CCQI
Carbon Credit Quality Initiative

UNDERSTANDING CCQI SCORES

Establishment of Natural Forests

September 2023
Version 1.0

Key CCQI findings

Additionality risks for this project type are likely low. Many projects exclusively rely on revenues from selling carbon credits to fund the planting of trees as well as maintaining and protecting the grown forest. Additionality risks for the project type are mainly the lack of systematic checks whether governments at a later stage of the project enact legal requirements that would mandate the establishment of natural forest.

Quantification methodologies for this project type will likely lead to an overestimation of removals, but for most methodologies, the degree of overestimation is likely to be low to medium.

The project type has material non-permanence risks as forests are inherently in jeopardy of being destroyed or degraded. Carbon crediting programs apply different approaches for addressing this risk, leading to a range of scores for this quality objective.

Establishing more natural forests is essential for achieving the transition to net zero emissions. Sustainable development benefits for the project type are highly dependent on the context of the individual project.

What is this project type about?

Establishment of a forest on non-forest land areas that are ecologically appropriate. The forest will not be used for any commercial purposes, such as harvesting, but may be used for sustainable subsistence. The tree species composition is based on the natural forest type of the area. The project type removes greenhouse gases by increasing forest carbon stock.

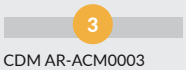
Carbon market background

All major carbon crediting programs (American Carbon Registry (ACR), Clean Development Mechanism (CDM), Climate Action Reserve (CAR), Gold Standard (GS), and Verified Carbon Standard (VCS)) offer registration for the project type, although under different names. Most of the time the activities we define in our project type description run under the label of afforestation and reforestation projects. Our narrower definition excludes commercial activities, such as timber plantations, that programs also label as afforestation and reforestation projects.

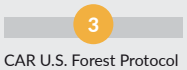
CCQI score summary

Additionality/Vulnerability

Quantification Methodologies



CDM AR-ACM0003
Version 2.0



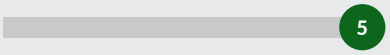
CAR U.S. Forest Protocol
Version 4.0

ACR Afforestation and Reforestation of Degraded Lands
Version 1.2

GS Methodology for Afforestation/Reforestation (A/R) GHGs Emission Reduction & Sequestration
Version 2.0

Non-permanence

Compatibility with net zero



SDG Impacts

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

This factsheet was commissioned by Foundation Development and Climate Alliance.

FOUNDATION Development and Climate Alliance

Main factors driving project type scores

Additionality/Vulnerability

The establishment of natural forests is very likely not financially viable without carbon credits

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?

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

The project type typically does not have any other revenues than those from carbon markets. This means that it is very likely that economic actors would not pursue these projects without the opportunity to sell carbon credits.

To be additional, removal activities must not take place on land for which the removal activities are likely driven by legal requirements (for example, if barren land is designated as a protected area). Carbon crediting programs require project developers to demonstrate that no legal mandates exist that require implementing the proposed project. The stringency of respective provisions differs, resulting in a differentiation of scores by program (see scale above). While most programs require this demonstration at registration, not all ask for periodic reassessments at later stages of the project.

In the case of CDM projects, the carbon market for the project type has collapsed. Our assessment on the likelihood that the removal activities for this project type continue without carbon credit revenues is inconclusive. Possible scenarios are that project owners abandon the project and cease to provide stewardship activities, assume silvicultural activities including commercial harvesting or clear the land to use it for other activities. It is however not possible to rank the likelihood of these scenarios as the chosen course of action for individual projects is highly contextual.

Quantification Methodologies

3
CDM AR-ACM0003
Version 2.0

3
CAR U.S. Forest Protocol
Version 4.0

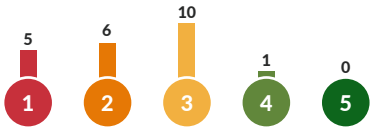
3
ACR Afforestation and Reforestation of Degraded Lands
Version 1.2

2
GS Methodology for Afforestation/ Reforestation (A/R) GHGs Emission Reduction & Sequestration
Version 2.0

Methodologies have several pitfalls, but the degree of over-estimation is likely to be low to medium

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?



Graph shows the score distribution for all 23 quantification methodologies assessed by CCQI.

Most projects use one of the following four methodologies to determine removals: *CDM AR-ACM0003*, *CAR U.S. Forest Protocol*, *ACR Afforestation and Reforestation of Degraded Lands* and *GS Methodology for Afforestation/Reforestation (A/R) GHGs Emission Reduction & Sequestration*. In our assessment, applying these methodologies will likely lead to an overestimation of removals, but for most methodologies the degree of overestimation is likely to be low to medium.

Overestimation risks result from multiple issues in the quantification methodologies.

A key issue in all methodologies is the lack of provisions to update the baseline if new legal requirements are enacted or when activities become common practice in the project area. This is especially relevant for this project type, as crediting periods can reach up to 100 years. An innovative approach in the ACR methodology might remedy these concerns. It requires the establishment of regeneration monitoring areas to verify the validity of baseline assumptions on an ongoing basis.

The GS methodology does not require modelling baseline carbon stocks and allows zero growth assumptions in baseline setting, which potentially could lead to significant overestimation. For the CAR methodology, uncertainty associated with leakage deduction estimates drives our score.

Other elements that can lead to overestimation of removals are the omission of relevant sources for project emissions (e.g., fertilizer use, road building and transportation emissions) and setting the default values too high or too low (e.g., for carbon in litter or dead wood).

Non-permanence

The project type has material non-permanence risks, which some carbon crediting programs address better than others

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.

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

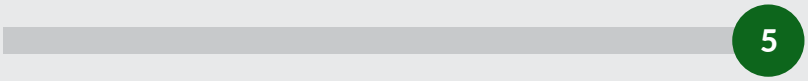
How do other project types score?

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

The establishment of natural forests has a material non-permanence risk: Forests are inherently in jeopardy of being destroyed or degraded, and thus releasing the stored carbon back into the atmosphere, for example in cases of land conversion or wildfires. The project type also does not address the drivers of deforestation, which increases the risk of removals being reversed.

Carbon crediting programs employ different approaches to reduce non-permanence risks and to account and compensate for reversals. The predominant approach to compensate for reversals is the cancellation of issued carbon credits, including using 'pooled buffer reserves' – a type of insurance mechanism. A range of scores applies for this criterion, because some carbon crediting programs have stricter rules than others. For example, the time for which reversals must be monitored and compensated varies among programs between 20 and 100 years.

Compatibility with net zero



Creating more natural forests 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 emisisons.

How do other project types score?

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

As the establishment of natural forest removes CO_2 from the atmosphere, it increases carbon stocks, which is essential for achieving the net zero transition. The project type rates highest in this category among those types assessed by the CCQI.

SDG Impacts

2.7 — 3.7

Environmentally-related SDG benefits are highly contextual

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?

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

Establishing natural forests can contribute to achieving several SDGs, in particular regarding environmental impacts. Foremost, the project type aims to increase afforestation globally, and thereby has positive impacts on water and soil retention, as well as biodiversity. Well-designed projects contribute to improving water quality of rivers und reduce run-off and erosion. Depending on project design as well as the implementation area, the project type also creates new jobs, mostly related to planting of trees as well as to maintaining and protecting the grown forest. The project type might also support jobs in the sustainable management of natural resources in the afforested area (e.g., use of forest biomass for local/indigenous groups).

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. Further, many positive or negative impacts are highly contextual, making the SDG impacts of the project type uncertain.

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 that would mandate the establishment of natural forests? Is the project already financially supported through policies or incentives other than carbon credits? If so, the project might have high additionality risks.
- Does the carbon crediting program under which the project is registered require periodic reassessments whether new legal requirements mandate the establishment of a natural forest?
- Does the project model baseline carbon stocks and periodically reassess and update the baseline, including to account for changes in legal requirements and an increased uptake of natural forests in the region?
- Has the project identified reversal risks and established a management plan to mitigate identified risks? Until what year will reversals from the project be monitored and compensated for?

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

CCQI
Carbon Credit
Quality Initiative

www.carboncreditquality.org

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

FOUNDATION Development and Climate Alliance

www.allianz-entwicklung-klima.de

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