Brussels, 6th April 2023

Dear Members and Alternate Members of the Article 6.4 Supervisory Body,

Carbon Market Watch welcomes the opportunity to provide inputs to the Supervisory Body on the requirements for the development and assessment of mechanism methodologies.

Noting that the Supervisory Body aims to finalise its draft recommendations on the requirements for mechanism methodologies at SB007 (11-14 September 2023), we would underscore that at this initial stage, the SB should take a step back to consider the broader implications of what these requirements must deliver in the context of the Paris Agreement. Our inputs respond to selected questions from the list (*italicised* below), focusing in some cases on the wider implications of the requirements.

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## General Questions

*1. In relation to the inputs[1] prepared for the consideration of the Supervisory Body on requirements for the development and assessment of methodologies for the mechanism established by Article 6, paragraph 4, of the Paris Agreement, what is missing and what can be improved?*

Overall, the framing of the document should better elaborate on key elements from the chapeau to paragraph 33 of the RMP. Article 6.4 should be aligned with 1.5°C, avoid lock-in of emissions and deliver on ambition increase over time. It should also reflect the principles of conservativeness and credibility in crediting, and should deliver equitable sharing of mitigation benefits across Parties. Host Parties and local communities must be able to benefit from Article 6.4 activities, and these benefits should be transparently reported.

These issues are not addressed in sufficient detail in the current draft recommendations: for example, only 4 sentences in section 2.12 are dedicated to "aligning with long-term temperature goals of the Paris Agreement", despite this being a hugely important topic

[1] *A6.4-SB004-AA-A10 - Draft recommendation: Requirements for the development and assessment of mechanism methodologies and the documents referred under its document history comprise the previous inputs in this area.*

with repercussions for baseline-setting, additionality, and more. When developing the next iteration of the recommendations in the form of an information note, the informal SB working group on methodologies, the SB, and the Secretariat must further elaborate on all the elements in paragraph 33 of the RMP. They should draw on relevant literature, and keep in mind the broader picture that the 6.4 mechanism must not inadvertently erode climate ambition by adopting weak methodological requirements that allow for over-crediting, non-additional credits, or lead to lock-in.

## Baseline Setting

### *General*

*2. What is understood by the elements in the chapeau to paragraph 33 of the RMP and how could they be operationalized?*

> *a) encourage ambition over time;*
> *b) encourage broad participation;*
> *c) be real, transparent, conservative, credible, below 'business as usual';*
> *d) avoid leakage, where applicable;*
> *e) recognize suppressed demand;*
> *f) align with the long-term temperature goal of the Paris Agreement;*
> *g) contribute to the equitable sharing of mitigation benefits between the participating Parties;*
> *h) In respect of each participating Party, contribute to reducing emission levels in the host Party, and align with its NDC, if applicable, its long-term low GHG emission development strategy if it has submitted one and the long-term goals of the Paris Agreement.*

The need for methodologies to reflect these principles implies that Article 6.4 must be focused on the provision of finance to transformational projects. Article 6.4 activities should not be activities that provide incremental benefits against BAU, because such incremental benefits are what is needed, as the first step, to do the bare minimum in line with the Paris Agreement's goals.

Delivering reductions compared to current practice today would not serve to "encourage ambition over time" (a), nor would it "align with the long-term temperature goal of the Paris Agreement" (f), because these changes are already underway and embedded in the Paris Agreement and the international community's recognition of the need to take urgent climate action.

**Article 6.4 activities can only increase ambition if they broaden the scope of what is considered "possible" today. They must focus on transformational activities** - so-called high-hanging fruits. This likely requires a combination of positive approaches (focusing on improvements that have the potential to transform an entire sector, rather than marginal "fixes" that can only reduce emissions up to a certain point), and negative approaches (refraining from registering activities that are not compatible with the long term goals of the Paris Agreement, e.g. activities that rely on the continued use of fossil fuel infrastructure).

Setting baselines that are well below business-as-usual, including via the application of a baseline contraction factor, is one simple and effective way to ensure that Article 6.4 contributes to the equitable sharing of benefits for host Parties (g) and to the reduction of emission levels in the host Party (h). Requiring activities to set **conservative baselines not only helps mitigate the risk of over-crediting but also serves as an additional safeguard to allow host Parties to benefit from a share of the mitigation benefits from Article 6.4 activities**. If an activity can only issue credits at a lower rate than its actually achieved emission reductions, this guarantees the host Party can still count emission reductions toward its target, since a portion of the reductions will not have been credited and hence will not need to be adjusted for upon authorisation.

Of course, such baseline setting, regardless of how stringent any hypothetical contraction factor might be, must be dynamic. **Baselines must evolve with time to reflect the fact that today's decarbonisation frontier will not be tomorrow's**: technologies that are nascent today will be common practice tomorrow. In fact, in order to be compatible with the long-term temperature goal of the Paris Agreement, baselines must not only be conservative today, but also decrease over time in a way that is compatible with reaching net-zero emissions at a global level by 2050. **In most sectors and for most activities, this means achieving (near) absolute zero by 2050 or earlier**.

The importance of ensuring that 6.4 methodologies are "real, transparent, conservative, credible, below 'business as usual' " (c) was underscored during the SB's 4th meeting, when the Secretariat demonstrated how calculated emission reductions under CDM cookstove methodology AMS-II.G would plummet by as much as 80% in some cases when applying more conservative approaches. This is a positive evolution. Lower crediting levels will have multiple positive impacts. Lower crediting levels will translate into **higher "own benefits" for the Host country**, who can count some of the mitigation outcomes achieved by

activities towards their own NDCs. Fewer credits also mean higher prices, which **leads to higher revenues** for both the developers taking action, and the Host countries selling their reductions. It contributes to a better **enforcement of the polluter pays principle**, as buyers are typically richer companies in the global north, while sellers are often developing countries.

More stringent methodologies should hence not be seen as a difficulty to be overcome for market actors and Host countries. On the contrary, it will benefit these actors and better reflect the principle of "equitable sharing of mitigation benefits".

*3. How might these elements be further elaborated with reference to literature?*

A range of peer-reviewed and grey literature has been published on the above subjects, on which the SB should request the Secretariat to undertake a comprehensive review against the same questions posed in this consultation. The literature review should focus on a range of sources, which could be ordered into 2 categories if desired, e.g. "IPCC/peer-reviewed" or "stakeholder inputs" (i.e. like in the information note on removals).

Based on this literature review, the Secretariat and SB working group could be tasked to develop several operationalisation options for each of the above elements.

Below is a non-exhaustive list of relevant literature and studies:

Carbon Credit Quality Initiative (EDF, WWF-US, Oeko-Institute), Methodology for assessing the quality of carbon credits, version 3 (31 May 2022).

- Detailed evaluations of a range of carbon credit methodology types against CCQI's assessment criteria available here: https://carboncreditquality.org/resources.html, such as an assessment of the CDM's effectiveness vis-a-vis robust quantification, an assessment of CDM cookstove methodology AMS-II.G, and more.

IFM: selected literature on baselines

- Haya Barbara K., Evans Samuel, Brown Letty, Bukoski Jacob, Butsic Van, Cabiyo Bodie, Jacobson Rory, Kerr Amber, Potts Matthew, Sanchez Daniel L. (2023) "Comprehensive review of carbon quantification by improved forest management offset protocols", Frontiers in Forests and Global Change vol6, https://www.frontiersin.org/articles/10.3389/ffgc.2023.958879/full
- Elgin B. (17 March 2022), "This Timber Company Sold Millions of Dollars of Useless Carbon Offsets", Bloomberg Green

- Badgley, G., Freeman, J., Hamman, J. J., Haya, B., Trugman, A. T., Anderegg, W. R. L., et al. (2022). Systematic over-crediting in California's forest carbon offsets program. Glob. Change Biol. 28, 1433–1445. doi: 10.1111/gcb.15943
- Coffield, S. R., Vo, C. D., Wang, J. A., Badgley, G., Goulden, M. L., Cullenward, D., et al. (2022). Using remote sensing to quantify the additional climate benefits of California forest carbon offset projects. Glob. Change Biol. 2022, gcb.16380. doi: 10.1111/gcb.16380
- van Kooten, G. C., Bogle, T. N., and de Vries, F. P. (2015). Forest carbon offsets revisited: Shedding light on darkwoods. For. Sci. 61, 370–380. doi: 10.5849/forsci.13-183
- Gifford, L. (2020). "You can't value what you can't measure": A critical look at forest carbon accounting. Clim. Change 161, 291–306. doi: 10.1007/s10584-020-02653-1
- Haya, B., Cullenward, D., Strong, A. L., Grubert, E., Heilmayr, R., Sivas, D. A., et al. (2020). Managing uncertainty in carbon offsets: Insights from California's standardized approach. Clim. Pol. 20, 1112–1126. doi: 10.1080/14693062.2020.1781035


REDD+: selected literature on baselines and impermanence


- West, T. A. P., Börner, J., Sills, E. O., and Kontoleon, A. (2020). Overstated carbon emission reductions from voluntary REDD+ projects in the Brazilian Amazon. Proc. Natl. Acad. Sci. U. S. A. 117, 24188–24194. doi: 10.1073/pnas.2004334117
- Calyx Global (April 2023), "Turning REDD into Green: Improving the GHG integrity of avoided deforestation credits", https://calyxglobal.com/resource-post/?q=9
- Guizar-Coutiño, Jones, Balmford, Carmenta, Coomes (2022), "A global evaluation of the effectiveness of voluntary REDD+ projects at reducing deforestation and degradation in the moist tropics", Conservation Biology, 36, e13970. https://doi.org/10.1111/cobi.13970


Soil carbon: selected literature on the difficulties of assessing and monitoring soil carbon stocks, on broader questions of the suitability of soil carbon sequestration for crediting activities, and on impacts of climate change on soil carbon sequestration potential:


- Carbonplan (2021), "Depth matters for soil carbon accounting", https://carbonplan.org/research/soil-depth-sampling
- Carbonplan (2021), "Lessons learned from a systematic review of 14 protocols for soil carbon offsets", https://carbonplan.org/research/soil-protocols-explainer

- Berthelin et al. (2022), "Soil carbon sequestration for climate change mitigation: Mineralization kinetics of organic inputs as an overlooked limitation", European Journal of Soil Science, 73(1), e13221, https://doi.org/10.1111/ejss.13221
- Soong et al. (2021), "Five years of whole-soil warming led to loss of subsoil carbon stocks and increased $CO_2$ efflux", Science Advances, 7(21), https://www.science.org/doi/full/10.1126/sciadv.abd1343

Cookstoves: selected literature on baselines and additionality

- Annelise Gill-Wiehl, Daniel Kammen, Barbara Haya et al. *Cooking the books: Pervasive over-crediting from cookstoves offset methodologies*, 23 February 2023, PREPRINT (Version 1) available at Research Square https://doi.org/10.21203/rs.3.rs-2606020/v1
- Carbon Credit Quality Initiative (May 2022), "1.3.2 Robustness of the quantification methodologies applied to determine emission reductions or removals: Clean Development Mechanism (CDM) AMS-II.G, Version 12.0, and CDM TOOL30, Version 3.0", EDF, WWF-US, Oeko-Institute
- Carbon Credit Quality Initiative (May 2022), "1.3.2 Robustness of the quantification methodologies applied to determine emission reductions or removals: Gold Standard: Technologies and Practices to Displace Decentralized Thermal Energy Consumption (GS TPDDTEC) Version 3.1 (August 2017)", EDF, WWF-US, Oeko-Institute
- Carbon Credit Quality Initiative (May 2022), "[Additionality] 1.1.4 Barriers: Efficient cookstoves" EDF, WWF-US, Oeko-Institute

*Specific*

*4. What is understood by the performance-based approach(es) identified in paragraph 36 of the RMP?*

*a) Best Available Technologies (BAT) that represent an economically feasible and environmentally sound course of action, where appropriate;*
*b) An ambitious benchmark approach where the baseline 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;*
*c) An approach based on existing actual or historical emissions, adjusted downwards to ensure alignment with paragraph 33 of the RMP.*

As mentioned in response to question 2, the SB and Secretariat should develop further guidance on baseline contraction factors, for ultimate inclusion in the recommendations.

Robust baseline contraction factors that ultimately lead to baseline emissions reaching zero by 2050 (depending on the exact sector of activity and geographical location) are a vital way to improve alignment with Paris-compatible emission pathways and to minimise the risk of over-crediting (either inadvertently or due to intentional gaming).

By limiting the risk of over-crediting, BCFs can also play an important role in delivering an equitable sharing of mitigation benefits between participating Parties and in ensuring that host Parties always receive some mitigation benefits from Article 6.4 activities.

The SB should request the UNFCCC secretariat and SB working group on methodologies to perform further research on BCFs and their applicability to different sectors, countries, and prospective activity types. Relevant research on this topic includes, but is not limited to, Perspectives Climate Group's "Tool for baseline setting".

The SB should also request the UNFCCC secretariat and SB working group to better integrate BCFs in the next iteration of the draft recommendations. To give just one example, in the current text, it should be better clarified that a procedure should indeed be selected to guide the development of BCFs, i.e. "A procedure ~~[~~will~~][could]~~ be established to guide the development of BCFs including the process for consultation with the host Parties" (para 11, page 13). In general, beyond this one example, the draft recommendations (and next information note) must reflect BCFs in much greater detail, since BCFs should ultimately be part of the final recommendations prepared by the SB for CMA.

*5. Where might each of these approaches be most applicable – with reference to different programmes or experiences?*

Baseline contraction factors, and other approaches that promote integrity and equitable sharing of benefits, should be implemented consistently across all activity types. However, in keeping with the principle of conservativeness, due consideration should be given to the need to adopt more stringent requirements for baseline setting in specific sectors or for specific activity types. This could be the case, for example, with activity types with high levels of uncertainty in impact quantification. **Conservativeness should be proportional to the degree of uncertainty**, and hence measures such as a BCF should be adapted to the expected levels of uncertainty. For example, while baseline setting must be conservative for all activity types, the use of a higher BCF for types where uncertainty is expected to be high (e.g. forest carbon accounting, if relevant under the 6.4 mechanism) should be mandated.

*6. How might each of these approaches be implemented – with reference to different programmes or experience?*

*7. The interaction of the elements from paragraph 33 and approaches identified in paragraph 36 of the RMP:*

*a) How do the options for implementation of paragraph 33 of the RMP identified in the paper deliver on the proposed elements?*

*i. Scalability and replicability*

*ii. Increasing stringency over time*

*b) How could implementation of the approaches identified in paragraph 36 of the RMP address the elements?*

**The "Best available technology" and "benchmark" approaches are most at risk of not delivering on the elements and principles listed in paragraph 33.** Setting baselines against current practices (whether "best available" or not) does not necessarily encourage innovation and transformational change. If current practice, even sometimes best available practice, is incompatible with reaching the long term goals of the Paris Agreement, then using this as the baseline would be counter to this principle in paragraph 33, as well as the principle of conservativeness, among others.

For example, best available technology in some sectors, such as the aviation sector, or for the generation of electricity through coal power, is fundamentally incompatible with meeting the long term goals of the Paris Agreement. In these cases, the baseline should be set below best practice, and only activities that can deliver transformational change could register under article 6.4. This means that **some activity types or sectors will not have access to Article 6.4, because there is no credible technology or pathway to make them compatible with temperature goals.** That is the case for example of power generation with coal. But this is not negative. Article 6.4 is a tool to "increase ambition" and it is only logical that it be designed in a way that targets those sectors and activities that do increase ambition.

**The starting point for all Article 6.4 methodological requirements should be "where do we want to go?" rather than "where are we now?".**

*8. Should the stringency over time be in the form of a net-to-gross adjustment to the emission reductions achieved applied in all methodologies, or should stringency be sought through a sector-specific or region-specific adjustment factor, or both?*

See answer to question 5. The approach to baseline setting could vary based on specific objective criteria, such as uncertainty levels, and does not necessarily need to be homogeneous across all projects. However, **if contraction factors are used, there should be a "floor" or default minimum value that is applicable**, which is then increased based on other factors such as uncertainty.

*[... moving to question 11]*

## Additionality

### *General*

*11. The interaction of the elements from paragraph 33 and approaches identified in paragraph 36 with paragraph 38 of the RMP on Additionality:*

*a) How should the different elements of the additionality requirements be understood?*

*b) How should the different elements be demonstrated?*

*i. 'would not have occurred in the absence of the incentives from the mechanism';*

*ii. 'taking into account all relevant national policies, including legislation';*

*iii. 'representing mitigation that exceeds any mitigation that is required by law or regulation;*

*iv. 'taking a conservative approach that avoids locking in levels of emissions, technologies or carbon intensive practices incompatible with paragraph 33 of the RMP'*

Additionality requirements are intrinsically linked to the principle of raising ambition, and adopting methodological requirements that are compatible with the long-term temperature goal of the Paris Agreement. Additionality rules must ensure that Article 6.4 activities contribute to going beyond the existing level of ambition, which means crediting activities that are highly unlikely to take place under current climate commitments.

The agreed principles require that Article 6.4 activities go beyond current practice and what is already mandated by law. **Article 6 should be a tool to enhance ambition, not to finance the enforcement of existing regulations.** Using it for such a purpose would be counter-productive as it would encourage countries to make commitments that seem legally binding but actually cannot be backed by real actions without external support. While external support must be provided, in particular from developed to developing

countries, to support climate action, this should come in the form of climate finance rather than the purchase of carbon credits.

Using the sale of credits to finance the enforcement of regulation leads to the Host country exporting the benefits of its own legislations and regulations, which makes it more difficult for that country to reach its NDC.

*[... moving to question 13]*

### *Specific*

*13. Are there classes of project, or levels and lifetimes of emissions that would deliver lock in? how might these be identified?*

The **6.4SB should establish, and regularly update, a list of activities that are deemed to have a low likelihood of additionality, as well as activities that are fundamentally incompatible with reaching the long-term goal of the Paris Agreement. Activity types on this list should not be eligible under Article 6.4.**

This could include for example, renewable energy projects in most regions of the world, as these are cost-competitive and highly unlikely to be additional. It would also include activity types that further the world's reliance on fossil fuels, such as increasing the efficiency of fossil fuel powered power plants, capturing leaks from fossil fuel transport infrastructure or from fossil fuel extraction sites, etc. **The SB should request the Secretariat to prepare a list of activity types that are proposed for exclusion**, on the basis of their low likelihood of additionality, and/or their incompatibility with reaching the long-term goals of the Paris Agreement due to lock-in risks.

*14. Are there classes of project, or levels and lifetimes of emissions that might be favored in a positive list?*

The Secretariat, in collaboration with Host countries, should **develop a list of activity types that should be prioritised under Article 6.4**. Activities from such activity types that seek to register under Article 6.4 could have lower requirements, e.g. for additionality, for example because the activity type is itself deemed to be of a very high likelihood of additionality. Such a "positive list" should be region-specific, and **should not lead to the automatic approval of activities under Article 6.4**. It should rather be used as a way of signalling to the market where it should focus its efforts. Working in collaboration with Host countries will help maximise the benefits of the market for Host countries, by ensuring that

it targets high-hanging fruits and does not lead to countries selling their cheapest abatement potential.

*15. What elements or criteria should be used to determine eligibility for automatic additionality, i.e., inclusion on a "positive list"?*

**Positive lists that lead to automatic eligibility are a risky approach to additionality testing**. While some upfront screening of activity types can be helpful to direct resources where they are most needed, such positive lists, if used, should lead to additionality requirements that are different, perhaps less stringent, than the requirements that apply to activities excluded from such lists. There should not be any automatic additionality of activities under Article 6.4.

**Negative lists must also be developed by the SB** (especially if positive lists are planned). Negative lists can be a critical way of **excluding project types/activities that would lead to lock-in that is inconsistent with Paris Agreement aligned emission pathways**.

Poorly designed positive lists could lead to mass crediting from non-additional activities. This would repeat the same errors from the CDM which rightfully undermined trust in the entire mechanism and led to a huge drop in market activity. Cames et al. (2016) were among those who highlighted the significant flaws in the CDM's approach to positive lists and additionality testing more generally, and who also underscored the need for the development of negative lists.[1]

In addition, once a technology or activity type has been included on a positive list, it may be very difficult to remove it from that list in the future since this will need to be renegotiated by the SB. For example, under the CDM, solar PV for large-scale grid-connected power generation remained on the CDM positive list until version 4 (11 March 2022), even though this was clearly no longer appropriate given the huge cost decrease of solar PV. Michaelowa et al. (2019)[2] noted that attempts to exclude solar PV from the CDM's positive list failed in previous versions (prior to v4) because the CDM Executive Board was unable to come to agreement. This risk could certainly materialise once again under the SB.

[1] Martin Cames, Ralph Harthan, Jürg Füssler, Michael Lazarus, Carrie Lee, Peter Erickson, Randall Spalding-Fecher, (2016/03/01), "How additional is the Clean Development Mechanism? Analysis of the application of current tools and proposed alternatives", Study prepared for DG CLIMA., 10.13140/RG.2.2.23258.54728

[2] Axel Michaelowa, Lukas Hermwille, Wolfgang Obergassel & Sonja Butzengeiger (2019), "Additionality revisited: guarding the integrity of market mechanisms under the Paris Agreement", Climate Policy, 19:10, 1211-1224, DOI: 10.1080/14693062.2019.1628695

**This is not only detrimental to climate action, but also to host countries, who will risk selling more low-hanging fruits because some activity types are inappropriately included in outdated positive lists.** For example, a host country might face more pressure from private developers to authorise certain A6.4ER transfers, because the activities are on a positive list and hence more easy to register. In turn, this makes it more difficult for the Host country to demonstrate its own ambition level and set and achieve ambitious NDC goals.

*16. How to consider regulations enforced during the crediting period (CP) under the regulatory surplus test (e.g. At the time of enforcement or at renewal of the CP)?*

The Article 6.4 agreement clearly states that activities should go beyond regulations and legislative requirements. **The level of enforcement should not be relevant in the eligibility assessment (including additionality testing) of activities**. Carbon credits are not a tool to finance policy enforcement, as policies should be used to deliver on host country climate targets, while carbon credits will be used to export those reductions to a buyer (unless a financial contribution model is adopted).

While some countries certainly require financial support for the implementation of ambitious policies at home, this **support should come in the form of climate finance, rather than carbon crediting**. Determining the extent to which policies are truly not enforced, and avoiding the perverse incentive of encouraging Host countries not to enforce policies in order to receive carbon credit finance, is a difficult task and it is a more careful - and conservative - approach to only register activities that go beyond regulatory requirements.

*17. What elements should be retested during renewal of crediting period?*

Re-assessing the ongoing need for financial resources from the sale of carbon credits is important before crediting periods can be renewed.

Further assessment of the exact elements to be reassessed is needed, and these will likely vary by activity type and situation. The SB should start by focusing on what it is trying to address and what principles should be met for this re-assessment. Our view is that the **re-assessment should focus on verifying whether 1) the barriers to implementation of the project still exist or not, 2) whether continued carbon credit issuance can alleviate these barriers if they still exist, and 3) whether the activity could continue to operate and overcome any barriers without continued issuance and sale of carbon**

**credits.** “Barriers” here should be interpreted in a broader sense, and not limited to what is commonly perceived as “barriers” as part of “barrier analysis” in additionality testing.

In developing provisions that address these questions, it will be important to note the distinction between activities that made large upfront investments and those that did not. The former might not face further barriers after the project has been started (e.g. because the needed infrastructure has been built and isn’t going to be taken down) but need credit revenues to recuperate their upfront investment. The latter should not continue to receive carbon credits if it faces no further barriers to implementation after a few years (e.g. because a practice or technology has become easier and/or cheaper and is hence viable without external support).

*[… moving to question 19]*

*19. Should enforcement rates of mandatory regulations be considered in the additionality demonstration?*

No, see answer to question 16.

## General Questions on baseline and additionality

*[… moving to question 22]*

*22. How might these elements or options to address them be informed by assessments such as in IPCC and IEA or Food and Agriculture Organization?*

External scientific reports and literature should be used to inform additionality assessments and baseline setting throughout the process, but are **particularly relevant in the establishment of negative lists** (and positive lists if these are used, though see answer to question 15 as positive lists should be considered with great caution). These external scientific resources should be **used in particular to assess the risk of lock-in that some activity types represent**, and the compatibility of activities with achieving the long-term goals of the Paris Agreement. A negative list of activity types should be based on robust science, such as IPCC reports, in order to exclude technologies and practices that are incompatible with a realistic and safe pathway towards meeting the temperature goals of the Paris Agreement.

*23. How might these elements be informed by host countries standards or policies?*

The SB should ensure that Host countries retain the ability to require activities to comply with additional domestic baseline-setting standards and additionality tests that go beyond the requirements of the 6.4SB. This is not to suggest that Host countries can exempt domestic activities from complying with SB requirements on baseline-setting and additionality in their domestic context – rather, this is to underscore that Host countries should be able to develop more conservative and rigorous standards for domestic activities, acting as an additional layer on top of prerequisite SB requirements. **This will enable, among other things, Host countries to better manage equitable sharing of benefits by setting more conservative baselines that enable the Host country to "keep" some of the mitigation benefits achieved by an activity.**

*[… moving to question 30]*

## Non-permanence and reversals

*30. Where are non-permanence risks in respect of emission reductions?*

**Non-permanence risks are not exclusive to emission removals and also exist for emission reductions.** Several AFOLU crediting methodologies entail a mix of emission reductions and removals, such as improved forest management and REDD+, which of course bear non-permanence risks. In fact, a large majority of credits that involve non-permanence risk on today's market are from emission reduction activities.

**The SB needs to very carefully consider permanence in the elaboration of its methodological requirements and work on removals.** Article 6.4ERs could be used by businesses and countries to offset real emissions that will remain in the atmosphere for centuries. If non-permanent reductions (or removals) that face real reversal risks are permitted under Article 6.4, then this creates a fundamentally unacceptable outcome where erroneous offset/carbon-neutrality claims will be made left and right that will be portrayed as having UNFCCC-backing. **CMW stresses once again that mitigation activities that lead to short-term sequestration of carbon should not be eligible to issue offsets under Article 6.4.** This includes activities such as forest protection, afforestation, reforestation, soil carbon management, improved forest management, etc.

Some projects on today's voluntary carbon market operate without any permanence-risk mitigation measures despite presenting real permanence risks. That is the case for example of many cookstove activities, which often aim to reduce the combustion of biomass. These activities aim to reduce forest degradation/deforestation levels, and bear non-permanence risks since the credited emission reductions entail sequestration in

natural ecosystems that are vulnerable to various reversal risks. The non-permanence risk tied to cookstove projects are typically not accounted for however.[3]

The SB therefore needs to take into account the fact that **non-permanence risk is not unique to removal activities, nor to activities that focus on direct interventions in natural ecosystems**. The SB should request the Secretariat and the related SB working groups to **conduct a comprehensive literature review of the non-permanence risks associated with various project types**. As mentioned in the footnote to the previous paragraph, the Carbon Credit Quality Initiative has already done work on this subject, which can inform the Secretariat's/SB's review.

*31. How are these typically addressed, what are the options?*

Carbon Market Watch has prepared several inputs on the topic of removals that cover this question, such as last year as well as the SBSTA call for inputs that closed on March 15th 2023, which we link here for reference to the SB and Secretariat.

In short, current approaches in carbon markets to address non-permanence risks are not compelling or robust enough to support offsetting claims made on the back of credits with impermanence risks (whether from reduction or removal activities, or a mix). If existing market approaches were adopted by the SB to purportedly address non-permanence, then this would be inappropriate, given that, i) these approaches cannot guarantee permanence on the scale required (i.e. minimum 2-3 centuries), and ii) A6.4ERs can be used to offset real emissions that will cause long-term damage.

As detailed in our recent submission to SBSTA, when it comes to buffer pools, which are currently the most common way to purportedly address impermanence, the contribution rates are not necessarily scientifically robust and can risk leading to undercapitalisation of the pool. Research of California's buffer pool suggests it is heavily undercapitalised.

In addition, for buffer pools to work, one would need to monitor the project area well beyond the end of the crediting period (over 100 years) in order to actually detect any

[3] Cookstove project developers on the voluntary market (Verra and Gold Standard) and on the CDM do not need to contribute to a buffer pool. More generally, for efficient cookstove project types, the CDM, Verra and Gold Standard, do not have "approaches for accounting and compensating for reversals [or] approaches for avoiding or reducing non-permanence risks" (Source: Carbon Credit Quality Initiative (May 2022), "Robustness of carbon crediting program's approaches on addressing non-permanence: CDM efficient cookstoves, GS efficient cookstoves, VCS efficient cookstoves"). The Carbon Credit Quality Initiative – developed by Oeko-Institut, World Wildlife Fund US, and Environmental Defense Fund – considers that cookstove project types "involve a material non-permanence risk" for the reasons cited above.

reversals, which is difficult (if not unrealistic) to guarantee and which also raises real questions of liability: reversals could occur many decades later (the project developer could be out of business), they could be on a huge scale (beyond the ability of a project developer to compensate for even if they're required to do so in principle), they may not be detected (even by national GHG inventories depending on granularity of measurement), and it may not be possible for the SB to legally require proponents to address reversals if they refuse.

These issues raise significant integrity questions regarding the long-term viability of buffer pools to address impermanence of credits used to offset actual emissions.

Temporary crediting under the CDM, as a way of addressing reversals, is an interesting concept since it underlines the temporary nature of the benefit achieved by the mitigation activity. This approach is however largely incompatible with an "offsetting" model, because it is not realistic to expect an entity to continuously replace credits that have been purchased, in perpetuity, and it is even less realistic to expect that any governance system, or external observers, will be able to monitor whether and how expired credits have been replaced. Temporary crediting would hence be a useful asset under a financial contribution model, but are incompatible with the idea of offsetting.

Finally, tonne-year accounting must not be included under Article 6.4 as a method of addressing non-permanence since it creates a false equivalence between temporary carbon storage and (permanent) reductions or removals and is at odds both with the IPCC and the Paris Agreement's long-term temperature goals. Further concerns about tonne-year accounting are raised in our SBSTA submission as well as in the submissions of other stakeholders such as Professor Meinshausen and Mr Broekhoff, Mr Brander and Mr Schneider, WWF, Bellona, IETA, and others.

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