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

Contact
carboncreditqualityinitiative@gmail.com

Sub-criterion:	**3.1 Significance of non-permanence risks**
Project type:	**Improved forest management**
Assessment based on carbon crediting program documents valid as of:	**15 May 2022**
Date of final assessment:	**21 February 2024**
Score:	**This project type involves a material non-permanence risk.**

Assessment

Criterion 3.1

Relevant scoring methodology provisions

The methodology evaluates the non-permanence risk of the project type. If the project type is deemed not to have a material non-permanence risk, then quality objective 3 is assigned a score of 5. If there is a material risk of non-permanence, the assessment depends on the outcome of criterion 3.2. The following table provides an overview for which types of mitigation activities non-permanence risks are considered material and for which not:

Mitigation activity	Non-permanence risk	Example activities
Destruction of non-CO_2 gases	No risk: No reservoir involved. The destruction cannot be physically reversed.	HFC-23 destruction from HCFC-22 production
Avoidance of formation of non-CO_2 gases, without effecting the amount of carbon stored in reservoirs	No risk: No reservoir involved. The process cannot be physically reversed.	Reducing CH_4 emissions from rice cultivation, ruminant livestock or organic waste diversion
Reducing demand for fossil fuels	No material risk within time horizon relevant for avoiding dangerous climate change (except for possible lock-in effects in the case of activities that lead to a long-term increase in energy or feedstock demand).[1]	Adoption of renewable energy; energy efficiency measures
Reducing demand for non-renewable biomass (thereby reducing forest degradation)	Material risks: natural disturbance risks and anthropogenic factors.	Efficient cook stove projects
Enhancing, preserving, or slowing depletion of terrestrial carbon reservoirs	Material risks: The size of the risk depends on spatial scale, how underlying drivers are addressed, and stability of the reservoir(s) affected by the mitigation activity.	Afforestation/reforestation; improved forest management; avoided deforestation/conversion; soil carbon enhancements; peatland preservation or "rewetting"; etc.
Storing carbon in geologic reservoirs	Material risks: The size of the risks mainly depends on reservoir stability.	Carbon capture and storage (CCS BECCS, DACCS, or other)
Preventing or extinguishing accidental uncontrolled burning of fossil fuels	Material risks: The size of the risks mainly depends on reservoir stability.	Extinguishing or preventing ignition of fires at waste coal piles

[1] An example of such a lock-in effect is a project that installs new natural gas infrastructure, with a technical lifetime of 30 years, to replace an existing oil-based heating system. In the absence of the project, the existing oil-based system would be replaced after 10 years by a new heating system that comes to the market and that operates on 100% renewable energy. In this case, the emission reductions that the natural gas system achieves in the first 10 years of its operation would be reversed in the subsequent 20 years if not replaced by less GHG intensive technology. The project is thus locking in a fossil fuel based solution for the 30 years while renewable energy solution become available.

Preventing or slowing exploitation of fossil fuel reserves	Material risks: If the protection measure is discontinued, the reservoir may be depleted.	Protecting an oil field from being extracted

Information sources considered

-

Assessment outcome

The project type is considered to involve a material non-permanence risk.

Justification of assessment

This assessment refers to the following project types:

Improved forest management:

“Implementing forest management practices that aim to increase and/or avoid the loss of carbon stocks.”

Table 26 of the scoring methodology defines afforestation activities, such as improved forest management, to have a material non-permanence risk, as these activities enhance terrestrial carbon reservoirs. Forests can be subject to natural depletion through natural disturbances such as fire, disease, drought or windstorms. Additionally, they may be susceptible to different types of human-caused depletion, such as from demand for wood, or for land needed for subsistence, agricultural production, or development. The size and scale of carbon reservoirs affected by a mitigation activity is another important factor in assessing reversal risk. For activities implemented at the scale of projects, the effect of a wildfire could be catastrophic in terms of reversing prior carbon gains.