

Clarifications of TAB's Criteria Interpretations Contained in TAB Reports

Version: November 2025

This document consolidates TAB's further interpretations of the CORSIA Emissions Units Eligibility Criteria¹ and associated *Guidelines for Criteria Interpretation*², including specific approaches taken to apply criteria and guidelines during the TAB's assessments, which form the basis of TAB's recommendations to the ICAO Council on eligible emissions units. Where TAB finds it necessary to clarify its interpretations, these clarifications are conveyed in TAB Reports to the ICAO Council and compiled in this document for transparency and ease of access.

The purpose of this document is to complement the information contained in the 1) *ICAO document "CORSIA Emissions Unit Eligibility Criteria"*, and 2) the *Guidelines for Criteria Interpretation*, with a view to helping potential applicants and the public understand how TAB discussed, agreed, interpreted, and applied specific criteria and/or guidelines in its assessments.

Each criterion and any relevant guideline(s) are listed in the order they appear in *Application Form, Appendix A - Supplementary Information* and cited according to the paragraph number in that document. The clarifications by TAB are then ordered and dated according to when they were conveyed to the ICAO Council and cited according to their location in the relevant TAB Report.

Criterion: Clear methodologies and protocols, and their development process; (paragraph 2.1)²

Section 4 in TAB Report - September 2023

- 4.4.3 TAB noted that several emissions unit programmes incorporate activity methodologies, requirements, and/or tools developed under the Clean Development Mechanism (CDM), and/or draw on approaches from the CDM to develop their own distinct programme elements. The degree of reliance varies widely by programme or applicant organization: while some have little or no reference to the CDM in their standards and procedures, others have incorporated some or all CDM methodologies and tools and have used them in some or all their registered activities.
- 4.4.4 TAB recalled the outcomes of the Glasgow Climate Conference (UNFCCC COP 26 / CMP 16 / CMA 3) and subsequent work under the Paris Agreement regarding the transition of CDM activities and methodologies for use in the Article 6.4 mechanism. These outcomes state that CDM activities may continue to apply their current approved CDM methodologies until the earlier of the end of their current crediting periods or 31 December 2025, following which they must apply an approved methodology from the Article 6.4 mechanism.³ CMA3 also requested the Article 6.4 Supervisory Body to, among other things, review existing CDM methodologies, accreditation standards and tools with a view to applying them with revisions, as appropriate, and/or developing similar tools under the new mechanism.⁴ At a future session, the CMP will determine a timeline for the end of

¹ Further information of the CORSIA Emissions Unit Eligibility Criteria can be found in the ICAO document "CORSIA Emissions Unit Eligibility Criteria", available [here](#).

² Guidelines for Criteria Interpretation is available in the Application Form, Appendix A - Supplementary Information: https://www.icao.int/sites/default/files/environmental-protection/CORSIA/Documents/TAB/Programme-Re-application-Form_Appendix_A_Supplementary_Information_2025.pdf

³ UNFCCC Decision 3/CMA.3, Annex para. 73(a).

⁴ UNFCCC Decision 3/CMA.3, para. 5.

the operation of the processes under the CDM and its institutions, with a view to avoiding a gap before the operationalization of the corresponding processes under the Article 6.4 mechanism.⁵

- 4.4.5 TAB discussed the possibility that some emissions unit programmes might continue to rely on CDM programme elements that will no longer be maintained under the UNFCCC process. This could affect those programmes' ability to demonstrate technical consistency with some or all the following criteria: Validation and verification procedures; Carbon offset credits must be quantified, monitored, reported, and verified; Clear methodologies and protocols, and their development process; Additionality; Realistic and credible baselines; and Leakage.
- 4.4.6 Reflecting on this possibility, TAB noted that programmes using CDM elements should (1) periodically monitor formal developments related to any CDM methodologies, processes and institutions, requirements, and/or tools that are incorporated into the programme or referenced in its programme documents, (2) respond to substantive updates, revisions, or other changes to those CDM contents, as appropriate, to maintain the programme's coherence and effectiveness, and (3) publicly report any actions or decisions taken thereon. TAB also noted that programmes that rely on CDM methodologies, processes and institutions, requirements, and/or tools should have procedures in place on items (1) to (3) above prior to becoming eligible to generate emissions units for the CORSIA first phase (2024-2026 compliance period).

Criterion: Offset Credit Issuance and Retirement Procedures

Section 4.4.3 in TAB Report – August 2025

- 4.4.3.1 TAB recalled that the 220th session of the ICAO Council (June 2020) approved the CORSIA *Eligible Emissions Unit Programme Registry Attestation*, along with procedures for its use, to facilitate aeroplane operators' implementation of the SARPs contained in Annex 16, Volume IV for the cancellation of CORSIA eligible emissions units and reporting thereon. Those procedures include periodic review by TAB of the status of each programme's registry in relation to the requirements contained in the Registry Attestation, based on a form submitted by each programme to describe how its registry fulfils the requirements of the Attestation. The programme must submit this form, along with an Attestation signed by the programme and the programme registry's administrator(s), in the programme's response to a call for applications. These materials must be updated and resubmitted as necessary to maintain up-to-date information.
- 4.4.3.2 TAB undertakes these Registry Attestation reviews in conjunction with its assessment of new applications or reapplications, which also involves assessing the programme registry's functionalities and registry-related programme procedures and governance arrangements for consistency with registry-related criteria⁶. In its 2025 reassessment, TAB found that several emissions units programmes were in the process of, or were considering, updating their registry

⁵ UNFCCC Decision 2/CMP.17, paras. 6 and 13.

⁶ TAB has previously assessed the consistency of programme registry procedures, functionalities, and arrangements, for consistency with the following criteria and their guidelines for interpretation: Offset Credit Issuance and Retirement Procedures (all guidelines); Identification and Tracking (all guidelines); Legal Nature and Transfer of Units; Programme Governance (including the guideline *Programme longevity*); Transparency and Public Participation Provisions; Avoidance of Double Counting, Issuance and Claiming; Carbon offset credits must be quantified, monitored, reported, and verified (including the guideline *Identification of units issued ex ante*); Carbon offset credits must have a clear and transparent chain of custody within the offset programme; Permanence (including guidelines for *Extent of compensation provisions*, *Reversal notification and liability*, and *Replacement unit eligibility*); and Are only counted once towards a mitigation obligation (all guidelines).

systems or administrative arrangements for the registry to fulfil all the requirements in the Attestation.

- 4.4.3.3 In light of those pending updates, TAB wishes to note its common finding of inconsistencies with the Attestation requirements and/or with the registries-related EUC. This was notably the case for registry data / fields and downloadable cancellation report formats that, in their current form, would not support aeroplane operators to fully implement the CORSIA SARPs for emissions unit cancellations and reports (EUCRs) and their verification. TAB observed that some registries provide for operators to reflect some of the information required in Volume 16, Annex IV, Table A5-7, in an open text field. This meets the letter of the requirements but requires operators to hand-code some EUCR data, posing an integrity risk to this data when it is aggregated at a global scale in the CORSIA Central Registry (CCR).
- 4.4.3.4 For this reason, the requested further actions arising from the 2025 reassessment include, *inter alia*, addressing the most common missing registry data / fields (preferably in a column-separated, downloadable format): (a) the CORSIA compliance periods for which emissions units are eligible, (b) the start date of the activity's first crediting period, and (c) the unique identifier of the registry account where the emissions units were cancelled for compliance; also, optionally, (d) the unique identifier of the registry account where the emissions units cancellation was initiated. TAB observed that the account identifier in (d) may be relevant to regulatory systems wherein compliance is demonstrated by transferring a unit to a regulator-administered registry account, where it is surrendered and effectively cancelled; (d) may be less relevant to independent registry systems where emissions units are commonly cancelled in a single account that also performs a range of other functions. Thus, TAB understands that, depending on the registry, only one identifier may be necessary and relevant, such that "(d)" is optional. TAB also wishes to note that the unique identifiers for registry accounts are not required to be publicly disclosed.
- 4.4.3.5 These TAB discussions and recommendations are intended to confirm market readiness for supporting CORSIA's first phase requirements. A CORSIA Eligible Emissions Unit Programme registry can provide registry services to aeroplane operators prior to the programme and programme registry administrators' demonstration of the registry's consistency with the Attestation requirements. However, the programme registry can only facilitate and identify emissions unit cancellations specifically for CORSIA use and support any related reporting and verification activities and promote itself as being capable of providing registry services for those purposes *after* the programme demonstrates the programme's and programme registry's consistency with the requirements in the Registry Attestation and (b) the signed attestation is published on the CORSIA website and (c) the programme registry is identified in the ICAO document "CORSIA Eligible Emissions Units".

Criterion: Identification and Tracking (paragraph 2.4, including 2.4.6)²

Section 4.3.3 in TAB Report - October 2020

- 4.3.3.6 Under the Governance criterion's guideline for Programme administrator and staff conflicts of interest, TAB identified that some programmes are staffed by government officials and employees who are subject to domestic laws and regulations governing conflicts of interest—but these laws or regulations are not explicitly attributed or specific to the programme itself (*i.e.* "Programme... procedures"). In such cases, TAB confirmed and assessed programmes according to the expectation that, if a programme is and will continue to be exclusively staffed by individuals who are subject to public service laws prohibiting conflicts of interests, the laws are assessed as if they are "programme procedures". The same approach was taken to the guidelines for Registry

administrator conflicts of interest where a programme registry is administered solely by public servants.

Section 4.3.4 in TAB Report - October 2020

4.3.4.1 Under this criterion, several requirements pertain to programme registry linkages and data exchange standards. Here, TAB identified that few programme registry systems are technically linked to any other registry (ies) or equivalent tracking systems that are relevant to the programme or its CORSIA eligibility. Some requirements under this criterion are only applicable to programmes that have such registry linkages. Where no relevant registry linkages are present, and unless a programme is found to have demonstrated consistency with the related requirements in any case, TAB confirmed and assessed programmes with understanding that the following requirements are not applicable to the programme:

- For the programme to stipulate (and disclose) to which, if any, other registries it is linked;
- For the programme to stipulate (and disclose) whether and which international data exchange standards the registry conforms with.

Section 4.4 in TAB Report – January 2024

4.4.3 The criterion Identification and Tracking and its Guideline on *Unit identification* require that programme registries “be capable of transparently identifying emissions units that are deemed ICAO- eligible, in all account types.” In this context, section 7.3 of the Emissions Unit Programme Registry Attestation requires that each programme registry “identify / label its CORSIA eligible emissions *units* as defined in the ICAO Document ‘CORSIA Eligible Emissions Units.’” (*Emphasis added*)⁷

4.4.4 TAB recalled its January 2023 Report to Council, which recommended different Scopes of Eligibility for the pilot phase (2021-2023 compliance period) versus the first phase (2024-2026 compliance period). This distinction was necessary to operationalize new *Criteria interpretations* recommended by TAB in its September 2022 Report, reflecting its considerations of the outcomes of the Glasgow Climate Conference (COP26) related to Article 6 of the Paris Agreement, as requested by the 225th Council. To operationalize the distinction in practice, the ICAO document was divided into two parts: Part I (pilot phase) and Part II (first phase).

4.4.5 At TAB/16, TAB members discussed the progress of emissions unit programmes in improving their labelling practices in reaction to the CORSIA EUC, Guidelines and Registry Attestation. In comparing existing practices to the CORSIA requirements, TAB noted that programme-designated registry labels or categories used to identify CORSIA-eligible emissions units should:

- (a) Be applied at the emissions unit level (*i.e.*, not, or not only, at the activity level);
- (b) Clearly distinguish CORSIA-eligible units from those that are not CORSIA-eligible, as well as the applicable Eligibility Timeframe(s), *i.e.*, the CORSIA compliance period(s) for which each unit is eligible; and,
- (c) Be consistent with the programme-specific section of the ICAO Document CORSIA Eligible Emissions Units for the relevant CORSIA compliance period.

4.4.6 For units generated in respect of mitigation that occurred from 2021 onward, TAB noted that the possible eventual eligibility of these units is contingent on authorization and attestation by the host

⁷ C-DEC 220/5 (June 2020).

country of its intent not to double-claim. In the meantime, several emissions unit programmes have developed separate labels (*e.g.*, forecasted, pending, *etc.*) to identify emissions units that are otherwise within the programme's Scope of Eligibility and thus *could* become CORSIA-eligible *if* they were to obtain attestation/authorization. Further, at least one emissions unit programme intends to separately label units that are "authorized for international mitigation purposes" under Article 6 of the Paris Agreement, even though CORSIA is currently the only existing "international mitigation purpose" within the meaning of the Article 6.2 Guidance. TAB members discussed the risk of CORSIA-adjacent labels causing confusion, while also acknowledging that the nomenclatures of such labels are tangential to TAB's core mandate.

- 4.4.7 Reflecting on these considerations, TAB noted that any programme-designated registry labels, categories, or other information intended to identify such emissions units:
- (a) must not characterize any emissions unit or activity as "CORSIA-eligible" unless all eligibility conditions are met, including host country attestations in the case of post-2020 unit vintages;
 - (b) must clearly and transparently disclose the further condition(s) that must be satisfied for the registry to designate these as fully CORSIA-eligible, and do so fully, prominently, and within visible proximity of the emissions units' registry listing.

Criterion: Governance (*paragraph 2.7, including 2.7.2, 2.7.3*)²

Section 4.3.3 in TAB Report - October 2020

- 4.3.3.1 Under the Governance criterion's guideline for Programme longevity requiring a programme to be "continuously governed and operational for at least the last two years", TAB identified the need for a clear minimum indicator that a programme is "operational". In light of the experience from its first assessment cycle, TAB confirmed and assessed programmes according to these expectations:
- 4.3.3.2 The programme must provide evidence that methodologies are in place and available for use (*i.e.* finalized rather than draft form), as the minimum indicator of "operational".
- 4.3.3.3 Such methodologies are not expected to have been in place and available for use for at least the last two years.
- 4.3.3.4 A programme is expected to have been continuously governed for at least the last two years.
- 4.3.3.5 TAB also gave further consideration to the same guideline for Programme longevity, in respect of the expectation for programmes to have "...a plan for... possible responses to the dissolution of the programme in its current form". TAB noted the importance of assessing programmes administered by for-profit or non-governmental organizations to confirm that such plans are indeed in place and reflect consideration of how the programme will discharge its responsibilities, obligations, and relevant programme and private assets under such a scenario. TAB acknowledged, however, that government agency-administered programmes—particularly those administered by sovereign national governments—are likely to have sufficient resources and public obligations to judiciously manage eventualities of this kind. Thus, TAB confirmed that the guideline's sub-requirement for programmes to have "a plan for... possible responses to the dissolution of the programme in its current form" is not applicable to government agency-administered programmes, particularly those administered by sovereign national governments.
- 4.3.3.6 Under the Governance criterion's guideline for Programme administrator and staff conflicts of interest, TAB identified that some programmes are staffed by government officials and employees who are subject to domestic laws and regulations governing conflicts of interest—but these laws or

regulations are not explicitly attributed or specific to the programme itself (i.e. “Programme... procedures”). In such cases, TAB confirmed and assessed programmes according to the expectation that, if a programme is and will continue to be exclusively staffed by individuals who are subject to public service laws prohibiting conflicts of interests, the laws are assessed as if they are “programme procedures”. The same approach was taken to the guidelines for Registry administrator conflicts of interest where a programme registry is administered solely by public servants.

Section 4.4.2 in TAB Report – August 2025

- 4.4.2.1 TAB has observed that some programmes are increasingly drawing on the expertise of third-party experts (for example, independent consultants, expert bodies or panels) to undertake technical reviews of methodologies, methodological tools, or activities, and to inform or recommend programme decisions thereon. TAB notes that programme administrators or programme staff are often assumed to be chiefly responsible for these functions. Criteria such as Must be Additional clearly confer responsibility to the programme to review and approve such programme elements; this responsibility is safeguarded by elements under the Programme Governance criterion that addresses conflicts of interest for individuals directly employed by or governing a programme. Given that the third-parties described above are performing functions that the EUC expect to be performed “by the programme”, TAB considers it critical that such expertise is underpinned by the same safeguards against partiality or bias that are provided for through conflict of interest provisions that apply to programme staff, administrators, and board members who presently perform similar functions or did so in the past.
- 4.4.2.2 TAB also acknowledged the carbon markets’ seemingly growing reliance on emissions unit certification programmes to reinforce their certifications with programme-level commitments or guarantees of unit quality or availability. These include, for example, programme commitments to directly purchase and cancel emissions units in instances of credit risk pool insufficiency, or to accommodate increasingly long-term monitoring commitments for issued removals credits from some activity types. TAB acknowledged that the professional liability insurance coverage of at least USD\$5M referred to in this criterion’s Liability Coverage guideline may merit re-evaluation—in particular, analysis that reflects on these expanded obligations or commitments.

Criterion: Safeguards System (paragraph 2.9)²

Section 6 in TAB Report - September 2022

- 6.5.1 TAB noted that there are linkages between the Article 6.2 Guidance⁸ and the criteria Safeguards System, Sustainable development criteria and Do no net harm. These criteria state, among other things, that programmes should have in place and publicly disclose safeguards to address environmental and social risks, sustainable development criteria used and any provisions for monitoring, reporting and verification; not violate any applicable laws or regulations; and publicly disclose which institutions, processes and procedures are used to implement, monitor and enforce such safeguards.
- 6.5.2 The Article 6.2 Guidance requires countries to “[d]escribe how each cooperative approach will ... minimize and, where possible, avoid negative environmental impacts; reflect the eleventh

⁸ Decision 2/CMA.3, Annex, paras. 18(h)(ii) and 22(b)(ii)

preambular paragraph of the Paris Agreement (e.g., various rights, Indigenous peoples, people in vulnerable situations, gender equality, etc.); [b]e consistent with the sustainable development objectives of the Party, noting national prerogatives; and apply any safeguards and limits...”⁹ The Article 6.4 RMP also include various references safeguards, tools, requirements, processes and actions relating to these matters, many of which will require further development and implementation by the Supervisory Body in the years to come (see Section 6.3.7 of TAB report September 2022).

- 6.5.3 TAB noted that the novel language in the Article 6 outcomes on these matters is of similar stringency to the EUC; it could be interpreted as more stringent in some areas and less stringent in other areas. TAB also noted that some emissions unit programmes already have detailed procedures in place relating to these matters, which have been assessed by the TAB to meet or exceed the EUC, and some programmes are also considering possible updates in light of the COP26 outcomes. TAB resolved to continue to apply the EUC in the manner described in its Criteria interpretations, to further clarify these interpretations where appropriate, and to monitor these ongoing developments, including in the Article 6 context.

Section 4.4 in TAB Report – August 2025

Matters relating to engineered carbon dioxide removal

- 4.4.6.1 TAB recalled its discussion in its September 2024 report to Council regarding novel carbon dioxide removal (CDR) technologies, including inter alia biochar, direct air capture with carbon capture and storage (DACCS), bioenergy with carbon capture and storage (BECCS), enhanced weathering (EW), ‘blue carbon management’¹⁰, ocean fertilization and ocean alkalinity enhancement (OAE).
- 4.4.6.2 In this context, TAB recalled the Intergovernmental Panel on Climate Change (IPCC) (2023), which notes that “the deployment of CDR to counterbalance hard-to-abate residual emissions is unavoidable if net zero CO₂ or GHG emissions are to be achieved.” The report also acknowledges that “[e]nablers of CDR include accelerated research, development and demonstration, improved tools for risk assessment and management, targeted incentives and development of agreed methods for measurement, reporting and verification of carbon flows.”¹¹
- 4.4.6.3 TAB discussed the current assessment of technology readiness levels (TRL) of the different CDR techniques in the IPCC Sixth Assessment Report, including as summarized in a July 2025 concept note by the UNFCCC Secretariat for the Supervisory Body of the Paris Agreement Crediting Mechanism,¹² which found that CDR methods with high TRL are appropriate for commercial-scale activities; those with medium TRL are appropriate for pilot and demonstration activities; and those with low TRL are appropriate only for scientific research and development purposes.
- 4.4.6.4 In its 2025 Assessment Cycle, TAB took into consideration these various inputs, alongside information provided by the relevant programmes¹³, in its deliberations on the criteria Safeguards system, Do no net harm, and Carbon offset credits must be quantified, monitored, reported, and

⁹ Decision 2/CMA.3, Annex, paras. 18(i)(i–iv) and 22(f–i)

¹⁰ This is distinct from peatland and coastal wetland restoration, which is already widely practiced.

¹¹ IPCC AR6 WGIII SPM para C.11 first sentence and C.11.1, first sentence.

¹² UNFCCC. “Development of additional criteria for safeguards and guiding questions for carbon dioxide removal activities and land use, land-use change and forestry for the Article 6.4 sustainable development tool” Concept note no. A6.4-SBM017-AA-A05 (21 July 2025). Available at <https://unfccc.int/documents/648824>; page 6.

¹³ Consistent with TAB Procedures for *Assessment Basis and Materials* (paras. 5.4-5.5), noting in particular, “After assessing the information provided by applicants and if/as necessary, TAB may consider additional information collected by TAB members. Such additional information can be gathered from, inter alia, desk research...”.

verified, and Permanence, to inform its recommendations to Council on matters relating to engineered carbon dioxide removal. In this regard, TAB discussed the interactions between programme procedures involving engineered carbon removal activities and ICAO's CORSIA Emissions Unit Criteria and the ways in which programmes would demonstrate consistency with the EUC in respect of these activity types.

- 4.4.6.5 The criterion Do No Net Harm requires that “Offset projects should not violate local, State/provincial, national or international regulations or obligations. Offset programmes should show how they comply with social and environmental safeguards and should publicly disclose which institutions, processes, and procedures are used to implement, monitor, and enforce safeguards to identify, assess and manage environmental and social risks.” The criterion Safeguards System also requires that “Programmes should have in place safeguards to address environmental and social risks. These safeguards should be publicly disclosed.”
- 4.4.6.6 TAB considered the particular necessity of dedicated environmental and social safeguards for some engineered CDR activity types, to manage risks relating to, *inter alia*, air and water pollution; chemical contamination in water, soils/sediments and organisms; biodiversity and ecosystems; pH, oxygen and nutrient concentrations; energy and water use; and other risks, depending on the specific activity type.¹⁴ TAB acknowledged the interrelationships between environmental and social risks, including in the areas of human health and food and water security.
- 4.4.6.7 TAB noted the importance of legal and regulatory systems to govern engineered CDR activity types—particularly those that involving to infrastructure—and that such systems are in a state of continuous improvement, with different levels of regulatory maturity depending on the activity type and jurisdiction.¹⁵ For example, a few jurisdictions¹⁶ have regulatory frameworks for activities involving geological carbon sequestration, which address all 16 elements of the ICAO Regulatory Scheme CORSIA Eligibility Requirements for Geological CCS Projects¹⁷, supported by established processes for permitting, oversight and monitoring by the competent authority(ies). In some other jurisdictions, no relevant regulations (or regulators) are in place, or regulations are pending legal approval or do not address all those elements. TAB also noted that, with few exceptions, those engineered CDR activities undertaken to date have exhibited a preference for implementation in jurisdictions with more mature regulatory frameworks.
- 4.4.6.8 In TAB's assessment of programme procedures and methods involving marine geoengineering activities, including ocean alkalinity enhancement and biomass cultivation for carbon removal, TAB noted the 2023 statement issued by the governing bodies the London Convention and London Protocol (LCLP), which endorsed scientific recommendations that “such activities other than legitimate scientific research should be deferred.”¹⁸ In the case of legitimate scientific research, the LCLP assessment framework states that “economic interests should not influence the design, conduct and/or outcomes” of such activities and there should be no “financial and/or economic gain arising directly from the experiment or its outcomes.”¹⁹ TAB recalled that these CDR techniques

¹⁴ IPCC AR6 WGIII TS, table TS.7; IPCC AR6 WG1, Figure 5.3.6.

¹⁵ Stephen M. Smith *et al.* (eds.), *The State of Carbon Dioxide Removal 2024*, 2nd edition, Table 10.4 (page 202). Available at <https://www.stateofcdr.org>

¹⁶ Recent analysis for the Committee on Aviation and Environment Protection Fuels Task Group indicates that the following jurisdictions have carbon capture and geological storage regulatory schemes containing the necessary elements: Australia (federal), the province of Alberta in Canada, the European Union, the United Kingdom, and the United States.

¹⁷ ICAO document “CORSIA methodology for calculating actual life cycle emission values”, section 11.1

¹⁸ International Maritime Organization. London Convention. “Statement on Marine Geoengineering.” IMO document LC/17, Annex 4. Adopted October 6, 2023.

¹⁹ International Maritime Organization. London Convention. Assessment Framework for Scientific Research involving Ocean Fertilization. Adopted October 14, 2020. IMO document LC 32/15, Annex 6. Available at <https://docs.imo.org/Shared/Download.aspx?did=63987> (Registration required.)

are currently at a low technology readiness level (see section 4.3 above) and observed that, while the LCLP technically only apply to dumping at sea (e.g., from ships, aircraft, or platforms), its considerations are also relevant to installations on land that introduce sequestered carbon and other engineered materials into surface waters and unconfined aquifers.

- 4.4.6.9 Reflecting on these considerations, TAB noted that programmes incorporating engineered CDR activity types should have in place and publicly disclose safeguards to address environmental and social risks, in line with the EUC, with full consideration of the technology readiness level of each CDR activity type and of the existing or emerging laws and regulations on CDR. In line with the EUC, the presence of regulatory frameworks governing these activities / types also does not exempt programmes from requiring such activities to establish all necessary safeguards. Rather, programmes' safeguarding provisions should facilitate the identification, minimization, monitoring of, and reporting on environmental and social risks to ensure that CORSIA eligible emissions units are generated via activities that do no net harm. TAB also noted that some engineered removal and/or geological storage activities involve infrastructure, interventions, or diffuse impacts (for example, deep well drilling or repurposing, pipeline transportation, projects involving "open systems"); here, safeguards administered by an emissions unit programme are an insufficient substitute for regulatory frameworks consistent with the ICAO Regulatory Scheme CORSIA Eligibility Requirements for Geological CCS Projects.
- 4.4.6.10 TAB also noted that engineered removal activities storing carbon in a water column or via the modification of oceans physico-chemical conditions would need sophisticated social and environmental safeguards that properly capture the risks and uncertainties of the activity, in particular in relation to the expected or potential impacts in the natural environment (e.g. air, soils, water). Taking into account the findings of the LPLC and the IPCC regarding uncertain environmental risks and low technology readiness levels (see above), TAB considered that any safeguards systems currently in use by programmes under assessment would be insufficient to demonstrate consistency with the criteria Do No Net Harm and Safeguards System were they to be applied to these activity types at this time.

Criterion: Sustainable Development Criteria (paragraph 2.10)²

Section 4.3.4 in TAB Report - January 2020

- 4.3.4.1 In regard to the public disclosure of Sustainable Development criteria used, TAB's interpretation of the EUC criterion, which it applied, is that the programme should clearly point to, or list, the criteria they use (e.g. alignment with SDGs), in line with the interpretation already applied by PTG. This includes that such use should not only be applied on a voluntary basis by activities that wish to supply emissions units to CORSIA, though this does not have to be required by the programme on a programme-wide basis.
- 4.3.4.2 Some of the programmes recommended as eligible do not define the Sustainable Development criteria at the programme level, but rather encourage such reporting or rely on the host country priorities on sustainable development (CDM). In most of these cases, further actions were recommended to update programme procedures, as reflected in the recommendations in Section 4.2.

Section 6 in TAB Report - September 2022

- 6.5.1 TAB noted that there are linkages between the Article 6.2 Guidance and the criteria Safeguards System, Sustainable development criteria and Do no net harm. These criteria state, among other

things, that programmes should have in place and publicly disclose safeguards to address environmental and social risks, sustainable development criteria used and any provisions for monitoring, reporting and verification; not violate any applicable laws or regulations; and publicly disclose which institutions, processes and procedures are used to implement, monitor and enforce such safeguards.

- 6.5.2 The Article 6.2 Guidance requires countries to “[d]escribe how each cooperative approach will ... minimize and, where possible, avoid negative environmental impacts; reflect the eleventh preambular paragraph of the Paris Agreement (e.g., various rights, Indigenous peoples, people in vulnerable situations, gender equality, etc.); [b]e consistent with the sustainable development objectives of the Party, noting national prerogatives; and apply any safeguards and limits...” The Article 6.4 RMP also include various references safeguards, tools, requirements, processes and actions relating to these matters, many of which will require further development and implementation by the Supervisory Body in the years to come (see Section 6.3.7).
- 6.5.3 TAB noted that the novel language in the Article 6 outcomes on these matters is of similar stringency to the EUC; it could be interpreted as more stringent in some areas and less stringent in other areas. TAB also noted that some emissions unit programmes already have detailed procedures in place relating to these matters, which have been assessed by the TAB to meet or exceed the EUC, and some programmes are also considering possible updates in light of the COP26 outcomes. TAB resolved to continue to apply the EUC in the manner described in its Criteria interpretations, to further clarify these interpretations where appropriate, and to monitor these ongoing developments, including in the Article 6 context.

Criterion: Avoidance of Double Counting, Issuance and Claiming (paragraph 2.11)²

Section 4.3 in TAB Report - October 2020

- 4.3.6.1 TAB interpreted and applied this criterion to assess whether a Programme “*provide[s] information on how*” it addresses double-counting, -issuance, -claiming, with a focus on the transparency of these procedures. TAB assessed the substantive contents of these procedures under the more elaborated contents and guidelines of the criterion Are only counted once towards a mitigation obligation.

Criterion: Carbon offset programmes must generate units that represent emissions reductions, avoidance, or removals that are additional (paragraphs 3.1, including 3.1.2)²

Section 4.3.3 in TAB Report - January 2020

- 4.3.3.1 The EUC require that “Carbon offset programmes must generate units that represent emissions reductions, avoidance, or removals that are additional”, including that they “exceed any greenhouse gas reduction or removals required by law, regulation, or legally binding mandate.” This is sometimes referred to as regulatory additionality.
- 4.3.3.2 In its assessment, TAB found that some programmes have procedures in place that demonstrate this criterion. TAB further noted that some other programmes only partially demonstrate consistency with the criterion’s reference to this concept; for example, by waiving the requirement in circumstances where environmental laws and regulations are not widely observed and/or enforced.

- 4.3.3.3 TAB discussed that the latter approach is common to programmes modelled after the Clean Development Mechanism, which provides accounting for and crediting of “regulatory surplus”. This is particularly applied in geographic contexts where enforcement levels are low for a variety of reasons.
- 4.3.3.4 TAB agreed that, given that the EUC were only finalized in 2019, programmes and their stakeholders would benefit from more time to familiarize themselves with the criterion and its implications. Thus, TAB agreed that such programmes should nevertheless be deemed eligible during the pilot phase, in order to allow time for these further considerations, as applicable.

Section 4.3 in TAB Report - October 2020

- 4.3.7.1 In applying this criterion, TAB noted that programmes that support jurisdiction-scale emissions reductions activities typically do not utilize traditional, project-based “tests” to assess the additionality of given activities. In such cases, TAB assessed their consistency with this criterion based on the use of these project-level additionality tests only in cases where the programme itself described and substantiated its procedures as equivalent to a performance benchmark approach. In most cases, requirements pertaining to these tests were assessed as “not applicable” to the programme. Instead, TAB assessed such programmes according to the alternative guideline for assessing programmes’ “Non-traditional or new analyses/tests”.

Section 6 in TAB Report - September 2022

- 6.5.8 TAB noted that there are linkages between the Article 6.2 Guidance and the criterion Carbon offset programmes must generate units that represent emissions reductions, avoidance or removals that are additional, including the requirement that eligible emissions units must “exceed GHG reduction or removals required by law, regulation, or legally binding mandate.” This is referred to as ‘legal additionality’ or ‘regulatory additionality’.
- 6.5.9 In first Report to Council (January 2020), TAB found that some programmes have procedures in place that demonstrate consistency with this criterion. TAB further noted that some other programmes only partially demonstrate consistency with the criterion’s reference to this concept. TAB discussed that the latter approach is common to programmes modelled after the Clean Development Mechanism, which provides accounting for and crediting of “regulatory surplus” – e.g., where there mitigation is required by a law or regulation that is relatively new and/or systematically unenforced. TAB agreed that, given that the EUC were only finalized in 2019, programmes and their stakeholders would benefit from more time to familiarize themselves with this criterion and its implications. TAB recommended that such programmes should therefore be deemed eligible during the pilot phase, in order to allow time for these further considerations, as applicable.²⁰
- 6.5.10 The Article 6.2 Guidance requires countries to “[d]escribe how each cooperative approach in which they participate ensures environmental integrity, including ... baselines set in a conservative way ... (including by taking into account all existing policies...).”²¹ In this context, the Article 6.4 RMP require new activities to apply new methodologies that demonstrate additionality “representing mitigation that exceeds any mitigation that is required by law or regulation.”²² However, the RMP also allow ongoing CDM activities that transition to the Article 6.4 mechanism to continue applying

²⁰ Para 4.3.3.4 of first TAB report. TAB Recommendation available at https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/TAB%202020/TAB_JANUARY_2020_REPORT_EXCERPT_SECTION_4.EN.pdf

²¹ Decision 2/CMA.3, Annex, paras. 18(h)(ii) and 22(b)(ii). Omitted text is discussed in section 6.5.14 below.

²² Decision 3/CMA.3, Annex, para. 38.

their current CDM methodologies “until the earlier of the end of its current crediting period or 31 December 2025.”²³

- 6.5.11 TAB noted that programmes and their stakeholders have now had more than three years to familiarize themselves with EUC (March 2019), including the criterion that requires procedures for ensuring legal additionality. TAB further noted that neither the Article 6.2 Guidance nor the Article 6.4 RMP provide a basis to extend the temporary exemption from the EUC described in section 6.5.8 (TAB Report September 2022).
- 6.5.12 In light of these considerations, TAB will fully apply the EUC relating to legal additionality for Eligible Emissions Units beyond the pilot phase (2021-2023), including in its ongoing re-assessment of CORSIA eligible emissions unit programmes that will inform TAB’s recommendations to the 228th ICAO Council.

Section 4 in TAB Report - September 2023

- 4.4.3 TAB noted that several emissions unit programmes incorporate activity methodologies, requirements, and/or tools developed under the Clean Development Mechanism (CDM), and/or draw on approaches from the CDM to develop their own distinct programme elements. The degree of reliance varies widely by programme or applicant organization: while some have little or no reference to the CDM in their standards and procedures, others have incorporated some or all CDM methodologies and tools and have used them in some or all their registered activities.
- 4.4.4. TAB recalled the outcomes of the Glasgow Climate Conference (UNFCCC COP 26 / CMP 16 / CMA 3) and subsequent work under the Paris Agreement regarding the transition of CDM activities and methodologies for use in the Article 6.4 mechanism. These outcomes state that CDM activities may continue to apply their current approved CDM methodologies until the earlier of the end of their current crediting periods or 31 December 2025, following which they must apply an approved methodology from the Article 6.4 mechanism.²⁴ CMA 3 also requested the Article 6.4 Supervisory Body to, among other things, review existing CDM methodologies, accreditation standards and tools with a view to applying them with revisions, as appropriate, and/or developing similar tools under the new mechanism.²⁵ At a future session, the CMP will determine a timeline for the end of the operation of the processes under the CDM and its institutions, with a view to avoiding a gap before the operationalization of the corresponding processes under the Article 6.4 mechanism.²⁶
- 4.4.5 TAB discussed the possibility that some emissions unit programmes might continue to rely on CDM programme elements that will no longer be maintained under the UNFCCC process. This could affect those programmes’ ability to demonstrate technical consistency with some or all the following criteria: Validation and verification procedures; Carbon offset credits must be quantified, monitored, reported, and verified; Clear methodologies and protocols, and their development process; Additionality; Realistic and credible baselines; and Leakage.
- 4.4.6 Reflecting on this possibility, TAB noted that programmes using CDM elements should (1) periodically monitor formal developments related to any CDM methodologies, processes and institutions, requirements, and/or tools that are incorporated into the programme or referenced in its programme documents, (2) respond to substantive updates, revisions, or other changes to those CDM contents, as appropriate, to maintain the programme's coherence and effectiveness, and (3) publicly report any actions or decisions taken thereon. TAB also noted that programmes that rely on CDM methodologies, processes and institutions, requirements, and/or tools should have

²³ Decision 3/CMA.3, Annex, para. 73(d)

²⁴ UNFCCC Decision 3/CMA.3, Annex para. 73(a).

²⁵ UNFCCC Decision 3/CMA.3, para. 5.

²⁶ UNFCCC Decision 2/CMP.17, paras. 6 and 13.

procedures in place on items (1) to (3) above prior to becoming eligible to generate emissions units for the CORSIA first phase (2024-2026 compliance period).

Section 4 in TAB Report - August 2024

- 4.4.4.1 The criterion Additionality requires, among other things, that CORSIA eligible emissions units represent GHG mitigation “that exceed[s] any greenhouse gas reductions or removals that would otherwise occur in a conservative, business-as-usual scenario”. To that end, it requires programmes to have procedures in place that “provide reasonable assurance that the emissions reductions would not have occurred in the absence of the offset programme.”
- 4.4.4.2 A related criterion Realistic and credible baselines requires, among other things, that “methods of developing baselines, including modeling, benchmarking or the use of historical data, use assumptions, methodologies, and values that do not over-estimate mitigation from an activity.” A baseline is the emissions level against which quantities of emissions reductions or removals are calculated. In March 2024, Council adopted a new EUC Guideline requiring that baselines be set “below business-as-usual”, in line with recent rules and guidance under Article 6 of the Paris Agreement.²⁷
- 4.4.4.3 TAB recalled that concerns have been long raised about some methodologies, tools and approaches for quantifying emissions units from renewable electricity generation, particularly relating to the criteria Additionality and Realistic and credible baselines. For example, there have been questions about assumptions used for baseline grid emissions factors, investment rates of return, the role of complementary policy incentives and defining common practice in this rapidly evolving sector. Concerns about the use of grid emissions factors in baseline-setting also relate to the risk of emissions Leakage, for example, when these activities take place in contexts of increasing energy demand. TAB noted that these concerns affect some, but not all, emissions units issued for renewable electricity generation. Several programmes have taken steps in light of these concerns: some have improved their tools and methodologies, others have limited their use to certain applications, and some have exited the electricity sector entirely. A few programmes continue to use tools and methodologies that are similar to, or even less conservative than, conventional approaches.
- 4.4.4.4 In this context, TAB recalled that the Conference of Parties serving as the Meeting of the Parties to the Paris Agreement (CMA) has requested the Article 6.4 Supervisory Body to, among other things, review existing Clean Development Mechanism (CDM) methodologies and tools with a view to applying them with revisions, as appropriate, and/or developing similar tools under the new Article 6.4 mechanism.²⁸ Renewable electricity activities using existing CDM tools and methodologies may continue to do so, with approval from the host country, “until the earlier of the end of its current crediting period or 31 December 2025.”²⁹ TAB noted that this ongoing review covers CDM tools and methodologies that other emissions unit programmes have incorporated or adapted, including for activities in the electricity sector.
- 4.4.4.5 In accordance with section 7.9 of its Procedures, TAB follows “a prudent, conservative, and risk-averse approach to evaluation, given that all decisions will be marked by some degree of uncertainty, in order to recommend for use units from emissions unit programmes that meet the

²⁷ For further discussion on “below business as usual”, see section 6.5.13 to 6.5.17 of TAB’s September 2022 Report to Council and section 4.4.3 to 4.4.6 of TAB’s January 2023 Report to Council.

²⁸ UNFCCC Decision 3/CMA.3, para. 5

²⁹ UNFCCC Decision 3/CMA.3, Annex, para. 73(d)

EUC with a very high degree of confidence.” While acknowledging that the scale of an activity is not necessarily a proxy for integrity, in order to limit the risk to the CORSIA scheme, TAB recommends in this report that, for the time being, only small-scale activities involving grid-connected renewable electricity generation/supply should be eligible during CORSIA’s first phase (2024-2026 compliance period).

- 4.4.4.6 Mindful of these considerations, TAB resolved to continue to monitor ongoing developments on this matter, including in the Article 6 context, with the aim of providing further recommendations on programmes supporting these activity types in the course of its near-term assessments, and to take these developments into account during its 2025 re-assessment cycle, which will inform its recommendations to Council on eligible emissions units during the 2027-2029 compliance period

Criterion: Carbon offset credits must be based on a realistic and credible baseline (paragraph 3.2)²

Section 6 in TAB Report - September 2022

- 6.5.13 TAB noted that there are linkages between the Article 6.2 Guidance and the criterion Carbon offset credits must be based on a realistic and credible baseline, which states, among other things, that “[t]he baseline is the level of emissions that would have occurred assuming a conservative ‘business as usual’ emissions trajectory...”³⁰
- 6.5.14 The Article 6.2 Guidance requires countries to “[d]escribe how each cooperative approach in which they participate ensures environmental integrity, including: [t]hat there is no net increase in global emissions within and between NDC implementation periods... through conservative reference levels, baselines set in a conservative way and below ‘business as usual’ emission projections...”³¹ The Article 6.4 RMP also makes reference to “below ‘business as usual’” for new methodologies and requires that these methodologies “recognize suppressed demand”.³²
- 6.5.15 Methodologies that recognize suppressed demand, including some methodologies in use in CORSIA eligible emissions units programmes, typically set baselines slightly above a conservative ‘business as usual’ projection in contexts where emissions are historically low due to underdevelopment, e.g., by using optimistic growth assumptions and/or ‘minimum service levels’ in emissions models. At COP27 (November 2022), Parties to the Paris Agreement will consider recommendations relating to the Article 6.2 guidance on the special circumstances of least developed countries and small island developing states; these may or may not provide further clarity on how to interpret the new baseline provisions in contexts of suppressed demand.
- 6.5.16 TAB noted that the novel language on baselines in the Article 6 outcomes (e.g., “below business as usual”) is of a similar stringency to the EUC (e.g., “conservative business as usual”). TAB also noted that the Article 6 language could also be interpreted as more stringent than the EUC, or perhaps less stringent in contexts of suppressed demand.
- 6.5.17 In light of the considerations described in in this section, TAB resolved to continue to apply the EUC in the manner described in its Criteria interpretations, to further clarify these interpretations where appropriate, and to monitor ongoing developments, including in the Article 6 context. In this regard, in respect of procedures for baseline emissions estimations involving business-as-usual emissions, TAB will interpret this criterion’s reference to “conservative” to mean that procedures should provide for baselines that are set “in a conservative way and below the business-as-usual

³⁰ Decision 2/CMA.3, Annex, paras. 18(h)(ii) and 22(b)(ii)

³¹ Decision 2/CMA.3, Annex, paras. 18(h)(i–ii) and 22(b)(i–ii)

³² Decision 3/CMA.3, Annex, para. 38.

emissions projections”, as referenced in the reporting requirements in the Article 6.2 Guidance.³³ TAB will also continue to monitor developments under Article 6.4 pertaining to the elaboration and / or implementation of the principles for conservative baselines referred to in that decision.³⁴ TAB will apply these interpretations for Eligible Emissions Units *beyond the pilot phase (2021-2023)*, including in its ongoing re-assessment of CORSIA eligible emissions unit programmes that will inform TAB’s recommendations to the 228th ICAO Council.

Section 4 in TAB Report - January 2023

- 4.4.3 This criterion states, among other things, that “[t]he baseline is the level of emissions that would have occurred assuming a conservative ‘business as usual’ emissions trajectory”. An associated Guideline states that programmes should have procedures in place to “ensure that methods of developing baselines... use assumptions, methodologies, and values that do not over-estimate mitigation from an activity.”
- 4.4.4 As part of TAB’s considerations and recommendations relating to Article 6 of the Paris Agreement, section 6.5.17 of TAB’s September 2022 Report states that, in respect of procedures for baseline emissions estimations involving business-as-usual emissions, TAB will interpret this criterion’s reference to “conservative” to mean that procedures should provide for baselines that are set “in a conservative way and below the business-as-usual emissions projections”. In this regard, TAB noted that programmes that use non-traditional methods for baseline-setting should have procedures in place that deliver outcomes equivalent to this interpretation, in order to avoid over-estimating mitigation from an activity, per this criterion’s Guideline on Conservative baseline estimation.
- 4.4.5 In its assessing Emissions Unit Programmes for eligibility toward the first phase (2024-2026 compliance period), TAB noted that some programmes have incorporated the new language ‘below business-as-usual’ from the COP26 outcomes (December 2021) into their procedures, while others have not. TAB also noted that it remains to be seen what effect this new language might have on programmes’ approaches and best practices for baseline-setting. In light of this, TAB requested all programmes to, at the earliest opportunity, but no later than TAB’s re-assessment of programmes for eligibility toward the 2027-2029 compliance period, demonstrate that procedures provide for baselines that are set in a conservative way and below the business-as-usual emissions projections, noting that non-traditional methods for baseline-setting should deliver equivalent outcomes
- 4.4.6 Noting that the term ‘below business-as-usual’ was adopted under the Paris Agreement only in December 2021 and first included in TAB’s Report in September 2022, TAB agreed that programmes and their stakeholders would benefit from more time to familiarize themselves with this interpretation the EUC. TAB therefore agreed to allow time for these further considerations, as applicable. TAB resolved to assess the implementation of this interpretation as soon as feasible, and no later than when it re-assesses programmes for eligibility toward the 2027-2029 compliance period.

Section 4 in TAB Report - September 2023

- 4.4.3 TAB noted that several emissions unit programmes incorporate activity methodologies, requirements, and/or tools developed under the Clean Development Mechanism (CDM), and/or draw on approaches from the CDM to develop their own distinct programme elements. The degree of reliance varies widely by programme or applicant organization: while some have little or no

³³ Decision 2/CMA3, Annex, para 18 (h) (ii)

³⁴ Decision 3/CMA3, Annex, para 33

reference to the CDM in their standards and procedures, others have incorporated some or all CDM methodologies and tools and have used them in some or all their registered activities.

- 4.4.4 TAB recalled the outcomes of the Glasgow Climate Conference (UNFCCC COP 26 / CMP 16 / CMA 3) and subsequent work under the Paris Agreement regarding the transition of CDM activities and methodologies for use in the Article 6.4 mechanism. These outcomes state that CDM activities may continue to apply their current approved CDM methodologies until the earlier of the end of their current crediting periods or 31 December 2025, following which they must apply an approved methodology from the Article 6.4 mechanism.³⁵ CMA 3 also requested the Article 6.4 Supervisory Body to, among other things, review existing CDM methodologies, accreditation standards and tools with a view to applying them with revisions, as appropriate, and/or developing similar tools under the new mechanism.³⁶ At a future session, the CMP will determine a timeline for the end of the operation of the processes under the CDM and its institutions, with a view to avoiding a gap before the operationalization of the corresponding processes under the Article 6.4 mechanism.³⁷
- 4.4.5 TAB discussed the possibility that some emissions unit programmes might continue to rely on CDM programme elements that will no longer be maintained under the UNFCCC process. This could affect those programmes' ability to demonstrate technical consistency with some or all the following criteria: Validation and verification procedures; Carbon offset credits must be quantified, monitored, reported, and verified; Clear methodologies and protocols, and their development process; Additionality; Realistic and credible baselines; and Leakage.
- 4.4.6 Reflecting on this possibility, TAB noted that programmes using CDM elements should (1) periodically monitor formal developments related to any CDM methodologies, processes and institutions, requirements, and/or tools that are incorporated into the programme or referenced in its programme documents, (2) respond to substantive updates, revisions, or other changes to those CDM contents, as appropriate, to maintain the programme's coherence and effectiveness, and (3) publicly report any actions or decisions taken thereon. TAB also noted that programmes that rely on CDM methodologies, processes and institutions, requirements, and/or tools should have procedures in place on items (1) to (3) above prior to becoming eligible to generate emissions units for the CORSIA first phase (2024-2026 compliance period).

Section 4 in TAB Report – August 2024

- 4.4.3.1 The criterion Carbon offset credits must be based on a realistic and credible baseline states, among other things, that “[t]he baseline is the level of emissions that would have occurred assuming a conservative ‘business as usual’ emissions trajectory...”.
- 4.4.3.2 TAB recalled para. 6.5.17 of its September 2022 report to Council, in which TAB resolved to interpret this criterion's reference to “conservative” to mean that procedures should provide for baselines that are set “in a conservative way and below the business-as-usual emissions projections”, as referenced in the reporting requirements in the Article 6.2 Guidance.³⁸ In C-DEC 231/2 (11 March 2024), Council approved a recommendation from the Committee on Aviation Environmental Protection (CAEP) to incorporate this interpretation into a new Guideline.

³⁵ UNFCCC Decision 3/CMA.3, Annex para. 73(a).

³⁶ UNFCCC Decision 3/CMA.3, para. 5.

³⁷ UNFCCC Decision 2/CMP.17, paras. 6 and 13.

³⁸ Decision 2/CMA.3, Annex, para 18(h)(ii)

- 4.4.3.3 TAB also recalled that the Article 6.4 guidelines state that methodologies may “recognize suppressed demand”.³⁹ Such methodologies typically set baselines slightly above a conservative ‘business as usual’ (BAU) projection in contexts where emissions are historically low due to underdevelopment, *e.g.*, by using optimistic growth assumptions and/or ‘minimum service levels’ in emissions models. As noted in para. 6.5.15 of TAB’s September 2022 Report to Council, there is limited clarity on how to interpret the new ‘below BAU’ provisions in contexts of suppressed demand.
- 4.4.3.4 TAB discussed recent developments in tools and methodologies for determining the fraction of woody biomass that can be established as non-renewable biomass (fNRB). This variable is used in baseline formulae for activities that reduce or displace the use of non-renewable biomass. An October 2023 information note for the CDM Executive Board⁴⁰ and a January 2024 paper in the journal *Nature Sustainability*⁴¹ found that older methods for calculating fNRB likely overestimate emissions reductions for these activities. Some of these activities also incorporate elements of suppressed demand.
- 4.4.3.5 Reflecting on these considerations, TAB noted that continuous improvement is a normal feature of GHG estimation, including in the context of carbon credit markets, and that at least one emissions unit programme is adjusting its approach.
- 4.4.3.6 TAB resolved to continue monitoring ongoing developments on this matter, including in the Article 6 context. TAB also resolved to take these developments into account during its 2025 re-assessment cycle, which will inform its recommendations to Council on eligible emissions units during the 2027-2029 compliance period.

Section 4 in TAB Report – January 2025

- 4.3.3 TAB recalled its discussion in section 4.4.1.0 to 4.4.1.5 of its August 2024 report to Council, regarding the criterion Carbon offset credits must be based on a realistic and credible baseline in the context of activities that reduce or displace the use of non-renewable biomass in household devices. The most established methodology supporting these activity types is the Clean Development Mechanism’s *AMS-II.G: Energy efficiency measures in thermal applications of non-renewable biomass*, which has undergone 13 versions since it first became valid in 2008.
- 4.3.4 In particular, TAB recalled that “[a]n October 2023 information note for the CDM Executive Board⁴² and a January 2024 paper in the journal *Nature Sustainability*⁴³ found that older methods for calculating the fraction of non-renewable biomass (fNRB) likely overestimate emissions reductions for these activities.” TAB also noted other possible risks of overestimation in these activity types, as well as the various solutions that programmes have developed over the years to address these challenges and ensure realistic and credible baselines.⁴⁴ In this regard, TAB recalled

³⁹ Decision 3/CMA.3, Annex, para 33

⁴⁰ Document number CDM-MP92-A07, available at https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20231012184345703/MP92_EA07_Information%20Note_fNRB%20values_collated.pdf

⁴¹ Annelise Gill-Wiehl et al., “Pervasive over-crediting from cookstove offset methodologies”, *Nature Sustainability* 7, 191-202 (2024). Available at <https://www.nature.com/articles/s41893-023-01259-6>

⁴² Document number CDM-MP92-A07, available at https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20231012184345703/MP92_EA07_Information%20Note_fNRB%20values_collated.pdf

⁴³ Annelise Gill-Wiehl et al., “Pervasive over-crediting from cookstove offset methodologies”, *Nature Sustainability* 7, 191-202 (2024). Available at <https://www.nature.com/articles/s41893-023-01259-6>

⁴⁴ *Ibid.* See also, for example, Probst *et al.*, “Systematic assessment of the achieved emission reductions of carbon crediting project”, *Nature Communications* 15, 9562 (2024), available at <https://www.nature.com/articles/s41467-024-53645-z>; as well as responses to these studies by Hernandez *et al.* (PDF [link](#)); Geibel *et al.* (PDF [link](#)); Kolmetz (PDF [link](#)); Gold Standard ([link](#)).

its finding that “that continuous improvement is a normal feature of GHG estimation, including in the context of carbon credit markets, and that at least one emissions unit programme is adjusting its approach.”⁴⁵

- 4.3.5 TAB reflected on recent progress by emissions unit programmes in the continuous improvement of methodologies for these activity types. In particular, the Paris Agreement Crediting Mechanism (PACM)’s Methodological Expert Panel has included the CDM methodology *AMS-II.G.: Energy efficiency measures in thermal applications of non-renewable biomass* and the related tool *Calculation of the fraction of non-renewable biomass* on the agenda for its meeting of 27-31 January 2025.⁴⁶ TAB also noted that one eligible programme has phased out the use of AMS-II.G and released a new methodology in October 2024, as well as a timeline for existing activities to transition to that methodology.⁴⁷ Other eligible programmes have either not finalized a timeline for transitioning from this methodology or are not currently supporting activities using this methodology.
- 4.3.6 TAB resolved to continue monitoring ongoing developments on this matter, including in the Article 6 context. TAB also resolved to take these developments into account during the beginning of its 2025 re-assessment cycle and to consider recommending further updates to the ICAO document, as appropriate, in future reports to Council.

Section 4.4.5 in TAB Report – August 2025

In relation to activities involving household device distribution

- 4.4.4.1 TAB recalled its discussions since April 2024 regarding the criterion Carbon offset credits must be based on a realistic and credible baseline in the context of activities that reduce or displace the use of non-renewable biomass in household devices.⁴⁸ These discussions have focused on the fraction of woody biomass that can be established as non-renewable biomass (fNRB), while also considering firewood-to-charcoal conversion rates; device adoption, usage and fuel consumption rates; and emissions factors. TAB also noted the February 2025 observations on these matters by the Integrity Council for the Voluntary Carbon Market (ICVCM).⁴⁹
- 4.4.4.2 TAB reflected on recent progress by emissions unit programmes in the continuous improvement of methodologies for activities involving household devices, including in light of the technical challenges identified above. In June 2025, the Executive Board (EB) of the Clean Development Mechanism (CDM) agreed to withdraw its TOOL 30: *Calculation of the fraction of non-renewable biomass*, effective 1 January 2026.⁵⁰ In parallel, Methodological Expert Panel of the Paris Agreement Crediting Mechanism (PACM) continues to discuss possible improvements to the CDM’s TOOL 30 as well as to CDM methodologies that have hitherto relied on that tool.⁵¹ TAB also noted that two other emissions unit programmes are phasing out support for these CDM tool

⁴⁵ Section 4.4.1.13 of TAB’s August 2024 Report to Council (CWP/15631, Appendix B).

⁴⁶ Available at https://unfccc.int/process-and-meetings/bodies/constituted-bodies/article-64-supervisory-body/mep/meetings#_24-MEP-001---MEP-003

⁴⁷ See Verra, VM0050: Energy Efficiency and Fuel-Switch Measures in Cookstoves, v.1.0. Available at <https://verra.org/methodologies/vm0050-energy-efficiency-and-fuel-switch-measures-in-cookstoves-v1-0/>

⁴⁸ See sections 4.3.3 to 4.3.6 of TAB’s March 2025 Report to Council (C-WP/15677) and sections 4.4.1.0 to 4.4.1.5 of its August 2024 report to Council (C-WP/15631)

⁴⁹ https://icvcm.org/wp-content/uploads/2025/03/Board-Observations_Cookstoves-and-Biodigesters-FINAL.pdf

⁵⁰ UNFCCC. “CDM Executive Board 125th Meeting” June 11-12, 2025. Paragraph 19-20. Available at ([PDF](#)).

⁵¹ See MEP004 Report, para. 22; MEP005 Report para. 23; MEP007 para. 21.

and methodologies, and that one programme has withdrawn and/or recalculated the results of some associated activities.⁵²

- 4.4.4.3 Reflecting on these considerations, TAB recalled its finding that continuous improvement is a normal feature of GHG estimation, including in the context of carbon credit markets. In this context, TAB recommends that emissions units issued based on the CDM's TOOL 30 should not be eligible during the 2027-2029 compliance period unless improvements are made to ensure accuracy and conservativeness. TAB further recommends that previous exclusions relating to these methodologies can now be rescinded, in light of the actions taken by the affected programmes to address over-issuance.

Baseline setting for high-forest low deforestation jurisdictions

- 4.4.5.1 The criterion Carbon offset credits must be based on a realistic and credible baseline, states, among other things, that “[t]he baseline is the level of emissions that would have occurred assuming a conservative ‘business as usual’ emissions trajectory...” Separately, the criterion Leakage and its guidelines *Scope* and *Leakage Prevention* require that “activities that pose a risk of leakage when implemented at the project-level should be implemented at a national level, or on an interim basis on a subnational level, in order to mitigate the risk of leakage.” As noted in TAB’s first report to Council (Oct. 2020)⁵³, this *Leakage* guideline specifically applies to REDD+ activities as defined in the UNFCCC’s Warsaw Framework and related decisions.⁵⁴
- 4.4.5.2 It is common practice for REDD+ programmes to derive crediting baselines from jurisdiction-wide multi-year historical emissions levels, in order to avoid selection biases that can occur when projection models or control areas are used.⁵⁵ However, historical baselines might underestimate emissions trends where deforestation might be increasing, such as in some “HFLD” countries, which have high forest cover and low deforestation rates due to historically sparse population and/or underdevelopment, for example. A variety of techniques have been developed to extrapolate or adjust historical baselines as appropriate to calculate the emissions that would otherwise occur in a *business-as-usual* scenario where the forest faces imminent threats.⁵⁶ TAB noted that the rationale for these techniques is similar in principle to that of “suppressed demand” techniques used in other sectors where emissions are historically low due to underdevelopment.⁵⁷
- 4.4.5.3 Some experts argue that many forests in HFLD jurisdictions do not face imminent threats, such that adjusted HFLD baselines overestimate *business-as-usual* emissions, thereby generating emissions units that do not represent real emissions reductions.⁵⁸ Other experts respond that many forests in HFLD jurisdictions do indeed face imminent threats and that the newest methods for adjusting

⁵² Verra, “Verra Cancels 5 Million Overissued Credits Linked to C-Quest Capital” (17 October 2024), available at: <https://verra.org/verra-cancels-5-million-overissued-credits-linked-to-c-quest-capital/>;

⁵³ See October 202 TAB Report, section 4.3.8.

⁵⁴ “REDD+” refers to reducing emissions from deforestation and forest degradation in developing countries (REDD) and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks (+). See the UNFCCC REDD+ platform for more information: <https://redd.unfccc.int/fact-sheets/warsaw-framework-for-redd.html>

⁵⁵ Graziera, Hamrick and Comstock, “Eligibility Requirements for REDD+ Standards and Financing”, *The Nature Conservancy and Conservation International* (May 2021). Available at https://www.nature.org/content/dam/tnc/nature/en/documents/EligibilityRequirementsforREDDPlus_Financing_2021.pdf, page

⁵⁶ Teo et al., “Charting the future of high forest low deforestation jurisdictions”, *PNAS* 121, no. 37 (2024), Available at <https://www.pnas.org/doi/epub/10.1073/pnas.2306496121> ; Schweikart, Mertz and Muller, “Adaptive approaches to REDD+ are needed for countries with high forest cover and low deforestation rates”, *Environmental Research Letters* 17, no. 11 (2022). Available at <https://iopscience.iop.org/article/10.1088/1748-9326/ac9827> .

⁵⁷ See discussion on suppressed demand in September 2022 TAB Report, section 6.5.13 to 6.5.17.

⁵⁸ Streck et al., “We must protect intact forests, but CORSIA got it wrong” *CarbonPulse*, April 14, 2022. Available at <https://carbon-pulse.com/156727/>

historical baselines are appropriately conservative.⁵⁹ TAB noted that a similar debate exists in other sectors regarding baseline-setting in situations of suppressed demand.⁶⁰

4.4.5.4 TAB has recommended one programme that uses HFLD baseline-setting techniques as fully eligible for all CORSIA compliance periods to date, as well as another such programme as conditionally eligible for the first phase. A few TAB experts expressed the view that HFLD procedures currently in use do not provide for baselines that are set in a conservative and credible manner, such that HFLD approaches should not be considered eligible at this stage.

4.4.5.5 In light of the considerations described in in this section, TAB recalled that continuous improvement is a normal feature of GHG estimation, including in the context of carbon credit markets. TAB resolved to continue to apply the EUC in the manner described in its *Criteria interpretations*, to further clarify these interpretations where appropriate, and to monitor continuing progress in the scientific literature and evolving practices for baseline-setting in HFLD jurisdictions, including in relation to the EUC guidelines for programme procedures to ensure that baselines are set in a conservative way and below *business-as-usual*.

Criterion: Carbon offset credits must be quantified, monitored, reported, and verified (paragraph 3.3)²

Section 4.3.5 in TAB Report - October 2020

4.3.7.1 TAB identified that the criteria “Validation and Verification procedures” (paragraph 2.6²) and “Carbon offset credits must be quantified, monitored, reported, and verified” (paragraph 3.3²), in combination, only contain comprehensive requirements for *verification* to be undertaken by accredited, independent third parties, and for the accreditation, qualification, and oversight of those verifiers. The same requirements do not in all cases extend to entities performing *validation* services. Nevertheless, TAB assessed programmes’ consistency with the criterion Carbon offset credits must be quantified, monitored, reported, and verified as requiring that a programme has procedures in place requiring that *validation* is undertaken by an entity that is a) accredited, b) independent, and c) a third party. TAB agreed this interpretation based on various references that establish the equivalence of validation and verification bodies (i.e. the Validation and Verification procedures criterion) and their functions (i.e. the *Guideline for Auditor conflicts of interest*, which refers to “accredited third-party(ies) performing the validation and/or verification procedures”).

Section 6 in TAB Report - September 2022

6.5.4 TAB noted that there are linkages between the Article 6.2 Guidance and the criterion Carbon offset credits must be quantified, monitored, reported, and verified. This criterion states, among other things, that “[o]ffset credits should be based on accurate measurements and quantification methods/protocols.” TAB also noted that measurement and quantification is linked to the criterion Only counted once towards a mitigation obligation.

6.5.5 The Article 6.2 Guidance requires, where mitigation outcomes are measured and transferred in tonnes of carbon dioxide equivalent (tCO_{2eq}), “measurement of mitigation outcomes in accordance

⁵⁹ Wildlife Conservation Society et al., “Statement on the credibility of HFLD credits in global carbon markets”, *Carbon Pulse*, May 26, 2022. Available at <https://carbon-pulse.com/160832/>

⁶⁰ Randall Spanding-Fecher, “Suppressed Demand in the Clean Development Mechanism: Conceptual and Practical Issues.” *Journal of Energy in Southern Africa* 26 (2015).

with the methodologies and metrics assessed by the Intergovernmental Panel on Climate Change and adopted by the CMA.”⁶¹ The CMA earlier decided that Parties to the Paris Agreement must report on their greenhouse gas emissions using 100-year time-horizon global warming potential (GWP) values from the IPCC Fifth Assessment Report (AR5), or 100-year time-horizon GWP values from a subsequent IPCC assessment report as agreed upon by the CMA.⁶² This requirement takes effect for national reports that are due at the latest by 31 December 2024.⁶³

- 6.5.6 TAB noted that, to meet the EUC and guidelines on quantification and double-issuance, the quantification of emissions units should be consistent with the quantification of the national emissions reporting of the host country, such that only one unit is issued for one tonne of mitigation. In this regard, TAB noted that some emissions unit programmes have already transitioned to 100-year GWP values from AR5 and that others programmes are planning to do so in the near future. TAB also noted that consistent GWP values are only relevant for units representing mitigation of greenhouse gases other than CO₂ because the GWP value of CO₂ is always, by definition, 1 tCO_{2eq}.
- 6.5.7 In light of these provisions of the Article 6.2 Guidance, TAB interprets the EUC as requiring all programmes that issue emissions units for the mitigation of non-CO₂ gases to have procedures in place for the quantification of emissions units using 100-year time-horizon global warming potential (GWP) values from the IPCC Fifth Assessment Report (AR5), or 100-year time-horizon GWP values from a subsequent IPCC assessment report as agreed upon by the CMA. These programmes should apply these procedures to all units issued for mitigation that occurred from 1 January 2021 onward. TAB will apply this interpretation for its recommendations regarding emissions units that should be eligible for use under CORSIA in years beyond its pilot phase (2021-2023), including in its ongoing re-assessment of Eligible Emissions Unit Programmes, which will inform TAB’s recommendations to the 228th ICAO Council.

Section 4 in TAB Report - September 2023

- 4.4.3 TAB noted that several emissions unit programmes incorporate activity methodologies, requirements, and/or tools developed under the Clean Development Mechanism (CDM), and/or draw on approaches from the CDM to develop their own distinct programme elements. The degree of reliance varies widely by programme or applicant organization: while some have little or no reference to the CDM in their standards and procedures, others have incorporated some or all CDM methodologies and tools and have used them in some or all their registered activities.
- 4.4.4. TAB recalled the outcomes of the Glasgow Climate Conference (UNFCCC COP 26 / CMP 16 / CMA 3) and subsequent work under the Paris Agreement regarding the transition of CDM activities and methodologies for use in the Article 6.4 mechanism. These outcomes state that CDM activities may continue to apply their current approved CDM methodologies until the earlier of the end of their current crediting periods or 31 December 2025, following which they must apply an approved methodology from the Article 6.4 mechanism.⁶⁴ CMA 3 also requested the Article 6.4 Supervisory Body to, among other things, review existing CDM methodologies, accreditation standards and tools with a view to applying them with revisions, as appropriate, and/or developing similar tools under the new mechanism.⁶⁵ At a future session, the CMP will determine a timeline for the end of

⁶¹ Decision 2/CMA.3, Annex, para. 22(c).

⁶² Decision 18/CMA.1, Annex, para. 37.

⁶³ Decision 18/CMA.1, para. 3.

⁶⁴ UNFCCC Decision 3/CMA.3, Annex para. 73(a).

⁶⁵ UNFCCC Decision 3/CMA.3, para. 5.

the operation of the processes under the CDM and its institutions, with a view to avoiding a gap before the operationalization of the corresponding processes under the Article 6.4 mechanism.⁶⁶

- 4.4.5 TAB discussed the possibility that some emissions unit programmes might continue to rely on CDM programme elements that will no longer be maintained under the UNFCCC process. This could affect those programmes' ability to demonstrate technical consistency with some or all the following criteria: Validation and verification procedures; Carbon offset credits must be quantified, monitored, reported, and verified; Clear methodologies and protocols, and their development process; Additionality; Realistic and credible baselines; and Leakage.
- 4.4.6 Reflecting on this possibility, TAB noted that programmes using CDM elements should (1) periodically monitor formal developments related to any CDM methodologies, processes and institutions, requirements, and/or tools that are incorporated into the programme or referenced in its programme documents, (2) respond to substantive updates, revisions, or other changes to those CDM contents, as appropriate, to maintain the programme's coherence and effectiveness, and (3) publicly report any actions or decisions taken thereon. TAB also noted that programmes that rely on CDM methodologies, processes and institutions, requirements, and/or tools should have procedures in place on items (1) to (3) above prior to becoming eligible to generate emissions units for the CORSIA first phase (2024-2026 compliance period).

Section 4.4 in TAB Report - August 2025

- 4.3.7.1 The criterion Carbon offset credits must be quantified, monitored, reported and verified states, among other things, that “[o]ffset credits should be based on accurate measurements and quantification methods/protocols.”
- 4.3.7.2 As observed in section 4.4.1.8 of TAB’s September 2024 Report to Council, the IPCC, at its 60th Session (January 2024), requested its Task Force on National Greenhouse Gas Inventories to develop a new *Methodology Report on Carbon Dioxide Removal Technologies, Carbon Capture Utilization and Storage* by 2027, as part of the IPCC’s Seventh Assessment Cycle. The Task Force aims to, among other things, identify gaps relating to CDR activities within the 2006 IPCC Guidelines on National GHG Inventories and/or identify areas where elaboration of the Guidelines would be desirable.
- 4.3.7.3 In this context, TAB noted that existing IPCC Guidelines do not address carbon sequestration from several engineered CDR activity types, in particular those for which measurement, reporting and verification techniques are relatively new, such that any sequestration achieved by such activities would not necessarily be reflected in national GHG emissions accounting.⁶⁷ TAB also noted that a significant body of research on CDR quantification techniques is ongoing, including on the role of robust measurement, modelling, monitoring, and the use of various technologies to reduce uncertainty.^{68, 69}
- 4.3.7.4 Reflecting on these considerations, TAB noted that programmes supporting carbon sequestration activities should have methodologies to measure, report and verify the carbon capture stream and the carbon storage in reservoirs/materials with reasonable accuracy and confidence, based on peer

⁶⁶ UNFCCC Decision 2/CMP.17, paras. 6 and 13.

⁶⁷ Stephen M. Smith *et al.* (eds.), *The State of Carbon Dioxide Removal 2024*, 2nd edition, Table 10.4 (page 202). Available at <https://www.stateofcdr.org>

⁶⁸ Clarkson, M. et al. “A review of measurement for quantification of carbon dioxide removal by enhanced weathering in soil”. *Front. Clim.*, 19 June 2024. See. *Carbon Dioxide Removal*. Vol 6-2024.

<https://www.frontiersin.org/journals/climate/articles/10.3389/fclim.2024.1345224/full>

⁶⁹ Cautious carbon removal. *Nat. Clim. Chang.* 14, 549 (2024). <https://doi.org/10.1038/s41558-024-02048-5>

reviewed techniques that are grounded in well-established science. TAB also noted that activities piloting or demonstrating novel quantification techniques should be scaled appropriately to address uncertainty.

Criterion: Permanence (paragraph 3.5, including 3.5.4)²

Section 4.3 in TAB Report - January 2020

- 4.3.7.5 TAB's Sub-group 4, which focused on the criteria Permanence and A system must have measures in place to assess and mitigate incidences of material leakage, assessed relevant programmes as those supporting activities that incur a risk of reversals. This included activities: a) in the forestry and land use sectors; and b) those generally categorized as "carbon capture and storage". The Permanence criterion states that "*Carbon offset credits must represent emissions reductions, avoidance, or carbon sequestration that are permanent. If there is risk of reductions or removals being reversed, then either (a) such credits are not eligible or (b) mitigation measures are in place to monitor, mitigate, and compensate any material incidence of non-permanence.*"
- 4.3.7.6 Sub-group 4 experts referred to CAEPs' guidelines for interpretation, the PTG outcome, and their own expertise, to interpret "mitigation measures" as provisions in place and administered by the programme to require the activities they support to monitor for and mitigate the risk of emissions reductions that are reversed, and to "compensate" for emissions units associated with any such reversals (through, e.g., buffer or insurance mechanisms). For all relevant programmes, the sub-group experts assessed the consistency of their measures with the criterion, taking into account discussions with the programmes and the sub-group's technical analysis of the information provided.
- 4.3.7.7 With the exception of one programme's procedures, which TAB identified as being incompatible with the use of the units under CORSIA and recommended they be excluded, other programmes' procedures were assessed as demonstrating consistency with the criterion.
- 4.3.7.8 TAB identified that the criterion and guidelines only define permanence by *function*, which was considered reasonable given the challenges of agreeing to a specific period of time that could be appropriately applied to all programmes, given their unique attributes. Here, they noted that the programmes assessed take multi-pronged approaches to mitigating reversal risks, many of which are captured in the *guidelines*, and should be assessed as a package.
- 4.3.7.9 While noting that the programmes assessed do have all procedures in place that are called for in the criteria and guidelines, in a few cases the timeframe for which activities are required to monitor and compensate for reversals was seen as too limited (e.g., five or ten years). After considering several options to address this issue, TAB recommended that these programmes should revise their procedures to provide for monitoring and compensation for a period of time that at the very least exceeds the period of time between when the programmes were assessed (2019) and the end of CORSIA's implementation period (2037).
- 4.3.7.10A few experts expressed the view that permanence CO₂ generally stays in the atmosphere for more than 100 years, most of it much longer, and noted that only one programme assessed requires measures that provide for permanence over such a timeframe. They identified that timelines utilized by some of the programmes assessed fall short of this and are in some cases too short to provide equivalence to the CO₂ emissions that are offset and to avert the risk of reversal of removals, and are of the view that such programmes should not be considered eligible at this stage.

Section 4.4 in TAB Report January 2024

- 4.4.8 TAB noted that some emissions unit programmes have been consulting on the practice of “tonne-year accounting” for activities involving the risk of reversals. At least one emissions unit programme allows for the practice in certain methodologies as an option in lieu of reversal management measures.
- 4.4.9 Tonne-year accounting allows crediting for tonnes greenhouse gases kept out of the atmosphere over a given number of years, with quantities then converted into “equivalent” permanent mitigation according to an accounting convention or conversion factor. TAB noted the outcome of the *Fifth meeting of the Article 6.4 mechanism Supervisory Body*⁷⁰, which acknowledged “persistent concerns and questions raised [about tonne-year accounting], including within the scientific community, regarding its underpinning methods and assumptions, and ecological implications, and insufficient confidence in its suitability for international applications and effectiveness at addressing reversals.” TAB also recalled its discussion on Permanence in the January 2020 Report to Council, which noted that “the programmes assessed take multi-pronged approaches to mitigating reversal risks, many of which are captured in the guidelines, and should be assessed as a package.”⁷¹
- 4.4.10 Reflecting on these considerations, TAB noted that ‘tonne-year accounting’ could be acceptable as part of a multi-pronged approach to addressing reversal risk. However, TAB also emphasized that such multi-pronged approaches must also include “measures to monitor, mitigate, and compensate any material incidence of non-permanence” in line with the EUC on Permanence. In this regard, TAB resolved to continue to apply the EUC in the manner described in its *Criteria interpretations*,⁷¹ further clarify these interpretations where appropriate, and monitor ongoing developments, including in the Article 6 context. Regarding these ongoing developments, TAB noted that there are ongoing discussions by the CMA and that the CAEP is scheduled to review the EUC in 2024.

Section 4.4 in TAB Report – August 2024

- 4.4.5.1 The criterion Permanence states that “Carbon offset credits must represent emissions reductions, avoidance, or carbon sequestration that are permanent. If there is risk of reductions or removals being reversed, then either (a) such credits are not eligible or (b) mitigation measures are in place to monitor, mitigate, and compensate any material incidence of non-permanence.”
- 4.4.5.2 As noted in section 4.3.2.1 to 4.3.2.6 of its January 2020 Report to Council, emissions unit programmes take multi-pronged approaches to mitigating reversal risks, many of which are captured in the EUC Guidelines, and should be assessed as a package. The Guidelines identify key aspects of a complete Permanence package, including: *Risk assessment, Reversal risk monitoring and mitigation, Reversal notification and liability, Extent of compensation provisions, Replacement unit eligibility, and Review of compensation measure performance*.
- 4.4.5.3 In its assessments of emissions unit programmes since 2019, TAB noted that several programmes use “reserve accounts” or “buffer pools” as part of their packages of procedures to address reversal risk. Under such approaches, a portion of the units issued for an activity are set aside by the programme. In the event of a reversal of mitigation from the activity, e.g., due to a natural disturbance or human actions, the reserved/pooled units are used to compensate for other units that

⁷⁰ See section 4.3.2.4 of TAB’s January 2020 report

⁷¹ See section 4.3.2 of TAB’s January 2020 Report to Council.

were affected by a reversal event. TAB noted that the required contributions to reserves/pools vary widely between programmes, activity types and individual activities. TAB also noted that some reserves/pools are dedicated to a single activity or activity proponent, while others are shared across all activities supported by the programme, and some programmes use combinations of reserves/pools.

4.4.5.4 The EUC Guideline on *Extent of compensation provisions* states, among other things, that “[t]he programme should have provisions in place to ensure full compensation for material reversals of mitigation issued as emissions units and used toward offsetting obligations under the CORSIA.” While emphasizing that TAB assesses Permanence procedures as a package, TAB noted some best practices that can help programmes demonstrate their willingness and ability to fully compensate for the reversals:

1. Programme tools/guidance to support activities to undertake reversals risk assessments are required and provided at the programme-level (not only at the methodology level).
2. Reversal risk assessments identify all material risk factors/causes; quantify their respective scales and likelihoods; require mitigation and monitoring for each factor/cause; and produce an aggregate risk rating for each activity, which is updated specified time intervals and/or milestones based on monitoring data. The extent, frequency and duration of monitoring can vary depending on the materiality of the reversal risk.
3. The data from reversal risk assessments and monitoring are documented and subject to third-party validation/verification, and their results inform the required contributions by each activity to the reserve account / buffer pool.
4. Risk reserves/pools that are larger, and that cover a diversity of activities, activity types, activity proponents and activity locations/jurisdictions, are better able to manage higher risks than smaller, more activity-specific reserves/pools.
5. The Programme should commit to compensate for any reversal of mitigation from an event that exceeds the holdings of the reserve account / buffer pool.

Section 4.4 in TAB Report - August 2025

4.4.8.1 The criterion Permanence states that “Carbon offset credits must represent emissions reductions, avoidance, or carbon sequestration that are permanent. If there is risk of reductions or removals being reversed, then either (a) such credits are not eligible or (b) mitigation measures are in place to monitor, mitigate, and compensate any material incidence of non-permanence.”

4.4.8.2 The IPCC Sixth Assessment Report (2023) notes that permanence of carbon storage is closely linked to the storage medium. Carbon stored in vegetation or soils has the shortest storage timescales and the highest risk of reversals from human activities or natural disturbances. Carbon stored as biochar in soils, cement and other materials have somewhat longer storage timescales and are less vulnerable to disturbances. Carbon stored in ocean reservoirs and in geological formations generally have the longest storage times, with the latter being potentially permanent.⁷²

4.4.8.3 TAB noted that appropriate procedures for mitigating and reconciling non-permanence depend on the inherent materiality of reversal risks, which in turn vary by activity type and storage medium.

⁷² IPCC AR6 WG1, Figure 5.3.6 (page 766); IPCC AR6 WGIII, Cross-Chapter Box 8 (page 1261).

In this regard, TAB noted that the reversal management timeframes set out in the EUC Guidelines⁷³ are most relevant to carbon removals from agriculture, forestry and land use (AFOLU). In contrast, the appropriate reversal management timeframes for engineered CDR and biochar activities are generally shorter than for AFOLU activities, but vary depending on the storage reservoir/medium and recent monitoring results. TAB concluded that it was reasonable to expect programme procedures for reversal management and monitoring to require an engineered CDR or biochar activity to monitor the sequestered carbon until it has verified, consistent with the best available science, that the residual risk of a reversal of removals is demonstrably negligible or non-existent, as are any residual identified risks of negative environmental or social impacts.

Criterion: A system must have measures in place to assess and mitigate incidences of material leakage (paragraph 3.6, including 3.6.2)²

Section 4.3.8 in TAB Report – October 2020

- 4.3.8.1 This criterion's guideline for *Scope and Leakage Prevention* requires that "activities that pose a risk of leakage when implemented at the project-level should be implemented at a national level, or on an interim basis on a subnational level, in order to mitigate the risk of leakage." TAB noted that this guideline is specifically applicable to REDD+ activities and for TAB's use in assessing programmes that support REDD+ activities as defined in the UNFCCC's Warsaw Framework and related decisions. TAB acknowledged that several programmes it has assessed support REDD+ activities at a variety of implementation scales (i.e. project-level, sub-national, national, and combinations thereof). TAB applied this guideline to programmes that support REDD+ and/or AFOLU activities. It was regarded as "not applicable" to all other programmes. Programmes that only support REDD+ to be implemented "at a national level, or on an interim basis on a subnational level" were assessed as demonstrating consistency with the contents of this guideline. TAB gave the following considerations to Programmes supporting stand-alone project-level REDD+ and/or AFOLU activities.
- 4.3.8.2 ***Consideration 1 — Activity type:*** TAB noted that several of the programmes assessed support REDD+ activities, as well as other interventions involving agriculture, forestry, and land use *that exclude REDD+*. As a first step, TAB identified categories of activities that are *not* categorized as REDD+ under commonly accepted definitions⁷⁴. Sections 4.2.4 – 4.2.7 of this report identify these categories of activities by their respective methodologies (or methodology categories) as "allowable exceptions" that can be implemented at any scale. These exceptions avoid inadvertently applying this guideline's "scale requirement" to AFOLU activities (excluding REDD+) to which it is clearly not applicable.
- 4.3.8.3 ***Consideration 2 — Geographic context:*** TAB noted that some programmes support AFOLU activities to be implemented in countries where REDD+ decisions are applicable (i.e. "REDD+ countries"⁷⁵). As a second step, TAB assessed whether the activities supported by the programme, or under a programme's methodology or protocol in question, could be implemented in *any* country with forest cover that is pursuing elements of REDD+ outlined by the UNFCCC Warsaw Framework and/or REDD+ international standards. Where the answer was "yes" for a given

⁷³ https://www.icao.int/sites/default/files/environmental-protection/CORSIA/Documents/TAB/Programme-Re-application-Form_Appendix_A_Supplementary_Information_2025.pdf

⁷⁴ "REDD+" commonly refers to Reducing Emissions from Deforestation and Forest Degradation, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.

⁷⁵ Referring to countries that are pursuing elements of REDD+ as defined in key decisions relevant for reducing emissions from deforestation and forest degradation in developing countries (REDD+), including the Warsaw Framework for REDD+. <https://unfccc.int/topics/land-use/workstreams/redd/redd-resources#Warsaw-Framework-for-REDD>

project-level methodology, Sections 4.2.4 – 4.2.7 of this report recommend that the resulting emissions units should be eligible where issued to projects that either a) are integrated (i.e. “nested”) into the programme’s CORSIA-eligible jurisdiction-scale REDD+ activities, or b) fall below the project size threshold described below.

- 4.3.8.4 **Consideration 3 — Project size and materiality:** TAB identified REDD+ and AFOLU projects that are expected to generate fewer than 7,000 emissions units/annum, individually or grouped, as allowable exceptions to all other exclusions set out in Sections 4.2.4 – 4.2.7 of this report. This recommendation takes into account the criterion’s emphasis on *material* leakage risk, and the comparably low risk that projects implemented at this *de minimis* scale would undermine incentives for countries to expand the scale of their REDD+ implementation strategies over time.
- 4.3.8.5 **Other considerations:** Where TAB assessed this guideline as not applying to a programme or some specific project scenarios described in this section, TAB nevertheless assessed their consistency with all other relevant criteria, including to confirm that procedures are in place to assess, monitor, mitigate, and account for material project-level leakage, and alignment with the *Permanence* criterion and guidelines.
- 4.3.8.6 TAB sought to apply this guideline at a level that would allow for the broadest eligibility scope while ensuring that the units are consistent with the contents of the EUC. TAB ultimately assessed and identified the exceptions described above at the level of methodological categories (i.e. activity types) or at the methodological level if a programme’s and TAB’s categorizations did not align.
- 4.3.8.7 In its geographic considerations (above), TAB also noted that some programmes support AFOLU and REDD+ projects in countries that are pursuing *some but not all* elements of REDD+ and that may or may not expand on these activities over time. TAB discussed whether project-level AFOLU activities could be exempt from this guideline if the host country itself does not classify the activity type as “REDD+” in its strategy. On this issue, TAB erred on the side of caution in terms of the feasibility and acceptability of the assessment. TAB confirmed that it prefers to avoid assessing whether each of these activities are included in each particular *REDD+ country’s* strategy⁷⁶ (and thus subject to this guideline’s scale requirement), including in light of limited time and information available to TAB, as well as to avoid discouraging countries from broadening their REDD+ national strategies over time. In this light, TAB confirmed that the approach described in this section does not assess the design and sufficiency of any given country’s REDD+ strategy or implementation.

Section 4 in TAB Report – September 2023

- 4.4.3 TAB noted that several emissions unit programmes incorporate activity methodologies, requirements, and/or tools developed under the Clean Development Mechanism (CDM), and/or draw on approaches from the CDM to develop their own distinct programme elements. The degree of reliance varies widely by programme or applicant organization: while some have little or no reference to the CDM in their standards and procedures, others have incorporated some or all CDM methodologies and tools and have used them in some or all their registered activities.
- 4.4.4 TAB recalled the outcomes of the Glasgow Climate Conference (UNFCCC COP 26 / CMP 16 / CMA 3) and subsequent work under the Paris Agreement regarding the transition of CDM activities and methodologies for use in the Article 6.4 mechanism. These outcomes state that CDM activities may continue to apply their current approved CDM methodologies until the earlier of the end of their current crediting periods or 31 December 2025, following which they must apply an approved

⁷⁶ For one programme that supports AFOLU activities in only one REDD+ country, TAB made an exception to this approach due to the programme’s relevance to the TAB Procedure for the “Assessment of government-vetted programmes.”

methodology from the Article 6.4 mechanism.⁷⁷ CMA 3 also requested the Article 6.4 Supervisory Body to, among other things, review existing CDM methodologies, accreditation standards and tools with a view to applying them with revisions, as appropriate, and/or developing similar tools under the new mechanism.⁷⁸ At a future session, the CMP will determine a timeline for the end of the operation of the processes under the CDM and its institutions, with a view to avoiding a gap before the operationalization of the corresponding processes under the Article 6.4 mechanism.⁷⁹

- 4.4.5 TAB discussed the possibility that some emissions unit programmes might continue to rely on CDM programme elements that will no longer be maintained under the UNFCCC process. This could affect those programmes' ability to demonstrate technical consistency with some or all the following criteria: Validation and verification procedures; Carbon offset credits must be quantified, monitored, reported, and verified; Clear methodologies and protocols, and their development process; Additionality; Realistic and credible baselines; and Leakage.
- 4.4.6 Reflecting on this possibility, TAB noted that programmes using CDM elements should (1) periodically monitor formal developments related to any CDM methodologies, processes and institutions, requirements, and/or tools that are incorporated into the programme or referenced in its programme documents, (2) respond to substantive updates, revisions, or other changes to those CDM contents, as appropriate, to maintain the programme's coherence and effectiveness, and (3) publicly report any actions or decisions taken thereon. TAB also noted that programmes that rely on CDM methodologies, processes and institutions, requirements, and/or tools should have procedures in place on items (1) to (3) above prior to becoming eligible to generate emissions units for the CORSIA first phase (2024-2026 compliance period).

Criterion: Are only counted once towards a mitigation obligation (paragraph 3.7, including 3.7.3, 3.7.8 – 3.7.13)²

Section 4.3.5 in TAB Report – January 2020

- 4.3.5.1 As part of its assessment, TAB found that most programmes have not yet put in place procedures, provisions or measures to obtain and make publicly available attestations from national governments' designated agency contact which recognize and confirm that the units can be used under CORSIA, and in relation to accounting for the mitigation from the activities that supply these units.
- 4.3.5.2 TAB noted that most programmes were not originally designed to support activities in national contexts that would necessitate such an attestation or any form of acknowledgement by a national government, or to have in place procedures that are consistent with the criterion Are only counted once towards a mitigation obligation. Experts discussed that such attestations, which national governments may choose to provide to the programme and/or the activities it supports, have become significantly more relevant, given the risk of double-claiming in the contexts referred to in the criterion.
- 4.3.5.3 During the assessment process, most programmes expressed their willingness to put in place measures (if they were not already "in place"), as described and interpreted under the criterion, for making publicly available any national government decisions related to accounting for the underlying mitigation associated with units used in ICAO, including the content of host country attestations; for updating information pertaining to host country attestations; for monitoring for

⁷⁷ UNFCCC Decision 3/CMA.3, Annex para. 73(a).

⁷⁸ UNFCCC Decision 3/CMA.3, para. 5.

⁷⁹ UNFCCC Decision 2/CMP.17, paras. 6 and 13.

double-claiming by relevant government agencies; and for reporting to ICAO's relevant bodies any performance information related to double claiming.

- 4.3.5.4 TAB's assessment reflected the extent to which each programme has already, or has expressed its willingness to, put in place procedures to provide for its consistency with the criterion, recognizing that some programmes' efforts to do so were well-advanced, and in some cases administered directly by the relevant national government agency.

Section 4.4 in TAB Report – January 2021

TAB assessment findings

- 4.4.2 TAB's first assessment (June – December 2019) found that no emissions unit programmes assessed had all of the necessary procedures in place to demonstrate consistency with the criterion "Are only counted once towards a mitigation obligation" and its guidelines. Thus, TAB recommended six programmes for immediate eligibility to supply emissions units for CORSIA's pilot phase (2021-2023), but also to limit their eligibility to emissions reductions created prior to 2021. This *end date* for unit eligibility was a stopgap measure to prevent double-counting in spite of the incompleteness of procedures for avoiding this risk—both at the programme-level in relation to the EUC, and at the global level in respect of the Paris Agreement's Article 6. It also allowed TAB to conclude its assessment and make recommendations rather than waiting for programmes to finalize the needed procedures. TAB nevertheless assessed the procedures each programme had in place at the time, noting that some of these were well-advanced. After Council accepted TAB recommendations, "*Further actions...*" were requested of eligible programmes, including to "*update, or finalize updates to, programme procedures related to the guidelines for host country attestation, for TAB to assess in respect of future recommendations on the extension of the eligibility dates referred to in Section 4.1.*"
- 4.4.3 Three programmes participating in the TAB's second assessment of material changes (MCA/2) submitted updated procedures for avoiding double-counting. TAB found that in the time since its first assessment, the programmes had taken meaningful strides toward finalizing these procedures—including one programme that demonstrated consistency with all elements of the criterion and its guidelines (paragraph 4.1.7).

TAB discussions regarding eligibility date extensions

- 4.4.4 Following this assessment, TAB discussed whether to recommend extending the *Eligibility Timeframe* (i.e., under which CORSIA cycles / phases units are eligible for use) and/or *Unit Eligibility Date* (i.e., the vintages, or years when emissions reductions occur, that are eligible for use) for this programme. TAB recalled that at its sixth meeting, members decided to consider timeframes involving eligibility for use beyond the pilot phase when re-assessing all eligible programmes throughout 2022. Given this, experts agreed to focus on the question of whether to recommend extending the programme's *Unit Eligibility Date*.
- 4.4.4 Key topics that underpinned TAB's discussions about extending the programme's *Unit Eligibility Date* included (1) whether such recommendations should be made on a programme-by-programme basis *or instead* after all programmes are re-assessed under a single process (i.e., late 2022); and (2) uncertainties related to the novelties of these procedures, and negotiations under the UNFCCC and Paris Agreement that have not yet concluded and are relevant to some procedures in question. On the first topic, a TAB member raised concerns related to the alignment of a programme-by-programme approach to assessing and making recommendations in light of plans for the 2022 reassessment. TAB members noted that a programme-by-programme approach is reinforced in

existing procedures and documents; is consistent with the technical nature of TAB's work; and clearly derives from TAB's findings. They considered that such an extension could unfairly elevate these procedures relative to others that are still in development, though members also noted that this was not uncommon for these programmes or for carbon markets generally. Regarding (2), TAB emphasized that these uncertainties (in particular related to the programme's compensation measures and risk indexing) merited regular attention, not only initially but throughout the programme's *Eligibility Timeframe*, including during the 2022 re-assessment. Other considerations pertaining to the UNFCCC and Paris Agreement are referred to in "*Considerations given in TAB assessments*" below.

Considerations given in TAB assessments

4.4.5 Regarding the **specific commitments, actions, and information** that the criterion and its guidelines call for in programme procedures, TAB analyzes whether programmes clearly define the following (*ordered by approximate stage of completion in programme procedures, from commonly "demonstrated" to "under consideration / development" over the course of MCA/2 and in prior assessments*):

- who implements them (responsibilities of, e.g., the programme, project developer, offset supplier, and/or host country)
- where they are implemented and evidenced (e.g., programme registry and website; host country attestations and national emissions reports; publicly accessible tracking system / database)
- when they are implemented (sequencing and timing for obtaining, reviewing, publishing host country attestations and any updates; for labeling eligible units; for evidencing approaches in national reporting; for identifying and compensating for instances of double-claiming)
- how they are implemented (clarity on country approaches that the programme will credit; specific information expected in host country attestations and evidenced in national emissions reports; steps required for identifying and compensating for instances of double-claiming, and the sufficiency of compensation mechanisms; programme processes for monitoring performance and implementation of procedures, including for reporting results to ICAO upon request).

4.4.6 TAB's assessment of these procedures and recommendation in paragraph 4.1.7 and 4.1.8 also reflects some **general considerations**:

- Thoroughness: Whether procedures translate all elements of the criterion and its guidelines into commitments and actions that are specific, clearly assigned, and traceable.
- Specificity: Whether *specific* requirements, procedures, and assignments of responsibilities in the criterion and guidelines are reflected in corresponding programme procedures.
- Course correction: Whether procedures and discussions with programme administrators reflect contingency planning, such that the programme's administrative procedures include monitoring the implementation of these procedures and expeditiously correcting any underperformance.

- Future-proofing: Where programme procedures refer to guidance, rules, tools, and mechanisms under the UNFCCC and the Paris Agreement, taking sufficient account of the following:
 - *timing* for, e.g., the implementation, availability, periodicity of those elements;
 - *Foreseeable scenarios* for the contents of those elements that are referred to in programme procedures but are not yet finalized or are subject to near-term review, where considerations include, for example, the approximate likelihood that the programme procedures would be compatible with any foreseeable scenarios.

Section 6.4 in TAB Report – September 2022

Host country attestation and transparent communications

- 6.4.3 The EUC state that “eligible programmes should require and demonstrate that host countries of emissions reduction activities *agree to account* for any offset units issued as a result of those activities”. A related EUC Guideline states that “[t]he programme should obtain ... *written attestation* from the host country’s national focal point or focal point’s designee...” (Emphases added.) This Guideline further states that each programme should “make publicly available any national government decisions related to accounting for units used in ICAO, including the contents of host country attestations ... and update [this] information ... as often as necessary to avoid double-claiming.”
- 6.4.4 The Article 6.2 Guidance requires that, whenever a host country “*authorizes*” the use of mitigation outcomes for international mitigation purposes, it “shall apply a corresponding adjustment for the first transfer of such mitigation outcomes consistently with this guidance”. The Guidance also requires host countries to have “arrangements in place for *authorizing* the use of ITMOs”; to provide “a copy of the *authorization*” for each cooperative approach; and to regularly report “information on authorization(s) of ITMOs”, including authorizations for use toward international mitigation purposes.⁸⁰
- 6.4.5 TAB noted that NDCs are “national target(s) / pledge(s) / mitigation contributions / mitigation commitments” communicated by each Party to the Paris Agreement. TAB also noted that the terms “agree to account for” and “written / host country attestation” in the EUC and Guidelines, respectively, have the same meaning as the terms “authorize” and “a copy of the authorization” in the Paris Agreement and the Article 6.2 Guidance. TAB also noted that the information on host country attestations that programmes make available (per the EUC Guidelines) should therefore be consistent with the information on authorizations that host countries report (per the Article 6.2 Guidance). TAB further noted that these linkages are consistent with TAB’s approach to assessing this criterion during previous assessment cycles. TAB’s recommendations from this assessment cycle, conveyed in Section 4 (September 2022), continue to reflect these linkages.

Double-claiming procedures

- 6.4.6 The EUC Guidelines state that written attestations from the host country (see Section 6.4.3 TAB Report September 2022) should “specify, and describe any steps taken, to prevent mitigation associated with units used by operators under CORSIA from also being claimed toward a host country’s national mitigation target(s) / pledge(s).” To that end, the Guidelines present three approaches for avoiding double-claiming:

⁸⁰ Decision 2/CMA.3, Annex, para. 16, 18(g), 20(a), 21(c)

- **Approach 1:** Emissions units are created where mitigation is not also counted toward national target(s) / pledge(s) / mitigation contributions / mitigation commitments.
 - **Approach 2:** Mitigation from emissions units used by operators under the CORSIA is appropriately accounted for by the host country when claiming achievement of its target(s) / pledges(s) / mitigation contributions / mitigation commitments, in line with the relevant and applicable international provisions.
 - **Approach 3:** If programme procedures provide for the use of method(s) to avoid double-claiming which are not listed above, the GMTF, or other appropriate technical expert body, should evaluate and make a recommendation regarding the sufficiency of the approach prior to any final determination of the programme's eligibility.
- 6.4.7 The Article 6.2 Guidance states that ITMOs are “generated in respect of or representing mitigation from 2021 onward”.⁸¹ It requires the host country to apply ‘corresponding adjustments’ consistently with the guidance for all ITMOs, whether or not the mitigation outcomes were generated from sectors and GHGs (and/or categories, in some cases⁸²) that covered by the host country’s NDC.⁸³ Corresponding adjustments are additions and subtractions that a country applies to the annual level of the indicator it uses to track progress and achievement of its NDC, e.g., the country’s annual GHG emissions level.
- 6.4.8 TAB noted that the application of corresponding adjustments consistent with the Article 6.2 guidance is required to prevent the same mitigation from being claimed toward both the host country’s NDC achievement and the airline’s CORSIA obligations. In this regard, TAB noted the following linkages between the Article 6.2 Guidance and the three approaches to avoiding double-claiming in the EUC Guidelines (Section 6.4.6 TAB report September 2022):
- 6.4.9 TAB noted that **Approach 1** cannot prevent double-claiming for emissions units with vintage years from 2021 onward, due to the Article 6.2 provisions described in para. 6.4.7 (TAB Report September 2022). TAB further noted that **Approach 1** remains valid for emissions units with vintage years through 2020, because the Article 6.2 Guidance does not apply to such units.⁸⁴
- 6.4.10 TAB noted that the Article 6.2 Guidance effectively requires the use of **Approach 2** for emissions units with vintage years from 2021 onward. TAB also noted that this Guidance contains “relevant and applicable international provisions” in line with Approach 2. TAB therefore noted that such emissions units must be “appropriately accounted for” consistent with the Article 6.2 Guidance, including through the host country’s application of corresponding adjustments.
- 6.4.11 Regarding **Approach 3**, TAB noted that the Article 6.2 Guidance does not provide for alternative methods for avoiding double-claiming against NDCs under the Paris Agreement. TAB therefore noted that this provision could potentially accommodate other accounting approaches that might be developed in the future, including in the Article 6 context.
- 6.4.12 TAB also noted that these linkages described above are consistent with TAB’s approach to assessing this criterion during previous assessment cycles, which are described in Criteria interpretations conveyed to Council in TAB’s reports of January 2020 and January 2021.⁸⁵ TAB’s recommendations from this assessment cycle, conveyed in Sections 4 (TAB Report September 2022), continue to reflect these linkages.

Comparing unit use against national reporting

⁸¹ Decision 2/CMA.3, Annex, para. 1(e).

⁸² Decision 2/CMA.3, Annex, para. 11.

⁸³ Decision 2/CMA.3, Annex, para. 13-14.

⁸⁴ Section 6.6.7 of TAB Report September 2022 discusses the eligibility of pre-2021 unit vintages beyond the CORSIA pilot phase.

⁸⁵ See January 2020 TAB Report, sections 4.3.5; and January 2021 TAB Report, section 4.4.

- 6.4.13 The EUC Guidelines state that “[t]he programme should have procedures in place to compare countries’ accounting for emissions units in national emissions reports against the volumes of eligible units issued by the programme and used under the CORSIA which the host country’s national reporting focal point or designee otherwise attested to its intention to not double-claim.”
- 6.4.14 Section IV of the Article 6.2 Guidance sets out the reporting requirements for countries’ accounting for ITMOs, including mitigation outcomes authorized for international mitigation purposes such as CORSIA (see section 6.3.1 TAB Report September 2022). The Guidance requires countries to provide copies of its authorizations in its Initial Report, which must be submitted no later than the country’s next due Biennial Transparency Report (BTR) and by the end of 2024.⁸⁶ The Guidance also requires countries to regularly submit quantitative information on the ITMOs they have first transferred, both in the ‘structured summary’ section of their BTR, as well as on an annual basis for recording in the Article 6 database.⁸⁷ These obligations are triggered upon the “first transfer” of a mitigation outcome authorized for international mitigation purposes, which the host country may specify as either (1) the authorization, (2) the issuance or (3) the use or cancellation of the mitigation outcome.⁸⁸ On these matters, Decision 2/CMA.3 also mandates further work in the UNFCCC process relating to the Article 6.2 Guidance, for which outcomes are expected at COP27, including formats, infrastructure and procedures for tracking, reporting and review.
- 6.4.15 TAB recalled its previous Criteria interpretations for the criterion Are only counted once towards a mitigation obligation, which it conveyed to Council in its reports of January 2020 and January 2021, including need for *thoroughness* and *specificity* in programme procedures.⁸⁹ TAB noted that these Criteria interpretations remain valid and relevant to comparing unit use against national reporting. Following the COP26 outcomes, TAB will interpret the EUC as indicating that programmes issuing CORSIA Eligible Emissions Units for mitigation that occurred from 2021 onward should incorporate more *thorough* and *specific* references to the Article 6.2 Guidance in future revisions to their procedures. In particular, programmes should have procedures in place to:
1. Specify the relevant “national emissions reports” that contain countries accounting for emissions units, including each report submitted by the host country in accordance with Section IV of the Article 6.2 Guidance;
 2. Address the relevant provisions of the Article 6.2 Guidance relating to the trigger and manner of application of corresponding adjustments⁹⁰; and,
 3. Compare the information on authorizations in national reports with the information on host country attestations made public by the emissions unit programme.
- 6.4.16 TAB will apply this interpretation for its recommendations regarding emissions units that should be eligible for use under CORSIA in years beyond its pilot phase (2021-2023), including in its ongoing re-assessment of Eligible Emissions Unit Programmes, which will inform TAB’s recommendations to the 228th ICAO Council.

Programme reporting on performance and Reconciliation double-claimed mitigation

- 6.4.17 The EUC Guidelines state that “the programme should be prepared to report to ICAO’s relevant bodies, as requested, *inter alia*, performance information relating to double claiming...” and “should have procedures in place for the programme, or proponents of the activities it supports, to

⁸⁶ Decision 2/CMA.3, Annex, para. 18 and 18(g)

⁸⁷ Decision 2/CMA.3, Annex, para. 20 and 23

⁸⁸ Decision 2/CMA.3, Annex, para. 2(b)

⁸⁹ See January 2020 TAB Report, sections 4.3.5; and January 2021 TAB Report, section 4.4.

⁹⁰ Decision 2/CMA.3, Annex, paras. 2(b), 8 and 23(d)

compensate for, replace or otherwise reconcile double-claimed mitigation associated with units used under the CORSIA...”. TAB noted that the COP26 outcomes do not directly implicate these two guidelines, but that they remain relevant for clarifying the roles, responsibilities and procedures needed to address instances of double-claiming in line with the EUC.

Section 4.4. in TAB Report January 2024

- 4.4.11 The criterion Only counted once towards a mitigation obligation states, among other things, that “[i]n order to prevent double claiming, eligible programs should require and demonstrate that host countries of emissions reduction activities agree to account for any offset units issued as a result of those activities such that double claiming does not occur between the airline and the host country of the emissions reduction activity.” There are several EUC guidelines for this criterion, including on *Double-claiming procedures*, *Transparent communications*, *Comparing unit use against national reporting*, *Program reporting on performance*, and *Reconciliation of double-claimed mitigation*. In successive TAB Reports approved by Council, TAB has communicated further Criteria interpretations to clarify how TAB applies this EUC and Guidelines in its assessments of emissions unit programmes.⁹¹
- 4.4.12 The EUC guideline on *Reconciliation of double-claimed mitigation* states that “[t]he programme should have procedures in place for the programme, or proponents of the activities it supports, to compensate for, replace, or otherwise reconcile double-claimed mitigation associated with units used under the CORSIA which the host country’s national accounting focal point or designee otherwise attested to its intention to not double-claim.” TAB noted that a programme would need to use these procedures when, in *Comparing unit use against national reporting*, it detects a discrepancy between the host country’s national reporting under the Paris Agreement and the emissions units issued by the programme that the host country has authorized for use by Aeroplane Operators under the CORSIA.
- 4.4.13 In its assessments to date, TAB has found that two programmes have procedures in place that fully demonstrate this criterion, including its guideline on *Reconciliation of double-claimed mitigation*. TAB has also found that some other programmes only partially demonstrated consistency with this guideline’s requirement to “compensate for, replace, or otherwise reconcile double-claimed mitigation”. In the latter cases, TAB could identify scenarios in which the programme, or the proponents of the activities it supports, could refuse – or be unable – to fully compensate for, replace or otherwise reconcile the double-claimed mitigation. These scenarios would leave the affected Aeroplane Operator liable for replacing units that it had purchased and cancelled in good faith.
- 4.4.14 In light of these considerations, TAB noted that, for all CORSIA-eligible emissions units generated in respect of mitigation that occurred in 2021 onward, programmes must have procedures in place that: require clear a commitment by the programme, or the proponents of the activities it supports, to compensate for, replace, or otherwise reconcile any double-claimed mitigation associated with that unit, and provide reasonable assurance that they have the capability to deliver on that commitment.
- 4.4.15 Ultimately, emissions unit programmes are the entities accountable to ICAO’s relevant bodies for the integrity of emissions units generated according to their procedures, including their performance on the avoidance of double claiming.

Section 4. in TAB Report - August 2024

⁹¹ See section 3.7 of TAB’s Jan. 2020 Report; section 4.4 of TAB’s Jan. 2021 report; and section 6.4 of TAB’s Sept. 2022 report.

Guideline: Comparing unit use against national reporting

- 4.4.6.1 The Guideline *Comparing unit use against national reporting* states that “[t]he programme should have procedures in place to compare countries’ accounting for emissions units in national emissions reports against the volumes of eligible units issued by the programme and used under the CORSIA which the host country’s national reporting focal point or designee otherwise attested to its intention to not double-claim.”
- 4.4.6.2 As noted in section 6.5.14 of TAB’s September 2022 Report to Council, the host country’s national reporting obligations are triggered upon the “first transfer” of a mitigation outcome authorized for international mitigation purposes, which the host country may specify as either (1) the authorization, (2) the issuance or (3) the use or cancellation of the mitigation outcome.⁹² Section IV of the Article 6.2 Guidance requires host countries to report information at specific intervals on the mitigation outcomes they have first transferred, including in the Initial report; Annual information, and the Biennial Transparency Report.
- 4.4.6.3 TAB noted that a programme’s procedures for *Comparing unit use against national reporting* would typically cover the time period from when a CORSIA-eligible unit was “first transferred” until the Programme has verified that that the unit is correctly reflected in the quantities of mitigation outcomes and corresponding adjustments reported pursuant to paragraph 23(a) to (k) of the Article 6.2 Guidance (Annex to Decision 2/CMA.3).
- 4.4.6.4 TAB considered the possibility that a host country might then attempt to undo its corresponding adjustment in a subsequent BTR, e.g., in the BTR that covers the end year of the NDC implementation period and determines whether or not the country has achieved its NDC.⁹³ TAB noted that these ‘final’ BTRs will not be due until 2032 and are subject to an Article 6 Technical Expert Review, which should be able to detect any time-series inconsistencies. TAB concluded that such inconsistencies could be addressed on a case-by-case basis at that time.
- 4.4.6.5 In light of these considerations, TAB resolved to continue to apply the EUC in the manner described in its Criteria interpretations, to further clarify these interpretations where appropriate, and to monitor ongoing developments, including in the Article 6 context. TAB also resolved to re-assess the implementation of this Guideline no later than during its 2032 re-assessment cycle, which would inform its recommendations on eligible unit programmes for the 2033-2035 compliance period.

Guideline: Reconciliation of double-claimed mitigation

- 4.4.6.6 The EUC guideline on *Reconciliation of double-claimed mitigation* states that “[t]he programme should have procedures in place for the programme, or proponents of the activities it supports, to compensate for, replace, or otherwise reconcile double-claimed mitigation associated with units used under the CORSIA which the host country’s national accounting focal point or designee otherwise attested to its intention to not double-claim.” In C-DEC 231/2 (11 March 2024), Council approved a recommendation by the CAEP to further specify that this Guideline applies “including in the instance that the application is withdrawn.”
- 4.4.6.7 In section 4.4.13 to 4.4.14 of its January 2024 report to Council, TAB discussed the status of implementation of this Criterion by emissions unit programmes:
- “In its assessments to date, TAB has found that two programmes have procedures in place that fully demonstrate this criterion, including its guideline on *Reconciliation of double-claimed mitigation*. TAB has also found that some other programmes only partially demonstrated consistency with this guideline’s requirement to ‘compensate for, replace, or otherwise reconcile double-claimed

⁹² Decision 2/CMA.3, Annex, para. 2(b)

⁹³ Decision 2/CMA.3, Annex, para. 23(l).

mitigation.’ In the latter cases, TAB could identify scenarios in which the programme, or the proponents of the activities it supports, could refuse – or be unable – to fully compensate for, replace or otherwise reconcile the double-claimed mitigation. These scenarios would leave the affected Aeroplane Operator liable for replacing units that it had purchased and cancelled in good faith.”

Responsibility to reconcile double-claiming

- 4.4.6.8 During TAB’s 2024 assessment cycle, some applicant programmes proposed to prevent double-claiming by removing or declining to apply a CORSIA-eligibility label *before* the unit is cancelled for use in the relevant CORSIA compliance period. Under this approach, once a programme determines that the host country is unable or unwilling to apply a corresponding adjustment, the programme would at least temporarily prevent the unit(s) cancellation for use in CORSIA and the affected Airline Operator would need to find replacement units to meet its CORSIA obligations. TAB determined that such an approach would not be consistent with decisions by Council.
- 4.4.6.9 Emissions Unit Programmes do not have the discretion to unilaterally narrow their Scope of CORSIA-eligibility for a given compliance period. Rather, the *Convention on International Civil Aviation* defines CORSIA Eligible Emissions Units as “those units described in the ICAO document titled “CORSIA Eligible Emissions Units”⁹⁴ As noted in that document, “[t]he programme must provide for and implement its registry system to identify its CORSIA eligible emissions units *as defined in this document*.”⁹⁵ (Emphasis added) The programme is also required to cancel any such units for the purpose of offsetting requirements under the CORSIA within 1–3 business days of receiving a cancellation request from an Aeroplane Operator or their designated account holder.⁹⁶
- 4.4.6.10 In accordance with C-DEC 222/10 (March 2021), if a programme wishes to “initiate a phase-out of, or cessation of support for, a methodology or activity type that was explicitly permitted in the programme’s Scope of Eligibility, and for which a phase-out of, or cessation from, use in CORSIA may also be appropriate”, then this is considered a “a non-severe programme development” that must be reported to TAB as a material change.⁹⁷ Any resulting narrowing of the programme’s *Scope of Eligibility* applies “from the start of the next three-year compliance period”, such that the affected units remain “valid and eligible for use to meet CO2 offsetting requirements under the compliance period that was active at the time.” In such cases, the programme’s responsibilities under the Guideline *Reconciliation of double-claimed mitigation* continue to apply until all reporting for that compliance period is complete.⁹⁸
- 4.4.6.11 If any emissions unit within a programme’s *Scope of Eligibility* for a particular CORSIA compliance period cannot be cancelled for use in that compliance period, for reasons relating to double-claiming, then the Guideline on Reconciliation of double-claimed mitigation does apply.⁹⁹ TAB recalled for emphasis that this Guideline clearly and explicitly assigns responsibility

⁹⁴ Convention on International Civil Aviation, Annex 16, Volume IV, Chapter 4, paragraph 4.2.1

⁹⁵ ICAO document ‘CORSIA Eligible Emissions Units’

⁹⁶ *Emissions Unit Programme Registry Attestation*, section 7.4 – 7.5.

⁹⁷ Appendix C to C-WP/15158, paras. 1.1 b), adopted by Council per C-DEC 222/10.

⁹⁸ Appendix C to C-WP/15158, paras. 2.1, adopted by Council per C-DEC 222/10.

⁹⁹ For further clarity, the requirement for programmes to reconcile double-claimed mitigation issued as CORSIA-eligible units only applies for units used in the same CORSIA compliance period for which they are eligible. It does not necessarily apply to other use cases where the same unit’s eligibility has yet to be determined, *e.g.*, future CORSIA compliance periods, or that are not governed by ICAO.

to “the programme, or proponents of the activities it supports” and not to Aeroplane Operators.¹⁰⁰

Use of third-party guarantees

4.4.6.12 In section 4.4.14 of TAB’s January 2024 report to Council, TAB noted that, for all CORSIA-eligible emissions units generated in respect of mitigation that occurred in 2021 onward, programmes must have procedures in place that:

require clear a commitment by programme, or proponents of the activities it supports, to compensate for, replace, or otherwise reconcile any double-claimed mitigation associated with that unit, and
provide reasonable assurance that they have the capability to deliver on that commitment.

4.4.6.13 In this context, TAB noted a recent proliferation of insurance products designed to ‘guarantee’ that a carbon credit will remain valid and not be double claimed by the host country.¹⁰¹ These products commit to pay monetary or in-kind compensation to the policy beneficiary for events affecting a unit’s integrity or market eligibility, such as a host country being unwilling or unable to apply a corresponding adjustment to prevent double-claiming. Although the Guideline assigns responsibility to the programmes to reconcile double-claimed mitigation associated with CORSIA-eligible units (or ensure that their activity proponents are required and able to do so), such insurance products may, in some cases, help the programme provide reasonable assurance of their capability to reconcile double-claimed mitigation, in line with the Criteria interpretation in section 4.4.14 of TAB’s January 2024 report to Council.

4.4.6.14 TAB noted for emphasis that it only assesses emissions unit programmes, and that third-party guarantees/insurance are not strictly necessary to prevent double-claiming. However, when a programme’s procedures allow for the use of third-party insurance/guarantees in relation to this Guideline, the programme should have procedures in place to require and confirm that such products, among other things:

1. Cover all units that have *Eligible Unit Dates* within the relevant CORSIA compliance period, to which the host country Letter of Authorization applies,
2. The coverage is effective from when the Programme applies a CORSIA-eligibility labels to the emissions units, at least until the Programme has verified that the corresponding adjustments were applied for all units used in the relevant CORSIA compliance period (see section 4.4.6.13 above),
3. Be underwritten by a highly reputable third party that is not affiliated with the host country government or the project proponents of the activity;
4. Should remit either a CORSIA-eligible unit (in kind), or a cash amount sufficient for the programme or the activity proponents to purchase a CORSIA-eligible unit at the time it is needed.

¹⁰⁰ For an introduction to the concept of assigning liability, see World Bank Group, “A guide to developing domestic carbon crediting mechanisms”, *Partnership for Market Readiness* (2021), section 10.2.1 (page 97-98).

¹⁰¹ For example, AXA XL, Howden Group, Kita Earth Limited, Oka the Carbon Insurance Company, the World Bank Multilateral Investment Guarantee Agency, *etc.*

4.4.6.15 In any case, the programme must have procedures in place to ensure that a CORSIA-eligible unit was indeed cancelled to reconcile the double-claimed mitigation from the perspective of the atmosphere. Emissions unit programmes (not Aeroplane Operators) are the entities accountable to ICAO's relevant bodies for the integrity of emissions units generated according to their procedures, including their performance on the avoidance of double claiming.

Criterion: Carbon offset credits must represent emissions reductions, avoidance, or carbon sequestration from projects that do no net harm (paragraph 3.8)²

Section 6 in TAB Report - September 2022

- 6.5.1 TAB noted that there are linkages between the Article 6.2 Guidance and the criteria Safeguards System, Sustainable development criteria and Do no net harm. These criteria state, among other things, that programmes should have in place and publicly disclose safeguards to address environmental and social risks, sustainable development criteria used and any provisions for monitoring, reporting and verification; not violate any applicable laws or regulations; and publicly disclose which institutions, processes and procedures are used to implement, monitor and enforce such safeguards.
- 6.5.2 The Article 6.2 Guidance requires countries to “[d]escribe how each cooperative approach will ... minimize and, where possible, avoid negative environmental impacts; reflect the eleventh preambular paragraph of the Paris Agreement (e.g., various rights, Indigenous peoples, people in vulnerable situations, gender equality, etc.); [b]e consistent with the sustainable development objectives of the Party, noting national prerogatives; and apply any safeguards and limits...” The Article 6.4 RMP also include various references safeguards, tools, requirements, processes and actions relating to these matters, many of which will require further development and implementation by the Supervisory Body in the years to come (Section 6.3.7, TAB Report 2022).
- 6.5.3 TAB noted that the novel language in the Article 6 outcomes on these matters is of similar stringency to the EUC; it could be interpreted as more stringent in some areas and less stringent in other areas. TAB also noted that some emissions unit programmes already have detailed procedures in place relating to these matters, which have been assessed by the TAB to meet or exceed the EUC, and some programmes are also considering possible updates in light of the COP26 outcomes. TAB resolved to continue to apply the EUC in the manner described in its Criteria interpretations, to further clarify these interpretations where appropriate, and to monitor these ongoing developments, including in the Article 6 context.

Criteria: Multiple

Section 4 in TAB Report – August 2024

- 4.4.2.1 Carbon dioxide removal (CDR) activities are designed to remove CO₂ from the atmosphere and store it durably in, geological, terrestrial, or ocean reservoirs, or in products.
- 4.4.2.2 Several CDR activity types are already widely practiced, including in carbon credit markets, namely afforestation, reforestation, some improved forest management, agroforestry and soil carbon sequestration.¹⁰² Experiences with these activity types have informed best practices for quantification, monitoring, reporting and verification of CO₂ removals, as well as for applicable

¹⁰² IPCC AR6 WGIII SPM para C.11.1, last sentence.

laws and regulations; environmental and social safeguards; procedures to address risks of non-permanence and carbon leakage; etcetera. These experiences and best practices informed existing international rules and guidelines, including the CORSIA Emissions Unit Criteria, the IPCC Guidelines for National Greenhouse Gas Inventories, and decisions adopted under the UNFCCC and its related legal instruments, including Articles 4, 6 and 13 of the Paris Agreement.

- 4.4.2.3 During its 2024 assessment cycle, TAB assessed a few emissions unit programmes that focus primarily on novel carbon dioxide removal (CDR) methods, for example: biochar, direct air capture with carbon capture and storage (DACCS), bioenergy with carbon capture and storage (BECCS), enhanced weathering (EW), ‘blue carbon management’¹⁰³, ocean fertilization and ocean alkalinity enhancement (OAE). Some other emissions unit programmes are also beginning to develop methodologies and projects for some of these types of activities.
- 4.4.2.4 TAB noted that the CORSIA Emissions Unit Criteria and Guidelines are relevant for these novel CDR activity types and discussed some possible particularities regarding their application. For example, TAB noted possible intersections with the criteria Safeguards system, No net harm, Carbon offset credits must be quantified, monitored, reported, and verified, Realistic and credible baselines, Permanence, Leakage, and Only counted once towards a mitigation obligation. TAB also noted that, for some novel CDR activity types, existing examples of demonstration-scale activities are few and only very recent, such that international rules and best practices remain in a state of evolution. TAB also noted that novel CDR demonstration activities typically have high costs, such that they are unlikely to displace more established activity types in the near term.
- 4.4.2.5 In this regard, TAB discussed the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report (2023), which notes that “the deployment of CDR to counterbalance hard-to-abate residual emissions is unavoidable if net zero CO₂ or GHG emissions are to be achieved.” The report also notes that “[e]nablers of CDR include accelerated research, development and demonstration, improved tools for risk assessment and management, targeted incentives and development of agreed methods for measurement, reporting and verification of carbon flows.”¹⁰⁴
- 4.4.2.6 The IPCC, at its 60th session (January 2024), requested its Task Force on National Greenhouse Gas Inventories to develop a new *Methodology Report on Carbon Dioxide Removal Technologies, Carbon Capture Utilization and Storage* by 2027, as part of the IPCC’s Seventh Assessment Cycle. The Task Force aims to, among other things, identify gaps relating to CDR activities within the *2006 IPCC Guidelines on National GHG Inventories* and/or identify areas where elaboration of the Guidelines would be desirable.
- 4.4.2.7 In light of these considerations, TAB resolved to continue to apply the EUC in the manner described in its Criteria interpretations, to further clarify these interpretations where appropriate, and to monitor ongoing developments, including in the Article 6 context and the IPCC’s Methodology Report.

— END —

¹⁰³ This is distinct from peatland and coastal wetland restoration, which is already widely practiced.

¹⁰⁴ IPCC AR6 WGIII SPM para C.11 first sentence and C.11.1, first sentence.