PROJECT ADDITIONALITY DEMONSTRATION TOOL

VERSION 2.0

CERTIFICATION PROGRAM

TERO CARBON AVALIAÇÕES E CERTIFICAÇÕES S.A.

IDENTIFICATION

DOCUMENT	Project Additionality Demonstration Tool
VERSION	2.0
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PROGRAM	All
SECTOR	All
TYPE	All

LIST OF ACRONYMS

BAU	Business-as-Usual
BL	Baseline
CDM	Clean Development Mechanism
GHG	Greenhouse Gas
IRR	Internal Rate of Return
NBS	Nature-Based Solutions
NPV	Net Present Value
PDD	Project Design Document
ROI	Return on Investment
SDG	Sustainable Development Goals
TBS	Technology-Based Solutions
UN	United Nations

LIST OF PROGRAMS

Certification Program
Methodologies Program
Assets Program

LIST OF SUPPORTING DOCUMENTS

NAME	PROGRAM
Definitions	All
Project Scale Analysis Tool	All

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1. INTRODUCTION

Within its Certification Program, Tero Carbon adopts a comprehensive approach to assessing the additionality of submitted projects, recognizing the fundamental importance of this concept in the voluntary carbon market. To support this critical evaluation, the tool for demonstrating project additionality has been developed as an integral part of the Initial Project Validation Review process.

This methodological tool not only establishes a solid framework for demonstrating and assessing the additionality of projects but also plays a vital role in maintaining the integrity and credibility of Tero Carbon's Certification Program. By adopting this approach, Tero Carbon reaffirms its commitment to promoting sustainable practices and effectively reducing carbon emissions in the voluntary carbon market.

A relevant aspect to be highlighted is Tero Carbon's approach in line with the standards established by the Clean Development Mechanism (CDM)[1] of the UN. From this perspective, Tero Carbon adopts more flexible criteria and simplified procedures for demonstrating additionality. This flexibility is particularly important for smaller-scale projects, which often face significant economic challenges. Recognizing these difficulties, Tero Carbon seeks to ensure that the assessment process is accessible and viable for a wide range of carbon mitigation initiatives, thereby contributing to promoting participation and engagement in sustainable practices.

2. OBJECTIVE

The objective of this tool is to provide a solid framework for evaluating whether proposed projects are truly additional to standard or regulatory practices. This is essential to ensure the integrity and effectiveness of the Tero Carbon Certification Program in the voluntary carbon market.

[1] The steps removed for small-scale projects from this tool follow the Clean Development Mechanism (CDM) guideline. Clean Development Mechanism. Tool21 - Methodological tool: Demonstration of additionality of small-scale project activities. Version 12.0.

3. APPLICABILITY

This tool applies to both small and large-scale projects for nature-based (NBS) and technology-based solutions (TBS).

4. DEMONSTRATION FLOW

The process for demonstrating project additionality follows the flow shown in **Figure 1**.

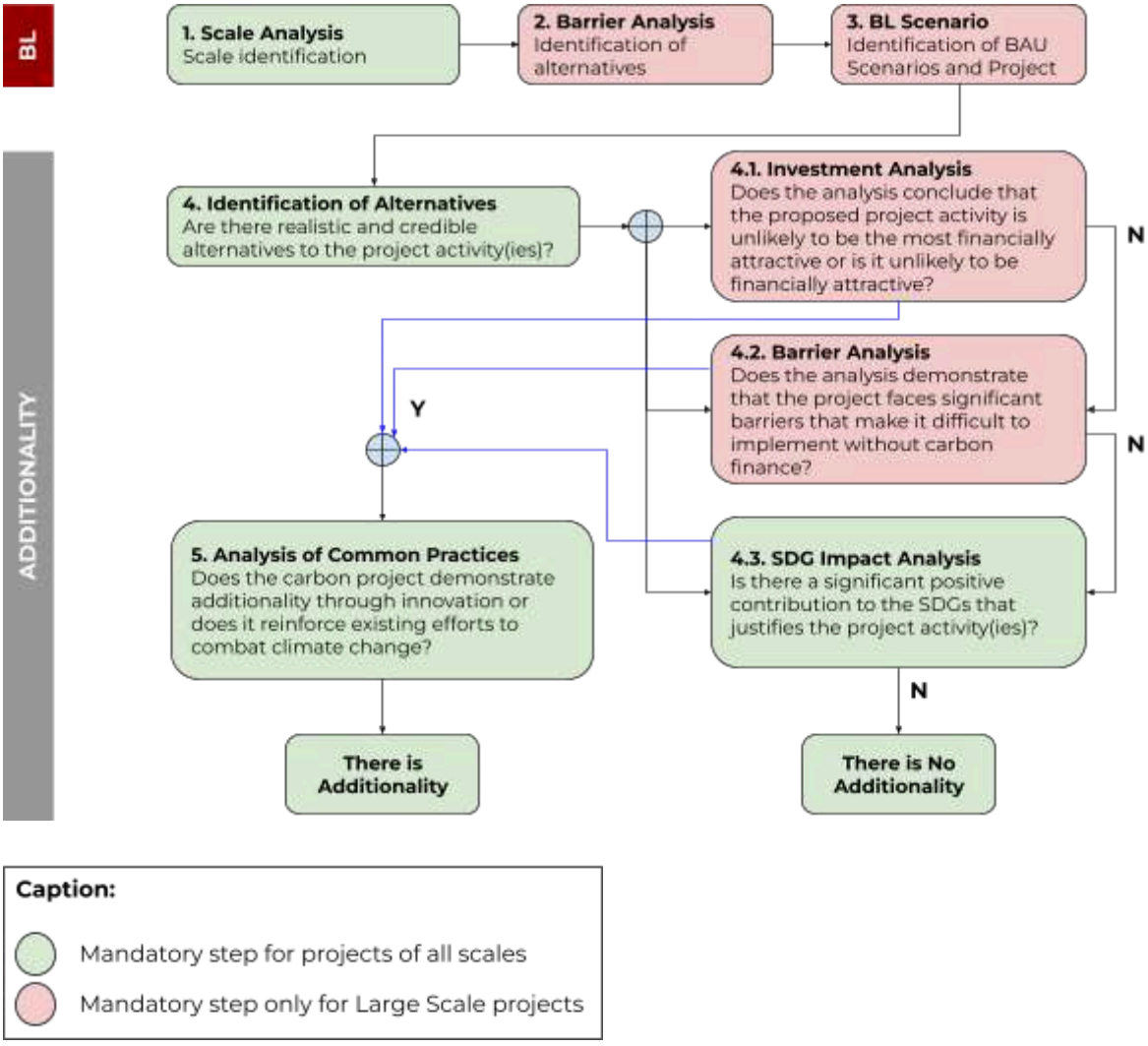

Figure 1. Flowchart to demonstrate project additionality.

5. BASELINE STAGES

5.1 Scale Analysis

Scale analysis in a carbon project refers to the assessment of the magnitude of carbon or greenhouse gas (GHG) emissions reduced or removed associated with specific activities.

This analysis is carried out based on the estimated quantification of carbon reduced or removed throughout the project's entire life cycle.

Use the "**Project Scale Analysis Tool**", available from Tero Carbon, to determine whether the project is: (a) small scale or (b) large scale.

5.2 Barrier Analysis

This step is only necessary for Large Scale projects.

The analysis aims to identify whether the project has identified realistic and credible barriers that would prevent the implementation of alternative scenarios to BAU (Business as Usual).

The main objective of a barrier analysis is to identify and understand limitations that may hinder the implementation of carbon reduction and/or removal initiatives, so that appropriate measures can be developed to overcome them.

Project participants will be required to provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers:

- **Barrier to investment:** a more financially viable alternative to the project activity would have led to higher emissions.
- **Technological barrier:** a less technologically advanced alternative to the project activity involves lower risks due to performance uncertainty or low market share of the new technology adopted for the project activity and would therefore have led to higher emissions.
- **Barrier due to prevailing practice:** prevailing practice or existing regulatory or policy requirements would have led to the implementation of a technology with higher emissions.
- **Other barriers:** Without the project activity, for another specific reason identified by the project participant, such as institutional barriers or

limited information, management resources, organizational capacity, financial resources or ability to absorb new technologies, emissions would have been higher.

5.3 Baseline Scenario

This step is only necessary for Large Scale projects.

Baseline scenario analysis in a carbon project involves assessing the greenhouse gas (GHG) emissions that would occur in a scenario business-as-usual (BAU), that is, what would happen if no mitigation actions were implemented (Baseline). This analysis is essential to determine the amount of emissions that would be generated without the intervention of the carbon project.

It is necessary to evaluate and demonstrate that the following have been taken into account:

- **Sources of Emissions:** Identify how to quantify the main sources of greenhouse gas (GHG) emissions associated with the project or activity in question.
- **Historical Data:** Identify the use of relevant historical data on GHG emissions, preferably from reliable and updated sources. This data will serve as a basis for understanding past trends and helping to project future emissions.
- **Future Projections:** Identify whether future projections of activities and developments that could influence GHG emissions are credible.
- **BAU scenario:** Check whether the scenario business-as-usual (BAU) represents the expected conditions if no additional mitigation actions are implemented. This includes estimating future GHG emissions under the BAU scenario based on identified trends and relevant projections.
- **Project Scenario:** Check whether the project scenario indicates the reduction and/or removal of GHG emissions with quantification and credible future trends.
- **Uncertainty Factors:** Assess uncertainty factors associated with baseline analysis, such as variations in economic conditions, changes in government policies, and unforeseen technological developments.

In conjunction with the Business-as-Usual (BAU) Scenario, the Developer is required to provide a projection of the Project Scenario, which demonstrates the expected reductions and/or removals of greenhouse gas (GHG) emissions over time. The baseline in projects needs to be reviewed every 5 years, meaning it should be updated in the Project Design Document (PDD).

6. ADDITIONALITY STAGES

6.1 Identification of Alternatives

At this stage, Project Developers are encouraged to consider and evaluate various alternatives that could have been implemented instead of the proposed project. The objective is to determine whether the project is truly additional, that is, whether it goes beyond what would have occurred in the scenario business-as-usual (BAU) or in other words, if it goes beyond what would have been done without the intervention of the project.

During the Alternatives Analysis, developers must identify and describe the possible options available to address the problem or opportunity that the project aims to solve. This may include different technologies, methods or approaches that could have been chosen to achieve the same emissions reduction objective. Furthermore, it is important to consider the different possible scenarios that could have occurred in the absence of the project.

When evaluating these alternatives, developers must take into account a series of criteria, such as technical, economic and operational feasibility, as well as environmental, social and regulatory impacts. The analysis must be robust and transparent, documenting all alternatives considered, the criteria used to evaluate them and the reasons why the proposed project was chosen as the best option.

At the end of this stage, the analysis of alternatives is expected to provide convincing evidence that the project is truly additional, that is, that it represents a significant intervention beyond what would have occurred otherwise. This strengthens the project's credibility and its eligibility for carbon credits or other emissions mitigation incentives.

By requesting that at least two alternatives are presented during the additionality analysis, Tero Carbon aims to promote a more comprehensive and rigorous assessment of carbon projects submitted to its certification program. This allows for a more robust comparison between the proposed project and other viable options that could have been implemented in its place.

6.2 Additionality Test

For the project to be classified as additional, it must demonstrate additionality in at least one of the analyses presented below.

6.2.1 Investment Analysis

If this step is used, it is only necessary for Large Scale projects.

For the project to be classified as additional, it is necessary to demonstrate that the activity proposed by the project is economically or financially less attractive than at least one other alternative, identified in the “Identification of Alternatives” stage, without the revenue coming from the sale of the assets generated . To conduct investment analysis, use the following points:

- **Identification of Costs and Revenues:** At this stage, the costs and revenues associated with the project are identified. This includes initial capital costs, such as technology and infrastructure investments, as well as ongoing operating costs, such as labor, maintenance, and other expenses. Revenues may include sales of carbon credits, additional revenues from products or services resulting from the project, and potentially other associated financial co-benefits.

- **Cash Flow Estimation:** The project's cash flows over its useful life are estimated. This involves projecting cash inflows and outflows over time, taking into account factors such as operating costs, expected revenues and possible maintenance and replacement costs.

- **Calculation of Financial Indicators:** Various financial indicators are calculated to assess the viability of the project. This may include Net Present Value (NPV), Internal Rate of Return (IRR), Payback Period, and Rate of Return on Investment (ROI). These indicators help determine whether the project is capable of generating adequate financial returns in relation to the initial investment.

- **Sensitivity Analysis:** A sensitivity analysis is performed to assess how different key variables affect the financial viability of the project. This may include changes in carbon prices, operating costs, discount rates and other factors that may influence the project's financial results.

- **Risk Assessment:** The risks associated with the project are identified and assessed. This may include risks related to regulatory changes, fluctuations in carbon prices, technological, environmental, political and other risks. Strategies to mitigate these risks can be developed and incorporated into investment analysis.

- **Decision Making:** Based on the complete investment analysis, a decision is made on the financial viability of the project and its ability to demonstrate additionality in terms of reducing carbon emissions. If the project is considered financially viable and capable of providing additional co-benefits, it can proceed with its implementation and registration as a carbon project. If this is not viable, alternatives or adjustments to the project can be explored to improve its financial attractiveness.

6.2.2 Barrier Analysis

If this step is used, it is only necessary for Large Scale projects.

This test is designed to determine whether a proposed project faces significant barriers that prevent its implementation without the support of carbon finance. Here is a description of that step:

- **Identification of Potential Barriers:** The first step involves identifying potential barriers that may impede project implementation in the absence of carbon finance. This may include financial, technological, regulatory, market, political or other barriers that make project implementation difficult or impossible.

- **Barrier Severity Assessment:** Each identified barrier is assessed for its severity and impact on project viability. This may involve analyzing the probability of occurrence, the potential financial impact and the difficulty of overcoming each barrier.

- **Comparison with Reference Projects:** Barrier analysis results are compared with similar reference projects that have been successfully implemented. This helps to contextualize the challenges faced by the proposed project in relation to similar projects that have not received carbon finance.

- **Analysis of the Ability to Overcome Barriers:** The next step involves assessing the project's ability to overcome or circumvent identified barriers in the absence of carbon finance. This may include analyzing alternative strategies, potential partnerships, project adjustments, or other measures that could mitigate barriers.

- **Analysis Conclusion:** Based on the assessment of the barriers and the project's ability to overcome them, a conclusion is drawn about the additionality of the project. If the barrier analysis test shows that the project faces significant barriers that make it difficult to implement without carbon finance, this strengthens the argument that the

project is additional and worthy of financial support. If barriers are found to be non-significant, this raises questions about the additionality of the project and may require further analysis.

6.2.3 Impact Analysis on SDGs

If this step is used, it can be used in projects of all scales.

For the project to be classified as additional, it must be assessed whether the proposed project contributes significantly to the achievement of the Sustainable Development Goals (SDGs) established by the United Nations (UN). Here is a description of that step:

- **Identification of Relevant SDGs, Excluding SDG-13:** Initially, the relevant SDGs for the project are identified, excluding SDG-13 (Action against Global Climate Change), which is already mandatory in carbon projects. The other SDGs are analyzed to determine their relevance to project activities.
- **Assessment of the Positive Impact on the Identified SDGs:** Next, the project is assessed for its potential to make a positive contribution to the identified SDGs.
- **Quantification and Analysis of Positive Impacts:** To conduct a robust analysis of the project's positive impacts on the identified SDGs, it is essential to implement appropriate data collection methods. This may include a variety of approaches such as field surveys, structured interviews, literature reviews, and secondary data analysis.
- **Assessment of the Significance of Contributions:** After collecting and analyzing data on the project's positive impacts on the identified SDGs, it is crucial to assess the significance of these contributions. This involves considering not only the magnitude of impacts, but also their relevance and importance for affected communities and achieving the SDGs. Additionally, it is important to compare project results with similar or neighboring areas that were not impacted by the project. This allows for a comparative analysis that helps identify specific project effects and quantify their co-benefits. By gathering and analyzing this data, it is possible to quantify the positive impacts of the project in relation to the identified SDGs. This analysis helps to tangibly demonstrate how project activities contribute to the achievement of global sustainable development goals, thus strengthening the argument for their additionality.

- **Conclusion on Additionality:** The final assessment of project additionality is determined by the magnitude and relevance of positive impacts identified in the SDGs, excluding SDG-13, along with comparison with similar or neighboring areas. If the positive impacts of the project are demonstrated to be substantial and significant in relation to the relevant SDGs, thereby strengthening sustainable development and meeting the needs of affected communities, then the project is considered additional.

6.3 Common Practice Analysis

If the project has demonstrated additionality in any of the previous tests, this step only aims to complement its relevance.

In this sense, this analysis aims to determine whether the actions proposed in the carbon project are innovative or common in the project market or region, and how this affects their additionality in relation to climate change mitigation. Here is a description of that step:

- **Identification of Implemented Actions:** List the actions proposed in the carbon project to mitigate carbon emissions or promote sustainable development. Research and identify whether these actions are new or commonly applied in the market or region of the project.

- **Evaluation of Action Innovation:** If the proposed actions are novel and represent an innovative approach to mitigating carbon emissions or promoting sustainable development, consider them as additional for innovation. If the proposed actions are common and are already being applied in the project's market or region, evaluate how they contribute to the project's additionality.

- **Contribution to Climate Change Mitigation:** Assess whether the common actions proposed in the project, even if they are not innovative, contribute significantly to climate change mitigation. Consider whether the project, by implementing common actions, reinforces and expands existing climate change mitigation efforts in the region.

7. ADDITIONALITY DEMONSTRATION

When drafting the Project Design Document (PDD), it is important to provide a summarized overview of your carbon project's additionality, highlighting its key characteristics and expected impacts on climate change mitigation.

Additionally, for large-scale projects, a detailed additionality study must be submitted, offering a more in-depth analysis using this tool. This study, along with calculation records and other relevant information, must be submitted to Tero Carbon for a thorough evaluation, ensuring the confidentiality and privacy of these details.

VERSION HISTORY

VERSION	DATE	NOTES
2.0	04/01/2025	Layout adjustment for document standardization. Furthermore, the demonstration of additionality will only be required in greater detail for large-scale projects, ensuring greater clarity and efficiency in the evaluation process.
1.0	08/19/2024	Initial version approved by Management and released for public consultation.