ARTICLE 6.4 MECHANISM

A6.4-MEP004-A01

Draft Standard

Setting the baseline in mechanism methodologies

Version 02.0

United Nations
Framework Convention on
Climate Change

COVER NOTE

1. Procedural background

1. The Supervisory Body of the Article 6.4 mechanism (SBM), at its tenth meeting (SBM 010), approved its workplan for 2024 and requested the Methodological Expert Panel (MEP) to prepare recommendations for baseline tools and guidance on standardized baselines.

2. At its first meeting (MEP 001), the MEP initiated its work on baselines and recommended that a single standard be developed that contains requirements for both baseline determination and standardized baselines. The proposal to integrate the two into a single standard is due to the interrelated nature of the two items. A single standard would also ensure consistency and coherence. At its eleventh meeting (SBM 011), the Supervisory Body approved this recommendation.

3. At its second meeting (MEP 002), the MEP considered the draft standard on setting the baseline in mechanism methodologies and discussed issues related to definitions, principles, general requirements for mechanism methodologies for baselines, approaches to setting the baseline, and downward adjustment. The MEP agreed to continue working on the document.

4. At its third meeting (MEP 003), the MEP finalized the draft standard on setting the baseline in mechanism methodologies and agreed to seek public input on this draft standard.

5. At its fourteenth meeting (SBM 014), the Supervisory Body adopted the “Standard: Application of the requirements of Chapter V.B (Methodologies) for the development and assessment of Article 6.4 mechanism methodologies” (hereinafter referred to as “Methodologies Standard”) and made specific recommendations to the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA). At that meeting, the Supervisory Body also requested the MEP to continue its work on baselines on the basis of the adopted Methodologies Standard. Subsequently, the CMA endorsed the approach by the Supervisory Body.

2. Purpose

6. The purpose of this draft standard is to address the mandate provided by the Supervisory Body at its eleventh meeting to develop recommendations on the requirements for setting the baseline in mechanism methodologies and standardized baselines.

3. Key issues and proposed solutions

7. This draft standard provides overarching requirements and guidance for approaches for determination of baselines under Article 6.4 mechanism methodologies.

8. This version of the draft standard has been aligned with the “Methodologies Standard” endorsed by the CMA and takes into account the inputs received in response to the call for public input on the draft standard.

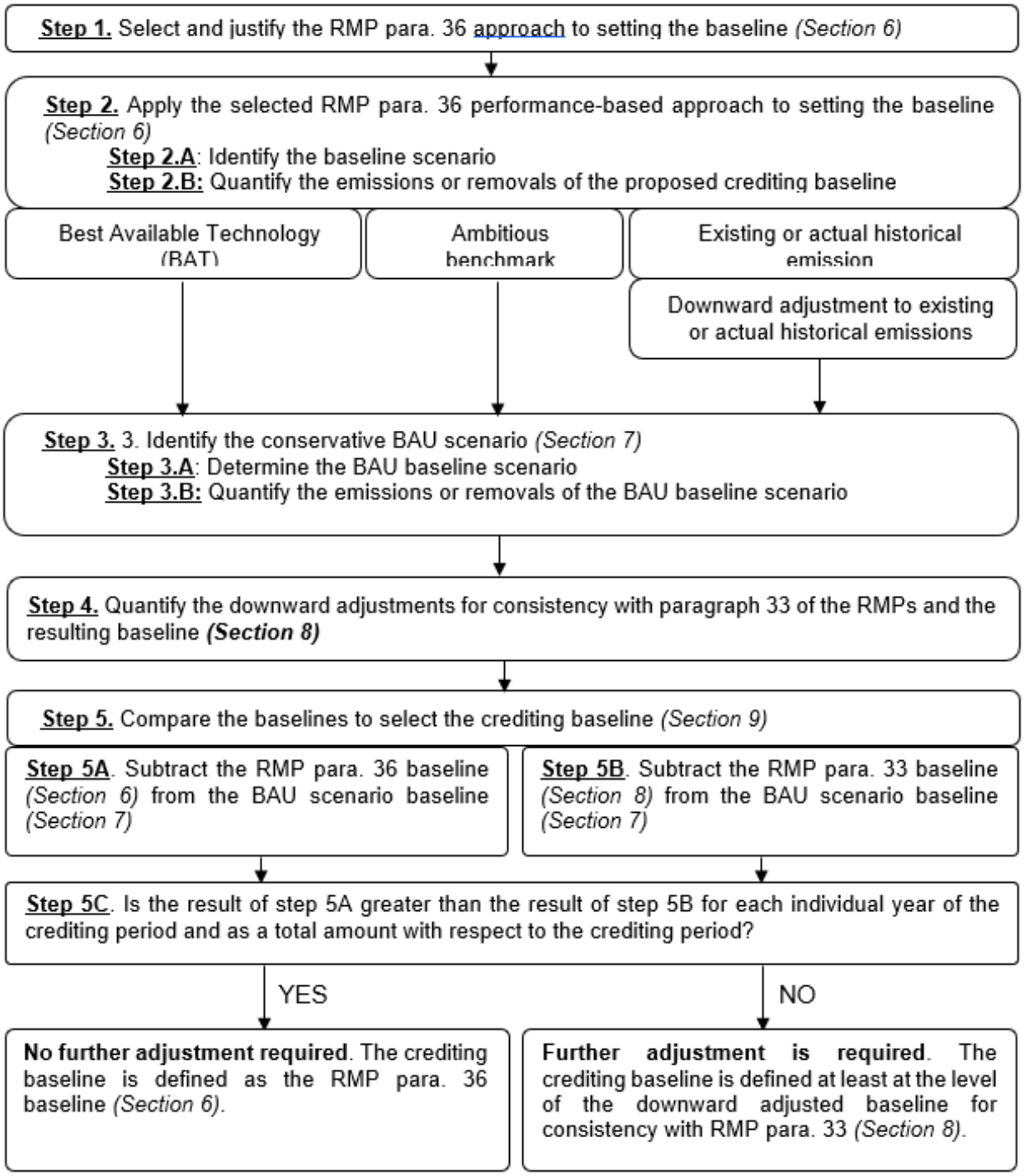
9. In elaborating the draft standard, the MEP identified several key issues. In this cover note the MEP provides further information on these key issues, including an assessment of

advantages and disadvantages of different options. Further, in some places, the draft standard presents options for further consideration by the Supervisory Body, indicated with brackets or through alternative text options.

3.1. Implementation of the general approach towards baseline setting and downward adjustment in the Methodologies Standard

10. Figure 1 below, also included in Appendix 1 of the draft standard, illustrates how the MEP has included the provisions of the Methodologies Standard in several operational steps of this draft baseline standard. In Step 1, the proponent of a methodology shall specify and justify which of the approaches from paragraph 36 of the rules, modalities and procedures (RMPs) is used for the purpose of setting the baseline. In Step 2, the respective approach is applied, resulting in a baseline crediting level based on paragraph 36 of the RMPs.

Figure 1 **Stepwise approach for setting the bas**eline and applying downward adjustments (long version).



11. The MEP notes that a downward adjustment is applied to all three approaches for establishing the baseline in paragraph 36 of the RMPs, unless otherwise decided by the Supervisory Body for approaches (i) and (ii). The MEP has implemented this provision such that in Step 2 a downward adjustment is applied to approach (iii) from paragraph 36 of the RMPs. This downward adjustment is made to ensure conservativeness (section 6.2.4 of the draft standard). The need for further downward adjustment to align with paragraph 33 of the RMPs, in accordance with section 4.7 of the Methodologies Standard, is separately assessed in Step 4.

12. Step 3 includes the determination of the Business as usual (BAU) baseline scenario and emissions or removals, in accordance with the paragraph 28 of the Methodologies Standard.

13. Step 4 includes the determination of the downward adjustment to ensure consistency with paragraph 33 of the RMPs and section 4.7 of the Methodologies Standard and determines the result baseline emissions or removals level.

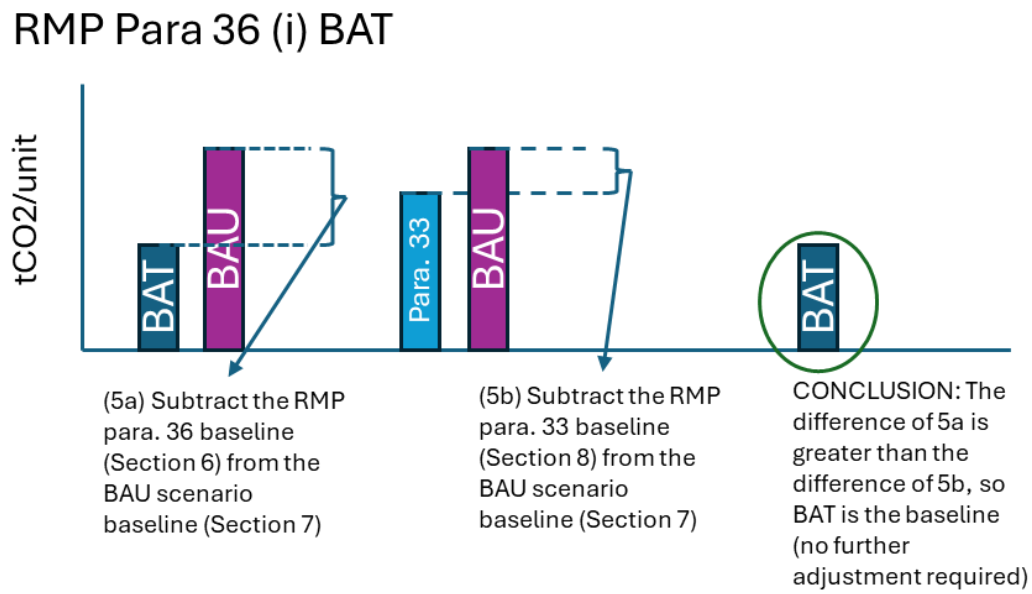
14. Step 5 includes a comparison of the relevant terms, resulting in the final crediting baseline level. In accordance with the Methodologies Standard, this includes comparing two terms and selecting the larger term among the two, in accordance with paragraphs 29 and 44 of the Methodologies Standard:

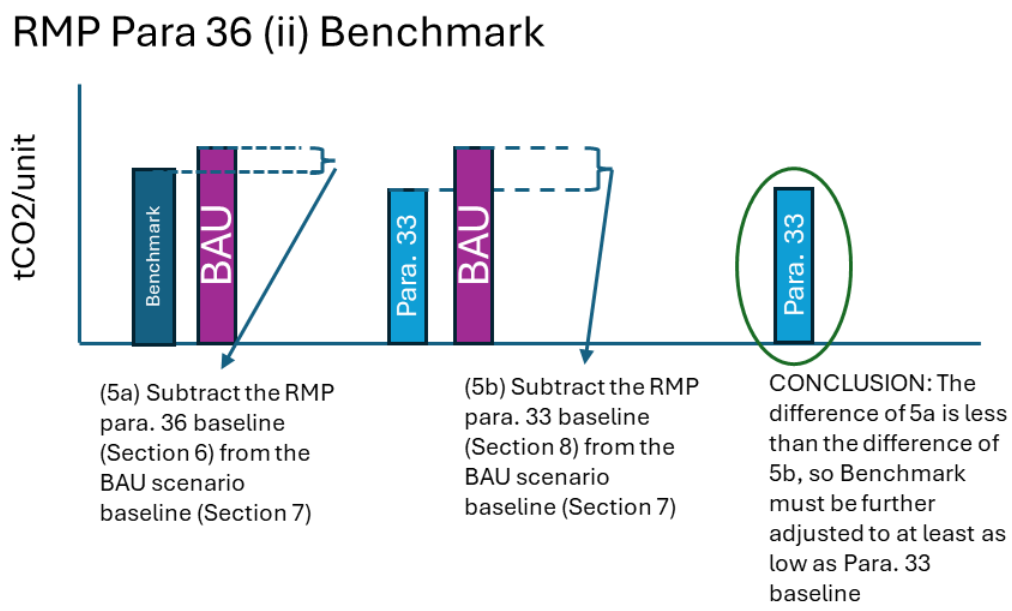
    (a) The difference between the baseline crediting level resulting from paragraph 36 of the RMPs (Step 2) and BAU emissions (Step 3);

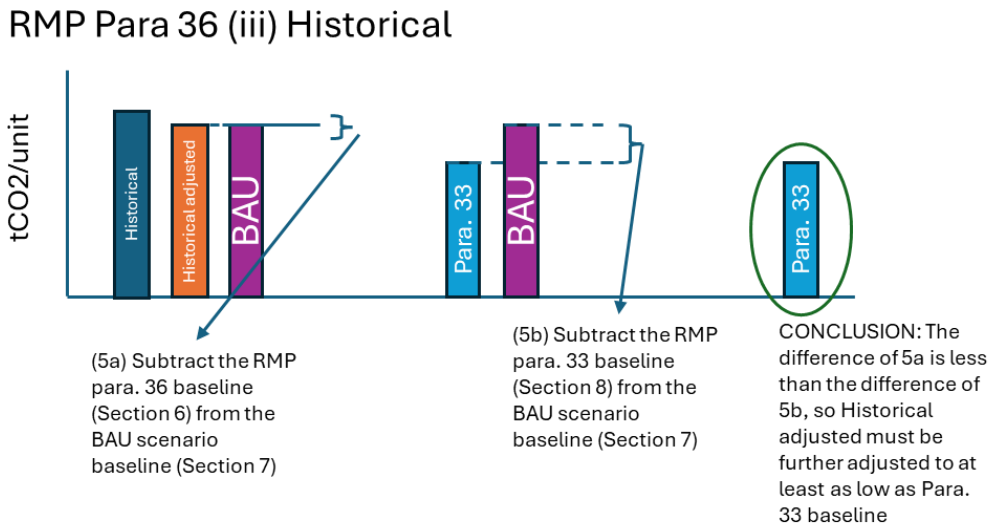
    (b) The downward adjustment to align with paragraph 33 of the RMPs, i.e., the difference between the downward adjusted baseline crediting level resulting from consistency with paragraph 33 of the RMPs (Step 4) and BAU emissions (Step 3).

    An illustration of these steps and comparisons for the approaches specified in paragraph 36 (i) to (iii) of the RMP is provided below in Figure 2.

Figure 2. Illustrated examples of baseline selection and downwards adjustment





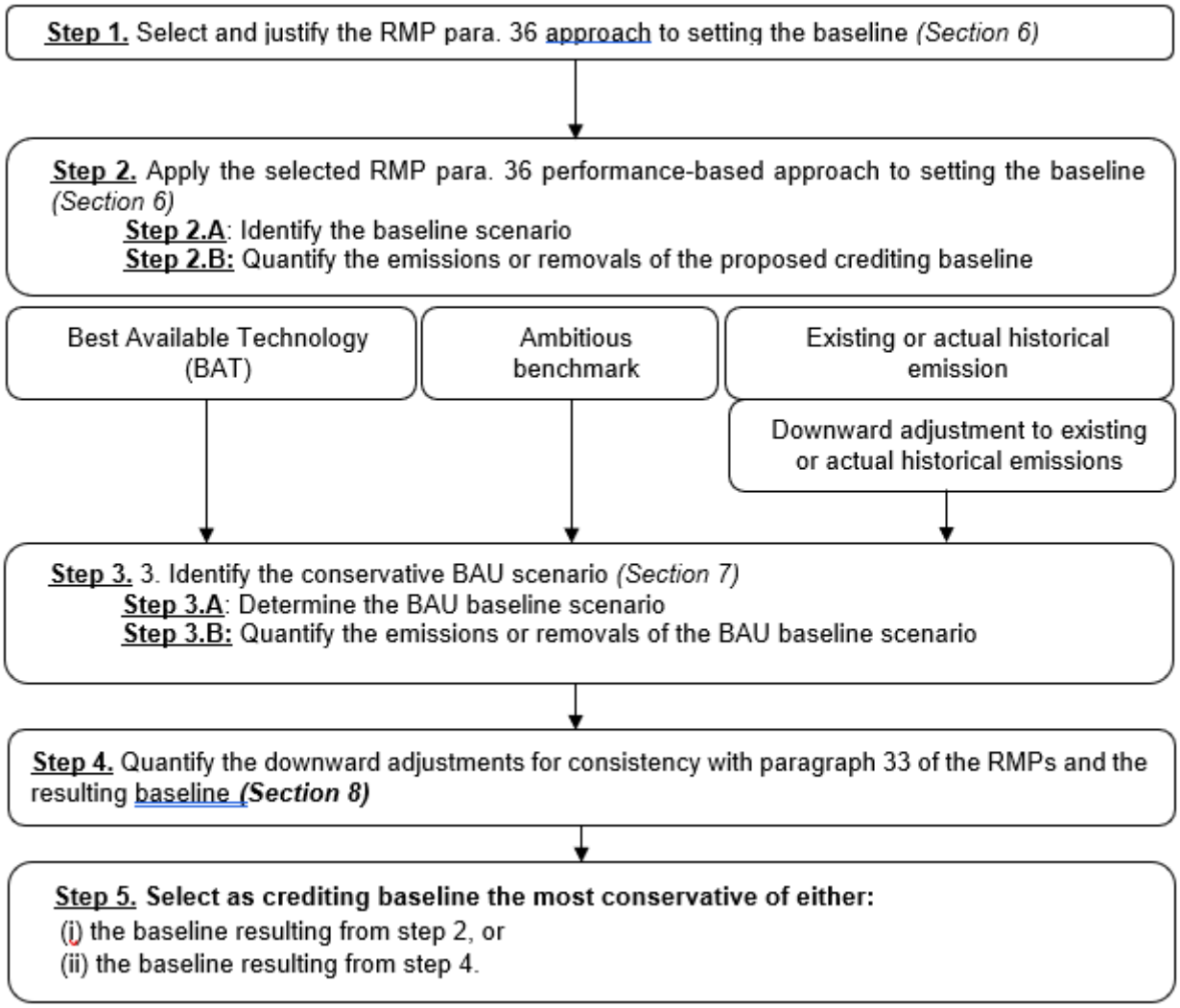


15. The MEP notes several issues in this context:

(a) The MEP notes that the Methodologies Standard does not explicitly specify what should be used as basis for comparison when determining the downward adjustment as per paragraphs 45 to 47 of the “Methodologies Standard”. The MEP interprets that the downward adjustment to align with paragraph 33 of the RMPs should be determined in relation to BAU emissions or removals. Using the emission level of the BAU as the point of comparison both for the RMP paragraph 36 baseline and the RMP paragraph 33 downward adjusted baseline means that the comparisons required by paragraphs 29 and 44 of the Methodologies Standard will give results that meaningfully demonstrate which of the approaches shows higher ambition, and determine whether the baselines resulting from the approaches i, ii or iii from RMP paragraph 36 require further downward adjustment, in line with Methodologies Standard paragraph 44.

(b) The MEP further notes that the comparisons included in paragraphs 29 and 44 of the Methodologies Standard, ultimately imply that the lower emissions baseline (or higher removals baselines) is selected between (i) a crediting baseline derived from paragraph 36 of the RMPs, and (ii) a crediting baseline aligned with paragraph 33 of the RMPs, while ensuring that the selected baseline is below BAU. This is illustrated with the examples included in Figure 2 above. The MEP therefore recommends and includes a respective option here (Figure 3) and in the draft standard, to express the comparison in simpler terms by requiring the selection of the crediting baseline with the lowest emissions among the two (or highest removals), ensuring that the selected baseline is below BAU.

Figure 3. Simplified stepwise approach for setting the baseline and applying downward adjustments.



3.2. Application of the baseline approaches at different levels of aggregation

16. This draft standard provides flexibility regarding the level of aggregation at which baseline approaches are applied (see section 5.2). This includes three levels:

    (a) **Proponent of the mechanism methodology:** The proponent of a mechanism methodology may determine the baseline scenario or parameters to quantify baseline emissions and/or removals, for all, or a subset of, the activities that are eligible under the methodology. For example, a mechanism methodology may determine the baseline scenario as the consumption of power from the electric grid and may accordingly provide methods to determine the grid emission factor to quantify baseline emissions;

    (b) **Activity participants:** The proponent of a mechanism methodology may specify in the methodology how the baseline scenario and/or baseline emissions and/or removals shall be determined and/or quantified by each individual activity applying the methodology;

    (c) **Host countries:** The proponents of a mechanism methodology shall specify in the methodology which approaches, parameters or conditions may or shall be demonstrated through the submission of a proposed standardized baseline by host countries. This may include standardization in relation to baseline setting, baseline quantification, or additionality demonstration.

17. This approach aims to provide flexibility. This reduces transaction costs for activity participants.

3.3. Alignment with the long-term temperature goal of the Paris Agreement

18. The MEP noted that paragraph 36 of the Methodologies Standard requires that an activity aligns, inter alia, with “the long-term temperature goal of the Paris Agreement and long-term goals of the Paris Agreement”.

19. The MEP also noted that section 4.7 of the Methodologies Standard, which specifies provisions for downward adjustment, states in paragraph 46 that downward adjustment shall be undertaken, while ensuring that ***mechanism methodologies*** are aligned with the long-term temperature goal of the Paris Agreement. The MEP noted that the earlier recommendation from SBM 009 in paragraph 48 referred to the “need of activities to contribute to achieving the long-term temperature goal of the Paris Agreement”, as indicated in Table 1.

Table 1. Comparison between A6.4-SBM014-A05 and A6.4-SB009-A01

A6.4-SB009-A01	A6.4-SBM014-A05
48. The downward adjustment shall be undertaken in a manner that considers economic viability of critical mitigation activities, large-scale transformation and decarbonization technologies, negative emission approaches, and informed by the need of activities to contribute to achieving the long-term temperature goal of the Paris Agreement	46. The downward adjustment shall be undertaken in a manner that considers economic viability of critical mitigation activities, large-scale transformation and decarbonization technologies, negative emission approaches while ensuring that methodologies are aligned with the long-term temperature goal of the Paris Agreement.

A6.4-SB009-A01	A6.4-SBM014-A05
47. Factors or quantitative methods for downward adjustment shall be: (a) Included in the project design document and updated at each renewal of the crediting period; (b) Based on an estimation of emission reductions and removals necessary to achieve NDCs if applicable, and LT-LEDS where they have been submitted; (c) Based on an estimation of emission reductions and removals necessary to achieve the long-term temperature goal of the Paris Agreement differentiated by technology/sector or country/region, considering socio-economic conditions and accommodating different circumstances of the host Parties.	45. Factors or quantitative methods for downward adjustment of baselines shall be included in the project design document and updated at each renewal of the crediting period, in accordance with paragraphs 46 to 47 below. Host Parties may decide to apply more stringent factors or quantitative methods for downward adjustment, according to their circumstances.

20. The MEP further noted that the earlier recommendation by SBM 009 on "Requirements for the development and assessment of Article 6.4 mechanism methodologies" has specific provisions in the same section that the "factors or quantitative methods for downward adjustment shall be (…) based on an estimation of emission reductions and removals necessary to achieve the long-term temperature goal of the Paris Agreement …" and that these provisions are not included in the Methodologies Standard adopted at SBM 014 (see Table 1 above). The paragraphs on "factors and quantitative methods" for downward adjustment (paragraphs 45 and 47 in the Methodologies Standard adopted at SBM 014) no longer include a reference to the long-term temperature goal of the Paris Agreement.

21. In this context, the MEP identified several options for how these provisions may be interpreted on how to account for the long-term temperature goals of Paris Agreement in mechanism methodologies and seeks guidance from the Supervisory Body on which options, or any other options, should be pursued.

22. The MEP identified two options for implementing paragraph 36 of the Methodologies Standard that requires that an ***activity*** aligns, inter alia, with "the long-term temperature goal of the Paris Agreement and long-term goals of the Paris Agreement":

    (a) Option A.1: Implementation of a whitelist which includes activities that are considered to be aligned with the long-term temperature goal of the Paris Agreement;

    (b) Option A.2: Implementation of a blacklist which includes activities that are considered not to be not aligned with the long-term temperature goal of the Paris Agreement.

23. A *whitelist* could be defined based on one of the following options:

    (a) Option A.1.1: The list of activities are those defined under paragraphs 28, 29, and 33 of decision 1/CMA.5 (global stocktake);

    (b) Option A.1.2: The list of activities can be defined by the Supervisory Body and be updated regularly;

(c) Option A.1.3: The list of activities can be defined by each host Party and approved by the Supervisory Body.

24. A *blacklist* could be defined based on one of the following options:

(a) Option B.2.1: The blacklist could be based on lists of excluded activities, as defined by third-party entities such as Multilateral Development Banks (MDBs) Common Principles or the Integrity Council of the Voluntary Carbon Market (ICVCM). MDBs have agreed to exclude from classifying as "climate mitigation finance" financing of activities in support of upstream and midstream activities in the fossil fuel industry, electricity generation from coal or peat, and those that lead to deforestation. Activities that are otherwise eligible but support these excluded activities are not eligible (as an example, carbon capture and utilization is in principle eligible, but when used for enhanced oil recovery are not eligible)[1]. The ICVCM rules out projects that lock in fossil fuel emissions or technologies, including: enhanced oil recovery using carbon capture and storage; road transport powered solely by fossil fuels; and all electricity generation from coal or other unabated fossil fuels except new gas power as part of increased zero emissions generation supporting a national low-carbon transition plan, and road transport that relies on the continued use of solely fossil -fuel powered engines[2];

(b) Option B.2.2: The blacklist can be defined by the Supervisory Body and be updated regularly.

25. The advantage of option A.1 (specifically option A.1.1) is that it relies on a list of efforts for which there was agreement by Parties that they are needed for deep, rapid and sustained reductions in greenhouse gas emissions in line with 1.5°C, which is expected to avoid controversy. A potential disadvantage of Option A.1.1 is that the list of efforts refers to some specific technologies but is sometimes relatively general. An advantage of Option A.1.2 is that it would allow for a more granular definition but would require achieving consensus on which actions are aligned with the Paris Agreement.

26. The disadvantage of option A.2 is that it may pose challenges to agree within the Supervisory Body on a blacklist of technologies that are considered *not* to be aligned with the long-term goal of the Paris Agreement, given the diversity of relevant circumstances specific to each Party.

27. This requirement is addressed in the Appendix 2 to the draft standard, paragraph 14, in the manner recommended by the MEP, which is Option A.1.1. The MEP seeks guidance or a decision from the Supervisory Body on whether the provided option is suitable, or whether another option better captures the intended requirements of the Methodologies Standard.

[1] Common Principles for Climate Mitigation Tracking, MDBs, 5 December 2023

[2] ICVCM. Assessment Framework V1.1, 15 May 24.pdf

3.4. Downward adjustment to ensure consistency with the requirements of paragraph 33 of the RMP

28. The MEP identified three overarching options for ensuring consistency with the requirements of paragraph 33 of the RMP described in paragraphs 43, 45, 46 and 47 of the Methodologies Standard:

    (a) Option B.1: Paragraph 46 of the methodology standard only requires methodologies to demonstrate the alignment of Article 6.4 *activities* with the long-term temperature goal of the Paris Agreement, for example using options A.1 or A.2 above;

    (b) Option B.2: The consideration of the long-term temperature goal of the Paris Agreement is also required in the context of ***quantifying the downward adjustment***, or

    (c) Option B.3: Downward adjustment primarily relates to the requirement in paragraph 33 of the RMP related to ***ensuring below BAU*** and ***encouraging ambition over time***.

29. The MEP further notes that the consideration of the long-term temperature goal of the Paris Agreement in quantifying the downward adjustment, as described in Option B.2 above, could be implemented in different ways. These include in particular whether any discounting factors or quantitative methods are differentiated by technology, host Party and so forth as described in the following list. If Option B.2 is pursued, the MEP recommends differentiation of any factors or quantitative methods by all three of the following:

    (a) Individual Parties or groups of Parties (e.g., LDCs and SIDS, developing countries other than LDCs and SIDSs, developed countries);

    (b) Sectors (e.g., energy sector, forestry sector, waste sector); and/or

    (c) Activity types (e.g., landfill gas flaring, landfill gas utilization, composting).

30. The MEP identified several advantages and disadvantages with considering the long-term temperature goal of the Paris Agreement in quantifying the downward adjustment (Option B.2). An advantage is that this approach would provide some orientation on the magnitude of the downward adjustment, noting that the Methodologies Standard does not provide other indications on the scale of the downward adjustment.

31. As a potential advantage for environmental integrity, but disadvantage for encouraging broad participation and including relevant circumstances, the application of this approach is expected to lead to very ambitious baselines, noting that the rate of decarbonisation needed to achieve the long-term temperature goal of the Paris Agreement is much greater than the current real-world decarbonisation trends. This could have the following implications

    (a) Some activity types, like zero-emitting technologies such as renewable energy generation or removals activities such as reforestation, may then still receive Article 6.4 ERs and could thus still be implemented under the mechanism;

    (b) However, activities such as those that implement incremental improvements, may not be able to receive Article 6.4 ERs under this interpretation, as they would have

to define a baseline emissions level aligned with the long-term temperature goal of the Paris Agreement likely to be equal to or below their project emissions level;

(c) The MEP also further notes that this recommendation implies that in a longer-term horizon, only removal activities may be able to receive Article 6.4 ERs because emissions baselines go down to zero on the Paris-aligned trajectory.

32. The MEP also identified several practical and policy challenges with the approach described in Option B.2.

(a) The emission reduction pathways for reaching the long-term goal of the Paris Agreement, as recognized in relevant Conference of the Parties (COP) and CMA decisions, are global pathways that all countries aim to achieve jointly, and the Paris Agreement and relevant COP and CMA decisions recognize the principle of common but differentiated responsibilities and respective capabilities in the light of different national circumstances and in the context of sustainable development and efforts to eradicate poverty. The MEP notes that any assumption about different pathways for different (groups of) countries are not a methodological but a policy matter that includes questions of equity and that it is a sensitive matter to many Parties. The MEP would therefore need policy guidance from the Supervisory Body on any such differentiation while developing or evaluating factors or quantitative methods.

(b) The feasibility and costs of reducing emissions, or enhancing removals, varies strongly by sector and activity type, and is associated with considerable uncertainties and "path dependence" for which different possible scenarios may be assumed (e.g., to what extent hydrogen or further electrification will be pursued to achieve zero emissions in some sectors). This makes it necessary to make policy assumptions in choosing among different potential sectoral pathways towards global net zero emissions.

(c) Adopting an approach which quantifies the long-term temperature goal of the Paris Agreement and considers differentiation among Parties may lead to vastly different potential for crediting of the same activity types from country to country, generating fairness concerns among Parties and activity proponents.

33. Option B.3 would avoid the practical and policy challenges mentioned above in paragraph 32(a) to 32(c). However, while encouraging ambition over time, it would also allow for methodologies to account for the long-term goals of the Paris Agreement in a practical way, thereby maintaining consistency with the concept.

34. Option B.3 is recommended by the MEP for implementation and a preliminary description is included in Section 8, paragraphs 61 and 62. If this option is accepted by Supervisory Body, then further work and guidance on factors and quantitative methods for downward adjustment will be developed by the MEP. Such guidance could provide for options to methodology developers on how to define such factors and quantitative methods. The MEP has identified a number of factors that could inform the determination of downward adjustment to ensure encouraging ambition over time and recommends the Supervisory Body to consider these initial factors and provide any feedback:

(a) **Consideration of economic viability of the mitigation technologies and practices.** The quantitative methods and factors could consider the economic viability of the relevant mitigation activities. This holds in particular for critical

mitigation activities, large-scale transformation and decarbonization technologies, and negative emission approaches. The quantitative methods and factors could result in relatively lower downward adjustments for these technologies and approaches, and other critical technologies at an early stage of innovation and diffusion, compared with technologies and practices that are closer to being economically viable;

(b) **Technological improvement expected over time**. The factors and quantitative methods may be informed by technical improvements expected in the sector;

(c) **Setting incentives for the adoption of less greenhouse gas (GHG) intensive technologies or practices.** The factors and quantitative methods may result in a relatively higher downward adjustment for more GHG intensive technologies and practices and a relatively lower downward adjustment for less GHG intensive technologies or practices. For example, the downward adjustment may be higher for Article 6.4 activities flaring landfill gas than for activities using the landfill gas as fuel;

(d) **Consideration of long-term pathways adopted by countries or industry**. Already established long-term pathways for emissions, technologies, or practices adopted by countries, groups of countries and/or international industry associations could inform the downward adjustment. This could mean that some sectors, regions or countries would have higher annual increases to the downward adjustment compared with other sectors, regions or countries;

(e) **Consideration of concept of sufficiency**. Considering work presented in Intergovernmental Panel on Climate Change (IPCC) AR6 WGIII Chapter 9, for example, in the buildings sector, it may be proposed that for high- income countries, the rate of reducing emissions is higher than that for low- income countries;

(f) **Consideration of suppressed demand**. The quantitative methods and factors could result in a relatively lower downward adjustment for sectors or regions where demand is suppressed.

3.5. Other methodological requirements related to the Methodologies Standard

35. The MEP identified several general methodological requirements that are particularly relevant for establishing baselines but also apply to other elements of mechanism methodologies, such as determining project emissions. For example, the definition of a project boundary is closely related to quantifying baseline emissions and project emissions. Appropriate definition of applicability conditions for methodologies is a prerequisite for ensuring that provisions in a methodology for calculating emission reductions and net removals are appropriate for the type of activities that may use the methodology. Similarly, requirements for use of data and monitoring may apply to the quantification of baseline emissions, emissions occurring under the activity and leakage emissions.

36. The MEP therefore included an Appendix 2 to the draft standard that includes general methodological requirements. Moreover, the Appendix 2 incorporates elements from the Methodologies Standard that do not fit into any of the other standards for mechanism methodologies under development (additionality, leakage, reversals, suppressed demand).

37. The MEP notes that this Appendix 2 could potentially also be adopted as a separate standard.

4. Impacts

38. This Standard will provide further clarity on the requirements that mechanism methodologies shall fulfil with regard to setting the baseline.

5. Subsequent work and timelines

39. The MEP notes that the proposed draft standard is only applicable to activities implemented at the project level. The standard may thus be amended to also cover methodological requirements for mitigation actions implemented at larger scales (e.g., programmes of activities or large-scale crediting programmes).

40. The MEP notes that this standard needs to be further elaborated. This holds in particular for:

    (a) Additional elements for activities involving removals, for example with respect to the ambitious benchmark approach;

    (b) More detailed requirements and guidance for standardized baselines applicable to one or several Parties;

    (c) Detailed guidance for determining the factors or quantitative methods for downward adjustment;

    (d) Consideration of legal requirements, policies and targets in determining BAU; and

    (e) Consideration of the need for mechanism methodologies to be regularly revised.

6. Recommendations to the Supervisory Body

41. The MEP recommends the Supervisory Body to consider the draft standard included in this document and pursue the following courses of actions:

    (a) Decide or provide guidance on the options provided by the MEP in the proposed draft standard and explained in this cover note; and

    (b) Provide any guidance to the MEP on its further elaboration; and

    (c) Request proponents of mechanism methodologies to use and test this version of the draft standard for any submission of new proposed mechanism methodologies; and/or

    (d) Initiate a second round of public inputs.

TABLE OF CONTENTS **Page**

1. Introduction

1.1. Scope

1. This standard sets out requirements for mechanism methodologies for setting the crediting baseline, including identifying the baseline scenario and determining baseline emissions and removals, and provides requirements for the determination of standardized baselines. It will be applied by proponents of mechanism methodologies in developing methodologies and by the UNFCCC Secretariat, the MEP and the Supervisory Body in assessing and considering mechanism methodologies for approval. The standard is not intended for the preparation of project design documents (PDDs) or monitoring reports.

2. The objective of this standard is to provide detail on the requirements on how mechanism methodologies shall define methods for setting the crediting baseline, including identifying the baseline scenario and determining baseline emissions, and for the determination of sector-specific standardized baselines at an appropriate level of aggregation.

3. Additional requirements for mechanism methodologies beyond setting the baseline are included in Appendix 2 to this document.

1.2. Entry into force

4. The date of entry into force is the date of the publication of the SBM ### meeting report on DD Month YYYY.

2. Definitions

5. The following definitions shall apply in the context of this standard:

   (a) **Applicability conditions** – Conditions that specify contexts, configurations and cases in which methodologies can be applied to Article 6.4 activities while ensuring environmental integrity;

   (b) **Baseline geographical reference area** – The geographical area assessed for setting the baseline;

   (c) **Best available technology (BAT)** – The practice/technology in a given scope (e.g. sector and baseline geographical area) that:

      (i) Provides a similar output as the Article 6.4 activity;

      (ii) Represents an economically feasible and environmentally sound course of action;

      (iii) Is available for the baseline geographical area, meaning accessible off the shelf, or via a tendering or direct contracting process, or by direct implementation by an end user at the scale of potential Article 6.4 activities; and

      (iv) Results in the lowest emissions or largest removals per unit of output among all practices/technologies that fulfil the conditions (i) to (iii);

(d) **Best performing comparable activities** – The activities that provide outputs within a top segment of performance in terms of greenhouse gas (GHG) emissions or removals intensity, considering all activities that provide similar outputs in a baseline geographical reference area;

(e) **Business as usual (BAU)**- Plausible reference benchmark or scenario for GHG emissions or removals prior to or in the absence of the implementation of the proposed Article 6.4 activity. It may be a scenario, emission or removal level, or an emissions or removals intensity;

(f) **Crediting Baseline** – Reference emissions or removals level, against which the volume of emission reductions or net removals achieved by the Article 6.4 activity is quantified;

(g) **Legal requirements** – Laws, statutes, regulations, court orders, decrees, consent agreements[3], executive orders, permitting conditions or any other legally binding mandates;

(h) **Level of aggregation** – The extent to which consolidation of information from any parts or units to form a collective whole is undertaken;

(i) **Level of service**: the quality, reliability and scale of an output provided by an Article 6.4 activity and/or in the baseline scenario;

(j) **Output**: Each good or service provided by the Article 6.4 activity and/or in the baseline scenario (for example, efficient appliance, electricity, cooking energy, municipal waste management, and so forth), as specified in the mechanism methodology;

(k) **Policies**– All national or sub-national policies that are applicable to the relevant activity and its alternatives, including legislation, subsidies and incentives (e.g., incentives from carbon pricing schemes such as emission trading schemes or from guarantees of origin), taxes and tax breaks, as well as fees; performance standards; or other specified instruments or means of implementation. This shall also include any specific national or sub-national targets for the sector or the type of activity, as long as these are supported by policy frameworks for implementation, but not general goals (e.g., a national emissions target) that are not specific to the sector or type of activity;

(l) **Pool of users –** For activities related to a good or a service, the pool of users consists of the user(s) supplied with the outputs by the activity;

(m) **Remaining lifetime –** The period during which an equipment would continue operating and/or a certain practice would remain in place without undergoing major repair or overhaul as specified in the mechanism methodology, given limitations such as technical lifetime, economic lifetime, requirements of laws or regulations, or any other factor which would lead to the discontinuation of the use of the equipment and/or practice;

[3] For example, agreements between parties, such as between a private sector entity and a government, to take an action in exchange for avoiding court action.

(n) **Sector –** A segment of a national economy that delivers defined output(s) (e.g. municipal waste management, household cooking energy, electricity, cooling, transportation);

(o) **Standardized baseline** – A standardization developed on a subnational, national, or group-of-Parties basis rather than on activity-specific basis to facilitate the determination of the baseline, calculation of GHG emission reductions or removals and/or the determination of additionality for Article 6.4 activities, while ensuring environmental integrity within the scope of the standardized baseline.[4]

3. Applicability

6. This version of the standard is applicable to proposed mechanism methodologies for activities undertaken at the project level. The standard may be amended in the future to also cover methodologies addressing mitigation actions at other scales (e.g., programmes of activities, policies, sectoral approaches, etc). The standard further applies for the development of standardized baselines.

7. This standard applies to mechanism methodologies developed for activities that involve emission reductions and/or activities involving removals. The standard may be amended in the future to incorporate further considerations for activities involving removals.

8. The standard applies to mechanism methodologies and methodological tools. For simplicity, only the term mechanism methodology is used in this standard.

4. Principles

9. The following principles shall guide the development and approval of mechanism methodologies for identifying the baseline scenario and determining baseline emissions and removals, and the development and approval of standardized baselines:

(a) **Relevance.** Data, parameters, assumptions, and methods used for setting the baseline shall not be misleading and only verifiable data and parameters that may have an impact on the outcome of setting the baseline shall be included;

(b) **Completeness**. All relevant information to support the baseline setting shall be included;

(c) **Consistency.** The application of methods ensures consistent results across similar circumstances;

(d) **Conservativeness**. In the context of baseline setting, conservativeness is the use of data, parameters, assumptions, and methods to ensure that baseline emissions are not overestimated, and baseline removals are not underestimated;

(e) **Accuracy**. Bias and uncertainties in both quantitative and non-quantitative information shall be reduced as far as is practical;

[4] Based on the definition provided in A6.4-SB014-A05 para. 63.

(f) **Transparency.** Sufficient and appropriate information shall be disclosed to allow intended users to make decisions with reasonable confidence. Transparency relates to clearly stating all data, parameters, assumptions and methods applied; referencing background material; stating documentation changes and stating and justifying all data, parameters, methods and assumptions made such that the outcomes can be reproduced;

(g) **Real.** The results of activities represent actual tonnes of GHG emission reductions or net removals derived from credible methods for estimating mitigation outcomes;

(h) **Below business as usual**. For emission reductions, the determined crediting baseline shall be below a conservatively determined BAU emissions level. For removals, the determined crediting baseline shall be above a conservatively determined BAU removal level;

(i) **Encourage ambition over time**. Crediting baselines for emission reductions shall decrease over time and crediting baselines for removals shall increase over time to encourage ambition.

5. General requirements

5.1. Methodology requirements

10. Mechanism methodologies shall specify the approach to setting the baseline scenario for the Article 6.4 activity. Mechanism methodologies shall apply one of the three approaches specified in paragraph 36 of the RMPs for setting the baseline scenario for each of the components of the activity (e.g., for the capture of landfill gas and its use for energy generation, one baseline approach may be applied for the capture of landfill gas and a different baseline approach may be applied for energy generation). The mechanism methodology shall justify the appropriateness of the choice among approaches (i) to (iii) of paragraph 36 of the RMP.

11. Mechanism methodologies may either use separate approaches to demonstrate additionality and determine the baseline scenario or use a combined approach that both demonstrates additionality and determines the baseline scenario, depending on the approach selected. Specifically, it may be possible to use BAT or an ambitious benchmark to simultaneously determine the baseline scenario and apply the “performance-based approaches” in demonstrating additionality (refer to the “Draft Standard: Demonstration of additionality in mechanism methodologies”).

12. Mechanism methodologies shall specify the methods for quantification of the baseline emissions and removals. Mechanism methodologies shall specify to which potential baseline scenarios its quantification methods are applicable.

13. Mechanism methodologies shall define and justify, or require the activity participant to define and justify, the baseline geographical reference area considering the main baseline sources or sinks. The baseline geographical reference area may be global, regional, national, sub-national, site-specific, etc. For example, an activity that supplies a global pool of users in the case of highly internationally traded goods (for example, aluminium) may need to consider global conditions when setting the baseline. On the contrary, some activities may only affect baseline emissions in a very restricted geographical scope or even at a specific site; for example, in the case of switching to a low-emissions energy

source or feedstock in a specific plant, only site-specific conditions may need to be considered when setting the baseline.

14. Mechanism methodologies shall require activity participants to describe the pre-activity scenario in the project design document (PDD). The pre-activity scenario corresponds to the circumstances immediately prior to the implementation of the Article 6.4 activity and shall be the existing conditions at the site where the activity will be implemented or for the case of distributed technologies for households/communities/ small and medium enterprises, the existing conditions for the activity output(s) in the baseline geographical reference area.

15. Mechanism methodologies shall encourage ambition through increasingly ambitious crediting baselines for emission reductions or removals activities, over time. This may be operationalised either as an annual change or as a larger step-change at the renewal of the crediting period if this can be appropriately justified.

16. For the purpose of this document, in case of removals, “downward adjustment” shall be read as “upward adjustment” with respect to the crediting baseline removals levels.

17. Under all the approaches in section 6 for setting the crediting baseline, mechanism methodologies shall determine whether any trends in the emissions intensity over time should be incorporated in the baseline quantification. This is necessary if such trends have a material impact on the emissions intensity in tonnes of carbon dioxide equivalent (tCO_2-eq) per unit of output, in which case the baseline emission factor or other indicator shall be adjusted over time, taking into account historical trends in the emissions intensity. Where no material trends toward improved performance in the emissions intensity can be observed and expected in the future, or where such a trend is compensated by a particularly ambitious baseline indicator, then no further adjustment for trends toward improved performance is required.

5.2. Application of the baseline approaches at different levels of aggregation

18. The baseline scenario or parameters to quantify crediting baseline for emissions and/or removals, such as baseline emission factors, may be applied at different levels and by different entities:

    (a) **Proponent of the mechanism methodology:** The proponent of a mechanism methodology may determine the baseline scenario or parameters to quantify baseline emissions and/or removals, for all, or a subset of, the activities that are eligible under the methodology. For example, a mechanism methodology may determine the baseline scenario as the consumption of power from the electric grid and may accordingly provide methods to determine the grid emission factor to quantify baseline emissions. The proponent of the mechanism methodology shall provide documented evidence and justifications in the methodology that the scenario and/or parameters are applicable for the relevant activities. The mechanism methodology may then state that these are deemed to be applicable for the relevant activities, as long as the applicability criteria or conditions specified in the methodology are satisfied. The mechanism methodology may need to be regularly revised to update the underlying analysis. The proponent of the mechanism methodology shall therefore specify the duration of the validity of the proposed methodology (e.g., three years). Where the application of the

standardization is mandatory, this shall be explicitly stated in the mechanism methodology;

(b) **Activity participants:** The proponent of a mechanism methodology may specify in the methodology how the baseline scenario and/or baseline emissions and/or removals shall be determined and/or quantified by each individual activity applying the methodology. This procedure shall then be applied by each proposed Article 6.4 activity. For example, a methodology may provide a method for how each activity shall quantify existing actual or historical emissions and a downward adjustment factor for these;

(c) **Host countries:** The proponents of a mechanism methodology shall specify in the methodology which approaches, parameters or conditions may or shall be demonstrated through the submission of a proposed standardized baseline by host countries. This may include standardization in relation to baseline setting, baseline quantification, or additionality demonstration. Standardization could also relate only to a specific parameter, such as the grid emission factor or the fraction of non-renewable biomass. Where the application of the standardized baseline is mandatory, this shall be explicitly stated in the standardized baseline.

5.3. Data requirements for baseline setting and quantification

19. Mechanism methodologies shall specify the assumptions, parameters, data sources and key factors used for determining the baseline scenario and quantifying the crediting baseline for emissions and/or removals and specify the related requirements with regard to data quality, vintage, availability and credibility.

20. Mechanism methodologies shall require data to be sourced from the most appropriate data source. This may include internal data of the activity participants or publicly available information. Only credible sources shall be used that are appropriate to the context of the type of activity. Relevant data sources may include Intergovernmental Panel on Climate Change (IPCC) publications, peer-reviewed scientific literature, test results following accepted standards performed by accredited entities, reports/statistics published by governments, multilateral entities, or industry or sector organizations, as applicable.

21. Mechanism methodologies shall require activity participants and developers of standardized baselines to transparently list and describe the sources of data considered and justify the vintage, relevance, accuracy, and conservativeness of the choices made. The data used shall be referenced. In cases where values, approaches or data sources are only applicable to specific scopes (geographic, sectors, etc.), the mechanism methodologies or standardized baselines shall clearly describe the scope of applicability of the respective values, approaches or data sources.

22. Mechanism methodologies shall determine the baseline scenario and the crediting baseline for emissions and/or removals in a transparent manner. They shall also take into account the uncertainty associated with setting the baseline scenario and quantifying crediting baseline emissions and/or removals, consistent with relevant IPCC guidelines. The consideration of uncertainty shall include all causes of uncertainty, including assumptions, equations or models, parameters and measurements. The consideration of uncertainty may, however, focus or be limited to those causes of uncertainty that are most relevant in the context of the Article 6.4 activity (e.g., the uncertainty of minor baseline emission sources may not need to be considered).

23. Different approaches may be pursued to address uncertainty. These may include approaches that address overall uncertainty or approaches that address uncertainty separately for the baseline scenario and the quantification of baseline emissions and removals. For example, in the case of uncertainties in the selection of the baseline scenario, the most conservative scenario may be selected among different plausible scenarios; whereas, for determining the baseline emissions and removals the uncertainty may be quantified using approaches such as formulas for error propagation.

5.4. Standardization

24. Standardization of baseline scenarios and crediting baselines in mechanism methodologies is encouraged as this avoids the risk of selection bias in using project-specific approaches, which could lead to overestimation of baseline emissions or underestimation of baseline removals.

6. Approaches to Setting the Baseline

25. This section sets out how the approaches for setting the baseline referred to in paragraph 36 of the RMP shall be implemented in mechanism methodologies.

6.1. Best available technology (BAT) approach

6.1.1. Applicability

26. Mechanism methodologies may determine the baseline using this approach where the following applies:

    (a) The emissions or removals per output are determined primarily by the technology(ies) or practice(s) used in the activity; and

    (b) BAT can be determined with the available data.

27. This approach may be particularly suitable where:

    (a) An activity consists of a single technology or practice (e.g., substitution/installation of new equipment such as clean cooking activities); and/or

    (b) The activity and alternative technologies or practices provide reasonably homogeneous outputs (i.e., they produce similar outputs for the pool of users).

28. The approach shall be applied if BAT has already been specified by the host Party as mandatory.

6.1.2. Determination of the baseline scenario

29. Mechanism methodologies may include provisions to identify the baseline scenario as the BAT.

30. BAT shall be justified or require justification of the choice of approach and be recent.

31. With regard to the BAT, the following applies:

    (a) An economically feasible course of action is one that will typically provide sufficient returns to cover investment, operations & maintenance costs. An economically

feasible course of action does not need to be viable for all entities under all circumstances;

(b) An environmentally sound course of action is an activity that is in line with laws and regulations on environmental protection in the applicable geographical area and seeks to reasonably minimize environmental harm.[5]

32. For technologies or practices applied in households, the mechanism methodology shall define "economically viable course of action" based on the type of activity and characteristics of the users. The definition may be based on the commonly experienced costs associated with the technology or practice and shall be based on an investment analysis applying financial parameters that reflect access to finance by households in a manner that does not overestimate financial barriers, and other relevant considerations.

33. Mechanism methodologies shall specify the appropriate baseline geographic reference area for establishing the BAT or provide for principles and requirements that activity participants shall apply to establish this area with proper justification.

34. When selecting this approach, mechanism methodologies shall define a procedure for determining BAT, applying one of the following options:

(a) Option 1: Best available technologies may be recommended by host Parties for consideration by the Supervisory Body, following the "Procedure for development, revision, clarification and update of standardized baselines". The BAT approved through this process can be applied directly without following any other steps;

(b) Option 2: Define BAT in the mechanism methodology as obtained from reliable recent data sources, consistent with the provisions in section 5.3 above. Confirm that the identified BAT is both economically viable and environmentally sound, in line with the definitions immediately above. If the geographic scope of the identified BAT is limited, then its geographic applicability shall be specified and justified in the mechanism methodology;

(c) Option 3. Provide a procedure in the mechanism methodology that activity participants shall apply to identify the BAT in the context of their Article 6.4 activity, including the following steps:

(i) Identify the available technologies in line with paragraph 3129 above and the definitions in this standard for supplying the pool of users in the baseline geographical reference area, at the scale required for implementation at a similar level to the activity;

(ii) Identify which of these available technologies are environmentally sound in line with paragraph 31 above;

(iii) Identify which of the environmentally sound technologies are economically viable in line with paragraph 31 above;

(iv) Define the emissions or removals intensity of each of the remaining technologies identified in step (iii) above as tonnes of carbon dioxide

[5] As assessed on a mechanism methodology basis or further defined by the Supervisory Body.

equivalent (tCO_2-eq) per unit of output, based on the average conditions of the technology in the baseline geographical reference area;

(v) Identify the remaining technology from step (iv) above with the best emissions or removals intensity. This technology constitutes the BAT, and its emission or removals intensity forms the basis for the baseline.

6.1.3. Determination of baseline emissions or removals

35. When the baseline scenario is set using BAT, then the quantification of the crediting baseline of the technology shall also be derived using the emissions or removals intensity of the identified BAT. The mechanism methodology shall define the procedures to quantify the emissions or removals intensity of the BAT as tCO_2-eq per unit of output. However, other parameters related to the crediting baseline emissions or removals may be derived using other approaches.

36. The mechanism methodology shall define the methods for quantification of the emissions or removals intensity of BAT, considering the general principles in section 4 and the data requirements in section 5.

37. The BAT may need to be regularly revised to update the underlying analysis. The proponent of the mechanism methodology including definition of the BAT shall therefore specify the duration of the validity of the proposed methodology (e.g., three years).

6.1.4. Ambitious benchmark approach

6.1.5. Applicability

38. Mechanism methodologies may determine the baseline using this approach where reliable data on best performing comparable activities providing similar outputs is available and permits a conservative and reliable estimation of the baseline.

39. This approach may be particularly suitable where:

(a) The sector is characterized by homogeneous outputs, i.e., if there are similar outputs with a similar level of service for the pool of users; and/or

(b) The emissions or removals per output depend on multiple factors (inter alia, technology, operational practices, fuels, feedstocks, local circumstances such as climatic conditions).

6.1.6. Determination of the baseline scenario and baseline emissions or removals

40. The baseline scenario based on an ambitious benchmark shall be identified as the average emissions or removals level of the best performing comparable activities providing similar outputs in a defined scope in similar social, economic, environmental, and technological circumstances. The mechanism methodology shall further specify this approach and justify or require justification of the choice of approach, including these criteria for similarity specified further in the mechanism methodology.

41. Mechanism methodologies shall either directly set the ambitious benchmark, or define a procedure that activity participants shall apply for setting the crediting baseline based on an ambitious benchmark, including the following steps:[6]

    (a) Define and justify the appropriate baseline geographical reference area for the type of practice/technology;

    (b) Identify all the practice/technology (e.g., types of industrial plants, types of household units, as applicable to the activity type) that are providing similar output in the baseline geographical reference area in similar social, economic, environmental, and technological circumstances[7];

    (c) Specify which comparable activities (e.g., plants, households) in the baseline geographical reference area shall be included in the analysis, taking into account the type of the activity. For example, if the activity consists of the installation of greenfield plants, then only recently built installations are included in the analysis. For brownfield activities (e.g., energy efficiency improvements), all existing installations may be considered, depending on the circumstances. Similarly, only activities of a similar size (e.g., plants above a certain threshold) or within certain locations (e.g., only households in rural areas) may be considered, depending on the context of the activity. If an Article 6.4 activity replaces existing installations while at the same expanding the capacity, comparable activities shall include installations, or combinations of installations, that can provide the same level of output as the Article 6.4 activity;

    (d) Determine the appropriate time period for which available performance data for all identified technologies or practices shall be included. In cases where the performance varies significantly between calendar years (e.g., due to differences in climatic conditions such as precipitation), an appropriate multi-year period shall be selected. The coverage may be of one or three years and when one year is selected, it shall be appropriately conservative. The choice shall be appropriately justified;

    (e) Collect recent performance data for all the identified technologies or practices in the baseline geographical reference area;

    (f) Prepare a performance distribution curve of tCO_2-eq/unit output for the total amount of output provided by the identified activities in the baseline geographical reference area;

    (g) Specify how to define the group of best performing comparable activities bounded at maximum by the 20^{th} percentile of the distribution curve or lower (e.g., 10^{th} percentile, 5^{th} percentile) and justify the choice and how it complies with the general principles in section 4;

[6] Mechanism methodologies may propose alternative approaches towards determining an ambitious benchmark.

[7] For example, for cement for building construction applications, the technologies are those being applied for building construction with similar structural capabilities, e.g., other cement production for concrete-based construction, wood-frame construction, steel-frame construction, masonry. For another example, metal-alloy production, the technologies are those being applied for the same metal-alloy production.

(h) Calculate the weighted average (by output) of the emissions intensities of all the best performing comparable activities including and beyond the selected percentile as tCO_2-eq/unit of output.

42. The value determined in sub-bullet (h) constitutes the ambitious benchmark, and its emission intensity forms the basis for the crediting baseline.

43. When the baseline scenario is set using an ambitious benchmark, then the crediting baseline emissions or removals shall also be derived using the emissions intensity of the benchmark. However, other parameters related to the crediting baseline for emissions and/or removals may be derived using other approaches (for example, disaggregated data on the energy efficiency of operations of each comparable activity may be combined with a default value for the specific GHG intensity per unit of energy).

44. The mechanism methodology shall define the methods for quantification, considering the general principles in section 4 and the data requirements in section 5.

45. The data used should aim to be both of high quality and recent, preferably with a vintage of no more than 3 years older than the year the activity PDD is submitted for global stakeholder consultation.

6.2. Downward adjusted existing actual or historical emissions approach

6.2.1. Applicability

46. Mechanism methodologies may determine the baseline using this approach where there is limited data availability on the emissions or removals performance from similar activities in the sector.

47. This approach may be particularly suitable where:

(a) Emissions or removals per output are dependent on factors that are highly activity- or site-specific; and/or

(b) Sector data shows strongly heterogeneous circumstances.

48. Where an Article 6.4 activity replaces equipment that was used in the pre-project scenario and could continue to be used, a baseline scenario determined using this approach shall only remain valid until, at maximum, the end of the remaining lifetime of the equipment that was used in the pre-activity scenario.

6.2.2. Baseline scenario selection

49. The baseline scenario may be identified based on existing actual or historical emissions, adjusted downwards.

50. The mechanism methodology may determine the baseline scenario as downward adjusted existing actual or historical emissions or removals from sources and sinks while following the general principles of conservativeness and others in section 4, as well as the data requirements in section 5 related to credibility and transparency, under considerations of data availability and quality and justify or require justification of the choice of approach.

51. The mechanism methodology shall define the procedures to determine the baseline scenario. Possible baseline scenarios may inter alia include:

    (a) The continuation of the pre-activity scenario up to a certain point in time (for example, up to the time at which a retrofit would have occurred);

    (b) An evolution of the baseline scenario over time (for example, if a gradual shift from the pre-activity scenario is observed);

    (c) The retrofit or replacement of equipment that has been used in the pre-activity scenario;

    (d) The implementation of the Article 6.4 activity at a later point in time.

6.2.3. Methods for quantification of baseline emissions or removals

52. The mechanism methodology shall define the methods to quantify the baseline emissions or net removals as tCO_2-eq or the baseline emissions or net removals intensity as tCO_2-eq per unit output. The determination shall be consistent with the identified baseline scenario. The crediting baseline may be derived using the following general methods:

    (a) **Site-specific historical data**. Where this method is used, the mechanism methodology shall address issues related to the minimum number of historical years to consider, year-on-year variability, any trends in the historical data and the need for the use of factors to account for improvements in performance that may occur in the baseline scenario over time;

    (b) **Control group**. Where this method is used, the mechanism methodology shall establish requirements related to selection of the control group; shared characteristics between the activity and control groups such as location, pre-activity and project technologies, socio-economic circumstances, and existing practices; and statistical tests for similarity between the control and activity group;

    (c) **Model.** Where this method is used, the mechanism methodology shall address the selection, calibration, capabilities, credibility and conservativeness of models; and

    (d) **Default factors.** Where this method is used, the mechanism methodology shall specify the source of the default factors used and ensure their relevance and conservativeness.

6.2.4. Downward Adjustment

53. For a baseline based on the existing actual or historical emissions or removals, the mechanism methodology shall describe the downward adjustment method to be applied by activity participants using the methodology for an Article 6.4 activity or host countries using the methodology to develop a standardized baseline.

54. The downward adjustment may be determined:

    (a) As the lower bound of the relative error at 95% confidence level estimated for the total baseline emissions of the first crediting period in the ex-ante quantification. In case the relative error is below 10%, the 10% value should be used as minimum downward adjustment. For baseline removals, an upward adjustment shall be applied mutatis mutandis;

$$DA_{CP,i} = max\left(10\%, \eta(BE_{CP,i})\right)$$ Equation (1)

$$BE_y = BE_{U,y} * (100\% - DA_{CP,i})$$ Equation (2)

Where:

$DA_{CP,i}$	=	Downward adjustment factor for the crediting period *i*
$\eta(BE_{CP,i})$	=	Relative error of the total baseline emissions of the crediting period *i*
BE_y	=	Downward adjusted baseline emissions of year *y*
BEu, y	=	Unadjusted baseline emissions of year *y*

(b) Through another approach proposed in the mechanism methodology, considering the minimum adjustment described in the method above.

Box 1. Illustrative examples of selecting the RMP paragraph 36 approach

The selection of approaches stated in chapter 6 can be illustrated by the following examples of hypothetical activities. The examples shown do not prejudge the eligibility of the types of activities and the suitability of such baselines in all circumstances.

1. Best available technology (BAT)

If an Article 6.4 activity installs a greenfield low emission boiler fuelled by renewables, a plausible baseline could be the installation of a new boiler with the BAT on the market. This could be a high efficiency boiler using a low-emission fossil fuel (e.g., natural gas). Baseline emissions could be calculated on the basis of the heat generated by the boiler introduced by the Article 6.4 activity, the efficiency of the BAT boiler and the emission factor of the reference fuel. If an Article 6.4 activity replaces an existing boiler, baseline emissions can be calculated by assuming a BAT boiler, which could yield a more conservative outcome and may be better suited in view of the activity lifetime, compared to calculation on the basis of existing boiler.

2. An ambitious benchmark

If an Article 6.4 activity aims to achieve emission reduction by replacing an equipment to reduce the GHG intensity of the product, e.g. cement, an ambitious benchmark for the emissions per unit of cement produced may be a suitable indicator since GHG emission associated with cement production typically depend on various factors, such as the technology, the sources of fuel and the blending materials, and may not be determined by the difference in equipment alone.

As a second example, if an Article 6.4 activity includes operational improvement, or for activities where no action (or no action mandated by regulations) is the BAU, an ambitious benchmark may apply. Some removal activities may fall into the latter description.

3. Existing actual or **historical emissions adjusted downwards**

For an activity that replaces an existing boiler (either stand-alone or part of a production process), a plausible baseline scenario could be that the existing boiler would continue to be used for its remaining lifetime. The efficiency of the existing boiler could be determined on the basis of its historical performance. Furthermore, there may be circumstances where the performance of boilers is highly location specific. In this case, historical operation data could serve as the basis for calculating the baseline efficiency. This baseline efficiency would be subject to downward adjustment.

7. Definition and Quantification of BAU

55. Mechanism methodologies shall include provisions to demonstrate that the requirements in RMP paragraph 36, baseline emissions and removals determined in accordance with any of the approaches in section 6 above, are below ‘business as usual’ for emission reduction activities, and above BAU for activities involving removals.

56. For that purpose, mechanism methodologies shall require the identification of a conservative BAU scenario that would occur in the absence of the activity and provide a

method for the estimation of the corresponding BAU emissions or removals. The BAU also may be defined using an approved standardized baseline.

57. The following alternatives shall be considered for the purposes of determining the BAU scenario:

    (a) Continuation of the historical situation (pre-activity scenario);

    (b) Establishment of an economically viable technology or practice;

    (c) A scenario combining (a) for the remaining lifetime of the existing equipment and/or practice, followed afterwards by (b);

    (d) Only when it is justified that the previous alternatives are not suitable, then another relevant scenario in line with the applicable principles and requirements set out in this standard can be considered.

58. The following approaches may be considered for estimating the BAU emissions or removals:

    (a) Where the activity is not a greenfield activity, the historical emissions or emissions intensity, including any trends toward improving performance, prior to the implementation of the activity, for the remaining lifetime of the existing equipment and/or practice;

    (b) Where the activity is a greenfield activity, or where it operates beyond the end of the remaining lifetime of the existing equipment and/or practice, mechanism methodologies may consider the average emissions intensity of new capacity installed in the past three years, in the baseline geographical reference area, and/or in similar social, economic, environmental and technological circumstances and providing similar outputs as the activity with these criteria specified further in the mechanism methodology.

59. In determining the BAU scenario and quantifying the BAU emissions or removals pursuant to paragraphs 55 to 58 above, the following shall be identified and incorporated in the BAU:

    (a) Legal requirements related to the activity type or sector that are active or scheduled to take effect:

        (i) *Option 1:* All legal requirements shall be deemed to be enforced;

        (ii) *Option 2:* The legal requirements are not enforced but the law or regulation refers to or formally integrates the mechanism as an instrument for implementation;

    (b) [Targets related to outputs provided by activity as defined by government authorities, including regional/supra-national, national, subnational, and local jurisdictions (e.g., efficiency targets for appliances, renewable capacity target for national grid, refrigerant substitution target for appliance manufacture);

    (c) Targets related to products or services provided by the activity as defined by other entities relevant to the sector, such as national or international sector associations (e.g., fossil fuel substitution targets for cement manufacture, etc.).]

60. The BAU scenario and quantification of the BAU emissions or removals shall be determined ex-ante at the start of the first crediting period for the same duration as the planned crediting periods of the activity. Where several scenarios are plausible, the scenario showing the lowest emissions (for reductions) or highest removals (for removals) shall be chosen as the BAU scenario. The BAU scenario and BAU emissions or removals shall be redetermined at each crediting period renewal and the same analysis shall be carried out.

8. Downward adjustment for consistency with paragraph 33 of the RMP

61. Mechanism methodologies shall include factors or quantitative methods for downward adjustment appropriate to the sector and activity type, and considering large-scale transformation and decarbonization technologies, negative emission approaches, and the long-term temperature goal of the Paris Agreement, unless otherwise decided by the Supervisory Body.

62. The downward adjustment shall be applied to the BAU baseline determined in section 7 above. The methodological approach to determine the downward adjustment shall be specified in the mechanism methodology, be appropriately justified, and be based on the following considerations:

    (a) The downward adjustment shall be applied to all years of the crediting period, including the first year;

    (b) The downward adjustment shall increase over time with the view to encouraging ambition over time;

    (c) [The initial scale of the downward adjustment shall be at least [X%] and the annual increase shall be at least [Y%] per year];

    (d) The scale of the downward adjustment shall be informed by other factors to be further developed in a future version of this or other standards.

9. Comparison and selection of crediting baseline

63. Mechanism methodologies shall contain provisions to require activity participants, ex-ante, to undertake the following comparisons.

64. Option 1: Approach – long version.

65. Compare for each individual year of the crediting period and as a total amount with respect to the crediting period and demonstrate the magnitude of this difference:

    (a) the baseline emissions and/or removals according to one of the approaches of para. 36 of the RMP estimated as per the applicable mechanism methodology defined in line with section 6 of this standard; and

    (b) the BAU baseline emissions and/or removals determined following the mechanism methodology defined in line with section 7 of this standard.

66. Then, compare for each individual year of the crediting period and as a total amount with respect to the crediting period and demonstrate the magnitude of this difference:

    (a) the downward adjusted for consistency with paragraph 33 of the RMP baseline as per the applicable mechanism methodology defined in line with section 8 of this standard; and

    (b) the BAU baseline emissions and/or removals determined following the mechanism methodology defined in line with section 7 of this standard.

67. If the difference of the first comparison is of greater magnitude, than the difference of the second comparison, then no further adjustment is required.

68. If the difference of the second comparison is greater, then the crediting baseline shall be further adjusted downward to the level of the downward adjusted BAU baseline.

69. For baselines for removals, the greater removals shall be selected mutatis mutandis.

70. This comparison and selection of the crediting baseline shall be demonstrated in the PDD at registration and undertaken and reported at each renewal of the crediting period.

71. Option 2: Simplified approach

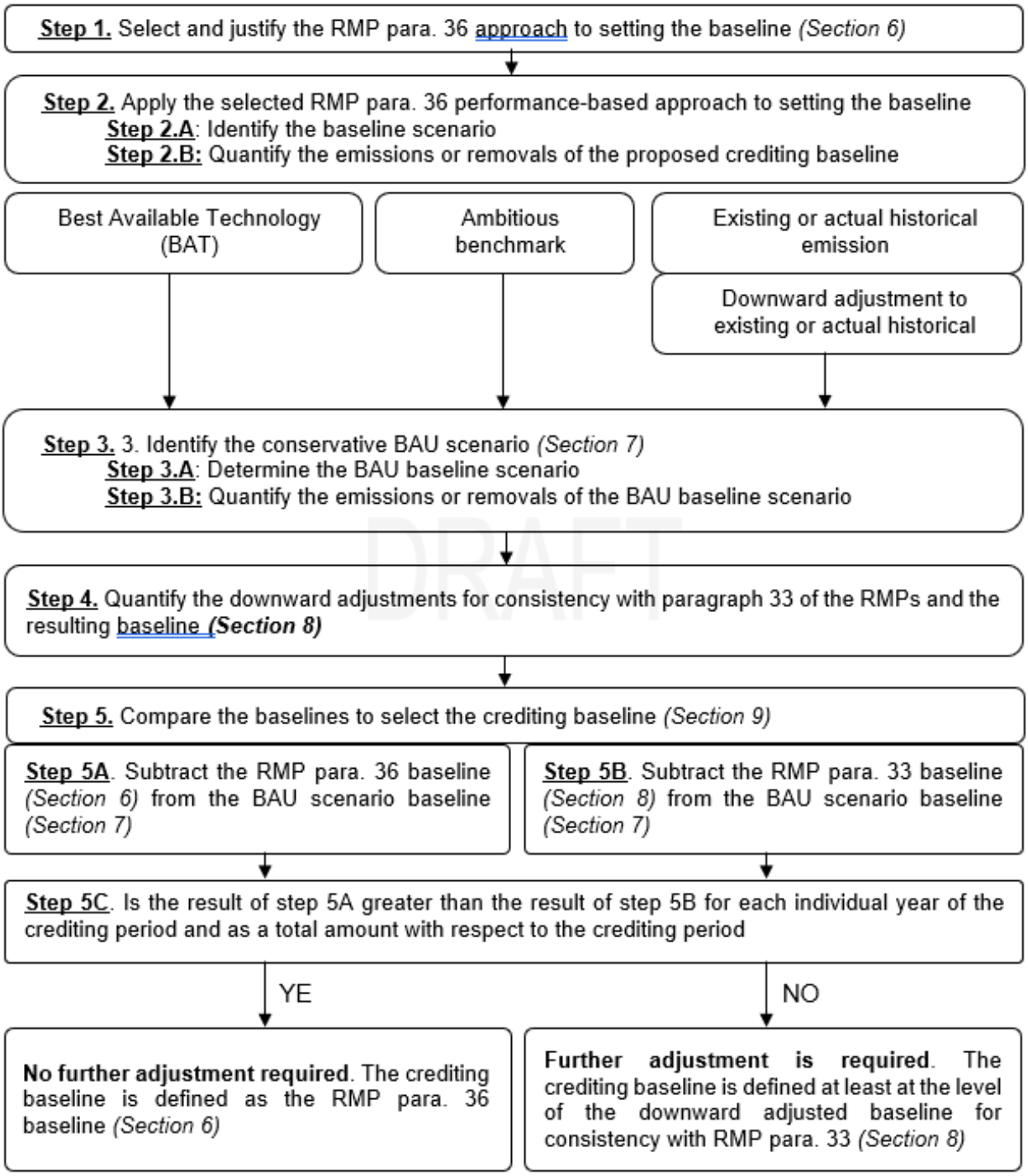
72. Select for each individual year the lowest of either:

    (a) The baseline resulting from step 2 (the baseline emissions and/or removals according to one of the approaches of para. 36 of the RMP estimated as per the applicable mechanism methodology defined in line with section 6 of this standard); or

    (b) The baseline resulting from step 4 (the downward adjusted for consistency with paragraph 33 of the RMP baseline as per the applicable mechanism methodology defined in line with section 8 of this standard).

Appendix 1. Overview of the baseline selection process

Figure 1. Selection of baseline approach and application of downwards adjustment



Appendix 2. General requirements for mechanism methodologies

1. Applicability conditions

1. Mechanism methodologies shall specify the conditions under which proposed Article 6.4 activities may use the methodology. Applicability conditions shall clearly describe the technologies or practices which are eligible under a methodology as well as, if appropriate, those which are not.

2. Applicability conditions shall also prevent the use of the methodologies in contexts, configurations and cases for which these are not intended and under which an overestimation of emission reductions or net removals and/or perverse incentives could occur.

3. For each applicability condition, the mechanism methodology shall specify whether the fulfilment of the condition shall be assessed:

   (a) Once at the initial validation of the PDD or, where the information is not yet available, at in the first verification of emission reductions or removals; or

   (b) At each verification of emission reductions or removals.

2. Definition of the project boundary

4. [Mechanism methodologies shall identify all the emission sources, sinks or reservoirs that could be altered by activities that are eligible under the methodology.

5. Mechanisms methodologies shall indicate for each source, sink or reservoir whether it pertains to the baseline scenario and/or the Article 6.4 activity scenario. Mechanism methodologies shall compare the activity and baseline sources, sinks and reservoirs to ensure a complete and fair comparison between the two scenarios.

6. Mechanism methodologies shall further indicate whether each source, sink and reservoir are controlled, related to, or affected by the applicable Article 6.4 activities, in line with the definitions, and provide adequate justification. Note that some sources, sinks or reservoirs may be classified in different ways, depending on the configuration of the Article 6.4 activity (for example, in some activities, a source of transport emissions may be controlled whereas in others it may be related); in this case, this should be indicated in the methodology respectively.

7. Mechanism methodologies shall define the **project boundary** of the applicable Article 6.4 activities, including which emission sources, sinks or reservoirs and GHGs are included.

8. The project boundary shall include emission sources, sinks or reservoirs that are identified as *controlled* and *related*. The project boundary also may include sources, sinks or reservoirs that are identified as *affected*. For example, for activities that provide renewable electricity to the grid and thereby affect generation by power plants in the grid. In this case, the emission reductions from power plants in the grid shall be treated as a baseline

emission source within the project boundary. Affected sources, sinks or reservoirs that are not included in the project boundary shall be included as leakage.

9. Mechanism methodologies may omit sources, sinks or GHGs from the project boundary and the leakage quantification, provided that the omission leads to a more conservative quantification of emission reductions or net removals. For example, where it can be demonstrated that upstream emissions associated with the applicable Article 6.4 activities are lower than upstream emissions associated with the baseline scenario, the relevant upstream emissions may be omitted in both the Article 6.4 activity scenario and the baseline scenario. The mechanism methodology may also specify conditions under which certain sources, sinks, reservoirs or GHGs shall be considered or may be omitted. The proponents of the mechanism methodology shall demonstrate and provide appropriate justifications for any such omissions, including that the omission is conservative for the range of Article 6.4 activities that may apply the methodology.

10. Mechanism methodologies shall require activity participants to delineate the **geographical boundary** of a proposed Article 6.4 activity. Mechanism methodologies may require activity participants to specify the location of the activity in the form of Keyhole Markup Language (KML) files or similar formats as one or more polygon(s) or by specifying the coordinates of the geographic boundary using a known coordinate system. The geographical boundary may cover more than one host Party. Where appropriate, the mechanism methodology may request the location of leakage emission sources and sinks to be described, as well.]

3. Alignment of Article 6.4 activities with NDCs, LT LEDS and Paris Agreement Long Term Goals

11. Mechanism methodologies shall require demonstration that the activity does not constrain but aligns with the policies, options and implementation plans of the host Party with regard to:

    (a) The latest nationally determined contribution (NDC) of the host Party; where available;

    (b) Its latest long-term low greenhouse gas emission development strategies (LT-LEDS), if it has submitted one; and

    (c) The long-term temperature goal and long-term goals of the Paris Agreement.

12. With respect to NDC alignment, mechanism methodologies shall require activity participants to demonstrate that the proposed Article 6.4 activity as described in the PDD is not in contradiction with the host Party NDC that is valid at the time of submission of the PDD to Global Stakeholder Consultation (GSC), or the policies, options and implementation plans as referred therein. This also holds for Article 6.4 activities that affect sources, sinks, reservoirs, or GHGs not covered by the NDC.

13. With respect to alignment with LT-LEDS, mechanism methodologies shall require activity participants to demonstrate that the proposed Article 6.4 activity as described in the PDD is not in contradiction with the long-term low greenhouse gas emission development strategies (LT-LEDS), if the host Party has submitted one, based on the LT-LEDS valid at the time of submission of the PDD to GSC, or the policies, options and implementation plans of the host Party as referred therein. This also holds for Article 6.4 activities that affect sources, sinks, reservoirs, or GHGs not covered by the LT-LEDS.

14. With respect to alignment with the long-term temperature goal and long-term goals of the Paris Agreement, mechanism methodologies shall require activity participants to demonstrate that the proposed Article 6.4 activity as described in the PDD does not constrain, but aligns with the long-term temperature goal and long-term goals of the Paris Agreement, which may be demonstrated by showing that the main focus of the activity does not constrain, but aligns with the following global efforts identified by decision 1/CMA.5, paragraphs 28, 29 and 33:

    (a) Tripling renewable energy capacity globally and doubling the global average annual rate of energy efficiency improvements by 2030;

    (b) Accelerating efforts towards the phase-down of unabated coal power;

    (c) Accelerating efforts globally towards net zero emission energy systems, utilizing zero- and low-carbon fuels, well before or by around mid-century;

    (d) Transitioning away from fossil fuels in energy systems, in a just, orderly and equitable manner, accelerating action in this critical decade, so as to achieve net zero by 2050 in keeping with the science;

    (e) Accelerating zero- and low-emission technologies, including, inter alia, renewables, nuclear, abatement and removal technologies such as carbon capture and utilization and storage, particularly in hard-to-abate sectors, and low-carbon hydrogen production;

    (f) Accelerating the substantial reduction of non-carbon-dioxide emissions globally, in particular methane emissions by 2030;

    (g) Accelerating the reduction of emissions from road transport on a range of pathways, including through development of infrastructure and rapid deployment of zero- and low emission vehicles;

    (h) Phasing out inefficient fossil fuel subsidies that do not address energy poverty or just transitions, as soon as possible; or

    (i) Conserving, protecting and restoring nature and ecosystems towards achieving the Paris Agreement temperature goal, including through enhanced efforts towards halting and reversing deforestation and forest degradation by 2030, and other terrestrial and marine ecosystems acting as sinks and reservoirs of greenhouse gases and by conserving biodiversity, while ensuring social and environmental safeguards, in line with the Kunming-Montreal Global Biodiversity Framework.

4. Aggregation

15. The consolidation of information may be done within a geographical area and a sector, to provide observations at a broader level than an individual Article 6.4 activity. Comparable activities can be grouped or aggregated to provide a broader picture when this does not lead to misrepresentation. Comparable activities can also be split or disaggregated, when this does not lead to misrepresentation, for example when the sector shows great heterogeneity.

5. Conservativeness and uncertainty

16. Mechanism methodologies shall ensure that the emission reductions or net removals from Article 6.4 activities using the methodology [shall result in conservative estimates][are not overestimated], taking into account the overall uncertainty in quantifying the emission reductions or net removals. The degree of conservativeness shall be based on the level of uncertainty (i.e., applying a larger degree of conservativeness in case of higher uncertainties). All causes of uncertainty shall be considered, including uncertainty in data (e.g., measurements), parameters (e.g., representativeness of default values), assumptions (e.g., the baseline scenario), and methods (e.g., models to quantify emission reductions).

6. Attributability of emission reductions or removals to the Article 6.4 activity

17. Mechanism methodologies shall ensure that the quantified emission reductions or net removals result from the implementation of the Article 6.4 activity and not from changes in exogenous factors that are not related to the implementation of the Article 6.4 activity. Mechanism methodologies shall therefore require approaches that take into account and adjust for exogenous factors affecting emission reductions or net removals.

7. Potential perverse incentives

18. Mechanism methodologies shall identify any potential perverse incentives for the activity participants to inflate the calculated emissions reductions or net removals and ensure that the perverse incentives are avoided.

8. Rebound effects

19. Mechanism methodologies shall ensure that rebound effects (i.e., an increase in use of outputs or service level as a result of the implementation of an Article 6.4 activity, e.g., when introducing energy-efficient appliances) are accounted for. Where applying the provisions with regard to suppressed demand, further requirements or guidance from relevant other standard(s) may be considered.

9. Avoidance of double counting

20. The proponent of a mechanism methodologies shall identify risks of potential double counting of the emission reductions or net removals and, where such risks are relevant and material, include provisions to avoid such double counting in the mechanism methodology. This shall include but not be limited to:

    (a) Double counting due to overlapping claims between different crediting mechanism activities;

    (b) Double counting due to overlap with mandatory domestic mitigation schemes; and

    (c) Double counting due to overlap with other environmental markets or accounting frameworks.

9.1. Double counting due to overlapping claims between different carbon crediting mechanism activities

21. Double counting may occur if different carbon crediting mechanism activities claim the same emission reductions or removals. The consideration of this form of double counting shall include but not be limited to:

    (a) The risk of different entities claiming the emission reductions or net removals associated with the production and use of goods or services (e.g., both the producer and the consumer of a biofuel claiming the same emission reductions);

    (b) The risk of overlap from emission sources or carbon pools that occur upstream and downstream of the activity (e.g., an efficient cookstove activity and an avoided deforestation activity claiming the same emission reductions);

    (c) The risk of overlap due to implementation of activities at different aggregation levels within the same geographical area (e.g., a project-scale avoided deforestation activity falling within the scope of a jurisdictional avoided deforestation activity).

22. This risk could, for example, be addressed in mechanism methodologies by requiring agreement between the entities that may potentially seek carbon credits for the same emission reductions or removals.

9.2. Double counting due to overlap with mandatory domestic mitigation schemes

23. Double counting may occur if an Article 6.4 activity reduces emissions or enhances removals that are covered by a mandatory domestic mitigation scheme (e.g. an emissions trading system). This risk could, for example, be addressed in mechanism methodologies by:

    (a) Excluding activities or not issuing Article 6.4 ERs for emission reductions or removals that are subject to such overlap; or

    (b) Requiring that measures are in place to ensure that any relevant impacts of the activity (e.g., the GHG emission reductions achieved or the kilowatt-hours of renewable electricity produced) are not counted towards the achievement of targets or obligations under the mandatory domestic mitigation scheme (e.g., by cancelling allowances from the emissions trading system before issuing carbon credits).

9.3. Double counting due to overlap with other environmental markets or accounting frameworks

24. Double counting may occur if the mitigation outcomes achieved by an Article 6.4 activity are also claimed in other environmental markets or accounting frameworks (e.g., guarantees of origin for renewable electricity generation, green hydrogen schemes, low carbon fuel standards, etc.). Note that this only holds if mitigation outcomes (e.g., emission reductions, removal enhancements, renewable energy generation, energy efficiency improvements, etc.) are claimed in the other environmental markets or accounting frameworks, but not where other outcomes (e.g., air contaminant reductions or social impacts) are claimed.

25. This risk could, for example, be addressed in mechanism methodologies by:

    (a) Excluding activities or not issuing Article 6.4 emission reductions for emission reductions or removals that are subject to such overlap; or

    (b) Requiring that the Article 6.4 activity does not claim the same mitigation outcomes in the relevant other environmental markets or accounting frameworks.

10. Updating of mechanism methodologies

26. In the context of general global trends toward better data availability and quality, at the regular review of approved mechanism methodologies at least once every five years, the review particularly shall seek to incorporate, or substitute, sources and types of data and information that enhance the application of the principles in section 4, for example the use of remote sensing and digital technologies.

11. Requirements for submissions of BAT for methodologies

27. The MEP further noted that its discussions identified potential challenges to applying BATs with overlapping scopes (geographic, sectoral, or technological) while ensuring consistency in the application of baselines relying on BATs in such cases. This may have impacts on Article 6.4 activity validation and registration.

12. Monitoring

28. Mechanism methodologies shall specify procedures and methods for the monitoring all data and parameters necessary to calculate the emission reductions or net removals from the Article 6.4 activity using the methodology.

29. Further requirements related to monitoring may be introduced in this standard in the future.

- - - - -

Document information

Version	*Date*	*Description*
02.0	3 February 2025	MEP 004, Annex 1. To be considered by the Supervisory Body at SBM 015. This version aligns with the methodologies standard (A6.4-STAN-METH-001) endorsed by the CMA and takes into account the inputs received in response to the call for public input on this draft document.
01.0	17 September 2024	MEP 003, Annex 1. A call for input on this document (A6.4-MEP003-A01) will be open to the public from 17 September to 8 October 2024. The input received during this period will be considered for further development of the draft standard at MEP 004.

Version	*Date*	*Description*

Decision Class: Regulatory
Document Type: Standard
Business Function: Methodology
Keywords: A6.4 mechanism, baseline scenario, methodologies, standardised baselines