Avoided Planned Deforestation

CCQI
Carbon Credit
Quality Initiative

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Version 1.0

Key CCQI findings

Forests significantly contribute to mitigating climate change by storing large amounts of CO_2, while also contributing to the preservation of biodiversity. Projects avoiding unplanned deforestation aim to maintain high forest carbon stocks, which is essential for transitioning to net zero emissions. Sustainable development benefits depend on the activities of the individual project.

Most projects are unlikely to be financially attractive without carbon credits. While this signals low non-additionality risks, the low additionality score reflects that the Verified Carbon Standard (VCS) allows projects to be listed three years after their start date and approves activities that are legally mandated but not systematically enforced.

The older VCS methodologies VM0007 and VM0009 are likely to lead to a very large overestimation of emission reductions. The new methodology VM0048, once applicable to avoided planned deforestation projects, may considerably reduce this risk but could still lead to significant overestimation.

As forests are in jeopardy of being destroyed or degraded, this project type has material non-permanence risks. While the VCS requires these risks to be assessed and reversals to be compensated, the minimum reporting period is only 20 years for projects registered before 2024.

What is this project type about?

Activities to avoid deforestation that is legally authorized and planned by an identifiable, commercial agent. In addition, forest degradation may be reduced. The activities are implemented in a geographical area defined at the project level, not the jurisdictional level. The project type reduces emissions by avoiding the loss of forest carbon stocks.

Carbon market background

Among the major global carbon crediting programs, only the VCS offers registration for this project type. Carbon crediting programs often register this project type under the acronyms REDD or REDD+, referring to the UNFCCC framework for reducing emissions from deforestation and forest degradation. The main project types falling under the REDD umbrella – Avoided Planned Deforestation and Avoided Unplanned Deforestation – collectively have the largest share of carbon credits in the voluntary carbon market.[1]
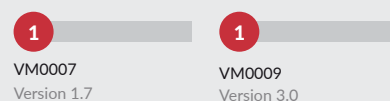
[1] **Source:** University of California, Berkley (2024) Voluntary Registry Offset database, v11
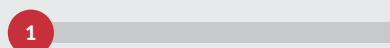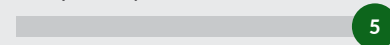
CCQI score summary

Additionality/Vulnerability
1 — 1.9
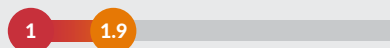
Quantification Methodologies
1 — VM0007 Version 1.7
1 — VM0009 Version 3.0

Non-permanence
1

Compatibility with net zero
5

SDG Impacts
1.4 — 3.1

Double issuance due to indirect overlaps between projects
1 — 5

Why do I see a range of scores for some quality objectives?

In these cases, scores differ between carbon crediting programs, quantification methodologies, countries or other circumstances. The range represents the spectrum that applies for all possible combinations.

CCQI resources

- CCQI Methodology & Definitions
- FAQ on our assessments
- Directory of assessment sheets

www.carboncreditquality.org

FOUNDATION Development and Climate Alliance

Main factors driving project type scores

Additionality/Vulnerability

| 1 | 1.9 | |

Avoided planned deforestation projects are likely not financially attractive without carbon credits, but there is substantial variability. If a project area is inaccessible, the likelihood of additionality decreases.

Here we assess the likelihood that the mitigation activity typically would not have taken place in the absence of the added incentive created by the carbon credits (additionality).

In cases where the market for the type of carbon credit has collapsed (e.g., CDM for some project types), we assess whether the mitigation activity typically is at risk of discontinuing greenhouse gas abatement without ongoing revenues from carbon credits (vulnerability).

How do other project types score?

| 1 | | 4.4 |

Graph shows the range of scores for all project types assessed by CCQI.

Viewing projects from the perspective of financial attractiveness indicates that avoided planned deforestation projects likely have low to medium risks of non-additionality. Project developers likely incur implementation costs and opportunity costs due to foregone revenues from crop production or ranching. In addition, the projects likely generate little to no revenue besides the income from the sale of carbon credits. However, there is considerable variability between projects; some might have other substantial sources of income, receive subsidies, or incur few implementation or opportunity costs.

Financial attractiveness further depends on the location of the project area. Projects implemented in remote areas that lack access via roads or waterways have a lower likelihood of additionality. Making these lands accessible by developing the respective infrastructure would be very expensive, resulting in low opportunity costs for landowners. Conversely, landowners have high opportunity costs for forest patches that are at the edge of a forest and near roads or waterways. Converting the land to alternative uses such as crop production and ranching likely yields high profits.

However, there might be cases in which legal requirements mandate some of the project activities. The VCS requires project developers to demonstrate that this is not the case but accepts registrations for projects which can demonstrate that such requirements are not systematically enforced. Such exceptions entail a risk of non-additionality as they are more vulnerable to error compared with provisions that exclude all legally required activities from registration.

The VCS further allows projects to be listed three years after their start date. This introduces a further non-additionality risk as it is less plausible that carbon credits were considered when making the investment decision for the project.

There is no market that has collapsed for avoided deforestation projects. Therefore, there is no vulnerability score for this project type.

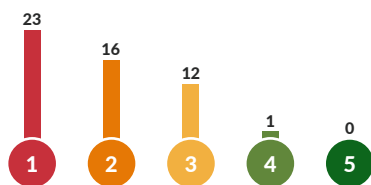## Quantification Methodologies

VM0007
Version 1.7 **1**

VM0009
Version 3.0 **1**

Avoided planned deforestation projects have a high risk that emission reductions are vastly overestimated. The new methodology VM0048, once applicable to avoided planned deforestation activities, may considerably reduce this risk but could still lead to significant overestimation.

Carbon crediting programs adopt methodologies for calculating the emission impact of a project. The methodologies prescribe, inter alia, equations, data sources and monitoring approaches. Here we assess whether quantification methodologies mitigate overestimation risks by applying conservative approaches for estimating emission reductions.

How do methodologies for other project types score?

23

16

12

1

0

1 2 3 4 5

Graph shows the score distribution for quantification methodologies assessed by CCQI.

Avoided planned deforestation is currently only eligible under the methodologies VM0007 and VM0009. In November 2023, Verra released the new methodology VM0048. This new methodology is not yet applicable to avoided planned deforestation projects but will replace VM0007 and VM0009 in the future. This factsheet only considers the currently valid methodologies VM0007 and VM0009.

Inflated baselines are the largest risk of overestimation

Establishing baselines for avoided deforestation projects is associated with very large uncertainty. The rate of future deforestation in a particular forest area depends on many unknown factors, such as changes in polices or in economic and social conditions. Uncertainty in the underlying (historical) data used to establish baseline deforestation rates is another important source of uncertainty. This poses the risk that the calculated emission reductions could only be partially attributable to the project intervention and partially be an artefact of wrongly set baselines.

The VM0007 and VM0009 methodologies assume that historical deforestation rates or trends observed in a reference area will continue in the future. The methodologies provide considerable flexibility on how to establish these reference regions. This holds for their location, the duration of the historical reference period, and how historical data is extrapolated to the future.

The available literature suggests that baseline deforestation rates derived from all older VCS methodologies (VM0006, VM0007, VM0009 and VM0015) have likely been overestimated

by several hundred percent on average.[2] Rating agencies that evaluated individual projects come to similar conclusions. . For example, one study that evaluated 73 projects concluded that only four projects estimated a conservative baseline.[3]

Leakage is likely to be underestimated

The main leakage risk for avoided deforestation projects arises from potential increases in deforestation elsewhere. This may occur due to "activity shifting," which is the relocation of deforestation drivers to surrounding areas, or "market leakage," which occurs when avoiding deforestation alters market conditions by reducing the production of a traded commodity relative to the baseline, thereby creating incentives for others to intensify deforestation. Both forms of leakage are methodologically difficult to estimate.

Both methodologies account for leakage from activity shifting and market effects. To estimate activity shifting, the methodologies account for increases in deforestation rates in designated leakage zones around the project, also referred to as "leakage belts". To account for market leakage, the methodologies use default leakage rates.

In practice, about 60% of the existing projects, covering both avoided planned and unplanned deforestation, have not applied any leakage deductions. When projects apply leakage deductions, they are relatively low and values do not match the literature.[4] One reason for this might be that the methodologies often provide flexibility to project proponents on how to determine leakage. The methodologies do not account for international leakage, though such leakage is likely to occur. Overall, leakage effects are likely to be underestimated when using these methodologies. This holds in particular for avoided planned deforestation projects.

Outdated data and flexibility in quantifying carbon stocks

Under both methodologies, some data sources to quantify carbon stocks are outdated. For example, the methodologies allow values of 49% or 50% to be used for the fraction of carbon in forest biomass. More recent research suggests that these values are too high, particularly for tropical trees.[5] The methodologies also provide considerable flexibility on

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[2] See for example: West et al. 2023; Guizar-Coutiño et al. 2022; Haya et al. 2023.

[3] Calyx Global 2023

[4] Haya et al. 2023

[5] Martin et al. 2023

how to determine some parameters, such as aboveground and belowground biomass volumes. This creates the risk that project proponents pick favourable values that lead to an overestimation of emission reductions. For example, one study evaluated a sample of projects and found that picking favourable parameters for biomass estimates led to the overestimation of emission reductions by 23% to 30%.[6]

Lack of clarity

The methodologies also lack clarity. They do not provide guidance on how forest, deforestation and forest degradation should be defined in the context of ecosystems and landscapes of the project or jurisdiction. Guidance on the inclusion or exclusion of emission sources and carbon pools is not always clear. Sometimes the guidance in the methodologies is inconsistent with guidance provided in underlying modules or tools.

Overall assessment

Overall, we find that emission reductions are likely to be overestimated by more than 30% under the two VCS methodologies. The new methodology VM0048, which will replace the existing methodologies in the future, is likely to considerably reduce this overestimation risk but could still lead to significant overestimation (see factsheet on avoided unplanned deforestation projects).

Non-permanence

1

This project type has material non-permanence risks, which are addressed through risk assessments and a pooled buffer reserve. However, for projects registered before 1 January 2024, reversals must only be monitored for 20 years.

Non-permanence means that emission reductions or removals achieved by a project are later reversed e.g., due to a natural disaster or project mismanagement.

We assess whether the project type has significant non-permanence risks.

The project type "avoided planned deforestation" has a material non-permanence risk: forests are in jeopardy of being destroyed or degraded, and thus releasing the stored carbon back into the atmosphere, e.g., in cases of land conversion or wildfires.

[6] Haya et al. 2023

For project types that do have significant non-permanence risks we assess the robustness of carbon crediting program provisions to address these risks.

How do other project types score?

1 ———————————— 5

Graph shows the range of scores for all project types assessed by CCQI.

The VCS has a robust approach for avoiding or reducing non-permanence risks as it requires that a non-permanence risk assessment is conducted according to a pre-defined methodology. It further has provisions in place that incentivize the project owners to avoid reversals. These include, for instance, requiring legal titles to the land, updating the risk assessment in the case of reversals, and assigning responsibility to compensate for intentional reversals to project owners.

However, when it comes to accounting and compensating for reversals, the program lacks sufficiently robust provisions. On the one hand, the program requires that both intentional and unintentional reversals are compensated and deploys a pooled buffer reserve, for which the share of carbon credits set aside is determined by the risk assessment. On the other hand, for projects registered before 1 January 2024, project owners must monitor and compensate for reversals for a minimum period of only 20 years, which is not sufficient for making robust compensation claims, considering that CO_2 can remain in the atmosphere for several hundred years. Under its updated requirements, which apply for projects registering with the VCS from 1 January 2024, project owners must monitor and compensate for reversals for a minimum period of 40 years.

Compatibility with net zero

5

Halting global deforestation is essential for the transition towards net zero emissions

Here we assess whether the technology or practices applied by the project type facilitate the transition towards net zero emisions.

How do other project types score?

3 ———————————— 5

Graph shows the range of scores for all project types assessed by CCQI.

Avoided planned deforestation projects aim to maintain carbon stocks at high levels, which is essential for achieving the net zero transition. This project type rates highest among those assessed by the CCQI.

SDG Impacts

1.4 ——————————————— **3.1**

Positive environmental impacts but also potential social risks

Here we assess whether the project type contributes to the achievement of the Sustainable Development Goals (SDGs).

Note that projects implemented in Small Island Developing States (SIDS) and Least Developed Countries (LDCs) receive an upgrade to the score by one point due to the special circumstances of these countries.

How do other project types score?

1 ——————————————— **5**

Graph shows the range of scores for all project types assessed by CCQI.

The project type encompasses a range of different activities that might have different interactions with Sustainable Development Goals (SDGs).

If the project includes a form of sustainable forest management, different approaches to managing the forest decrease the disturbance (intensity), can improve water quality and enhance the water-related forest ecosystem (SDG 6, clean water and sanitation). The project type contributes to SDG 15 (life on land) as project activities might ensure a sustainable use of the forest ecosystem, reduce the level of the area's previously planned deforestation, and increase its biodiversity. The positive impacts on SDG 6 and 15 will likely be more evident for projects that transfer the forest into a protected area as this ensures that the forest is kept intact as a whole. Additionally, reducing deforestation maintains a forest's ability to positively contribute to farmland pollination and seed dispersal, reduced soil erosion, and acting as a buffer for nitrate leakage from surrounding agriculture. Assuming that project activities will likely not have an impact on the accessibility of the forest area as the commercial agent already holds the right to deforest the forest area in the baseline, projects protecting a forest area hence positively impact SDG 2 (zero hunger).

The impact of the project type on SDG 10 (reduced inequalities) and SDG 16 (peace, justice and strong institutions) is highly dependent on the local context and the implemented activities. In cases in which projects are not well designed and take place in areas with disputed land ownership, there might be a high risk that project activities reinforce and perpetuate dispossession and inequity. There is evidence that past projects under this project type have led to evictions and human rights abuses in worst cases. Project activities might thus involve significant risks to progress on SDG 10 and 16.

The conflicting objectives between forests as a carbon sink and using wood products as a source for fuelwood and timber is a challenge inherent to this project type. Furthermore, some

positive and negative impacts are highly contextual (e.g., the creation of jobs, land-dependent livelihood, impact on women) and depend on the implemented activities.

Double issuance due to indirect overlaps between projects

1 ──────────────────── **5**

Carbon crediting programs might accidentally issue credits for the same emission reductions to avoided planned deforestation projects and to projects reducing timber consumption

Here we assess whether the project type has low risks to overlap with other project types in the carbon market.

For project types where we identified a high risk, we also assess if carbon crediting programs have robust provisions in place that avoid that the same credit is issued twice for the same emission reduction in the case that two projects.

How do other project types score?

1 ──────────────── **5**

Graph shows the range of scores for all project types assessed by CCQI.

The risk of double issuance due to indirect overlaps between projects is oftentimes overlooked for avoided planned deforestation projects. Double issuance can arise when an avoided planned deforestation project and a project reducing timber consumption, i.e., a cookstove project or a household biodigester project, take place in the same area. The latter aims to reduce the consumption of non-renewable biomass and thereby preserve carbon stocks in surrounding forest areas. If a project that aims to reduce deforestation is implemented in the same forest area, it might claim the same emission reductions.

Our assessment of the VCS provisions showed that the program does not apply systematic checks to identify and avoid overlaps between avoided deforestation and other carbon market projects.

Starting points for further due diligence

This factsheet summarizes key risk factors for the quality of carbon credits from this project type, as identified in CCQI's detailed assessments. Individual projects might outperform any of our scores by making project-design choices that mitigate these risks. CCQI scores therefore do not apply to individual projects. They can however inform further due diligence when assessing the quality of individual projects. Questions to ask might include:

- Are there legal requirements in the region to halt or reduce deforestation? Is the project already financially supported through policies or incentives other than carbon credits? If so, the project might have high risks of non-additionality.

- Is the land accessible, i.e., have forest patches close to the project area already been deforested or is there is a road network or waterways in the project area or nearby? If so, non-additionality risks are likely low.

- Was the project registered with the carbon crediting program after its start date? If so, the mitigation activity might not be additional.

- Does the project use the newer methodology, VM0048, for quantifying emission reductions? If so, overestimation risks may be lower compared with old methodologies.

- Does the project use conservative approaches to quantify carbon stocks? If so, this might address some of the overestimation risks.

- Are the assumptions about what would have happened in the absence of this project, i.e., the 'baseline scenario,' plausible? Is it credible that deforestation would occur in the baseline scenario? If not, the project's emission reductions might be overestimated.

- Do the project owners monitor the project area beyond the minimum period of 20 years required by the VCS for projects registered before 2024? If not, the project may have high non-permanence risks.

For assessments of specific projects, you may contact specialized rating agencies such as BeZero, Calyx Global or Sylvera.
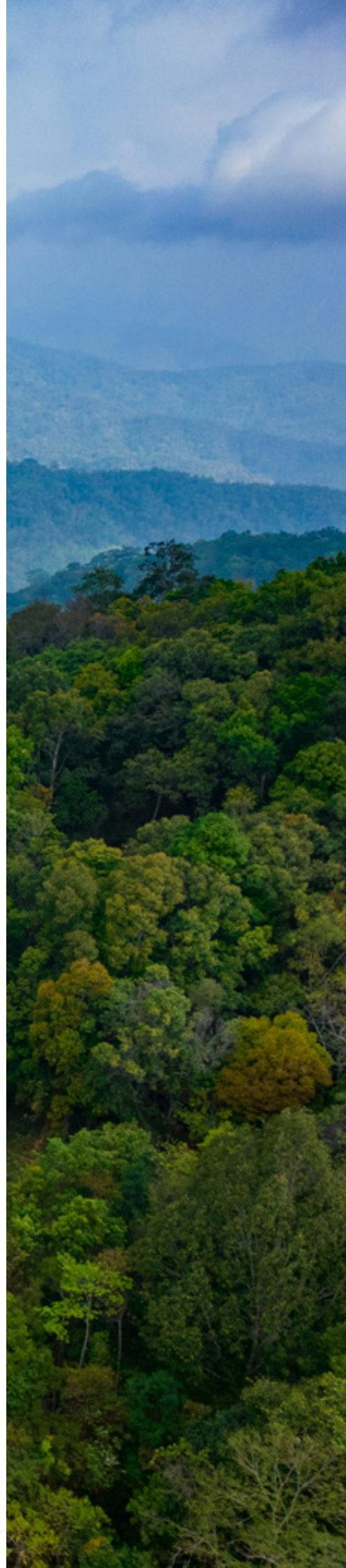
About CCQI

The Carbon Credit Quality Initiative (CCQI) was established to provide free, transparent information on the quality of different types of carbon credits, enabling users to understand what types of carbon credits are more likely to deliver actual emission reductions as well as social and environmental benefits.

CCQI was founded and is managed by Environmental Defense Fund (EDF), World Wildlife Fund (WWF-US) and Oeko-Institut, a leading European research and consultancy institution working for a sustainable future. Scores published by CCQI are derived from applying the CCQI assessment methodology. The assessment is led by Oeko-Institut, with support from experienced carbon market experts from Carbon Limits, Greenhouse Gas Management Institute (GHGMI), INFRAS and Stockholm Environment Institute (SEI). Draft results are reviewed by the full CCQI team before public release. All experts involved in CCQI have deep expertise in carbon markets and are not employed by project developers or carbon crediting programs.

This factsheet was commissioned by

www.allianz-entwicklung-klima.de

www.carboncreditquality.org

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How does CCQI assess quality?

CCQI assesses quality aspects of different types of carbon credits. The following main features define a type for our assessments:
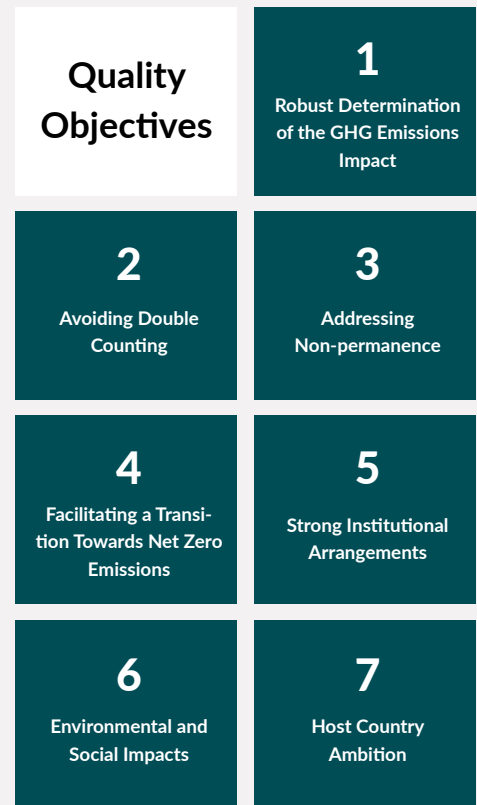
- The type of project (e.g., landfill gas utilization)
- The carbon crediting program (e.g., Verified Carbon Standard)
- The quantification methodology used to estimate emission reductions for the project activity
- The country in which the activity takes place

We assess each type against several criteria, sub-criteria and indicators that are clustered around seven quality objectives.

Each assessment follows our publicly available methodology.

In this factsheet we present results for selected quality objectives, criteria and sub-criteria whose scores depend primarily on characteristics of the type of project.

To see how this project type scores against all our criteria, explore our scoring tool.

Quality Objectives	1 Robust Determination of the GHG Emissions Impact
2 Avoiding Double Counting	3 Addressing Non-permanence
4 Facilitating a Transition Towards Net Zero Emissions	5 Strong Institutional Arrangements
6 Environmental and Social Impacts	7 Host Country Ambition

VISIT CCQI SCORING TOOL

www.carboncreditquality.org/scores.html

How to interpret CCQI Scores?

Our scores use an interval scale from 1-5, with 5 representing the highest score.

Scores are risk-based and indicative of the confidence or likelihood that the assessment subject meets the quality objective.

We do not provide an aggregated score for types of carbon credits to provide users with a nuanced picture on different quality aspects.

CCQI Score Scale

Level of confidence that the assessment subject meets the criterion or quality objective

Very High	5
High	4
Moderate	3
Low	2
Very Low	1