ARTICLE 6.4 MECHANISM

A6.4-SB007-AA-A10

Information Note

Compilation of responses to the call for input titled “Structured public consultation: Further input – requirements for the development and assessment of mechanism methodologies”

Version 01.0

United Nations
Framework Convention on
Climate Change

COVER NOTE

1. Procedural background

1. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), at its third session, requested the Supervisory Body of the mechanism established by Article 6, paragraph 4, of the Paris Agreement (Article 6.4 mechanism) to elaborate and further develop recommendations, for consideration and adoption by the CMA at its fourth session (November 2022), on the application of the requirements referred to in chapter V.B (titled “Methodologies”) of the rules, modalities and procedures of the Article 6.4 mechanism (RMPs).[1]

2. The CMA, at its fourth session, requested the Supervisory Body to elaborate and further develop recommendations for consideration and adoption by the CMA at its fifth session (December 2023). It further requested the Supervisory Body, while developing the recommendations, to consider broader inputs from stakeholders provided in a structured public consultation process.[2]

3. The Supervisory Body, at its fourth meeting (SB 004), considered the draft recommendation “Requirements for the development and assessment of mechanism methodologies”[3] and agreed that an informal working group on this matter, comprising its members and alternate members as well as the secretariat, would prepare an information note, taking into account the guidance and questions contained in annex 3 to the SB 004 meeting report,[4] for the consideration by the Supervisory Body at its fifth meeting. It further requested the secretariat to launch a call for public input based on those questions, with a view to seeking further input from stakeholders.

4. At its fifth meeting, the Supervisory Body considered the information notes titled “Draft elements for the recommendation on requirements for the development and assessment of mechanism methodologies”[5] and “Compilation of public inputs in response to the ‘public consultation: Requirements for the development and assessment of mechanism methodologies’ and related literature”[6] and requested the secretariat to further work on the

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[1] See decision 3/CMA.3, para. 6(d), for the request, and the annex to decision 3/CMA.3, for the RMPs, contained in document FCCC/PA/CMA/2021/10/Add.1, available at: https://unfccc.int/documents/460950.

[2] See decision 7/CMA.4, paras. 21 and 22, for the request, contained in document FCCC/PA/CMA/2022/10/Add.2, available at: https://unfccc.int/documents/626570.

[3] See annex 10 to the annotations to the agenda of SB 004 (A6.4-SB004-AA-A10), available at https://unfccc.int/sites/default/files/resource/a64-sb004-aa-a10.pdf.

[4] See annex 3 of the meeting report of SB 004 (A6.4-SB004-A03), available at https://unfccc.int/sites/default/files/resource/a64-sb004-a03.pdf.

[5] See annex 7 of the annotations to the agenda of SB 005 (A6.4-SB005-AA-A07), available at https://unfccc.int/sites/default/files/resource/a64-sb005-aa-a07.pdf.

[6] See annex 8 of the annotations to the agenda of SB 005 (A6.4-SB005-AA-A08), available at https://unfccc.int/sites/default/files/resource/a64-sb005-aa-a08.pdf.

draft elements for the recommendation on requirements for the development and assessment of Article 6.4 mechanism methodologies, taking into account guidance from the Supervisory Body at this meeting. Further, the Supervisory Body agreed to prepare a concept note on proposals and options to implement or operationalize elements in line with guidance and questions elaborated by the Supervisory Body at SB 005, as contained in annex 1 to the SB 005 meeting report,[7] drawing on previous work, reflecting concerns expressed by members and alternate members, and taking into account previous public input.

5. At its sixth meeting, the Supervisory Body considered the draft recommendation “Requirements for the development and assessment of mechanism methodologies”[8] and agreed:

(a) That an informal working group on this matter comprising members and alternate members of the Supervisory Body as well as the secretariat would work prior to its next meeting to prepare the updated draft recommendation for consideration of the Supervisory Body at its next meeting; and

(b) To launch a call for structured public consultation from 3 to 16 August 2023 to invite stakeholders to provide comments, based on the draft recommendation which will be prepared by the informal working group, and requested the secretariat to prepare a compilation of all public inputs received. The Supervisory Body also requested the secretariat to inform Article 6.4 mechanism designated national authorities (DNAs) of the opening of the call and organize a specific interaction with DNAs on this matter prior to the next meeting, in line with paragraph 29 of the SB 006 meeting report. Comments are invited to cover the following aspects:

(i) Addressing options laid out in the text for the implementation of baseline, additionality and leakage assessment requirements;

(ii) Addressing pros and cons of the different options;

(iii) Addressing the balance in the text between substantive guidance in the draft recommendation text and further guidance to be elaborated in the tools;

(iv) Addressing the clarity, structure and understanding of the text, with proposals for improvement; and

(v) Addressing the questions for additional inputs included in the document.

2. Purpose

6. The purpose of this document is to provide a compilation of public input received in response to the “Structured public consultation: Further input – Requirements for the development and assessment of mechanism methodologies”. The compilation aims to facilitate the work of the Supervisory Body in developing recommendations on the application of the requirements referred to in chapter V.B. ("Methodologies”) of the RMP.

[7] See annex 1 of the meeting report of SB 005 (A6.4-SB005-A01), available at https://unfccc.int/sites/default/files/resource/a64-sb005-a01.pdf.

[8] See annex 8 of the annotations to the agenda of SB 006 (A6.4-SB006-AA-A08), available at https://unfccc.int/sites/default/files/resource/a64-sb006-aa-a08_1.pdf.

7. The secretariat synthesised, paraphrased and grouped the information in the submissions for easy readability and flow of information. In that process, despite best efforts, some relevant information may have been unintentionally omitted or not correctly represented. Also, it was difficult to fit some information under the prevailing elements and categories. Readers are encouraged to consult the full submissions available at the link included under footnote 9 to fully understand the background and context in which proposals are made in the submissions.

3. Current work

8. The call for inputs from stakeholders was open from 3 to 16 August 2023. A total of 21 responses were received as shown in table 1.[9]

Table 1. List of stakeholders who responded to the call for public input[(a)]

No.	Stakeholder
1	Vinay Deodhar (VD)
2	Electryone Power Private Limited
3	44moles (44M)
4	UNDP
5	Global Carbon Council (GCC)
6	International and Comparative Law Research Center (ICLRC)
7	Perspectives Climate Research (PCR)
8	Riverse (CGED)
9	Puro.earth (PE)
10	BeZero Carbon (BZC)
11	Ecosecurities (ES)
12	Clean Cooking and Climate Consortium (4C)
13	Sylvera (SY)
14	Climeworks (CW)
15	Carbon Capture and Storage Association (CCSA)
16	MDB Article 6 Working Group (MDB WG)
17	Carbon Engineering (CE)
18	1PointFive (1PF)
19	IETA
20	Republic of Congo (RC)[(b)]
21	Climate Analytics (CA)

[(a)] In-text citations in this document (e.g., VD) reference stakeholder comments/inputs made to the call for public inputs.

[(b)] The original submission was made in French and this information note provides a non-official translation to English for informational purposes only. The readers are encouraged to refer to original submission at the link mentioned in footnote 9 below.

[9] Details of the call for public input and the full submissions are available at: https://unfccc.int/process-and-meetings/the-paris-agreement/article-64-mechanism/calls-for-input/call-for-input-2023-structured-public-consultation-further-input-requirements-for-the-development.

4. Subsequent work and timelines

9. Further work will be carried out based on the guidance that will be received from the Supervisory Body.

5. Recommendations to the Supervisory Body

10. The Supervisory Body may wish to take note of this document.

(c)

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1. Procedural background

1. The Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), at its third session, requested the Supervisory Body for the mechanism established by Article 6, paragraph 4, of the Paris Agreement (Mechanism) to elaborate and further develop recommendations, for consideration and adoption by the CMA at its fourth session (November 2022), on the application of the requirements referred to in chapter V.B (titled Methodologies) of the rules, modalities and procedures for the mechanism established by Article 6, paragraph 4, of the Paris Agreement (RMP).[1]

2. The CMA, at its fourth session, requested the Supervisory Body to elaborate and further develop recommendations for consideration and adoption by the CMA at its fifth session. It further requested the Supervisory Body, while developing the recommendations, to consider broader inputs from stakeholders provided in a structured public consultation process. [2]

2. General comments

3. Below is a summary of public input received.

4. The activity participant should be allowed to retrospectively correct any errors in the data submitted at the time of verification, validation and that has been come to notice at a later stage. (Electryone Power Private Limited)[3].

5. Grouping the requirements related to emission reductions and removals and consequently providing guidance on methodologies to be developed for both, removals and reductions simultaneously has led to confusion in following the specifications of the document[4]. It is suggested not to group reduction and removal activities by referring to ‘emission reductions’ collectively as some paragraphs seemed specific to reduction activities, where the outlined requirements and criteria did not match the scope of removal activities. Especially as certain paragraphs don’t seem to be applicable to removal projects, whether that is regarding baselines below business as usual (BAU), or additionality criteria. Most requirements and criteria would benefit from differentiating the two activity types to provide adequate guidance both for removal and for reduction activities respectively (44 M).

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[1] See decision 3/CMA.3, para. 6(d), for the request, and the annex to 3/CMA.3, for the Rules, modalities and procedures for the mechanism established by Article 6, para. 4, of the Paris Agreement, contained in document FCCC/PA/CMA/2021/10/Add.1, available at: https://unfccc.int/documents/460950.

[2] See decision 7/CMA.4, paras. 21 and 22, for the request, contained in document FCCC/PA/CMA/2022/10/Add.2, available at: https://unfccc.int/documents/626570.

[3] In-text citations in this document (e.g., VD) reference stakeholder comments/inputs made to the call for public inputs.

[4] For example, removal projects in forests would benefit from baselines set below BAU, as the baseline usually refers to removals (negative emissions) that would have occurred anyway. To assume usual sequestration through forests is lower than BAU would hence allow foresters to produce more additional offsets. Setting baselines below BAU only applies to reduction activities where baselines represent positive emissions and does not create the same effect when the baseline represents negative emissions, as in most removal activities.

6. It is suggested to have very simple to use approach that gives a highly predictable number of ITMOs and keep project development paperwork cost to the absolute minimum. Make sure it is far lower than the real reductions, without trying to specify how much of the "far lower" is for leakage and what not. Maybe do that simplification and standardization work for technologies already known will come in large numbers in the first wave of project requests instead of trying to define general rules on how to be conservative all different kinds of carbon projects (UNDP).

7. The A6.4SB should distinctly refer to emission reductions and increasing removals and not commensurate within a single term. The IPCC state that: *“CDR[5] cannot substitute for immediate and deep emissions reductions, but is a part of all modelled scenarios that limit global warming to 2°C or lower by 2100”*. To avoid an impression of CDR acting as a substitution and to accommodate for CDR specific rules and requirements, it is strongly recommend avoiding subsummations of reduction, adaptation and removal efforts within a single term (CW).

8. To effectively meet the goals of the Paris Agreement and achieve a balance between emissions and removals, it is imperative to include both carbon removals and reductions as integral components of climate mitigation strategies. While emissions reductions play a critical role in reducing greenhouse gas emissions at their source, carbon removals, such as those achieved through DAC (Direct Air Capture) projects, offer a complementary solution by actively removing carbon dioxide from the atmosphere. By combining these approaches, it can enhance the likelihood of achieving net-zero emissions and preventing further climate change. The distinction of emission reductions and removals is required in the 6.4 mechanism for two reasons:

   (a) Given their complementary roles, removals and reductions should be differentiated to ensure visibility over their roles in achieving net zero outcomes;

   (b) The methodology development of technology-based removals requires different approaches to additionality, baseline and inclusions of all emissions through a conservative LCA to ensure credits generated are of the highest integrity and are real, transparent, conservative and credible (CE).

3. [Baseline setting] [Methodology Principles]

9. Below is a summary of public input received.

10. Para 6 of the Draft recommendation specifies that para 33 of the RMP “applies to methodologies, and it is relevant to both baseline setting and additionality”, also para 9 of the Draft recommendation specifies that para 36 of the RMP presents the three elements of the additionality test, “including avoidance of lock-in and compatibility with paragraph 33 of the RMP particularly”. It is noted that RMP are clear to indicate that the compatibility with para 33 of the RMP refers directly and only to the lock-in of said levels of emissions, technologies or carbon-intensive practices. There is a conceptual difference between lock-in and the use of specific technologies or practices per se. As per the RMP, overall compatibility with para 33 is not part of the additionality test, but rather a general requirement for the development and assessment of mechanism methodologies (ICLRC).

[5] Climate Dioxide Removal.

11. To accommodate for both emission reduction and removal, it is encouraged to set [Methodology principles] rather than [baseline setting] as a title as for many industrial CDR activities, the baseline should correspond to 0 emissions, i.e., no other activities are done as e.g., in the case of DACS (Direct air capture and storage) the CDR activity presents a stand-alone approach to sequester CO_2 from the atmosphere. The resulting quantification will thus be following a performance assessment of an individual facility, rather than determining the impact based on a counterfactual (CW).

12. Baseline setting be replaced with zero baseline by default for any new engineered removals capacity. A counterfactual baseline is not needed for engineered removals, and capacity building over time is required on this topic (1PF).

13. The RMP mentions that methodologies can also be developed by stakeholders. However, list of potential stakeholders is required to be mentioned in paragraph 7 of the draft recommendation text *(hereinafter referred as methodology requirement document)* (SY).

14. By its own terms, Article 6 of the Paris Agreement exists to support Parties in enhancing their mitigation and adaptation ambition (Article 6.1). Article 6 was adopted in a context in which the insufficiency of mitigation ambition was already recognized to jeopardize achievement of the Paris Agreement’s referenced 1.5°C global warming limit. In this ongoing context of insufficient ambition, each element of paragraph 33 of decision 3/CMA.3 is significant, mandatory (“mechanism methodologies shall…”), and must be operationalized in a credible, persuasive, transparent and predictable way. These elements are not just “methodology principles” but **operational requirements** and this should be reflected in the choice of section heading. Baselines need to become more stringent over time to ensure that Article 6.4 both contributes to and aligns with the long-term temperature goal. In this context (and relevant to sections 4.1 and 4.8 of the document), **top-down baseline contraction factors (BCFs), linked to IPCC 1.5°C pathways, that reflect linear reductions to net zero carbon dioxide emissions by 2050 should be fully explored, to support the credibility of Article 6.4ERs,** the credibility of Article 6 as a whole and Paris Agreement consistency. Due attention may need to be given to how best to accommodate the different development contexts of host Parties in this context, recognizing that all Parties have agreed to collectively aim to achieve net zero emissions around mid-century, in resolving to pursue efforts to limit the temperature increase to 1.5°C (decision 1/CMA.3, paras 21-22; 1/CMA.4, para 8) and all Parties have recognized the importance of best available science in policymaking (1/CMA.3, para 1; 1/CMA.4, para 5). For project developers, **predictable, top down, default BCFs, consistent with IPCC 1.5°C pathways and Paris Agreement goals, and established by the Supervisory Body**, will help plan investments in given locations and sectors. In contrast, an open-ended general requirement that baselines be adjusted downward and become more stringent with each renewal period will not provide sufficient guidance to project proponents, or hosts, or sufficient confidence to the public, on Paris Agreement alignment. For host Parties, baseline methodologies need to provide assurance that their engagement in Article 6.4 activities will not lead to over-crediting; but beyond this protection of environmental integrity, baseline methodologies also need to support host Parties in retaining mitigation outcomes that can be used toward their own NDC achievement and enhancement over time. Some Parties **lack expertise in modelling and/or are less able to project the impacts of Article 6.4 activities on their mitigation goals**. Some Parties may face **unequal information or bargaining power in discussions or negotiations with project developers or partners**, leaving them less able to secure a significant own mitigation benefit from Article 6.4 project activities, once

corresponding adjustments have been made. Establishment of top down BCFs can help ensure that all host Parties retain a domestic mitigation benefit from Article 6 engagement that can be used toward NDC achievement and enhancement over time, in the move to net zero by 2050. It was difficult for many developing countries to establish standardized baselines under the CDM. These baselines had the potential to become rapidly out of date in small economies, for example, with the addition of large renewable energy installations. **Predictable BCFs, centrally established, can support and enable broad participation,** and remove the burden on small countries of establishing or reviewing bottom up BCFs (CA).

3.1. Encouraging ambition over time

15. Below is a summary of public input received.

16. Encouraging ambition over time is crucial to the Article 6.4 Mechanism. Especially when referring to removal projects, it is believed that the progressive reduction of crediting levels would not encourage ambition. Removal projects in the forest sector tend to require upfront investments with most removals achieved in the later phases of the project. Reducing the gains by reducing crediting levels in the last phase of the activity would make nature-based removal activities less viable. As reduction activities produce offsets, referred to as avoided emissions, it is common practice to reduce crediting levels, as additionally of said avoided emissions is only assumed to remain true for a limited period. And therefore, the suggested mechanism would only work for reduction activities, while significantly counteracting the work of removal activities (44 M).

17. The CDR activities have not been at the forefront of minds when the encouragement of ambition over time has been included within the RMPs. Since, for CDR activities, ambition over time is not a straightforward concept. CDR activities under the A6.4. mechanism will increase anthropogenic removals and could – in various contexts – be seen as an additional ambition at all times. I.e., without ongoing investments into CDR, nothing is likely to happen. By suggesting a baseline scenario of 0 emissions for industrial CDR activities such as DACS, aiming for highest ambition by quantifying only additional and anthropogenic CDR activities that are decoupled from ongoing (but hopefully shrinking) emissions. Note that once a party to the Paris agreement has a legally binding net-negative CO_2 emissions target and corresponding policy in place, this baseline setting approach for CDR methods needs to be reviewed and/or the activity should not pass a regulatory additionality test (CW).

18. Encouraging ambition in capacity growth for removals over time is necessary. However, the ambition over time for reducing emissions is a separate concept from increasing removals capacity (1PF).

19. Paragraphs 12 and 13 of the methodology requirement document should read “**shall”** rather than should (CA).

20. By prioritizing ‘technologies’, the natural potential of terrestrial carbon sinks maintained and grown through improved forest management, reforestation, afforestation, climate-smart agriculture, etc. would be entirely neglected. The Supervisory Body should not advocate or prioritize certain solutions over others. While technological solutions are required, project developers in the AFOLU sector should not be at a disadvantage, especially as nature-based solutions are currently the only activities applicable at the necessary scale to prevent further global warming (44 M).

21. Paragraph 14 of the methodology requirement document should include a reference to **transformative approaches**, inserting, “*by prioritizing transformational approaches*, by prioritizing technologies…. “ etc. Paragraph 14’s reference to “low carbon solutions” would better read “low carbon **and zero emission approaches**”, as low(er) carbon is not necessarily a “solution”, where the goal is zero emissions over time (CA).

22. It should be specified that paragraph 14 of the methodology requirement document applies to reduction activities only. Removal activities do not use GHG intensive technologies, nor do they work with a user base. Nature-based removal activities do not shift from being carbon intensive to becoming a low carbon solution, but rather go form already removing carbon form the atmosphere to removing significantly more due the Article 6.4 Mechanism’s financial incentive (44 M).

23. Paragraph 15 of the methodology requirement document could also helpfully refer to **avoiding fossil fuel lock in**. Transformative approaches could be understood as **zero-emission or near zero emission** approaches (CA).

24. Methodologies shall encourage ambition over time, and it is believed a quantitative or qualitative approach should be required even when it affects financial viability. Neglecting section 4.8, if it negatively affects financial viability would indirectly encourage project developers to design activities that appear financially viable only if the approach outlined in section 4.8 is not applied, which would significantly decrease transparency and trust in the mechanism (44 M).

25. The methodology developers should be able to choose between qualitative and quantitative approaches to demonstrating how the activity encourages ambition over time with due justification — and a mix of both if applicable. This would allow taking into account the widest array of national and local circumstances and allow for streamlined demonstration of compliance in particular cases, which would encourage broad participation (ICLRC).

26. Paragraph 16 of the methodology requirement document shall have the following sentence structure; *“mechanism methodologies shall require adoption of a **quantitative** approach set out in 4.8”* (CA).

3.2. [Being real, transparent, conservative, credible], [below business as usual]

27. Below is a summary of public input received.

28. It is still unclear what the requirement to methodologies to be “below business as usual” (as stated in para 33 of the RMP) shall mean. This section should elaborate on the compliance of methodologies overall to this particular requirement (ICLRC).

29. As of today, anthropogenic CDR activities provide for marginal contributions only and a substantial increase of activities must lead to overall atmospheric concentrations that are below BAU. As industrial CDR activities will rely on engineered processes and are thus likely to be done by actors that are accustomed to engineered activities, an additional aspect of “business sensitive” information should be considered when drafting data disclosure requirements. For industrial CDR activities, it is promising to have a thriving ecosystem with (friendly) competition that will require some business sensitive data to be restricted to the public. An independent third-party auditor (likely under an NDA) should have access to all data and calculations to safeguard integrity of the A6.4 mechanism. In addition to the points above, it is strongly believed in a need to assess and account CDR

activities separately from emission reductions. This will lead to additional safeguard concerning a substitution effect of CDR towards emission reductions and allows for the assessment of CDR activities based on a stringent and conservative Life Cycle Analysis approach that is taking into account all life cycle emissions based on a cradle to grave assessment scope (i.e. including all embodied emissions (and future reversals – where applicable) caused by the activity) (CW).

30. The language and provisions that will ensure real, transparent, conservative, credible, and below business-as-usual goals for reduction activities. Below business as usual is not a relevant concept to engineered removals activities, as business as usual for an engineered removals project is zero removal capacity (1PF).

31. Data sources should always be disclosed. Confidential sources should not be allowed. Building trust around emission reductions is crucial to ensure demand and hence the ability to globally finance sustainable action. If data sources are not disclosed, it would contradict the mechanism’s goal of transparency. Calculations shall provide repeatable and reproducible results when input parameters are identical. If through the use of machine learning or deep learning models the results deviate, although the same input data has been provided, the resulting standard error should not only be published and considered in the crediting levels associated with that activity, but the methodology overall should be questioned by the Supervisory Body, as reproducibility is required for the mechanism and its activities to be considered scientific and trustworthy (44 M).

32. Who and how would overestimation be identified and with what consequence. The use of references and confidential sources, as referred to in paragraph 19 of the methodology requirements document it could prevent a third party from identifying overestimation. Only by preventing the use of secondary data can the risk for overestimation be eliminated fully. Forest projects currently estimate removals based on a variety of models, secondary data, and seldomly primary data from the activity area. As discussed by the media extensively (The Guardian, Die ZEIT), overestimation of additional removals in forest projects is currently the standard. The only way to detect over-estimation, not simply by comparing results from two different models or from a differing set of secondary data, is through destructive sampling, which would result in cutting down the forest. Avoiding overestimation in forestry cannot be achieved through proofing mechanisms once the activity has been established, it can only be achieved structurally, by ensuring activity proponents apply methods that minimize the risk for overestimation e.g., by not allowing the use of secondary data (44 M).

33. Where possible the Supervisory Body should require activity proponents to use primary data. Current Improved Forest Management activities use secondary data to model removals, while it is shown that the collection of primary data for each project is more exact, and financially viable. To grow trust is the mechanism the Supervisory Body should condemn the use of secondary data for activity types that can collect more accurate primary data, while ensuring the project remains financially viable (44 M).

34. The use of BAU and baseline concepts that refer to historic values, reference plots, or modelled scenarios effectively do not represent the projects additionality. The fraudulent use of those concepts has allowed project proponents and developers to exploit the market, leading to great skepticism, especially around nature-based removal projects (44 M).

35. BAU concepts should be applied only to reduction projects, as removal activities can use alternative, more effective tools to provide proof of additionality and permanence. A greater focus on permanence, ensuring removals are stored beyond what is considered BAU, would ensure additionality, not just when initiating the activity, but throughout the entirety of the activities crediting period and beyond. Not relying on projected baselines and historic and modeled data to establish additionality would greatly simplify the mechanism and provide a tangible asset to investors that worry about the long-term additionality of the market as a whole (44 M).

3.3. [Establishing that the selected baseline is below BAU]

36. Below is a summary of public input received.

37. The RMP currently do not require that the baselines be “below business as usual”. Expanding this requirement to the baselines in the Draft recommendations (including in Section 4.3 and paras 33, 33bis and 33ter of the document) does not appear to comply with the original regulation and intention of the RMP. At the same time the RMP could encourage the Parties of the Supervisory Body to develop methodologies to include such a requirement in their methodologies (ICLRC).

38. Setting a below BAU baseline seems not applicable to some CDR activities, especially DACS i.e., there are no plausible emissions in providing the same outputs, as the sole focus of DACS is to sequester CO_2 from the atmosphere. In line with the IPCC definition of CDR as deliberate technologies, practices and approaches that remove CO_2 from the atmosphere, it is concluded that without a project, there will be no deliberate CDR activities. It is therefore suggested working with a positive list for relevant activities (CW).

3.4. Contributing to the equitable sharing of mitigation benefits between participating Parties

39. Below is a summary of public input received.

40. The operationalization of this principle is encouraged via designated national authorities (DNA). The vast range of mitigation activities at hand limits the applicability of general principles and should thus be determined based on national circumstances, best known by DNAs. The A6.4SB should nevertheless engage in activities around guidance and tools that should proof helpful in a faster operationalization by DNAs (CW).

41. It is believed that the 6.4 mechanism contributes to the equitable sharing of mitigation benefits between participating Parties by design, thanks to its short-crediting periods, strict methodological requirements, and host country approval plus the authorisation process for ITMOs. In addition, the mandatory cancellation of credits towards the Overall Mitigation in Global Emissions (OMGE) and the Share of Proceeds (SoP) towards adaptation further strengthens this aspect. Further credit sharing arrangements may be considered by Designated National Authorities (DNAs), but we caution against excessive “haircuts” that may undermine the economic viability of projects and/or the competitiveness of the Article 6.4 mechanism in relation to other crediting programmes. Application of a BCF that reflects host Party preferences with regards to retaining certain shares of emissions reductions would add another layer of complexity and uncertainty for project developers, further hampering the scale and speed of the mechanism to contribute to additional mitigation activities. Ensuring capacity building regarding authorisation of ITMOs and low barriers of access to the mechanism is crucial, especially for least-developed countries and small

island developing states facing special circumstances. This will be the most crucial aspect in delivering on this provision. In our view, neither option for application of baseline contraction factors should therefore be targeted in order to address the equitable sharing of mitigation benefits (IETA).

42. The “equitable sharing” of mitigation benefits implies a **sharing of mitigation outcomes between the project proponent(s) and host Party that is quantified and can be assessed quantitatively.** It will be important for methodologies to ensure that host Parties retain a significant share of the mitigation outcomes achieved from Article 6.4 activities, so that activities contribute to the host Party’s own NDC achievement. For example, **equitable sharing might be presumed** if under a given methodology **one-half or more** of the mitigation outcomes calculated to have been achieved over the relevant crediting period are retained by the host Party. In such a scenario, even once corresponding adjustments have been made for authorized A6.4ERs, the host Party will not be in deficit from an accounting perspective due to its participation in Article 6.4 activities. A calculation that estimates mitigation outcomes to be retained by the host over a project activity’s lifetime, after applying BCFs, may also be helpful in assessing whether this criterion is satisfied (CA).

43. Mitigation contributions should be defined in the document (44 M) or the Methodologies should indicate that if the host country benefit sharing requirements are more stringent than those required by the methodology, the host country ruling applies (SY).

44. By setting baselines that are well below BAU, the financial viability of projects could be at risk. The mechanism should promote viable, scalable activities. By undermining the impact of an activity by setting baselines well below BAU, the mechanism would distort the market by suppressing supply of projects that effectively remove large quantities of carbon from the atmosphere. Representing and accurately quantifying emissions removals should be at the core of Article 6.4 activities, eliminating the need for amended baselines and crediting levels to account for errors and inaccuracies (44 M).

45. Paragraph 29 of the methodology requirement document is not helpful in its presentation of a menu (“inter alia”) of optional alternatives, some of which cannot be quantified. Instead, a clear **quantitative approach** is needed to demonstrate an equitable sharing of benefits and allow for an assessment of whether this requirement is met. A reference to the **share of proceeds for adaptation** is misplaced here. The mandatory share of proceeds for adaptation required under decision 3/CMA.3 is not a “mitigation benefit shared between **the participating parties**” to an Article 6.4 activity (see para. 33 of the RMP). It is delivered to the Adaptation Fund, where it supports activities across developing country Parties particularly vulnerable to the impacts of climate change. These beneficiary countries are a diffuse group and not “the participating parties” to a given Article 6.4 project activity (e.g., host Party, project proponent, investing Party). If the intent of 29c of the methodology requirement document is to address the relative burdens of SoP on participating Parties, then that seems to be a different issue from the issue addressed in para. 33 of the RMP. Regarding paragraph 29d of the methodology requirement document – “Where there are **mitigation co-benefits** derived from the activity and identified in the mechanism methodologies” - the notion of mitigation “co-benefits” of a mitigation activity is circular, and it is unclear what is intended here from a quantitative perspective. Further, neither paragraph 31 nor 31bis of the methodology requirement document alone is sufficient and paragraph 32 of the methodology requirement document is not a suitable alternative. Regarding paras 30-34 of the methodology requirement document, the equitable sharing of mitigation benefits is a mandatory requirement under 3/CMA.3, para.

33 of the RMP. Accordingly, there must be a way to assess objectively whether this requirement has been met; a description of efforts undertaken can accompany, but not replace, satisfaction of a mandatory quantitative requirement implemented through methodologies (CA).

3.5. Aligning with the NDC of each participating Party, if applicable and LT-LEDs, if it has submitted one and the long-term goals of the Paris Agreement

46. Below is a summary of public input received.

47. The aim to ensure that mechanism activities encourage increasing ambition in host party’s NDCs, noting that no country has pledged to scale engineered carbon removal activities by 2030 as part of their NDC and that only some countries have reported on preferred carbon removal methods in their LT-LEDs (CCSA).

48. It is unclear how a 6.4 activity could encourage ambition in future host party NDCs, as this would imply pre-judgement of future national commitments, non-existent at the moment of methodology approval. Inclusive, efficient, robust and mutually beneficial cooperation under the 6.4 mechanism, however, could in itself incentivize and encourage future ambition through reliable provision of additional climate finance in the form of A6.4ER issuances and sales (ICLRC).

49. It is difficult for the African parties and more particularly for the Republic of Congo to talk about NDCs because no implementation has been done to date, moreover, most of the policies and technological measures envisaged belong to conditional measures (RC).

50. It has to be recognized here that NDC alignment may be problematic where Party NDCs themselves are not Paris Agreement aligned, or where countries have failed to bring forward the economy-wide NDCs encouraged of all Parties under the Paris Agreement (CA).

3.6. Aligning with the long-term temperature goal of the Paris Agreement

51. Below is a summary of public input received.

52. The recommendation should avoid language that creates additional uncertainty and the need for further elaborate guidance, such as “what is needed to deliver on the long-term temperature goal’ (para 43bis) or levels that would “prejudice achievement of the long-term goal” (para 43bis). It is also noted that the requirement to avoid lock-in incompatible with para 33 is already suggested in this recommendation as part of the additionality test. It is suggested to elaborate this requirement only once through this document (ICLRC).

53. Here is another question which is not concrete, and which is the subject of much debate. The rules must be specified and above all the price per carbon ton must be validated. Further, I suggest that all these efforts to reduce GHG emissions also take into account the fight against poverty. The battle for the objectives of Article 6.4 must not overshadow the fight against poverty and the development of nations. (RC).

3.7. [Requirements on baselines] [BASELINES (The approaches)]

54. Below is a summary of public input received.

55. It is proposed that any approach to setting requirements to compute baselines, either for setting or impact on a baseline, arises from applying the following principles:

(a) That it is based on a transparent and certified certification of any effect, temporary or permanent, of inputs to NDC’s and LT-LEDs meeting UNFCCC criteria;

(b) That the certification is distinct on the effect on the concentration of CO2eq GHG in the atmosphere (due to the time critical impact of GHGs), and not directly for example, on CO_2 in seawater. Any other attributes are discretely certified to prove the emissions firstly, are legal in the jurisdiction and accepted as sustainable, and secondly, define non atmospheric GHG direct effects such as on ecosystems and human development metrics;

(c) That given the principle that the sum of all direct tonnes CO2eq emissions in a jurisdiction in a year is the base data for a baseline year and any changes in that baseline in subsequent years is reflected in the calculation and assessment of statistics for the jurisdiction(s), comprising the National statistics input and contributing to assessing global climate outcomes with respect to UN agreements, including the Paris Agreement. Has appropriate methodologies, capable of contractual definition, agreed as meeting UN data needs and actionable to suit the circumstances of each jurisdiction to be stated each year to support the reported emissions for each year;

(d) That the jurisdiction methodology shall:

(i) Enable certifiable activities of entities to be mutually exclusive from each other. Each must have boundaries within which actions by the entity seeking certification can affect all GHG emissions, either by increasing, maintaining, or decreasing direct emissions to the atmosphere;

(ii) Have an associated timescale in years(rounded down to the nearest year) for the effect of the activity from the certified date of the effect being enacted;

(iii) The legal and financial basis for actions is a matter for each jurisdiction, (whether rewarded, free, required, or taxed, traded, or bought, etc) but the Nation shall have primary right of origin to include the data arising from certification of direct totals and changes each year in emissions tCO2eq GHG within their jurisdiction(s), to be recorded and available to them for National and jurisdictional statistics;

(iv) The competent Authority for a jurisdiction shall oversee the measurement, reporting and verification (MRV) of emissions reported by entities and approve the certification processes appropriate for each entity’s activities;

(v) The Authority shall consider the balance of atmospheric emissions for the baseline and subsequent years and approve or revise the certifiable activities of entities, or agree with the National Government the public accountability of the balance of the increasing, maintaining, or decreasing direct emissions to the atmosphere for the reported year;

(vi) The certified date and timescale of certified actives affecting tCO2eq GHG must inform the measurement of host country statistics;

(e) That host countries can trade between each other (including through the Article 6.4 Mechanism), the under or over achievement of planned outcomes, as they are the hosts of their respective yearly inventories in terms of tCO2eq GHGs. This is linked by certification to entities generating legal certificates required or desired to be claimed by an entity in one country’s and traded with an entity in another country. Whilst the exchange price is not necessarily defined, the change affecting the respective tCO2eq GHG involved must be reported to the respective seller and buyer so that the National accounts are rebalanced and correctly reported for international statistics (CCSA).

56. The trading and valuing of emissions is premised on the approach of National responsibility for reporting acceptable National data, which is understandable and translatable to (a) meeting agreed report schedules, (b) for robust climate modelling use by UN agencies, parties to international agreements and carbon border mechanisms, and (c) for trade statistics and commercial trading of goods and services including pricing of emissions. The funding of the activities of entities are not the primary aim of comments, but some aspects maybe worth noting:

(a) Firstly, please note comments on additionality (chapter 5 of the draft recommendation document) below which is a simplifying enabler for the mechanism for trading of emissions activities between countries;

(b) Secondly the question of leakage below (chapter 6 of the draft recommendation document) is linked to points in the above basis for baseline and yearly changes, and though the actual market pricing is not the issue, the mechanism needs to accommodate differences:

(i) to permanency for effects of over a year to avoid purely seasonal effects;

(ii) for whole years up to ex ante commercial assurance at the end of that time (as assumed in most climate modelling) the effect is reversed. Given assessment and certification that the effect has not been reversed then a further period of assured effect maybe certified and traded;

(iii) the difference between permanent effects such as CO_2 storage that are not reliant on adding to a naturally dynamic system over 100 to 10,000 years, such as the take up by the sea or peat, is more risky than permanent chemical changes in geological formations;

(c) Thirdly, further to 44(e) above, the certified date and timescale of certified actives affecting tCO2eq GHG must inform the measurement of host country statistics. Besides differences in effect in assessment by analysis of IPCC climate models having dynamic storage versus independent storage, and short versus very long durations, the constraints as to what is a financial and insurable duration risk needs reasonable alignment with a meaningful duration from the whole climate view. In other words, markets which vary need a standard measure, such as USD/oz of 99.95% purity gold, 10-year gilts, bbl of Brent crude, or the FAO rice price index (CCSA).

57. Different jurisdictions may have different splits between public entity and private entity risks, such as addressing long term uninsurable risks, and ability to trade excess emissions, and the licencing of responsibility for emission management to entities in various markets. In this no classification between voluntary and compliance markets is

proposed as both can be commercial but have the same need to respect the host jurisdiction data to support the mechanism. This generally supports “3 Approach based on existing actual or historical emissions, building details of the mechanism up from a national base to transparent statistical data able to be aggregated at a UN/global level, to inform policy and commercial actions” (CCSA).

58. Setting a standard; used for policy, statistical comparisons, and commercial valuation in a mechanism *“to contribute to the mitigation of greenhouse gas emissions and support sustainable development” (Paris Agreement, Article 6, paragraph 4)* (CCSA).

59. Whilst defining permanence is difficult, defining a standard that is practical, is to set a timescale between the human centric short term and the natural resources and systems affecting long term climate outcomes, recognising that long time scales have wider uncertainty bands due to the limitations of ones’ ability to model the future. So commercially attracted to standards in the 50 to 100 ish years, and the full range of natural effects of excess GHG emissions on the climate are seen over the 100 to 10,000 years, remembering that past and recent emissions have very long-term residuals, so a degree of over activity now is necessary, as has been noted in IPCC reports. A standard must also have liquidity to establish a market, and learns to price shorter- and longer-term climate policy and financial risks. It also works back from a scale global atmospheric impact perspective (CCSA).

60. As a working draft it is proposed a base standard of 100 years of effect without gain or loss of tCO2eq GHG to affect the concentration of CO2eq in the atmosphere from the date the action by an entity takes place. With GHG equivalence based on the on a 100-year global warming potential (GWP) basis, as defined by the IPCC as at the date of action (CCSA).

61. The balance sought here is to have proof of effective 100+ year infrastructure investments from ancient Roman roads to modern property, and recognise that it can re-develop infrastructure as the future reveals better resource uses to achieve long term goals, particularly scientific and then political development of understanding the climate as essential infrastructure, and what is a sustainable earth. Such a timescale also allows shorter successive blocks of action to be aggregated into 100-year impacts. (Noting that use of ‘tonne/years’ is not acceptable, neither is the idea of 100tonnes stored for 1 year equal to 1 tonne stored for 100 years.) Blocks of ex-post 1 tonne for 10 years, over 10 successive decades, is equal to a 1 tonneCO2eq. which is calibrated against the total goal standard of achieving only +1.5deg C in 100 years (CCSA).

62. Baselines based on historical emissions, especially for nature-based removal projects do not reflect the activities true added value. Forests today differ from forests in the past and with climate change the weather, and consequently the growth of forests is increasingly more difficult to predict and increasingly less comparable to historic values. Using historic data for nature-based removal projects or modelled baselines fueled by historic data should not be allowed, as it misrepresents the activities true comparable alternatives and future BAU (44 M).

63. As the square brackets under paragraph 44 (b) of the methodology requirement document indicate, the text presented here is incompatible with the RMP. The RMP list the approach based on existing actual or historical emissions as one of the performance-based approaches. Structuring this section as presented in the draft would require reconsideration of the RMP by the CMA (ICLRC).

64. A minimal scientific standard should be expected, independent of the host Parties circumstances, to ensure emissions reduction are real, and additional (44 M).

65. This chapter is too dense. I propose that it be improved for a better contribution (RC).

3.7.1. Question for additional inputs: should the above paragraph be split to improve clarity?

66. Below is a summary of public input received.

67. Some of the stakeholders suggested to split the paragraph 46/46bis of the methodology requirement document to include several aspects referred to in paras 33 and 35, and may be split possibly in individual sub bullet points to improve clarity (VD) (GCC) (CGED). The split up of the paragraph 46/ 46 bis of the methodology requirement document will:

(a) Improve the readability and clarity of the requirements (GCC) (CW);

(b) Provide clearer guidance on how to justify the choice of baseline for mechanism methodologies (CGED);

(c) Be more explicit, whether it's derived from a performance-based approach or from making an appropriate choice based on the specific circumstances and context in question (CGED).

68. Proposal for split up of paragraph 46 of the methodology requirement document is as follows:

46. Mechanism methodologies shall justify the appropriateness of the choice(s) made in the methodology for setting the baseline approach while taking into account guidance on the performance-based approach in the RMP and providing full flexibility to reflect local conditions and host Party circumstances.

47. The appropriateness of the choice(s) can be substantiated by referring to specificities of technologies/measures or sector(s) covered by the methodology such as homogeneity or variability of emission sources, data required for the parameters for a conservative and reliable estimation of the baseline, where applicable drawing from experience from typical mitigation activities that have been already implemented).

69. Some of them suggested not to split (44 M) (SY) and proposed a combination of para 46 and 46bis for clarity (PCR).

70. Proposal for split of paragraph 46bis of the methodology requirement document is as follows:

46 bis. Mechanism methodologies shall require justification of the appropriateness of the choice(s) made in the methodology for setting the baseline, and in particular the choice of approach, with reference to the requirements of paragraphs 33 and 35 of the RMP, as implemented in this and further guidance.

47. Factors affecting the appropriateness of the choice shall include the homogeneity or variability of emission sources with respect to technologies and measures applied, or sectors covered by the methodology, availability of data required for the parameters for a conservative and reliable estimation of the baseline. When considering these

elements methodologies shall, where applicable, draw from experience from typical mitigation activities that have been already implemented (GCC).

71. Proposal for a combination of paragraph 46 and 46bis of the methodology requirement document is as follows:

46. Mechanism methodologies shall require justification of the appropriateness of the choice(s) made in the methodology for setting the baseline while taking into account this and further guidance by the Supervisory Body as well as the requirements of paragraphs 33 and 35 of the RMP, providing full flexibility to reflect local conditions and host Party circumstances, as long the principles are still respected. Factors affecting the appropriateness of the choice include the homogeneity or variability of emission sources with respect to technologies and measures applied, or sectors covered by the methodology, and the availability of data required for the parameters for a conservative and reliable estimation of the baseline. When considering these elements methodologies shall, where applicable, draw from experience from typical mitigation activities that have been already implemented (PCR)*.*

72. The wording “full flexibility” could be misunderstood to enable circum-venting principles and thus propose the addition of “as long as the principles are still respected” (PCR).

73. Paragraphs 46 and 46bis in the draft have *seemingly similar* contents but differ in context. This may cause confusion and differences in interpretation. Therefore, it should be split and described more specifically. To further improve these paragraphs, the listed examples of how the appropriateness of choice is justified should be differentiated. This is because the ‘justification of the appropriateness of choice’ is *contingent on the approach applied*, and the approach can either be performance-based or based on existing actual or historical emissions, Paragraphs 46 and 46bis should be split and distinguished to avoid confusion about the guidelines stated in these two (2) paragraphs. Paragraph 46 of the methodology requirement document pertains to host Parties that apply the performance-based approach. Hence, this paragraph should specify that if the performance-based approach is applied, the host Party should demonstrate the appropriateness of this choice that meets Paragraph 44 (a) (i) and (a) (ii) of the methodology requirement document. From this text, the host Party should be able to ascertain that it needs to consider the best available and comparable technologies they have benchmarked to determine its ambition level. If factors affecting appropriateness are to be listed, they should differ from those listed in Paragraph 46bis of the methodology requirement document. Paragraph 46bis of the methodology requirement document is anchored on setting baselines based on Paragraphs 33 and 35 of the RMP, which are focused on applying a quantitative or qualitative approach and how the emission reductions being contributed are aligned with the NDC. This paragraph would benefit from a more explicit description of what factors affect the appropriateness that differs from Paragraph 46 of the methodology requirement document (ES).

74. The justification of baseline approach choice and requirement to demonstrate alignment with para 33 of the RMP should be applicable for all three baseline approaches, as the choice of the baseline approach in itself does not ensure alignment and the choice of one of the approaches over the other may or may not mean better alignment with para 33. To make this guidance applicable to the widest range of circumstances, downward adjustment should be implemented for all baseline approaches if needed to ensure alignment with para 33 of RMP. This also means that methodologies that use approach

(iii) may not require downward adjustment if it is demonstrated that alignment with para 33 already exists with a non-adjusted baseline (ICLRC).

3.7.2. Question for additional inputs: should the downward adjustment be eligible/applicable for all the approaches to setting the baseline?

75. Below is a summary of public input received.

76. Alignment with paras 33 and 35 of the RMP i.e., making the baselines stringent progressively should not cause inaccuracy in estimating baseline emissions, especially if the Art 6.4 mechanism activity replaces the existing technology. In the absence of the A6.4 activity in all probability the BAU scenario may continue. For such situations a solution could be to consider the host country policies in the concerned sector which may include upgradation of technology in the BAU sector at specified intervals based on latest technological development (VD).

77. The downward adjustment should not be eligible for nature-based removal activities (44 M).

78. The most common application of a “performance-based” approach in carbon markets is a performance benchmark baseline approach, which allows the estimation of the GHG emission reductions of activity against peers by providing a reference emission level. In the case of RMP, the ambitious benchmark is set at least at the average emission level of the best performing comparable activities providing similar outputs and services in a defined scope in similar social, economic, environmental and technological circumstances. Considering that the “best performing “peer activities will be accounted for deriving the benchmark this already includes the aim of encouraging ambition over time and does not require additional [quantitative]/[qualitative] or [either quantitative or qualitative approaches] to be applied. If the reference level is set in the same and consistent way this will ensure a similar benchmark stringency level the conservativeness of the baseline will be applied across different countries and sectors (GCC).

79. Similarly, the “best available technologies” that represent an economically feasible and environmentally sound course of action will determine the range of technologies under consideration, and therefore the baseline level with have the required level of stringency. Taking into account that the possible interpretation is that the “best available” approach is essentially a variant of a “performance based” approach, considering the “best available technology” (BAT) or the best available process means that this approach also does not require any adjustment downwards as it already represents an approach for encouraging ambitions over time. The “Best available technology” approach also includes transformative measures for the sector to which it applies by crediting only the better performing technologies and thus will facilitate the transition of the specific sector in which it applies towards low GHG emitting technologies. It is also very well established that the benchmark established based on the “best performing “peer activities, as well as performance reference level consistent with the “best available technologies” does not correspond to “Business as usual” scenario thus making these approaches consistent with the respective requirement of paragraph 33 of RMP. Given the nature and specifics of the baseline setting approaches, under the RMP the only approach where the downward adjustment must be applied to encourage increased ambitions over time and consistency with a baseline which is below the “business-as-usual” scenario is the approach on existing actual or historic emissions that by default have to be adjusted downwards. Furthermore, paragraph 36 (iii) of the D3/CMA.3 clearly stipulates that only this particular

approach requires downward adjustment in order to comply with the requirements of paragraph 33 of RMP (GCC).

80. The downward adjustment must be applicable to all the baseline setting approaches (ES). There is a need for baselines to become more stringent over time in order to ensure the baseline’s alignment with the Paris Agreement’s long-term goal. Downward adjustment of the baseline enhances ambition by ensuring that the baseline emissions intensity decreases over time. The II-AMT tool for robust baseline setting (II-AMT TOOL02, II-AMT 2022 TOOL02 - _Tool_for_robust_baseline_setting_Concept_Note._Version_April_2022__Perspectives_Climate_Research__Freiburg.pdf) applies the “Paris goal coefficient” (a quantitative downward adjustment approach) to each of the three baseline approaches because none of the approaches guarantees that the proposed activity aligns with increasing ambition.Therefore, the need to apply the downward adjustment to all baseline-setting approaches is strongly recommended (PCR).

81. The downward adjustment should only apply when actual or historical emissions data is available. For baselines derived from research, explicit criteria should guide the appropriate selection, negating the need for downward adjustment (CGED).

82. Except for those approaches that already imply a more stringent baseline over time. Historical baselines, used by ART TREES and Verra in their jurisdictional REDD+ methodologies, would probably not need a downward adjustment. For example, under ART TREES, a program’s baseline is calculated as the average emissions of the last 5 years. As the activity is implemented, the average emissions decrease, resulting in a more stringent baseline in the next period. The key question would be how often the historical reference period is revised, meaning how often the baseline is pushed downwards. As a pre-emptive measure, a floor for downward adjustment could be implemented (to ensure a minimum downward trend) (SY).

83. This downward adjustment shouldn’t be applicable for all approaches to setting the baseline, i.e., in the case of DACS based CDR activities, the baseline is no other activity taking place and thus 0 emissions in the baseline scenarios/a performance assessment of indi, as this best reflects the distinct nature of DACS based mitigation activities and allows for a robust cradle to grave assessment (CW).

84. The downward adjustment should not be applied to the best available technology (BAT) and ambitious benchmark approach. It is required, however, in the context of estimating baseline emissions using existing actual or historical emissions only. BAT and ambitious benchmarks are determined as below business-as-usual (BAU), thereby not requiring any downward adjustment. However, in scenarios where it is difficult to ascertain the below business-as-usual, a lenient downward factor can be considered depending on the decarbonization pathway of the sector/country set in their NDCs or any other relevant documents. While the importance of applying downward adjustments (discounting) to approaches that rely on actual or historical emissions data is acknowledged, comprehensive and well-defined guidelines for setting baseline emissions downward should be provided to ensure accuracy, fairness, and credibility in emission reduction initiatives. It is recommend to incorporate the following points in such guidelines, including such applicability to all approaches to setting the baseline:

    (a) Default discounting (of baseline emissions) through introducing such a factor in the specific methodologies;

(b) Country-specific discounting (of baseline emissions) linked to the NDC and associated targets from the (host) country; and

(c) Methodology/criteria for adjustment of emission factor (MDB-WG).

85. In addition, the guideline might include the following elements:

(a) Treatment of early reduction efforts: Specify how and when countries that have undertaken emission reduction efforts prior to the baseline period will be rewarded, encouraging early action;

(b) Historical data verification: Establish protocols for verifying historical emission data, including data collection methods, accuracy checks, and documentation requirements;

(c) Normalization for production changes: Develop a method for normalizing emissions to account for changes in production levels, ensuring that reductions are not solely due to decreased activity;

(d) Documentation and reporting: Outline documentation requirements, considering the resource needs and capacity of relevant stakeholders, for historical emission data, adjustments made, and the rationale behind those adjustments. This supports transparency and auditability;

(e) Periodic review and updating: Specify a timeline, also considering the official publication timelines of NDCs and relevant sector/country decarbonization pathways, for reviewing and updating the baseline adjustment guidelines to reflect evolving best practices and technological advancements; and

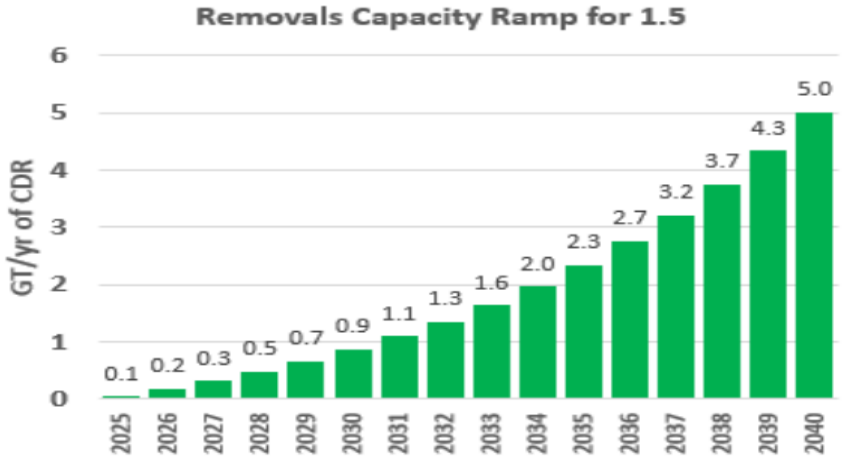
(f) Stakeholder engagement: Include mechanisms for involving stakeholders, such as industry experts, environmental organizations, and affected communities, in the development and review of baseline adjustment guidelines (MDB-WG).

86. Any identification of a downward discounting factor should reflect the country's context, efforts needed to develop such one, and the incentives that it creates for the underlying activity. Whether the project activity should apply this adjustment once in a specific time period or during the renewal of the crediting period must be clarified. And if such adjustment is required during the crediting period, whether that should be linked to the NDC update period or any other timelines need to be clarified. Developing comprehensive and transparent guidelines for downward baseline adjustments will help ensure the integrity and effectiveness of emission reduction activities while fostering trust among participants and stakeholders. In addition, allowing countries/project developers to develop/propose such factors should be considered to allow more innovation and capacity building (MDB-WG).

87. Per the IPCC[6], the goal of the authors of this document is to support a framework which delivers the annual capacity of 5GT/yr of carbon dioxide removals by 2040. This is required to achieve net zero and address residual emissions. At an estimated $150/ton this equates to a $750bn/yr industry with trillions of dollars’ worth of carbon removed that need risk management. Ambition for the reduction of emissions is clearly beneficial in the long term. The best removals and avoidance technologies will not address all emissions, leaving

[6] https://www.ipcc.ch/report/ar6/wg3/downloads/outreach/IPCC_AR6_WGIII_Factsheet_CDR.pdf.

residual, hard to abate and economically challenging emissions. These emissions may be addressed by emissions removals. It is encouraged to ramp up removals capacity to be the framework for success for removals as opposed to increasing ambition. Such a task requires capital and resource mobilization on a scale similar to current global energy infrastructure. Removal technology is at an early stage and needs rapid praxis, learning by doing to scale and reduce costs. For context, the Three Gorges Dam took 18 years to build as a focused $25 billion USD critical project in a country known for fast execution on infrastructure deployment. Scale of the task at hand, urgency and the removals ramp Given the scale and urgency of having only 16 years for such a task, it is suggested that a global goal of capacity building be acknowledged, tracked and met. For context, large energy infrastructure can take 10-15 years from planning to deployment. While the concepts of additionality, baseline, and ambition over time are effective tools for guiding emissions reduction efforts, they need to be adapted to suit the unique nature of emissions removals, particularly engineered technologies like direct air capture (DAC). The focus of emissions removal isn't tied to displacing existing emissions sources but rather to achieving specified carbon removal goals. Therefore, the design of mechanisms for emissions removal should account for the distinct operational principles of these removal technologies. This adaptation will ensure that the regulatory frameworks are appropriately tailored to the distinctive challenges and objectives posed by carbon removal strategies, helping to meet mid-century CO_2 reduction targets efficiently. Removals ramp v. avoidance and offsets Historically, carbon instruments have been associated with offsets and avoidances. Avoidances and offsets rely on baselines and counterfactuals to establish integrity for book and claim instruments. Thus, baselines and additionality were and are critical elements to both the recognition and validity of these instruments in a finite world of capacity with localized activities or non-activity assumptions. Removals are a physical reality associated with capacity building from a zero baseline towards a goal. It is advocated to use a global removals ramp which tracks annual removals capacity. Given the scale and urgency of the task at hand, it is urged using the removals ramp as the basis for additionality assessments. If the global installed and expected removals capacity is below an IPCC 1.5 degree aligned level, additionality should be demonstrated through a positive list. A sample removals capacity ramp which achieves 5GT of capacity by 2040 is shown in the following figure. Downward adjustments and baselines are not applicable in the same way for engineered removals and emissions reductions. The Supervisory Body to develop more relevant tests and requirements for removals than baselines and downward adjustments (1PF).



88. I am a volunteer and propose to participate in this method writing team (RC).

3.7.3. Question for additional inputs: should it be specified that only activities triggered by policies can be credited? Will there be complexities in relation to additionality assessment in this regard?

89. Crediting activities triggered by policies would lead to complexities in relation to additionality assessment. Emission reductions achieved due to policies are better accommodated under Article 6.2 (44 M).

90. Under CDM the consideration of domestic policies of the host country in additionality determination and baseline setting was a very contradictory topic and called the environmental integrity of the mechanism into question. The CDM EB adopted the so-called E+/E- rule on the consideration of policies in baseline setting for host countries: Policies that provide a comparative advantage to more emission intensive technologies (E+) were only taken into account if their adoption predated the adoption of the Kyoto Protocol in 1997. The rationale was to prevent countries from artificially inflating the baseline. Policies that provide a comparative advantage to less emission-intensive technologies (E-) were only taken into account if adopted prior to the adoption of the Marrakech Accords in 2001. The rationale behind this rule is to prevent a perverse incentive not to adopt mitigation policies. However, when it comes to the concrete current question it could be argued that specifying that only activities triggered by policies can be credited may be unjustified because the mechanism shall incentivize all legitimate project activities that comply with the requirements of RMP even if they are outside of the scope of the formulated policies but lead to real, measurable and additional emission reductions. On the one hand, there may be instances where the eligible proposed project activities for crediting are not included in the sectors covered under the NDC of a country or the country in question has not formulated specific policies for all sectors included in the scope of its NDC and the requirement of crediting activities only triggered by policies will be penalizing such project activities. On the other hand, in terms of additionality assessment the project activities may be negatively affected because along with the formulated policies countries can establish various instruments to incentivize and support the policy implementation which need to be accounted for when demonstrating additionality. In addition to that it should be pointed out that in general setting baselines for policies is very complex as the determination of the mitigation outcomes requires comprehensive, robust, and reliable modelling. When the policy itself is to be credited, it is not required to be incorporated into the crediting baseline alongside other existing or planned policies but a model without the policy should be applied (GCC).

91. There is no precedent for crediting of policies under the CDM on which could be built. Principally, policy crediting should be subject to the following conditions:

    (a) It can be established that the policy incentivizes mitigation actions that would not have happened under business as usual. Such incentivization can be in the form of monetary incentives (subsidies) for mitigation or disincentives to emissions-intensive activities (carbon tax, ETS, etc.) that improve the competitiveness of low-emissions alternatives. This means that pure capacity building or information-related policies would not be eligible for crediting;

    (b) The mitigation actions mobilized by the policy can be specified and their mitigation outcome can be monitored. The activities need to show that they would pass an investment additionality test in the absence of the policy (PCR).

92. Policy crediting should thus be implemented in a form similar to a PoA, with a PolDD showing how the policy triggers mitigation and a Pol-MADD specifying mitigation activities triggered by the policy, including an investment test applying parameters that would have been realistic without the implementation of the policy. Please note that sectoral crediting, which has been proposed by various entities, would not be covered by crediting of policies because sectoral emissions are determined by a wide array of policies, and a robust attribution of a net change of emissions is impossible (PCR).

93. It should be specified that only mitigation activities influenced by policies are eligible for crediting. However, it's crucial to note that while policies can create favorable environments for these activities, they shouldn't mandate nor enforce them directly (if so activities won’t validate regulatory additionality). This distinction is essential to maintain the integrity of additionality. To ensure genuine additionality, such activities should also meet other type of additionality like financial, prevalence, or technological (CGED).

94. The policies that trigger creditable activities should be credited, but only if these policies still meet additionality requirements. The crediting of eligible policies should be specific to *avoid crediting policies that do not directly trigger emission activities or conflict with additionality*. The *timing of when a policy should be credited must also be precise*. For example, if a country develops a policy that encourages emission reduction or removals projects, should that policy be only credited when the project has started to achieve its reductions or removals (ES)?

95. It shouldn’t be specified that only activities triggered by policies can be credited. For one, this will lead to high complexities concerning regulatory additionality and will trigger a need for additional additionality assessment tools. Still, the A6.4SB is encouraged to think of a public/private partnership in certain A6.4 activities and provide additional guidance on how regulatory additionality can be squared in cases where both, governmental incentives (/policies) and private initiatives overlap. Additionally, through the need to approve and authorize A6.4 activities, governments remain in full power over the decision of authorizing A6 activities in the first place (CW).

96. It is encouraging that the Supervisory Board considers the possibility of policy crediting under Article 6.4. Implementing regulatory policies such as energy efficiency standards, fuel standards, and building codes; price-based policies such as removal of fossil fuel subsidies, reform of agricultural subsidies, and direct or indirect carbon pricing; as well as incentive policies such as feed-in tariff schemes for renewable energies or feebate schemes for low carbon vehicles are critical to achieve the long-term climate targets of the Paris Agreement. The impact of such policies in transforming and decarbonizing economies is very high. The World Bank has more than a decade of experience in conceptualizing policy crediting, developing policy crediting methodologies and applying them to concrete policies. Recently, the World Bank included the first ever policy crediting program in the portfolio of Transformative Carbon Asset Facility (TCAF), i.e., the Uzbekistan Innovative Carbon Resource Application for Energy Transition (iCRAFT) program crediting emission reductions caused by the removal of energy sector subsidies in Uzbekistan https://projects.worldbank.org/en/projects-operations/project-detail/P180432. Earlier the World Bank developed a model-based methodology to quantify emission reductions resulting from such policies https://documents1.worldbank.org/curated/en/964331541085444404/pdf/Morocco-Energy-Policy-MRV.pdf. A recent TCAF report provides a narrative, theory of change, and blueprinting of crediting policies of different types https://www.tcafwb.org/sites/default/files/2023-05/WB_RBCF_Report_FINAL.pdf. The

World Bank’s forthcoming program Scaling Climate Action by Lowering Emissions (SCALE) will use policy crediting as one of its crediting approaches aiming to deploy it and other scaled-up crediting approaches on the next level https://www.worldbank.org/en/programs/scale/overview (MDB WG).

97. On a separate but related note, it would be helpful to clarify if the “policy” includes jurisdictional-scale crediting (or inventory-based crediting). Under the LULUCF sector, most under the REDD+ mechanism, the World Bank’s Forest Carbon Partnership Facility (FCPF) has been supporting 46 countries in creating their national frameworks to enable access to results-based payment and carbon markets. Through its carbon fund, the FCPF is also piloting results-based payment with the implementation of jurisdictionalscale REDD+ emission reduction programs which implement different GHG mitigation measures (policies, project activities, enabling environment, etc.) that seek to reduce emissions and enhance removals. The FCPF has in place requirements related to methodological aspects, safeguards, third-party validation/verification, double counting/claiming, permanence, transactions, and others that enable countries to generate high-social and environmental integrity emission reduction credits that could potentially be transacted in carbon markets. This FCPF program has been recognized under CORSIA through the approval of the FCPF to generate CORSIA-eligible units. The FCPF Methodological Framework already states, in its requirements related to ambition, that new and enhanced measures (with regards to the historical reference period) need to be implemented and is therefore in line with these Art. 6.4 proposals. Against this background, the World Bank would be delighted to share its experience in more detail with the SB and the UNFCCC secretariat helping efforts to operationalize policy crediting under Article 6.4 as well. Related to the concrete questions on policy crediting, it is important to note that, different from project-based or programmatic crediting, it is in general not possible to break down crediting to the individual activity level under policy crediting. Most policies are affecting millions of different choices of private households and businesses and in most cases quantifying the mitigation impact of policies requires economic modelling using sectoral and macroeconomic data. In terms of jurisdictional REDD+ programs, accounting is based on a comprehensive inventory of the main sources of emissions and removals in the whole jurisdiction, and crediting is based on the creation of a downward trend in emissions below a conservative baseline which is based on average historical emissions. This makes attribution to specific policies very difficult, but also makes estimation much more accurate as it already considers potential interaction and feedbacks between policies and activities on the ground and incentivizes ambition of countries to reduce emissions at large scale. For instance, under policy crediting a certain policy could be shown to be great in terms of emission reductions, but due to different interactions, it might still result in emissions in a sector or a jurisdiction going up. Therefore, it is considered that limiting crediting to activities directly related to policies may limit incentives for jurisdictional actors. Accordingly, in most cases, additionality of policy crediting needs to be established at the policy level, not at the level of individual activities triggered by the respective policy. This requires theories of change demonstrating that crediting is essential for successful policy implementation and/or continuation. The mentioned TCAF report on policy crediting provides initial guidance on developing such theories of change for selected policy types. The crediting of policies under Article 6.4 does not conflict with the RMP requirement to consider national policies in additionality testing. This requirement rather relates to existing policies, not to new policies or to policies in risk of discontinuation. Overall, policy crediting can be done in full alignment and compliance with all RMP requirements, and the MDB WG would like to encourage the SB to continue with its efforts to operationalize policy crediting under Article 6.4 (MDB WG).

3.8. Approaches for downward adjustment and to address elements of paragraph 33 of the RMP

98. Below is a summary of public input received.

99. IETA takes note of the different proposals of approaches for downward adjustment outlined in the public consultation for addressing para 33-39 of the RMPs, including the necessity for mechanism methodologies to encourage ambition over time, align with the long-term temperature goal of the Paris Agreement and be real, transparent, conservative, credible and below ‘business as usual’. The efforts by the SB and UNFCCC Secretariat to lay out different options for operationalising these provisions are recognised, including through various application of baseline contraction factors (BCF). Additionally, it take note of the initial efforts to analyze the impacts of different options for BCFs as well as alternative or complimentary measures for BCFs[7]. Thereby, the importance in further considering and analysing the impact of the various options may have on the development of the Article 6.4 mechanism before moving to conclusions is stressed. For some in the carbon markets community, it seems that a ‘Paris-aligned’ baseline needs to contain all the mitigation already encompassed within a net-zero aligned NDC of the host Party. Such an approach would, however, severely limit the potential of the mechanism to deliver emission reductions and removal at scale and speed. It is believed that “net-zero” alignment legitimately includes cooperation with other Parties to achieve the “net” mitigation. While IETA recognises that the market-based mechanisms of Article 6 must increase ambition in mitigation and adaption, it is the purpose of the mechanism to enable Parties to both achieve their Nationally Determined Contributions (NDCs) and deliver more mitigation. In the case of achievement, to ensure integrity and ambition, it is imperative that the baseline is set such that the relationship between the activity and the fulfilment of the NDC is clear. Current options presented for operationalising BCF under the 6.4 mechanism have limited or no prior experience of being applied in other crediting schemes, and may pose significant risks to the market if not adequately studied. This includes their impact on the attractiveness of the Article 6.4 mechanism, the investments risks, technology risks, interaction with host-party policies, NDCs and LT-LEDS, equitable sharing of benefits and risks of creating perverse incentives. These risks are discussed further in the following sections (IETA).

100. Investment risks arising from the application of BCF – To ensure a scaled-up Article 6.4 mechanism that can deliver on its dual objectives of supporting Parties’ NDC achievement and raising ambition, it is of utmost importance that the investment environment be predictable and avoids volatility for project developers and investors. The functioning of any BCF across the entire crediting period must be clear, ex ante, prior to the start of a project activity. Proponents need a clear understanding of the full future credit stream arising from an activity before moving forward; even the slightest perceived risk of retroactive changes to the amounts of credits that could be awarded in the future will negatively impact upon investment decision-making today. As such, any baseline stringency should either be done at the beginning of a new crediting period or be pre-determined at the beginning of the project. If baseline reviews take place, these should be at predictable time intervals. For projects with large upfront investment costs and long payback periods, ensuring clarity on the baseline review cycle would be especially

[7] Concept note: Proposals and options to operationalize baseline contraction factor, avoid ‘lock-in levels of emissions’ and address leakage in the draft recommendation on requirements for the development and assessment of mechanism methodologies, Appendix 7 (a64-sb006-aa-a07 (unfccc.int)).

important. Any uncertainty when it comes to the predictability of BCF updates would also risk spilling over into issues around the demonstration of financial additionality. For example, if the downward adjustment over time is uncertain, the project developer would not be able to quantify and value the future credit stream. On this note, para. 38 of the RMPs requires that “Additionality […] be demonstrated using a robust assessment that shows the activity would not have occurred in the absence of the incentives from the mechanism…”. This requirement could be challenged if a BCF is subject to future ex post adjustment. Policy risks and perverse incentives from top-down/bottom-up BCF – Adopting a bottom-up approach in which 6.4 mechanism baselines align with NDCs requires flexibility, considering that the number of situations in which diverse, unconditional NDC targets or national levels (sometimes determined through a top-down process), can easily be translated into project-level baselines are infrequent. When utilizing jurisdictional BCF approaches intended to align with the host country NDC, a potential perverse incentive arises. These approaches might lead host countries to artificially increase their BAU scenario, countering the impact of any BCF. This counteraction could inadvertently foster less ambitious NDCs to deliver increased credit flows. However, this option would still be preferred over the development of top-down BCF which is likely to present several further issues. The option of a top-down development of BCF using IPCC IMPs (or other scientific pathways) to create coefficients applicable to countries, sectors or activity types seems to go against the principles of the Paris Agreement of national circumstances and common but differentiated responsibilities (CBDR). It is outlined that for Parties without net-zero targets, the SB could propose pathways. It is fund difficult to see how such a process could be seen as equitable, especially considering the special circumstances of least-developed countries and small island developing states. This option seems to assume that Parties have not made an appropriate level of quantitative analysis for their future emissions development and mitigation actions in their NDC and/or LT-LEDS, or that the SB would be in a better position to develop such pathways than the host country. This provision seems to go against the bottom-up nature of the Paris Agreement and host country prerogatives (IETA).

101. Overarching or activity specific baselines – On whether the stringency over time should be in the form of an adjustment to the emission reductions achieved through all sectors and countries, or whether it should be specific to different types of activities and methodologies, IETA believes that the best approach should differentiate between activity types, sectors, and regions under consideration. In the context of removal activities such as BECCS/DACCS, as well as nature-based climate solutions, the application of forward-looking baseline contraction factors may erode the financial incentives and thereby limit the economic attractiveness of investing in these projects. Considering that in the absence of other sources of revenue, the only economic case for undertaking these climate solutions is typically the carbon revenue, the application of a BCF for such projects could have a detrimental impact on the ability to reach global net-zero targets. It would, therefore, be important to have an activity-based approach or flexibility with multiple options for project developers to apply any BCF depending on, for example, their baseline approach, activity type and local circumstances. Baseline contraction factors can be a helpful tool, but they are unlikely to be the most suitable approach for all methodologies or baseline approaches indicated in para 44 of the Draft recommendation on

Requirements for the development and assessment of mechanism methodologies3[8]. When applying an approach based on existing actual or historical emissions adjusted downwards, it would be important to have multiple options for downward adjustment depending on activity types and local circumstances. The qualitative approach (Option 2) of “Demonstrating that activities eligible under the methodologies are transformative to enable deep decarbonisation aligned with IPCC’s IMPs, i.e., have the potential to transform an entire sector to low carbon option, as opposed to producing incremental improvements” seems to be overly limiting the types of activities that could be eligible under the Article 6.4 mechanism, and could have a severely negative impact on the market. If an activity has successfully demonstrated additionality, it should be eligible, as it would per definition deliver emission reductions that would otherwise not have taken place in the absence of the mechanism. Limiting the mechanism to only consider ‘transformative’ projects could be seen as counterproductive to one of the key objectives of the mechanism, namely: supporting the cooperative achievement of Parties’ current NDCs. An expanded user base of low-carbon solutions after initial deployment supported by carbon markets is also one of the critical ways to encourage ambition over time. Promoting specific activities (through a so-called positive list) through simplified regulatory requirements and fast-track processes could reduce barriers for certain technologies and regions. However, it could also skew market incentives, and establishing criteria to determine such a list of activities may be challenging. In addition, when assessing “lock-in” levels, it is important to be pragmatic, as by definition, any project that generates residual emissions would lock-in some emissions. Instead of promoting positive or negative lists, a broader assessment – focused on how the activity promotes low-emission and sustainable development pathways aligned with long-term goals of the Paris Agreement - should be conducted. Great caution should be exercised if attempting to establish a global negative list mentioned in para 91, considering the vast differences in Parties’ NDCs and their unique national circumstances. Before deciding on one or the other of existing options for addressing the provisions in para 33-39 in the RMPs, for example through the application of BCF, the SB should outline clear scenarios for how options, when applied with various factors, would impact the stream of credits towards project developers over the full lifetime of different types of projects. This analysis should also include an assessment of potential impacts on host Party NDCs and project participants’ willingness to invest in additional mitigation projects. Ultimately, the Article 6.4 mechanism will not, through severely limiting the amount of crediting from project activities, be the policy tool that brings us towards net-zero in a timely manner. This is ultimately determined by the ambition in Parties’ NDCs. Just like any other crediting mechanism, the Article 6.4 mechanism needs to ensure that credits represent emission reductions or removals that are real, verifiable and additional. However, in the end, it will be up to each Party to the Paris Agreement to deliver increasing ambition over time, ensure avoidance of lock-in to emissions intensive practices and the achievement of NDCs and LT-LEDS through the built-in ratchet mechanism of the Agreement. Whilst the various options for implementing BCF in the 6.4 mechanism represent some interesting conceptual alternatives that could ultimately help achieve this, it is not the only, nor necessarily preferable, manner of raising ambition. As highlighted in previous

[8] A6.4-SB007-AA-A## Draft recommendation: Requirements for the development and assessment of mechanism methodologies Version 05.0 (SB006_propan08_methodology requirements_draft recommendations (unfccc.int)).

submissions, "the Article 6.4 mechanism is not in itself the driver of ambition, since that comes from the progression in NDC ambition over time" (IETA).[9]

102. See comments under the heading "Baseline setting" above, relating to these options. For the reasons stated above, support for establishment of **top-down default baseline contraction factors (BCFs), linked to IPCC 1.5^{0}C pathways, that reflect linear reductions to net zero emissions by 2050.** Host Parties retain the option to apply more stringent downward adjustments beyond these values (CA).

103. The application of forward-looking baseline contraction factors (BCFs) could be hard to operationalise. Therefore, it is important to have an activity-based approach or flexibility for project developers, supporting 52bis which states that "[*Application of these approaches is not mandatory*] (PE)."

104. The question I ask myself is that all these methodologies apply to all the member parties of the UNFCCC (RC)?

105. Updating parameters in the methodologies at regular intervals based on latest science would be too vague in regard to the temporal scope and it could lead to updates based on inconclusive or premature scientific findings, destabilizing activities and the relationship with buyers. Updates should occur regularly in alignment with the release of IPCC reports (44 M).

106. It should be considered that activity proponents in countries without a designated national authority (DNA) should be able to propose methodologies directly to the Supervisory Body to ensure broad participation is not halted due to the lack of administrative infrastructure (44 M).

3.8.1. Question for additional inputs: should the downward adjustment be eligible/applicable for all the approaches to setting the baseline indicated in para 44 of the methodology requirement document?

107. Below is a summary of public input received.

108. The term "latest science" is somewhat vague and needs to be elaborated e.g., does it refer to the latest version of the BAU technology? Also, latest IPCC report may be over five years back. The basis of autonomous improvements of baseline parameters needs elaboration. It suggested that a reassessment of parameters of the baseline be done at the renewal of crediting period so that there is certainty in the emission reductions from the standpoint of the buyers of the credits (VD).

109. Refer to the answer to section 3.7.2 above (PCR).

110. The downward adjustment should only apply when actual or historical emissions data is available. For baselines derived from research, explicit criteria should guide the appropriate selection, negating the need for downward adjustment (CGED).

[9] Luca Lo Re, et. al. (2019), "Designing the Article 6.4 mechanism: assessing selected baseline approaches and their implications", Climate Change Expert Group Paper No. 2019(5) (oecd.org/environment/cc/Designing-the-Article-6-4-mechanism-assessing-selected-baseline-approaches-and-their-implications.pdf).

111. A conservative and dynamic approach to determining a project's baseline is key to avoiding the risk of over-crediting. Assessing integrity around credit issuance requires transparency around how credit issuance is calculated through the identification of the most plausible baseline scenario, as well as estimates of the carbon stocks in both the baseline and project scenarios. For Avoided Deforestation activities dynamic baselines (BeZero Carbon’s next generation of dynamic baselines) are developed to construct a counterfactual scenario for the project area using statistically matched control pixels, such as vegetation type and population density and distribution, in the wider landscapes. This enables the construction of a statistically appropriate baseline to judge a project’s activities against on an ongoing basis. Tracking and comparing carbon emissions through time is essential to assessing the risk of over-crediting. While the dynamic baselining is considered as best-practice, it should be considered in the context of the cost of doing so and the implications for the viability of the given project type. Downward adjustment should therefore be eligible for all approaches but not a stringent requirement ((BZC)).

112. Yes, the downward adjustment should be applied to both performance-based and existing actual or historical emissions to avoid selecting an approach based only on whether an adjustment is applied (ES).

113. See the answer to section 3.7.2 above (SY).

114. Yes, a predictable downward adjustment over time should be applicable to all baseline approaches. With respect to removals, it should be noted that under the UNFCCC, Article 4, and Paris Agreement Article 5, all Parties have an obligation both to reduce emissions and to enhance sinks. Accordingly, baselines should reflect that Parties should already be making efforts to improve on historical emission levels in the context of their sinks (CA).

115. Option under paragraph 54 of the methodology requirements document is supported. Option 2bis: Application of positive list to demonstrate that activities eligible under the methodologies are transformative, i.e., have the potential to transform an entire sector, as opposed to producing incremental improvements, taking into account the specifics of a sector, geographical location and level of uncertainty of greenhouse gas estimation. It is believed this option supports the principle of ambition over time, and, if implemented appropriately, could address the need to think of additionality and baselines differently for engineered removals and emissions reductions activities (1PF).

3.8.2. **Question for additional inputs: would option 2 above fit under ‘adjustment downwards? And is it linked to additionality demonstration? How can ‘transformative’ be defined?**

116. Below is a summary of public input received.

117. Introduction of the term “transformative” activities that enable deep decarbonisation is welcome. These could include activities that either eliminate GHG emissions or reduce them significantly in the sector covered by the A6.4 activity. For such activities the downward reduction of the baselines over BAU may be delayed by at least one crediting period (VD).

118. Especially when using positive lists, project activities fulfilling the criteria of being “transformative” should not have to provide further proof of additionality.

Transformative: To turn a sustainable activity, formerly financially non-viable into a scalable, profitable activity (44 M).

119. The definition of transformational change, in particular in the context of different circumstances of countries shall be elaborated by the DNA of the respective countries. As the Paris Agreement infrastructure is based on a bottom-up and Party-driven approach it should be left at every individual country’s discretion to specify what defines transformative change. Thus, the ultimate responsibility to decide whether an activity is eligible under a methodology and compliant with the transformative change requirement shall be of each individual host country. The host country should identify in its NDC implementation plan the project activities which are eligible for crediting and conformable with transformative change requirement making them eligible for carbon crediting. Typically, project activities that can transform a sector in a country are associated with large marginal abatement costs and require carbon market support, thus their additionality can be easily demonstrated. Furthermore, the “transformative” project activities/technologies/measures can be defined by the country in top-down developed positive lists which should be publicly available in order to give predictability to project developers and to make the mechanism attractive for market players. The baseline approaches which are formulated as benchmark established on the basis of the “best performing “peer activities, as well as performance reference levels consistent with the “best available technologies” have the potential to safeguard the host countries’ NDC achievement while potentially contributing to ambition raising through incentivizing transformational activities beyond those planned under the host countries’ commitment. The level of stringency chosen for these approaches should achieve a balance of cost-effectiveness and long-term incentives for transformation (GCC).

120. Option 2 does not address the problem that a future transformation spearheaded by activities credited under Article 6.4 does not justify allocation of credits in the present day. If an activity leads to a transformation, this implies that activities of that type will in the future no longer fulfil the additionality principle, as a successful transformation means that an activity has become business as usual. Thus, there is no reason that future transformation should be rewarded by crediting in the present day. Also, there is no connection between downward adjustment of baselines and the transformation potential of activities. These issues are conceptually separate. To put it bluntly: Non-additional activities are the sign that a successful transformation has taken place. For example, if renewable electricity generation is the cheapest form of electricity generation, there has been a successful transformation toward renewable electricity. But this does not justify granting A6.4ERs to non-additional renewable electricity activities (PCR).

121. "Adjustment downwards" typically means that the baseline is modified to represent a lower emission scenario than previously projected. In other words, the business-as-usual (BAU) emission projection is adjusted downwards to ensure that credited emission reductions are conservative and ambitious. Option 2 emphasizes the transformative potential of activities to enable deep decarbonisation, which may imply a more stringent baseline (and thus could fit the concept of 'adjustment downwards'). However, it does not explicitly state a method for setting or adjusting the baseline. Additionality refers to ensuring that credited emissions reductions are above and beyond what would have happened in the absence of the intervention (or the carbon market mechanism). Demonstrating that activities are transformative (as in Option 2) could be seen as a stronger form of “technological additionality”. Transformative solutions may be subject to a streamlined, simplified additionality test, due to the fact that 1) they are typically additional by nature and 2) there is great interest in fast-tracking such technologies with huge benefits. “Technological additionality” could be defined by: Technological barriers may exist that prevent the mitigation activity from occurring or expanding. This may include access to equipment,

infrastructure, or skilled labor. Funding from sales of carbon credits may allow projects to overcome these barriers (CGED).

122. A transformative activity or project could be defined by the following criteria:

(a) Scale: A transformative activity should have a broad and significant impact, potentially affecting an entire sector or industry;

(b) Longevity: It should have lasting effects, with benefits that persist long after the project's conclusion;

(c) Innovation: It might introduce new technologies, practices, or systems that weren't previously in place or mainstream in that sector;

(d) Barriers Overcome: A transformative initiative might overcome significant financial, technological, or cultural barriers that previously inhibited decarbonization;

(e) Catalytic Impact: The activity might spur further action in the sector, creating a domino effect of positive change (CGED).

123. Refer to the answer to question under section 3.8.1 above (BZC).

124. Supports option 2ter which clarifies that it is linked to the ‘adjustment downwards’ because Option 2 and 2bis are more conceptual. Yes, additionality is demonstrated by Options 2, 2bis, and 2ter. Transformative should be defined as a meaningful and positive long-lasting change (ES).

125. First, it is important to acknowledge that the RMP do not include a definition of transformative impact of mitigation activities and related requirements for eligibility under Article 6.4. Transformative impact requirements should therefore not be introduced via methodological requirements. Still, transformative impact can be a useful concept to prioritize methodology development for different types of mitigation activities, identify the appropriate linkages with additionality demonstration based on the criteria defined and selection of such activities for crediting under Article 6.4 by participating parties. This speaks for non-binding guidance on assessing transformative impact provided as a resource to parties, project entities, and stakeholders in Article 6.4. The transformation has two dimensions, i.e., a qualitative and a quantitative one. Activities with transformative quality are those that are aligned with the mid-century net-zero mitigation target. The MDB WG would therefore recommend using for transformative quality the same criteria as for alignment with the long-term climate goals of the Paris Agreement, i.e., use LTSs, if they are available, as the reference point. If such LTS-aligned mitigation activities are transformative, it would then depend on their quantitative impact either in reaching large enough scale to shift sectoral emissions pathways to net-zero compatibility or in triggering a suite of replicating activities achieving the same objective. In general, such assessments will need to be done on a case-by-case basis, but there certainly are activities where such transformative impact is obvious such as in the case of policies with high mitigation impacts and sectoral reform programs (see input above on policy crediting). It is recommended to develop a positive list on transformative mitigation activities and a heuristic for case-by-case assessments for voluntary use by parties and stakeholders in Article 6.4 activities (MDB WG).

3.9. Encouraging broad participation

126. Below is a summary of public input received.

127. While providing lesser developed countries with an equal opportunity to participate, by adjusting the scientific standard downward, accounting for a lack of scientific infrastructure, this approach (similar to the Tier 1 Option within the IPCC Guidelines for National Greenhouse Gas Inventories) does not encourage investment into scientific infrastructure within the host country. If a high scientific standard were required independent of the circumstances in the host country, project developers would be encouraged to invest and establish scientific infrastructure, which would not only benefit future activity proponents in the region, but also the countries’ ability to provide detailed biannual reports and data driven nationally determined contributions (NDC). Identifying host countries with insufficient scientific infrastructure could aid in determining fees that would support the collection of data and the procurement of scientific tools and infrastructure when buying offsets from a host country granted the right to charge said fee (44 M).

3.10. Including data sources and accounting for uncertainty

128. No public input is received on this section.

3.11. Recognizing suppressed demand

129. No public input is received on this section.

3.12. Taking into account policies and measures and relevant circumstances

130. Below is a summary of public input received.

131. It is understood from the RMP and the spirit of the Agreement that taking into account policies and measures, and relevant circumstances is to be done for all forms of international cooperation and specifically to the implementation of the Article 6.4. mechanism. It is already being operationalized in many sections of the guidance, including additionality, NDC and LT-LEDS alignment, broad participation, sustainable development contribution, etc. Therefore, it is suggested to not create additional uncertainty for the market and further work for the Supervisory body in the form of additional guidance on taking into account relevant circumstances. Instead, this section could recap all the ways in which such circumstances are considered in other elements of the guidance and set it out as a general principle of the mechanism’s operationalization (ICLRC).

3.13. Standardized baselines

132. Below is a summary of public input received.

133. Performance-based approaches to baseline setting have been discussed since the early days of carbon crediting and trading. Using standardized baselines – i.e., performance benchmarks or default values – has reduced transaction costs and increased the transparency of CDM project activities: baselines are not set on a project-by-project level but can be determined for entire project types and sectors. Baselines setting in CDR is still being developed for many project types. However, DAC has the unique characteristic to define zero baseline. “For the purest-form CDR technology – all value-chain elements

of which purely exist for the purpose of removing CO_2 from the atmosphere into durable storage – Direct Air Carbon Capture and Storage (DACCS) the baseline is no activity whatsoever.”[10] With the baseline of DACCS being zero, setting a below BAU baseline is not plausible. Carbon Engineering recommends the use of zero baseline for DAC and a positive list for this activity (CE).

134. It is believed that the concept or question of a baseline test is relevant to offsets and avoidances. For engineered removals it is suggested that the relevant benchmark for a “baseline” is whether or not there is global installed capacity along a reasonable removals ramp trajectory to keep climate change below 1.5 degrees. If not, then additional removals capacity should be additional based on a positive list. An example of why the concept of a baseline may not be relevant to all activities is DAC + storage (DACCS). DACCS has the unique characteristic to define zero baseline. “For the purest-form CDR technology – all value-chain elements of which purely exist for the purpose of removing CO_2 from the atmosphere into durable storage – Direct Air Carbon Capture and Storage (DACCS) the baseline is no activity whatsoever (1PF).”[11]

135. As updates are to be requested by the host country and as the updated baselines shall not impact already registered activities, this could encourage project developers to register activities and updates at specific times, which could potentially result in higher crediting levels. As economic projections, growth and weather models, fueled with historic data are often the basis for baselines, the timing of requesting a baseline update could influence the resulting baselines. It is recommended to update baselines in regular intervals, independent of host party requests to ensure updates are not requested during economic crisis or weather phenomena, ensuring baselines remain objective and unbiased (44 M).

4. Additionality

136. Below is a summary of public input received.

137. It is noted that the inherent differences between engineered and nature-based removal activities should be considered when assessing the additionality of those activities. The incremental contribution of engineered carbon removals to climate change mitigation is explicit given the characteristics of such projects (i.e., removals would not have occurred without the implementation of the project), justifying that methodologies treat these activities as additional by default. For many removal activities, the incentive provided by the certification will likely complement national/regional grant funding. It is possible that compliance with ‘financial additionality’ is harder to justify for removal projects receiving support from national or regional programmes (e.g., grant funding, business model support), since they can be less dependent on revenues from the sale of carbon removal units. Thus, a simplified approach is supported to the additionality test, with the inclusion

[10] Poralla, M.; Honegger, M.; Gameros, C.; Wang, Y.; Michaelowa, A.; Sacherer, A.-K.; Ahonen, H.-M; Moreno, L. (2022): Tracking greenhouse gas removals: baseline and monitoring methodologies, additionality testing, and accounting, NET-Rapido Consortium and Perspectives Climate Research, London, UK and Freiburg i.B., Germany.

[11] Poralla, M.; Honegger, M.; Gameros, C.; Wang, Y.; Michaelowa, A.; Sacherer, A.-K.; Ahonen, H.-M; Moreno, L. (2022): Tracking greenhouse gas removals: baseline and monitoring methodologies, additionality testing, and accounting, NET-Rapido Consortium and Perspectives Climate Research, London, UK and Freiburg i.B., Germany.

of engineered carbon removals in a ‘positive list of technologies’, where additionality is assumed by default (CCSA).

138. The use of a positive list or similar mechanism to determine the additionality of engineered removals is supported. Certain technologies, such as DAC, are inherently additional, as the only product of DAC is CO_2 removal, and the “baseline” for a DAC activity is zero carbon removed. The use of a positive list for engineered removals can encourage the growth needed to reach the level of global removals capacity needed to align with a 1.5-degree future (1PF).

139. A clear indication of the risk assessment (and in particular, as relates to the financial additionality risk) is required. Clarity towards the definitions of medium and high risks (in qualitative or quantitative terms) are also required to avoid any disputes or controversies (ICLRC).

4.1. Question for additional inputs: how does this issue link to policy crediting where policies deliberately intended to generate credits? What considerations are needed in this regard?

140. Below is a summary of public input received.

141. The Article 6 rulebook - in particular the rules, modalities, and procedures (RMP) of the Article 6.4 mechanism formulates new principles and requirements for the demonstration and assessment of additionality. Paragraph 38 of RMP requires additionality to be demonstrated using a robust assessment that shows the activity would not have occurred in the absence of the incentives from the mechanism, taking into account all relevant national policies, including legislation, and representing mitigation that exceeds any mitigation that is required by law or regulation, and taking a conservative approach that avoids locking in levels of emissions, technologies or carbon-intensive practices incompatible with paragraph 33 of RMP. This necessitates having mandatory legal test for additionality along with taking into account the relevant national policies. Considering that most Parties[12] (81 per cent) provided information on voluntary cooperation under Article 6 of the Paris Agreement. Almost all of them (76 per cent) stated that they plan to or will possibly use at least one type of voluntary cooperation, with the use of cooperative approaches most frequently communicated. At the same time, some Parties (30 per cent) have set qualitative limits on their use of voluntary cooperation for achieving their mitigation targets, such as using units that adhere to certain standards and guidelines to ensure, for example, additionality, permanence or avoidance of double counting of emission reductions, the policies that will represent policy crediting will be very much subject to discussion. The policies that deliberately intend to generate credits need to be taken into consideration in a modified way mimicking the approach and complying with the rationale of E+/E- policies under the CDM e.g. policies that provide a comparative advantage to crediting were only taken into account if their adoption predated the adoption of the Paris agreement, whereas policies that are adopted to in order to achieve compliance with the Paris Agreement and under the NDC may be disregarded as they are align with the architecture of the Paris Agreement (GCC).

142. A host country government clearly needs to specify which policies have been introduced specifically to generate Article 6.4ERs. This shall be done by notifying the A6.4SB. Such

[12] https://unfccc.int/ndc-synthesis-report-2022.

policies shall not be taken into account in the baseline setting. Please refer to the answer in Q3 regarding the conditions under which a policy can generate credits (PCR).

143. The issue touches on the nuances of policy crediting, where policies are intentionally designed to produce credits. It's essential to clarify that while policies can be crafted to create a favorable environment or set mandates, but once policies enforce activities (to become the new norm), the activities stemming from them may no longer be considered additional. The "additionality" of an activity is anchored on its ability to go above and beyond current norms or regulations (CGED).

144. A general elaboration of the additionality test should be presented before any special cases, such as positive lists, are implemented so that the test is applicable to any activity type or technology in any circumstances. This general test should be universally applicable to all projects and could be simplified only under the conditions set further in the guidance. This would allow for early operationalization of the mechanism as a risk of protracted discussions on the criteria for simplified additionality tests and eligibility is anticipated (ICLRC).

145. The potential effects of policy crediting to additionality are nuanced because policies can come from multiple government agencies with various purposes and objectives. If the policy deliberately intended to generate credit, it should be tested to determine whether it creates or enables conditions that no longer make a project additional. It should also be considered whether it targets specific groups who would benefit from that policy while restricting others. The policy's impact should also be traceable, measurable, and verifiable. If the policy intended to generate credits from activities that emanate from activities that are not additional, that policy should not be credited. For example, some policies are promulgated for environmental compliance requirements. These are usually for companies that have cleared forests for development or what is considered an ‘environmental debt’ (e.g., road construction, mining, commercial development etc). To make up for this debt, they are legally required to replace the trees they had to cut down. The replacement trees are not considered additional. General policies supporting climate action may not directly trigger or enable activities that generate emission reductions or removals. In this case, the policy should also not be credited. Questions such as who promulgated the policy, what actions or activities it specifically triggers, what those activities achieve, and how the policy enables and sustains support for those activities need to be considered for policy crediting (ES).

146. Policy crediting may have unintended and adverse effects, such as creating a disincentive to other policies that are not credited but are necessary to support the policy being credited. Policy crediting may also likely affect projects in government-owned, controlled, or regulated land that are sensitive to policy or government forces. If the policy to be ‘credited’ is enforced by rules and regulations that are pro-actively enforced, resourced, and demonstrated to be effective, then the additionality of the crediting activity may be questioned. Governments have the capacity to craft and execute policies aimed at fostering the advancement of the art 6.4 mechanism for a variety of motivations, including the attraction of projects to their nation's borders. However, I hold the perspective that penalizing a project because it fails to satisfy the requisite additionality criteria since there are policies that incentivize credits generation could be counterproductive. To meet Paris Agreement target, the VCM needs to be scaled up and, it becomes imperative to formulate policies that motivate for its progression. In scenarios where a project operates within a jurisdiction featuring policies designed to encourage credit generation, project proponents could substantiate the concept of additionality based on distinct factors. For instance, they

might spotlight challenges associated with securing funding for the execution of such projects within the country. This highlights why adopting a carbon scheme becomes the exclusive pathway for bringing such projects a reality (ES).

147. For industrial CDR activities like DACS, it is likely that public/private partnerships will be instrumental to further develop the sector and increase overall effectiveness of this approach. It is to be expected that governmental incentives and policies make for a part, but not all the financial investments needed to deploy additional capacities. If governments are deliberately setting up policies for the sake of credit generation, it needs to be safeguarded that the party remains on track of its own NDC pledges and that credited activities i) go beyond domestically required mitigation and ii) present benefits to the host country. For DACS based mitigation, this obstacles could be overcome by positive lists (CW).

4.2. Question for additional inputs: should there be a statement about the general additionality test before specifying how it may be simplified in certain cases, or be subject of a positive list? Could be a more nuanced approach, i.e. all projects need to demonstrate additionality, some can be excluded or included based on one sort of assessment while others require more detailed assessment:

(a) What are the general rules?

(b) Where may they be simplified, or deemed to have been satisfied?

148. Below is a summary of public input received.

149. The additionality assessment shall take into account the risks to additionality relevant to the general activity type and to the specific project conditions. In general, a stepwise approach to assess and demonstrate the additionality of projects and programs of activities in order to robustly determine additionality under Article 6 is required where the first step is the mandatory legal additionality test. Automatic financial additionality through positive lists still has a role to play when it comes to specific country circumstances. Thus, for specific technologies national and international positive lists for financial additionality that are updated regularly are required to incentivize crediting mechanisms in the respective countries. For project types where risks to additionality are high the detailed financial analysis and respective evidence-based approach have to be applied on case-by-case basis. Positive lists need to be justified in relation to all or specific aspects e.g., financial additionality and regulatory additionality and must meet minimum predefined criteria. The process for developing global and national positive lists should include transparently presented and robustly justified argumentation. In the development of positive lists for financial additionality, the following may be applied that needs to be regularly reviewed and updated:

(a) For global positive lists: In case a project type/category can demonstrate that their net present value of costs exceeds revenues and savings without carbon finance more than certain established default threshold the same can be considered qualifying to be included in the global positive list;

(b) For regional/country-specific positive lists: In case a project type/category can demonstrate in a national context that either their costs significantly exceed revenues and savings so that their IRR is negative under conservative

assumptions regarding the discount rate, or their levelized costs of delivering a product or service are more than certain threshold which is higher than the industry average, or their marginal abatement cost exceeds a country specific benchmark they may be eligible to qualify for inclusion in the regional/country-specific positive list;

(c) Also, well-established thresholds for technology penetration rate can be applied for deriving positive lists (GCC).

150. There should be a statement about the general additionality test before specifying how it may be simplified in certain cases. The general rules are laid out in paragraph 83 of the of the methodology requirement document. The II-AMT TOOL 01 (II-AMT 2022 TOOL01 - Tool for the demonstration and assessment of additionality Concept Note. Version April 2022 Perspectives Climate Research Freiburg.pdf) proposed a stepwise approach that includes a pre-assessment and four steps (mentioned in paragraphs 86 a and b of the draft recommendation A6.4-SB007-AA-A##)). The first three are mandatory and the subsequent one applies under certain conditions. There is no need for a more simplified approach. The proposed guiding principles to demonstrate additionality that could be considered as general rules and the tool also specifies how to establish a positive list, so all the steps can be skipped. This provides sufficient simplicity for additionality testing (PCR).

151. The general additionality tests should be presented first, before presenting the exceptions and simplified cases. Could be a more nuanced approach, i.e. all projects need to demonstrate additionality, some can be excluded or included based on one sort of assessment while others require more detailed assessment:

(a) What are the general rules? A project should at least validated regulatory surplus and financial additionality. Here are some test:

(i) Test for Regulatory Additionality:

a. List Regulatory Mandates: Enumerate the current laws, statutes, and regulations related to the project's sector and region;

b. Project Compliance Analysis: Assess if the project merely complies with these mandates or if it goes beyond them. If possible, quantify the extent to which the project exceeds mandates. For example, if a regulation requires a 10% reduction in emissions and the project achieves a 20% reduction, then it has exceeded by 10%;

c. Determination: If the project is found to exceed current regulatory mandates or achieves goals not currently mandated, it demonstrates regulatory additionality;

(ii) Test for Financial Additionality:

a. Baseline Financial Analysis: Calculate the expected revenues and costs of the project without considering the revenue from carbon credits or external funding mechanisms. Calculate the expected net present value (NPV), internal rate of return (IRR), or payback period;

b. Comparison: Compare the financial metrics from step 1 with typical industry benchmarks or financial criteria required by investors or project developers;

c. Determination: If the project's financial metrics are below the benchmarks or criteria without the revenue from carbon credits, then it demonstrates financial additionality. In essence, it wouldn't be financially viable without the extra support (CGED).

152. The criteria for additionality can be simplified or deemed satisfied in the case of transformative technologies, as defined by a positive list (ie circular economy solutions), and for removal activities. Implementing transformative technologies often brings inherent benefits beyond the baseline scenario, and removal activities naturally contribute to emission reductions. Thus, a streamlined additionality assessment for these categories can expedite project initiation while maintaining environmental integrity (CGED).

153. Additionality (BeZero’s carbon risk factor series: Additionality (bezerocarbon.com)) tests are fundamental to accrediting carbon credit projects. For BeZero Carbon, the public documentation of how a project gauges additionality is one of the three qualifying tests for a project to be eligible to be rated. Additionality ranks as the highest weighted risk factor in the BeZero Carbon Ratings framework (Global Carbon Ratings, Methodologies & Frameworks | BeZero Carbon). The assessment of additionality (How additionality limits the BeZero Carbon Rating) takes into account variables beyond the project boundaries and what the project self-reports. Inputs include the presence of global or national barriers to project delivery, the role of carbon finance in the overall revenue stream, and the effectiveness of policy instruments and governance for either pre-existing conservation or decarbonisation practices. Additionality can be determined through using a variety of different metrics - including common practice analysis, identification of alternatives to the proposed project, investment and barrier analysis. The research shows that substantial differences exist in how additionality tests are applied across different types of projects, even those within the same sub-sector that appear outwardly similar. Therefore, the establishment of positive lists, while useful in theory, does not take into account the significant amount of variation between projects. Positive lists also risk leading to less disclosure and incentives to manipulate project designs to maximise chances of inclusion. They are often not updated with sufficient frequency to reflect underlying additionality conditions. Additionality tests show that quality is binary. Yet, there is a range that exists in the market. Serious differences exist between how a project implements additionality tests and the context within which the project operates. Further, carbon credit quality cannot be judged by merely the quantity or type of test(s). Rather, additionality tests function like a benchmark for minimum quality. The more projects disclose the details on which additionality tests have been applied and the evidence to support them, the more the market can incentivise higher levels of quality and integrity. A nuanced approach is needed to test additionality across sections and project-types (BZC).

154. A general statement on additionality and a positive list should be included. The concept of additionality is often misunderstood and misinterpreted as any action, if it's for the environment, is additional. A misunderstanding of what is additional could misdirect action. Additionality should consistently be demonstrated. There are many general rules in the Voluntary Carbon Market that can be lifted. What can be simplified is how additionality is tested. Supplementary tools for multiple actors should be developed for simplicity and ease of screening additionality. In the sake of clarity, the general rules of additionality

should be clearly written down. Certain types of activity or ecosystem can be excluded from the demonstration of additionality and in this case, the rules/criteria that have to be met have to be clearly mentioned (ES).

155. It is encouraged that engineered to place CDR activities with no other purpose than the delivery of negative emission (credits) on a positive list (CW).

156. The MDB WG recommends revisiting the additionality demonstration outlined in Article 6 of the Paris Agreement. This should involve aligning the baselines with the country’s NDCs and/or Paris Agreement goals, as well as introducing a baseline downward adjustment factor to support increased ambition (as already included in the downward adjustment factor for actual or historical emissions). By adopting these approaches, there may no longer be a need for adopting traditional additionality demonstration approaches (such as financial additionality or barriers assessments). Furthermore, given the NDC targets and countries’ requirements to avoid double counting and meet their NDC goals first, it is necessary to encourage countries to develop positive/negative lists. In such scenarios, similar to earlier approaches, no further additionality test is required. Guidelines for developing these positive lists should be developed, building on the CDM experience. Providing a global positive list while allowing host countries to submit their own national positive lists is a commendable approach. However, there seems to be some ambiguity regarding the acceptance of proposals from host countries for their national positive lists by the Supervisory Body (SB). Hence, clear guidance from the SB for the development of national positive lists and the procedure for their consideration/approval by the SB would be needed. Also, contradictory approaches when host countries develop such positive lists/additionality demonstration approaches for Article 6.2 to the approaches that the SB develops for Article 6.4 should be minimized. In this regard, the guideline could consider the following aspects.

(a) Criteria for inclusion/exclusion of activities: Define clear and specific criteria for activities to be included in the positive list. Example criteria could include emission reduction potential, contribution to sustainable development, technological feasibility, and social and environmental co-benefits;

(b) Flexibility and regular updates: Allow for flexibility by periodically reviewing and updating the lists to reflect technological advancements, changing circumstances, and new information;

(c) Monitoring and reporting: Develop a robust monitoring and reporting mechanism to track the implementation of activities on the positive list and to assess any potential negative impacts of activities on the negative list;

(d) International cooperation and harmonization: An extended positive list could be a clear indicator of additionality even for voluntary markets. For example, in the case of India, a list of 13 activities has been clearly specified to be considered for the trading of carbon credits under Article 6.2 mechanism to facilitate the transfer of emerging technologies and mobilize international finance in India. A few other countries also followed similar approach. The (positive) list could be extended further for other activities wherein bilateral/ cooperative approaches are not envisaged (MDB WG).

157. In order to have a faster execution of the positive list and the involvement of the host country, the following could be considered in the context of paragraph 95 of the methodology requirement document:

(a) Automatic approval of the national positive list submitted by the host party for the first submission, with the understanding that the validity of the positive list should expire, say three ((3) years after the approval date or align with the NDC updating timelines;

(b) Periodic update (annual) of the positive list by the Host Party following paragraph 93 of the methodology requirement document. While a rigorous approval process, as outlined in Paragraph 93 of the methodology requirement document, is desirable, considering the resources, time and capacities involved, could consider increased timelines as proposed above; and

(c) Fast-track process of accepting the proposal of national positive lists (unlike the lengthy process of developing standardized baselines under CDM), especially in situations where host countries already established such lists for other international carbon markets (Article 6.2) (MDB WG).

158. Positive lists will help guide the types of activities that countries can undertake in their cooperative efforts while ensuring that emissions reductions are meaningful and aligned with climate objectives. These lists will contribute to transparency, accountability, and the overall effectiveness of international cooperation in addressing climate change. The World Bank, together with the MDB WG, has developed a range of knowledge products that aim to support the development and assessment of mechanism methodologies under Article 6. One such product is the draft approach paper on the "Considerations for additionality concepts to Article 6 approaches" which offers a number of scenarios to guide the evaluation of activity-based additionality and to help mitigate risks to both the host and buyer. Additional details on this topic can be found in the draft approach paper attached (MDB WG).

159. Positive lists should be considered as additionality requirements can be complex to demonstrate for innovative removal activities, where the technology or the markets have not yet been established. Further opportunity to review the guidance from the Supervisory Body with a timeline of at least 6 weeks for consultation is welcome. Approach as in paragraph 93.d of the methodology requirement document, “Positive lists should be developed based on inputs from experts and the public and should include independent assessment and validation.”, is supported (PE).

160. In general, as I have already said, the lack of funding for mitigation actions, adaptations in the Republic of Congo does not make it possible to monitor the policies, measures and technologies put in place (RC).

4.3. Question for additional inputs: are positive lists needed? If yes, is the above guidance on positive lists too specific and detailed, and may the guidance be shortened?

161. Below is a summary of public input received.

162. The positive lists are very much needed (i) for incentivizing project crediting (GCC); (ii) to facilitate and simplify the process of additionality demonstration (PCR); and (iii) especially

when tailored to specific regions, to fast track some required transformative technologies. The approach outlined is fundamentally sound (CGED). The guidance included is sufficiently concise. The provided guidance for developing positive lists shall be detailed and specific so that consistency and an equal playing level field is ensured across the board. The detailed elaboration of the requirements on the deriving positive list is very much needed in order to have transparency and trust in the process. Please also kindly consider the response provided above with respect to positive lists (GCC).

163. The establishment of positive lists, while useful in theory, does not take into account the significant amount of variation between projects. Positive lists also risk leading to less disclosure and incentives to manipulate project designs to maximise chances of inclusion. (BZC).

164. Positive lists are a good way to direct action toward desired activities. This should be developed based on country- or region-specific circumstances. If possible, a sectoral-based positive list would be easier to follow. The guidance can be shortened, and supplementary documents that host details can be provided to stakeholders later. Supplementary documents can be country- or region-specific to better drive action to desired ambition levels and outcomes. Yes, positive lists are needed to make clear which technologies or activities are deemed additional. National positive lists can be a good option to simplify the guidance on positive list and are specific to the country/jurisdiction. Positive lists of specific technologies or activities can also be developed to simplify the guidance (ES).

165. Positive lists can save time and effort in comparison to evaluating the additionality of activities on an individual basis. Further guidance would be needed, for example, in relation to how often the positive list should be updated (SY).

166. Positive lists are needed and encouraged for activities fulfilling e.g., the requirement in para 93(a). DACS as one example presents a technology that has no other revenues than carbon finance and will thus rely on it in all cases. However, as additional public finance might spur DAC investments (e.g., consider the recently announced DoE subsidies around DAC Hubs) and thus present questions concerning the additionality of DACS approaches, it is important to keep a specific and detailed guidance (CW).

167. Positive lists will be helpful. Reserving the ability of the Supervisory Body to develop negative lists could be useful, but, as a practical matter, negative lists run the risk of implying that activities not on the list are permitted, which itself can be problematic (CA).

5. Leakage

5.1. Question for additional inputs: should pre-project activity emissions and upstream emissions be accounted as activity emissions or leakage emissions, or be identified by the Supervisory Body as being beyond the scope of activity accounting guidance? What further assessment is needed in this regard?

168. Below is a summary of public input received.

169. Pre-project activity emissions and upstream emissions should be considered within the scope of the activity (44 M).

170. The way to address comprehensively all net changes of anthropogenic emissions by sources of GHGs that occur outside the project boundary but are measurable and attributable to the project activity directly corresponds to the ultimate goal of maintaining environmental integrity of the mechanism. However, having a full pledged life-cycle approach towards all associated upstream and downstream emissions may be difficult to justify in terms of their contribution to actual significant GHGs sources associated with the project activity. The “net” approach may be explored as the accounting for pre-project activity emissions may easily cancel out with upstream and downstream project emissions and furthermore many of these emissions sources may be insignificant. Thus, the efforts and the burden of data collection for negligible upstream and downstream emission sources may cause undue difficulties to project participants. Leakage must be estimated based on a comparison to the baseline scenario for the project activity causing the leakage and applied to the sources/sinks affected (GCC).

171. Assuming that pre-project activities are R&D activities, project planning phase, and construction activities (activities that happen until the project start date and are directly related to and within the project's boundary), emissions from these activities should be classified as activity emissions. On the other hand, if activities are displaced outside the activity boundary due to the project activities and cause increased emissions elsewhere, this should be classified as leakage emissions (PCR).

172. Based on VCS, three types of leakage can be differentiated:

    (a) Market leakage: projects significantly reduce the production of a commodity, and production is increased elsewhere to offset the lost supply;

    (b) Activity-shifting leakage (in the context of biological sinks projects): an actor destroying bio-logical sinks relocates to an area beyond the project boundary and destroys sinks there;

    (c) Ecological leakage: a project generates GHG emissions in ecosystems that share a hydrological connection with the project area (PCR).

173. The A6.4SB will have to define for which activity types which forms of leakage need to be considered in the methodology. It should also decide on criteria and procedures determining when a leakage assessment would not be required because it would be deemed as "de minimis." (PCR).

174. Pre-project activities, such as commissioning activities, should be factored into the emissions accounting in the initial years of the project. Additionally, upstream emissions should be integrated within the emissions accounting framework, adopting a "cradle to grave" Life Cycle Assessment (LCA) approach. This comprehensive approach ensures a holistic understanding of the project's environmental impact. Further methodological requirements should involve detailed LCA methodologies and guidelines to ensure consistent and rigorous accounting across various projects and sectors. For example, when starting a pyrolizer or a biogas site, direct emissions are usually higher than once the production reached its steady state (CGED).

175. Leakage risks must be considered on a project-by-project basis and take into account project safeguards. Only when such a holistic approach is employed can leakage risks be comprehensively evaluated and compared across different sectors, with the benefit of promoting fungibility within the market. BeZero Carbon assesses leakage (BeZero’s carbon risk factor series: Leakage (bezerocarbon.com)) by interrogating the extent of

possible risks, including those associated with activity within and around a project area, as well as any safeguards put in place to mitigate such risks. The likelihood of emissions avoided or removed by a project being pushed outside its boundaries is an important factor when assessing a credit’s level of carbon efficacy. Assessing both the top-down and project-specific leakage risk is essential (BZC).

176. Pre-project activity and upstream emissions should be accounted for as activity emissions. The diversion of any pre-project activity emissions and upstream emissions should be accounted for as leakage emissions. The Supervisory Body should define the scope of activity and leakage emissions. An assessment of supply-chain emissions and assessments of sectoral scope 1-3 emissions would be needed. Pre-project activity emission and upstream emissions should be accounted for activity emissions. Leakages are expected to happen after the implementation of activity and for that reason, it’s more appropriate to qualify pre-project emission and upstream emissions as activity emission. They should be accounted if there are significant. A threshold as well as other criteria can be set to guide the accounting of pre-project activity emission and upstream emissions. The threshold and criteria can vary depending on the activity (ES).

177. This should depend on the activity type. For activities where in general the levels of upstream emissions are low, those emissions should be considered out of the scope of activity accounting guidance. For those activities that are for example associated with high electricity consumption (such as Direct Air Capture), methodologies should include guidance to account for them (SY).

178. Following the approach to quantify CDR activities based on a robust cradle to grave LCA basis, upstream emissions and pre-project activity emissions should be accounted as activity emissions and correspondingly reflect a lower amount of A6.4ER (CW).

179. Please see response to ‘Requirements on baselines’ above. Pre-project activity emissions should not be considered leakage, otherwise there remains no goal posts as to how far back in time you review pre-project activity, for example prior to retrofitting CCUS onto an existing plant. Leakage should be defined as a default of a certification and must be remedied (CCSA).

180. Projects must include secondary project emissions (i.e., leakage) that result from a cradle to grave life cycle emissions inventory for completeness of the life cycle analysis. As part of this inclusion, project developers need to understand when expansion of the GHG accounting boundaries is appropriate and also need guidance for applying consistent materiality thresholds, regardless of project type (i.e., emissions reduction or removal), under a methodology framework. This detail is needed to guide project proponents toward determining which emissions within the project activity and supply chain to include in project baseline determinations (if applicable) and project emissions, respectively. These pre-project activity emissions and upstream emissions should be accounted for as activity emissions. A materiality threshold should be used to determine which emissions are material to be included in the GHG accounting boundary for a given project under this methodology framework. The net emissions benefit generated by the project activity can change significantly depending on the predetermined cut-off for excluding emissions from within either the project activity boundary or the project GHG accounting boundary. Secondary effects caused by a project activity need to be evaluated with care and rigor to ensure the environmental benefits claimed by a project are achieved. A secondary effect is an unintended change caused by project activity in GHG emissions, removals, or storage associated with a GHG source or sink. Secondary effects are typically small

relative to a project activity’s primary effect. In some cases, however, they may undermine or negate the primary effect. Secondary effects are classified into two categories:

(a) One-time effects – one-time changes in GHG emissions associated with the construction, installation, and establishment or the decommissioning and termination of the project activity;

(b) Upstream and downstream effects – recurring changes in GHG emissions associated with inputs to the project activity (upstream) or products from the project activity (downstream), relative to baseline emissions (1PF).

181. The remaining work for the Supervisory Body should include creating a project lifecycle emissions inventory to the degree necessary to determine an appropriate materiality threshold for all emission sources included in the GHG accounting boundary for all project types. The resulting project GHG accounting boundary should include all secondary effects unless explicitly excluded so they can be quantified, understood, and accounted for in the project crediting. The leakage being minimized or addressed using the methods described in paragraph 100 of the methodology requirement document is supported (1PF).

182. Projects need to be able to ensure they can meet the leakage requirements set by these recommendations. The opportunity to assess how the recommendations on leakage could work in practice is welcome. As stated in paragraph 103 of the methodology requirement document, “*The Supervisory Body will develop a methodological tool for the implementation*”, and we look forward to at least 6-week consultation process on this methodological tool (PE).

6. Non-permanence and reversals **{The work from removal WG will be reflected here}**

183. Below is a summary of public input received.

184. Examples of particular instruments which may be used to address the risk of reversals (such as, for example, insurance instruments, etc.) may be considered for inclusion in the guidance (ICLRC).

185. While emission reductions from projects that displace non-renewable biomass consumption are in many aspects functionally similar to credits derived from carbon removal projects, it is believed that introducing a requirement to track the biomass saved by these project activities would be impractical for the following reasons:

(a) Activities that displace non-renewable biomass consumption are highly diffuse, and it is very difficult to define the boundaries of areas that are impacted by specific projects. This applies for projects that target to displace firewood collected by participating households but is even more relevant for projects that displace charcoal in urban or peri-urban centers, because the biomass used to produce charcoal often originates from multiple production areas serving multiple markets;

(b) Even if those areas can be identified and have well-defined boundaries, attributing changes in biomass stocks to project activities is very difficult because in most cases, biomass cover is affected by multiple human and natural processes; and

(c) There is consensus in the scientific community that consumption of non-renewable biomass linked to the use of fuelwood and charcoal contributes mainly to

degradation rather than deforestation. Degradation is much more difficult to measure (even without considering the diffuse boundaries and attribution challenges described above). Demonstrating measurable impact on degradation would require the use of sophisticated remote sensing techniques with extensive ground truthing and/or the creation of semi-permanent plots in both project and non-project areas. Both of these options would require specialized knowledge and investment that are beyond the capabilities of most or all project implementers (4C).

186. Furthermore, activities that displace non-renewable biomass and apply a value of fraction of non-renewable biomass (fNRB) to the emissions reduction calculations account for some permanence risk by accounting for the balance between tree offtake and regeneration. In other words, by applying an fNRB value, emissions reductions are only credited from biomass that would not have regrown without the project activity (4C).

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Document information

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21 February 2023	A6.4-SB004-AA-A10 - Draft recommendation: Requirements for the development and assessment of mechanism methodologies (version 03.0) (Zip file: Appendices 1 - 4 to Annex 10)
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