



# What do “High Quality” Carbon Credits Signify and How do you Identify Them?

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The goal of this white paper is to discuss common criteria for high quality credits and how these parameters can be evaluated.

Here we highlight a few examples of the high-level criteria used to assess the quality of a carbon credit and showcase some of the benefits and challenges associated with different projects.

- y Represent actions that go above and beyond what otherwise would have occurred.
- y At a minimum, cause no net harm to nearby communities.

Within the past few years, many articles have highlighted concerns over the VCM and the legitimacy of carbon credits used to offset emissions and meet climate action targets (Greenfield, 2023).

Without rigorous screening criteria, allegations of greenwashing and carbon piracy are some .1 TJ EMC /P <</Lang (en-US)/MCID 19 >>BDC T\* [(a)3.9 (n )0.5 (c mar8-2.1 (k)27.9 Tcia1o,.7 (i)-2.8 (t)7.5 (s a)3.9 (r)7.9 (e )7.5 (f)4\*2s m72yAdSou means they are functionally permanent within a 100-year timeframe.

These circumstances highlight the need to mitigate for residual emissions to meet net zero goals. Without a regulated global rating systemintended to help distinguish and bad quality credits.

## Credit type 1: Reductions

Projects that decrease the emissions of an existing process result in reduction credits. Here are a couple of examples: developing renewable energy to decrease grid emissions intensities or using control-release fertilizer to decrease nitrous oxide emissions from agricultural field operations.

These credits help to fund practices that reduce the emissions of existing processes and can be an important incentivization tool for decarbonization. The challenge with these credits is that they are often the most impacted by “double counting”—the process of claiming climate-mitigation benefits more than once. How does that happen? Two organizations—one implementing it and another upstream or downstream of the process—both track and report the emissions reductions in their disclosures.

For example, an agricultural company reducing nitrous oxide emissions may capture these

reductions in their reporting. At the same time, consumers could claim the reduction in the emissions intensities of their products in their Scope 3 emissions. It is easy to double count climate mitigation from reductions, even inadvertently. If using reduction credits, investors must understand all the parties involved in the supply chain of the project developer and if these benefits are being claimed by others within their disclosures.

## Credit type 2: Avoidance

Avoidance credits are similar to—and often categorized as—reduction credits, but they have their own benefits and challenges. Avoidances rely on emissions that would have occurred rather than those of an existing process. Forest conservation is perhaps the most common example of avoidance credit. In this example, credit is based on the expected future loss of a forested area and the carbon within it, due to either planned or unplanned degradation or harvesting. In this instance, conservation measures are put in place to avoid these losses.

These credits are important to fund critical conservation measures and combat deforestation. However, they are subject to risk because they are based on anticipated future impacts.

Forecasted impacts are difficult to quantify and validate. Conservation-based projects may result in displacing a similar level of impact to a different area, which is difficult to track. For example, some articles claim avoidance projects are conserving forested areas that would have never been lost (McCoy et al., 2024). The recent inclusion of dynamic baselines in methodologies is helping to reduce the risk profile for avoidance credits. How? By tracking the degradation of the surrounding landscape throughout the project lifespan. This has the potential to create a more realistic look at the losses the project avoided.

The concept of avoidance credits is not to be confused with avoided emissions in the context of business' greenhouse gas

## Credit type 3: Removals

Removal credits are based on the capture and storage of carbon through either technology or nature. They are generally viewed as higher-quality credits. Here's a look at a couple of examples.

y Technology: It allows for the capture of carbon and injection into geologic formations or wells for long-term storage. This could constitute carbon capture and sequestration from an industrial process or direct air capture from the atmosphere. Other

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## What is permanence—and why does it matter?

We measure emissions and the credits used to offset them in carbon dioxide equivalent (CO<sub>2</sub>e). This metric represents the climate impact measured on a 100-year time horizon from the emissions being produced or removed. For a credit to be equal to the emissions it is offsetting on a one-to-one ratio, the credit must be functionally permanent within 100 years.

This proves challenging in the case of removal projects where the minimum project lifespan is often 20 to 40 years. Registries, depending on the method used, will typically account for this permanence in two ways:

1. By using a combination of source-specific restrictions. For example, they will not include the credit from a specific aspect of the process if it is not anticipated to be permanent at a 100-year time horizon.
2. Through credit withholding in buffer accounts. These are meant to mitigate for losses both during and after the project has concluded.

However, some crediting mechanisms do not account for permanence on sufficient time horizons, which opens investors to greenwashing.

An option to the standard 100-year requirement is discounting the conversion of CO

## What are the co-benefits from carbon credit projects?

Carbon credit projects can also impact nature and communities through their development and operation. Here are some things that can create positive or negative impacts:

- y Land ownership and status prior to project implementation
- y The surrounding community's reliance on the area and involvement in the project
- y Restrictions on access
- y Changes to habitat and function

For example, a project that restricts access to an area that the local community relies on for subsistence or cultural practices would have a negative community impact even if carbon credits were generated.

By contrast, a project that improves ecosystem services (clean air, clean water, habitat, etc.) could provide value to a community while also enhancing nature. Benefits might include recreation, education, and tourism. Some registries require that projects show such community benefits. Other registries provide guidance on community engagement and no net harm and instead address community benefits under separate certification programs. Examples include Verra's Climate, Community, and Biodiversity Standard or Sustainable Development Verified Impact Standard.

The Integrity Council for the Voluntary Carbon Market (ICVCM) and its 10 Core Carbon Principals (CCP) emerged in 2021. It has a similar goal of assessing if registries and their methodologies align with best practices (ICVCM, 2024). The ICVCM differs from ICROA in that its assessment and endorsement is focused on not only the registry but is also specific to the methodologies the registries approve for use. These programs can provide a high-level indication of credit quality based on the registry and methods used by a project. Since these are not specific to each project, additional due diligence should take place prior to investment.

Another example is the Carbon Credit Quality Initiative (CCQI). It provides ratings similar in scope to the ICVCM, though its assessment considers some project-specific context (CCQI, 2022). In addition to considering the registry and project type, the program also considers where projects are implemented. This assessment rates project types rather than specific registered projects. It is based on 7 objectives containing a total of 19 assessment criteria. Using a rating organization such as CCQI can provide

# What is the path forward?

Rating systems vary in how they distinguish credit quality. But high-quality carbon credits generally represent benefits from climate mitigation that are “measured, reported, verified, and correctly accounted for.” They also yield “results that are demonstrably additional to what would otherwise have occurred, have low risk of reversal, and avoid negative impacts on people and the environment”

