 2.6°C warming by 2100 – far above the Paris 1.5°C temperature limit. To meet the 1.5°C limit, global emissions must be halved by 2030 compared to 2019 levels.

Highlighting the risks of Article 6

Ambition

Cooperation based on Article 6 should result in higher overall emission reductions for all Parties engaged in it. However, when emissions are transferred between countries whose climate targets are not aligned with the 1.5°C temperature limit, this does not increase emission reductions globally – it merely shifts responsibility from one country to another. In other words, such cooperation is, at best,[2] a zero-sum game and possibly a net negative one in light of the issues regarding quality as listed above (i.e., credits need to offer demonstrably real, additional and permanent reductions, and contribute to sustainable development and environmental integrity).

For Article 6 to work as intended, countries must first demonstrate their highest possible domestic ambition before relying on the use of internationally transferred mitigation outcomes (ITMOs). This principle is not currently enforced by international rules.

Equity

The transfer of emission reductions from one country to another requires the country selling a carbon credit to another country to undertake a *corresponding adjustment* in its accounting. In CAT terms, this could mean that the country selling the credit accepts the transfer of a carbon credit to a purchasing country at the expense of its own rating. At the same time, the country purchasing the credit would, in effect, be purchasing an improvement to its CAT rating.

When a rich country purchases carbon credits from a poorer country, this will most likely imply the selling of low-hanging fruit reductions: the purchaser participates to reduce costs, while the transaction will make NDC achievement more expensive for the seller. But the result would be that the seller would have to make a "corresponding adjustment" to increase its own reported emissions. This therefore raises equity issues from the transfer of responsibility and 1.5°C alignment from the North to the South.

1 Some studies have also questioned the additionality of a large amount of CERs. See, for example, Cames, M., Harthan, R. O., Füssler, J., Lazarus, M., Lee, C. M., & Erickson, P. (2017). How additional is the Clean Development Mechanism? Analysis of the application of current tools and proposed alternatives (Climate Action, European Commission, Publication No. CLIMA.B.3/SERl2013/0026r). Berlin: Öko-Institut

2 Best case refers to all emission reductions being additional. Where emission reductions are not additional the transfer leads to an increase in emissions in the buying country thereby resulting in a net negative transaction which weakens global ambition

Quality

To ensure environmental integrity, emission reductions must contribute to sustainable development, be truly additional, permanent, not double counted and adhere to the highest standards of transparency, measurement and verification.

Twenty years of experience with the CDM have shown that developing high quality offset projects is extremely difficult.[3] For example, a major issue lies in the use of weak or inflated baselines, particularly for countries whose targets are set as reductions below business-as-usual (BAU) rather than as absolute emission targets. In some cases, this can result in the setting of NDC targets above current policy scenarios.

Many countries still have BAU-based targets and, as seen during the CDM era, this can lead to significant over-crediting, now on a much larger and more difficult to manage scale. On the other hand, transactions between countries with absolute targets may be subject to accounting problems and uncertainties emerging from the lack of clear trajectories towards their target.[4]

These risks are now magnified by the new rules that allow the transition of certain CDM activities to Article 6.4. This transition risks undermining global ambition, as credits may simply be used to meet, not exceed, NDCs. In the worst case, this could allow about 1 billion carbon credits entering NDC accounting by 2030.[5]

To put this into perspective, such a quantity is commensurate to the mitigation efforts of all developed countries that have signalled the purchasing of credits for 2030:[6] South Korea (~150 $MtCO_2e$ difference between current policies and NDC in 2030), Japan (~100 $MtCO_2e$), New Zealand (~20 $MtCO_2e$) and Australia (~20 $MtCO_2e$).

Climate Action Tracker assessments and the use of Article 6

The CAT assesses NDCs by separating domestic action from international components, but in many cases, the role of ITMOs remains unclear. The CAT is exploring ways to reflect the risks and challenges of the use of Article 6 into our country assessments, with a particular focus on the **ambition threshold**: the domestic component of an NDC must reflect the highest possible ambition before any use of ITMOs is considered. Countries should not rely on ITMOs to make up for weak domestic targets.

By assessing countries' use of Article 6 through this lens, we aim to clarify that ITMOs should play a **supporting** role in climate policy —domestic action which is aligned with 1.5°C pathways must come first, and Article 6 should enhance, not replace, urgent emissions reductions at home.

3 For example, analyses of the CDM shows than 85% of the projects and 73% of the carbon credits were likely not additional and often overestimated their impact. See https://climate.ec.europa.eu/system/files/2017-04/clean_dev_mechanism_en.pdf

4 Schneider, L. and A. Simmons. 2021. Implications for environmental integrity of carbon markets under Article 6 of the Paris Agreement: Averaging or multi-year accounting? Oeko Institut e.V. https://www.oeko.de/publikation/averaging-or-multi-year-accounting/

5 https://carbonmarketwatch.org/2025/04/10/first-wave-of-article-6-carbon-credits-misfire-spectacularly/

6 Calculated as the average of the difference between current policy projections (min and max, where available) and NDC target in 2030 based on CAT country assessments of those that have signalled plans to purchase carbon credits, except Switzerland where the gap between CPP and NDC was not significant.

From the buyer's perspective – risk of inadequate ambition and transparency

For the CAT, the "highest possible domestic ambition" for developed countries is defined by our modelled domestic pathways (MDPs),[7] setting a benchmark for the minimum level of ambition that developed countries should achieve through their own domestic actions to ensure the Paris Agreement's 1.5°C limit is kept.

Switzerland, for instance, aims to cut emissions by at least 65% below 1990 levels by 2035, right at the threshold of what a 1.5°C target would be (according to our MDPs). However, Switzerland plans to meet an unspecified part of this target using ITMOs. The CAT assessment for Switzerland, therefore, considers **only** the domestic portion of Switzerland's target (assumed here to be 60–67%) and rates it against our MDPs.

This approach ensures that if a country relies heavily on international credits instead of cutting emissions at home, its NDC will receive a lower rating when compared to what would be needed for a 1.5°C-aligned modelled domestic pathway. In practice, this penalises countries for insufficient domestic ambition and highlights the importance of prioritising real, in-country emission reductions over offsetting through ITMOs.

The **EU** is currently considering allowing the use of international carbon credits under Article 6 when it sets its 2040 climate target, which would effectively lower its level of ambition. Current EU climate laws require that both the 2030 target and the 2050 net zero target be achieved without the use of carbon credits.[8]

The European Scientific Advisory Board on Climate Change (ESABCC) recommends excluding these carbon credits from the 2040 target. While the European Commission has proposed a 90% reduction by 2040 without the use of carbon credits, the ESABCC recommends an even higher target of 90–95%, also without carbon credits. Achieving less than a 90% reduction and relying on carbon credits to reach the target would represent a decrease in ambition, contrary to Article 6's goal of increasing ambition. If the EU chooses to use Article 6, it should be to go beyond the 90–95% reduction, not to replace domestic action.

Meanwhile, other countries like Australia, Japan, and New Zealand have not clarified how much they plan to rely on ITMOs, nor disclosed which projects they intend to use or how mitigation benefits will be shared between host and buyer. New Zealand could cover up to two thirds of its domestic target by 2030.[9] Lack of such transparency exacerbates concerns over the true role and impact of ITMOs.

---

7 We use IPCC AR6 cost-effective modelled emission pathways that in general apply least cost abatement options within regionally differentiated circumstances and assumptions. This perspective focusses on emissions reduction only and, in general, not on who should pay for the reductions, an issue which is covered in the following section.

8 In a recent blog, we have noted that "The EU rightly abandoned the use of international credits in 2021 after it flooded the EU Emissions Trading Scheme (EU ETS) with cheap, low-quality credits, crashing prices, weakening incentives to reduce emissions and reducing the auctioning revenues." See https://climateactiontracker.org/blog/eu-missing-in-action/

9 https://environment.govt.nz/what-government-is-doing/international-action/about-the-paris-agreement/new-zealand-and-international-carbon-markets/#:~:text=Read%20more%20about%20New%20Zealand's,ambitious%20scenario%20for%20domestic%20action.

From the seller's perspective – low-hanging fruit and non-additionality

The CAT continues to encourage countries to strive for NDCs that reflect their "highest possible ambition". But without clear rules defining exactly what that constitutes for developing countries, they risk selling emission reductions that are relatively inexpensive or would have occurred anyway. This includes so-called "low-hanging fruit" – easy and cheap reductions that, once sold, may leave seller countries with fewer and more costly options to increase their own mitigation ambition.

An example can be seen in one of the first projects under Article 6.2: the Swiss government's support of the roll-out of electric buses in Bangkok.[10] In many countries, electric buses are already more cost-effective than diesel buses and have become the standard for new fleets. This Swiss-Thai cooperation appears to target the "low-hanging fruit" of mitigation, rather than facilitating access to more challenging and transformative mitigation options.

Additionally, under Article 6.2, there is no international oversight over whether mitigation activities are truly additional. Some sellers even seek to include outcomes from non-market schemes like REDD+ under Article 6, despite its questionable environmental integrity. The sale of non-additional or low-integrity credits undermines climate ambition on both sides.

Generally, carbon markets need to fulfil several fundamental requirements to effectively contribute to climate action, and experience shows that standards continue to be too weak.

Brazil's November 2024 NDC indicates plans to use Article 6, allowing the sale of emission reductions achieved between 59% and 67% below 2005 levels by 2035. This approach could undermine Brazil's long-term climate goals, as it might involve selling off emission reductions that are easy or less expensive for it to achieve. By transferring these "low-hanging fruit" credits abroad, Brazil could limit its own ability to pursue more ambitious climate action in the future.

Article 6 and climate finance

Article 9 of the Paris Agreement requires developed countries to provide financial resources to assist developing countries meet their climate obligations. These obligations include preparing ambitious NDCs, implementing adaptation measures, and fulfilling reporting requirements. Climate finance is not just a form of cooperation, it is a legal obligation grounded in the principles of responsibility and equity.

Finance generated through the purchase of ITMOs under Article 6 should not be counted as climate finance under Article 9. ITMO transactions are designed to help the buying country (e.g., a developed country) achieve its targets, while the selling country (e.g., a developing country) must make a corresponding adjustment that effectively makes the achievement of its target more difficult. Furthermore, analyses of the voluntary carbon markets show that most of the revenues go to project developers and intermediaries based in high-income countries, with only a small fraction reaching the host countries. A similar pattern is expected under Article 6, where high transaction costs – such as those for consultancy and monitoring, reporting, and verification (MRV) services – are likely to further limit financial benefits for developing countries. This is the opposite of what climate finance is supposed to do.

Many developing countries express the need for climate finance by setting conditional targets, subject to the provision of finance and other support. For example, Bangladesh has set an unconditional target to reduce emissions by 28 $MtCO_2e$ (6.7%) below BAU in 2030 and a much stronger conditional target of 62 $MtCO_2e$ (15%) below BAU in 2030 – if finance is provided. Therefore, financial flows from developed to developing countries should first support increased ambition in the Global South, rather than prioritising transactions that primarily benefit developed countries' targets.

The importance of climate finance in raising ambition is reflected in the CAT, which considers the rating of finance vis-à-vis the rating of the fair share, and averages the best of these two with the rating of modelled domestic pathways (see Annex I).

10 See https://www.climatechangenews.com/2024/01/09/first-ever-paris-agreement-offsets-face-integrity-questions/

Our policy analysis stresses throughout the opportunity to increase climate finance whenever national efforts are not in line with a 1.5°C scenario. In other words, the provision of climate finance is a means to increase ambition and, therefore, improve the rating of targets, as illustrated in Figure 1.

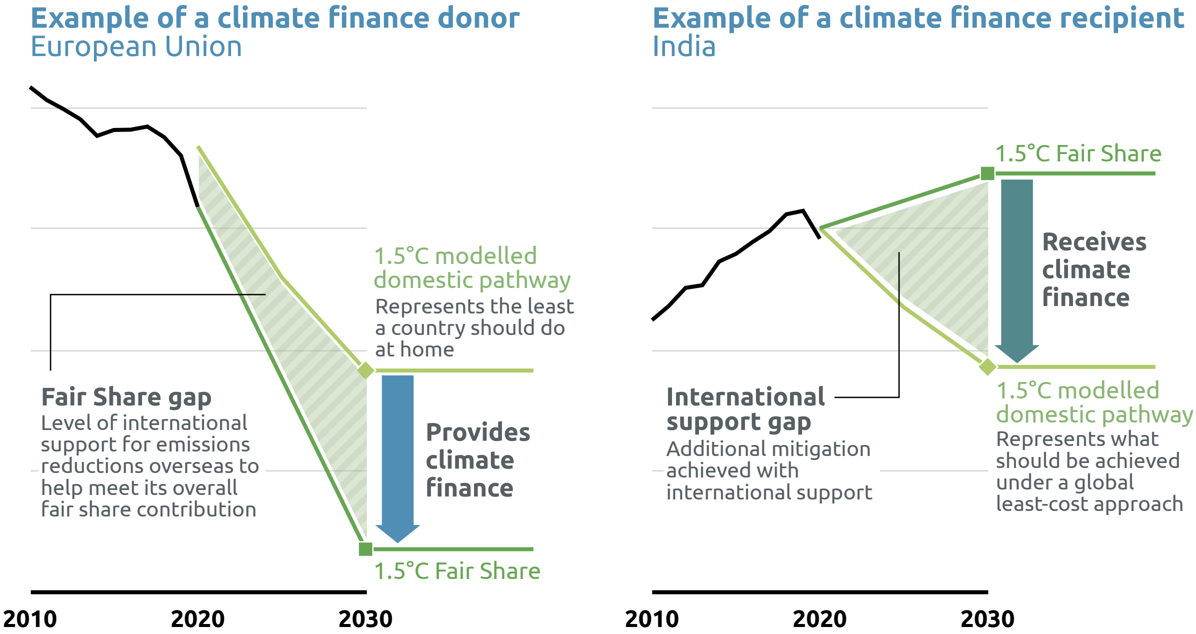


Figure 1: The importance of climate finance for raising ambition

Conclusion

Cooperation through the use of carbon credits and climate finance should aim at increasing the climate action of all Parties, delivering real and high-quality emission reductions, and avoiding the transfer of responsibilities from the north to the south.

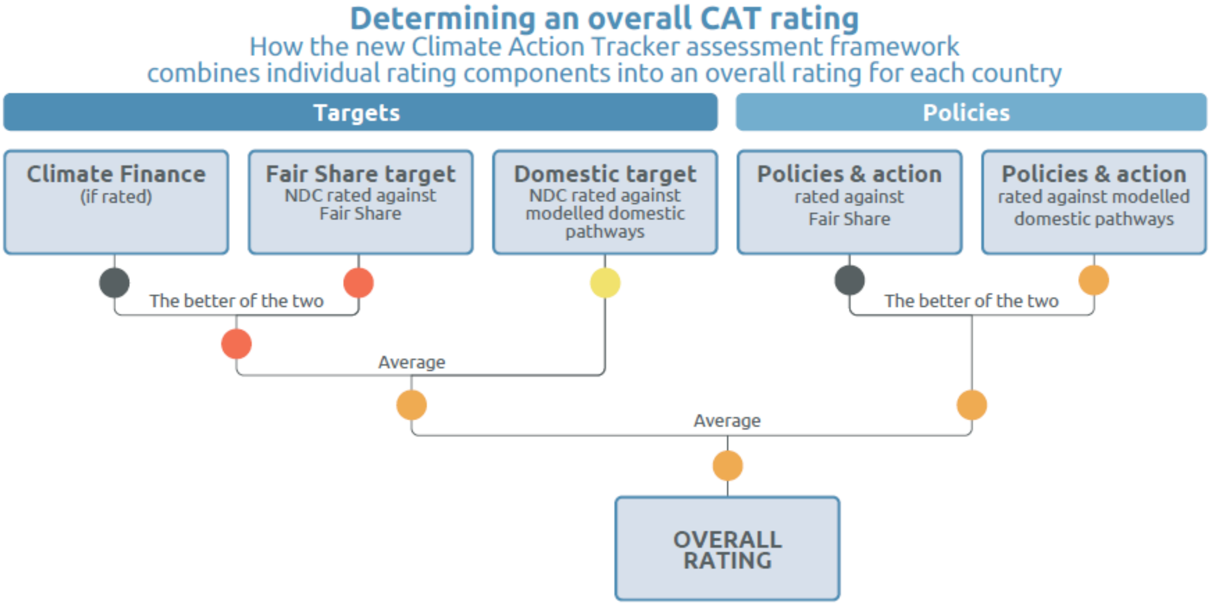
For Article 6 to become an effective means of cooperation, safeguards to address the issues identified in this paper should be incorporated together with a commitment by governments to enhance ambition and transparency. The Climate Action Tracker is continuously evolving its methodology to reflect this reality, encouraging countries to focus on domestic mitigation and to use ITMOs only as a supplement – not a substitute – for real action. In their NDCs, countries should clearly outline the following information as it is crucial for a robust assessments of global climate ambition:[11]

- Their intention to participate in Article 6 as buyers or sellers, and for what purpose. This information should specify whether they intend to use ITMOs generated through Article 6.2 or 6.4 and, if relevant, 6.4 ER Mitigation Contribution Units.
- Targets with and without use of ITMOs, i.e. the expected scale of ITMO use. Selling countries with conditional targets should specify what role Article 6 plays in their strategy.
- How their strategy on Article 6 is raising the ambition of their NDCs and is in line with their long-term strategy.
- For buyer countries, what are the measures they have put in place to prevent labelling climate finance and ITMOs the same.
- Communicate which types of projects do they want to engage with. They must demonstrate why they think these projects contribute to sustainable development and what types of consultations took place with local stakeholders.
- Details on the benefit-sharing arrangements in place.

11 See also: Johnstone, I., Schneider, L., Michaelowa, A., Grandpré, J., Kuci, S., Ahonen, H., Probst, B.S., Lezak, S., Hale,T., La Hoz Theuer, S., Omukuti, J., Reséndiz, J.L., Fankhauser, S., Abebe, S., and Hepburn, C. Oxford Principles for Responsible Engagement with Article 6 (2025). Oxford: Smith School of Enterprise and the Environment, University of Oxford.

Annex

Annex I: The CAT's rating methodology



Annex II: Understanding the fine print: Article 6 explained

The Paris Agreement defines a temperature limit which needs recurring translation into emission reduction targets to reflect recent developments and new scientific knowledge.

The Paris Agreement requires all countries to submit national climate action plans, known as nationally determined contributions (NDCs). In acknowledgment that the set of intended NDCs presented prior to adoption of the Paris Agreement would not be consistent with the Agreement's own temperature limitation goal, the Agreement includes a number of "ambition raising" measures, most centrally a five-year cycle, for ratcheting up NDC ambition.

The Paris Agreement provides that each successive contribution will represent a country's "highest possible ambition" and go "beyond" the previous NDC (Article 4.3). Despite this five-year cycle, countries can update and improve their NDCs at any time (Article 4.11).

Article 6 of the Paris Agreement addresses and enables the use of mitigation outcomes achieved in other countries toward domestic NDC achievement.

It acknowledges that countries 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"* (UNFCCC, 2015 Article 6.1), and sets key principles for the transfer and use of emission reductions toward NDCs:

- Parties are to promote sustainable development, ensure environmental integrity, apply robust accounting to ensure the avoidance of double counting, and ensure transparency, including in governance.
- The use of transferred mitigation outcomes toward NDCs is to be voluntary and authorised by participating Parties.

Article 6 encompasses two different approaches to cooperation in connection with the transfer of mitigation outcomes:

- decentralised cooperative approaches under Article 6.2
- use of the centralised crediting mechanism established under Article 6.4

It took close to a decade for Parties to the Paris Agreement to finalise guidance and rules for the operationalisation of these two elements of Article 6. It was not until COP26 in Glasgow (2021) that the first set of Article 6 rules were finally agreed and not until COP29 in Baku (2024) that these rules were fully elaborated and finalised.

Article 6.2 guidance agreed in Glasgow establishes an accounting framework for international transferred mitigation outcomes (ITMOs), including authorised Article 6.4 emission reductions transferred under Article 6.2 rules. Under Article 6, countries may mitigation outcomes for three possible uses:

- use towards an NDC,
- use for other international mitigation purposes – e.g. towards international aviation obligations under ICAO's carbon offsetting scheme, CORSIA,
- use for "other purposes"

Article 6.2 is now operational. Several initial reports have been submitted providing details of Parties' cooperative approaches.

The Paris Agreement Crediting Mechanism, established under Article 6.4, is moving toward full operation, under centralised oversight by the PACM Supervisory Body. It was agreed in Sharm El-Sheikh that under Article 6.4 two types of units may be issued: 1) authorised A6.4 emission reductions or "A6.4ERs"; and 2) non-authorised credits referred to as "mitigation contribution units" or "MCUs".

At issuance, Article 6.4 directs a minimum of 2% of all issued Article 6.4 units to a cancellation account toward delivery of an overall mitigation in global emissions (OMGE) and directs 5% of issued units to an Adaptation Fund account representing a share of proceeds (SOP). These percentages are paired with a corresponding adjustment for authorised A6,4ERs. These same elements (contributions to the Adaptation Fund and cancellations of correspondingly adjusted units toward OMGE) are strongly encouraged for application under Article 6.2, but not required (see decision 2/CMA.3 paras 37-40).

Existing Kyoto Protocol Clean Development Mechanism (CDM) projects are permitted a window of opportunity to transition into the Paris Agreement's Article 6.4 mechanism and be registered as 6.4 activities. These projects can continue to operate and issue credits under Article 6.4 if they meet several requirements: the activities must have been registered from 2013 on, project participants must have requested transition by 31 December 2023, host Parties must approve this transition by 31 December 2025, and activities must comply with the Paris Agreement's updated rules and standards set for Article 6.4 activities from 31 December 2025 onwards.

Parties are also permitted to use CERs issued from projects registered on or after 1 January 2013 toward first or first updated NDCs.

The provisions agreed on CDM transition will dilute the ambition of first NDCs and

diminish the credibility of the new mechanism. Use of old credits will displace new reductions that would otherwise be undertaken to meet NDCs. Transitioning CDM activities will issue credits under the Paris Agreement using old CDM methodologies through 2025, with baselines that are less stringent than those required of newly-initiated activities under Article 6.4 rules.

The rules and guidance agreed so far for Article 6 implementation have failed to introduce the necessary safeguards to ensure that Article 6 operates as an instrument for raising both domestic and global ambition. Article 6.2 lacks quality criteria for internationally transferred mitigation outcomes, other than the requirement that participating Parties ensure environmental integrity, including through corresponding adjustments to avoid double counting. Oversight will take place largely through transparency requirements, with periodic reporting and technical expert reviews of submitted reports for consistency with reporting obligations.

Article 6.4 sets a higher standard for quality, with the issuance of important standards for baselines, additionality and leakage standards by the PACM Supervisory Body, the mandatory application of a Sustainable Development Tool and a Risk Assessment Tool which has yet to be finalised. Nevertheless, the potential use of pre-2021 CERs toward first NDCs, the transition of existing CDM activities into the new Article 6.4 system, and the dubious quality of certain mitigation outcomes presented under Article 6.2 as ITMOs have already raised concerns about the market's near-term credibility.

The extended period of time it has taken to agree rules and guidance for Article 6 reflects fundamental disagreements across Parties on how strict or permissive the rules for the generation and use of ITMOs should be. Fears remain that Article 6 has potential to become a major loophole, distorting or undermining climate ambition.

Authors

Climate Analytics

Claudio Forner
Sofia Gonzales-Zuñiga
Bill Hare

NewClimate Institute

Juliette de Grandpré
Niklas Höhne

Editing
Cindy Baxter

Design
Designers For Climate Studios

Acknowledgments
We would like to thank Lambert Schneider (Öko Institut) and M.J. Mace (Climate Analytics) for their review and input through the process.

We would also like to thank the wider CAT team for their work on country assessments, which contributed to this briefing.

CAT The Consortium

The Climate Action Tracker (CAT) is an independent scientific analysis produced by two research organisations tracking climate action since 2009. We track progress towards the globally agreed aim of holding warming well below 2°C, and pursuing efforts to limit warming to 1.5°C.

climateactiontracker.org

Climate Analytics is a non-profit institute leading research on climate science and policy in relation to the 1.5°C limit in the Paris Agreement. It has offices in Germany, the United States, Togo, Australia, Nepal and Trinidad and Tobago.

climateanalytics.org

NewClimate Institute is an independent non-profit organisation that develops solutions to tackle climate change and drives their implementation worldwide. Through research, policy advice and knowledge sharing, we aim to raise the ambition for climate action and support sustainable development.

newclimate.org

Institute for Essential Services Reform (IESR) is an energy and environment focused think-tank that aims to accelerate the energy transition by supporting sustainable mobility, green economy, and well designed climate change policy. IESR has experience mainly in Indonesia, but is expanding its focus to work in other regions and countries.

iesr.or.id