Application of the CCQI methodology for assessing the quality of carbon credits

This document presents results from the application of version 3.0 of a methodology, developed by Oeko-Institut, World Wildlife Fund (WWF-US) and Environmental Defense Fund (EDF), for assessing the quality of carbon credits. The methodology is applied by Oeko-Institut with support by Carbon Limits, Greenhouse Gas Management Institute (GHGMI), INFRAS, Stockholm Environment Institute, and individual carbon market experts. This document evaluates one specific criterion or sub-criterion with respect to a specific carbon crediting program, project type, quantification methodology and/or host country, as specified in the below table. Please note that the CCQI website Site terms and Privacy Policy apply with respect to any use of the information provided in this document. Further information on the project and the methodology can be found here: www.carboncreditquality.org

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Sub-criterion:	**3.2.1 Approaches for accounting and compensating for reversals (Approach 1)**
Carbon crediting program:	**VCS**
Project type:	**Avoided Planned Deforestation** **Avoided Unplanned Deforestation** **Commercial afforestation** **Establishment of natural forest** **Improved forest management**
Assessment based on carbon crediting program documents valid as of:	**30 June 2021**
Date of final assessment:	**02 July 2024**
Score:	**1.45**

Assessment

The methodology assesses the robustness of the carbon crediting program´s approach to account and compensate for reversals. Carbon crediting programs employ the following three approaches for accounting and compensating for reversals:

- **Temporary carbon credits (Approach 1a):** credits that expire after a certain period and need to be replaced by other carbon market units, irrespective of whether a reversal occurred;
- **Monitoring and compensation for reversals (Approach 1b):** monitoring of any (potential) reversals and the compensation for the reversal through the cancellation of other carbon market units;
- **Discounting (Approach 1c):** discounting of emission reductions or using lower baselines that result in fewer emission reductions or removals that are credited in order to account for possible future reversals.

Usually, a carbon crediting program only pursues *one* of these three approaches for a given project type and geographical area. The assessment is thus applied to the relevant approach only and the scoring result for the relevant approach constitutes the score for sub-criterion 3.2.1. In situations where a program uses another approach than the above three approaches to account and compensate for reversals, the users of the methodology may use expert judgment to assess the robustness of the relevant approach. The VCS applies approach 1b.

Approach 1b

Relevant scoring methodology provisions

Monitoring and compensation for reversals is the predominant approach of carbon crediting programs to address non-permanence. The robustness of this approach depends on several design aspects. The methodology therefore considers several indicators to assess the application of this approach. All of these indicators are assessed at program level and, where the program's requirements differ between project types, quantification methodologies and/or geographical areas, also taking into account the specific provisions of the program related to the relevant project types, quantification methodologies and/or geographical areas.

Indicator 3.2.1.1

Relevant scoring methodology provisions

The methodology assesses the carbon crediting program provisions for the minimum time period for which the occurrence of any reversals must be monitored, reported and compensated for. The longer this period is, the higher is the likelihood that reversals occurring within the time horizon relevant for avoiding dangerous climate change are appropriately addressed. The following table specifies which score is assigned for which minimum duration:

Period for which monitoring, and reporting of reversals is required (from the start of the first crediting period)	Score
100 years or longer	4
>= 60 years	3
>= 30 years	2
Shorter	1

Information sources considered

1 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

2 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, sections 3.8.3 and 3.4: "For all other AFOLU projects [...] the project crediting period shall be a minimum of 20 years up to a maximum of 100 years, which may be renewed at most four times with a total project crediting period not to exceed 100 years".

"In order to complete the project verification process, project proponents shall prepare a monitoring report, which describes the data and information related to the monitoring of GHG emission reductions or removals".

Provision 2 Source 1, section 3.2.18: "where projects fail to submit a verification report within five or ten years from the previous verification event, a percentage of buffer credits is put on hold under the conservative assumption that the carbon benefits represented by buffer credits held in the AFOLU pooled buffer account may have been reversed or lost in the field. Where projects fail to submit a verification report within 15 years from the previous verification event, buffer credits are cancelled under the same assumption."

Provision 3 Source 1, section 3.2.19: "The remaining balance of buffer credits is cancelled at the end of the project crediting period."

Provision 4 Source 2, section 5.3.4: "Where a project fails to submit a verification report to the Verra registry within five years of its last verification, 50 percent of the buffer credits associated with the project shall be put on hold. After a further five years, all of its remaining buffer credits shall be put on hold. Where no subsequent verification report has been presented within a period of 15 years, **and the project crediting period has not yet expired**, buffer credits shall be cancelled from the AFOLU pooled buffer account in an amount equivalent to the total number of VCUs issued to the project (including buffer credits put on hold) and the project shall be labeled as *inactive*."

Provision 5 Source 2, section 5.3.5: "Where buffer credits are put on hold because a project does not submit a verification report within five years of the previous verification, the project may re-claim buffer credits. A new verification report shall be submitted prior to the expiration of the project crediting period. Verra shall re-assign buffer credits that have been put on hold in accordance with the procedure set out in Section 5.1.1

above. **The remaining balance of buffer credits associated with a project shall be cancelled at the end of the project crediting period**."

Assessment outcome

The approach is assigned a score of 1.

Justification of assessment

Under the VCS, a project could run for only one crediting period of 20 years that is not renewed (provision 1). In that case, monitoring and compensating for reversals would only be ensured for a time horizon of 20 years. Provisions 2-5 imply that verification (and thus also monitoring and reporting of reversals) is only required through the end of a project's crediting period. This was confirmed by VCS in personal communication. For that reason, the approach by VCS is assigned a score of 1.

Indicator 3.2.1.2

Relevant scoring methodology provisions

The methodology assesses the approaches employed by carbon crediting programs to address the risk of potential reversals in case of discontinuation of monitoring. If monitoring of reversals discontinues prior to the required time horizon, the occurrence of a reversal cannot be excluded. In some instances, activity owners might even cease monitoring because of a reversal. The approaches employed by carbon crediting programs to address the risk of potential reversals in case of discontinuation of monitoring are scored as follows:

Program requirements	Score
All carbon credits previously issued to the project must be compensated for within 1 year after the monitoring or verification report was due	4
All carbon credits previously issued to the project must be compensated for, with a grace period longer than 1 year after the monitoring or verification report was due	3
Only a fraction of carbon credits (e.g., those set aside in a pooled buffer reserve) must be used to compensate for a possible reversal	2
No action is required, or no time limit is indicated for compensation	1

Information sources considered

1 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 5.3.4: "Where a project fails to submit a verification report to the Verra registry within five years of its last verification, 50 percent of the buffer credits associated with the project shall be put on hold. After a further five years, all of its remaining buffer credits shall be put on hold. Where no subsequent verification report has been presented within a period of 15 years, and the project crediting period has not yet expired, buffer credits shall be cancelled from the AFOLU pooled buffer

account in an amount equivalent to the total number of VCUs issued to the project (including buffer credits put on hold) and the project shall be labelled as inactive".

Assessment outcome

The approach is assigned a score of 3.

Justification of assessment

The VCS has robust rules in place in order to react to a failure to submit a verification report and it requires the compensation of all issued credits in that event. Yet, a grace period of 15 years is provided to submit such a report.

Indicator 3.2.1.3

Relevant scoring methodology provisions

The methodology assesses whether and how carbon crediting programs address any reversals that might occur after the end of the required time horizon for monitoring reversals. The following table specifies the scoring approach for the carbon crediting programs provisions to address potential reversals after the end of regular monitoring:

Program requirements	Score
The project's credits held in a buffer reserve are retired	4
The project's credits held in a buffer reserve stay in the reserve without retiring them	3
No action required (all credits are issued to the project owners)	1

Information sources considered

1 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

2 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 3.2.19 and source 2, section 5.3.5: "The remaining balance of buffer credits associated with a project shall be cancelled at the end of the project crediting period".

Assessment outcome

The approach is assigned a score of 4.

Justification of assessment

The VCS requires that carbon credits held in the buffer reserve are cancelled. The approach is therefore assigned a score of 4.

Indicator 3.2.1.4

Relevant scoring methodology provisions

Non-permanence is only truly ensured if all types of reversals are compensated for. The methodology therefore assesses whether carbon crediting programs require compensation of all or only some types of reversals.

Some carbon crediting programs distinguish two types of reversals:

1 **Unintentional (or unavoidable) reversals** happen if stored carbon is lost due natural disturbances such as storms, wildfire or disease that is not the result of human willful intent or negligence.

2 **Intentional (or avoidable) reversals** denote reversals that are caused by a landowner's or project proponent's willful intent, including harvesting, land conversion or negligence, e.g. through poor management.

Carbon crediting programs that require all types of reversals being compensated for receive a score of 4. Some programs only require that unintentional reversals be compensated for. This approach only partially addresses reversal risks and therefore receives a score of 1.

Program requirements	Score
All types of reversals must be compensated for	4
Only unintentional reversals (e.g. due to natural disturbances) must be compensated for	1

Information sources considered

1 Program definitions v4.1 (September 2019, updated in April 2021), available at https://verra.org/wp-content/uploads/2021/04/Program_Definitions_v4.1.pdf

2 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, page 7: "Loss event: In an AFOLU project, any event that results in a loss of more than five percent of previously verified emission reductions and removals due to losses in carbon stocks in pools included in the project boundary that is not planned for in the project description (e.g., harvesting as set out in management plans and described in the project description is not a loss event). Examples include catastrophic events [...] as well as human-induced losses such as those caused by poor management, tillage, over-harvesting or encroachment by outside actors (e.g. illegal logging or fuelwood collection)".

Provision 2 Source 2, section 5.3.1: "Verra shall put buffer credits from the AFOLU pooled buffer account on hold, in an amount equivalent to the estimated loss stated in the loss event report".

Assessment outcome

The approach is assigned a score of 4.

Justification of assessment

The VCS requires that any loss event is compensated for, including human-induced losses. This corresponds to a score of 4.

Indicator 3.2.1.5

Relevant scoring methodology provisions

The methodology assesses the robustness of the approach used by the carbon crediting program for compensating for reversals. The overall effectiveness may depend on how different measures are implemented or combined. This may depend on several factors, including which entities are responsible for compensating, in what sequence they assume responsibility, and what assurances are provided that the responsible entities have incentives and will be able to fully compensate for the reversals (see methodology for more details). The methodology uses a point system which identifies the following key sub-indicators for the overall robustness.

Sub-indicator 3.2.1.5.1

Relevant scoring methodology provisions

"The project owners are the primary responsible entity for compensating for intentional reversals or for *all* reversals (e.g. they are required to top up units temporarily drawn from a pooled buffer reverse)."

Information sources considered

1 Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

2 VCS Program guide v4.0, available at https://verra.org/wp-content/uploads/2019/09/VCS_Program_Guide_v4.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 5.3.3: "Where the reversal is a catastrophic reversal […] the following applies: GHG credits shall be deposited in the AFOLU pooled buffer account in an amount equivalent to the additional number of buffer credits cancelled after the reversal, above what has been previously contributed by the project. For example, if the project previously contributed 100 buffer credits and 150 credits were cancelled from the AFOLU pooled buffer account after a reversal, the project would deposit 50 buffer credits (to replenish the pool at large). […] **Where the reversal is a non-catastrophic reversal, the following applies: GHG credits shall be deposited in the AFOLU pooled buffer account in an amount equivalent to the full reversal**".

Provision 2 "Source 1, section 4.2.12.4: "Where a loss event or a reversal occurs, **the project** shall comply with the rules for reporting a loss event and holding and cancelling credits set out in Section 5.3. Such reporting, holding and cancelling shall apply to the proportion of credits (GHG credits and buffer credits) granted to date under the VCS Program."

Assessment outcome

Yes (4 Points).

Justification of assessment

The above documentation indicates that the sub-indicator is fulfilled. The documentation clarifies that the project owners bear the responsibility for compensating for intentional reversals. No other entity is mentioned as being responsible for compensating for intentional reversals.

Sub-indicator 3.2.1.5.2

Relevant scoring methodology provisions

To facilitate compensation by project owners, the program has the following provisions in place:

a. The project owners are required to sign legal agreements obligating them to monitor, report and compensate for reversals.

OR

b. Following a reversal, the program ceases the issuance of carbon credits to the project until the project owners have fully compensated for the reversals.

OR

c. Both of these provisions are implemented.

Information sources considered

1 VCS Registration representation single representor template v4.1, available at https://verra.org/wp-content/uploads/2020/04/VCS-Registration-Representation-Single-Representor-v4.1.docx

2 VCS Program guide v4.0, available at https://verra.org/wp-content/uploads/2019/09/VCS_Program_Guide_v4.0.pdf

3 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1: “I have read, understood and will abide by the VCS Program Rules”.

Provision 2 Source 2, section 2.5.1: “Project and jurisdictional proponents establish and operate projects and programs in accordance with the VCS Program rules. They are responsible for providing the project or program description, monitoring report and supporting documentation (including evidence of project ownership or program ownership) to facilitate validation and verification. Project and jurisdictional proponents sign unilateral representations with respect to their projects or programs and VCUs, and these are made available on the Verra registry”.

Provision 3 Source 3, section 3.2.17: "At a verification event, where a reversal has occurred, the following applies: 1) Where the reversal is a catastrophic reversal [...], the following applies: [...] GHG credits may not be sought from any increased rate of sequestration from natural regeneration after a catastrophic reversal until the loss from catastrophic reversals is recovered. [...] 2) Where the reversal is a non-catastrophic reversal (e.g. due to poor management, removal of a portion of the project area from participation in the project or over-harvesting), the following applies: a) No further VCUs shall be issued to the project until the deficit is remedied."

Assessment outcome

Both of the above provisions are implemented (5 points).

Justification of assessment

The above documentation indicates that both provisions are fulfilled. Project owners are required to sign legal agreements (provision 1) that oblige them to monitor, report and compensate for reversals (provision 2). The program ceases the issuance of carbon credits to the project until the project owners have fully compensated for reversals (provision 3).

Sub-indicator 3.2.1.5.3

Relevant scoring methodology provisions

"The carbon crediting program ensures that full compensation for any monitored reversals takes place in the case that the project owners do not fulfil their obligation for compensating for reversals (e.g., due to bankruptcy or non-enforceable legal agreements), by establishing provisions that in such instances compensation takes place through other means, such as the pooled buffer reserve."

Information sources considered

1 Program definitions v4.1 (September 2019, updated in April 2021), available at https://verra.org/wp-content/uploads/2021/04/Program_Definitions_v4.1.pdf

2 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, page 7: "Loss event: In an AFOLU project, any event that results in a loss of more than five percent of previously verified emission reductions and removals due to losses in carbon stocks in pools included in the project boundary that is not planned for in the project description (e.g., harvesting as set out in management plans and described in the project description is not a loss event). Examples include catastrophic events [...] as well as human-induced losses such as those caused by poor management, tillage, over-harvesting or encroachment by outside actors (e.g. illegal logging or fuelwood collection)".

Provision 2 Source 2, section 5.3.1: "Verra shall put buffer credits from the AFOLU pooled buffer account on hold, in an amount equivalent to the estimated loss stated in the loss event report".

Provision 3 Source 2, section 5.3.3: "Where the reversal is a catastrophic reversal […] the following applies: GHG credits shall be deposited in the AFOLU pooled buffer account in an amount equivalent to the additional number of buffer credits cancelled after the reversal, above what has been previously contributed by the project. For example, if the project previously contributed 100 buffer credits and 150 credits were cancelled from the AFOLU pooled buffer account after a reversal, the project would deposit 50 buffer credits (to replenish the pool at large). […] Where the reversal is a non-catastrophic reversal, the following applies: GHG credits shall be deposited in the AFOLU pooled buffer account in an amount equivalent to the full reversal".

Provision 4 Source 2, section 5.3.2: "The following applies with respect to the verification report submitted subsequent to a loss event:

Where the net GHG benefit of the project for the verification period is negative, a reversal has occurred (see the VCS Program document *Program Definitions* for definition of reversal) and the following applies:

a) Where the total reversal is less than the number of credits put on hold after the submission of the loss event report, Verra shall cancel buffer credits equivalent to the reversal. Any remaining buffer credits shall be released from their on-hold status (though remain in the AFOLU pooled buffer account).

b) Where the reversal is greater than the number of credits put on hold after the submission of the loss event report, the full amount of buffer credits put on hold with respect to the submission of the loss event report shall be cancelled, and additional buffer credits from the AFOLU pooled buffer account shall be cancelled to fully account for the reversal".

Assessment outcome

Yes (2 Points).

Justification of assessment

The above documentation specifies that a reversal is compensated for by putting units from the pooled buffer account on hold immediately after the loss event and cancelling those units after the submission of the verification report subsequent to a loss event (provisions 1 and 2). The project owner has to replenish the buffer account (provision 3). In case of a default of the project owner, compensation would still be enacted through the pooled buffer reserve (provision 4).

Sub-indicator 3.2.1.5.4

Relevant scoring methodology provisions

"The program uses a pooled buffer reserve to compensate for reversals."

Information sources considered

1 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

2 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

3 VCS AFOLU Non-Permanence risk tool v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 2.4.1: "Permanence risk in Agriculture, Forestry, and Other Land Use (AFOLU) projects is addressed through the use of a project risk analysis, using the AFOLU Non-Permanence Risk Tool, which determines a number of credits to be deposited in the AFOLU pooled buffer account. The pooled buffer account holds non-tradable buffer credits to cover the non-permanence risk associated with AFOLU projects. It is a single account that holds the buffer".

Provision 2 Source 2, section 5.1: "At first VCU issuance, buffer credits shall be deposited into the AFOLU pooled buffer account, in accordance with the procedures below".

Provision 3 Source 3, section 1.1.1: "This document sets out the procedures for conducting the non-permanence risk analysis to determine the non-permanence risk rating ("risk rating"), which shall be used to determine the number of buffer credits that an AFOLU project shall deposit into the AFOLU pooled buffer account".

Assessment outcome

Yes (6 Points).

Justification of assessment

The above documentation specifies that the indicator is fulfilled.

Sub-indicator 3.2.1.5.5

"The average fraction of carbon credits required to be placed into the pooled buffer reserve is X percentage points at the time of assessment. The assessment should include all projects from which carbon credits are held in the buffer reserve."

Information sources considered

1 VCS AFOLU Non-Permanence risk tool v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf

2 Verra registry, available at: https://registry.verra.org/app/search/VCS/Buffer

3 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

4 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 2.5.4: "To determine the number of buffer credits that shall be deposited in the AFOLU pooled buffer account, the overall risk rating shall be converted to a percentage (e.g., an overall risk rating of 35 converts to 35%). This percentage shall be multiplied by the net change in the project's carbon stocks (stated in the verification report), as set out in the VCS Program document *Registration and Issuance Process*. Where a project is divided into more than one geographic area for the purpose of risk analysis, the overall risk rating percentage for each area shall be multiplied by the net change in the project's carbon stocks (stated in the verification report) in such geographic area".

Provision 2 Source 3, section 5.1.2: "Buffer credits are not issued a VCU serial number nor are they considered to be VCUs. They are not subject to the VCU issuance levy".

Provision 3 Source 3, section 2.4.1: "The pooled buffer account holds non-tradable buffer credits to cover the non-permanence risk associated with AFOLU projects. It is a single account that holds the buffer credits for all projects [...] The VCS approach provides environmental integrity because the AFOLU pooled buffer account will always maintain an adequate surplus to cover unanticipated losses from individual project failures and the net GHG benefits across the entire pool of AFOLU projects will be greater than the total number of VCUs issued".

Provision 4 Source 3, section 5.3.1: "Verra shall put buffer credits from the AFOLU pooled buffer account on hold, in an amount equivalent to the estimated loss stated in the loss event report".

Provision 5 Source 3, section 5.3.2: "The following applies with respect to the verification report submitted subsequent to a loss event:

Where the net GHG benefit of the project for the verification period is negative, a reversal has occurred (see the VCS Program document *Program Definitions* for definition of reversal) and the following applies:

a) Where the total reversal is less than the number of credits put on hold after the submission of the loss event report, Verra shall cancel buffer credits equivalent to the reversal. Any remaining buffer credits shall be released from their on-hold status (though remain in the AFOLU pooled buffer account).

b) Where the reversal is greater than the number of credits put on hold after the submission of the loss event report, the full amount of buffer credits put on hold with respect to the submission of the loss event report shall be cancelled, and additional buffer credits from the AFOLU pooled buffer account shall be cancelled to fully account for the reversal".

Assessment outcome

2.93 points.

The number of points is calculated by dividing the average percentage points that the carbon crediting program requires to be placed in the pooled buffer reserve (14.66) by 5.

Justification of assessment

The fraction of credits to be placed in the buffer pool is determined by a risk rating (provision 1). According to the information on total credits issued per project as well as credits deposited in pooled buffer account that is available in the Verra registry (source 2) as of November 2021, the average fraction of carbon credits placed in the buffer pool is 14.66%. Dividing this average fraction by 5 leads to an assessment outcome of 2.93.

The average has been calculated by determining the ratio between credits deposited in the buffer (at the time of issuance) by those projects that contribute to the buffer as of November 2021 by the total number of credits issued for those projects that contribute to the buffer as of November 2021. The total amount of credits issued is calculated by aggregating figures for total credits issued per project as provided in the registry plus credits placed into the buffer per project as the total number of credits issued per project in the registry does not include the number of credits placed into the buffer (provision 2). This calculation includes all projects that currently contribute to the buffer pool and does not only consider forestry projects, because credits from other project types may be used to compensate for reversals, e.g. in case of a default of the project owner (provisions 3, 4 and 5).

Sub-indicator 3.2.1.5.6

Relevant scoring methodology provisions

"The fraction of carbon credits set aside in the pooled buffer reserve is determined through a project-specific risk assessment, following a pre-defined methodology."

Information sources considered

1 VCS AFOLU Non-Permanence risk tool v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 2.5.4: "To determine the number of buffer credits that shall be deposited in the AFOLU pooled buffer account, the overall risk rating shall be converted to a percentage (e.g., an overall risk rating of 35 converts to 35%). This percentage shall be multiplied by the net change in the project's carbon stocks (stated in the verification report), as set out in the VCS Program document *Registration and Issuance Process*. Where a project is divided into more than one geographic area for the purpose of risk analysis, the overall risk rating percentage for each area shall be multiplied by the net change in the project's carbon stocks (stated in the verification report) in such geographic area".

Provision 2 Source 1, section 2.1.1: "The potential transient and permanent losses in carbon stocks shall be assessed over a period of 100 years and be based on the conditions present and the information available at the time of the risk analysis, unless otherwise specified in Sections 2.2 to 2.4, to determine the appropriate risk rating. For example, projects with a project start date in the past, or projects analyzing risk at a subsequent

verification event shall assess the potential transient and permanent losses for the next 100 years based on the conditions present and available at the time of risk analysis".

Assessment outcome

Yes (2 Points).

Justification of assessment

Source 1 outlines the risk rating methodology applied by the VCS. The indicator is therefore fulfilled.

Sub-indicator 3.2.1.5.7

Relevant scoring methodology provisions

"X registered projects contribute to the pooled buffer reserve. The assessment should include all projects from which carbon credits are held in the buffer reserve at the time of assessment."

Information sources considered

1 Verra registry, available at: https://registry.verra.org/app/search/VCS/Buffer

2 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 3, section 2.4.1: "The pooled buffer account holds non-tradable buffer credits to cover the non-permanence risk associated with AFOLU projects. It is a single account that holds the buffer credits for all projects [...] The VCS approach provides environmental integrity because the AFOLU pooled buffer account will always maintain an adequate surplus to cover unanticipated losses from individual project failures and the net GHG benefits across the entire pool of AFOLU projects will be greater than the total number of VCUs issued".

Provision 2 Source 3, section 5.3.1: "Verra shall put buffer credits from the AFOLU pooled buffer account on hold, in an amount equivalent to the estimated loss stated in the loss event report".

Provision 3 Source 3, section 5.3.2: "The following applies with respect to the verification report submitted subsequent to a loss event:

Where the net GHG benefit of the project for the verification period is negative, a reversal has occurred (see the VCS Program document *Program Definitions* for definition of reversal) and the following applies:

a) Where the total reversal is less than the number of credits put on hold after the submission of the loss event report, Verra shall cancel buffer credits equivalent to the reversal. Any remaining buffer credits shall be released from their on-hold status (though remain in the AFOLU pooled buffer account).

b) Where the reversal is greater than the number of credits put on hold after the submission of the loss event report, the full amount of buffer credits put on hold with respect to the submission of the loss event report shall be cancelled, and additional buffer credits from the AFOLU pooled buffer account shall be cancelled to fully account for the reversal".

Assessment outcome

2 points (The number of registered projects contributing to the pooled buffer reserve (171) divided by 50, with a maximum of 2 points).

Justification of assessment

The information available in the VCS registry (November 2021) specifies that 171 registered projects contribute to the pooled buffer reserve (source 1). This includes all projects that currently contribute to the buffer pool and does not only consider forestry projects, because credits from other project types may be used to compensate for reversals, e.g. in case of a default of the project owner (provisions 1-3).

Sub-indicator 3.2.1.5.8

Relevant scoring methodology provisions

"The registered projects contributing to the pooled buffer reserve are implemented in X different regions. A region is a state or province within a country (e.g., states within the US, provinces within Brazil). The assessment should include all projects from which carbon credits are hold in the buffer reserve at the time of assessment."

Information sources considered

1 Verra registry, available at: https://registry.verra.org/app/search/VCS/Buffer

2 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 3, section 2.4.1: "The pooled buffer account holds non-tradable buffer credits to cover the non-permanence risk associated with AFOLU projects. It is a single account that holds the buffer credits for all projects [...] The VCS approach provides environmental integrity because the AFOLU pooled buffer account will always maintain an adequate surplus to cover unanticipated losses from individual project failures and the net GHG benefits across the entire pool of AFOLU projects will be greater than the total number of VCUs issued".

Provision 2 Source 3, section 5.3.1: "Verra shall put buffer credits from the AFOLU pooled buffer account on hold, in an amount equivalent to the estimated loss stated in the loss event report".

Provision 3 Source 3, section 5.3.2: "The following applies with respect to the verification report submitted subsequent to a loss event:

Where the net GHG benefit of the project for the verification period is negative, a reversal has occurred (see the VCS Program document *Program Definitions* for definition of reversal) and the following applies:

a) Where the total reversal is less than the number of credits put on hold after the submission of the loss event report, Verra shall cancel buffer credits equivalent to the reversal. Any remaining buffer credits shall be released from their on-hold status (though remain in the AFOLU pooled buffer account).

b) Where the reversal is greater than the number of credits put on hold after the submission of the loss event report, the full amount of buffer credits put on hold with respect to the submission of the loss event report shall be cancelled, and additional buffer credits from the AFOLU pooled buffer account shall be cancelled to fully account for the reversal".

Assessment outcome

2 points (The number of regions (122) divided by 25, with a maximum of 2 points).

Justification of assessment

The information available in the VCS registry (November 2021) specifies that registered projects contributing to the pooled buffer reserve are implemented in 122 different regions (source 1). This includes all projects that currently contribute to the buffer pool and does not only consider forestry projects, because credits from other project types may be used to compensate for reversals, e.g. in case of a default of the project owner (provisions 1-3).

Sub-indicator 3.2.1.5.9

Relevant scoring methodology provisions

"The three largest projects contributing to the pooled buffer reserve represent X percentage points of the carbon credits held in the pooled buffer reserve."

Information sources considered

1 Verra registry, available at: https://registry.verra.org/app/search/VCS/Buffer

2 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

Relevant carbon crediting program provisions

Provision 1 Source 3, section 2.4.1: "The pooled buffer account holds non-tradable buffer credits to cover the non-permanence risk associated with AFOLU projects. It is a single account that holds the buffer credits for all projects [...] The VCS approach provides environmental integrity because the AFOLU pooled buffer account will always maintain an adequate surplus to cover unanticipated losses from individual project

failures and the net GHG benefits across the entire pool of AFOLU projects will be greater than the total number of VCUs issued".

Provision 2 Source 3, section 5.3.1: "Verra shall put buffer credits from the AFOLU pooled buffer account on hold, in an amount equivalent to the estimated loss stated in the loss event report".

Provision 3 Source 3, section 5.3.2: "The following applies with respect to the verification report submitted subsequent to a loss event:

Where the net GHG benefit of the project for the verification period is negative, a reversal has occurred (see the VCS Program document *Program Definitions* for definition of reversal) and the following applies:

a) Where the total reversal is less than the number of credits put on hold after the submission of the loss event report, Verra shall cancel buffer credits equivalent to the reversal. Any remaining buffer credits shall be released from their on-hold status (though remain in the AFOLU pooled buffer account).

b) Where the reversal is greater than the number of credits put on hold after the submission of the loss event report, the full amount of buffer credits put on hold with respect to the submission of the loss event report shall be cancelled, and additional buffer credits from the AFOLU pooled buffer account shall be cancelled to fully account for the reversal".

Assessment outcome

-2.4 points.

The number of percentage points (24) divided by 10. The score of this sub-indicator is negative and must be subtracted from the other scores when determining the final score for indicator 3.2.1.5

Justification of assessment

The information available in the VCS registry (November 2021) specifies that the three largest projects contributing to the pooled buffer reserve represent 24 percentage points of the carbon credits held in the pooled buffer reserve. This calculation includes all projects that currently contribute to the buffer pool and does not only consider forestry projects, because credits from other project types may be used to compensate for reversals, e.g. in case of a default of the project owner (provisions 1-3).

Sub-indicator 3.2.1.5.10

Relevant scoring methodology provisions

"There are provisions in place to ensure the continued operation of the reserve if the carbon crediting program ceases to exist, including in the case of bankruptcy."

Information sources considered

1 VCS program guide v4.0, available at https://verra.org/wp-content/uploads/2019/09/VCS_Program_Guide_v4.0.pdf

2 VCS Website

Relevant carbon crediting program provisions

Provision 1 Source 1, section 2.5.6: "The VCS Program is managed by Verra, which is an independent, non-profit organization incorporated under the laws of the District of Columbia in the United States. Verra is responsible for managing, overseeing and developing the program".

Assessment outcome

No (0 Points).

Justification of assessment

The above documentation suggests that the indicator is not fulfilled. No provisions could be found indicating that provisions are in place to ensure a continued operation of the reserve in case the carbon crediting program ceases to exist.

Sub-indicator 3.2.1.5.11

Relevant scoring methodology provisions

The program funds part of its pooled buffer reserve with carbon credits from projects that do not have a material non-permanence risk, as defined in Table 27, and the fraction of these carbon credits makes up:

a. 50% or less of the pooled buffer reserve;

OR

b. More than 50% of the pooled buffer reserve.

Information sources considered

1 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1. Section 2.4.1: "Permanence risk in Agriculture, Forestry, and Other Land Use (AFOLU) projects is addressed through the use of a project risk analysis, using the AFOLU Non-Permanence Risk Tool, which determines a number of credits to be deposited in the AFOLU pooled buffer account. The pooled buffer account holds non-tradable buffer credits to cover the non-permanence risk associated with AFOLU projects. It is a single account that holds the buffer".

Assessment outcome

No (0 points).

Justification of assessment

The buffer only includes contributions from AFOLU projects that do have a material non-permanence risk, indicating that this indicator is not fulfilled.

Sub-indicator 3.2.1.5.12

Relevant scoring methodology provisions

"The program uses a non-pooled buffer reserve to compensate for reversals."

Information sources considered

1 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 2.4.1: "Permanence risk in Agriculture, Forestry, and Other Land Use (AFOLU) projects is addressed through the use of a project risk analysis, using the AFOLU Non-Permanence Risk Tool, which determines a number of credits to be deposited in the AFOLU pooled buffer account. The pooled buffer account holds non-tradable buffer credits to cover the non-permanence risk associated with AFOLU projects. It is a single account that holds the buffer".

Assessment outcome

No (0 points).

Justification of assessment

The program does not use a non-pooled buffer reserve.

Sub-indicator 3.2.1.5.13

Relevant scoring methodology provisions

"The fraction of issued carbon credits that must be placed into the non-pooled buffer reserve is X percentage points."

Information sources considered

1 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

Relevant carbon crediting program provisions

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Assessment outcome

No (0 points).

Justification of assessment

The program does not use a non-pooled buffer reserve.

Sub-indicator 3.2.1.5.14

Relevant scoring methodology provisions

"There are provisions in place to ensure the continued operation of the non-pooled buffer reserve if the carbon crediting program ceases to exist, including in the case of bankruptcy."

Information sources considered

1 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

Relevant carbon crediting program provisions

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Assessment outcome

No (0 points).

Justification of assessment

The program does not use a non-pooled buffer reserve.

Sub-indicator 3.2.1.5.15

"In addition to requirements for compensation by project owners and the use of a pooled buffer reserve, the program requires project owners to insure the risks associated with their obligation to compensate for reversals."

Information sources considered

1 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

2 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

3 VCS AFOLU Non-Permanence risk tool v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf

Relevant carbon crediting program provisions

None.

Assessment outcome

No (0 points)

Justification of assessment

There is no reference to insurances in the program documents. The sub-indicator is therefore not fulfilled.

Sub-indicator 3.2.1.5.16

Relevant scoring methodology provisions

"The program establishes clear conditions for what type of insurance is considered sufficient, including provisions that only high-quality credits may be used for compensation."

Information sources considered

1 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

2 VCS Registration and issuance process v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/Registration_and_Issuance_Process_v4.0.pdf

3 VCS AFOLU Non-Permanence risk tool v4.0 (September 2019), available at https://verra.org/wp-content/uploads/2019/09/AFOLU_Non-Permanence_Risk-Tool_v4.0.pdf

Relevant carbon crediting program provisions

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Assessment outcome

No (0 points).

Justification of assessment

There is no reference to insurances in the program documents. This sub-indicator is therefore not fulfilled.

Scoring results for indicator 3.2.1.5

According to the above assessment, the carbon crediting program receives 23.53 points. Applying the scoring approach in the methodology, this results in a score of 2.54 for the indicator.

Indicator 3.2.1.6

Relevant scoring methodology provisions

Some carbon crediting programs allow or require that a new baseline be established in the event of a reversal. However, if the baseline is adjusted upwards, by adding the reversals to the baseline, then the reversal would no longer be accounted for, i.e. the cumulative emission reductions that may be claimed could be equal to the situation when the reversal had never occurred. Such provisions could thus undermine the effectiveness of fully accounting for reversals. The methodology assesses carbon crediting programs depending on the extent to which they allow or require adjusting baseline emission upwards in the case of reversals. The program requirements in the case of reversals are scored as follows:

Program provisions in the case of reversals	Score
The program provisions do not allow or require adjusting the baseline upwards (i.e. towards higher emissions in the case of reversals)	4
The program provisions allow or require adjusting the baseline upwards (i.e. towards higher emissions in the case of reversals), but only to a much smaller extent than the actual reversals	3
The program provisions potentially allow or require adjusting the baseline upwards (i.e. towards higher emissions in the case of reversals) to the same extent as the reversals that occurred	1

Information sources considered

1 VCS Standard v4.1 (Update of April 2021), available at https://verra.org/wp-content/uploads/2021/04/VCS-Standard_v4.1.pdf

Relevant carbon crediting program provisions

Provision 1 Source 1, section 3.2.17: At a verification event, where a reversal has occurred, the following applies: 1) Where the reversal is a catastrophic reversal […], the following applies: a) The baseline may be reassessed, including any relevant changes to baseline carbon stocks and, where reassessed, shall be validated at the time of the verification event subsequent to the reversal. Note that allowing baseline revisions after catastrophic reversal supersedes any methodological requirements for a fixed baseline.

Provision 2 Source 1, section 3.8.9: "The validity of the original baseline scenario shall be demonstrated, or where invalid a new baseline scenario shall be determined, when renewing the project crediting period, as follows: a) The validity of the original baseline scenario shall be assessed. Such assessment shall include an evaluation of the impact of new relevant national and/or sectoral policies and circumstances on the validity of the baseline scenario. b) […] c) Where it is determined that the original baseline scenario is no longer valid, the current baseline scenario shall be established in accordance with the VCS Program rules".

Assessment outcome

The approach is assigned a score of 1.

Justification of assessment

The above documentation specifies that the carbon crediting program provisions allow for an update of baselines in case of catastrophic reversals and when renewing the project crediting period. There is no indication in the program documentation that this update may only include a more conservative baseline or that the size of the update is in any limited. This corresponds to a score of 1.

Scoring results

According to the above assessment, the carbon crediting program achieves a score of 1 for indicator 3.2.1.1, a score of 3 for indicator 3.2.1.2, a score of 4 for indicator 3.2.1.3, a score of 4 for indicator 3.2.1.4, a score of 2.54 for indicator 3.2.1.5, and a score of 1 for indicator 3.2.1.6. Applying the scoring approach of the methodology, this results in a combined score of 1.45 for sub-criterion 3.2.1.

Annex: Summary of changes from previous assessment sheet versions

The following table describes the main changes implemented in comparison to the assessment from 21 February 2024.

Topic	Rationale
Project type	Provisions were found to be applicable for project types avoided planned deforestation and avoided unplanned deforestation