

A6.4-SB007-AA-A16

Concept note

Detailed regulatory elements for the transition of CDM activities to the Article 6.4 mechanism

Version 01.0



United Nations
Framework Convention on
Climate Change

1. Procedural background

1. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), at its third session, adopted rules, modalities and procedures (RMPs) for the mechanism established by Article 6, paragraph 4, of the Paris Agreement (the Article 6.4 mechanism).¹ Chapter XI.A of the RMPs contains provisions that allow for the transition of project activities and programmes of activities (PoAs) registered under the clean development mechanism (CDM) under Article 12 of the Kyoto Protocol or listed as provisional as per the temporary measures adopted by the Executive Board of the CDM² (hereinafter referred to as provisional requests) to the Article 6.4 mechanism.
2. The CMA, at its fourth session, elaborated key conditions and processes for such transition (hereinafter referred to as the elaboration of the RMPs).³ At the same session, the CMA also requested⁴ the Supervisory Body for the Article 6.4 mechanism to facilitate the tasks related to the transition of CDM activities to the Article 6.4 mechanism by:
 - (a) Developing and operationalizing a procedure for requesting transition, which includes relevant forms, by no later than June 2023;
 - (b) Developing and operationalizing the transition process and reporting back to the CMA at its fifth session.
3. The Supervisory Body, at its fifth meeting, agreed to postpone developing provisions specific to the transition of afforestation and reforestation CDM activities until the CMA provides guidance on activities involving removals under the Article 6.4 mechanism.
4. The Supervisory Body, at its sixth meeting, adopted the “Standard for the transition of CDM activities to the Article 6.4 mechanism” (transition standard)⁵ and the “Procedure for the transition of CDM activities to the Article 6.4 mechanism” (transition procedure),⁶ and agreed to make them effective from 1 January 2024,⁷ subject to the availability of detailed regulatory elements to enable the operationalization of the transition process referred to in the transition standard and the transition procedure, to be developed by the Supervisory Body. These detailed regulatory elements include:
 - (a) A decision on identifying projects with a risk of non-permanence;

¹ Decision 3/CMA.3, annex, as contained in document FCCC/PA/CMA/2021/10/Add.1 available at: https://unfccc.int/sites/default/files/resource/cma2021_10_add1_adv.pdf#page=25.

² At its 108th meeting (see paragraphs 7–8 of the meeting report) and later clarified in the document entitled “Clarification: Regulatory requirements under temporary measures for post-2020 cases” available at: http://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20220314132358671/Reg_Clar03v02.pdf.

³ Decision 7/CMA.4, annex I, chapter I, in document FCCC/PA/CMA/2022/10/Add.2 (Advance Version) available at: https://unfccc.int/sites/default/files/resource/cma2022_10a02_adv.pdf#page=33.

⁴ Decision 7/CMA.4, paragraph 23.

⁵ A6.4-SB006-A01, available at: <https://unfccc.int/sites/default/files/resource/a64-sb006-a01.pdf>

⁶ A6.4-SB006-A02 available at: <https://unfccc.int/sites/default/files/resource/a64-sb006-a02.pdf>

⁷ With the exception of the provisions on the submission of requests for transition, which was made effective on 30 June 2023 in accordance with the agreement of the Supervisory Body at its fifth meeting.

- (b) Approval by the Supervisory Body of the addendum, detailing the information to be supplied, including the templates for:
 - (i) A summary of analysis of non-permanence risks for activities determined to be at risk of non-permanence;
 - (ii) A summary of the analysis of environmental and social impacts;
 - (iii) A confirmation that the activities continue to apply the CDM methodology currently applied to the project design document (PDD), or the programme of activities design document (PoA-DD) and component project activity design documents (CPA-DDs), with an associated attestation of the project participants.
5. The Supervisory Body requested the secretariat to present the draft detailed regulatory elements referred to in paragraph 4 above at its seventh meeting for its consideration.

2. Purpose

6. The purpose of developing additional regulatory elements for the transition of CDM activities to the Article 6.4 mechanism and finalizing provisional requests under the Article 6.4 mechanism is to operationalize the process for such transition and finalization pursuant to the CMA decisions referred to in paragraphs 1–2 above.

3. Key issues and proposed solutions

3.1. Non-permanence risk

3.1.1. Identification of activity types having non-permanence risk

7. Non-permanence risks arise in activities where there are possibilities for ‘reversal’ of the emission reductions or removals achieved. Typically, activities that involve carbon dioxide storage of some kind may potentially face a situation of reversal, whereas under most other circumstances such risks are minimal.
8. Non-permanence risks are closely linked to a definition of ‘permanence period’. There is no universally agreed value for permanence period. Voluntary standard setters and policy makers have specified minimum periods of storage ranging from 25 to 100 years as a permanence period for practical purposes.⁸
9. The above consideration of permanence has been in relation to durability of storage of carbon dioxide. However, in a literature and under the CDM, whether a mitigation activity has achieved emission reductions after deducting any project or leakage emissions at any given point in the crediting period has also been considered in relation to permanence of emission reductions of an activity as detailed below:
- (a) Technically, a reversal of net emission reductions by an activity occurs if, at any point in the future, the rate of greenhouse gas (GHG) emissions from the

⁸ See pages 65-69 of A6.4-SB006-AA-A09 “Information note: Compilation of the public inputs on removal activities under the Article 6.4 mechanism”, available at: <https://unfccc.int/event/Supervisory-Body-6> and The State of Carbon Dioxide Removal (2023) available at: <https://www.stateofcdr.org/resources>.

implemented activity accelerates so that it is higher than what would have occurred in the absence of the activity.⁹ For example, a project implements a solar electricity generation system to replace carbon-intensive grid electricity; however, due to the faulty equipment, a backup diesel generation system is used for an extended period of time, leading to a “reversal” of any emission reductions achieved until that point in time. It should be noted that the monitoring plan of the activity would record data on any use of fossil fuel as backup or otherwise, and the calculation of emission reductions takes into account project and leakage emissions on account of use of fossil fuel or electricity. The CDM Executive Board identified methodologies¹⁰ where there are theoretical possibilities for ‘negative emission reductions’ (i.e. during a given period, aggregate project and leakage emissions outweigh the baseline emissions, for example, due to the use of fossil fuel for co-firing or as a back up source) to occur in an activity during its operation, and addressed it by requiring sequential monitoring reports and issuance requests;¹¹

- (b) Further, the CDM Executive Board and its Methodologies Panel have considered and addressed the permanence issue during the methodology approval process. For example, the Board, at its forty-seventh meeting, considered the issue of permanence in relation to the proposed new methodologies NM0267 “Shuixi Gou Coal Field Fire Extinguishing Project” and NM0297 “Carbon dioxide and methane emissions avoidance from Block-C, Central Kalimantan”, concluded that the ‘permanence’ of GHG emission reductions cannot be ensured with these methodologies, and consequently rejected them. With these proposed methodologies, although the activity would extinguish and prevent the uncontrolled burning of coal in underground coal mine fires, there was no guarantee that fires can not resume if the underground coal seam is exposed to oxygen due to equipment failure. Similarly, it was considered that peatland fires are likely to start if the management system established under the activity that is intended to prevent, detect and extinguish the fires stops operating.

10. Furthermore, in a submission responding to the call for input “Structured public consultation: Requirements for the development and assessment of mechanism methodologies”,¹² a stakeholder referred to the work of the Carbon Credit Quality

⁹ See <https://www.offsetguide.org/high-quality-offsets/permanence/>.

¹⁰ Identified methodologies include (a) ACM0005 Increasing the blend in cement production; (b) ACM0006 Consolidated methodology for electricity and heat generation from biomass; (c) ACM0017 Production of biodiesel for use as fuel; (d) ACM0018 Electricity generation from biomass residues in power-only plants; (e) ACM0020 Co-firing of biomass residues for heat generation and/or electricity generation in grid connected power plants; (f) ACM0022 Alternative waste treatment processes; (g) AM0036 Fuel switch from fossil fuels to biomass residues in heat generation equipment; (h) AM0057 Avoided emissions from biomass wastes through use as feed stock in pulp and paper, cardboard, fibreboard or bio-oil production; (i) AM0061 Methodology for rehabilitation and/or energy efficiency improvement in existing power plants; (j) AM0094 Distribution of biomass based stove and/or heater for household or institutional use; (k) AM0108 Interconnection between electricity systems for energy exchange;

¹¹ See “CDM activity cycle procedure for programmes of activities” (ver. 03.0), paragraph 230(c) and appendix 3, available at: https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20210921110723406/pc_proc02_v03.0.pdf.

¹² Available at: <https://unfccc.int/process-and-meetings/the-paris-agreement/article-64-mechanism/calls-for-input/sb004-requirements-methodologies>.

Initiative¹³ and other literature, and noted that “Many cookstove activities...aim to reduce forest degradation/deforestation levels and bear non-permanence risks”, “Credited emission reductions entail sequestration in natural ecosystems that are vulnerable to various reversal risks”, “Cookstove project developers (Verra, and Gold Standard and the CDM) do not need to contribute to a buffer pool...[and] do not have approaches for accounting and compensating for reversals [or] approaches for avoiding or reducing non-permanence risks”.¹⁴ Another submission¹⁵ received in response to the “Call for input 2023 - structured public consultation: Further input - Requirements for the development and assessment of mechanism methodologies”¹⁶ has stated that introducing a requirement to track the biomass saved by cookstove project activities would be impractical.

11. Table 1 includes an analysis of non-permanence risks for different mitigation activity types drawn from the reference referred in paragraph 10 above.

Table 1. Non-permanence risk of activity types

Mitigation activity type	Non-permanence risk	Example activities	Relevance for transitioning CDM activities
Destruction of non-CO ₂ gases	No risk: No reservoir involved. The destruction cannot be physically reversed.	HFC-23 destruction from HCFC-22 production	-
Avoidance of formation of non-CO ₂ gases, without effecting the amount of carbon stored in reservoirs	No risk: No reservoir involved. The process cannot be physically reversed.	Reducing CH ₄ emissions from rice cultivation, ruminant livestock or organic waste diversion	-
Reducing demand for fossil fuels	No material risk within time horizon relevant for avoiding dangerous climate change (except for possible lock-in effects in the case of activities that lead to a long-term increase in energy or feedstock demand).	Adoption of renewable energy; energy efficiency measures	-

¹³ Evaluations on non-permanence risks conducted by the Carbon Credit Quality Initiative (CCQI) are available at:

<https://carboncreditquality.org/download/Assessments/3.1%20Efficient%20cookstoves%20%2831%20January%202023%29.pdf>.

¹⁴ Inputs from Carbon Market Watch, available at:

https://unfccc.int/sites/default/files/resource/Methodologies_requirements_input_CMW.pdf.

¹⁵ Inputs from Clean Cooking and Climate Consortium, available at:

https://unfccc.int/sites/default/files/resource/SB006_call_for_input%20on%20meth_Clean%20Cooking%20and%20Climate%20Consortium.pdf

¹⁶ <https://unfccc.int/process-and-meetings/the-paris-agreement/article-64-mechanism/calls-for-input/call-for-input-2023-structured-public-consultation-further-input-requirements-for-the-development>

Reducing demand for non-renewable biomass (thereby reducing forest degradation)	Material risks: natural disturbance risks and anthropogenic factors.	Efficient cookstove projects	Further discussed below
Enhancing, preserving, or slowing depletion of terrestrial carbon reservoirs	Material risks: The size of the risk depends on spatial scale, how underlying drivers are addressed, and stability of the reservoir(s) affected by the mitigation activity.	Afforestation/reforestation; improved forest management; avoided deforestation/conversion; soil carbon enhancements; peatland preservation or “rewetting”; etc.	The Supervisory Body, at its fifth meeting, agreed to postpone developing provisions specific to the transition of afforestation and reforestation CDM activities
Storing carbon in geologic reservoirs	Material risks: The size of the risks mainly depends on reservoir stability.	Carbon capture and storage (CCS BECCS, DACCS, or other)	No
Preventing or extinguishing accidental uncontrolled burning of fossil fuels	Material risks: The size of the risks mainly depends on reservoir stability.	Extinguishing or preventing ignition of fires at waste coal piles	No (no registered CDM activities of this type exist)
Preventing or slowing exploitation of fossil fuel reserves	Material risks: If the protection measure is discontinued, the reservoir may be depleted.	Protecting an oil field from being extracted	No (no registered CDM activities of this type exist)

Source: Carbon Credit Quality Initiative (cited under footnote 13 of this document), modified to include column titled “Relevance for transitioning CDM activities”

12. While Table 1 covers carbon dioxide removal (CDR) and carbon capture and storage (CCS) involving biological storage and geochemical storage of carbon dioxide, carbon storage in products may also need to be considered in relation to permanence.
13. Carbon capture and utilisation (CCU) is a set of industrial methods for the chemical capture of carbon dioxide and its conversion into products. These products can include carbonated drinks, fuels, plastics and aggregates. Many carbon-based products do not constitute durable storage. However, construction materials and biochar (a carbon-rich material produced by heating biomass in an oxygen-limited environment) can store carbon for decades or more. These carbon-based products can be made from conversion of harvested biomass (in the cases of biochar and wood in construction), from concentrated carbon dioxide streams or even from carbon dioxide from ambient air (in the case of aggregates such as cement concrete).
14. However, there is no CDM methodology that involve CDR, CCS or CCU. Therefore there has never been a registered CDM activity deploying any of these technologies. Consequently, non-permanence risk relating to these technologies is not relevant to this document.
15. Concerning cookstove projects, the following aspects may merit consideration:

- (a) Only a portion of the biomass saved by the project, that is a fraction of non-renewable biomass (fNRB), is credited while the portion that is considered renewable (default value of 0.7 is specified in the methodologies) is not credited. fNRB accounts for the balance between wood fuel extraction from forests and regeneration. In other words, by applying an fNRB value, emission reductions are only created from the biomass that would not have regrown in the absence of the project;
- (b) In addition, avoided methane and nitrous oxide emissions in the case of clean cooking projects typically account for a tenth of emission reductions estimated and are not subject to permanence issues;
- (c) Further, leakage requirements in cookstove methodologies require surveys to be undertaken to check if the woody biomass saved by the project is utilized by non-project users; in such cases the emission reductions are to be discounted accordingly. As an alternative to the survey, a 5 per cent default discount is also provided in the methodology to account for such leakage emissions. It is stated in the relevant methodologies that “Leakage of non-renewable woody biomass saved by the project [shall be] estimated based on surveys of users and areas from which biomass is sourced (90/30 precision for samples)...Alternatively a net to gross adjustment factor of 0.95 [shall be used] to account for leakages, in which case surveys are not required”;¹⁷
- (d) Contribution to a buffer pool¹⁸ as a recourse to permanence issue is referred in the submission cited under paragraph 10 above. Such an approach seems to have many practical limitations:
 - (i) Short crediting periods of transitioned projects relative to permanence periods discussed in paragraph 8 above pose complex operational issues (e.g. which entity will undertake monitoring and by what means following the end of crediting period and who will assume the responsibility to manage the buffer pool and compensate for reversals?);
 - (ii) Wood fuel sources for cooking, especially for charcoal making, may be geographically dispersed and may change over time, making it difficult to identify the sources precisely. Moreover, other drivers such as agricultural land expansion may have greater influence on forest loss;
 - (iii) Requiring the project participants to be responsible for the entire portion of the wood saved (i.e. both fNRB and RB portions), may imply that fNRB can be disregarded for the emission reduction estimates, which may potentially conflict with the requirements on removals under the Article 6.4 mechanism.

¹⁷ AMS-I.E.: Switch from non-renewable biomass for thermal applications by the user (version 13.0), available at: <https://cdm.unfccc.int/methodologies/DB/JP9J7XDIJ3298CLGZ1279ZMB2Y4NPQ> and AMS-II.G.: Energy efficiency measures in thermal applications of non-renewable biomass (version 13.0), available at: <https://cdm.unfccc.int/methodologies/DB/GNFWB3Y6GM4WPXFRR2SXKS9XR908IO>.

¹⁸ Current practice of standard setting bodies is to require a contribution of 15-20% of issued credits to a common buffer pool.

3.1.2. Addressing non-permanence risk

16. The Supervisory Body may wish to consider the following possible measures:
- (a) For all transitioning CDM activities, the activity participants shall assess if the use of fossil fuel for co-firing or as a backup fuel is plausible, and whether existing monitoring plans of the activities address this aspect;
 - (b) For the transitioning CDM activities applying methodologies listed under footnote 10, the activity participants shall assess all the monitoring reports of the activities beginning from the start date of the activities, to check any accrual of net negative emission reductions;
 - (c) For the transition of cookstove CDM activities that combust woody biomass (fuelwood or charcoal):
 - (i) Ensure that the fNRB value applied is reliable and conservative and based on the latest data and information and the project participants shall demonstrate that it is reliable and conservative;
 - (ii) If the current 5 per cent discount on leakage referred in paragraph 12(c) above is deemed not sufficient,¹⁹ choose a more appropriate value [x].

3.2. Environmental and social impacts

17. The transition standard requires transitioning CDM activities to undergo an analysis of the environmental and social impacts and sustainable development benefits of their operation, and provide a summary of the analysis and a monitoring plan of such impacts and planned remedial measures of negative impacts, if any, during the operation of the activity in accordance with the Article 6.4 mechanism sustainable development tool (A6.4 SD tool). If this tool is not available at the time of submission of additional documentation to the secretariat to initiate the processing of the transition request in accordance with the transition procedure, the sustainable development co-benefits tool developed under the CDM shall be followed for the same purpose.
18. The Supervisory Body is currently developing the A6.4 SD tool with a view to adopting it in early 2024. Once adopted, the Supervisory Body should provide guidance on how to apply the A6.4 SD tool to transitioning CDM activities, at transition and/or after transition, based on the content of the A6.4 SD tool.

3.3. Compliance with applied methodology

19. In accordance with paragraph 9 of the transition procedure, for transitioning CDM activities that continue applying the currently applied CDM methodology at transition in accordance with paragraph 73(d) of decision 3/CMA.3, the transition request is to be published on the UNFCCC website together with the link to the project information page of the CDM activity on the UNFCCC CDM website, which displays the registered PDD, or PoA-DD and CPA-DDs, under the CDM.

¹⁹ 5 per cent discount was based on expert judgement by the CDM Executive Board following the recommendation of the Small-Scale CDM Working Group.

20. In accordance with paragraph 17 of the transition procedure, the project participants of transitioning CDM activities that continue applying the currently applied CDM methodology at transition shall submit an addendum to the PDD, or PoA-DD and CPA-DDs, to attest that the CDM project activity, or PoA and CPAs therein, have been implemented in accordance with the registered PDD, or PoA-DD and CPA-DDs, as well as to demonstrate the compliance with additional requirements for registration under the Article 6.4 mechanism in accordance with the relevant provisions in the transition standard. The same paragraph further states that, with the attestation in the addendum, the relevant PDD, or PoA-DD and CPA-DDs, shall be deemed submitted by the project participants.
21. Therefore, the registered PDD, or PoA-DD and CPA-DDs, and the application of the CDM methodology therein, are the basis and the reference for transitioning CDM activities under the Article 6.4 mechanism until the earlier of the end of their current crediting period or 31 December 2025, when they are required to replace the CDM methodology with an Article 6.4 mechanism methodology. In this context, based on the guidance from the Supervisory Body as referred to in paragraph 4(b)(iii) above, the attestation of the project participants in the addendum shall confirm that the transitioning CDM activity has been implemented and monitored in accordance with the registered PDD, or PoA-DD and CPA-DDs as displayed on the project information page on the UNFCCC CDM website, including the application of the currently applied CDM methodology.
22. If there is a post-registration change (PRC) that has occurred after 2020 to transitioning CDM activities that necessitates the revision of the registered PDD, or PoA-DD and CPA-DDs, the confirmation referred to in paragraph 21 above is not possible, since such PRC shall be subject to approval under the PRC process under the Article 6.4 mechanism. Therefore, for such cases, the project participants shall confirm that the activities will undergo the PRC process under the Article 6.4 mechanism after their transition to the Article 6.4 mechanism, noting that the PRC may not be approved by the Supervisory Body. This may impact the crediting of Article 6, paragraph 4, emission reductions for the activities occurring after the PRC.

4. Impacts

23. The adoption of the detailed regulatory elements of the transition standard and procedure presented in this document would enable the full operationalization of the transition process.

5. Subsequent work and timelines

24. Based on the guidance by the Supervisory Body on the detailed regulatory elements considered in this concept note, the secretariat will prepare draft revised transition standard and transition procedure to incorporate them.

6. Recommendations to the Supervisory Body

25. The secretariat recommends that the Supervisory Body to provide guidance on the detailed regulatory elements considered in this document and request the secretariat to revise the transition standard and the transition procedure, and present them to the Supervisory Body at its eight meeting for its consideration.

<p>Compliance with the registered design document, including the application of currently applied CDM methodology</p> <p><i>Tick the applicable box</i></p>	<p><input type="checkbox"/> No post-registration change occurred after 2020: I hereby confirm that the transitioning CDM activity has been implemented and monitored in accordance with the registered project design document (PDD), or programme of activities design document (PoA-DD) and component project activity design documents (CPA-DDs), as displayed on the project information page on the UNFCCC CDM website, including the application of the currently applied CDM methodology.</p> <p><input type="checkbox"/> A post-registration change (PRC) occurred after 2020: I hereby confirm that I will seek approval of the PRC to the transitioning CDM activity under the Article 6.4 mechanism after its transition to the Article 6.4 mechanism, noting that the PRC may not be approved by the Supervisory Body. This may impact the crediting of Article 6, paragraph 4, emission reductions for the activity occurring after the PRC.</p>
<p>I confirm that the information provided in this form is correct</p>	<p>Date (DD/MM/YYYY):</p> <hr/> <p>Names of the entity and the representative of the project participants:²¹</p> <hr/> <p>Signature:</p>

²¹ Please write the name of the focal point entity designated by the project participants of the CDM project activity or PoA for scope (c) and the name of its representative as communicated to the secretariat in the modalities of communication in accordance with the relevant provisions in the “CDM project cycle procedure for project activities” or the “CDM project cycle procedure for programmes of activities”, respectively.

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