

Lessons learned from the first round of applications by carbon-offsetting programs for eligibility under CORSA

Berlin / Zürich /
Seattle
October 2019

Authors

Dr. Lambert Schneider (Oeko-Institut e.V.)
Dr. Axel Michaelowa (Perspectives Climate Group)
Derik Broekhoff (Stockholm Environment Institute)
Aglaja Espelage (Perspectives Climate Group)
Anne Siemons (Oeko-Institut e.V.)

Head Office Freiburg

P.O. Box 17 71
79017 Freiburg
Street address
Merzhauser Strasse 173
79100 Freiburg
Tel. +49 761 45295-0

Office Berlin

Schicklerstrasse 5-7
10179 Berlin
Tel. +49 30 405085-0

Office Darmstadt

Rheinstrasse 95
64295 Darmstadt
Tel. +49 6151 8191-0

info@oeko.de
www.oeko.de

Partner



On behalf of:



of the Federal Republic of Germany



Implemented by



Impressum

Publisher: Öko-Institut / Perspectives / Stockholm Environment Institute

Editors and

Project Management: Anne Gläser (GIZ), Enrico Rubertus (GIZ),
Dennis Tänzler (adelphi), Denis Machnik (adelphi)

Authors: Dr. Lambert Schneider, Dr. Axel Michaelowa, Derik Broekhoff,
Aglaja Espelage, Anne Siemons

Date: 30 October 2019

This paper has been commissioned by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) and by ClimateWorks Foundation.

Disclaimer

The analysis, results and recommendations in this paper, funded by the Federal Ministry of the Environment, Nature Conservation and Nuclear Safety (BMU) and ClimateWorks Foundation, represent the opinion of the authors and are neither necessarily representative of the position of the funders nor of the Gesellschaft für Internationale Zusammenarbeit (GIZ GmbH).

Acknowledgements

The authors wish to thank Aki Kachi and Randall Spalding-Fecher for their comments to a draft version of this paper. Needless to say, this does not imply that they endorse the analysis or recommendations included in the publication.

© 2019 Öko-Institut, Perspectives, Stockholm Environment Institute

Perspectives Climate Group

Hugstetter Str. 7
79106 Freiburg
Germany
Phone +49 761 76695560

Stockholm Environment Institute U.S.

11 Curtis Avenue,
Somerville, MA 02144-1224
United States
Phone +1 617 627-3786

Table of Contents

Summary	5
1. Introduction	7
2. Cross-cutting issues	7
3. Additionality	9
4. Baselines	10
5. Addressing non-permanence	11
6. Avoiding double counting	13
7. No net harm	16
8. Conclusions	16
9. References	17
Appendix: Comments submitted to ICAO	18

Summary

In 2016, the International Civil Aviation Organization (ICAO) adopted the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). The scheme requires participating airline operators to purchase carbon offset credits to compensate for the increase in their carbon dioxide emissions from international flights above 2019/2020 levels.

This paper synthesizes key lessons learned from an assessment of the first 14 applications of carbon-offsetting programs for eligibility under CORSIA, focussing on five out of eight eligibility criteria established by ICAO. The evaluation shows that the degree to which the applicants satisfy the ICAO requirements differs substantially. Some applicants hardly meet any of the requirements and may not even be considered carbon-offsetting programs. However, there are also notable differences in relation to specific criteria.

With regard to ensuring additionality and establishing baselines, key shortcomings are that many programmes apply approaches that do not guarantee environmental integrity of the generated credits. Not all programs regularly reassess whether their approaches are still appropriate in the light of new circumstances, such as lower costs of renewable energy technologies, and programs may still need to update their approaches for assessing additionality and establishing baselines in the light of the new context of the Paris Agreement. Some programs also do not require an independent third-party assessment of baseline methodologies. Most programs do not yet have procedures in place or planned for avoiding double counting between CORSIA and nationally determined contributions (NDCs) under the Paris Agreement. However, a few programs are in the process of implementing detailed procedures, based on voluntary [Guidelines](#) developed by a multi-stakeholder group. To address non-permanence, most programs use "buffer" approaches. The duration for which non-permanence is ensured, the avoidance of moral hazard risks of intentional reversals, and the "capitalization" of buffers vary considerably among programs. The Clean Development Mechanism's provisions to address non-permanence were in principle robust but do no longer work, given that the Kyoto Protocol will not have a third commitment period. Lastly, only two programs have a process in place which requires the assessment of environmental and social risks, the adoption of safeguards, and the monitoring and reporting on risks.

The paper also identifies several cross-cutting issues. First, we recommend that ICAO only approve programs as eligible for CORSIA once programs have amended their standards and procedures to fulfil *all* criteria. Second, the evaluation identified that ICAO still needs to clarify several matters that are not explicitly addressed in current criteria, such as what global warming potentials programs should use to convert non-CO₂ emissions into CO₂ equivalents; whether offset credits will be eligible if the host country does not participate in the Paris Agreement; with what type of international mitigation targets double counting must be avoided; and the treatment of emission reductions not covered by NDCs. Clear international rules on these matters would greatly facilitate the approval of programs and the implementation of CORSIA. Third, we recommend that ICAO adopts a transparent procedure for the initial approval, ongoing supervision, re-approval, suspension and termination of eligibility of programs. This procedure could also address the insufficient level of information in current applications, by requiring programs to provide more detailed information. Lastly, we recommend that the Parties to the Paris Agreement include specific provisions in the international rules on Article 6 for how countries should account for offset credits used under CORSIA.

1. Introduction

In 2016, the International Civil Aviation Organization (ICAO) adopted the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). The scheme requires participating airline operators to purchase carbon offset credits to compensate for the increase in their carbon dioxide emissions from international flights above 2019/2020 levels. Over its operational period from 2021 to 2035, the scheme could generate a demand for about 1.6 to 3.7 billion offset credits (Healy, 2017).

In 2019, the ICAO Council adopted Emission Unit Eligibility Criteria (EUCs) which specify the requirements that must be fulfilled for carbon offset credits to be eligible under CORSIA (ICAO, 2019). Carbon-offsetting programs need to fulfil these criteria and be approved by the ICAO Council as eligible programs. The ICAO Council also set up a Technical Advisory Body (TAB) and tasked it with evaluating whether carbon-offsetting programs satisfy the EUCs and making recommendations on their approval to the Council. In June 2019, the first window for applications by carbon-offsetting programs was opened. The TAB also published further information, including guidelines for interpretation of the EUCs and application forms. In total, 14 programs and entities responded to the call and submitted information to the TAB.

This paper synthesizes key lessons learned from an assessment of the first round of applications by carbon-offsetting programs for eligibility under CORSIA. The paper is based on a detailed evaluation of the 14 program applications and focuses on five out of the eight 'Carbon Offset Credit Integrity Assessment Criteria'. These include that "offset credit programs should deliver credits that represent emission reductions, avoidance or sequestration that: which we consider particularly important deemed particularly important EUCs:

1. Are additional (section 3);
2. Are based on a realistic and credible baseline (section 4);
3. Represent permanent emission reductions (section 5);
4. Are only counted once towards a mitigation obligation (section 6); and
5. Do no net harm (section 7)."

The paper first identifies cross-cutting and procedural issues observed with the applications (section 2) and then synthesises the lessons learned for each of the five criteria above (sections 3 to 7). This is followed by brief conclusions (section 8). This paper does not include an assessment of specific programs but rather summarizes general observations from the evaluation of the 14 program applications. Specific comments to program applications were provided by the authors as part of public comments submitted to ICAO and are attached to this paper in the Appendix.

The evaluation of programs and this synthesis paper are co-funded by Gesellschaft für Internationale Zusammenarbeit (GIZ) based on funding from the German Environment Ministry and by ClimateWorks Foundation.

2. Cross-cutting issues

The evaluation of the 14 program applications revealed several cross-cutting issues:

- **Need for a transparent procedure for program approval, program surveillance, and termination of program eligibility.** The current application process for carbon-offsetting programs does not seem to follow any publicly available procedure. We recommend that the TAB develops a clear and transparent procedure for the initial establishment of program eligibility, the subsequent continuous surveillance of programs in relation to their performance against the EUCs, as well as procedures for suspension or termination of program eligibility if the programs do not continue to meet all requirements. This procedure should be publicly available and public comments should be invited on the procedure prior to its final adoption. As carbon-offsetting programs regularly change or amend their program requirements, we recommend that initial eligibility is established for a limited duration and regularly re-assessed, and that the procedure establishes means to ensure that programs continue to satisfy all EUCs. If a program no longer satisfies the EUCs, ICAO should suspend or terminate its eligibility and determine the conditions for re-establishing eligibility.
- **Timing of approving programs as CORSIA eligible:** None of the carbon-offsetting programs currently have standards and procedures in place that address all EUCs. This is understandable, given the adoption of the EUCs by the ICAO Council just recently in February 2019, and the new context of CORSIA and the Paris Agreement. Many programs claim that they will address requirements in the future. This raises questions for the timing of the approval of programs by ICAO. We believe that it is essential that programs are not approved based on "plans" to fulfil requirements in the future, but only once they have adopted all necessary amendments to their standards, procedures, guidelines, forms and program operations, and only after these amendments have been assessed by the TAB. This also raises timing issues for programs, as amendments to standards and procedures that specifically target CORSIA should only become effective once the program is CORSIA eligible. To address this, the TAB could require that programs *adopt* any necessary amendments to their standards and procedures before their final evaluation by the TAB but *confirm* the date of their entry into force only once they have been approved as CORSIA eligible.
- **Lack of sufficient information to inform public comments.** Some programs do not include any substantive information on how they plan to meet a criterion in the future. We recommend the TAB to make any further information provided by the applicants in the course of the application process publicly available and to launch a second call for public comments once the programs have prepared amendments to their standards and procedures in order to satisfy the EUCs. Moreover, a procedure for the application of programs, as recommended above, could address the insufficient level of information in current applications, by specifying more clearly what detail of information should be provided in program applications.
- **Lack of guidance on values for global warming potentials (GWPs).** ICAO has not established a requirement regarding what GWP values programs should use to convert non-CO₂ emission reductions/removals into CO₂ equivalents. If different programs use different GWP values under CORSIA, this could have two adverse outcomes. First, this could create a risk that project owners pick the program which results in higher CO₂ equivalents of emission reductions, depending on which gases are abated. In aggregate, this could lead to higher emission reduction claims compared to a situation where all programs use the same GWP values, and thus undermine the integrity of CORSIA. Second, as the same emission reduction would have a different value under different programs, this could distort the market. We recommend that ICAO clarifies what GWP values programs should use for which relevant time periods (up to 31 December 2020 and as of 1 January 2021). Following relevant decisions under the Kyoto Protocol and the Paris Agreement, we recommend that ICAO clarifies that programs should use the 100-year time-horizon values from the 4th assessment report of the Intergovernmental

Panel on Climate Change (IPCC) for emission reductions or removals that occur before 1 January 2021 (if such emission reductions are deemed eligible in accordance with relevant decisions on vintage and timeframe) and the values from the 5th assessment report for emission reductions or removals that occur on or after 1 January 2021.

- **Need to restrict applications to actual carbon-offsetting programs.** The applicants Myclimate, REDD.plus and the State Forests of the Republic of Poland do not have some of the basic features of carbon-offsetting programs, such as procedures for the approval of projects and issuance of carbon market units, managing protocols for the quantification of emission reductions, and operating or accessing a registry system. Similarly, the Forest Carbon Partnership Facility is a fund that supports programs that may generate carbon certificates but lacks key elements of a full carbon-offsetting program.
- **Lack of a procedure to qualify offset credits for use under CORSIA.** Offset credits issued by carbon-offsetting programs are often used for multiple purposes. In some instances, these different uses may involve different requirements than those under CORSIA. For the integrity of CORSIA it is important that programs distinguish units that meet all CORSIA requirements from those that do not meet these requirements. To address this matter, all programs that intend to issue, or have already issued, offset credits for which not all EUCs and other relevant decisions under ICAO (such as decisions on the eligible vintage and timeframe of offset credits) are initially satisfied should establish a procedure under which project owners or offset credit holders can request that offset credits be qualified for meeting offsetting requirements under the CORSIA.

3. Additionality

The requirement of additionality means that eligible offset credit programs should clearly demonstrate that the program has procedures in place to assess/test for additionality of the activities for which credits are issued, and that those procedures provide reasonable assurance that the emission reductions or emission avoidance would not have occurred in the absence of the offset program. There are different approaches used to test additionality that differ in the degree they provide the required assurance.

Some programmes test additionality through investment analysis tests, in particular those that apply CDM rules for additionality assessment. These tests, which have been refined over the years, have the advantage that they take the specific economic circumstances of an activity into account, but they also face the challenge of information asymmetry between project owners and regulators. Very few standards rely solely on barrier analysis and common practice tests, which can be considered insufficient in many cases if applied without investment analysis.

Recently, standardization of additionality assessment through benchmarks, positive lists or eligibility criteria has gained ground for some technologies under the CDM, and some programs only use standardized approaches to test additionality. These approaches were introduced to address concerns raised with the investment analysis, in particular the ability of project owners to “game” additionality determinations by exploiting information asymmetries and uncertainty of assumptions on future developments of key parameters such as fuel costs. However, standardized approaches have serious disadvantages: any form of standardization needs to be either highly conservative or updated regularly (for instance every 3-5 years, but this should be determined on a technology-specific level) to account for technology developments within the respective regional or national circumstances in which the offset activities are being implemented. For instance, under the CDM, some positive lists became less conservative over time and their non-revision led to the automatic

eligibility of renewable energy projects, whose additionality became more questionable after costs of renewable energy technologies had fallen substantially. Most applicants do not address this issue, but some programs are in the process of narrowing the scope of eligible activities to address the falling costs of some technologies. We recommend that programs should have procedures in place that ensure that any standardized additionality approaches are regularly updated to reassess whether relevant circumstances affecting the additionality have changed.

In general, additionality testing, but also baseline calculation, is heavily influenced by the overall context of the international climate policy regime. This was particularly true for the issue of consideration of national mitigation policies during the Kyoto Protocol era, as non-Annex B Parties did not have emission targets. Under the CDM, the so-called “E+/E-“ rules were adopted to avoid a perverse incentive for host country governments not to implement mitigation policies in order to protect CER revenues.¹ The application of this rule, however, led to the registration of some projects which would have been deemed non-additional if national policies (e.g. national renewable energy feed-in-tariffs) had been taken into account, and it was therefore subject to criticism.

As all countries now have NDCs to achieving the Paris Agreement objectives, all host country policies and measures should be taken into account in additionality determination. The precise rules for assessing additionality in the context of NDCs and related national policies and measures are still subject to international negotiations. However, it is clear that the paradigm shift from a bifurcated climate regime to one in which all countries make contributions through their NDCs should affect the international rules for the assessment of additionality (Michaelowa, Hermwille, Obergassel, & Butzengeiger, 2019). Depending on the rules to be adopted for additionality assessment in the context of Article 6 of the Paris Agreement, additionality testing rules of CORSIA eligibility programs should be re-evaluated and harmonized. Most probably, additionality assessment will take into account implemented policies, but maybe even planned policies.

4. Baselines

There are different approaches to baseline setting that are appropriate in different contexts. When assessing baseline requirements of carbon-offsetting programs at a general level, a necessary condition for credibility is that the baseline methodologies are approved following independent third-party assessment and are accompanied by full public transparency regarding the assumptions and parameters used to establish baselines.

Several program applications, mostly those that build to a large extent on CDM rules, have a clear and detailed process in place and provide for the necessary transparency. However, this is not the case for all applications, and some do not provide public information on the process in their application nor on their websites. Also questionable are “fast track procedures” for the approval of methodologies from other (including non-UNFCCC) carbon-offsetting programs. If these methodologies are not developed in the context of full transparency and third-party assessment, this introduces the risk of increased use of non-conservative baseline methodologies across different programs. In addition, some applicants do not publish their methodologies in English, which limits transparency in an international context.

¹ When establishing baselines, policies that provide a comparative advantage to more emission-intensive technologies (E+) were only taken into account if their adoption predated the adoption of the Kyoto Protocol in 1997. Policies that provided a comparative advantage to less emission-intensive technologies (E-) were only taken into account if adopted prior to the adoption of the Marrakech Accords in 2001. This rule is also referred to in the additionality tool of the CDM but the meaning of the reference has been interpreted in different ways over time and has been subject to considerable debate.

All types of standardized baselines must be subject to regular updates in order to reflect developments in economic, technological or other circumstances in a global, regional or country-specific context. This is however only addressed by very few applicants and in some cases, lack of regular updates has led to significantly less conservative baseline methodologies, at least if compared to the development of baseline setting for large-scale projects under the CDM.

Similar to additionality assessment, a decision on the principles for the establishment of baselines is expected to be taken under Article 6 of the Paris Agreement, at least in the context of the Article 6.4 mechanism. In the medium term, baseline setting rules for eligible offsets under CORSIA should be harmonized with UNFCCC requirements.

5. Addressing non-permanence

Because offset credits will be used to compensate for emissions that will effectively raise atmospheric concentrations of CO₂ for many thousands of years, they should be associated with emission reductions or removals that are similarly permanent. If an emission reduction or removal is “reversed” (e.g., subsequently emitted so that no net reduction occurs), then it can no longer function as an offset. This is primarily a concern for sequestration or carbon-storage in the land-use sector (Schneider, Conway, Kachi, & Hermann, 2018).

Of the candidate programs that issue credits for reversible reductions/removals, most use a pooled “buffer reserve” to address the risk of reversals. Under this approach, offset credits are set aside from individual projects into a common buffer reserve, which can be drawn upon to cover reversals from any project. Although buffer reserves are a common mechanism for addressing permanence, they have some potential shortcomings:

1. *Buffer reserves only guarantee permanence for a limited time period.* No risk can be insured against in perpetuity, including reversal risks (i.e. over the very long run, the chance of reversal for any given project approaches 100%). Programs adopting buffer reserves are therefore implicitly or explicitly transferring an obligation to maintain carbon storage (or compensate for reversals) to future decisionmakers (Murray, Galik, Mitchell, & Cottle, 2012). From a policy standpoint, the question is what sort of *minimum guarantee* is sufficient to deem an emission reduction “permanent.” As a convention, international policymakers have adopted 100 years as a standard benchmark for evaluating the climate impacts of mitigation actions (Fearnside, 2002). This is the basis, for example, for using 100-year global warming potentials (GWPs) to convert quantities of non-CO₂ emissions into CO₂-equivalent emissions. The same benchmark should be used for evaluating the “permanence” of carbon offsets used by the aviation industry. However, only two of the programs that submitted applications – British Columbia and Climate Action Reserve – provide a minimum guarantee of compensating for reversals for 100 years or more. Other programs guarantee permanence for shorter periods of time, have shorter monitoring periods, and/or are vague about their guarantees. We recommend that programs should only be approved if their procedures and standards ensure permanence for 100 years or more. This includes that monitoring of any reversals should continue throughout this period and that appropriate mechanisms are in place to compensate for potential reversals if monitoring is no longer conducted.

Related to this, a larger question is what the recourse may be in situations where programs with 100-year permanence guarantees cease operation before these obligations are fulfilled. This could be a particular concern with programs administered by private companies or non-governmental organizations. This is something that should be further explored by ICAO in the context of CORSIA. Possible solutions, for example, could be the establishment of public trust-

teeships (e.g., at a national level, or administered by ICAO) to manage buffer reserves and enforce legal obligations against intentional reversals; assumption by governments of ultimate liability or trusteeship responsibilities; or other forms of collective (re)insurance.

2. *Buffer reserves are not sufficient (by themselves) to address the risk of intentional, human-caused reversals.* Buffer reserves could be effective at compensating for reversals due to natural disturbance risks, such as fire, disease, or drought affecting forests and soils. They can present a “moral hazard” problem, however, if used to compensate for human-caused reversals, such as intentional harvesting. If a landowner faces no penalty for harvesting trees for their timber value, for example – because any reversals caused by harvesting would be compensated out of a buffer reserve – then the landowner could face a strong incentive to harvest. Such perverse incentives can make a buffer reserve approach unviable, unless programs use alternative mechanisms or penalties to cover “intentional” or “avoidable” reversals. At least two of the applying programs either do not explicitly address this distinction or apply approaches that are insufficient to address the “moral hazard” problem. We recommend that programs are only approved if they have robust penalties and procedures in place to address “moral hazard” risks.
3. *Buffer reserves must be sufficiently “capitalized” to cover reversal risks over time.* As with any kind of insurance, buffer reserves can only be effective at guaranteeing permanence if they are sufficiently “capitalized” to cover reversal risks over time. Only two of the applicants provided explicit quantitative information indicating that their buffer reserves are sufficiently large to cover possible reversal events, including catastrophic losses across multiple projects. Given the potential volume of demand for carbon offsets that may arise under CORSIA, it is important to ensure that the buffer reserves of approved programs are robust. We recommend that rigorous stress testing of the applicants’ buffer reserves be conducted prior to approval by ICAO, and that such stress testing be conducted on a regular basis as CORSIA progresses. Stress testing should demonstrate that buffer reserves are sufficient to cover potential catastrophic events, taking into account the geographical locations of projects.

Another issue that can arise with buffer reserves is the possible mixing of credits from different project *types* in reserve pools, including project types not subject to reversal risks. This can bolster the effectiveness of buffer reserves, because at least some of the buffer will not be subject to reversal (as it could be if only AFOLU-project credits are used). On the other hand, this could create the risk that credits not eligible under CORSIA could be used to compensate for the reversal of credits that *are* CORSIA-eligible. Program approval should be conditional on having procedures in place to ensure that ineligible credits are not used to compensate for reversals of CORSIA-eligible credits.²

Finally, it should be noted that the CDM addresses permanence for afforestation/reforestation (A/R) projects through an entirely different mechanism: temporary (expiring) credits. Under this approach, offset credits expire after a predefined period and must be replaced with other units issued under the Kyoto Protocol (this holds for both tCERs and ICERs). In clearly defined instances – the end of a commitment period under the Kyoto Protocol for tCERs, or a non-permanence event or non-submission of a monitoring report for ICERs – the credits must be replaced. tCERs may be reissued for subsequent commitment periods. At the end of a project’s final crediting period, how-

² A separate concern is that allowing different types of credits to compensate for reversals could create arbitrage opportunities for project developers. As a worst-case example, a developer could sell credits from an AFOLU project, terminate the project, and cover any liability using cheaper credits from other project types. While this presents no direct environmental integrity risks - as long as projects that are not CORSIA-eligible have the same quality as CORSIA-eligible projects - it could create issues for buyers who paid a higher price assuming they were also supporting the co-benefits of an AFOLU project.

ever, no more credits may be issued and all credits must be replaced with permanent Kyoto units, regardless of whether a reversal occurred or not. This approach ostensibly guarantees permanence by ensuring that all offset credits associated with potentially non-permanent reductions or removals are replaced with units representing permanent reductions – even if no reversals occur during a project’s crediting period. This is arguably a stronger guarantee than the one provided by buffer reserves.

However, there are several challenges with the approach applied by the CDM. First, it was developed in the context of the Kyoto Protocol, and specific requirements are linked to elements of the Kyoto regime. For a certain subset of temporary credits, for example, expiry is linked to the end of the next Kyoto Protocol commitment period, which has yet to be defined (and likely will not be defined, as countries to the UNFCCC do not intend to adopt a third commitment period under the Kyoto Protocol). Moreover, in the absence of a third commitment period, permanent Kyoto units will no longer exist after the end of the true-up period of the second commitment period after 2023. After the end of that period, no units can be transacted within the Kyoto registry system. It may thus be technically impossible to compensate for any reversals after 2023. Furthermore, the requirements to replace units legally apply only to Annex B Parties to the Kyoto Protocol; so it is unclear how the requirement to replace expiring credits would be enforced in the context of CORSIA.³

In summary, while the CDM’s approaches to addressing non-permanence are in principle conservative and appropriate, they are functionally insufficient due to a lack of subsequent commitment periods under the Kyoto Protocol. Effectively, permanence for these activities is no longer ensured. We therefore recommend that these project types be excluded from the scope of eligible units should the CDM be approved as an eligible program.

6. Avoiding double counting

The EUCs distinguish three forms of double counting that must be avoided: (1) double issuance of emissions units; (2) double use of emissions units; and (3) double claiming of the same emission reductions or removals by both the country in which the emission reductions or removals occur and an aeroplane operator using emission units under CORSIA.

None of the 14 program applications have procedures in place that effectively avoid all forms of double counting. Four of the applicants, jointly with three non-governmental organizations and the International Emissions Trading Authority (IETA), have developed the [Guidelines on Avoiding Double Counting for CORSIA](#) (ClimateWorks Foundation, Meridian Institute, & Stockholm Environment Institute, 2019). These Guidelines aim to help carbon-offsetting programs in implementing standards and procedures to avoid double counting for CORSIA. Some programs applications explicitly refer to these Guidelines and express the intent to incorporate the Guidelines into their standards and procedures. The Guidelines could also be a useful resource for other programs that intend to become eligible under CORSIA.

With regard to *double issuance*, most programs have procedures for avoiding that the same project be registered twice under the same program. However, several programs seem to lack procedures to avoid double issuance due to double registration of the same project with other programs. To avoid such double issuance, these programs should develop procedures to verify that registered

³ Note that the CDM applies a different approach to ensuring the permanence of CCS projects, involving buffers for each project (i.e., CCS buffers are not “pooled”), combined with a state liability either by the acquiring country or the host country. Although this appears to be a conservative approach in general, it faces the same issues with regard to the operational ending of the Kyoto Protocol.

projects have not been issued offset credits in any other program for emission reductions, such as legal attestations from project owners which confirm that they have not and will not request issuance of offset credits for emission reductions or removals from more than one program. If a project is registered with more than one program, offset credits should be cancelled by one program before offset credits are issued by another program for the same emission reductions and removals. Double issuance can also occur indirectly, through overlapping claims by different entities involved in carbon offset projects, for example, if one program credits the production of biofuels, whereas another program credits the use of biofuels. With the exception of the Climate Action Reserve, none of the programs have procedures in place that fully avoid such overlapping claims, in particular with projects registered under other programs.

With regard to *double use*, most programs have, or plan to implement, registry systems that effectively prevent a unit from being duplicated and cancelled or retired twice. However, none of the programs currently have procedures in place that effectively avoid that a single unit cancellation could be claimed for more than one purpose. Programs should therefore develop cancellation procedures that ensure that a cancellation is clearly indicated, irreversible and unambiguously designated for a specific purpose. The registry functionalities of the program should require the registry user to specify the aeroplane operator for which the offset credits were cancelled and the calendar year for which an offsetting requirement is fulfilled through the cancellation in order to conduct a CORSIA-related cancellation (e.g. "XYZ Airlines, 2024 offsetting requirement, covering the 2021-2023 offsetting compliance period under CORSIA").

Double claiming is most challenging to address because it requires coordinated action among multiple actors: the host countries of emission reduction projects, the carbon-offsetting programs and the project owners. The EUC and the guidelines for interpretation envisage that programs obtain a letter from host countries in which the country commits to taking the necessary steps for avoiding double claiming. Most programs are not clear what information in host country attestations would be regarded as sufficient for the program to qualify offset credits as being CORSIA eligible. We recommend that host country letters not only identify the project and acknowledge the project but also explicitly authorize the use of the project's emission reductions or removals, issued as offset credits, by aeroplane operators in order to meet offsetting requirements under CORSIA and declare that the country will not use the project's emission reductions or removals to track progress towards, or for demonstrating achievement of, its NDC and will account for their use by aeroplane operators under CORSIA by applying relevant corresponding adjustments.

By approving programs, the TAB will implicitly also take decisions on important policy matters related to accounting for offset credits which are *not* explicitly addressed in the EUC and the guidelines for interpretation.

First, depending on the outcome of international negotiations on Article 6 of the Paris Agreement at COP25 in December 2019, the TAB will need to consider whether, and under what conditions, emission reductions that are not covered by NDCs should be eligible for CORSIA and, if yes, whether host countries will need to declare in their letters that they will apply adjustments. This matter cannot be resolved by carbon-offsetting programs and should ideally be addressed by the Parties to the Paris Agreement, including for offset credits used under CORSIA. In the absence of clear international rules under the Paris Agreement, however, this issue is a relevant matter for the process of approval of programs by ICAO. Effectively, by approving programs, ICAO would either approve the use of such emission reductions (if the program's procedures allow them to be qualified for use under CORSIA) or not approve them (if the program's procedures do *not* allow them to be qualified).

A second policy matter not addressed in the EUC is whether offset credits will be eligible if the host country does not participate in the Paris Agreement. Several applicant programs mainly issue emission reductions from projects in the United States which has announced its intention to withdraw from the Paris Agreement. None of the applicant programs provide information on whether they would issue and qualify credits for use under CORSIA if the host country does not participate in the Paris Agreement, or has not communicated an NDC, but nevertheless issues a letter authorizing the use of the emission reductions under CORSIA. In our view, ensuring that countries participate in the Paris Agreement and have an NDC is not only essential to satisfy the EUCs with regard to the requirement to account for offset credits, but also to avoid that CORSIA creates a perverse incentive for countries to withdraw from the Paris Agreement. Such perverse incentives could undermine global mitigation ambition beyond CORSIA. Lastly, qualifying offset credits from countries that currently do not participate in the Paris Agreement could also lead to double claiming if a country joined the agreement again at a later stage and crediting baselines extended into the period when the country has a new NDC. We recommend that all programs clarify as part of their procedures that offset credits issued for emission reductions after 2020 can only be qualified by a program as CORSIA eligible if the relevant country participates in the Paris Agreement and has communicated an NDC for the applicable NDC implementation period.

A third policy matter that is not explicitly addressed in the EUC is whether double counting needs to be avoided with international mitigation targets that countries agreed or communicated for the period up to 2020. The EUC do not refer to any specific agreements under the UNFCCC but generally to double counting with regard to 'mitigation obligations' and 'mitigation efforts'. The programs take diverse approaches towards this matter. Some programs avoid double counting with Kyoto Protocol targets (e.g. by requiring cancellation of AAUs if offset credits are issued). Some programs also avoid double counting with Cancun targets communicated by Annex I countries (mostly by not allowing projects in these countries), while others ignore these targets. Some programs are not entirely clear. In our view, double claiming should be avoided with both Kyoto and Cancun targets. In the negotiations following the adoption of the Cancun targets, Parties agreed that "various approaches, including opportunities for using markets ... must meet standards that ... avoid double counting of effort" (decision 2/ CP.17, paragraph 79). Decision 1/CP.21, adopting the Paris Agreement, also refers to avoiding double counting in the context of action prior to 2020, urging "host and purchasing Parties to report transparently on internationally transferred mitigation outcomes, including outcomes used to meet international pledges, and emission units issued under the Kyoto Protocol with a view to promoting environmental integrity and avoiding double counting." International decisions under the UNFCCC thus point to the need to avoid double counting. Moreover, the EUCs are not limited to NDCs but cover mitigation efforts or obligations more broadly. A related policy matter is whether double counting should also be avoided with countries' targets under the Montreal Protocol, including its Kigali amendment, once these targets become binding. Programs crediting reductions in emissions of HFCs or ozone depleting substances would have to show that the reduction goes beyond the legally binding targets to reduce these emissions.

Most programs also lack technical procedures that are necessary to effectively avoid double claiming, including: to identify overlap with NDCs (in the case that no adjustments are needed for emission reductions not covered by NDCs); to determine in which calendar years emission reductions occurred; to determine the emission reductions in the GWP metrics that the host country uses; or to determine and track whether the country has applied the necessary corresponding adjustments. Moreover, none of the programs have procedures in place to "compensate for, replace, or otherwise reconcile double-claimed mitigation", as referred to in the guidelines for interpretation of the EUC. We recommend that programs develop such procedures prior to their approval as CORSIA eligible programs.

Lastly, programs also differ on whether they avoid double claiming with mandatory domestic climate change mitigation targets. Some programs have explicit procedures to avoid such double counting, for example, requiring that emission reductions covered by an ETS can either not be issued as offset credits or that a respective amount of ETS allowances must be cancelled. Others do not at all address such forms of double claiming. We recommend that programs develop respective procedures prior to their approval as CORSIA eligible programs.

7. No net harm

No net harm can only credibly be ensured if the program requires that specific social and environmental safeguards must be satisfied and if it has procedures in place to publicly demonstrate compliance on an ongoing basis. Project proponents should be obligated to identify, mitigate, monitor and report on risks. In addition, the program should require the information and consultation of local stakeholders and have specific provisions for how to address concerns once raised.

Unfortunately, only two standards have a process in place which requires the assessment of risks, the adoption of safeguards and the monitoring and reporting on these risks. Only one standard foresees the cancellation of credits in case harm has occurred during a certain period. Almost half of the offset standards analyzed have no procedure in place and therefore fail to address this criterion. A few other programs enshrined the “no harm” principle in their templates for activity design documents and require an ex-ante risk assessment; however they do not have provisions for continuous monitoring or reporting of risks during the crediting period. One applicant is currently updating its rules and procedures with a view to strengthen stakeholder consultation requirements. Another applicant points out that it will strengthen requirements for projects seeking eligibility under CORSIA for their offset credits. However, as pointed out in the section on cross-cutting issues, final approval of the standard should not be given before the necessary procedures are in place.

8. Conclusions

The evaluation of the 14 applicants provided important insights which should inform the ongoing approval process under ICAO. First, the degree to which the applicants satisfy the EUC differs substantially. Some applicants hardly meet any of the EUC and may not even be considered carbon-offsetting programs. However, there are also notable differences on how applicants perform in relation to specific EUCs. For each EUC, there are good and bad examples. This is good and bad news: the good news is that the good examples demonstrate that it is possible to satisfy all of the EUC with solid procedures. The bad news is that none of the programs currently performs well against *all* of the five EUCs evaluated in this paper. The applicants could thus learn from each other, and adopt their peers' best approaches, such that they satisfy all requirements.

A second important lesson is that all programs need to revise and amend their standards and procedures in order to satisfy the EUC. This, however, requires time, as revisions to project cycle procedures and key standards usually involve several drafts and stakeholder consultation. While airlines wish to have certainty on what carbon offset units will be eligible, we consider it essential that programs are only approved by ICAO once they have *adopted* the necessary standards and procedures to satisfy all EUCs. An approval based on “plans” to revise standards and procedures in the future could bear considerable risks for the integrity of the CORSIA. As long as offset credits are not yet eligible for use under CORSIA, ICAO may alternatively consider approving programs “provisionally”, subject to changes that they need to implement and subject to a final assessment by ICAO of whether these changes have been implemented appropriately.

A third lesson is that the EUC and other ICAO documents are not explicit on a number of features that are important for the overall integrity of the scheme. This holds, for example, for the duration for which non-permanence should be ensured, which differs considerably among the applicants. Another example is the lack of clarity on which GWP values the programs should use when issuing CORSIA eligible offset credits. Similarly, it is unclear for how long programs will be approved and how it will be ensured that they continue to satisfy the EUC after their approval. ICAO thus needs to provide further clarity on these matters. We recommend specifically that the TAB develops a transparent and publicly available procedure for the initial approval, ongoing supervision, re-approval, suspension and termination of program eligibility for CORSIA.

Lastly, several issues interact with the ongoing negotiations on Article 6 of the Paris Agreement. The integrity of CORSIA and the program approval process under ICAO would be greatly facilitated if Parties managed to adopt international rules for Article 6 at the forthcoming climate change conference in December 2019 in Santiago and if these rules explicitly address the use of carbon offset credits under CORSIA. This could, for example, provide clarity on how emission reductions not covered by NDCs should be treated, what key elements are necessary for letters of attestation and authorization by host countries, what baseline setting procedures may be appropriate in the future in the light of NDCs, how additionality of activities can credibly be proven, and what actions should trigger the application of corresponding adjustments in order to account for the use of offset credits under CORSIA.

9. References

- ClimateWorks Foundation, Meridian Institute, & Stockholm Environment Institute. (2019). Guidelines on Avoiding Double Counting for the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). Washington D.C.
- Fearnside, P. M. (2002). Why a 100-Year Time Horizon should be used for GlobalWarming Mitigation Calculations. *Mitigation and Adaptation Strategies for Global Change*, 7(1), 19–30. <https://doi.org/10.1023/A:1015885027530>
- Healy, S. (2017). CORSIA: Quantification of the Offset Demand. Berlin: Öko-Institut.
- ICAO. (2019). CORSIA Emissions Unit Eligibility Criteria. International Civil Aviation Organization (ICAO).
- Michaelowa, A., Hermwille, L., Obergassel, W., & Butzengeiger, S. (2019). Additionality revisited: guarding the integrity of market mechanisms under the Paris Agreement. *Climate Policy*, 0(0), 1–14. <https://doi.org/10.1080/14693062.2019.1628695>
- Murray, B. C., Galik, C. S., Mitchell, S., & Cottle, P. (2012). Alternative Approaches to Addressing the Risk of Non-Permanence in Afforestation and Reforestation Projects under the Clean Development Mechanism. <https://doi.org/10.1596/27123>
- Schneider, L., Conway, D., Kachi, A., & Hermann, B. (2018). Crediting Forest-related Mitigation under International Carbon Market Mechanisms: A Synthesis of Environmental Integrity Risks and Options to Address Them.

Appendix: Comments submitted to ICAO

- Submission by Perspectives Climate Group
- Joint submission by Öko-Institut and Stockholm Environment Institute

TAB Public Comment Template Form

The public is invited to submit comments on the responses to the call for applications, including regarding their alignment with the emissions units criteria (EUC).

The public is requested to use this form to provide structured comments on the responses to the call for applications that were submitted for assessment by the TAB. Public comments regarding the information submitted may be published online, along with the commenter name and organization.

Commenter Name: Axel Michaelowa

Commenter Organization: Perspectives Climate Group

Generic comments on nature of applicants

Programme Name	Reference in Programme Application Form	Emissions Unit Criteria reference*	Comment
Forest Carbon Partnership Facility	All	All	The FCPF is a World Bank operated fund that supports forest programmes generating carbon certificates, but did not develop its own offset standard. It thus is not an eligible standard.
Myclimate	All	All	Myclimate is not an offset standard, but an offset developer applying different offset standards. It thus is not an eligible standard.
REDD.plus	All	All	REDD.plus is an initiative to provide support to REDD+ activities which lacks critical features of an offset standard. It may develop such features of an offset standard in the future but currently does not have them, and thus should not be eligible.

Specific comments on EUC compliance of candidate programmes regarding additionality (3.1), realistic and credible baseline (3.2), absence of net harm (3.8)

Initial comment on additionality testing:

We interpret the requirement of additionality to be that “eligible offset credit programs should clearly demonstrate that the program has procedures in place to assess/test for additionality and that those procedures provide a reasonable assurance that the emissions reductions or avoided emissions would not have occurred in the absence of the offset program”. There are different approaches used to test additionality that differ in the degree they provide the required assurance.

Investment tests proved to have worked well to determine additionality, with significant experience accumulated under the CDM, whereas barrier and common practice tests can be considered insufficient in many cases, if applied without an investment analysis. Recently, standardization of additionality assessment through benchmarks or positive lists gained ground for some technologies. However, any form of standardization of parameters needs to be either highly conservative or updated regularly (for instance every 3-5 years, but this should be determined on a technology-specific level) to account for technology developments within the respective regional or national circumstances in which the offset activities are being implemented. For instance, under the CDM, some positive lists got “sticky” (i.e. less conservative) over time and their non-revision led to the crediting of renewable energy projects, whose additionality became more questionable after costs for the deployment of renewable energy had fallen substantially.

In general, additionality testing, but also baseline calculation, is heavily influenced by the overall context of the international climate policy regime. This is particularly true for the issue of consideration of national mitigation policies, which used to be ignored during the Kyoto Protocol era, as non-Annex I Parties were not expected to make mandatory contributions to global climate action. Under the CDM, the so-called E+/E- rules were adopted to avoid a perverse incentive for host country governments not to develop mitigation policies in order to protect CER revenues. When assessing additionality and establishing baselines, policies that provide a comparative advantage to more emission-intensive technologies (E+) were only taken into account if their adoption predated the adoption of the Kyoto Protocol in 1997. Policies that provided a comparative advantage to less emission-intensive technologies (E-) were only taken into account if adopted prior to the adoption of the Marrakech Accords in 2001. The application of this rule, however, led to the registration of projects which would have been deemed non-additional if national policies such as national renewable energy feed-in-tariffs would have been taken into account, and was therefore subject to criticism.

As all countries are contributing NDCs to achieving the Paris Agreement objectives, all national policies and activities need to be taken into account when reinterpreting additionality. The precise rules for assessing additionality in the context of NDCs and related national policies and

measures future are still subject to international negotiations. However, it is clear that the paradigm shift from a bifurcated climate regime to one in which all countries make contributions through their NDCs will affect the international rules for the assessment of additionality. Therefore, this criterion is not assessed in the comment on the standards applications.

Initial comment on baselines:

In the assessment, the focus is on the methodology development process. Baseline development is considered credible if the baselines are approved following independent third-party assessment and accompanied by full public transparency regarding the assumptions and parameters used to establish baselines. All types of standardized baselines must be subject to regular updates in order to reflect developments in economic, technological or other circumstances in a global, regional or country-specific context.

Initial comment on absence of net harm:

No net harm can only credibly be ensured if the program publishes specific social and environmental safeguards and publicly demonstrates compliance. Project proponents should be obligated to identify, mitigate, monitor and report on risks. In addition, the program should ensure consultation of local stakeholders and information on specific provisions on how to address concerns once raised.

Programme Name	Reference in Programme Application Form	Emissions Unit Criteria reference*	Comment
American Carbon Registry	4.1	3.1	Insufficient: Applies either benchmarks or barrier tests, after additionality to current regulation is checked. Evidence for positive lists is provided. Investment test is not used. Common practice and barrier tests are generally not sufficient to test additionality, but might be sufficient for certain ACR project types.
British Columbia Offset Program	4.1	3.1	Sufficient: Applies investment analysis and a regulatory test. No positive lists are used, so they do not need to be updated or justified. However, they do not reply to the question how the procedures provide a reasonable assurance that mitigation would not have occurred in the absence of the programme.
China GHG Voluntary Emission Reduction Program	4.1	3.1	Sufficient: Applies investment analysis as per the CDM rules. There are provisions in place to address over-issuance.
Climate Action Reserve	4.1	3.1	Insufficient: Standardized additionality testing based on benchmarks and positive lists, but no investment analysis. The program manual (currently under revision) specifies that the performance standard test should also assess financial returns and implementation barriers of certain project types, there is no project-specific analysis undertaken. The program manual explains that “most reserve protocols” do contain an appendix explaining the analysis undertaken to establish the standard, partially also including an assessment of “typical” financial conditions. No regular revision of these performance standards is foreseen, even if the Reserve “may” review and update standards and baselines where it considers needed.

Clean Development Mechanism	4.1	3.1	Sufficient for large scale activities, partially insufficient for small-scale / micro-scale activities: Applies highly elaborated additionality tests developed over a period of more than a decade. Principally, the investment analysis, if applied in a conservative manner, will weed out non-additional projects. However, depending on the activity size and type positive lists have been applied recently, which have not been sufficiently updated over time. For example, micro-scale solar PV activities are generally deemed additional which may be inconsistent in some circumstances in light of recent massive cost decreases of solar PV.
Global Carbon Trust	4.1	3.1	Insufficient: Refers to tests used by Verra, CAR, CDM, allows both positive lists and benchmarks. Whether an investment analysis is always applied is unclear: first, the application of CDM methodologies is presented as the main approach to additionality testing, yet, then the application states that VCS, CAR and GS methodologies can also be used. It uses CDM positive lists for small-scale and micro scale activities (for critique on this approach, see comment to CDM). Of concern is the fact that GCT is currently developing project-specific simplified methodologies, however, the supporting documents used for analysis of technologies/fuels/feedstocks that lead to the positive lists are referred to as internal - documents that are not publicly accessible.
Gold Standard	4.1	3.1	Sufficient, except “simplified approaches”, partially insufficient for small-scale / micro-scale activities (as it applies CDM methodologies, see above): Essentially applies additionality tests from the CDM but does allow further additionality tests.
Nori	4.1	3.1	Insufficient: Only uses barrier test.
Thailand Greenhouse Gas Management Organization	4.1	3.1	Grossly insufficient: Small projects are automatically deemed additional without any explanation or justification for this. Simple payback period threshold of 3 years for large scale projects is not conservative, as this is not in line with standard commercial investment decision and commercial interest rates for project finance in Thailand.
State Forests of the Republic of Poland	4.1	3.1	Grossly insufficient: Neither application nor publicly available documents provide evidence of additionality testing.

Verra/VCS	4.1	3.1	Insufficient: For renewable energy and energy efficiency projects either performance benchmarks or positive lists are used (see: VCS standard, sections 3.14 and 4.1, http://verra.org/wp-content/uploads/2018/03/VCS_Standard_v3.7.pdf). Benchmarks cannot convincingly prove additionality of a given activity, especially in heterogeneous sectors. Positive lists under Verra are less conservative than under the CDM. For forestry projects, a combination of an investment test with common practice and barrier analysis is undertaken which is robust (therefore partially sufficient).
American Carbon Registry	4.2	3.2	Sufficient: While CDM approved methodologies are accepted, ACR also develops its own methodologies, which are assessed through a peer review process involving public comments and dedicated reviewers. Documentation (see https://americancarbonregistry.org/carbon-accounting/standards-methodologies) is excellent. Performance standards for additionality assessments are regularly reviewed; other methodologies and tools are reviewed in case of “significant changes” in context, data availability or need for clarification
British Columbia Offset Program	4.2	3.2	Insufficient: Application document does not describe baseline methodology development procedure. Official information of the BC programme at https://www2.gov.bc.ca/gov/content/environment/climate-change/industry/offset-projects does not specify the baseline methodology procedure applied. Baseline methodology for fuel switch (only methodology approved to date, https://www2.gov.bc.ca/assets/gov/environment/climate-change/ind/protocol/bc_fuel_switch_protocol_2019.pdf) is purely based on barrier analysis for baseline scenario selection. The submission also does not address the questions on baseline revision and baseline over-estimation.

China GHG Voluntary Emission Reduction Program	4.2	3.2	Partially insufficient: Applies approved CDM methodologies, and further methodologies which have been approved through a domestic procedure. Baseline review process is in place, but as methodologies and procedure are purely available in Chinese language, the conservativeness of the methodologies could not be checked. In order to be eligible, the program would have to translate both methodologies and procedures in English and make these translations publicly available.
Climate Action Reserve	4.2	3.2	Sufficient: Develops its own, detailed methodologies through a well-documented process, including peer review and public comments (https://www.climateactionreserve.org/how/protocols/) Baselines are reviewed at the end of the crediting period.
Clean Development Mechanism	4.2	3.2	Sufficient: Highly regulated baseline and monitoring methodology development process overseen by Meth Panel / Small Scale Panel. Over 200 technology-specific methodologies have been approved, and many of them have been significantly improved over the years as experience with their use has accumulated. The conservativeness of methodologies has generally increased through this regulatory process. Transparency is high.
Global Carbon Trust	4.2	3.2	Insufficient: Refers to Climate Action Reserve, CDM, Gold Standard and Verified Carbon Standard baseline methodologies all being eligible. Baseline revision is required. No baseline methodology development process has been clearly defined, so it is not possible to evaluate this. The baseline guidance document (https://gct.ga/Admin/Content/Baseline-and-Monitoring-Methodologies25112018893.pdf) is superficial and does not guarantee conservativeness.

Gold Standard	4.2	3.2	Partially insufficient: A detailed and transparent peer review process is undertaken and baseline revisions are addressed. However, methodologies from “credible” standards go through a simplified “fast track procedure”. These credible standards are not properly defined, but cited are CDM, Verra, CAR, ACR and others. This means that any comments given here on one of these standards re baseline methodologies applies here as well. . More recent methodologies for unconventional project types tend to be less conservative than the “older” ones. For example, Gold Standard cookstove methodologies allow to gain about twice as many credits than if one would use the respective CDM methodology. Gold Standard forestry methodologies lack an uncertainty assessment.
Nori	4.2	3.2	Insufficient: The croplands sequestration methodology refers mainly to a third-party model and does not address the critical questions of conservativeness. The methodology development and peer review process is not clear.
Thailand Greenhouse Gas Management Organization	4.2	3.2	Grossly Insufficient: Baseline methodologies are extremely short and not available in English (http://ghgreduction.tgo.or.th/tver-method/tver-methodology-for-voluntary-greenhouse-gas-reduction/ee.html). No evidence is provided in response to the questions on baselines in the submission. The baseline methodology development process is unclear. There are also insufficient requirements for baseline revision. In order to assess the methodologies, they as well as the process documents need to be available in English.
State Forests of the Republic of Poland	4.2	3.2	Grossly insufficient: No proper baseline methodology is applied; the baseline is administratively set from politically determined forest management plans.

Verra/VCS	4.2	3.2	Partially insufficient: VCS accepts CDM and CAR methodologies but also develops new methodologies involving public consultations and two reviews by external validation/verification bodies. Baseline revision is addressed for both normal projects and REDD projects. Methodology scope is very broad and some of the more recent methodologies for unusual project types have been subject of public criticism for not being conservative, e.g. the tidal wetland and seagrass methodology (Johannessen S C, Macdonald RW (2016): Geoengineering with seagrasses: is credit due where credit is given? Environ Res.Lett. 11 113001). A positive feature of VCS methodologies is that they consistently account for uncertainties.
American Carbon Registry	4.8	3.8	Partially insufficient: No net harm principle anchored in procedures, albeit no specific procedure for MRV of non-GHG impacts/safeguards of activities. While project proponents must identify community and environmental impacts of their projects and describe safeguards put in place, ACR does not require a particular process or tool if basic requirements are addressed. However, project proponents must publicly disclose any comments received from stakeholders during development, construction, operation and/or maintenance of the project and prove that these issues were addressed.
British Columbia Offset Program	4.8	3.8	Insufficient: No specific “no net harm” procedure; section 14 of GGEER is generic and does not relate to MRV of non-GHG impacts/safeguards of activities.
China GHG Voluntary Emission Reduction Program	4.8	3.8	Grossly insufficient: No specific “no net harm” procedure; only reference to general EIA, as well as no MRV of safeguards or “no net harm” .
Climate Action Reserve	4.8	3.8	Sufficient: Detailed “no net harm” guidance and MRV of actual “no net harm” and safeguards, resulting in cancellation of credits if harm has occurred during a certain period.
Clean Development Mechanism	4.8	3.8	Grossly insufficient: No specific “no net harm” procedure and no procedure for MRV of safeguards or “no net harm” .

Global Carbon Trust	4.8	3.8	Partially insufficient: No net harm principle anchored in procedures. For the projects supplying CORSIA the voluntary environment and social safeguards standard with risk assessment and monitoring of impacts will be made mandatory.
Gold Standard	4.8	3.8	Sufficient: While strong stakeholder consultation procedures make it likely that harm can be avoided, there is no specific “no net harm” rule applied by the Gold Standard. However, the approach employed by the Gold Standard is consistent with the TAB definition on no net harm. Environmental or social risks must be assessed, safeguards put in place where necessary and monitored and reported.
Nori	4.8	3.8	Grossly insufficient: No specific “no net harm” procedure and no procedure for MRV of non-GHG impacts of activities. Only general reference to compliance with all legal requirements
Thailand Greenhouse Gas Management Organization	4.8	3.8	Grossly insufficient: No specific “no net harm” procedure; only reference to general EIA.
State Forests of the Republic of Poland	4.8	3.8	Grossly insufficient: No specific “no net harm” procedure
Verra/VCS	4.8	3.8	Partially insufficient: Verra enshrines the principle of no net harm and requires identification and mitigation of potential risks. However, continued monitoring of non-GHG impacts are only mandatory under the additional CCBS and the standard SDVista and not under the VCS. Currently, Verra is proposing to update VCS rules to strengthen stakeholder consultation requirements. This would inter alia include a risk, cost and benefit analysis for local stakeholders and the development of a grievance and redress process.

TAB Public Comment Template Form

The public is invited to submit comments on the responses to the call for applications, including regarding their alignment with the emissions units criteria (EUC).

The public is requested to use this form to provide structured comments on the responses to the call for applications that were submitted for assessment by the TAB. Public comments regarding the information submitted may be published online, along with the commenter name and organization.

Commenter Name: Lambert Schneider (Oeko-Institut), Anne Simons (Oeko-Institut), Derik Broekhoff (Stockholm Environment Institute)

Commenter Organization: Oeko-Institut / Stockholm Environment Institute

Note: The following abbreviations are used for programs:

- American Carbon Registry (ACR)
- British Columbia Offset Program (BCOP)
- China GHG Voluntary Emission Reduction Program (CCER)
- Clean Development Mechanism (CDM)
- Climate Action Reserve (CAR)
- Forest Carbon Partnership Facility (FCPF)
- Global Carbon Trust (GCT)
- Gold Standard (GS)
- myclimate (myclimate)
- Nori (Nori)
- REDD.plus (REDD.plus)
- Thailand Greenhouse Gas Management Organization (TGO)
- The State Forests of the Republic of Poland (SFP)
- VCS Program managed by Verra (VCS)

Some comments provided below apply equally to several programs. In this case, the relevant programs are listed in the first column of the table. For simplicity, in such cases no separate comments are provided on each program.

The comments provided in this document are partially based on the [Guidelines on Avoiding Double Counting for CORSIA](#) which were developed by a multi-stakeholder working group (www.adc-wg.org), consisting of carbon-offsetting programs, non-governmental organizations and the International Emissions Trading Association (IETA). The Guidelines aim to help carbon-offsetting programs in implementing standards and procedures to avoid double counting for CORSIA. All four working group members (ACR, CAR, GS and VCS) have also applied to become CORSIA eligible programs. Three out of these four programs (ACR, CAR, GS) explicitly refer to these Guidelines; the VCS does not refer to them but informed the authors that it intends to apply the Guidelines as well. In their applications, not all of the programs are clear whether they intend to apply the Guidelines in its entirety. It would be helpful if this is clarified, and we therefore provide a comment in this regard. In commenting below, however, we assume that all four programs (ACR, CAR, GS and VCS) will implement and incorporate the Guidelines in their standards and procedures in their entirety.

Please also note that our evaluation of the programs raised some broader governance questions in relation to CORSIA. We understand that the main purpose of this public consultation is seeking feedback on the program applications. However, it is difficult to evaluate the programs if some broader governance questions have not been clarified. We therefore also provide a few broader comments in the first section of the document that do not relate to specific programs, but the process of program evaluation and approval.

Finally, please note that two of the individuals providing comments here have affiliations with some of the programs under consideration. Lambert Schneider (Oeko-Institute) is as a member of the CDM Executive Board and also serves on the VCS Program Advisory Group (part of Verra). Derik Broekhoff (SEI) was formerly the Vice President for Policy at the Climate Action Reserve (CAR). Within this document, SEI takes sole responsibility for comments specifically referencing the CDM and VCS/Verra, while Oeko-Institute is solely responsible for comments specifically referencing CAR.

Programme Name	Reference in Programme Application Form	Emissions Unit Criteria reference*	Comment
Cross-cutting comments on the application process (not specific to any program)			
Cross-cutting issue (not specific to any program)	Cross-cutting issue / All section	Cross-cutting issue / All aspects	Timing of approving programs as CORSIA eligible. None of the programs have standards and procedures in place that address all EUCs. This holds in particular for the avoidance of double counting in the new context of CORSIA and the Paris Agreement. This is clear given the timing of the adoption of the EUCs by the ICAO Council, just

			<p>recently in February 2019, and the new context of CORSIA and the Paris Agreement. Many programs specify that they will address these issues in the future. However, the applications are not always clear how these issues will be addressed. Moreover, we believe that “plans” should not be the basis for an ultimate approval of a program by ICAO. For example, if a program announced in its application that it will incorporate in its procedures a requirement to obtain a host country attestation, but later – after approval by ICAO – does not include such a requirement, the use of offset credits from the program could seriously undermine the integrity of CORSIA. Plans may also change, for very good reasons, as often new issues are identified when developing the actual revisions of relevant program documents.</p> <p>For these reasons, we believe it is essential that programs are only approved by the ICAO Council as CORSIA eligible after they have adopted all necessary amendments to their standards, procedures, guidelines, forms and program operations, and only after these amendments have been assessed by the TAB.</p> <p>We recognize that this raises some timing issues, as amendments to standards and procedures that specifically target CORSIA should only become effective once the program is CORSIA eligible. A possible approach to address this issue could be that programs adopt any necessary amendments to their standards and procedures before the final assessment by the TAB and approval by the ICAO Council, but confirm the date of their effectiveness or entry into force only following a final decision by the ICAO Council on the eligibility of the program. It is common practice with carbon offsetting programs that revisions to program documents only enter into force at a future date.</p>
--	--	--	---

Cross-cutting issue (not specific to any program)	Cross-cutting issue / All section	Cross-cutting issue / All aspects	<p>Duration of approval and treatment of future revisions of program documents. There is no information available for how long programs will be approved as CORSIA eligible and how any future revisions to program requirements will be handled. For example, after initial approval, a program could adopt revisions to its requirements and may, due to these revisions, no longer satisfy the EUCs.</p> <p>To address these challenges, we recommend that programs are approved for a limited duration and are re-assessed by the TAB and re-approved by the ICAO Council prior to the end of the first eligibility period. Furthermore, we recommend establishing a procedure to address future revisions to program requirements. This procedure needs to be simple - as programs frequently amend their requirements - but at the same time sufficient to address the risk that revisions do not undermine the ability of the program to fulfil the EUCs. Possibly, programs could be required to annually notify the TAB about changes implemented in the last year and how these ensure that the EUCs are still met. The TAB could take note of this, or seek further information, or if it concludes that the program no longer meets the EUCs, request the program to implement changes, or otherwise suspend or terminate the eligibility of the program.</p> <p>We recommend that the TAB develops a clear and transparent procedure for the initial establishment of program eligibility, the subsequent continuous surveillance of the program in relation to its performance against the EUCs, as well as procedures for suspension or termination of program eligibility. This procedure should be publicly available and public comments should be invited to the procedures prior to its final adoption.</p>
Cross-cutting issue (not specific	Cross-cutting issue / All section	Cross-cutting issue / All aspects	<p>Lack of sufficient information to inform public comments. For some programs, it is not clear how they plan to fulfil the EUCs, in particular</p>

to any program)			<p>with regard to avoiding double counting. Some programs do not include any substantive information on how they plan to meet a criterion, other programs include some information, but with the available information it is not possible to assess whether the criterion will be satisfied. It seems obvious that further information needs to be provided by the programs.</p> <p>We call on the TAB to make publicly available any further information provided by the applicants in the course of the application process. Given that for many programs the current information is not sufficient to provide substantive comments, we also recommend that a second call for public comments be launched. It may be most effective to schedule this second call for public inputs for each applicant separately, and to launch the call once the program has prepared a draft amendment to its standards and procedures in order to satisfy the EUCs. This would constitute a meaningful basis for providing public comments.</p>
Cross-cutting issue (not specific to any program)	Cross-cutting issue / All section	Cross-cutting issue / All aspects	<p>Lack of guidance on values for global warming potentials (GWPs). ICAO has not established a requirement regarding which GWP values programs should use to convert non-CO₂ emission reductions/removals into CO₂ equivalents. The CORSIA State Letter refers to GWPs only in the context of life cycle assessments for sustainable fuels. In this context, the 100-year values from the 5th IPCC assessment report should be used, but there is no clear guidance whether the same values should be used by carbon-offsetting programs.</p> <p>If different programs use different sets of GWP values under CORSIA, this could have at least two adverse impacts. First, this could create a risk that project owners pick the program which results in higher CO₂ equivalents of emission reductions, depending on which gases are</p>

			<p>abated. In aggregate, this could lead to higher emission reduction claims compared to a situation where all programs use the same GWP values. Second, as the same emission reduction would have a different value under different programs, this could distort the market. The Guidelines on Avoiding Double Counting for CORSIA therefore recommend that all CORSIA eligible programs use the same GWP values, taking into account relevant decisions under the UNFCCC.</p> <p>We recommend that the ICAO clarifies which GWP values programs should use for which relevant time periods (up to 31 December 2020 and as of 1 January 2021). Following relevant decisions under the Kyoto Protocol and the Paris Agreement, as well as the Guidelines on Avoiding Double Counting for CORSIA, we recommend that the following GWP values be used by all programs that intend to become CORSIA eligible:</p> <ol style="list-style-type: none"> 1. The 100-year time-horizon values from the 4th assessment report of the Intergovernmental Panel on Climate Change (IPCC) for emission reductions or removals that occur before 1 January 2021 (if such emission reductions are deemed eligible in accordance with relevant decisions on vintage and timeframe); 2. The 100-year time-horizon values from the 5th assessment report of the IPCC for emission reductions or removals that occur on or after 1 January 2021 or, if applicable, any other common GWP values adopted for future periods in relevant decisions by the CMA.
General comments to program applications (applicable to all sections of the application form)			
myclimate	All sections	All paragraphs	Myclimate is a project developer rather than a carbon-offsetting program. We note that myclimate is an entity that develops climate mitigation projects and draws upon other programs for registering projects and issuing offset credits. Myclimate does not have its own

			<p>procedures and standards for registering projects and issuing offset credits. The application mainly refers to relevant programs that myclimate uses. As such, we do not deem myclimate to be a program that is eligible for application and do not further comment on this application.</p> <p>Please also note that not all programs referred to by myclimate have applied to become eligible programs in this first call by the TAB.</p>
REDD.plus	All sections	All paragraphs	<p>REDD.plus seems to be a registry and trading platform rather than a carbon-offsetting program. We similarly note that REDD.plus appears to maintain a registry (operated by IHS Markit) in conjunction with a trading platform intended to facilitate trading of UN-certified REDD+ credits (which, however, do not yet exist). It does not have its own procedures and standards for registering projects (or jurisdictional REDD+ programmes) and issuing offset credits. The application mainly refers to sections of international agreements providing guidelines and safeguards related to REDD+ efforts, which currently do <i>not</i> address offsetting or emissions trading requirements (e.g., as would be applied under Article 6 of the Paris Agreement). We therefore do not deem REDD.plus to be a carbon offsetting program eligible for application, and do not further comment on this application.</p> <p>We also note that the website of REDD.plus only includes one link to "contact" information and further information about this entity is lacking. The website also provides wrong information about the Warsaw Framework by referring to "UN approved, REDD+ carbon credits". Such credits do not exist.</p>
SFP	All sections	All paragraphs	<p>The State Forests of the Republic of Poland (SFP) does not seem to be a carbon-offsetting program. We similarly note that SFP also does not have any procedures and standards for registering activities and</p>

			<p>issuance of offset credits and does not operate a registry. We therefore deem that this initiative is also not a carbon-offsetting program and do not further comment on this application, except in specific circumstances that only apply to SFP.</p>
<p>BC, CCER, CDM, FCPF, GCT, Nori, TGO</p>	<p>All sections</p>	<p>All aspects</p>	<p>Lack of a procedure to qualify offset credits for use under CORSIA. Offset credits issued by the programs are often used for multiple purposes. In some instances, these different uses may involve different requirements. Not all offset credits issued by a program may satisfy all CORSIA requirements (e.g. because meeting such requirements is not necessary for their use outside of CORSIA). Some programs also applied with a limited scope and exclude certain activities. Some programs have already issued offset credits that do not satisfy CORSIA requirements. Some programs are not fully clear in their application whether they intend to issue offset credits that do not satisfy CORSIA requirements. In all these cases, offset credits for which all CORSIA requirements have been met should be clearly identified as such.</p> <p>All programs listed here do not explain how they will distinguish units that satisfy all CORSIA requirements from those that do not satisfy CORSIA requirements. Some other programs have explicit procedures for this. The GS, for example, explains in its application that it will introduce a procedure “to allow interested project owners or offset credit holders to make a formal request to Gold Standard to request that offset credits be qualified for meeting offsetting requirements under the CORSIA”.</p> <p>To address this issue, we recommend that programs that intend to issue, or have already issued, offset credits for which not all EUCs and other relevant decisions under ICAO (such as on the eligible vintage and timeframe of offset credits) are initially satisfied establish a</p>

			<p>procedure under which project owners or offset credit holders can request that offset credits be qualified for meeting offsetting requirements under the CORSIA. This procedure should clearly specify which substantive requirements must be satisfied for offset credits to be qualified. Programs could establish certain minimum requirements that all projects have to satisfy in order to be issued offset credits, and additional requirements that must be satisfied in order for offset credits to be qualified by the program for use under CORSIA. The requirements arising from the CORSIA Eligible Emissions Unit Criteria could partially belong to the minimum requirements applicable to all offsets issued by the program and partially to the specific additional requirements needed to qualify an offset credit for use under CORSIA. The procedure should ensure that offset credits are not qualified by a program for use under CORSIA unless all CORSIA-related program requirements have been satisfied. The fulfilment of program requirements should be demonstrated through appropriate supporting documentation that is made publicly available. See further guidance in section II.8 of the Guidelines on Avoiding Double Counting for CORSIA.</p>
Comments relating to addressing non-permanence			
ACR, BC, CAR, FCPF, GS, Nori, VCS	Section 4.5	All paragraphs	<p>Use of buffer reserves to address permanence. Because offset credits will be used to compensate for emissions that will effectively raise atmospheric concentrations of CO₂ for many thousands of years, they should be associated with emission <i>reductions</i> that are similarly permanent. If an emission reduction or removal is “reversed” (e.g., subsequently emitted so that no net reduction occurs), then it can no longer function as an offset. The CORSIA EUCs imply that offsetting emission reductions must be truly permanent: <i>“Carbon offset credits must represent emissions reductions, avoidance, or carbon sequestration that are permanent.”</i></p>

			<p>Several of the programs that submitted applications use different versions of a pooled “buffer reserve” approach to address the risk of reversals. Under this approach, offset credits are set aside from individual projects into a common buffer reserve, which can be drawn upon to cover reversals from any project. Programs adopting this approach include ACR, BC, CAR, FCPF, GS, and VCS. Nori applies a limited form of project-specific buffering. The CDM addresses permanence through temporary (expiring) credits (though it does not detail this approach in its application). The remaining applicants do not indicate any specific requirements or provisions related to maintaining permanence.</p> <p>Although buffer reserves are a common mechanism for addressing permanence, they have some potential shortcomings:</p> <ol style="list-style-type: none"> 1. They only guarantee permanence for a limited time period 2. They are not sufficient to address the risk of intentional, human-caused reversals 3. They must be sufficiently “capitalized” to cover reversal risks over time <p>Each of these points is addressed in more detailed comments below, indicating specific programs for which these issues may be a particular concern.</p>
ACR, FCPF, GS, Nori, VCS	Section 4.5	All paragraphs	<p>Insufficient length of permanence guarantees. No risk can be insured against in perpetuity, including reversal risks (over the very long run, the chance of reversal for any given project approaches 100%). Programs adopting buffer reserves are therefore implicitly or explicitly transferring an obligation to maintain carbon storage (or compensate for reversals) to future decisionmakers (Murray et al. 2012). From a policy standpoint, the question is what sort of</p>

			<p><i>minimum guarantee</i> is sufficient to deem an emission reduction “permanent.” As a convention, international policymakers have adopted 100 years as a standard benchmark for evaluating the climate impacts of mitigation actions (Fearnside 2002). This is the basis, for example, for using 100-year global warming potentials (GWPs) to convert quantities of non-CO₂ emissions into CO₂-equivalent emissions. The same benchmark should be used for evaluating the “permanence” of carbon offsets used by the aviation industry. However, only two of the programs that submitted applications – BC and CAR – provide a minimum guarantee of compensating for reversals for 100 years or more. Other programs guarantee permanence for shorter periods of time (sometimes far shorter), have shorter monitoring periods, and/or are vague about their guarantees. Specifically:</p> <ul style="list-style-type: none">• ACR ensures compensation for reversals only through the end of a project’s lifetime, which may be as low as 40 years (the “Minimum Project Term”). For geologic sequestration projects, a “Risk Mitigation Covenant” helps ensure against post-project reversals. However, there does not appear to be a similar covenant required for AFOLU projects.• The FCPF implements buffer reserves specific to each of the jurisdictional REDD+ programs it funds, as well as a pooled buffer to cover catastrophic reversals risks. The terms of FCPF emission-reduction purchase agreements (ERPAs), however, provide for compensation of reversals only during a REDD+ program’s first crediting period. These are typically 4+ years, but in no case will go beyond the lifetime of the FCPF Carbon Fund (currently expected to be through 2025). Funded REDD+ programs are required to have a “robust Reversal management mechanism” in place that addresses “the risk of Reversals after the term of the
--	--	--	---

			<p>ERPA.” However, the FCFP offers few details on what such mechanisms could or should look like. This presents significant uncertainties about how permanence will be maintained after 2025, including – for example - whether the FCPF’s program-specific and pooled buffer reserves will be maintained.</p> <ul style="list-style-type: none">• As noted above, Nori only compensates for reversals (in a limited fashion) for a period of 10 years after a project’s last crediting period.• The Gold Standard does not indicate for how long monitoring and compensation for reversals must be carried out. According to program documentation, A/R projects have a minimum crediting period of 30 years and a maximum of 50 years. Although buffer reserve credits are not returned to projects at the end of a project, the Gold Standard provides no estimate of how long permanence can be ensured past the end of a project’s crediting period. Unlike the BC Offset Program and CAR, there do not appear to be requirements for ongoing (post-crediting period) monitoring and compensation.• The VCS requires active monitoring and compensation for reversals only through the end of a project’s final crediting period; AFOLU projects may have lifetimes as short as 20 years. Although VCS buffer reserves may offer some insurance against reversals after a project terminates, no evidence is provided for how long this compensation could last, or how it would operate without ongoing monitoring. <p>We recommend that programs are only approved as CORSIA-eligible if their procedures and standards ensure permanence for 100 years or more. This includes that monitoring of any reversals should continue throughout this period and that appropriate mechanisms are in place to compensate for potential reversal if monitoring is no</p>
--	--	--	--

			longer conducted.
Nori, VCS	Section 4.5	Paragraph 3.5.5	<p>Failure to sufficiently address risk of intentional reversals. Buffer reserves can be effective at compensating for reversals due to natural disturbance risks, such as fire, disease, or drought affecting forests and soils. They can present a “moral hazard” problem, however, if used to compensate for human-caused reversals, such as intentional harvesting. If a landowner faces no penalty for harvesting trees for their timber value, for example – because any reversals caused by harvesting would be compensated out of a buffer reserve – then the landowner could face a strong incentive to harvest. Such perverse incentives can make a buffer reserve approach unviable, unless programs use alternative mechanisms or penalties to cover “intentional” or “avoidable” reversals. At least two of the applying programs – Nori and VCS – either do not explicitly address this distinction, or apply approaches that are insufficient to address the “moral hazard” problem:</p> <ul style="list-style-type: none"> • Nori fails to apply any direct liability for reversals and therefore creates a moral hazard for suppliers. In theory, a supplier could decide to receive credits for a period of time, then allow their land to be developed in a way that releases all credited carbon. The supplier would face no penalty for this. Although Nori maintains an “insurance reserve pool” of tokens with which it could compensate for such intentional reversals (noted in its online materials), it fails to address the moral hazard created by not imposing any liability on suppliers or buyers. • The VCS covers “non-catastrophic” reversals (e.g., due to poor management or over-harvesting) out of its buffer reserve, but will not issue further offset credits to a project until the reversal is remedied. This is similar to Nori’s approach, and provides some

			<p>disincentive against intentional reversals. However, by not imposing any immediate liability, project developers may still abandon projects without further consequence. If project monitoring ceases, the VCS commits to compensating for all VCU's issued to a project from its buffer reserve – in principle allowing intentional reversals to be fully covered.* If early cessation of projects becomes widespread, however, this commitment could lead to failure of the VCS buffer reserve.</p> <p>We recommend that programs are only approved as CORSIA eligible if they have procedures in place to address the “moral hazard” risk, as otherwise there is a significant risk that buffer reserves may not be sufficient to compensate for non-permanence.</p> <p>* VCS AFOLU projects are also required to “put in place management systems to ensure the carbon against which VCU's are issued is not lost during a final cut with no subsequent replanting or regeneration.”</p>
<p>ACR, BC , CAR, FCPF, GS, Nori, VCS</p>	<p>Section 4.5</p>	<p>Paragraph 3.5.7</p>	<p>Uncertain sufficiency of buffer reserves. As with any kind of insurance, buffer reserves can only be effective at guaranteeing permanence if they are sufficiently “capitalized” to cover reversal risks over time. Only two of the applicants – ACR and GS – provide explicit quantitative information indicating that their buffer reserves are sufficiently large to cover possible reversal events, including catastrophic losses across multiple projects. Given the potential volume of demand for carbon offsets that may arise under CORSIA, it will be important to ensure that the buffer reserves of approved programs are robust.</p> <p>We recommend that rigorous stress testing of the applicants’ buffer reserves be conducted prior to approval by ICAO, and that such</p>

			<p>stress testing be conducted on a regular basis as CORSIA progresses. Stress testing should demonstrate that buffer reserves are sufficient to cover potential catastrophic events, taking into account the geographical locations of projects.</p>
GCT, SFP	Section 4.5	All paragraphs	<p>Lack of provisions to address permanence. These two programs include activities with non-permanence risks in their application scope but do not appear to have provisions in place to address permanence or reversal risk.</p> <ul style="list-style-type: none"> · GCT refers only to permanence-related “applicability conditions” in “planned” methodologies for afforestation/reforestation (A/R) projects, and has not yet decided how reversal risk will be addressed for CCS projects. GCT indicates that it will follow CDM methodologies for permanence in A/R projects, but with shorter crediting periods; however, the CDM applies a “temporary crediting” approach to permanence that does not seem to be acknowledged here. Finally, GCT suggests that it has not yet registered any projects with reversal risks, so lack of clear policies should not (yet) be an issue. We recommend that for GCT to be approved, it should explicitly remove from its scope of eligible activities project activities that are subject to reversal risk. · SFP’s application seems to imply that because forests in Poland are a net sink for carbon, reversal risks do not apply. This is incorrect. Nevertheless, the applications refers to a “reserve” that could be used to compensate for reversals, but provides no details. The program does not seem to meet minimum criteria for fulfilling this EUC.
Nori	Section 4.5	All paragraphs	<p>Approach does not ensure permanence. Nori describes a unique approach to addressing permanence that, while innovative, does not appear to meet minimum requirements for meeting this EUC.</p>

			<p>In essence, Nori describes a forward-crediting approach, where total credits are gradually disbursed to projects (“suppliers”) over time and total disbursements are true-up based on an audit at 10 years, and then based on regular reporting (not audited) for 10 years thereafter. In principle, this monitoring and true-up process reduces the risk of over-crediting, including over-crediting as a result of reversals, but:</p> <ul style="list-style-type: none"> • Monitoring and true-up only extends for 10 years past the end of a project’s final crediting period. This is far less than the 100-year guarantee provided by other programs, which should be the benchmark for claiming “permanence.” • Nori notes that suppliers can extend the duration of carbon storage by re-enrolling their projects and adopting a new baseline. However, there is no requirement for projects to re-enroll, and there appears to be no enforcement of the new baseline (the application states explicitly that new baselines are a “theoretical assumption” and will be published “for general information purposes only.”) • As a result, there is no requirement for either suppliers or buyers to replace already-issued credits for which there are reversals (which could happen, for example, if carbon stocks fall <i>below</i> baseline levels). Liability is therefore not assigned (Paragraph 3.5.5 (a)) – and the checkbox for this requirement is left unchecked. Although Nori maintains an “insurance reserve pool” of tokens with which it could compensate for such reversals (noted above), it fails to address the moral hazard created by not imposing any liability on suppliers or buyers – nor is it clear that the “virtual” supply of tokens in Nori’s reserve pool could be used to secure a sufficient number of CRCs, which would depend on market availability.
CDM	Section 4.5	All paragraphs	Use of temporary crediting. Although not detailed in its application,

			<p>it should be noted that, for afforestation/reforestation (A/R) projects, the CDM's approach to ensuring permanence differs markedly from other offset programs. Specifically, the CDM applies a "temporary crediting" approach, where offset credits expire after a predefined period and must be replaced with other units issued under the Kyoto Protocol (this holds for both tCERs and ICERs). In clearly defined instances – the end of a commitment period under the Kyoto Protocol for tCERs, or a non-permanence event or non-submission of a monitoring report for ICERs, the credits must be replaced. tCERs may be reissued for subsequent commitment periods.. At the end of a project's final crediting period, however, no more credits may be issued and all credits must be replaced with permanent Kyoto units, regardless of whether a reversal occurred or not. This approach ostensibly guarantees permanence by ensuring that all offset credits associated with potentially non-permanent reductions or removals are replaced with units representing permanent reductions – even if no reversals occur during a project's crediting period. This is arguably a stronger guarantee than that provided by buffer reserves.</p> <p>There are several challenges with the CDM's approach, however. First, it was developed in the context of the Kyoto Protocol, and specific requirements are linked to elements of the Kyoto regime. For a certain subset of temporary credits, for example, expiry is linked to the end of the next Kyoto Protocol commitment period, which has yet to be defined (and likely will not be defined, as countries to the UNFCCC do not intend to adopt a third commitment period under the Kyoto Protocol). Moreover, in the absence of a third commitment period, permanent Kyoto units will no longer exist after the end of the true-up period of the second commitment period after 2023. After the end of that period, no units can be transacted within the Kyoto registry system. It may thus be technically impossible to</p>
--	--	--	--

			<p>compensate for any reversals after 2023. Furthermore, the requirements to replace units legally apply only to Annex B Parties to the Kyoto Protocol; it is unclear how the requirement to replace expiring credits would be enforced in the context of CORSIA.</p> <p>Note that the CDM applies a different approach to ensuring the permanence of CCS projects, involving buffers for each project (i.e., CCS buffers are not “pooled”), combined with a state liability either by the acquiring country or the host country. Although this appears to be a conservative approach in general, it faces the same issues with regard to the operational ending of the Kyoto Protocol.</p> <p>In summary, while the CDM’s approaches to addressing non-permanence for AR and CCS project activities are in principle conservative and appropriate, they are functionally insufficient due to a lack of subsequent commitment periods under the Kyoto Protocol. Effectively, permanence for these activities is no longer ensured. We therefore recommend that these project types be excluded from scope should the CDM be approved as an eligible program.</p>
ACR, GS	Section 4.5	Paragraph 3.5.6	<p>Using a mix of credits in buffer reserves. Both ACR and the Gold Standard in principle allow a project to contribute to pooled buffer reserves using credits that were issued to <i>other</i> projects, including projects not subject to reversal risks. This can bolster the effectiveness of buffer reserves, because at least some of the buffer will not be subject to reversal (as it could be if only AFOLU-project credits are used). On the hand, this could create the risk that credits that are not eligible under CORSIA could be used to compensate for the reversal of credits that <i>are</i> CORSIA-eligible. Both ACR and the Gold Standard indicate that they are able to prevent this from happening. If both these programs are approved, then their approval</p>

			<p>should be conditional on having procedures in place to ensure that ineligible credits are not used to compensate for reversals of CORSIA-eligible credits.</p> <p>(It could also be noted that allowing different types of credits to compensate for reversals could create arbitrage opportunities for project developers. As a worst-case example, a developer could sell credits from an AFOLU project, terminate the project, and cover any liability using cheaper credits from other project types. While this presents no direct environmental integrity risks - as long as projects that are not CORSIA-eligible have the same quality as CORSIA-eligible projects - it could create issues for buyers who paid a higher price assuming they were also supporting the co-benefits of an AFOLU project.)</p>
Comments relating to avoiding double counting			
ACR, CAR, GS, VCS	Section 4.7	All paragraphs	<p>Incorporation of the Guidelines on Avoiding Double Counting for CORSIA. These Guidelines were developed by a multi-stakeholder group and aim to help carbon offsetting programs in implementing standards and procedures to avoid double counting for CORSIA. The Guidelines provide practical examples and guidance on how programs can address the EUCs related to double counting. They include guidance to address nearly all of the elements included in the TAB's "Guidelines for Criteria Implementation", with the exception of the "Reconciliation of double-claimed mitigation" (3.7.13).</p> <p>The four programs listed here have participated in the multi-stakeholder group that developed the Guidelines on Avoiding Double Counting for CORSIA. The ACR, CAR and GS refer in their application to the Guidelines; the VCS does not mention the Guidelines. From the language used in the applications of these four programs, it is however not fully clear whether the programs intend to incorporate</p>

			<p>the Guidelines in their entirety in their program standards and procedures:</p> <ul style="list-style-type: none">• The ACR standard, version 6.0, chapter 10, incorporates by reference the "procedures to avoid double counting as detailed in the Guidelines on Avoiding Double Counting for CORSIA". Section 10.B.2 also incorporates some elements of the Guidelines into the standard, such as the requirement to obtain attestation letters from relevant countries. Given the short time available after publication of the Guidelines and the application window for the TAB, the incorporation by reference seems a good and straight-forward solution for those elements of the Guidelines that can be implemented directly by project owners. However, some elements of the Guidelines target the standards, procedures and operations of the carbon-offsetting programs. For example, the Guidelines include several options for how programs could satisfy CORSIA requirements; a reference to the Guidelines does not provide clarity about which of these elements are required for project owners and which not. There are also elements of the Guidelines which may require modifications to the operations of the program, such as the information and registry systems of the program. These can also not be addressed by a reference to the Guidelines.• The CAR highlights that several changes to relevant program documentation will be implemented to incorporate the Guidelines. This should be completed by the end of 2019.• The GS highlights that for addressing double claiming procedures will be developed in line with the Guidelines. The GS also explicitly refers to a new procedure that will be developed to qualify offset credits for use under CORSIA. These elements are planned to be finalized by the end of 2019, whereas other
--	--	--	--

			<p>elements are only planned to be finalized around 2023-2024.</p> <ul style="list-style-type: none"> The VCS does not refer to the Guidelines. <p>We recommend that these four programs further clarify which elements of the Guidelines they intend to apply, or whether they will apply the Guidelines in their entirety. We also recommend that programs further clarify which program documents and operations will be changed to implement the Guidelines. In commenting below, we assume that all four programs apply the Guidelines in their entirety, including the VCS. However, we flag specific issues that may arise for programs on some aspects. If our assumption that the Guidelines will be applied in their entirety is not correct, some of the comments provided to other programs may also apply to ACR, CAR, GS and the VCS.</p>
BC	Section 4.7	Double issuance (paragraph 3.7.5)	<p>Lack of procedures to avoid double issuance due to double registration of the same project within the same program. BC does not explain how they intend to avoid double registration of the same project within the same program. The application form only refers to registry functionalities, but this issue cannot be addressed through registry functionalities. To address this issue, the program should have standards and procedures in place that ensure that the same project is not simultaneously registered more than once within a single program.</p>
FCPF	Section 4.7	Double issuance (paragraph 3.7.5)	<p>Lack of procedures to avoid double issuance due to nested activities within a jurisdictional program. FCPF does not explain what procedures are in place to avoid double issuance with activities nested within the jurisdiction where FCPF is implemented. To address this issue, the programs could establish standards and procedures for accounting of nested activities.</p>
BC, CDM, FCPF, Nori, TGO	Section 4.7	Double issuance (paragraph 3.7.5)	<p>Lack of procedures to avoid double issuance due to double registration of the same project with other programs. The programs</p>

			<p>listed here do not explain how they avoid double registration of the same project under two different programs. Other programs have procedures in place to avoid double issuance between two projects registered under two programs.</p> <p>To avoid double registration of the same project under different programs, programs should undertake checks, e.g. by reviewing project databases of other programs to verify that registered projects have not been issued offset credits in any other program for emission reductions. For that purpose, offset credit registries need to make information on offset credits available to users and the public. Programs should administer a publicly accessible, transparent and easily searchable project database for that purpose which may operate as a separately functioning system or be incorporated as part of the program's offset credit registry system. If a project is registered with more than one program, offset credits need to be cancelled by one program before offset credits are issued by another program for the same emission reductions and removals. The cancellations should be clearly designated for the purpose of allowing the reissuance of offset credits for the same emission reductions or removals under another program. For that purpose, legal attestations from project owners should also be obtained which confirm that they have not and will not request issuance of offset credits for emission reductions or removals from more than one program, unless such offset credits are canceled under one program prior to reissuance. By that means, the risk of double registration can be reduced by making project owners liable in case of not adhering to the obligations they have signed on to.</p>
GCT	Section 4.7	Double issuance (paragraph 3.7.5)	<p>Lack of clarity how double issuance with other programs is avoided. GCT states that, in order to avoid such double issuance, the GPS coordinates of the project will be checked before issuing offset</p>

			credits. However, there is no reference to relevant standards and procedures which clearly establish requirements that double registration is not allowed or not avoided. It is also questionable whether GPS checks are sufficient to avoid this form of double issuance. Most other programs require legal attestations from project owners that they will not register the project elsewhere, or similar means.
ACR, BC, CCER, CDM, FCPF, GCT, GS, Nori, TGO, VCS	Section 4.7	Double issuance (paragraph 3.7.5)	<p>Double issuance of offset credits from different projects which indirectly address the same mitigation activity under the same or different programs. Double issuance can also occur indirectly, through overlapping claims by different entities involved in carbon offset projects. This can, for example, occur when different entities involved in the production and/or consumption of the same good or service are allowed to claim offset credits for the same emission reductions or removals. The programs listed here are not clear how they avoid such double issuance, in particular in relation to such overlap with other programs (e.g. if one program credits the production of biofuels, whereas another program credits the use of biofuels).</p> <p>The CAR addresses this issue by avoiding the development and adoption of protocols that are likely to present a risk of ownership issues. Some CDM methodologies also address this issue, inter alia, by requesting that project owners seek written attestations from other potential owners of the emission reductions that they will not claim the emission reductions. For some activities, CDM methodologies also only allow that one possible user can claim emission reductions. More indirect overlaps are also addressed, for example, by using emission factors that consider other CDM projects with potentially overlapping claims. However, the CDM addresses this form of double issuance only with regard to other CDM projects but</p>

			<p>does not avoid it with regard to projects registered under other programs.</p> <p>We recommend that programs listed here clarify how they address this form of double issuance. To avoid this form of double issuance, programs could establish quantification standards and project eligibility criteria that ensure that overlapping emission reduction or removal claims are avoided so that different projects cannot be issued credits for the same emission reductions or removals. To prevent overlapping claims, procedures and methodologies for the accounting of emission reductions or removals need to be defined. For that purpose, the boundaries for different project types need to be defined so that overlap does not occur. The Guidelines on Avoiding Double Counting for CORSIA provide further information that may be useful in implementing such standards and procedures.</p>
BC, CCER, CDM, FCPF, GCT, Nori, TGO	Section 4.7	Double use (paragraph 3.7.6)	<p>Lack of CORSIA compatible cancellation procedures to avoid double use of the same offset credits. Double use of offset credits could occur not only if the same offset credit is cancelled twice, but also if one cancellation is applied to more than one emission reduction claim. This could occur, for example, if the purpose of a cancellation is ambiguous, such that more than one entity could assert a claim to it. The programs listed here are not clear how they would ensure that, for CORSIA compliance, the cancellation purpose is clearly indicated such that only one party (e.g., an aeroplane operator) can credibly claim the use of an offset credit.</p> <p>To address this issue, programs need to incorporate cancellation procedures that ensure that a cancellation is clearly indicated, irreversible and unambiguously designated for a specific purpose. Accordingly, cancelled offset credits should be clearly linked to a specific offsetting requirement of a particular aeroplane operator.</p>

			<p>The registry functionalities of the program should require the registry user, in order to conduct a CORSIA-related cancellation, to specify the aeroplane operator for which the offset credits were cancelled and the calendar year for which an offsetting requirement is fulfilled through the cancellation (e.g. "XYZ Airlines, 2024 offsetting requirement, covering the 2021-2023 offsetting compliance period under CORSIA").</p>
<p>BC, CCER, CDM, FCPF, GCT, Nori, TGO</p>	<p>Section 4.7</p>	<p>Host country attestation to the avoidance of double-claiming (paragraph 3.7.8)</p>	<p>Content of host country attestations. The programs listed here are not clear what information in host country attestations would be regarded as sufficient for the program to qualify offset credits as being CORSIA eligible.</p> <p>To address this issue, we recommend that programs establish procedures that require that attestation letters must, as a minimum, include the following information in order for the program to qualify offset credits from a project as being CORSIA eligible:</p> <ul style="list-style-type: none"> • Identify the project; • Acknowledge that the project may reduce emissions (or enhance removals) in the country; • Acknowledge that the program to which the letter is provided has issued, or intends to issue, offset credits for the emission reductions or removals that occur within the country; • Authorize the use of the project's emission reductions or removals, issued as offset credits, by aeroplane operators in order to meet offsetting requirements under CORSIA; • Declare that the country will not use the project's emission reductions or removals to track progress towards, or for demonstrating achievement of, its NDC (or other relevant international mitigation targets, as applicable) and will account for their use by aeroplane operators under CORSIA by applying

			<p>relevant adjustments (or for other relevant international mitigation targets by taken appropriating other means such as the cancellation of assigned amount units under the Kyoto Protocol).</p> <p>It may also be helpful if programs encourage that letters:</p> <ul style="list-style-type: none"> • Provide a stipulation regarding the maximum number of the project's emission reductions or removals, issued as offset credits, that the country authorizes for use, including any limits on the time period over which the country provides such authorization; • Include a request to the program to provide information to the country on the use of the offset credits; • Declare that the country will report on the authorization and use of the project's emission reductions or removals by other countries or entities in a transparent manner in its biennial transparency report submitted under Article 13 of the Paris Agreement. <p>Programs may also include example letters in any best practice guidelines. Further relevant information, including example letters, can be found in the Guidelines on Avoiding Double Counting for CORSIA.</p>
Cross-cutting issue / All programs	Section 4.7	Host country attestation to the avoidance of double-claiming (paragraph 3.7.8)	<p>Mitigation outcomes outside the scope of NDCs. There is ongoing debate in international negotiations under the Paris Agreement whether emission reductions that are not covered by NDCs are eligible for international transfer and, if yes, whether corresponding adjustments or other safeguards are necessary. While technically double claiming does not occur if the emission reductions or removals are not covered by an NDC, the use of such offset credits could create a number of environmental integrity concerns. It could,</p>

			<p>in particular, create perverse incentives for countries not to broaden the scope of their NDCs. This could undermine the objective in Article 4.4 of the Paris Agreement that all countries should move over time towards economy-wide targets. If the emission reductions are covered by NDCs, countries may also have greater incentives to ensure that they only authorize projects that are additional and do not over-estimate emission reductions. A further practical difficulty of not requiring adjustments for emission reductions or removals that are not covered by NDCs is that the scope of current NDCs is often not clear, and it may be practically difficult to differentiate whether an emission reduction is covered or not covered by an NDC. This could potentially result in inconsistent treatment by different programs, even in the same country with the same activities.</p> <p>While this matter cannot be resolved by carbon-offsetting programs and should ideally be addressed by the Parties to the Paris Agreement, including for offset credits used under CORSIA, in the absence of such clear international rules under the Paris Agreement this issue is a relevant matter for the process of approval of programs by ICAO. Effectively, by approving programs, ICAO would either approve the use of such emission reductions (if the program's procedures allow them to be qualified for use under CORSIA) or not approve them (if the program's procedures do not allow them to be qualified).</p> <p>None of the programs provide information in their applications whether and under which conditions they would qualify offset credits for use under CORSIA if the associated emission reductions are not covered by NDCs and no rules on this matter have been adopted under the Paris Agreement. In particular, it is unclear how they would handle a situation where the letter from the relevant country would</p>
--	--	--	---

			<p>NOT confirm that the country intends to apply adjustments for emission reductions not covered by the NDC and used under CORSIA.</p> <p>If this matter is not resolved at COP25 in Santiago, including for offset credits used under CORSIA, we recommend that programs and ICAO adopt a cautious approach, in order to avoid that offset credits are qualified for use under CORSIA that may not satisfy future rules under the Paris Agreement. To implement such a cautious approach, we recommend that programs only qualify offset credits for use under CORSIA:</p> <p>1) if the offset credit's associated emission reductions are covered by NDCs; or</p> <p>2) if the attestation letter by the relevant country specifies that all emission reductions - irrespective of whether they are covered or not covered by an NDC (or other relevant international mitigation target) - will be accounted for by the country through the application of adjustments.</p> <p>If this matter is clarified at COP25 in Santiago, the approach adopted would need to be incorporated in relevant program standards and procedures, to ensure consistency with relevant international rules.</p>
<p>ACR, BC, CAR, CCER, CDM, FCPF, GCT, GS, Nori, TGO, VCS</p>	<p>Section 4.7</p>	<p>Host country attestation to the avoidance of double-claiming (paragraph 3.7.8)</p>	<p>Possibility of host country attestations from countries that do not participate in the Paris Agreement. The EUC on double claiming specifies that host countries of emissions reduction activities should 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." The Guidelines for interpretation further specify that this should occur on the basis of an attestation which should describe the steps taken to</p>

			<p>prevent double claiming.</p> <p>However, none of the programs listed here provide information whether they would qualify offset credits for use under CORSIA if the relevant country does not participate in the Paris Agreement, or has not communicated an NDC for the applicable implementation period, but would nevertheless issue a letter authorizing the use of the emission reductions under CORSIA.</p> <p>We recommend that all programs clarify as part of their procedures that offset credits issued for emission reductions after 2020 can only be qualified by a program as CORSIA eligible if the relevant country participates in the Paris Agreement and has communicated an NDC for the applicable NDC implementation period.</p> <p>As part of the program approval process, ICAO will need to clarify, and programs will need to implement respective provisions, whether emission reductions from countries that do not participate in the Paris Agreement, or that have not communicated an NDC for an applicable NDC implementation period, should be eligible for use under CORSIA.</p> <p>In our view, this is not only essential to satisfy the EUCs with regard to the requirement to account for offset credits, but also to avoid that CORSIA creates a perverse incentive for countries to withdraw from the Paris Agreement. Such perverse incentives could undermine global mitigation ambition beyond CORSIA. Lastly, qualifying offset credits from countries that currently do not participate in the Paris Agreement could also lead to double claiming if a country would later join the agreement again.</p>
BC, CCER, CDM,	Section 4.7	Double claiming	Lack of procedures to identify overlap with a country's NDC. A key

FCPF, GCT, Nori, TGO		procedures (paragraph 3.7.9)	<p>prerequisite for avoiding double claiming is that any overlap with a country's NDC under the Paris Agreement is identified. A systematic identification of whether a project involves activities or emission reductions or removals that are covered by NDC targets is necessary in order to provide transparency on potential effects of a project on a country's progress towards achieving its NDC targets. Such transparency helps countries to plan the achievement of their NDC targets and understand how the implementation of projects might affect their progress towards NDC targets. Also, this information may be needed for countries to apply adjustments in cases of overlap. The programs listed here do not specify how they intend to implement procedures to identify overlap with NDCs.</p> <p>To address this issue, programs should adopt a procedure to identify overlap with NDC targets. The results of the assessment of overlap with a country's NDC would need to be documented, such as through a publicly accessible database where relevant information on each offset credit is accessible (e.g. whether it overlaps with relevant NDC targets, whether adjustments are necessary, and whether the relevant adjustments have been applied). The Guidelines on Avoiding Double Counting for CORSIA provide useful further information how this could be implemented.</p>
BC, CCER, CDM, FCPF, GCT, Nori, TGO	Section 4.7	Double claiming procedures (paragraph 3.7.9)	<p>Lack of procedures to ensure gathering and public provision of information on the country where the emission reductions or removals occurred. To prevent double claiming and seek attestation letters (see comment further below), it is necessary to identify in which countries the offset credits' emission reductions or removals occurred. In most instances, a project is implemented only in one country and the emission reductions or removals occur in the same country. In some instances, however, the emission reductions or removals could occur in several countries or in a different country</p>

			<p>than where the project is being implemented. Examples include programmatic approaches that often implement activities in several countries; multinational electricity systems in which the generation or saving of electricity in one country can affect the emissions from power plants in other countries; and projects avoiding upstream or downstream emissions that occur in other countries, such as from the production of fossil fuels.</p> <p>The programs listed here do not include information in their applications on how they identify the countries where the emission reductions occur.</p> <p>To address this issue, programs need to adopt standards and procedures to identify the relevant countries and allocate the emission reductions respectively to the relevant countries. For that purpose, the Guidelines on Avoiding Double Counting for CORSIA recommend that programs require project owners and/or program staff to</p> <ul style="list-style-type: none">• Identify the countries in which the project is implemented, i.e. where the mitigation action is undertaken,• Identify the country, or group of countries, where the project's calculated emission reductions or removals occur,• Determine the proportion of emission reductions or removals that occurred within each identified country, ensuring that<ul style="list-style-type: none">○ The allocation is proportional to where the emission reduction or removals occurred○ A project cannot claim emission reductions in one country while ignoring increases of emissions in another country due to the project○ The total number of offset credits issued does not exceed
--	--	--	--

			<p>the net emission reductions or removals of the project in all countries</p> <ul style="list-style-type: none"> Assign an attribute to each offset credit indicating the country where the emission reductions or removals occurred, ensuring that only one country is assigned to each offset credit.
BC, CCER, CDM, FCPF, GCT, Nori, TGO	Section 4.7	Double claiming procedures (paragraph 3.7.9)	<p>Lack of specification of approach to identify the calendar years in which the emission reductions or removals occurred. The programs listed here do not explain how they plan to identify the calendar years in which the offset credits' emission reductions or removals occurred. This is necessary in order to effectively avoid double claiming, as it is necessary to assess whether an offset credit's emission reductions or removal fall within a period that is covered by a relevant mitigation target. It also necessary for enabling robust accounting for the use of offset credits over time, in particular in the context of single-year mitigation targets.</p> <p>The programs do not provide information how they plan to address this. The CDM includes such approaches, but only for identifying the relevant commitment period, not individual calendar years. In the post-2020 context, however, with many countries having single year targets, it is necessary to identify the calendar year in which the emission reductions occurred.</p> <p>To address this issue, the programs should establish standards and procedures to identify for each offset credit the calendar year in which the associated emission reductions or removals occurred, and to assign to each issued offset credit an attribute indicating the calendar year. Offset credits should be allocated proportionally to calendar years. For that purpose, the Guidelines on Avoiding Double Counting for CORSIA recommend two different approaches:</p>

			<ul style="list-style-type: none"> • Direct measurement: the emission reductions are measured continuously, or relevant meters are read at the end of a calendar year; • Allocation based on plausible assumptions: the emission reductions are allocated to the calendar years using plausible assumptions on when they likely occurred. <p>The allocation of offset credits to calendar years should be transparently documented. Clear allocation of credits to calendar years allows assessing whether an offset credit's emission reduction or removal falls within a period that is covered by an NDC.</p>
BC, CCER, CDM, FCPF, GCT, Nori, TGO	Section 4.7	Double claiming procedures (paragraph 3.7.9)	<p>Lack of procedure to provide countries information necessary to apply adjustments in the GWP values that they use to account for their NDCs. In some instances, countries may account for their mitigation targets in different GWP values than the values that the program uses to issue offset credits for use under CORSIA. Under the Paris Agreement, for example, it is envisaged that countries account for emissions and removals in accordance with “common metrics” assessed by the IPCC (decision 1/CP.21, paragraph 31, sub-paragraph a). At COP24 in Katowice, Parties agreed that each Party shall use in their national inventory reports the 100-year time-horizon GWP values from the 5th IPCC assessment report, or 100-year time-horizon GWP values from a subsequent IPCC assessment report as agreed upon by the CMA, to report aggregate emissions and removals of GHGs, expressed in CO₂eq. Each Party may in addition also use other metrics (e.g. global temperature potential) to report supplemental information on aggregate emissions and removals of GHGs, expressed in CO₂eq (see paragraph 37 of the decision 18/CMA.1 on “Modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement”). Furthermore, Parties adopted guidance</p>

			<p>on accounting for Parties' nationally determined contributions, which establishes that Parties account for anthropogenic emissions and removals in accordance with these metrics (paragraph 1, subparagraph a, of Annex II to decision 4/CMA.1 on "Further guidance in relation to the mitigation section of decision 1/CP.21"). This accounting guidance is, however, only mandatory for second and subsequent NDCs (paragraph 32 of decision 1/CP.21 and paragraph 14 of decision 4/CMA.1). In their first NDCs, countries communicated that they intend to use various GWP values, including values from the 2nd, 4th, and 5th IPCC assessment reports. It is thus possible that some countries use, for the first NDC, values other than those from the 5th IPCC assessment report to account for their NDC.</p> <p>This brings challenges for the consistency of GWP values used by programs to issue offset credits, and the amounts that need to be accounted for by countries in their own GWP metrics. To address this issue and enable robust accounting by countries for the use of offset credits under CORSIA, it is thus necessary that programs establish procedures that inform countries about the amount of adjustments that are necessary to effectively avoid double claiming based on the GWP values applied by the countries. The Guidelines on Avoiding Double Counting for CORSIA provide further information on how such information could be reported. None of the programs listed explain in their applications how they intend to address this issue.</p>
ACR, BC, CAR, CCER, CDM, FCPF, GCT, GS, Nori, TGO, VCS	Section 4.7	Double claiming procedures (paragraph 3.7.9)	<p>Procedures to avoid double counting with international mitigation targets in the period up to 2020. Through 2020, countries have agreed to or communicated international climate change mitigation targets in the context of the UNFCCC, the Kyoto Protocol and its Doha Amendment. In response to the fifteenth and sixteenth Conferences of the Parties (COP) to the UNFCCC, held respectively in Copenhagen and Cancun, countries put forward voluntary pledges and nationally-</p>

		<p>appropriate mitigation actions for the year 2020 (hereinafter referred to collectively as “Cancun targets”). The targets of developed countries that participate in the Kyoto Protocol’s second commitment period were later translated into quantified emission limitation and reduction objectives for the period 2013 to 2020 and included in Annex B under the Doha Amendment, while the targets of other countries remain under the UNFCCC.</p> <p>The programs take diverse approaches to avoid double counting in the context of these mitigation targets. Some programs avoid double counting with Kyoto Protocol targets (e.g. by requiring cancellation of AAUs if offset credits are issued). Some programs also avoid double counting with Cancun targets communicated by Annex I countries (mostly by not allowing projects in these countries), while others ignore these targets. Some programs are not entirely clear. We recommend that all programs provide clear information with which type of international mitigation targets they intend to avoid double claiming.</p> <p>In our view, double claiming should be avoided with both Kyoto and Cancun targets. In the negotiations following the adoption of the Cancun targets, Parties agreed that “various approaches, including opportunities for using markets ... must meet standards that ... avoid double counting of effort” (decision 2/ CP.17, paragraph 79). Decision 1/CP.21, adopting the Paris Agreement, also refers to avoiding double counting in the context of action prior to 2020, urging “host and purchasing Parties to report transparently on internationally transferred mitigation outcomes, including outcomes used to meet international pledges, and emissions units issued under the Kyoto Protocol with a view to promoting environmental integrity and avoiding double counting.” International decisions under UNFCCC</p>
--	--	--

			<p>thus point to the need to avoid double counting. Moreover, the EUCs are clearly not limited to NDCs but cover mitigation efforts and obligations more broadly. Lastly, in our view, allowing double counting with internationally communicated mitigation targets in the period up to 2020 could undermine the integrity and ambition of CORSIA.</p>
<p>BC, CCER, CDM, FCPF, GCT, Nori, SFP, TGO</p>	<p>Section 4.7</p>	<p>Double-claiming procedures (paragraph 3.7.9)</p>	<p>Lack of procedures to avoid double claiming with mandatory domestic climate change mitigation targets. The programs listed here do not explain how double claiming with mandatory domestic climate mitigation targets can be avoided. Mitigation activities that are used under CORSIA might overlap with domestic mandatory climate targets. For example, renewable power plants could also reduce emissions in regional or national emissions trading system (ETS). Some programs explicitly have procedures in place to avoid such double counting or plan to implement them. For example, several programs avoid double counting with ETs and have procedures that emission reductions covered by an ETS can either not be issued as offset credits or that a respective amount of ETS allowances be cancelled if offset credits are issued. The programs listed here do not explain whether they avoid such double counting.</p> <p>SFP, for example, proposes to qualify emission reductions for use under CORSIA that can also be used to achieve mandatory EU legislation (LULUCF Regulation, Regulation (EU) 2018/841). Under the EU's LULUCF regulation, countries can use the same emission reductions to achieve their LULUCF target and partially to compensate for emissions in other sectors. The EU legislation does not include means to account for the use of these emission reductions under CORSIA. EU legislation would thus need to be amended to avoid double counting for CORSIA.</p>

			<p>To address this issue, programs should have procedures in place to identify relevant mandatory domestic mitigation targets and a project's overlap with such targets in order to avoid double claiming. Any potential overlap should be addressed through</p> <ul style="list-style-type: none"> · Requiring that activities or emission reductions/removals that are associated with offset credits are not counted towards the achievement of relevant domestic mitigation targets · Not issuing offset credits for activities or emission reductions or removals that are covered by these targets · Not qualifying offset credits for use under CORSIA if the associated activities or emission reductions or removals are covered by these targets.
ACR, GCT, GS, VCS	Section 4.7	Double claiming procedures (paragraph 3.7.9)	<p>Clarification of ineligibility of emission reductions from international bunker fuel sectors. The programs listed here are not fully clear in their applications whether emission reductions from decreasing the use of international bunker fuels are ineligible. If such emission reductions were eligible, this could lead to double claiming within CORSIA (as the airlines would claim the same emission reductions through lower reported emissions and through the use of these offset credits) or with mitigation efforts and targets under the International Maritime Organization (IMO).</p>
ACR, CAR, CDM, GCT, VCS	Section 4.7	Double-claiming procedures (paragraph 3.7.9)	<p>Potential double claiming with targets under the Montreal Protocol and its amendments. The Montreal Protocol and its amendments establish binding targets for countries to reduce the consumption and production of ozone depleting substances (ODS) as well as HFCs (in the recent Kigali amendment). The programs listed here include the reduction of ODSs or HFCs within their scope, or are not entirely clear whether these activities are included within their scope requested to be eligible for CORSIA. It is not clear how the programs ensure that credited emission reductions from these gases are not</p>

			used to achieve both CORSIA offsetting obligations and the targets under the Montreal Protocol and its amendments.
Cross-cutting issue / All programs	Section 4.7	Double-claiming procedures (paragraph 3.7.9)	<p>Potential double claiming of emission reductions in relation to NDC targets expressed in non-GHG metrics. If an NDC target is expressed in non-GHG metrics, double claiming can occur if emission reductions that are used as offset credits under CORSIA result from activities that also contribute to achieving non-GHG targets in a country's NDC (e.g. energy efficiency targets, increasing renewable energy or forest cover).</p> <p>In international negotiations under the Paris Agreement, it is not yet clear how any targets in non-GHG metrics will be considered. One option considered is expressing such NDCs in GHG emissions terms for accounting purposes, another option is considering non-GHG metrics. Depending on the outcome, programs will need to have procedures in place to identify any overlap between project activities and non-GHG targets. So far, a decision on accounting of such mitigation outcomes and potential adjustments has not been taken. If the CMA provides guidance in this respect in the future, this should be implemented as requirements for programs operating under CORSIA as well.</p>
BC, FCPF, Nori, TGO	Section 4.7	Double claiming procedures (paragraph 3.7.9)	<p>Lack of procedures for ensuring that offset credits are issued only after final program approval of verification reports. The programs listed here do not explain how they ensure that offset credits are issued only after emission reductions have occurred and been verified. If offset credits were issued ex-ante, this could lead to double counting (e.g. if an NDC is updated to include sources for which credits were already issued in advance).</p>
BC, CCER, CDM, FCPF, GCT, Nori, TGO	Section 4.7	Double-claiming procedures (paragraph	<p>Lack of procedures to obtain evidence of appropriate accounting by host countries. The programs listed here are not clear how they plan to obtain evidence of appropriate accounting by host countries. In</p>

		<p>3.7.9.2) and comparing unit use against national reporting (3.7.11)</p>	<p>order to avoid double claiming, programs need to establish procedures to check whether countries have appropriately accounted for any emission reductions that were used as offsets under CORSIA when claiming the achievement of their mitigation targets.</p> <p>To address this issue, programs should adopt standards and procedures to obtain such evidence. The procedure should address all relevant types of mitigation targets (domestic, international) and mandatory schemes (such as emissions trading systems). In the context of emissions trading systems, for example, the procedures should ensure that a respective amount of allowances are cancelled for any emission reductions achieved within the scope of the emissions trading system.</p> <p>In the context of NDCs under the Paris Agreement, programs should verify that the relevant country has established and is operating an accounting system for recording adjustments; that the adjustment was recorded appropriately in the accounting system and reported in the structured summary referred in paragraph 77d of the Annex to decision 18/CMA.1 and paragraph 17 of decision 4/CMA.1; and that all necessary adjustments were appropriately applied, consistent with relevant international rules. Evidence for the application of adjustments could, for example, be provided in the form of a letter or certificate (physical or electronic) from the relevant country indicating that the required adjustments have been applied within the relevant accounting system. Any evidence should clearly reference the offset credits for which the country has applied the adjustments.</p> <p>A program's standards and procedures should also clarify when the program should take action to obtain evidence of appropriate</p>
--	--	--	---

			accounting by the host country.
BC, CCER, CDM, FCPF, GCT, Nori, SFP, TGO	Section 4.7	Reconciliation of double-claimed mitigation (paragraph 3.7.13)	<p>Public reporting. The programs listed here do not provide information on their procedures for public reporting. The regular publication of reports with aggregated information can facilitate the avoidance of all forms of double counting. The countries where the emission reductions or removals occur require information on the issuance and use of offset credits for the purpose of applying adjustments. Aggregated information on the issuance and use of offset credits is also required to reconcile and compare the use of offset credits under CORSIA with the adjustments applied by countries.</p> <p>To address this issue, we recommend that programs regularly publish reports that provide aggregated information related to the issuance and cancellation of offset credits. Such reports should be published at least annually within six months after the end of a calendar year and include at a minimum</p> <ul style="list-style-type: none"> • Total issued offset credits by country, calendar year, and the need for application of adjustments, • Total cancelled offset credits by aeroplane operators, • The maximum number of emission reductions or removals from projects registered with the program, authorized by countries for use by other countries or entities, by country and calendar year. <p>The Guidelines on Avoiding Double Counting for CORSIA provide further information reporting elements.</p>
ACR, BC, CAR, CDM, CCER, FCPF, GCT, GS, Nori, SFP, TGO, VCS	Section 4.7	Reconciliation of double-claimed mitigation (paragraph 3.7.13)	<p>Lack of procedures to reconcile credits once double-claimed. The programs listed here do not provide information on how they deal with double counting once it has occurred. Procedures are necessary to ensure that any double-claimed mitigation associated with units</p>

			<p>used under CORSIA are compensated for, replaced or otherwise reconciled.</p> <p>Most programs do not provide any information on how to deal with this issue or vaguely state that they will put in place or would be willing to consider introducing a mechanism to compensate for instances of double claiming, as required by ICAO (e.g. ACR, VCS).</p> <p>Nori mentions in its application and supporting documents that all purchases of credits under CORSIA are insured to be made whole by the Nori insurance reserve. However, according to the program documentation by Nori (section 2.5), this insurance does not cover double counting (e.g. a situation where the country does not apply necessary adjustments). It is also unclear whether this insurance will be able to adequately address the underlying risk.</p>
--	--	--	--

* Please refer to [Programme Application Form, Appendix A - Supplementary Information for Assessment of Emissions Unit Programs](#)

References

Fearnside, P. M. (2002). Why a 100-year time horizon should be used for global warming mitigation calculations. *Mitigation and Adaptation Strategies for Global Change*, no. 7. 19–30.

Murray, B. C., Galik, C. S., Mitchell, S. and Cottle, P. (2012). *Alternative Approaches to Addressing the Risk of Non-Permanence in Afforestation and Reforestation Projects under the Clean Development Mechanism*. Nicholas Institute for Environmental Policy Solutions, Duke University

Schneider, L., Conway, D., Kachi, A. and Hermann, B. (2018). *Crediting Forest-Related Mitigation under International Carbon Market Mechanisms: A Synthesis of Environmental Integrity Risks and Options to Address Them*. GIZ, Berlin.

<https://newclimate.org/2018/09/19/crediting-forest-related-mitigation-under-international-carbon-market-mechanisms/>