BCR TOOL

MONITORING, REPORTING AND VERIFICATION (MRV)

BCR carbon credits are quantified, monitored, reported and verified

BIOCARBON REGISTRY®

Version 1.0 | February 13, 2023

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1 Introduction

According to the rules and procedures stablished by BIOCARBON REGISTRY, the project holder shall calculate the emissions reductions in a manner conservative and transparent. In this sense, the project holder shall meet the terms with the necessary conditions to ensure quality in the quantification and management of the GHG emission reduction and removals.

The GHG Program includes the issuance of Verified Carbon Credits from a validated and verified project. The estimation of the emissions reductions shall be based on accurate measurements and quantification methods[1], and carbon credits will only be issued if they have been previously verified.

The validation and verification processes shall be carried out by an independent third party (Conformity Assessment Body – CAB), guaranteeing that they apply GHG emission reduction or removal quantification methodologies that are verifiable in the framework of ISO 14064-3.

Verification process completed, CAB shall submit the verification statement, confirming that, during a specified period, the GHG project has achieved the GHG performance. That means GHG emissions, GHG emission reductions, and GHG emissions removal increases, as declared by the project holder.

The conformity assessment body shall carry out the verification under the provisions of the BIOCARBON REGISTRY Validation and Verification Manual. The Verification Statement shall include a justification of the conformity of the GHG project's validation, ensuring that it complies with BIOCARBON REGISTRY regulations and the applicable national regulations.

The BCR MRV process is rigorous and requires a high level of accuracy and strict data collecting and archiving. In consequence, the MRV process for BCR projects shall comply with the BCR STANDARD and other relevant documents under the BCR Program.

2 Objectives

The objectives of this tool are:

(a) establish the principles and requirements applicable to the GHG projects, to monitoring, reporting and verification;

[1] The BCR Methodological documents give the procedures for guarantee that the emissions reductions are estimated with appropriate methods and protocols.

(b) provide the necessary conditions to ensure quality in the quantification, management and monitoring of the GHG emission reductions;

(c) support projects conformity within the rules and application procedures for the monitoring, reporting and verification of the GHG projects, and the issuance of Verified Carbon Credits (VCC);

(d) ensure the overall efficiency and integrity of the GHG PROJECTS.

3 Version

This document constitutes Version 1.0. February 13, 2023.

This version of the document may be adjusted periodically. Intended users should ensure that they are using the updated version.

4 General terms

The following general terms apply for this Tool:

(a) "Shall" is used to indicate that the requirement shall be met;

(b) "Should" is used to suggest that, among several possibilities, a course of action recommended as particularly appropriate;

(c) "May" is used to indicate that it is permitted.

5 Scope

This document is a tool for the monitoring, reporting and verification (MRV) of GHG projects. The certification and registration of GHG projects are possible BCR Program framework if such projects have been previously validated and verified by accredited Conformity Assessment Bodies, accredited in accordance with the provisions of section 22 of the BCR STANDARD.

This document provides the set of principles and requirements necessary for the MRV of GHG projects, and the issuance of Verified Carbon Credits in BIOCARBON REGISTRY, ensuring that they comply with the conditions established in the BCR STANDARD.

The scope of this tool is limited to:

(a) GHG projects using a methodology developed or accepted by BIOCARBON REGISTRY, applicable to GHG emissions reductions or GHG emissions removals;

(b) GHG projects using a methodology developed or accepted by BIOCARBON REGISTRY, applicable to activities in the AFOLU, energy, transportation, and waste handling and disposal sectors.

This tool presents the requirements for the monitoring, reporting and verification of projects aimed at reducing GHG emissions and/or removals, in the context of the BCR STANDARD.

This tool includes only additional or also referred information. The project holder shall apply the rules and protocols that constitute the methodologies[2] for the quantification of GHG emission reductions and removals, defined by sector and/or type of project (See section 8 of BCR STANDARD).

6 Principles

GHG project holders and, in general, all those involved in the design and implementation of the monitoring, reporting and verification of GHG projects should apply the following principles[3]:

6.1 Accuracy

(a) Minimizing bias and uncertainty in the measurement and processing of quantitative and nonquantitative data;

(b) Reducing sources of uncertainty; and

(c) Maintaining, calibrating, and checking all metering or other testing equipment used to report monitoring data for guidance on equipment calibration and ensuring that spreadsheets and other tools used to store and manipulate monitoring data are free from error.

6.2 Relevance

The monitoring and reporting of emission reductions achieved by a project is relevant information provided it complies with the BCR STANDARD. Data is not relevant if it does not impact emission reductions.

[2] Methodological documents or guidance
[3] Adapted from the CDM. http://cdm.unfccc.int/Reference/Standards/index.html

6.3 Credibility

Information can be considered credible if it is authentic and believable relative to what is being measured.

6.4 Reliability

Information can be considered reliable if it is able to yield the same results on a repeated basis over time using the same monitoring method and datasets.

6.5 Completeness

Completeness refers to inclusion of all relevant information for all relevant sources of data that are required for the assessment of emission reductions.

6.6 Consistency

Data, methods, criteria, and assumptions should allow meaningful and valid comparisons of the greenhouse gas emission reductions achieved in different monitoring periods and/or by different projects.

6.7 Transparency

Sufficient information should be made publicly available to allow reviewers to make decisions on the credibility and reliability of greenhouse gas emission reduction claims with reasonable confidence.

7 Quantification and monitoring periods

The quantification periods of GHG emission reductions or removals are as follows:

(a) for GHG removal projects, a minimum of 20 years and a maximum of 30 years;

(b) for REDD+ projects, a minimum of 20 years and a maximum of 40 years;

(c) for projects in the energy, transport, and waste sectors, the same rules on quantification periods (crediting period), as defined by the Clean Development Mechanism, shall apply. A maximum of seven years, renewable at most twice, or a maximum of ten years with no renewal option.

Monitoring, measuring, and reporting of the project activities and the emissions reduction shall be conducted at specified intervals during the project quantification period. In this way, verifications may be annual but shall be carried out every 5 years at the latest for projects in the AFOLU sector and every 3 years for projects in sectors other than AFOLU.

8 Conservative approach and uncertainty management

GHG project holders should establish and apply mechanism for managing uncertainty in the baseline quantification and mitigation results.

According to the International Organization for Standardization (ISO), "*uncertainty is the parameter associated with the result of quantification, which characterizes the dispersion of values that could reasonably be attributed to the quantified quantity. Uncertainty information generally specifies quantitative estimates of the likely dispersion of values and a qualitative description of the likely causes of the dispersion*"[4].

As a good practice, the project holders should use national or local values and data when available. Given this, GHG project holders may use the IPCC default values if and only if local or national data (for the type of Project and parameter required) are not available[5]. When using default values, to follow the conservative principle, traditional values of settings should be used[6] , for example, by the use of the lower limit of the range of data as long as it corresponds to the most conservative assumption[7].

Finally, if reference the Project makes references to external documents susceptible to updates, such as the IPCC Guidelines for National GHG Inventories, the project holders shall use the most recent version of those documents.

To manage uncertainty in projects in the AFOLU sector, BIOCARBON REGISTRY determines criteria and guidelines to comply with the uncertainty management associated with models to estimate emission reductions / removals in GHG projects[8].

If the data and parameters applied to estimate the reduction or removal of GHG emissions shall be consistent with the emission factors, activity data, projection of GHG emissions, and the other parameters used to construct the inventory national of GHG and the national reference scenario. If that's so, it is unnecessary to apply the percentages defined for the discount factor provided in the guidelines for managing uncertainty.

[4] ISO 14064-2:2019(en)

[5] GUIDANCE ON IPCC DEFAULT VALUES (Extract of the report of the twenty-fifth meeting of the Executive Board, paragraph 59) "The Board agreed that the IPCC default values should be used only when country or project specific data are not available or difficult to obtain". https://cdm.unfccc.int/Reference/Guidclarif/meth/meth_guid16_v01.pdf

[6] The conservative principle for a parameter refers to the value that, when used in calculations, is more likely to result in underestimation rather than overestimation of GHG emission reductions or removals (ISO 14064-2:2019).

[7] The conservative principle shall be ensured by the appropriate choice of parameters affecting the project's GHG emissions, removals, sinks and reservoirs.

[8] Contained in the methodological documents, developed by sector or Project type.

9 Monitoring Process

Project holder is responsible for monitoring actual emissions according to applied methodology outlined in the Project Document (PD), for managing changes in the implementation from PD and producing Monitoring report for CAB verification. The GHG project holder shall describe the procedures for monitoring project activities and GHG emissions reductions.

The monitoring procedures shall provide all relevant information and data, including:

(a) confirmation that the applicability conditions of the applied methodology were met;

(b) a complete description of the monitoring system, including data collection, procedures;

(c) information about data generation, aggregation, recording, calculation and reporting;

(d) organizational structure, roles and responsibilities of personnel, and emergency procedures for the monitoring procedure;

(e) parameters used to calculate baseline, project emissions reductions, and leakage as well as other relevant parameters required by the applied methodology and the monitoring plan;

(f) processes related to models and methods used to sampling and quality control;

(g) specific information on how data and parameters will be monitored during the monitoring period.

10 Monitoring Plan

The monitoring plan, which shall be approved by the CAB at the validation stage and posterior registration process in BCR, is required to monitor all parameters used to calculate the baseline, project, and leakage emissions as well as other relevant parameters required by the methodology used by the project holder.

In accordance with the applied methodology, project holders are required to develop and describe the monitoring plan for the project activities. It is an important component of the project document. In this sense, the monitoring plan is the guideline for the project holders to follow when completing monitoring reports once the project has commenced the implementation.

Truthful accomplishment of the monitoring report prevents misinterpretations at the verification activity.

11 Methodological documents

The MRV process for BIOCARBON REGISTRY projects shall comply with the methodologies developed or approved by BCR, as well as with the other relevant documents under the BCR Program.

The current versions of the methodological documents are the following:

(a) METHODOLOGICAL DOCUMENT. AFOLU SECTOR. Quantification of GHG Emission Reductions. GHG REMOVAL ACTIVITIES. Version 3.0 April 13, 2022. In: https://biocarbonregistry.com/methodologies/BCR-Methodological-Document-AFOLU-HME.pdf

(b) METHODOLOGICAL DOCUMENT AFOLU SECTOR. Quantification of GHG Emission Reductions. REDD+ Projects. Version 3.1. September 15, 2022. In: https://biocarbonregistry.com/methodologies/BCR0002_Methodological-document-REDD-projects.pdf

Methodological Document AFOLU SECTOR. BCR0003 Quantification of GHG Emissions Reduction. Activities that prevent land use change and improve management practices for peatlands and other wetlands in high mountain ecosystems. Version 3.0. August 31, 2022. In: https://biocarbonregistry.com/methodologies/BCR_Methodological-Document-Continental-Wetlands.pdf

(c) METHODOLOGICAL DOCUMENT SECTOR AFOLU. BCR0004. Quantification Emission Reduction and GHG removal. Activities that avoid land use change in Continental Wetlands. Version 2.0. June 23, 2022. In: https://biocarbonregistry.com/methodologies/BCR-Methodological-Document-AFOLU-HME.pdf

(d) Methodological Document AFOLU SECTOR. Quantification of GHG Emissions Reduction. Activities that prevent land use change in natural savannas. BCR0005. Version 1.0. October 21, 2022. In: https://biocarbonregistry.com/methodologies/BCR0005_Methodological-document-savannas.pdf

The projects in the sector transport, energy and waste shall follow the MRV rules provided by CDM. Available in: https://cdm.unfccc.int/methodologies/index.html

History of document

Type of document

BCR Tool monitoring, reporting and verification (MRV)

Version	**Date**	**Nature of the document**
Version 1.0	February 13, 2023	First version of the Tool.