

**Cercarbono's Tool
to Demonstrate
Additionality of
Climate Change
Mitigation Initiatives**



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**Version
2.0.1**

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Acronyms and abbreviations

CCMP	Climate Change Mitigation Programme or Project
CDM	Clean Development Mechanism
CO₂e	Carbon dioxide equivalent
GHG	Greenhouse Gases
IPCC	Intergovernmental Panel for Climate Change
KP	Kyoto Protocol
PDD	Project Description Document
UNFCCC	United Nations Framework Convention on Climate Change

Terms and definitions

The terms relevant to this tool are listed below. For the definition of each of them please refer to the document ***Terms and Definitions of the Cercarbono Voluntary Certification Programme***, available at www.cercarbono.com, section: Documentation.

- additionality
- avoidance of greenhouse gas emissions
- baseline scenario
- biomass
- carbon credit
- carbon market
- carbon pool
- Carboncer
- CCMP activity
- CCMP developer
- CCMP holder
- climate change mitigation initiative
- criteria
- destruction of greenhouse gas
- displacement of a more-GHG-intensive output
- energy efficiency
- first of its kind
- fuel or feedstock switching
- greenhouse gas
- greenhouse gas emissions
- greenhouse gas removal
- land use
- methodology
- Project Description Document
- project scenario
- reduction of greenhouse gas emissions
- regulated carbon market
- renewable energy
- restoration
- retroactivity period
- sectoral scope
- similar technology
- source of greenhouse gas emissions
- validation
- verification
- voluntary carbon market

Summary

The demonstration of the concept of additionality has enabled the implementation of climate change mitigation initiatives in different economic sectors and in different territories around the world, which represent extra efforts to solve this problem, thus supporting the emergence and dynamization of the international carbon market.

This document establishes guidelines and criteria that climate change mitigation initiatives must consider for demonstrating their additionality as a requirement to participate in the international carbon market, based on the additionality tools developed by the Clean Development Mechanism.

Foreword

Cercarbono is a standard with a voluntary carbon certification programme, whose mission is to facilitate and guarantee to individuals, companies, and the public the registration of Climate Change Mitigation Programmes or Projects (CCMPs), the certification of emissions and the registration of carbon credits obtained by these CCMPs.

This tool has been developed by Cercarbono's technical team and endorsed by its Board of Directors and CEO.

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This document will be updated when its scope needs to be broadened or adapted to international circumstances.

A draft of the initial version of this tool was made available to society through a public consultation on the Cercarbono's website and through invitations to individuals and public and private organisations. Their contributions were considered in the elaboration of the initial version.

1 Introduction

The concept of additionality originated in the Kyoto Protocol (KP, Article 12.5c), under the second Conference of the Parties (COP.2) to the Framework Convention on Climate Change (UNFCCC), to ensure that Greenhouse Gas (GHG) emission reductions achieved by projects are “additional” to what would have occurred in their absence.

Additionality has been identified as a necessary condition to ensure the environmental integrity of a Climate Change mitigation initiative, the objective of which should focus on achieving stabilisation of GHG concentration in the atmosphere. Therefore, the Climate Change Mitigation Programmes or Projects (CCMP) must meet certain characteristics that demonstrate it, that is, to prove that its programme or project activity, be it the GHG removals or reductions of GHG emissions, would not have occurred in the absence of the carbon market and the climate change mitigation initiative.

Since the inception of the KP, different definitions (some similar) of what additionality in climate change mitigation initiatives is, such as the one proposed by the Intergovernmental Panel on Climate Change (IPCC): “**Reduction of emissions from sources, or enhancement of elimination¹ by sinks², that is additional to that which would occur in the absence of a project activity**”, has been the most widely used definition internationally. However, the understanding and application of this definition in climate change mitigation initiatives has been rather complicated in terms of interpretation.

So far, the application of the concept of additionality in the formulation of climate change mitigation initiatives has been a rather complex issue, which has generated discussions at different levels. Although the Clean Development Mechanism (CDM), defined in parallel to this concept (Article 12.3 of the KP), provided the methodological basis for demonstrating the additionality of such initiatives, it also generated great technical and operational difficulties to support it. In fact, many initiatives did not continue their formulation or could not participate in that nascent international carbon market because they could not demonstrate some of the additionality criteria established by the CDM.

The carbon market, which originated in 2005 with the entry into force of the KP, is based on the purchase and sale of certified carbon credits³ achieved by the activity of a climate change mitigation initiative. There are currently two types of markets: regulated and voluntary. The former is used by companies and governments that are required by law to account for their GHG emissions under mandatory regimes, whether sub-national, national, regional, or international (where mechanisms such as the CDM used to operate), and in the latter, individuals, companies, and governments voluntarily decide to GHG remove or reduce these emissions.

For climate change mitigation initiatives to participate in the carbon market, developers or holders of these initiatives have relied on internationally developed technical documents or tools for their formulation and implementation. However, there are still procedural and

¹ Cercarbono replaces this term with removal.

² Cercarbono replaces this term with carbon pools.

³ These are sold to buyers to offset their GHG emissions, which would otherwise be more difficult or costly for them to mitigate than the price they pay for these credits.

technical gaps in their formulation. For this reason, certification programmes such as Cercarbono have been working independently but in coordination with different market actors to provide robust and reliable technical guidelines or elements to support transparency in the international carbon market.

In this sense, this document sets out the additionality criteria that must be considered by climate change mitigation initiatives to voluntarily respond to GHG emission reductions and demonstrate their additionality under Cercarbono, in coherence with the principles defined in their voluntary certification programme and in compliance with the regulations established in different contexts.

2 Scope

The additionality criteria below can be used for the formulation and development of CCMP activity(ies) operating in the following sectoral scopes defined by the UNFCCC that are adopted by Cercarbono (*Table 1*).

The CCMP activity(ies)⁴ included are:

- a) Removal of GHG.
- b) Reduction of GHG emissions: which includes:
 - Displacement of a more-GHG-intensive output:
 - Renewable energy.
 - Low carbon electricity.
 - Energy efficiency (including technology change).
 - Fuel or feedstock switching.
 - GHG emissions avoidance.
 - GHG destruction.

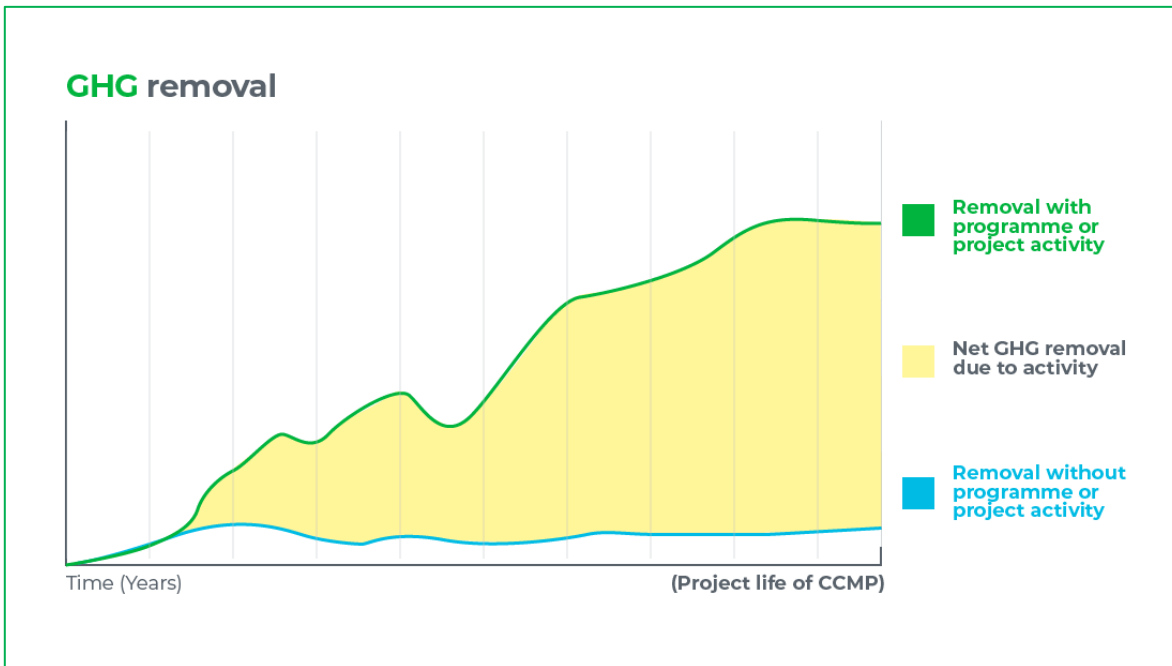
Table 1. Sectoral scopes and CCMP activities.

Sectoral scope		CCMP activities							
		GHG re- movals	GHG emission reductions					Displacement of a more-GHG-intensive output	
			Energy ef- ficiency	Fuel or feed- stock switch- ing	GHG emission avoid- ance	GHG de- struction	Renewa- ble en- ergy	Low carbon electricity	
Energy	Generation	-	X	X	X	-	X	X	
	Distribution	-	X	X	-	-	X	-	
	Demand	-	X	X	-	-	X	-	
Industry	Manufacturing	-	X	X	X	X	X	X	
	Chemical	-	X	X	X	X	X	X	
Construction		-	-	X	-	-	-	X	
Transport		-	X	X	-	-	X	X	
Mining and mineral production		-	-	X	X	X	X	-	
Metal Production		-	X	X	X	-	X	-	
Fugitive emis- sions	Fuels	-	-	X	X	X	-	X	
	Halocarbon and sul- phur hexafluoride production and con- sumption	-	-	X	X	X	-	-	
Waste management		-	X	-	X	X	X	-	
Land use	Forestry	X	-	-	X	-	-	-	
	Agricultural	X	-	X	X	X	-	-	

⁴ The differences among these actions or programme/project activities are set out in Cercarbono's Protocol.

Climate change mitigation initiatives focused on removing GHG must demonstrate that the net anthropogenic removals of GHG by carbon pools resulting from the CCMP activity must exceed the sum of the changes in carbon pools that would have occurred in the absence of the activity (**Figure 1**).

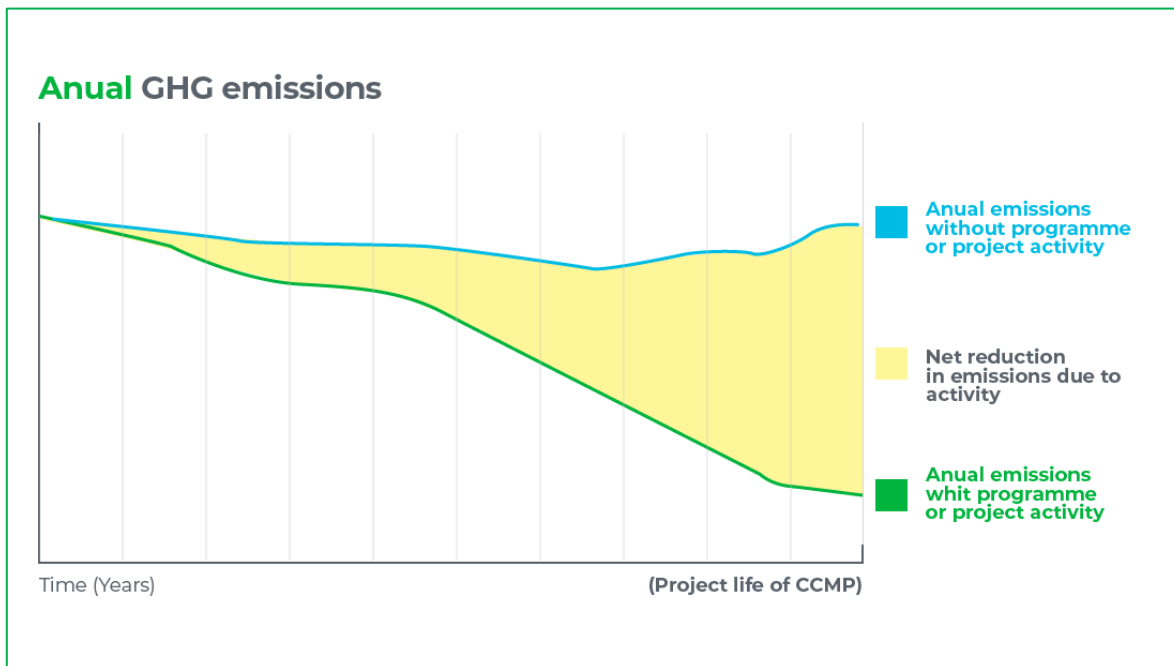
Figure 1. Exemplification of the results achieved by the CCMP activity focused on GHG removals.



Climate change mitigation initiatives focused on reducing⁵ GHG emissions must demonstrate that the net anthropogenic GHG reductions by emission sources resulting from the CCMP activity must be less than would have occurred in the absence of the activity. **Figure 2** presents an example of the results that can be achieved by these types of CCMP activities. It is important to mention that, since the reduction of GHG emissions generate similar graphical results (amount of tCO₂e decreased in each time), they are exemplified in a single figure.

⁵ These CCMP activities differ from each other in terms of the techniques or tools used to effectively reduce GHG emissions, and their classification is presented in Cercarbono's Protocol.

Figure 2. Exemplification of the results obtained by the CCMP activity focused on reduction of GHG emissions.



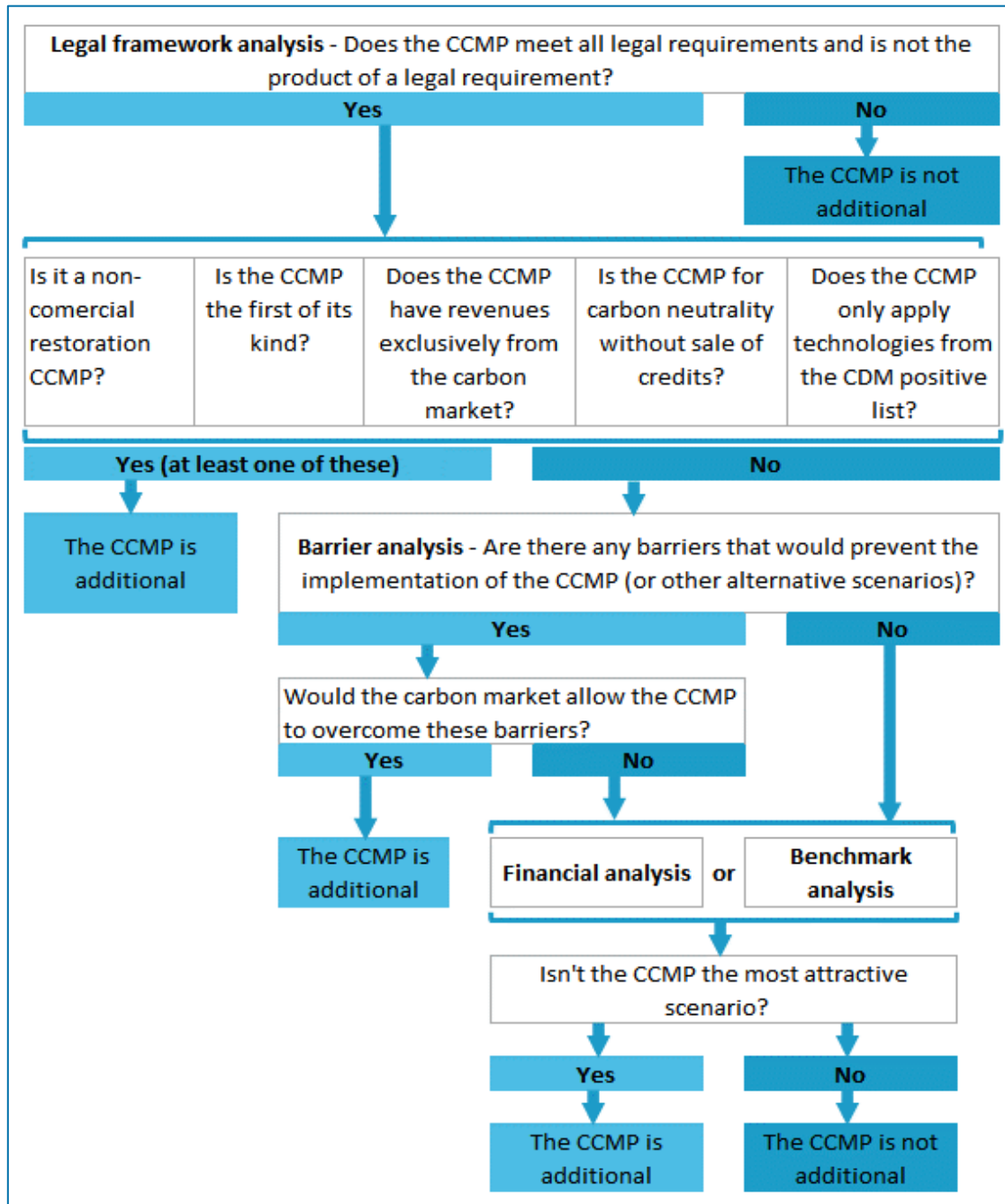
The differences in the calculations between the baseline and project “net removal or reduction” scenarios exemplified in [Figure 1](#) and [Figure 2](#), represent the amount of carbon credits achieved by the CCMP activity, which under Cercarbono are referred to as *Carboncer*.

3 Additionality

Climate change mitigation initiatives to be certified by Cercarbono must undertake a specific analysis to demonstrate that they would not have occurred in the absence of an offset credit market. At Cercarbono, this analysis is carried out by applying the procedures set out in this additionality tool.

The diagram of the CCMP additionality analysis process is presented in *Figure 3*.

Figure 3. Diagram of additionality analysis.



4 Legal framework analysis

The climate change mitigation initiative must analyse and be consistent with existing laws or regulations so that it complies with all mandatory legal and regulatory requirements, including those that have objectives other than generating GHG emissions mitigation.

The climate change mitigation initiative should not be the result of compliance with a mandatory or legally mandated regulation or standard, nor be part of a mandatory environmental offset scheme. Therefore, climate change mitigation initiatives that do not comply with the legal framework or are the product of a legal requirement are considered non-additional.

5 Specific additionality cases

If a climate change mitigation initiative complies with the regulatory framework and is not the product of a legal requirement, it can be considered directly additional if it has at least one of the following characteristics:

- It is the first of its kind.
- It implements exclusively restoration activities in the forest sector without commercial use.
- It derives its revenues exclusively from the carbon market.
- It is designed to neutralise the GHG emissions of a given company or institution, whose activities would correspond to sectoral areas other than those it normally undertakes.
- The activity(ies) to be implemented are included in the positive lists on the use of CDM technologies (see [Section 5.5](#)).

Climate change mitigation initiatives that comply with the regulatory framework and are not the product of a legal requirement but do not correspond to any of the characteristics described above, must conduct a barrier or alternative scenario analysis to demonstrate their additionality.

5.1 First of its kind

A CCMP that intends to implement a new technology may face a barrier due to prevailing practice. If this barrier can be overcome by carbon markets, then the CCMP is considered additional.

The application of this case to a given CCMP should clearly define what the prevailing practice(s) are, what the CCMP technology is and what is considered a similar technology. In the absence of a clear definition of the CCMP technology that is considered to be the first of its kind, all technologies to which the methodology is applied should be considered similar technologies. Proofs of concept and non-commercial research projects are excluded from the analysis.

The methodology for applying this case to a given CCMP should clearly define the applicable geographical area in the first-of-a-kind context. The latter can be the global level, a country, or a region within a country. In the absence of a specific definition of the applicable geographical area in the approved baseline scenario and monitoring methodology, the country in which the CCMP will be implemented should be used as the reference area. The CCMP holder or developer may select a sub-national geographical scale of analysis (state, province, department, etc.), but must provide a justification of the circumstances that warrant analysis at that level rather than at the national level.

In the case of CCMP that will start activities after validation, the situation will be analysed for the time when the Project Description Document (PDD) is submitted for public consultation and other possible CCMP in validation or already implemented will be included in the assessment.

In the case of CCMP that started implementation prior to validation, the analysis will be done for the situation at the time implementation started, including also other possible CCMP in validation, or already implemented at the time of the analysis.

CCMP related to land use cannot be considered “first-of-its-kind” unless they implement GHG removal or emissions reduction technologies other than biomass greenhouse gases sequestration.

It should be noted that if a CCMP activity does not meet the *first-of-its-kind* criteria, proponent may use any other barriers or investment analysis to demonstrate the additionality of this activity.

5.2 Restoration without commercial use

Initiatives that implement ecosystem restoration processes (either passive or active) for non-commercial purposes, which do not contemplate future timber harvests⁶, and that are implemented in areas that are considered by law to be protected or that include in their design a mechanism to prevent future exploitation are considered additional.

Initiatives that, in addition to non-commercial restoration, include restoration with sustainable use of the forest with timber harvesting or other segments such as restoration with timber harvesting schemes, reforestation and woody crops, shall demonstrate additionality under the terms of this document.

5.3 Exclusive carbon market revenues

Climate change mitigation initiatives that receive revenues exclusively from the carbon market are considered additional. In this case, the mechanisms used to obtain such revenues must be justified.

5.4 Exclusive use in carbon neutrality programmes

In the case of climate change mitigation initiatives that are designed to neutralise the GHG emissions of a given company or institution, whose activities would correspond to sectoral areas other than those it normally carries out, they will be considered as additional, as long as the credits are not co-traded but for internal use of the company or institution, and these they are not the result of compliance with regulations or legal mandate, nor part of a mandatory environmental offset scheme.

5.5 Positive lists for the use of technologies

Positive lists of technologies and associated conditions that confer automatic additionality to programme or project activities are those included in the recent version of the CDM approved *Tool 32 Methodological tool: Positive lists of technologies version 04.0*, including their validity for implementation. These must be submitted together with the approved and selected methodology and cover:

- Mitigation activities developed in the waste management sector.

⁶ Sustainable harvesting of non-timber forest products is allowed.

- Mitigation activities integrating different forms of renewable energy.
- Technologies or measures used by households, communities, and small and medium-sized enterprises.

6 Identification of alternative scenarios and barrier analysis

In cases where additionality cannot be demonstrated according to the criteria set out in [Section 5](#), the proponent shall make a comparative analysis, considering all potential baseline scenarios, including the proposed initiative as one such scenario and initiatives that have the same capacity to deliver the same end-product using other technologies. If the initiative is equivalent to the most plausible potential baseline scenario, it is not considered additional.

Under this criterion, all alternative scenarios to the proposed CCMP activity should be identified, which can be considered as their baseline scenario. The scenarios should be established considering the barrier analysis.

The justification for the application of this criteria should be demonstrated objectively and based on solid evidence, such as own, quantifiable, and traceable or third-party, transparent, and documented evidence, e.g., national, and international statistics, national, sub-national and local policies and laws, studies, and surveys from independent agencies.

Analyses of alternative scenarios should consider all emissions associated with the operation, including indirect sources⁷.

Once the barrier analysis is conducted, all scenarios should be compared with each other and identify whether the project scenario of the climate change mitigation initiative is similar, in terms of the activities to be implemented, the barriers faced by any of those identified alternative scenarios. If the proposed CCMP activity is like any of these scenarios, the initiative is considered as non-additional.

Barrier analysis

Under this criterion the barriers or impediments to the implementation of a climate change mitigation initiative are identified, assessing the type of risk in the alternative scenarios that may be impeded by these barriers and arguing, for the CCMP under consideration, how the carbon market would address them.

A comprehensive list of (realistic and credible) barriers that may prevent the occurrence of the alternative scenarios should be established. These barriers may include risks:

- **Investment/financing:** for example, and among others, lack of access to credit (generally or specific to the relevant sector); similar activities⁸ requiring subsidies or other non-commercial financial conditions; lack of access to capital due to real or perceived circumstances associated with investments in the country or region where the CCMP activity will be implemented, as may be demonstrated, for example, by the country's credit rating or other investment reports of the country or region.

⁷ Both the baseline and the project scenario must be comprehensive in including all generated, controlled, and associated emission sources (including indirect sources) in order to assess and derive the actual net GHG removals or net GHG emission reductions.

⁸ Activities of a similar scale that take place in a comparable environment with respect to the regulatory framework and are carried out in the relevant geographic area.

- **Implementation:** for example, and among others, due to technical, economic, social (including local traditions and knowledge or lack thereof) and environmental constraints that may represent opposition to the implementation of the climate change mitigation initiative.
- **Technological:** for example, and among others, lack of skilled labour or access to materials needed in the geographical area to develop the technology implemented by the initiative; lack of or inadequate infrastructure to implement and monitor the technology; failures in the processes and operation of the technology.
- **Institutional:** for example, and among others, risks related to changes in government policies or laws or lack of enforcement of legislation related to the sector in which the climate change mitigation initiative would be developed.

Climate change mitigation initiatives that demonstrate that the carbon market allows them to overcome these barriers are considered additional. If such barriers cannot be overcome, they should conduct either a comparative financial analysis or a baseline analysis demonstrating that such initiatives do not represent the most attractive scenario.

6.1 Financial analysis

The comparative financial analysis can be performed using one or several traditional financial indicators⁹, such as VPN, VET, TIR, LCOE, investment cost vs. operating cost, among others, calculating the alternatives not discarded, including, and not including potential revenues from carbon credits (in applicable scenarios), but always including the non-carbon revenues that the alternative would have.

If the option under consideration only includes revenues from carbon credits, it is sufficient to present the cost-benefit structure, as well as a demonstration that there are no additional benefits beyond those generated by carbon credits to confirm the additionality of the climate change mitigation initiative.

As part of the financial analysis, a sensitivity and variability analysis of the chosen financial indicators is recommended to identify the most robust financial model.

The result of this analysis should be that the alternative proposed as a project is not the most attractive in financial terms.

6.2 Benchmark analysis

Benchmark analysis should use the most appropriate financial indicator for the specific CCMP type and circumstances and its standard market benchmark, considering the specific risk of the selected type of climate change mitigation initiative.

⁹ Specifying the justification for use of specific indicators.

7 Validity and transitional regimes

This tool applies to CCMPs implementing version 4.1 of the Cercarbono's Protocol.

8 References

Cercarbono. (2022a). *Cercarbono's Protocol for Voluntary Carbon Certification*. Version 4.1. Available at: www.cercarbono.com

Cercarbono. (2022b). *Terms and Definitions of the Voluntary Certification Programme of Cercarbono*. Version 3.0. Available at: www.cercarbono.com

Clean Development Mechanism (CDM). (2022). *Tool 32 Methodological tool: Positive lists of technologies*. Available at: kutt.it/NjXSER

Clean Development Mechanism (CDM) - Meth Panel. (2008). *Report of the Thirty-fourth meeting, Annex 10: Note on the barrier "first-of-its-kind"*. Available at: kutt.it/ISvq78

9 Document history

Version	Date	Comments or changes
1.0	13.05.2021	Initial version of this document released for public consultation from 13.05.2021 to 14.06.2021.
1.1	15.07.2021	Final version with integrated comments from the public consultation and additional complementary elements.
1.2	14.01.2022	Version with changes and adjustments to Version 3.1 of the Cercarbono Protocol. The acronym CCMP was included, and some editorial changes were made.
2.0	30.07.2022	Version aligned with the international voluntary carbon market.
2.0.1	05.08.2022	Clarification in Figure 3 regarding the set of positive list options.