



COLCX Guide to demonstrate additionality

Version 2.1



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Acronyms and abbreviations

AFOLU	Agriculture, Forestry and Other Land Use
ICR	Increase of Carbon Reserves
GHG	Greenhouse Gases
CDM	Clean Development Mechanism
SDG	Sustainable Development Goals
VVB	Validation and Verification Bodies
GHGMP	Greenhouse Gas Mitigation Projects
REDD+	Reducing Emissions from Deforestation and Forest Degradation
RUDDA	Reducing GHG emissions from unplanned deforestation and/or forest degradation activities
RPDDA	Reducing GHG emissions from planned deforestation and/or forest degradation activities

1 INTRODUCTION

The guidance to demonstrate additionality of a GHG mitigation initiative provides methodological guidance for the GHGMP to demonstrate how GHG reductions and/or removals generate a positive net benefit to the atmosphere, which would not occur in the absence of the proposed mitigation initiative, and which is enhanced by the incentives provided by the certification of carbon credits under the COLCX Program for use in the carbon market.

This guide has been developed based on the requirements established in the *COLCX Certification Program*, which is the general reference framework that links the rules and requirements that apply to the certification of GHG mitigation initiatives and their results.

2 GENERAL CONSIDERATIONS

For the COLCX Program, the analysis of the additionality of a mitigation initiative is based on the methods proposed by the Clean Development Mechanism (CDM) and the criteria of international regulations.

Any mitigation initiative that demonstrates its additionality must assess compliance with the legal requirements applicable to the host country, demonstrating its consistency and relevance with the existing policy and regulatory framework. The GHGMP must demonstrate that by implementing the project, less GHG emissions are generated than would have been the case in its absence.

To demonstrate additionality, the GHGMP must make use of the mechanisms defined by the COLCX Program in this guide in its current version.

3 PRINCIPLES

GHGMP must consider the COLCX principles defined in the certification program, certification standard for mitigation initiatives and this guide, to carry out the demonstration, evaluation and conclusion of the additionality of the initiative in any of the selected mechanisms.

- **Independence.** The data and parameters used for the additionality and baseline demonstration must be validated and verified by an independent third party, providing reasonable assurance that they are credible and real.
- **Quantification.** The results used to demonstrate additionality must apply quantification and measurement tools and models recognized by the COLCX standard.
- **Compliance.** The GHGMP must demonstrate compliance with all legal requirements applicable to its mitigation initiative in the national and international context.
- **Conservative.** The data and the definition of assumptions used for the demonstration of additionality will follow the usual standards, practices and customs, in a moderate manner and without exaggerating the values.

- **Transparency.** The information used to demonstrate additionality, and its results will be accessible, clear and truthful, allowing users to make informed decisions. This information is openly and permanently available to interested parties.

4 ADDITIONALITY ANALYSIS OF THE GHGMP

Analysis of additionality is essential to validate that the climate benefits generated by the initiative would not have occurred under a business-as-usual scenario or through conventional development, and therefore, that the GHGMP effectively contributes to climate change mitigation. According to this guide, the evaluation of additionality by a GHGMP must follow the procedures outlined in Figure 1.

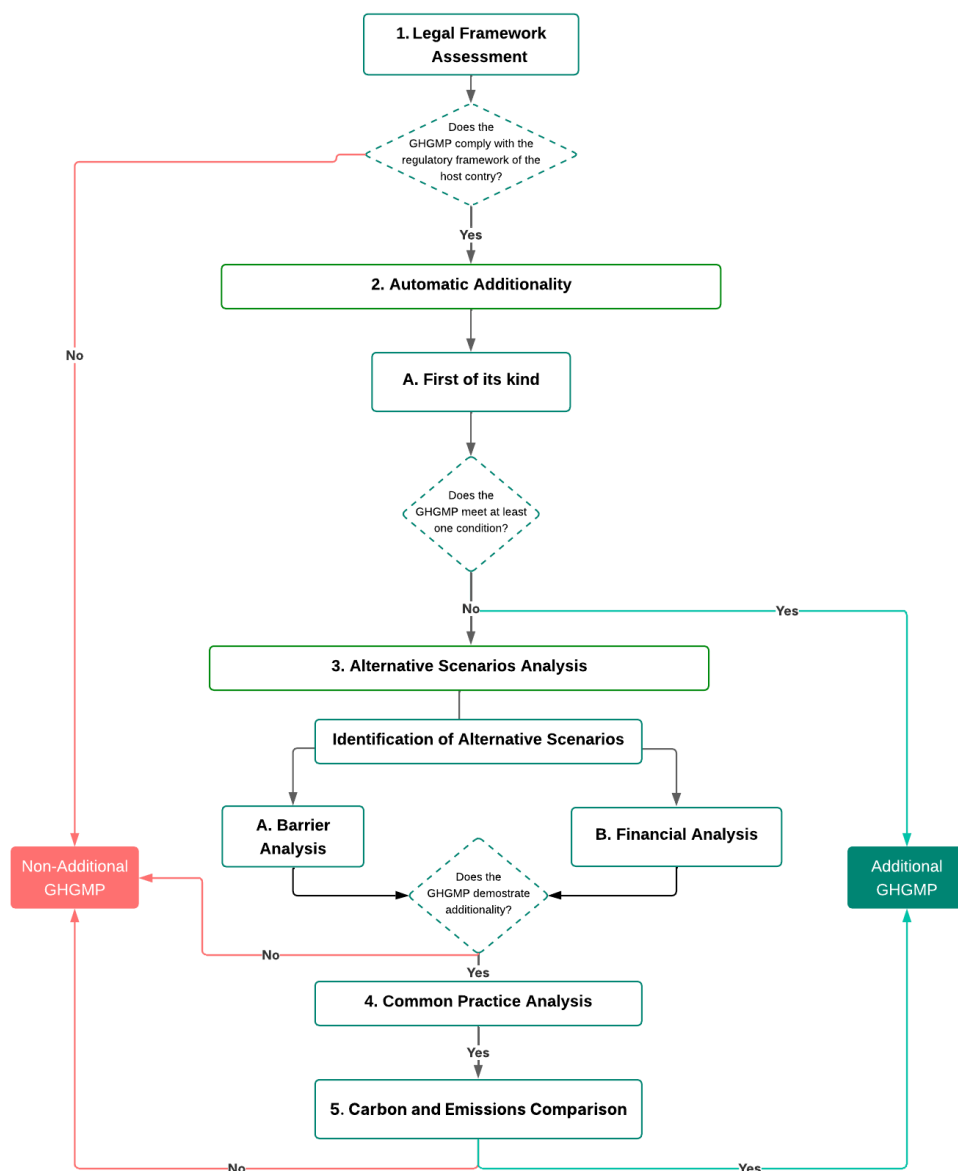


Figure 1. GHGMP Additionality Analysis.

4.1 Correspondence with the legal framework applicable to the mitigation initiative

The GHGMP must demonstrate how the mitigation initiative complies with the different legal requirements applicable to it, without this in itself conferring the condition of being additional, its compliance being only an enabling prerequisite for the application of the additionality assessment mechanisms.

4.1.1 Compliance with regulatory requirements

Under this mechanism, the GHGMP must indicate which national and international rules and regulations are applicable to the mitigation initiative, and how it complies with each of them. To this end, the developer must construct a matrix¹ that identifies the applicable regulations and indicates the mechanisms and/or elements necessary to demonstrate compliance with the identified requirements; at a minimum, the regulations related to the formulation of mitigation projects, compensation and monitoring mechanisms, reporting and verification (MRV) of carbon projects must be included.

If the mitigation initiative does not demonstrate compliance with the applicable legal framework, it will be considered as non-additional by the COLCX Program.

4.1.2 Compliance with legal mandates

Moreover, it must be demonstrated that the mitigation initiative, as well as the GHG reductions and/or removals resulting from it, do not occur because of compliance with a legal mandate derived from national or local regulations, or be part of a mandatory environmental compensation scheme.

Legal mandates include laws, statutes, regulations, court orders, legal agreements, permit conditions or other legally binding conditions that require implementation; voluntary mitigation commitments or agreements do not constitute a legal mandate. On the other hand, the mitigation initiative will not be considered additional if its implementation is mandated by law. The proponent must consider that GHG emission reductions and/or removals resulting from compensation activities derived from the impacts caused by projects, construction works or activities within the framework of environmental licenses and concessions are not considered additional.

If the mitigation initiative demonstrates that it does not result from a legal mandate or requirement, it will be partially considered as additional by the COLCX Program.

4.2 Demonstration of automatic additionality

GHGMP may automatically consider that the mitigation activity is additional if it demonstrates compliance with the requirements defined in the following alternative.

¹ For this matrix, the regulatory framework analysis carried out for Cancun Safeguard 1 may be considered, where applicable.

4.2.1 First-of-its-Kind Consideration

Under this mechanism the GHGMP must demonstrate whether the proposed mitigation initiative is the first of its kind in the host country where it is implemented or sector to which it belongs, following the guidelines of the most recent version of the CDM methodological tool *Additionality of first-of-its-kind project activities*.

When the proponent demonstrates that the mitigation initiative is the first of its kind and is not a common practice in the project area, it will be considered additional.

4.3 Demonstration of non-automatic additionality

The GHGMP must demonstrate that the mitigation initiative is additional by applying and complying with at least one of the following evaluation mechanisms.

4.3.1 Identification of alternative scenarios

This step serves to identify alternative scenarios to the project scenario. This is done through the following steps:

Step 1a. Identify plausible alternative scenarios, different from the GHGMP scenario.

The alternative scenarios must be plausible and supportable so that they reflect a likely alternative scenario. This should account for what would have occurred within the boundaries of the GHGMP in the absence of its activities. Therefore, any identified scenario must be legally feasible according to the economic sector and host country where it is developed, and must be consistent in terms of economic trends, historical scenarios, practices and territorial circumstances.

To identify whether the alternative scenarios to the project are feasible, the proponent should provide documentation such as surveys, documents from official sources, government reports, among others. It may also include information from participatory workshops conducted with stakeholders, among others. It can be used as support territorial planning documents, policies and regulations that support the viability of the alternative scenarios according to the GHGMP sector.

The expected outcome of this sub-step is a list of all the likely alternative scenarios that could have occurred if the GHGMP had not been implemented.

Step 1b. Consistency assessment of alternative scenarios considering the historical, legal and political context of the project area.

For an alternative scenario to be consistent, it must meet the following criteria:

- Demonstrate that the scenario identified in Step 1a complies with all applicable mandatory legal and regulatory requirements of the host country where the initiative is taking place.

- If the scenario does not comply with all applicable mandatory laws and regulations of the host country where the GHGMP is developed, it must be demonstrated that this is the result of systematic non-compliance with applicable laws and regulations on a generalized basis and that the prevalence of this activity is at least 30% within the spatial boundaries of the GHGMP, or administrative areas where it is located².

Any scenario identified in Step 1a that does not meet these criteria should be eliminated from the list. The product of this sub-step should be a list of alternative scenarios consistent with the historical, legal and political context.

If no alternative scenarios to the project scenario are available at this step, the GHGMP is not additional.

Step 1c. Selection of the baseline scenario.

The GHGMP must follow the procedures outlined for the formulation of the baseline scenario according to the applicable methodology. In addition, the initiative must identify if there are significant differences between the baseline scenario and the scenario with the project.

As a result of this section the GHGMP should identify a list of alternative scenarios to the project scenario. If the above is met, continue with section 4.3.2 (Financial Analysis) or section 4.3.3 Barrier analysis (Barrier Analysis); at least one of them is required or, alternatively, they can be complementary.

4.3.2 Financial Analysis

Under this mechanism, the additionality of the mitigation initiative must be demonstrated in accordance with the financial demonstration methods defined by the CDM; this involves demonstrating that the proposed GHG emission reduction and/or removal activity is not economically or financially feasible without the revenues from the sale of the carbon credits that are generated. If the GHGMP can demonstrate that the revenue from the sale of potential carbon credits in the carbon market makes it financially viable to implement the proposed GHG emission reduction or removal activity, the mitigation initiative is partially additional.

To demonstrate additionality under this mechanism, the following steps taken from the CDM *Investment analysis* and the *Guidelines on the assessment of investment*.

To perform this analysis, follow the sub-steps:

Step 1a. Determine the appropriate method of analysis.

² This condition is not applicable in countries where systematic non-compliance with applicable laws and regulations is not recognized under any circumstances (i.e Chile).

Determine whether a simple cost analysis, an investment comparison analysis, or a benchmark analysis should be applied (Step 2b). If the GHGMP does not generate financial or economic benefits beyond revenues from the sale of COLCERS, then apply the simple cost analysis (Option I).

Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Please note that options I, II and III are mutually exclusive, so only one of them can be applied.

Step 2b. Option I. Apply a simple cost analysis.

Document the costs associated with the GHGMP and demonstrate that the activity does not produce financial benefits in addition to the revenues related to the commercialization of the COLCERS.

If it is concluded that the proposed GHGMP does not produce financial benefits in addition to the revenue related to the marketing of COLCERS, then continue with section 4.3.4 Common Practice Analysis (Common Practice Analysis).

Step 2b. Option II. Apply investment comparison analysis.

Identify the financial indicator, such as IRR (Internal Rate of Return), NPV (Net Present Value), payback period, cost-benefit ratio, or the most appropriate indicator for the project type and decision-making context. This should be applied both to the scenario without GHGMP registration and to the project's alternative scenarios. The financial analysis between these scenarios must demonstrate that the project faces greater financial barriers than the alternative scenarios.

Step 2b. Option III. Apply reference analysis.

Identify the financial indicators, such as IRR, NPV, payback period, cost-benefit ratio, or others (e.g., required rate of return associated with investments in the listed scenarios, bank deposit interest rate adjusted for project-specific risk, or opportunity costs such as any expected income from the various scenarios) that are most appropriate for the project type and decision-making context. Identify the relevant benchmark value for capital. The benchmark represents standard market returns, considering the specific risk of the project type, but not tied to the subjective return expectations or risk profile of a particular project developer.

Benchmarks can be derived from:

- a) Government bond rates increased by an appropriate risk premium to reflect private investment and/or the project type, as justified by an independent (financial) expert.
- b) Estimates of the cost of financing and the required return on capital (e.g., commercial lending rates and collateral requirements for the country and the type of project activity in question), based on the opinions of banks and the required returns of investors/private equity funds in comparable projects.

- c) An internal company benchmark (the company's weighted average cost of capital) if there is only one potential project developer (e.g., when the proposed project land is owned or otherwise controlled by a single entity, individual, or company that is also the project developer). Proponents must demonstrate that this benchmark has been used consistently in the past; that is, project activities under similar conditions developed by the same company used the same benchmark.

Step 2c. Calculation and comparison of financial indicators (applicable only to options II and III):

- a) Calculate the appropriate financial indicator for the proposed PMGEI without including the financial benefits from the sale of COLCERs and, in the case of Option II, for the other alternative scenarios. Include all relevant costs (such as investment costs, and operation and maintenance costs) and revenues (excluding revenues from the sale of COLCERs, but including subsidies/tax incentives where applicable), and as appropriate, non-market costs and benefits in the case of public investors.
- b) Present the investment analysis in a transparent manner and provide all relevant assumptions within the GHGMP description, so that any reader can reproduce the analysis and obtain the same results. Clearly present the critical economic parameters and assumptions (such as capital costs, project lifetime, and the discount rate or cost of capital). Assumptions must be justified and/or cited in a way that allows them to be validated. When calculating the financial indicator, project risks may be incorporated into the cash flow based on project-specific expectations and assumptions (for example, insurance premiums may be used in the calculation to reflect specific risk equivalents).
- c) The assumptions and input data for the investment analysis must not differ between the GHGMP activity and its alternatives, unless the differences can be well justified.
- d) Present, in the GHGMP description for validation, a clear comparison of the financial indicator for the proposed GHGMP without including the financial benefits from the sale of COLCERs, and apply accordingly:
 - i) Option II (investment comparison analysis): If the alternative scenarios show a better indicator (e.g., a higher IRR), then the GHGMP cannot be considered financially attractive; or
 - ii) Option III (benchmark analysis): If the GHGMP shows a less favorable indicator (e.g., a lower IRR) than the alternative scenarios, then the GHGMP cannot be considered financially attractive.

If it is concluded that the proposed GHGMP, without the financial benefits from the sale of COLCERs, is not the most financially attractive scenario, proceed to Step 2d (Sensitivity Analysis).

Step 2d. Sensitivity analysis (only applicable to options II and III).

Include a sensitivity analysis that demonstrates whether the conclusion regarding financial attractiveness is robust to reasonable variations in the critical assumptions. The

investment analysis provides a valid argument for additionality only if, across a realistic range of assumptions, it consistently supports the conclusion that the proposed GHGMP, without the financial benefits from the sale of COLCERs, is unlikely to be financially attractive.

- a) **If, after the sensitivity analysis, it is concluded that the proposed GHGMP without the financial benefits from the sale of COLCERs is unlikely to be more financially attractive than the alternative scenarios (Option II and Option III), then proceed directly to Section 4.3.4 Common Practice Analysis.**
- b) **If the sensitivity analysis concludes that the proposed GHGMP is likely to be financially the most attractive (Option II and Option III), then the project activity cannot be considered additional through financial analysis. Mandatorily, continue with section 4.3.3 (Barrier Analysis) to demonstrate that the proposed project activity faces barriers that do not prevent the alternative scenarios from occurring. If the Barrier Analysis is not used, the GHGMP is not additional.**

4.3.3 Barrier analysis

Under this mechanism the GHGMP must identify and analyze the possible environmental, institutional, technological, investment, or legislative difficulties, among others, that could limit or make it impossible to implement the proposed mitigation initiative and the alternative scenarios previously identified. If the proponent can demonstrate how the certification of the mitigation initiative and its GHG reduction and/or removal results can overcome these barriers, the mitigation initiative is additional.

To demonstrate additionality, the barriers must be consistent with the GHG reduction and/or removal activity and explain the possible effects that may occur when implementing the mitigation initiative, understanding the scale of application and the benefits that are obtained by the implementation to help overcome such barriers. To perform this analysis, the following steps should be taken:

Step 1. *Identify barriers that would prevent the implementation of the proposed scenario.*

Barriers specific to each of the GHG mitigation initiatives are identified. These barriers may include some of those set out in the most recent version of the *CDM Tool for the Demonstration and Assessment of Additionality*.

These barriers may include, but are not limited to:

Type of barrier	Justification
Barriers to investment	<p>These consider:</p> <ul style="list-style-type: none"> • That implementation of the mitigation initiative can only be achieved through financial assistance or other non-commercial financing terms. • No equity capital is available for its development, and there is a lack of or difficulty in obtaining financing or access to credit. • That private investment is non-existent or limited due to the presence of real or perceived risks that may occur in the

Type of barrier	Justification
	country or region where the mitigation initiative will be implemented.
Barriers to technology adoption	<p>These consider:</p> <ul style="list-style-type: none"> • Lack of qualified and/or adequately trained manpower for the operation and maintenance of GHG reduction and/or removal activities associated with the mitigation initiative, which could lead to equipment deterioration and/or poor equipment performance. • That there is difficult access to modern technologies for the application of best practices related to GHG reduction or removal activities associated with the mitigation initiative. • The necessary infrastructure is not available for the operation and maintenance of the GHG reduction or removal activities associated with the mitigation initiative (e.g., the energy generated cannot be transported in a cost-efficient manner due to the lack of an adequate transmission and distribution network).
Barriers due to environmental conditions	<p>These consider:</p> <ul style="list-style-type: none"> • That there are natural and/or human-induced catastrophic events in the territory that affect or discourage the implementation of the mitigation initiative (e.g., proximity to areas prone to landslides, high probability of flooding, recurrence of fires, etc.). • That the meteorological conditions in the territory are unfavorable for the implementation and operation of the proposed mitigation initiative (e.g., there are early or late frosts, the area has long periods of drought, etc.).
Barriers due to social conditions	<p>These consider:</p> <ul style="list-style-type: none"> • That there are conflicts between social or interest groups in the region where the mitigation initiative is being carried out. • That there are public order problems that limit or discourage the implementation of the mitigation initiative. • Lack of qualified and/or adequately trained manpower for the operation and maintenance of the GHG reduction or removal activities associated with the mitigation initiative.
Barriers due to national status or interest	<p>These consider:</p> <ul style="list-style-type: none"> • A regulatory framework that discourages the implementation of the mitigation initiative or generates adverse conditions for it. • The right geopolitical conditions do not exist for the mitigation initiative to be carried out or sustained over time. • The necessary capabilities are not available to implement the mitigation initiative under the required time and place conditions (e.g., to contribute to the implementation of a public policy, to meet a national goal, etc.).

As a result of step 1, the proponent should establish the list of barriers that may prevent or affect the implementation of the mitigation initiative.

Step 2. *Demonstrate that the identified barriers will not prevent implementation of at least one of the alternative scenarios (except the GHGMP activity).*

If the identified barriers also affect the alternative scenarios, explain how the alternative scenarios are affected less strongly than they affect the GHGMP activities. In other words, explain how the identified barriers do not prevent the implementation of at least one of the alternative scenarios. At least one alternative feasible scenario must be identified, if at least one alternative feasible scenario is not identified the project cannot be considered additional.

Step 3. *Identify how carbon credit trading contributes to overcoming the identified barriers.*

For the evaluation of each identified barrier, the proponent must analyze how COLCERS certification and its later access to the carbon market allows the proponent to overcome each of the identified barriers, considering the level of access to information, technologies, workforce and their availability in the region where the mitigation initiative is located. Here it must duly justify this condition, through documents or other appropriate verification mechanisms such as:

- Relevant legal and regulatory guidelines
- Studies or surveys (sectoral) applicable to the mitigation initiative (e.g. market studies, technology studies, etc.) These may be conducted by universities, research institutions, associations, companies, bilateral/multilateral institutions, etc.
- Relevant statistical data from governmental statistical institutes
- Documentation of relevant market data (e.g., market prices, tariffs, standards)
- Written documentation from the company or institution developing or implementing the mitigation initiative (e.g., board minutes, meetings, correspondence, feasibility studies, financial information, etc.), and
- Technical documentation or independent expert opinions from governmental or non-governmental agencies related to the GHG reduction or removal activities to be implemented or by individual experts, educational institutions (e.g., universities, technical schools, training centers), professional associations, among others.

As a result of step 2, if the proponent demonstrates that the generation and commercialization of COLCERS contributes to the actual overcoming of any of the barriers identified in step 1 of this section, the GHGMP is considered to be additional under this analysis and should continue with section 4.3.4. If the above condition is demonstrated, the mitigation initiative will be considered additional.

4.3.4 Common Practice Analysis

According to this guide, common practices are defined as “those that are similar to those of the GHGMP in terms of scale, regulatory framework and applicability in the environment”.

To perform the analysis of common practices, follow the sub-steps below:

Step 1. Identify activities like those of the GHGMP.

Identify similar activities that have been implemented prior to the start of the project or are currently underway. Similar activities are defined as those that are like those of the GHGMP in terms of scale, environment, regulatory framework and applicability in the environment; for this, a geographic area defined by the administrative boundaries of the host country where the initiative is developed can be considered, without exceeding its limits.

Step 2. List of similar activities identified and compare them with the proposed GHGMP activities.

List similar activities and compare them based on the existence of essential differences. Essential differences can be described in terms of fundamental and verifiable changes based on comparisons of the circumstances under which the proposed GHGMP activities will be implemented, and under which similar activities were carried out. For example, the existence of incentives, subsidies, crediting opportunities, changes in political circumstances that resulted in the implementation of similar activities not facing the barriers identified by the GHGMP.

Step 3. Demonstrate with verifiable support that the GHGMP activities have essential distinctions with respect to similar activities.

Demonstrate that similar activities face lower barriers to implementation. If it cannot be demonstrated that similar activities do not have essential distinctions with respect to the GHGMP, the GHGMP cannot be considered additional.

As a result of this section, if it is evident that the area of influence of the evaluated project does not have the same common practice in more than 30% of the area, the GHGMP is additional. On the other hand, if there is evidence that even though the area of influence has common practice in more than 30% of the area, essential distinctions are evident, the GHGMP is additional. On the other hand, if there is evidence of compliance with the above guidelines, the project is not additional.

4.3.5 Carbon and Emissions Comparison

This section assesses the impact of the project in terms of GHG removed and/or reduced and GHG emissions compared to the baseline scenario.

To do so, the following steps must be followed:

Step 1. Identification of the emissions and reservoirs in the baseline and project scenarios.

In accordance with the guidelines for the selection of emission sources and reservoirs, as well as the selection of the baseline scenario according to the methodology applicable by the GHGMP, the initiative must identify and list all the reservoirs and emission sources corresponding to both the baseline scenario and the project scenario.

Step 2. Comparative Emissions and carbon reservoirs between the baseline and project scenarios.

The GHGMP must compare absolute GHG emissions, reductions and/or removals between the baseline scenario and the project scenario, using primary or secondary information duly supported by reliable sources relevant to the project area, for the entire crediting period established by the initiative in accordance with the initiative's ex-ante calculations.

As a result of this evaluation, if it is determined that the project scenario presents greater reductions and/or removals, and lower emissions compared to the baseline scenario, the GHGMP will be considered additional. Otherwise, it will not be considered additional.

5 FINAL CONSIDERATIONS

All documents and information used to demonstrate and support the additionality analysis of a mitigation initiative shall be publicly available for evaluation by an VVB or the COLCX Program and shall accompany the documentation provided as part of the mitigation initiative registration process in accordance with the *COLCX Procedure of the mitigation initiatives cycle* and the *COLCX Standard for mitigation initiatives certification* in its most recent versions.

History of the Document

Version	Date	Description
1.0	13/07/2023	Initial version.
1.1	12/09/2024	V 1.0 form adjustments without altering the technical content
2.0	16/04/2025	Adjustments to the general additionality procedure, delimiting an orderly sequence of steps and procedures.
2.1	09/12/2025	Adjustments to section 4.3.1 Identification of alternative scenarios and regulatory framework compliance.