



BIOCARBON TOOL

IDENTIFICATION OF A BASELINE SCENARIO AND DEMONSTRATION OF ADDITIONALITY

BASELINE AND ADDITIONALITY TOOL (BAT)

GHG Projects generate verified carbon credits (VCC) that represent emissions reductions, avoidance, or removals that are additional

BIOCARBON CERT[®]

Version 2.0 | February 27, 2026

© 2026 BIOCARBON CERT®. All rights reserved. Reproduction in whole or in part without the express permission of BIOCARBON CERT.

BIOCARBON CERT®. 2026. BIOCARBON TOOL. Identification of a Baseline Scenario and Demonstration of Additionality. Baseline and Additionality Tool (BAT). Version 2.0 February 27, 2026. 48 p. <http://www.biocarbonstandard.com>

Table of contents

1	Introduction	5
2	Purpose	5
3	Objectives	5
4	Scope	6
5	Version	7
6	Definitions	7
7	General requirements.....	9
1.1	Conservative baseline calibration and systemic safeguards.....	10
8	Methodological Procedure	11
Step 1.	Identification of Alternative Scenarios.....	12
Sub-step 1a:	Define alternative scenarios	12
Sub-step 1b:	Consistency with mandatory laws and regulations	13
Step 2.	Barrier Analysis.....	15
Sub-step 2a:	Identify relevant barriers.....	15
Sub-step 2b:	Demonstrate barrier prevents project activity.....	17
Sub-step 2c:	Demonstrate Alternatives are not prevented	18
Sub-step 2d:	Demonstrate carbon credit revenues play a material and determinative role	18
Step 3.	Investment Analysis.....	19
Sub-step 3a:	Calculate Financial Indicator	20
Sub-step 3b:	Sensitivity Analysis	21
Sub-step 3c:	Determine investment attractiveness	22
Step 4.	Common Practice Analysis	23
Sub-step 4a:	Define the applicable measure and scope of comparison.....	23
Step 5.	<i>Selection of the Baseline Scenario</i>	<i>27</i>
9	Small-Scale Project Provisions.....	32
1.2	Eligibility for Simplified Procedures	32
1.3	Oversight and transparency.....	33
10	Documentation and evidence requirements.....	33
1.4	General Requirements	33
1.5	Acceptable Types of Evidence (non-exhaustive list).....	33
1.6	Minimum documentation by Step	35
11	Implementation Timeline and Applicability of this Version	35
ANNEX A. Minimum Evidence Requirements by Step.....		37
ANNEX B. Simplified Additionality Tool for Micro/Small-Scale Projects ...		39

1 Introduction

The BIOCARBON STANDARD establishes that the issuance of VCC shall be based on a realistic and credible baseline. In addition, the rule related with the VCC quantification includes the demonstration that the project holder applies a reasonable, justifiable, and conservative baseline estimation of emissions.

This tool establishes a standardized and conservative approach for identifying the baseline scenario and demonstrating the additionality of GHG project activities under the BIOCARBON STANDARD.

It is designed to ensure that all verified carbon credits (VCCs) issued by the BIOCARBON STANDARD represent real, measurable, and additional emission reductions or removals, in full alignment with globally recognized principles of environmental integrity and credit quality, including those required for participation in global markets and high-integrity voluntary frameworks.

This tool shall be applied in conjunction with other BIOCARBON STANDARD instruments, including the Avoiding Double Counting (ADC) Tool and the Program's Standard Operating Procedures, to ensure full alignment with the broader framework for environmental integrity, transparency, and legal robustness.

2 Purpose

The purpose of this tool is to provide a standardized framework for the identification of a credible baseline scenario and the demonstration of additionality under the BIOCARBON STANDARD.

By applying this tool, project holders can ensure that all mitigation outcomes represent real, measurable, and additional emission reductions or removals that would not have occurred in the absence of the project.

This tool contributes to the environmental integrity and quality of verified carbon credits (VCCs) issued under the BIOCARBON STANDARD, in alignment with recognized best practices and principles of high-integrity carbon markets.

3 Objectives

The tool is structured to guide project developers through a sequential, step-wise process that ensures that all assumptions used in the development of baseline scenarios are conservative and reflect realistic conditions to avoid any overestimation of mitigation outcomes.

In this sense, the objectives of this tool are:

- (a) The identification of all realistic and credible alternative scenarios to the project activity;
- (b) The evaluation of financial, technological, regulatory, and institutional barriers;
- (c) The assessment of economic viability through investment analysis;
- (d) The verification that the project activity is not common practice in the applicable sector and geographic area;
- (e) The selection of a conservative baseline scenario that reflects what would have occurred in the absence of the project.

This approach supports the environmental integrity and robustness of climate claims made through the use of BIOCARBON credits. It provides transparency and replicability in baseline and additionality assessments, while safeguarding against over-crediting, non-additionality, and double claiming.

4 Scope

This tool applies to all project activities seeking registration and credit issuance under the BIOCARBON STANDARD that require the identification of a baseline scenario and demonstration of additionality, whether mandated by the applicable methodology or necessitated by the absence of internal procedures within the methodology itself.

The tool is applicable across all sectors covered by the Program, including but not limited to:

- (a) Agriculture, Forestry, and Other Land Use (AFOLU);
- (b) Energy generation and efficiency;
- (c) Transport systems;
- (d) Waste management and disposal.

It is designed to accommodate both emission reduction and removal activities, including nature-based and technology-based solutions. Project activities that rely on standard methodologies developed or approved by BIOCARBON, as well as those adapted from external sources, shall apply this Tool in all cases. Any internal procedure included in the methodology shall not substitute the application of this Tool. This applies to both methodologies developed under the BIOCARBON STANDARD and those adapted from external sources (e.g., CDM).

The application of this tool is not required in the following cases:

- (a) When the project falls under sector-specific positive lists or simplified approaches expressly approved by the Program (note: no such lists are currently in force under BIOCARBON);
- (b) When the project type or activity is categorically excluded by regulation or legal mandate, or when it is otherwise deemed ineligible for crediting.

In all other circumstances, project holder shall apply this tool in full, without omission or selective application of steps. The outcome of its application shall serve as the basis for determining the project's eligibility and the credibility of claimed mitigation outcomes.

The BIOCARBON STANDARD does not maintain positive lists of eligible project types for the purposes of additionality assessment. All project activities are subject to individualized evaluation under this tool. This approach ensures that eligibility is not assumed by default and that all mitigation outcomes are assessed against rigorous additionality criteria in accordance with high-integrity crediting principles.

5 Version

This document constitutes Version 2.0. February 27, 2026.

This document may be updated periodically to reflect technical improvements, regulatory developments, or to clarify its interpretation and application. Updates may also be issued in response to stakeholder feedback, programmatic adjustments, or the incorporation of new scientific or methodological evidence.

Users shall ensure they are referring to the most recent version available on the BIOCARBON website and are responsible for complying with the applicable version in effect at the time of use.

6 Definitions

For the purposes of this tool, the following definitions apply. Where terms are not defined below, the definitions provided in the BCR Glossary shall apply. Terms derived from international frameworks have been adapted for consistency with the BIOCARBON STANDARD.

Additionality

A project activity is considered additional if it can be demonstrated that the associated emission reductions or removals would not occur in the absence of carbon credit revenues or equivalent enabling incentives. This means that the mitigation outcome is directly dependent on the

incentive provided by the carbon market and would not be achieved under a credible baseline scenario without such support.

Alternative Scenario

A plausible course of action, distinct from the proposed project activity, that provides a similar result, output, or input. Alternative scenarios may include continuation of the current situation, adoption of other technologies or practices, or actions implemented by other market actors.

Applicable Geographic Area

The spatial boundary used to assess market penetration, legal enforcement, investment conditions, and other contextual factors relevant to the project activity. Unless otherwise justified, the default applicable area is the host country.

Barrier

A condition that prevents or significantly hinders the implementation of the proposed project activity, such as lack of financing, regulatory disincentives, technological limitations, or social and institutional constraints.

Baseline Scenario (or Reference Scenario)

The baseline scenario is a counterfactual situation that reasonably represents the anthropogenic emissions or removals that would occur in the absence of the project activity. It shall reflect conservative assumptions and comply with applicable methodological and program requirements.

Benchmark (for Investment Analysis)

A reference value used to assess the financial attractiveness of a project, which may be derived from market-based data (e.g., government bond rates, cost of capital), sectoral norms, or project developer benchmarks consistently applied in similar decision-making contexts.

Common Practice

A technology or measure is considered common practice if it has achieved significant market penetration in the relevant sector and geographic area, unless there are essential distinguishing features between the proposed project and existing project activities.

Financial Indicator

A quantified metric used to assess the economic performance of the project or its alternatives, such as Internal Rate of Return (IRR), Net Present Value (NPV), payback period, or levelized cost of service.

First-of-its-Kind

A project activity that applies a technology, practice, or measure that is not commonly implemented in the applicable geographic area, and for which no similar activities have been registered, commissioned, or brought into operation under comparable conditions.

Project Activity

A specific set of actions undertaken to reduce or remove greenhouse gas emissions, designed and implemented in accordance with an approved methodology under the BIOCARBON STANDARD.

Realistic and Credible Alternative

An alternative scenario that is technically feasible, legally permitted (unless systematically unenforced), and economically accessible to project holders or comparable actors within the applicable geographic area.

Regulatory Surplus

The requirement that a project activity shall not be mandated by law or regulation. Activities that are legally required, and where compliance is enforced, are not eligible to generate carbon credits under the BIOCARBON STANDARD.

Simple Payback Period

The simple payback period is defined as the number of years required for a project to recover its total investment costs through its net annual cash inflows, excluding revenues from carbon credits. It is calculated as the ratio of total investment costs to average annual net cash savings or benefits (not discounted). This indicator does not account for the time value of money and is used as a simplified measure of investment attractiveness, particularly for small-scale projects under Annex B

7 General requirements

All projects developed under the BIOCARBON STANDARD shall demonstrate and document that baselines are established using realistic and conservative assumptions, parameters, and models.

The use of historical data, benchmarking, or modelling shall reflect conditions that would plausibly occur in the absence of the mitigation activity and shall not result in the overestimation of emission reductions or removals.

The baseline scenario shall represent a credible and conservative counterfactual and shall not assume optimistic, speculative, or best-case projections that would inflate mitigation outcomes. Project holders shall

demonstrate, based on verifiable and decision-relevant evidence, that the decision to implement the activity was materially influenced by the expected generation of carbon credit revenues and that such mitigation would not reasonably have occurred under prevailing market, regulatory, and sectoral conditions in the absence of the carbon market participation.

The baseline scenario shall also consider applicable government policies and legally binding requirements that reduce GHG emissions, where such policies are effectively enforced in the project context. This includes instruments such as carbon taxes, feed-in tariffs, performance standards, efficiency mandates, or other regulatory measures. The assessment may consider the level of enforcement and any officially recognized grace periods, provided that such consideration is supported by verifiable evidence.

All assumptions applied in the baseline scenario shall be evidence-based, transparent, and aligned with sectoral best practices. Where uncertainty exists, project holders shall adopt the most conservative values or scenarios to ensure environmental integrity.

The BIOCARBON STANDARD ensures systematic coordination between this Tool, the Uncertainty Assessment Tool, and the Leakage Management Tool to ensure that distinct sources of over-crediting risk are independently and conservatively addressed.

1.1 Conservative baseline calibration and systemic safeguards

Baseline emissions or removals shall not be overestimated in relation to realistic business-as-usual (BAU) conditions. Where methodological uncertainty, structural transition risks, sectoral evolution, policy trajectory changes, or data limitations may reasonably result in an overestimation of BAU emissions or removals, project holders shall apply conservative downward adjustments to baseline parameters, emission factors, activity data, performance benchmarks, or modeled trajectories, as applicable.

Such conservative calibration may, where justified, result in baseline values below central or average BAU projections, provided that the resulting baseline remains realistic and credible.

- (a) Baseline conservativeness shall be conceptually and quantitatively distinct from:
- (b) uncertainty deductions applied under the Uncertainty Assessment Tool; and
- (c) leakage deductions required under the Leakage Management Tool.

Baseline conservativeness addresses ex-ante counterfactual risk.

Uncertainty adjustments address measurement and data reliability risk.

Leakage deductions address displacement effects occurring outside the project boundary.

These safeguards shall not be applied in a duplicative manner to penalize the same source of risk more than once. However, each instrument shall independently ensure that its respective source of overestimation risk is conservatively addressed.

In cases involving methodologies adapted from external frameworks, including CDM-derived approaches or methodologies undergoing transition toward Article 6.4-aligned standards, BIOCARBON shall require additional scrutiny and, where appropriate, conservative recalibration of baseline assumptions to prevent structural overestimation of mitigation outcomes.

Project holders shall document and justify all key assumptions used in the baseline calculation, including data sources, boundary conditions, emission factors, socio-economic variables, modeling approaches, and any conservative downward adjustments applied. These assumptions and adjustments shall be transparently described in the Project Document and shall be subject to independent validation and public transparency requirements in accordance with the BIOCARBON STANDARD.

Baseline conservativeness and any conservative calibration decisions shall be reassessed in accordance with the baseline reassessment provisions established in the BioCarbon Standard, as amended and adopted from time to time, including sector-specific periodic reassessment cycles.

8 Methodological Procedure

This section describes the step-wise procedure for identifying the baseline scenario and demonstrating additionality. Each step shall be applied in sequence unless otherwise permitted by the applicable methodology. The steps are:

1. Identification of alternative scenarios;
2. Barrier analysis;
3. Investment analysis;
4. Common practice analysis;
5. Selection of the baseline scenario.

Project holders may choose to apply either Step 2 (Barrier Analysis) or Step 3 (Investment Analysis), or both, unless the methodology requires a specific approach. Step 4 (Common Practice Analysis) is mandatory in all cases.

This flexibility reflects the fact that either a credible implementation barrier or an unattractive investment profile may independently demonstrate that a project activity would not occur in the absence of carbon revenues. Both pathways are considered valid, as long as they are complemented by the mandatory common practice assessment in Step 4.

Where the project generates material non-carbon revenues or is typically assessed through financial decision metrics in the sector, Step 3 shall be applied unless the methodology explicitly prescribes an alternative test.

All assessments carried out under this Tool, including the identification of alternative scenarios, barrier or investment analysis, and common practice evaluation, shall be based on the information, conditions, and regulatory context that were applicable at the time the project holder defines the decision date of the project activity.

The “decision date” refers to the point at which key implementation decisions were made, or contractual commitments were signed, and may precede the crediting period. This ensures that additionality is assessed in relation to the circumstances that prevailed when the project decision was taken, rather than at a later or more favorable moment.

Project holders shall demonstrate that the intention to seek carbon crediting was considered prior to, or at the time of, the investment decision. Evidence may include internal memoranda, board minutes, feasibility assessments incorporating carbon revenue scenarios, or documented correspondence with carbon market intermediaries.

Where such prior consideration cannot be credibly demonstrated, the project activity shall not be considered additional.

All assessments shall be transparently documented and supported by verifiable evidence in accordance with the requirements set forth in this tool and the applicable BIOCARBON methodology.

Step 1. Identification of Alternative Scenarios

To identify all realistic and credible alternative scenarios to the proposed project activity, including the scenario that may ultimately be selected as the baseline.

Sub-step 1a: Define alternative scenarios

The project holder shall identify all technically feasible, legally allowable, and economically accessible scenarios that provide the same or a comparable service, function, or output as the proposed project activity. These scenarios shall include, at a minimum:

- (a) The proposed project activity undertaken without registration under a GHG program (i.e., without crediting);

- (b) The continuation of the current situation (i.e., business-as-usual operation with no significant intervention);
- (c) Other plausible options implemented by the project holder or comparable actors in the applicable geographic area (e.g., alternative technologies, energy sources, waste treatment methods, or land uses);
- (d) Scenarios where the same output is provided by other market participants (e.g., energy supplied by the grid instead of on-site generation);
- (e) Any other scenario reasonably available to the project holder or similar stakeholders within the same jurisdictional and economic context.

Where the proposed project activity includes multiple components or outputs (e.g., heat and electricity from a cogeneration unit), alternatives shall be identified for each service separately, and feasible combinations shall be considered.

Note1: Pilot or demonstration projects that lack commercial scalability or financial viability shall not be considered as realistic and credible alternative scenarios.

Note2: For AFOLU activities, alternative land-use scenarios shall consider historical land use, policy context, and observed practices within the region.

Sub-step 1b: Consistency with mandatory laws and regulations

Each alternative scenario identified in Sub-step 1a shall be assessed for consistency with legally binding and enforceable regulations within the applicable geographic area.

Alternative scenarios shall be excluded if they:

- (a) Clearly violate mandatory laws or regulations, and
- (b) Such laws or regulations are enforced in practice.

However, an alternative that is non-compliant may still be considered if the project holder provides robust evidence that:

- (a) The relevant law or regulation is systematically not enforced, and
- (b) Non-compliance is widespread within the applicable jurisdiction (e.g., documented enforcement gaps, independent reports, or national compliance audits).

Important: Policies or programs that are not legally binding (e.g., voluntary sustainability standards, development plans, or non-mandatory national goals) shall not be used to exclude alternative scenarios.

Clarification of “systematically not enforced”

For the purposes of this Tool, a legal requirement shall be considered “systematically not enforced” only where credible and sector-specific evidence demonstrates a consistent pattern of non-enforcement within the applicable geographic area.

Such determination shall be supported by:

- (a) Evidence covering a recent and relevant time period, generally not less than the preceding three (3) to five (5) years prior to the project decision date;
- (b) Documentation specific to the relevant sector, activity type, and jurisdiction; and
- (c) Authoritative and verifiable sources, such as official enforcement statistics, regulatory official reports, judicial decisions, audit findings, or independent institutional assessments.

Isolated instances of non-compliance, anecdotal evidence, or generalized claims of weak enforcement shall not be considered sufficient to demonstrate systematic non-enforcement.

Where enforcement practices vary across subnational jurisdictions, the project holder shall demonstrate that non-enforcement is applicable to the specific project location.

Sub-step 1c: Regulatory surplus test

The project activity shall not be legally required under enforced laws, regulations, or binding mandates applicable to the project location and sector. Where the activity is required by law and such requirement is enforced, the project shall not be considered additional.

Where a legal requirement exists but is demonstrably and systematically not enforced, the determination of non-enforcement shall be made in accordance with the evidentiary criteria defined under Sub-step 1b.

In such cases, the project holder shall provide robust, current, and sector-specific evidence demonstrating that the regulatory requirement is not effectively enforced in the applicable jurisdiction.

Outcome of Step 1

A list of realistic, credible, and legally consistent alternative scenarios shall be established. If the only remaining alternative is the project activity

without registration under a GHG program, the project activity shall be considered not additional.

Otherwise, the assessment proceeds to either Step 2 (Barrier Analysis) or Step 3 (Investment Analysis), or both.

Step 2. Barrier Analysis

To determine whether the proposed project activity faces one or more identifiable and credible barriers that would prevent its implementation in the absence of revenues from carbon credits, and to confirm that at least one alternative scenario identified in Step 1 is not subject to the same barriers.

Sub-step 2a: Identify relevant barriers

The project holder shall identify all realistic and credible barriers that affect the implementation of the proposed project activity in the applicable geographic context. Barriers may include, but are not limited to:

(a) Financial barriers (excluding low return on investment, which is assessed under Step 3):

- Lack of access to affordable financing;
- Project types that have only been implemented with grants or concessional funding;
- High perceived risk by capital providers, reflected in limited access to debt or equity markets.

(b) Technological barriers:

- Lack of availability of necessary technologies in the region;
- Absence of trained personnel to operate or maintain the technology;
- High failure risk due to local conditions.

(c) Institutional or policy barriers:

- Misaligned incentives (e.g., investment decisions made by actors who do not capture the benefit);
- Fragmented decision-making processes that discourage innovation;
- Regulatory uncertainty or lack of support frameworks.

(d) Information and awareness barriers:

- Limited knowledge among users or investors about the technology or practice;
- Cultural or market biases against alternative approaches.
- Social or land tenure barriers (especially relevant in AFOLU):
- Insecure land ownership or usage rights;
- Customary practices incompatible with proposed changes.

Barriers shall be based on project-specific circumstances and reflect actual implementation conditions in the host country or region. General claims or anecdotal assertions shall not be considered sufficient.

Only persistent and material barriers shall be considered valid for the purpose of this analysis. Structural barriers are those that are systemic or long-standing in nature (e.g., land tenure insecurity, lack of enabling institutions), whereas circumstantial or temporary obstacles (e.g., recent budget cuts, short-term policy gaps) shall not be used as a sole justification for additionality.

Important: Claims based solely on anecdotal evidence, informal perceptions, or unsubstantiated narratives shall not be accepted. All identified barriers shall be supported by verifiable and project-specific documentation.

2a.1 Optional consideration – Social and institutional feasibility indicators

In addition to the financial, technical, and regulatory barriers considered under this Tool, project holders may also present evidence related to the social or institutional feasibility of the proposed project activity.

This option is particularly relevant in project types that rely on behavioral adoption, local community engagement, or decentralized governance structures (e.g., clean cookstove dissemination, non-motorized transport systems, decentralized waste solutions, or smallholder AFOLU interventions).

Examples of valid social or institutional feasibility indicators include:

- (a) Documented lack of community acceptance or past adoption failures of similar initiatives;
- (b) Absence of enabling institutions or local delivery mechanisms to implement the project at scale;

- (c) Evidence of cultural or behavioral barriers that reduce uptake (e.g., resistance to fuel switching, lack of perceived benefits);
- (d) Weak or fragmented institutional coordination among stakeholders necessary for project implementation.

Where such indicators are presented, the project holder shall justify their material relevance and support them with credible evidence, such as stakeholder consultation records, peer-reviewed studies, or implementation evaluations from similar programs.

This type of analysis shall complement, but not substitute, the demonstration of additionality through financial or technological barriers. It serves to enhance the contextual understanding of implementation risks and reinforces the conservative and realistic assessment of baseline and additionality conditions.

Sub-step 2b: Demonstrate barrier prevents project activity

The project holder shall provide verifiable and documented evidence that the identified barriers prevent the implementation of the project activity without the enabling support of carbon credit revenues.

Examples of acceptable evidence include:

- Independent expert reports or market assessments;
- Official documentation showing denial of financing due to project type;
- Country risk ratings or financial institution guidance;
- Documentation from internal decision-making processes (e.g., board minutes, feasibility studies);
- Sectoral studies, third-party surveys, or statistical analyses.

The project holder shall also demonstrate that the revenues expected from the sale of carbon credits are sufficient to overcome the barrier (e.g., tipping the economic feasibility or unlocking financing).

In cases where uncertainty exists regarding the applicability, strength, or context-specific relevance of the identified barriers, project holders shall apply a conservative interpretation. Evidence shall only be considered valid when it provides high confidence that the claimed barrier significantly prevents implementation. Where such confidence cannot be established, the barrier shall be deemed insufficient to demonstrate additionality.

Sub-step 2c: Demonstrate Alternatives are not prevented

The project holder shall analyze each alternative scenario from Step 1 and determine whether the identified barrier(s) would also prevent their implementation. Any alternative that is equally affected by the same barriers shall be excluded from consideration.

At least one alternative scenario shall remain that is not significantly affected by the identified barriers.

The analysis shall include:

- Clear comparisons across project and alternatives;
- Justification of differential barrier impact (e.g., financing available for conventional but not innovative projects);
- Evidence for each scenario analyzed.

Sub-step 2d: Demonstrate carbon credit revenues play a material and determinative role

The project holder shall demonstrate that the barrier(s) can be effectively overcome only due to the availability of revenues from carbon crediting.

Evidence may include conditional financing agreements, forward purchase intentions, internal financial models, or documented investment decisions showing that carbon revenues materially improve the investment outlook or enable implementation.

If carbon finance does not materially alter the investment outlook or implementation decision, the project activity shall not be considered additional on the basis of barriers.

Outcome of Step 2

The project activity shall be considered additional under the barrier analysis pathway only if all the following conditions are met:

- (a) The implementation of the project activity is credibly prevented by one or more barriers;
- (b) At least one alternative scenario from Step 1 is not prevented by those same barriers;
- (c) Carbon credit revenues play a material and determinative role in overcoming the identified barrier(s).
- (d) If all conditions are met, the assessment proceeds to Step 4 (Common Practice Analysis).

If any condition is not met, the project holder may proceed to Step 3 (Investment Analysis), provided this is not excluded by the methodology.

Step 3. Investment Analysis

To assess whether the proposed project activity is economically or financially unattractive in the absence of revenues from carbon credits, and to confirm that such revenues play a material and determinative role in the investment or implementation decision. The analysis shall also help identify the most financially attractive scenario, which may serve as the baseline.

General Requirements

- (a) The investment analysis shall follow a transparent, conservative, and reproducible approach.
- (b) All relevant input data, assumptions, and results shall be documented in an unprotected and traceable spreadsheet.
- (c) The analysis shall reflect the financial decision-making context at the time the investment decision was made.
- (d) The analysis shall be conducted using post-tax cash flows unless otherwise justified.
- (e) All comparisons shall be made using consistent input assumptions across scenarios.

All cash flows and benchmarks shall be expressed consistently either in real or nominal terms. Where nominal values are used, inflation assumptions shall be transparently disclosed. The discount rate applied shall be consistent with the treatment of inflation (real rate with real cash flows; nominal rate with nominal cash flows).

The selected benchmark shall reflect the country, sector, and project type in which the activity operates. The project holder shall justify the appropriateness of the benchmark using credible and publicly available data sources. Where a range of benchmarks exists, a conservative value within that range shall be applied.

Eligible Analysis Options

Identified alternatives shall be mutually exclusive and capable of providing comparable outputs or services under similar market and regulatory conditions.

The project holder shall choose one of the following types of analysis:

Option 1: Investment Comparison Analysis

Compare the financial indicator of the proposed project activity to that of the alternative scenarios identified in Step 1.

Option 2: Benchmark Analysis

Compare the financial indicator of the proposed project activity to an appropriate market-based benchmark.

Note: Simple cost analysis is not permitted unless the methodology explicitly allows it and the project generates no financial benefit other than from carbon crediting.

Selection of Financial Indicator¹

The financial indicator selected shall be appropriate to the project context. Acceptable indicators include:

- Internal Rate of Return (IRR)
- Net Present Value (NPV)
- Payback period
- Levelized cost of service or production (e.g., \$/kWh, \$/GJ, \$/ton)

If IRR is used, the type shall be specified:

- Project IRR excludes financing structure (i.e., evaluates overall project viability).
- Equity IRR considers only the return on equity, including debt servicing.

Sub-step 3a: Calculate Financial Indicator

- (a) Determine the total investment, operational, and maintenance costs over the life of the project.
- (b) Exclude carbon credit revenues in the baseline analysis.
- (c) Include all other revenues (e.g., product sales, energy savings, subsidies, cost savings).

¹ Note: Where appropriate, project holders may refer to default values for cost of equity, WACC, or IRR benchmarks provided in relevant methodologies or public sources (e.g., national development banks, sectoral studies, or standard-setting bodies). Investment indicators such as IRR and NPV shall be calculated using standard financial formulas. If requested by the validator, calculations shall be demonstrated and reproduced in the submitted financial model.

- (d) Apply a suitable discount rate (based on WACC or cost of equity, as applicable).
- (e) Include salvage or residual value in the final year of analysis.
- (f) Present the financial performance of:
 - The proposed project activity (without carbon credits);
 - All remaining viable alternative scenarios (if applying Option 1);
 - The relevant benchmark (if applying Option 2).

All assumptions and inputs shall be:

- Justified with market data or authoritative sources;
- Consistent across scenarios, unless clear justification is provided;
- Documented in a transparent spreadsheet (submitted with the Project Document).

The financial model, assumptions, and conclusions used to demonstrate additionality shall be consistent with the information presented to the project's management, investors, or lenders at the time of the investment decision. Where differences exist, the project holder shall provide documented justification. Upon request, the project holder shall make available relevant excerpts of investment memoranda, board approvals, or financing term sheets, subject to confidentiality safeguards.

The financial assessment period shall reflect the expected operational lifetime of the project activity. Where lifetime is uncertain, the assessment shall cover a minimum of ten (10) years and include a transparent treatment of residual value where applicable.

Sub-step 3b: Sensitivity Analysis

A sensitivity analysis shall be conducted on all key financial parameters that individually account for:

- More than 20% of total project revenues or costs, or
- A material influence on the financial outcome.

The range of variation should be based on verifiable market data or a minimum range of $\pm 10\%$ or a range reflecting observed market variability, whichever is higher.

The investment analysis is considered valid only if the project activity remains financially unattractive across a realistic range of input values.

Sub-step 3c: Determine investment attractiveness

Option 1: Investment Comparison Analysis

If the financial indicator (e.g., IRR) of the proposed project is worse than all alternatives (e.g., lower IRR, higher cost), and this remains true under sensitivity analysis → the project is not the most financially attractive option and may proceed to Step 4.

If one or more alternatives are less attractive than the project activity, the project is not additional.

Option 2: Benchmark Analysis

If the financial indicator of the proposed project activity is below the benchmark without carbon revenues, the project is financially unattractive.

If carbon revenues raise the indicator above or equal to the benchmark, and this holds under sensitivity analysis, the project may proceed to Step 4.

Outcome of Step 3

The project activity shall be considered financially additional under this step if:

- (a) It is clearly not the most attractive option when compared to viable alternatives, or
- (b) It does not meet financial benchmarks without carbon revenues, and such revenues are necessary to reach viability.

If the investment analysis does not support additionality, the project may still apply Step 2 (Barrier Analysis), if not already done. If both steps fail to demonstrate additionality, the project is not eligible under the BIOCARBON STANDARD.

Carbon credit revenues shall demonstrate a material and determinative impact on the project's financial viability. Marginal improvements that do not alter the investment decision shall not be sufficient. Where applicable, the project holder shall demonstrate materiality through quantified changes in IRR, NPV, debt-service coverage ratios, or documented lender requirements.

The demonstration shall show that carbon revenues materially alter the investment decision outcome, not merely improve financial performance within normal investment tolerance ranges.

Step 4. Common Practice Analysis

To evaluate whether the proposed project activity reflects a commonly adopted technology, practice, or measure in the applicable geographic area and sector, and to ensure that the project does not represent a mitigation outcome that would likely have occurred in the normal course of business.

This step serves as a credibility check to complement the barrier and/or investment analysis and is mandatory for all project activities, regardless of which pathway was followed in Steps 2 and 3.

Sub-step 4a: Define the applicable measure and scope of comparison

The project holder shall identify the measure applied by the project (e.g., fuel switch, technology upgrade, methane capture, reforestation) and define the applicable geographic area based on the same area used in Steps 1–3.

Unless otherwise justified by the methodology or national conditions, the applicable geographic area is the entire host country. A smaller geographic area may be used only if the project holder demonstrates that implementation conditions differ significantly from the rest of the country (e.g., due to infrastructure, policies, climate, or economic context).

The analysis shall focus on similar activities, which are defined as those that:

- (a) Provide the same or comparable outputs or services;
- (b) Use the same or functionally similar technology or practices;
- (c) Are implemented under comparable market, policy, and institutional conditions;
- (d) Are of a similar scale and purpose;
- (e) Have entered commercial operation before the public disclosure of the project activity.

Note: Technologies shall be considered equivalent if they provide the same or similar service or environmental benefit under comparable operating conditions, even if they differ in specific design, scale, or manufacturer. Minor technical variations shall not be used to exclude otherwise comparable activities.

Sub-step 4b: Identify Similar Activities and Market Penetration

The project holder shall identify a representative set of similar activities within the relevant sector and geographic region. These activities shall be comparable in terms of:

- (a) Services delivered, outcomes generated, or land-use objectives pursued (e.g., energy production, waste management improvements, avoided deforestation, ecosystem restoration, etc.);
- (b) Technological approach, land management strategy, or intervention type;
- (c) Temporal and spatial context, including timing of implementation and applicable regional conditions;
- (d) Not registered under the BIOCARBON STANDARD or another carbon crediting program.

This reference set shall include activities implemented in the past 5 to 10 years and shall be justified using verifiable sources such as public databases, registries, national inventories, spatial datasets, or relevant sectoral studies.

The aggregate magnitude of these similar activities shall be referred to as M_{all} (representing the total market share of similar activities, expressed in terms of installed capacity, treated volume, area covered, or another relevant metric depending on the sector).

The construction of M_{all} shall not be artificially restricted by scale, minor technological distinctions, or geographic segmentation that would conceal the true competitive market context.

Scale, feedstock, or implementation conditions may only be used to define M_{diff} where they materially affect feasibility or comparability.

From this set, the project holder shall identify which activities differ in essential ways from the proposed project, due to factors such as:

- (a) Significantly different feedstock, energy source, or technology design;
- (b) Implementation under uniquely favorable policy conditions;
- (c) Access to preferential financing not available to the proposed project;
- (d) Scale, purpose, or location that makes the comparison invalid.
- (e) For AFOLU activities:
 - i. Land tenure arrangements or legal conditions that materially affect feasibility (e.g., state vs. communal or private ownership);
 - ii. Agroecological conditions or biophysical constraints (e.g., rainfall regime, soil productivity, fire risk);

- iii. Landscape context and proximity to markets or infrastructure (e.g., remoteness, accessibility);
- iv. Degree of enforcement of land-use regulations (e.g., forest code enforcement, protected area status);
- v. Degree of degradation or land-use history affecting restoration feasibility or cost.

The aggregate magnitude of activities that differ in essential aspects shall be referred to as M_{diff} . The number of such activities shall be reported separately as N_{diff} for transparency purposes.

Then, calculate the common practice factor:

$$F = 1 - \frac{M_{diff}}{M_{all}}$$

Where:

M_{diff}	Aggregate magnitude of similar activities with essential differences
M_{all}	Aggregate magnitude of all comparable activities

Sector-specific definitions for M_{all} and M_{diff}

AFOLU

M represents the total area (hectares) under implementation of comparable land-use activities.

Energy

M represents the installed capacity (e.g., MW, MWt) of similar energy generation or efficiency activities.

Waste

M represents the annual volume of waste treated or avoided (e.g., tons/year).

Transport

M represents the total service volume, such as passenger-kilometers, freight-kilometers, or km of infrastructure deployed (depending on the type of intervention).

In all cases, the project holder shall justify the metric selected and provide a transparent, replicable calculation of M_{diff} and M_{all} based on credible, sector-relevant data sources.

Minimum comparability safeguard (N-based)

In addition to the magnitude-based common practice factor (F), the project holder shall report:

N_{all} – the number of comparable activities used to construct M_{all} ;

N_{diff} – the number of activities excluded as having essential differences;

$N_{comp} = N_{all} - N_{diff}$ – the number of comparable activities without essential differences.

Where N_{comp} is limited and does not provide sufficient representativeness of the relevant sector and geographic context, the quantitative prevalence test (F) shall not be used as the sole basis to determine common practice.

In such cases, the project holder shall apply an enhanced qualitative assessment, including:

- (a) justification of dataset representativeness;
- (b) conservative assumptions to avoid underestimation of prevalence;
- (c) robust analysis of essential differences and contextual barriers.

Interpretation of Results

The proposed project activity shall be considered common practice where:

- (a) $F > 20\%$, indicating significant market penetration of comparable activities without essential differences; and
- (b) The dataset of comparable activities is sufficiently representative of prevailing market conditions.

If the project is considered common practice under this analysis, it shall not be deemed additional unless the project holder can demonstrate that fundamental and material distinctions prevent implementation in the absence of carbon credit revenues.

Outcome of Step 4

The project passes the common practice analysis if:

- (a) $F \leq 20\%$; or
- (b) $F > 20\%$ but enhanced assessment demonstrates lack of representativeness or material distinctions sufficient to prevent implementation.

All findings under this step shall be supported by transparent sources, clear methodological documentation, and independently verifiable evidence.

Step 5. Selection of the Baseline Scenario

To determine the most appropriate, realistic and conservative baseline scenario from among the viable alternatives identified in Step 1 and not excluded in subsequent steps.

The selected baseline shall represent the most likely scenario for GHG emissions or removals in the absence of the project activity and shall comply with all relevant methodological and program requirements.

The selected baseline scenario shall:

- (a) Be consistent with the findings of Steps 1–4;
- (b) Be technically and legally feasible;
- (c) Not face implementation barriers that would prevent its occurrence;
- (d) Represent a realistic and credible counterfactual to the proposed project activity;
- (e) Be conservatively calibrated in accordance with Section 7 of this Tool;
- (f) Avoid overestimation of emission reductions or removals.

Where multiple baseline candidates are plausible and credible, the scenario resulting in the lowest emission reductions or removals shall be selected, provided that it remains realistic and consistent with observable market or regulatory conditions.

The baseline shall not be constructed in a manner that assumes speculative future changes, unsupported technological shifts, or unverified policy developments that would artificially inflate mitigation outcomes.

Conservative calibration and systemic integrity

Baseline selection shall incorporate conservative calibration where structural uncertainty, sectoral transition dynamics, or policy trajectory changes may reasonably lead to overestimation of mitigation outcomes.

Such conservative calibration may result in baseline parameters that are lower than central or average BAU projections, provided that the baseline remains realistic and evidence-based.

Conservative calibration under this Step shall address counterfactual construction risk and shall be conceptually distinct from:

- (a) Uncertainty deductions applied at quantification stage; and
- (b) Leakage deductions applied to account for displacement effects.

No crediting shall rely on double application of conservativeness for the same source of risk.

Baseline scenario determination rules

Depending on the results of Step 2 or Step 3, selection shall proceed as follows:

A. If only one viable alternative remains:

That scenario shall be adopted as the baseline, unless it corresponds to the proposed project activity implemented without carbon revenues, in which case the project shall not be considered additional.

B. If multiple alternatives remain:

If the output or result is exclusive to the project holder (i.e., cannot be supplied by third parties):

→ Select the alternative that results in the highest emissions or lowest removals, consistent with methodological requirements and conservative calibration principles.

If the output or result can be supplied by other market participants:

→ The baseline shall be determined using a benchmark or market-representative approach, where required by the applicable methodology. The benchmark shall reflect average or conservative emissions from comparable market-supplied services.

C. If benchmark analysis was used in Step 3:

The baseline scenario shall correspond to the system or market represented by the benchmark (e.g., grid electricity, prevailing land-use pattern, sectoral average technology), conservatively calibrated where appropriate.

Baseline reassessment and stability

Baseline reassessment shall be conducted periodically and at each renewal of the quantification period, regardless of the selected quantification period length. Reassessment shall also be conducted whenever relevant national or sectoral policies, economic conditions, technological changes, or scientific developments may materially affect baseline assumptions.

For AFOLU activities, baseline reassessment shall occur at least once every five (5) years. For AFOLU activities other than REDD+, the baseline scenario shall be reassessed every five (5) years and at each renewal of the quantification period, regardless of observed changes.

For projects in the energy, transportation, and waste sectors, the baseline scenario shall be reassessed and validated every seven (7) years and at each renewal of the quantification period.

Reassessment shall include, as applicable: (a) review of the validity of baseline assumptions, data sources, and parameters; (b) consideration of updated scientific information, technological developments, and relevant policies affecting baseline conditions; (c) confirmation that the applied methodology remains valid and applicable, otherwise the latest approved version or a replacement methodology shall be used; and (d) reconfirmation of regulatory surplus and additionality based on current legal and policy frameworks.

Any revised or updated baseline shall be submitted for validation by a Conformity Assessment Body (CAB) and shall be applied prospectively. If a baseline is reassessed or updated prior to the issuance of credits for a completed monitoring period, the most recently validated baseline shall apply for that issuance.

Consistency with methodological requirements

The selected baseline shall comply with all applicable requirements set out in the approved methodology used for the project activity, including:

- (a) Emission sources and sinks included in the project boundary;
- (b) Baseline duration and renewal conditions;
- (c) Data requirements for quantification and monitoring.

Where methodologies prescribe specific baseline determination approaches (e.g., performance standards, modeled baselines, standardized benchmarks, or default parameters), such provisions shall take precedence, provided that they are implemented in a conservative, transparent, and evidence-based manner consistent with this Tool.

(a) Structural integrity of methodological baseline design

All methodologies approved under the BIOCARBON STANDARD shall be structurally designed to ensure that their baseline determination rules systematically result in baseline scenarios that are set below the business-as-usual (BAU) level of emissions or removals.

As a condition of methodology approval and continued applicability, BIOCARBON shall confirm that the methodological baseline-setting framework, including performance standards, modeling assumptions, benchmarks, default parameters, and underlying data sources, is

conservatively calibrated to prevent structural overestimation of mitigation outcomes.

Where a methodology's design does not demonstrably ensure that baseline outcomes are set below BAU conditions, BIOCARBON shall require methodological revision or recalibration prior to its approval or continued use.

(b) Formal consistency review

Where a methodology has been developed or adapted from an external framework, including CDM-derived approaches or methodologies undergoing transition toward Article 6.4-aligned standards, BIOCARBON shall conduct a formal consistency review prior to approving the methodology for use under the BIOCARBON STANDARD.

This review shall assess whether the methodology's baseline selection rules deliver outcomes that are at least as conservative as those required under this Tool.

Where deficiencies are identified, BIOCARBON shall require recalibration of the relevant baseline provisions as a condition of methodology approval.

The results of this review shall be documented and publicly disclosed as part of the record of the approved methodology application.

(c) Project-level quantitative demonstration

As a condition of credit issuance under the BIOCARBON STANDARD, the methodology developer and/or the project holder shall quantitatively demonstrate, in publicly available information, that the baseline scenario resulting from the application of the approved methodology to the specific project activity is set below the business-as-usual level of emissions or removals.

This demonstration shall:

- Be supported by transparent, reproducible, and verifiable data and assumptions;

- Be documented in the Project Document;

- Remain publicly accessible through the BIOCARBON registry or programme website.

Where such demonstration has not been made, or where it cannot be substantiated through verifiable and publicly available data, no credits shall be issued to the activity.

Transparency and Documentation

The justification for the selected baseline scenario shall be documented in the Project Document and shall include:

- (a) Description of all viable alternatives remaining;
- (b) Explanation of exclusions based on barriers, investment analysis, or common practice;
- (c) Rationale for conservative calibration;
- (d) Clear demonstration that the baseline avoids overestimation;

Where the applicable methodology was developed or adapted from an external source, the Project Document shall also include documentation of BIOCARBON's consistency review, any recalibration of baseline provisions required as a condition of approval, and the results of that review as part of the record of the approved methodology application.

The selected baseline shall be subject to independent validation by an accredited Conformity Assessment Body (CAB), which shall assess and confirm that:

- (a) the baseline scenario is realistic, credible, and conservatively calibrated;
- (b) all assumptions, data sources, and parameters are evidence-based, transparent, and free from overestimation bias;
- (c) the approved methodology applied to the project activity is structurally designed and implemented in a manner that ensures baseline outcomes are set below the business-as-usual level of emissions or removals;
- (d) the project-level quantitative demonstration that the baseline is set below business-as-usual conditions has been transparently substantiated in publicly available information; and
- (e) the documentation provided in the Project Document is sufficient to support the conclusions reached.

No crediting shall occur unless the baseline scenario has been:

- (a) fully justified;
- (b) independently validated;
- (c) demonstrated to be set below business-as-usual conditions at both the methodological and project-specific levels; and
- (d) determined to be credible, realistic, and conservatively calibrated in accordance with the requirements of this Tool.

Outcome of Step 5

The selected baseline scenario shall form the foundation for estimating emission reductions or removals, and for defining monitoring parameters in accordance with the applicable methodology.

9 Small-Scale Project Provisions

Recognizing the need for proportionality in the application of requirements, the BIOCARBON STANDARD allows for the use of simplified approaches to demonstrate additionality and select the baseline scenario in the case of eligible small-scale projects. These provisions are designed to reduce transaction costs while maintaining environmental integrity and alignment with high-integrity crediting principles.

While baseline selection for small-scale projects is not exempted, the BIOCARBON STANDARD allows the use of simplified justification procedures in accordance with the project's scale and available evidence, provided that the baseline remains credible and conservative.

1.2 Eligibility for Simplified Procedures

Small-scale activities under the BIOCARBON STANDARD are eligible to apply the simplified procedures described in Annex B, provided they meet the following sector-specific thresholds:

- (a) For renewable energy generation projects: installed capacity does not exceed 15 megawatts (MW);
- (b) For energy efficiency projects: annual energy savings do not exceed 60 gigawatt-hours (GWh);
- (c) For greenhouse gas emission reductions or removals:
 - i. In AFOLU activities (e.g., reforestation, improved forest management, soil carbon enhancement): $\leq 40,000 \text{ tCO}_2\text{e/year}$;
 - ii. In all other sectors: $\leq 60,000 \text{ tCO}_2\text{e/year}$.

These thresholds are based on objective, physical parameters that provide clarity and predictability during project design and are intended to limit the simplified approach to projects of relatively modest scale and complexity.

These thresholds are aligned with recognized benchmarks for small-scale project activities, including prior tools from the CDM (e.g., TOOL19 and TOOL21), and are consistent with prevailing investment expectations, typical project sizes, and implementation capacity in emerging market contexts. They may be periodically reviewed by BIOCARBON based on updated empirical data or stakeholder input.

Projects that meet these criteria may apply the simplified additionality procedures outlined in Annex B, without being exempt from validation or other applicable requirements under the BIOCARBON STANDARD.

1.3 Oversight and transparency

All small-scale projects applying simplified procedures shall still be subject to full third-party validation and verification. The project holder shall transparently declare its eligibility for simplified treatment and retain documentation to support such eligibility.

The use of simplified procedures does not exempt the project from compliance with any other applicable requirements of the BIOCARBON STANDARD or relevant methodologies.

10 Documentation and evidence requirements

To ensure that all steps and conclusions derived from the application of this tool are supported by verifiable, transparent, and credible documentation, sufficient for validation and verification by an independent Conformity Assessment Body (CAB).

1.4 General Requirements

All evidence submitted shall:

- (a) Be relevant and specific to the project context;
- (b) Be current and applicable to the time of decision-making;
- (c) Be traceable to publicly available sources or internal project documentation;
- (d) Be provided in English or the project holders may provide supporting evidence in other languages if the Conformity Assessment Body (CAB) confirms its validity and usability during validation or verification.

Project holder shall maintain all supporting documentation for a minimum of two (2) quantification periods or ten (10) years, whichever is longer.

1.5 Acceptable Types of Evidence (non-exhaustive list)

The table following table outlines the main categories of documentation that may be used to substantiate claims made during the application of this tool. These categories are not exhaustive, but they provide a practical reference for the types of sources expected to demonstrate credibility, traceability, and conservativeness.

Each row in the table corresponds to a category of evidence that may be applicable across multiple steps of the methodological procedure:

- (a) Legal and Regulatory: Includes laws, decrees, enforcement records, and regulatory interpretations relevant to project and baseline legality.

- (b) Financial: Covers documentation related to investment decisions, including economic feasibility assessments, internal return analyses, and financing agreements.
- (c) Technical: Encompasses engineering designs, technology specifications, and performance data used to evaluate project feasibility and comparability.
- (d) Institutional: Refers to governance and operational structures that may affect the ability of a project holder to implement or access alternatives.
- (e) Market/Policy: Includes data on national or sectoral market trends, incentive programs, or subsidy regimes relevant to the project context.
- (f) Academic/Research: Supports contextual understanding through peer-reviewed literature or technical assessments by credible institutions.
- (g) Field Data: Provides direct observational or empirical evidence from the project site or reference region (e.g., land use history, forest surveys).
- (h) Expert Opinions: When applicable, includes written assessments by qualified, independent third parties offering professional judgment on technical, financial, or institutional matters.

Project holders are expected to draw from one or more of these categories to justify key assumptions and conclusions, depending on the step and claim being substantiated. Use of anecdotal evidence or unverifiable assertions shall not be considered sufficient for validation.

Where appropriate, multiple categories should be combined to support a single finding—for example, using financial models (financial) supported by investor correspondence (institutional) and technology specifications (technical) to demonstrate a barrier.

All documentation shall be referenced in the project design documentation and submitted in a format suitable for independent review by validation and verification bodies.

Category	Examples
Legal and Regulatory	Copies of laws, regulations, permits, enforcement records, legal assessments

Category	Examples
Financial	Investment memos, IRR/NPV spreadsheets, loan offers, pre-feasibility and feasibility studies
Technical	Technical specifications, engineering designs, product descriptions
Institutional	Organizational charts, governance procedures, incentive structures
Market/Policy	National strategies, published market data, policy reports, subsidy records
Academic/Research	Peer-reviewed papers, modeling studies, sectoral studies from universities or think tanks
Field Data	Land use maps, forest inventories, photographic evidence, community consultations
Expert Opinions	Independent assessments by recognized professionals or consulting firms

1.6 Minimum documentation by Step

Project holders shall provide documentary evidence for each step as described in Annex A. Omission of required evidence may result in a finding of non-additionality or baseline invalidity.

11 Implementation Timeline and Applicability of this Version

This version (2.0, February 27, 2026) confirms that the BIOCARBON Additionality Tool (BAT) is mandatory for all project activities under the BIOCARBON STANDARD, including those that apply methodologies containing internal procedures for baseline and additionality.

As of its publication date, this Tool is mandatory for all validation and verification processes conducted under the BIOCARBON STANDARD. No external additionality or baseline procedure, including those embedded in methodologies adapted from the CDM or other external frameworks, may substitute or replace the application of this Tool, regardless of whether such procedures were accepted under a prior version of the BIOCARBON STANDARD.

This requirement applies to all projects that had not submitted their validation report to BIOCARBON as of February 27, 2026. Projects for which a complete validation report was submitted prior to this date may continue to apply the version of the Tool and procedures that were in

effect at the time of submission, in accordance with BIOCARBON's version control and transition policies.

ANNEX A. Minimum Evidence Requirements by Step

Step	Sub-step	Required Documentation	Source Type
Step 1	1a. Identify alternatives	Description of alternatives, comparison tables, technology/service equivalence	Internal analysis; technical reports
	1b. Legal compliance	Relevant laws/regulations; enforcement evidence; justification for systemic non-compliance if applicable	Legal databases; enforcement studies
	1c. Regulatory surplus test	Evidence demonstrating that the project activity is not legally required under laws and regulations; enforced laws, regulations, or official binding mandates applicable to the project location and sector; where a legal requirement exists but is independent claimed to be systematically unenforced, sector-specific evidence covering the the relevant sector and preceding 3–5 years prior to jurisdiction the project decision date	Copies of applicable laws and regulations; regulatory agency reports; judicial decisions; audit findings;
	1d. Prior consideration of carbon crediting	Documentation demonstrating that carbon crediting was considered prior to or at the time of the investment decision	Internal memoranda, board minutes, feasibility assessments incorporating carbon revenue scenarios, documented correspondence with carbon market intermediaries, or conditional financing agreements referencing carbon revenues
Step 2	2a. Identify barriers	Reports on financing, technology, labor, access, policies	Banks, agencies, third-party studies
	2b. Barriers prevent project	Board meeting minutes, feasibility rejections, lender investor statements, cost comparisons	Internal records; correspondence

Step	Sub-step	Required Documentation	Source Type
Step 3	2c. Barriers do not affect alternatives	Analysis of how alternatives are not similarly affected	Comparative table; expert opinion
	2d. Carbon Contracts, revenue is decisive	LOIs, conditional loans, pro forma models with/without credit revenue	Legal agreements; financial models
	3a. Financial indicator	Investment spreadsheet (IRR, NPV, etc.), including data for all viable alternatives	Financial model submitted with the PD
	3b. Sensitivity analysis	Spreadsheet showing impact of parameter variations	Same spreadsheet, clearly marked
Step 4	4a. Define scope of area; comparison	Justification of geographic area; definition of project measure	Methodology guidance; project holder justification
	4b. Identify similar activities	Registry records, industry publications, government reports	Public sources; stakeholder consultation
	4c. Determine common practice	Table of similar activities, explanation of essential differences, F factor calculation	Internal table with source references
Step 5	5. Select baseline	Clear justification of final baseline selection; emission profile; conservativeness rationale.	Internal report; methodology alignment
		Where applicable, documentation of BIOCARBON's consistency review of externally adapted methodology provisions.	

ANNEX B. Simplified Additionality Tool for Micro/Small-Scale Projects

Purpose and applicability of Annex B

This Annex provides a simplified approach for demonstrating the additionality of small-scale project activities under the BIOCARBON STANDARD. It is intended to reduce the complexity and transaction costs for low-emission initiatives while maintaining environmental integrity.

The procedures included in this Annex are only applicable to project activities that meet the eligibility criteria described below. These simplified procedures are based on international benchmarks such as the CDM Tools for small-scale and microscale projects (TOOL21 and TOOL19) and incorporate safeguards to prevent the misuse of flexibility provisions.

While this Annex provides a simplified approach for demonstrating additionality, project holders shall still identify a credible and conservative baseline scenario for the quantification of emission reductions or removals. This includes documenting the most plausible alternative to the proposed activity, in accordance with Section 5 of the main Tool. The baseline scenario does not need to follow the full comparative pathway but shall reflect a realistic and credible scenario representing what would occur in the absence of the project, based on the project context.

Eligibility conditions

A project may apply the simplified additionality assessment procedures described in this Annex only if it meets all the conditions described below.

Application to other than AFOLU activities

- (a) The project qualifies as small-scale, as defined by the BIOCARBON STANDARD. Specifically, the project shall meet at least one of the following thresholds:
 - i. Installed capacity does not exceed 15 megawatts (MW) (for renewable energy generation projects);
 - ii. Annual energy savings do not exceed 60 gigawatt-hours (GWh) (for energy efficiency projects); or
 - iii. Annual greenhouse gas emission reductions or removals do not exceed 60,000 tCO₂-e.
- (b) The project is not part of a bundle or aggregation of activities intentionally designed to remain under the applicable threshold for small-scale eligibility.

- (c) The project has not applied another simplified additionality approach (e.g. automatic additionality, positive lists) under any other framework or program, for the same activity.

Application to AFOLU activities

This Annex may also be applied to small-scale AFOLU activities, including reforestation, improved forest management, agroforestry, soil carbon enhancement, or ecosystem restoration, provided that the project generates no more than 40,000 tCO₂e of emission reductions or removals per year.

For AFOLU projects, implementation barriers may include:

- (a) Insecure land tenure or unclear property rights;
- (b) Lack of access to technical assistance or extension services;
- (c) Long investment horizons and delayed return on investment;
- (d) Institutional fragmentation or lack of enabling incentives;
- (e) Biophysical risks (e.g., drought, fire, pest outbreaks).

Where applicable, payback benchmarks may be adapted using sector-specific studies or stakeholder consultation.

Project holders are encouraged to provide supporting evidence such as land use records, forest inventories, cadastral maps, or agricultural census data to substantiate claims.

Examples of eligible small-scale project activities may include but are not limited to community-scale wastewater treatment systems, smallholder composting initiatives, decentralized solar irrigation, rural electrification, low-emission public transport pilots, or wetland restoration for water purification. These examples illustrate the broad applicability of this Annex across diverse sectors and geographies.

Step 1 – Barrier or investment test (pre-set options)

This step allows project holders to demonstrate that the activity would not occur in the absence of carbon credit revenues, due to the existence of one or more credible implementation barriers. These pre-set options provide a simplified approach to assess additionality, consistent with valid practices for small-scale activities.

Project holders shall first confirm that the activity is not legally mandated. This is a necessary condition, but not sufficient on its own. At least one of the following conditions shall also be met to justify the project's additionality, based on evidence provided in accordance with this Annex.

Project holders shall demonstrate that the activity is not legally required and that it faces at least one of the following additional barriers, as described in this Annex.

- (a) Regulatory barrier. The project activity is not legally required under existing national or subnational laws or regulations.

However, the absence of a legal requirement is a necessary condition for additionality, but it is not sufficient by itself. Project holders shall complement this assessment with an analysis of other relevant barriers (e.g., financial, technological, institutional) or common practice, in accordance with the applicable options in this Annex.

- (b) Technological barrier. Recent introduction or limited market penetration of the technology.

The technology used in the project has been introduced in the host country within the past five (5) years or has a market penetration rate below 5% in the relevant sector and region.

The date of introduction shall be based on official records, national statistics, peer-reviewed studies or public reports, and shall exclude small-scale pilot or demonstration projects. In the absence of verifiable data on introduction, market penetration may be used as an alternative criterion, in accordance with recognized valid approaches (e.g., TOOL19 Appendix).

- (c) Investment unattractiveness

The project has a simple payback period that exceeds the threshold established in Table 1. These benchmarks are based on typical investment expectations in the host country and shall be periodically reviewed. If justified, project holders may propose alternative benchmarks supported by evidence.

The benchmarks indicated in Table 1 shall reflect typical investment return expectations for the relevant sector in the host country. These values may be derived from:

- i. Sectoral studies and market surveys;
- ii. Investment decision thresholds published by financial institutions;
- iii. Regulatory guidance or government investment promotion agencies;
- iv. Independent expert opinions or consultations with local stakeholders.

The following table presents indicative payback thresholds by sector. These values are based on prevailing investment expectations and may be updated periodically by BIOCARBON. Project holders may propose alternative values with documented justification.

Table 1. Payback period benchmarks

Sector or activity type	Indicative maximum payback period (years)	Source(s)
Grid-connected solar PV	4–5 years	IRENA (2022). Renewable Power Generation Costs; BloombergNEF (2023). Levelized Cost of Electricity Report; CDM TOOL21.
Small-scale biomass energy	5–7 years	UNDP (2019). Biomass Energy Market Assessment; IEA Bioenergy (2020). Task 32 Reports; CDM TOOL21.
Industrial energy efficiency	4–6 years	IFC (2018). Energy Efficiency Investment Criteria; CDM TOOL21; GEF (2016). EE in Industry Guidelines.
Small-scale hydroelectric power	6–8 years	IRENA (2023). Hydropower Cost Report; World Bank (2019). Hydropower Sustainability Guidelines; CDM TOOL21.
Small-scale wind energy	6–9 years	IRENA (2023). Renewable Energy Costs – Wind; Gold Standard Projects Database; CDM TOOL21.
Small-scale geothermal energy	8–12 years	IRENA (2021). Geothermal Power Technology Brief; IFC (2020). Geothermal Market Assessment; CDM TOOL21.
Electric mobility (e.g., light-duty vehicles, charging infrastructure) ²	5–8 years	World Bank (2021–2023). EV Deployment Reports; IDB

² For e-mobility, this refers to the deployment of light-duty electric vehicles or community- or institution-scale charging infrastructure and does not include large commercial fleets.

Sector or activity type	Indicative maximum payback period (years)	Source(s)
		(2022). E-Mobility in Latin America.
Efficient cookstoves (household)	2–3 years	Practical Action (2018). Clean Cooking Impacts Study; CDM TOOL19.
Methane capture (landfills, WWTP)	5–6 years	UNEP (2022). Global Methane Assessment; CDM TOOL21.
Reforestation (community-based)	7–10 years	CDM A/R Methodologies (AR-AM0001); CIFOR (2020). Community Forestry Economics.
Agroforestry systems	6–9 years	FAO (2020). Agroforestry Economics Review; ICRAF Case Studies (2018–2022).
Soil carbon enhancement (e.g., compost, cover crops)	5–8 years	USDA NRCS & COMET-Farm (2021).
Improved forest management (IFM)	8–12 years	Forest Trends (2021). IFM Implementation Review; CDM A/R comparisons.
Wetland or mangrove restoration	7–10 years	IUCN (2021). Blue Carbon Handbook; Conservation International (2020). Mangrove Investment Cases
<i>Note: Project holders may apply these benchmarks directly, without providing further justification, as long as the project activity clearly falls within the listed category.</i> <i>Updates to the indicative payback benchmarks in this Table shall not apply retroactively. The applicable values shall be those in effect at the time the project's start date is defined.</i>		

Project holders may apply these payback benchmarks directly, without the need to provide additional justification, provided that the project activity clearly corresponds to the applicable sector or activity type. These benchmarks are recognized by the BIOCARBON STANDARD as valid thresholds for simplified additionality assessment under Annex B.

Where the project activity does not match any of the categories listed, or where a different threshold may be more appropriate given the specific

characteristics of the activity, the project holder may submit a documented justification for review and approval by BIOCARBON.

The BIOCARBON Technical Committee may periodically update these benchmarks based on new empirical evidence or stakeholder input.

Optional consideration – First-of-its-kind justification

Project holders may support their additionality claim by demonstrating that the project activity qualifies as first-of-its-kind in the applicable geographic area.

A project may be considered first-of-its-kind if it applies a technology, practice, or approach that has not been previously implemented in the country or region under similar circumstances.

While this justification alone is not sufficient to demonstrate additionality, it may strengthen the case when used in combination with other applicable barrier or investment tests under this Annex.

Evidence may include technology diffusion studies, government reports, or stakeholder consultations confirming the absence of similar operational initiatives.

Benchmarks and thresholds applied under this Annex shall be reviewed at least every three (3) years, or earlier where significant market, regulatory, or technological changes occur. Reviews shall be documented and approved in accordance with the BIOCARBON's methodology governance procedures.

Step 2 – Common practice analysis

This step serves as a credibility check to ensure that the proposed project activity is not already widely implemented in the relevant sector and region under similar conditions.

The analysis compares the project with other similar activities to determine whether it represents a deviation from prevailing practices. If the project type is already commonly practiced, without the need for carbon credit revenues, then it may not be considered additional.

The project shall be deemed common practice if similar activities are already widely implemented under similar conditions.

The standard threshold is a market penetration of 20% or more.

For projects in the energy sector, penetration shall be assessed based on installed capacity (MW) rather than number of installations, in order to reflect the actual contribution of the technology to the sector.

In other sectors, the penetration may be assessed using the magnitude of similar activities (M_{diff}/M_{all}), as defined in this tool (above), unless otherwise justified.

Market penetration may be calculated using the following equation:

$$F = 1 - \frac{M_{diff}}{M_{all}}$$

Where:

M_{diff}	Magnitude of similar activities with essential differences
M_{all}	Aggregate magnitude of all comparable activities

A project is considered additional if $F > 0.8$ (i.e. penetration $\leq 20\%$).

Essential distinctions (e.g. access to finance, technology type, or implementation barriers) shall be clearly documented if similar activities exist. This shall include official statistics, national energy plans, recognized databases, or peer-reviewed literature. Where applicable, project holders may use a conservative estimate supported by documented assumptions.

The project holder shall identify any material non-carbon revenues associated with the activity. Where such revenues exist, the project holder shall demonstrate that they are insufficient to render the activity financially viable in the absence of carbon credit revenues.

Step 3 – Investment analysis

Step 3 of the main Tool (Investment analysis) is not required under these simplified procedures; investment unattractiveness is addressed through the payback benchmarks in Step 1.

Step 4 – Documentation and validation

All evidence shall be compiled and submitted with the Project Document. Conformity Assessment Bodies shall confirm compliance with the above steps; no financial IRR/NPV model is required under this tool.

Conservativeness provision

Where uncertainty exists regarding threshold values, barrier conditions or penetration rates, the more conservative (lower) emission-reduction estimate shall be applied.

Revision and withdrawal

The BIOCARBON Technical Committee may revise or withdraw this tool if market penetration rates, regulatory contexts or empirical data indicate that the simplified approach no longer ensures environmental integrity.

References

- BloombergNEF. (2023). Levelized Cost of Electricity Report Q1 2023. Bloomberg New Energy Finance.
- CIFOR. (2020). Community forestry and sustainable livelihoods. Center for International Forestry Research. <https://doi.org/10.17528/cifor/007776>
- Conservation International. (2020). Investment case for coastal ecosystems: Mangroves in Colombia. Conservation International.
- Food and Agriculture Organization of the United Nations (FAO). (2020). The economics of agroforestry systems. Rome: FAO.
- Forest Trends. (2021). Improved Forest Management: Review of Implementation under Voluntary Carbon Standards. Forest Trends Ecosystem Marketplace.
- International Energy Agency (IEA). (2020). Bioenergy Technology Roadmap. IEA Bioenergy Task 32.
- International Finance Corporation (IFC). (2018). Investor's Guide to Energy Efficiency Projects. World Bank Group.
- International Finance Corporation (IFC). (2020). Geothermal Market Assessment: Latin America and the Caribbean. World Bank Group.
- International Renewable Energy Agency (IRENA). (2021). Geothermal Power: Technology Brief. Abu Dhabi: IRENA.
- International Renewable Energy Agency (IRENA). (2022). Renewable Power Generation Costs in 2021. Abu Dhabi: IRENA.
- International Renewable Energy Agency (IRENA). (2023). Hydropower: Status and Trends Report 2023. Abu Dhabi: IRENA.
- International Renewable Energy Agency (IRENA). (2023). Renewable Power Generation Costs in 2022. Abu Dhabi: IRENA.
- International Union for Conservation of Nature (IUCN). (2021). Blue Carbon Handbook: A Guide to Developing Coastal Carbon Projects. Gland, Switzerland: IUCN.
- ICRAF (World Agroforestry Centre). (2018–2022). Agroforestry system case studies. Nairobi: ICRAF.
- Inter-American Development Bank (IDB). (2022). E-Mobility in Latin America: Opportunities and Challenges. Washington, D.C.: IDB.
- Practical Action. (2018). Delivering Clean Cooking Solutions at Scale: A Review of the Evidence. Rugby, UK: Practical Action Publishing.

United Nations Development Programme (UNDP). (2019). Biomass Energy Market Assessment in Developing Countries. UNDP Energy Programme.

United Nations Environment Programme (UNEP). (2022). Global Methane Assessment: Benefits and Costs of Mitigating Methane Emissions. Nairobi: UNEP and Climate and Clean Air Coalition.

United States Department of Agriculture – Natural Resources Conservation Service (USDA-NRCS). (2021). COMET-Farm Carbon Estimation Tool. <https://comet-farm.com/>

History of document

Type of document

BioCarbon Tool. Baseline and Additionality Tool (BAT)

Version	Date	Description
Version 1.0 Draft for Public Consultation	June 17, 2025	First version of the Tool
Version 1.0	July 25, 2025	Updated to confirm that the BioCarbon Additionality Tool is mandatory in all cases, replacing any procedures in methodologies, including those from CDM. Clarified that external tools (e.g., CDM Tools) are not valid under the BioCarbon Standard, unless formally approved. Updated wording in Section 3 (Scope) to eliminate ambiguities regarding the applicability of this Tool.
Version 2.0	February 27, 2026	Comprehensively strengthened the baseline integrity architecture of the Tool to ensure that all approved methodologies under the BioCarbon Standard are structurally designed to produce baseline scenarios set below business-as-usual (BAU) conditions. Clarified that, as a condition of both methodology approval and credit issuance, baseline determination rules shall systematically prevent structural overestimation of mitigation outcomes. Established an explicit requirement for quantitative and publicly available demonstration that the baseline scenario resulting from the application of the approved methodology to each specific project activity is set below BAU conditions. Reorganized and consolidated the “Consistency with methodological requirements” section to eliminate redundancies and provide a coherent normative structure linking methodological design, project-level application, and credit issuance safeguards. Strengthened governance provisions by formalizing mandatory consistency reviews for methodologies developed or adapted from external frameworks and requiring recalibration where structural conservativeness cannot be demonstrated. Reinforced independent validation requirements by requiring accredited Conformity Assessment Bodies (CABs) to assess and confirm structural methodological integrity, project-level quantitative substantiation of BAU conservativeness, and the absence of overestimation bias prior to credit issuance. Enhanced transparency obligations by requiring public accessibility of baseline BAU demonstrations through the BioCarbon registry or programme website.