

Cercarbono's Protocol for Voluntary Carbon Certification

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Version 4.2

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Acronyms and abbreviations

ASOCARBONO	Colombian Association of Carbon Market Actors
BoD	Board of Directors
BTR	Biennial Transparency Report
CCMP	Climate Change Mitigation Programme or Project
CDM	Clean Development Mechanism
Cen	Coordinating Entity
CEO	Chief Executive Officer
DispG	Displacement of a more-GHG-intensive output
DOE	Designated Operational Entity
EE	Energy efficiency
FREL	Forest Reference Emission Level
FS	Fuel or feedstock switch
GDest	GHG destruction
GEA	GHG emissions avoidance
GHG	Greenhouse Gases
Grem	GHG removal
IAF	International Accreditation Forum
ID	Identification number or code
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization for Standardization
ITMO	Internationally Transferred Mitigation Outcomes
LCE	Low Carbon Electricity
LPG	Liquefied Petroleum Gas
NDC	Nationally Determined Contributions
ONAC	National Accreditation Body (Colombia)
Pas	Climate Change Mitigation Programme Activities
PDD	Project Description Document
PFC	Perfluorocarbon
PoA	Programme of Activities for Climate Change Mitigation
RDF	Refuse Derived Fuels
RE	Renewable energy
REDD+	Reduction of Emissions from Deforestation and Forest Degradation and other actions in this sector
SB	Stabilised biomass
SDGs	Sustainable Development Goals
UNFCCC	United Nations Framework Convention on Climate Change
VVB	Validation and Verification Body

Terms and definitions

Terms and definitions guiding the understanding of this protocol and the carbon market context have been deposited in the ***Terms and Definitions of the Voluntary Certification Programme of Cercarbono***, available at www.cercarbono.com, section: Documentation.

Summary

This document presents the regulatory and technical framework governing Cercarbono's international voluntary carbon certification programme for certifying climate change mitigation initiatives with which different carbon market actors can participate, highlighting the most important principles that must be considered by this type of initiatives and the results derived from them, as well as the different sectors in which they can operate.

The protocol presents a detailed guide aimed at holders and developers including the most essential elements that should be considered in the formulation and development of these initiatives (which give rise to environmental information), such as additionality, eligibility, and permanence criteria, as well as the bases that support the identification and selection of baseline and project scenarios, including emission sources and carbon pools. In addition, it presents some elements that strengthen the development of these initiatives, such as effective participation scenarios, contribution to the Sustainable Development Goals and legal and document management.

The protocol also highlights the requirements that these initiatives must consider within the validation and verification processes, under which the validation and verification bodies intervene, to evaluate and support the evidence presented and issue (or not) the corresponding validation and verification statements. Finally, it details the entire process that these initiatives must comply with to be registered and subsequently certify the emission and register the carbon credits achieved by the programme or project activities.

Foreword

Cercarbono is a standard with a voluntary carbon certification programme, whose mission is to facilitate and guarantee to individuals, companies, and the stakeholders 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 protocol has been developed by Cercarbono's technical team and endorsed by its Board of Directors (BoD) and Chief Executive Officer (CEO).

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The protocol will be updated when it is required to adapt it to international circumstances and the needs of national contexts.

A draft of this document (Version 4.0) was made available for consideration by society at large through a public consultation posted on the Cercarbono website and through invitations to individuals, state owned and private companies.

Cercarbono is grateful for the participation of companies and independent individuals who expressed their opinions and recommendations, which helped to strengthen this document.

This version of the protocol (4.2) takes effect from the date of its publication.

1 Introduction

Cercarbono is a certification standard with an international voluntary carbon certification programme, which certifies Greenhouse Gas (GHG) removals and GHG emission reductions (see its classification in [Section 4](#)) from climate change mitigation initiatives carried out in different sectoral areas¹. This certification occurs primarily in the framework of the commitments that countries have made before the United Nations Framework Convention on Climate Change (UNFCCC) to address climate change by stabilising GHG concentrations at a level that prevents dangerous anthropogenic interference with the climate system, resulting in the Kyoto Protocol in 1997 and the Paris Agreement in 2015 (in particular its Article 6).

In line with that Article, specifically sub-point 6.2 which contemplates market mechanisms aimed at voluntary cooperation between countries, the Cercarbono registry (EcoRegistry) has been designed to facilitate the exchange and integration of data with other registries and to contribute to the meta-registration of the international emissions market in a way that prevents double counting, facilitating in turn national GHG accounting and enabling the international transfer of carbon credits between countries. In this regard, Cercarbono comprehensively and accurately identifies the characteristics of its credits based on 13 independent parameters that allow the attributes associated with each credit to be unequivocally identified.

For their part, countries are developing different regulatory or voluntary schemes to encourage compliance with their GHG emissions mitigation targets, in which the development of Climate Change Mitigation Programmes or Projects (CCMP) and the purchase of carbon credits from this type of initiatives are encouraged.

This protocol describes the formalisation process and the requirements that CCMPs must meet to obtain the issuance of carbon credits through the international Cercarbono certification programme, which are unique, real, and measurable credits called “Carboncer”.

In this way, CCMP holders, Carboncer buyers and sellers or any other entity participating in the international voluntary carbon market can count on the support of adequate, reliable, impartial, transparent, and relevant validation, verification, and certification processes.

The protocol, while providing guidelines for carrying out the validation and verification processes², focuses on defining the principles governing the registration of CCMPs and emission certification and the registration and conversion of carbon credits from the distinct

¹ To develop climate change mitigation initiatives, the UNFCCC established 15 sectoral areas: 1. Energy industries; 2. Energy distribution; 3. Energy demand; 4. Manufacturing industries; 5. Chemical industries; 6. Construction; 7. Transport; 8. Mining/mineral production; 9. Metal production; 10. Fugitive emissions from fuels (solid, oil and gas); 11. Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride; 12. Use of solvents; 13. Waste management and disposal; 14. Cercarbono covers 14 of these sectors, which are grouped and described in [Section 4](#).

² The Validation and Verification Bodies (VVBs) authorised by Cercarbono are listed in [Section 7](#).

types of CCMPs accepted by Cercarbono. It also describes in general terms the procedures and steps required for the Cercarbono voluntary carbon certification process, as well as some specific methodological aspects. However, the specific methodological aspects of the distinct types of CCMPs are defined in the methodologies accepted or developed by Cercarbono.

The protocol is based on ***ISO 14066:2011, ISO 14064-1:2018, ISO 14064-2:2019, ISO 14064-3:2019, ISO/IEC 17029:2019*** and ***ISO 14065:2020***³. Its structure is global and is governed by the requirements of international voluntary carbon markets. It also considers and adopts the regulations established by a given country or offset mechanism according to the final use or destination of the carbon credits.

³ See [*Section 12.3*](#).

2 Governance

2.1 Programme objectives

- Align the climate change mitigation objectives generated at the international level with the requirements of the Cercarbono programme, as a guarantee of legal compliance of the CCMPs.
- Consolidate a registration system that complies with the rigorous requirements of the carbon market, generating security, and transparency of all CCMPs that are part of the programme.
- Promote the international dynamics of the carbon market, generating confidence through transparency in its actions and providing greater accessibility through the use of technologies that facilitate the management and access to information.
- Establish, advise, or approve guidelines or methodologies that allow the development of CCMPs, which can be adapted to the dynamics of the different economic sectors, complying with regulations and with the ultimate intention of promoting initiatives that generate real and proven GHG removals, and GHG emission reductions.
- Support and coordinate actions that contribute to the fulfilment of the Sustainable Development Goals (SDGs) by CCMPs.
- Register and certify CCMPs that meet the criteria set out in this protocol.
- Promote a friendly, efficient, and effective environment in which all actors involved in the project cycle interact.

A more extensive explanation of the governance of the voluntary carbon certification program is available in the document: **Cercarbono Governance Overview**, available at www.cercarbono.com, section: Documentation.

2.2 Organisational structure

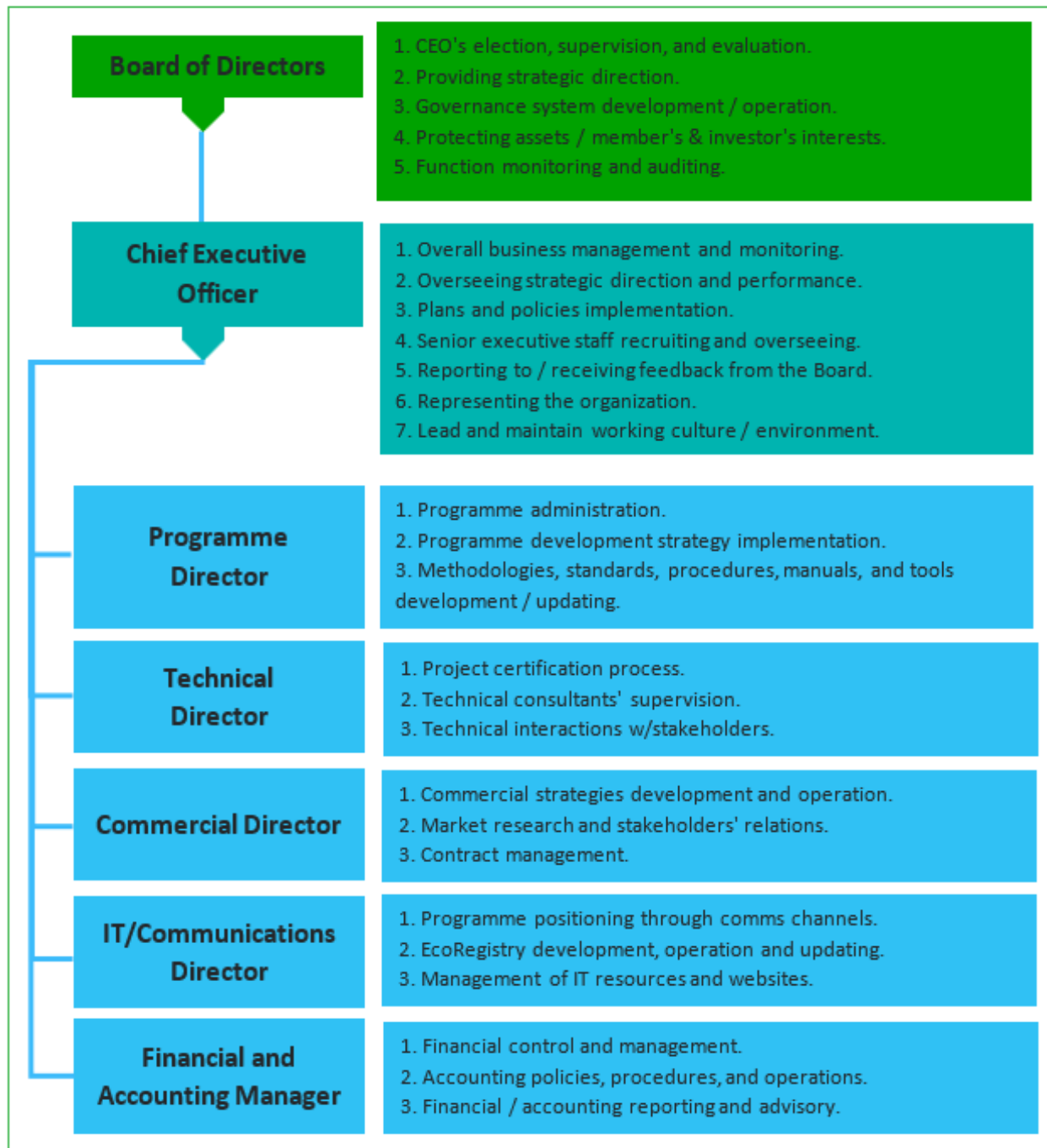
The **Board of Directors (BoD)** oversees Cercarbono's governance in all its dimensions; has the broadest powers to manage the organization and it is the top decision-making body of the organization.

The **Directorate General Chief Executive Officer** will oversee all operations and performance indicators providing hands-on guidance and intervening to ensure compliance with business and strategic planning goals. Is the top operational decision-maker within the organization, with the obligation to report to the BoD, and technically is subordinated to the Chair of the BoD.

Cercarbono's executive staff includes four Executive Directors and the Finance and Accounting Manager reporting directly to the CEO. A more detailed explanation of this section is available in the document: **Cercarbono Governance Overview**, available at www.cercarbono.com, section: Documentation.

Figure 1 presents the organisational and governance structure of the Cercarbono voluntary carbon certification programme.

Figure 1. Cercarbono organization chart.



2.3 Decision-making

Resolutions of the BoD will be invariably decided by affirmative vote of a majority of its members not involved in matters affecting or related to its individual performance or change of status.

Specifically, the following acts must have at least a 75 % majority of the members of the Board of Directors to be implemented:

- Change or modify the organization's objectives, purpose, or mission / vision statements.
- Elect the BoD Chair and Vice Chair.
- Appointment of the CEO.
- Election of members of the BoD.
- Dissolution or merging of the organization or establishing strategic alliances.
- Setting the organization's direction and priorities.
- Creating formal, not within the BoD, ancillary support, or consulting bodies.
- Decisions or resolutions on relevant matters as deemed by a member of the BoD.
- Appoint the organization's auditor or auditing company.
- Authorize the annual budget.
- Develop new business lines, standards, or programmes.
- Major changes to the procedures, protocols, standards, or programme(s).

Decisions of the board of directors must be supported by minutes of the meetings, which are available for external or internal audit processes of Cercarbono and is available at www.cercarbono.com, section: Documentation (Minutes).

Public consultation of the documents produced by the programme is a fundamental element for informed decision-making.

A more detailed explanation of decision-making is available in the document: **Cercarbono Governance Overview**, available at www.cercarbono.com, section: Documentation.

3 Principles

The principles listed in this section set out the fundamental rules or concepts governing Cercarbono's international voluntary carbon certification programme. They are presented to facilitate the general understanding of the requirements established under the programme.

The principles establish the basis for justifications and explanations the holder or developer of the programme or project⁴ must consider in the formulation and implementation of climate change mitigation initiatives. They should refer to the relevant principles and the way in which they have been applied.

During validation and verification processes, the Validation and Verification Bodies (VVBs) must explicitly confirm compliance with the Cercarbono principles, referencing them in audit reports and reporting any conflicts or non-compliance to the CCMP.

3.1 Principles to be considered by CCMPs

Listed below are all the principles that must be considered by CCMP holders, developers and any other actor wishing to have their climate change mitigation initiatives certified by Cercarbono.

Accuracy

Measurements made at the CCMPs agree with or are reasonably close to the actual values.

Precision

Efforts should be made to reduce the variability or dispersion of the information obtained from the measurement of variables allowing the determination of the magnitude of GHG emissions and removals and GHG emission reductions of the PMCC.

Coherence

The results of GHG emission inventories in both the baseline and project scenarios must be comparable over time. Any changes in data, scope, calculation methods, or other factors that are relevant to the time series need to be clearly documented.

The calculations performed by the CCMP must be reproducible and technically validated, so that they can generate consistently coherent, and well-supported results.

Comparability

The results obtained by the CCMP activity should be comparable against the use of methodologies, guidelines, and protocols, among others, so that the estimation and calculation of GHG emissions and removals and GHG emission reductions achieved by the CCMP can be independently assessed and.

⁴ Throughout this document these are also referred to as the CCMP holder or developer, for short.

Comprehensiveness

All relevant information that supports decision-making, as well as the procedures for reaching those results, must be included, minimising uncertainty, increasing confidence in the data and results expected or achieved by the CCMP, to generate comprehensive, accurate, consistent, comparable, complete, and replicable accounting and reporting of the GHG emissions and removals, and GHG emission reductions considered.

Completeness

All significant GHG emission sources generated by the CCMP must be included, as appropriate to the type of programme or project. Sources which, taken together, do not exceed 5 % of the total emissions generated by the CCMP over its results accounting period are considered non-significant. All relevant information to support decision-making and the results expected or achieved by the CCMP, as well as the procedures to achieve these results, must also be included.

Consistency

The assumptions, values and procedures used by the CCMP for the calculation of GHG emissions and removals and GHG emission reductions shall be technically correct, consistent, comparable, and replicable.

Conservatism

Conservative assumptions, methodologies, values, and procedures should be used to ensure that CCMP GHG emissions are not underestimated and that CCMP GHG removals and GHG emission reductions are not overestimated.

Given the feasibility of using two or more values of the same parameter at the same scale, the most conservative should be used.

Evidence

The evidence used by the CCMP must be sufficient and appropriate to ensure that rational, reliable, and replicable methods are used to ensure that GHG removals and GHG emission reductions are genuine and correctly calculated.

Integrity

All relevant GHG emission sources and carbon pools should be included along with quantification of their GHG emissions and removals in the baseline scenario, as well as GHG emissions and removals and GHG emission reductions generated in the project scenario, using data and parameters from recognised sources, as well as technically supported modelling.

No net harm

The programme or project activities of the CCMP must not generate a net damage on the surrounding areas or communities, in social, environmental, or legal aspects.

All CCMPs must ensure that the mitigation activity covered by the project does not produce net harm in environmental, social, and economic terms. To this end, they must comply with

the ***Safeguarding Principles and Procedures of Cercarbono's Certification Programme***, available at www.cercarbono.com, section: Documentation.

Relevance

The CCMP must be appropriate and relevant to the sector under which it operates.

Reliability

Data and parameters from recognised sources must be used, as well as technically substantiated models that support the GHG removals and GHG emission reductions calculated, accounted for, or monitored by the CCMP. The data, variables, and parameters must be representative of the reality or context in which the CCMP is developed, so direct measurement methods that integrate statistical representativeness are encouraged.

Recognised sources are those included in the Good Practice Guidance of the Intergovernmental Panel on Climate Change (IPCC) in its most updated version, or in previous versions if their use is technically justified, as well as the methodological tools of the Clean Development Mechanism (CDM). Academic articles published in indexed journals are also valid.

Transparency

Genuine, clear, honest, justified, appropriate, understandable, truthful, timely, transparent, solid, sufficient, and auditable information related to the CCMP's procedures, assumptions, processes, and intrinsic limitations should be used, so that the reliability and credibility of its GHG removal and GHG emission reduction results can be guaranteed. All references and sources of information must be explicitly mentioned and made available to third parties, ensuring that it is public and permanent⁵, so that any calculations can be reconstructed and generate results equal to those obtained by the CCMP.

3.2 Principles considered in carbon credits

The principles that additionally and complementarily the CCMP should consider in the validation, verification, and certification processes are presented below. Stakeholders involved in these processes must seek and support compliance.

Carbon credits generated by GHG removal, or GHG emission reduction programme or project activities must be:

Real

All GHG removals and GHG emission reductions generated by the CCMP must be shown to have actually occurred.

Additional

Carbon credits generated by CCMPs must demonstrate their additionality as a requirement to participate in the carbon market. For this purpose, CCMPs must use ***Cercarbono's Tool***

⁵ As long as the holder of a PMCC justifies valid reasons, this information will not be public.

to Demonstrate Additionality of Climate Change Mitigation Initiatives, available at www.cercarbono.com, section: Documentation.

Independently verified

All GHG removals and GHG emission reductions generated by the CCMP must be verified with a reasonable level of assurance by an independent verification body, authorised by Cercarbono and accredited in the sector in which it is being undertaken. See **Section 7**.

Measurable

All GHG emissions and removals and GHG emission reductions generated by the CCMP must be quantified, using recognised measurement tools (including adjustments for uncertainty and leakage), considering, and comparing them against a credible baseline scenario.

The CCMPs have at their disposal different technical documents developed by Cercarbono, including its own methodologies and regulatory guidelines, available at www.cercarbono.com.

No double counting

A tonne of carbon dioxide equivalent (tCO₂e) resulting from GHG removals or GHG emission reductions generated by the CCMP cannot:

- Being accounted for more than once to demonstrate compliance with the same GHG mitigation target.
- Be counted to demonstrate compliance with more than one GHG mitigation target.
- Used more than once to obtain remuneration, benefits, or incentives.
- Be verified, certified, or accredited through the implementation of more than one GHG mitigation initiative.

Complementary elements to this principle are provided in the **Procedures of Cercarbono's Certification Programme** document, available at www.cercarbono.com, section: Documentation.

Permanent

Carbon credits generated by CCMPs must be permanent over a 100-year horizon.

GHG removal programmes or projects that present a risk of reversal of GHG removals to the atmosphere must use **Cercarbono's Tool to Estimate Carbon Buffer in Initiatives to Mitigate Climate Change in the Land Use Sector**, available at www.cercarbono.com, section: Documentation.

Unique

Each GHG removal unit and each GHG emission reduction unit is associated with a single carbon credit, corresponding to one tonne of carbon dioxide equivalent (tCO₂e). Carbon credits are registered and retired through the EcoRegistry platform.

3.3 Principles to be considered by VVBs

The following principles shall be considered by accredited VVBs, in accordance with *ISO/IEC 17029:2019 and ISO 14065:2020*, thereby supporting that the validation and verification statement complies with the requirements specified in this protocol.

Competence

Staff have the knowledge, skills, experience, training, supporting infrastructure, and capacity to effectively perform the activities in the validation and verification processes.

Confidentiality

Confidential information obtained or created during validation and verification activities is protected and not improperly disclosed.

Impartiality

Decisions made by the VVB are based on objective evidence obtained through the validation and verification processes and are not influenced by other interests or parties. Threats to impartiality may include:

- **Self-interest:** a threat that comes from a person or entity acting out of self-interest. An example of a threat to impartiality in validation and verification processes is financial self-interest.
- **Self-review:** a threat that arises when a person or entity reviews work done by themselves.
- **Familiarity (or trust):** a threat that arises when a person or entity is overly familiar or trusting of another person rather than seeking evidence to support the validation and verification processes.
- **Intimidation:** a threat that arises from a person or entity having the perception of being overtly or covertly coerced, such as the threat of being replaced or reporting a supervisor.

Openness

The VVB must provide public access to or disclose information on its validation and verification process in a timely manner.

Professional scepticism

Attitude of personnel involved in validation and verification processes, based on recognition of potential circumstances that may cause a material error in a validation and verification

statement. Therefore, any assertions made in the PDD or monitoring report must be supported by complete and reliable evidence.

Responsiveness to complaints

Parties involved in the validation and verification processes may submit complaints. These shall be handled and resolved appropriately. Responsiveness to complaints is necessary to demonstrate credibility to all parties about the integrity of the validation and verification results.

Responsibility

The client, and not the VVB, is responsible for the declared information, as well as for its conformity with the specified and applicable requirements. The VVB has the responsibility that a validation and verification statement is based on objective, sufficient and appropriate evidence.

In addition to complying with the above referred principles, the VVB must have a documented description of its legal status including, as applicable, the names of its owners and those of the persons controlling it, in addition to having an organisational structure, management, and operational control.

Risk-based approach

The VVB must consider the risks associated with providing competent, consistent, and impartial services in the validation and verification processes. Risks may include:

- The objectives of the validation and verification processes and the requirements of the certification programme.
- Actual and perceived competence, consistency, and impartiality.
- Legal, regulatory, and liability issues.
- The client's organisation, where the validation and verification processes are carried out, and its system management, operating environment, geographical location, among others.
- The susceptibility of any parameter included in the claim to generate a material error, even if there is a control system in place.
- The level of assurance achieved, and the corresponding collection of evidence used in the validation and verification processes must be reasonable ($\geq 95\%$) in accordance with *ISOs 14064-2, 14064:3 and 14065:2020*.
- Stakeholder perception.
- Misleading claims or misuse of trademarks by the customer.
- Risk control and improvement opportunities.

3.4 Principles to be considered in validation and verification processes

The following are the principles to be considered by VVBs in validation and verification processes in accordance with *ISO 14065:2020* and *ISO/IEC 17029:2019* Standards.

Documentation

The validation and verification processes are documented and establish the basis for the conclusion and decision on the conformity of the validation and verification statement with the specified requirements.

Evidence-based approach to decision making

Validation and verification processes must implement methods to reach reliable and reproducible conclusions based on objective, sufficient, and appropriate evidence. The validation and verification statement are based on evidence gathered through an objective validation and verification process.

Fair presentation

During validation and verification processes, findings, conclusions, and statements, including significant obstacles encountered during these processes, as well as unresolved divergent opinions between the VVB and the client shall be truthfully and accurately presented.

As set out in *ISO/IEC 17029:2019*, VVBs shall have a consistent validation and verification programme to carry out validation and verification processes considering the following elements:

- The scope of validation and verification.
- The specific competence criteria for the validation and verification team, and VVB as a whole.
- The validation and verification process.
- The evidence gathering activities during validation and verification.
- The validation and verification reports.

The following steps must be also completed in the validation and verification process:

- Establish a pre-commitment.
- Establish a final commitment.
- Validation and verification process planning⁶.
- Perform the validation and verification process.
- Documents and evidence review.
- Decide on and issue a validation and verification statement.
- If appropriate, generate post-validation and verification statement issuance findings.
- Process appeals.
- Handle claims and complaints.
- Generate records.

⁶ A strategic analysis is necessary to understand the nature and complexity of the PDD and to determine the scope of validation and verification activities based on the type of engagement, as well as to assess the risk of non-compliance with the criteria. The level of assurance and materiality is included in the plan.

4 Scope

This protocol has been defined for the registration of CCMPs and for the certification of the issuance and registration of carbon credits -Carboncer- from CCMPs through Cercarbono's Protocol for Voluntary Carbon Certification.

Activities allowed under the Cercarbono programme can be submitted at programme or project level and implemented in different countries according to their domestic regulations in line with the international voluntary carbon market and in compliance with the provisions of this protocol. According to the amount of GHGs removed or GHG emissions reduced by a CCMP during its crediting period, they can be included in one of the two types of scale covered by Cercarbono:

CCMP Type 1: those that remove or reduce 10,000 or more tonnes of CO₂e, on average per year.

CCMP Type 2: those that remove or reduce less than 10,000 tonnes of CO₂e, on average per year.

Once the CCMP has been registered and has passed the validation stage it cannot change the type of scale.

CCMPs, according to their type and conditions, should use methodologies approved by Cercarbono. Cercarbono's own methodologies do not make a scale differentiation, but CCMPs must consider the applicability requirements of the selected methodology(ies).

4.1 CCMP activities

According to the sector, CCMPs can consider the following activities:

- GHG removal: activity that, through plant photosynthesis, removes CO₂ from the atmosphere, and stores it in the form of biomass in different carbon pools.
- GHG emissions reduction⁷, which includes:
 - **Displacement of a more-GHG-intensive output (DispG):** adoption of technologies or processes that displace more GHG-intensive production. Includes:
 - **Renewable energy (RE):** generation or use of energy from hydro, photovoltaic, wind, geothermal, ocean, and biomass renewable sources. It may include cogeneration actions (electricity, heat and cold).

⁷ Regulatory frameworks often highlight only GHG emission reduction activity without delving into the differences within this climate change mitigation outcome. Therefore, actions such as GHG emissions displacement (including renewable energy and low carbon electricity), energy efficiency, fuel or feedstock switching efficiency, avoidance, and destruction of GHG are considered under the GHG emissions reduction activity. Cercarbono, under this protocol, sets out the differences that exist between these programme or project actions or activities, which are highlighted (where applicable) in the issuance of carbon credits earned under a GHG emission reduction.

- **Low carbon electricity (LCE):** power generation based on lower GHG emitting fuels such as natural gas.
- **Energy efficiency (EE) (including technology change):** optimised generation or use of energy by implementing or renewing processes, machinery, tools, or technologies that require less energy demand to achieve the same performance or perform the same function more efficiently. It may include cogeneration actions.
- **Fuel or feedstock switching (FS):** implementation of fuel or feedstock switching with lower GHG emissions. Includes electricity, hydrogen, hybrid, natural gas, Liquefied Petroleum Gas (LPG), biodiesel, or bioethanol sources or supply, as well as alternative feedstock.
- **GHG emissions avoidance (GEA):** adoption of technologies or processes that reduce, control, or avoid GHG emissions to the atmosphere.
- **GHG destruction (GDest):** adoption of technologies or processes for this purpose. CCMPs often include the capture or recovery of GHGs. Destruction is achieved by combustion or catalytic conversion of GHGs.

The CCMPs may consider more than one programme or project activity simultaneously if they are justified and supported by a methodology. The Cercarbono voluntary certification Programme has an international geographical scope. CCMPs can be implemented anywhere in the world. However, a CCMP cannot be implemented in more than one country, but it can be implemented in different areas of a given country, as in the case of grouped projects or programme of activities) if they comply with the requirements of the Programme and the legal regulations of the country where they are implemented.

4.2 Sectoral areas

In line with the international carbon market and as adopted by the IPCC, the sectors covered by Cercarbono's voluntary certification programme for CCMP implementation are:

4.2.1 Energy sector

- **Energy generation:**

Corresponds to CCMP Type 1 and 2 activities (including energy efficiency, fuel or feedstock switching, avoidance and displacement (RE and LCE) of GHG emissions), reducing GHG emissions by GHG sources in power plants, power grids or facilities that supply energy.

- **Energy demand and distribution:**

Corresponds to CCMP Type 1 and 2 activities (including energy efficiency, fuel or feedstock switching and displacement (RE) of GHG emissions), reducing GHG emissions by GHG sources in power plants, energy networks or facilities that supply or demand energy.

4.2.2 Industry sector

- **Manufacturing industry:**

Corresponds to CCMP Type 1 and 2 activities (including energy efficiency, fuel or feedstock switching, avoidance, destruction, and displacement (RE and LCE) of GHG emissions), reducing GHG emissions by GHG sources in manufacturing facilities or companies.

- **Chemical industry:**

Corresponds to CCMP Type 1 and 2 activities (including energy efficiency, fuel or feedstock switching, avoidance, destruction, and displacement (RE and LCE) of GHG emissions), reducing GHG emissions by GHG sources at chemical facilities or companies.

4.2.3 Construction sector

Corresponds to CCMP Type 2 activities (including fuel or feedstock switching and displacement (LCE) of GHG emissions), reducing GHG emissions from GHG sources in infrastructure construction.

4.2.4 Transport sector

Corresponds to CCMP Type 1 and 2 activities (including energy efficiency, fuel or feedstock switching and displacement (RE and LCE) of GHG emissions), reducing GHG emissions by GHG sources in companies owning or using automotive (public and private), aviation and maritime fleets.

4.2.5 Mining and mineral production sector

Corresponds to CCMP Type 1 and 2 activities (including fuel or feedstock switching, destruction and displacement (RE) of GHG emissions), reducing GHG emissions by GHG sources in mineral production plants or processes.

4.2.6 Metal production sector

Corresponds to CCMP Type 1 and 2 activities (including energy efficiency, fuel or feedstock switching, avoidance and displacement (RE) of GHG emissions), reducing GHG emissions by GHG sources in metal production plants or processes.

4.2.7 Fugitive emissions sector

- **Fugitive emissions from fuels:**

Corresponds to CCMP Type 1 and 2 activities (mainly) (including avoidance and destruction), reducing GHG emissions from fugitive emissions of fuels.

- **Fugitive fuel emissions from the production and consumption of halocarbons and sulphur hexafluoride (SF6):**

Corresponds to CCMP Type 1 and 2 activities (including GHG avoidance and destruction), reducing GHG emissions from the production and consumption of halocarbons and SF6.

4.2.8 Waste management sector

Corresponds to CCMP Type 1 and 2 activities (including energy efficiency, avoidance, destruction, and displacement (RE) of GHG emissions), reducing GHG emissions by GHG sources in solid and liquid waste management plants.

4.2.9 Land use sector

- **Forest land:**

Corresponds to CCMP Type 1 and 2 activities (GHG emissions avoidance), removing GHG or reducing GHG emissions by sources in forested areas. Projects focused on reforestation, forest restoration or REDD+ may be developed.

- **Agricultural land:**

Corresponds to CCMP Type 1 and 2 activities (including fuel or feedstock switching, avoidance of GHG emissions), removing GHG or reducing GHG emissions by sources in agricultural areas.

Table 1. Sectoral areas and CCMP activities covered by this version of the protocol.

Sectoral scope		CCMP activities						
		GHG removals	GHG emission reductions					
			Energy efficiency	Fuel or feedstock switching	GHG emission avoidance	GHG destruction	Displacement of a more-GHG-intensive output	
							Renewable energy	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 emissions	Fuels	-	-	-	X	X	-	-
	Halocarbon and sulphur hexafluoride production and consumption	-	-	-	X	X	-	-
Waste management		-	X	-	X	X	X	-
Land use	Forestry	X	-	-	X	-	-	-

Sectoral scope	CCMP activities						
	GHG re- movals	GHG emission reductions					
		Energy effi- ciency	Fuel or feed- stock switching	GHG emission avoid- ance	GHG de- struction	Displacement of a more- GHG-intensive output	
						Renewable energy	Low carbon electricity
Agricultural	X	-	X	X	X	-	-

4.3 Use of the protocol and certification programme documents

Cercarbono's voluntary carbon certification programme is aligned to the international requirements of the voluntary carbon market, while respecting and adopting requirements, regulations or decisions established in national contexts, with the final use or destination of the carbon credits determining the framework for action.

This protocol as well as the technical and informative documents that are part of the Cercarbono voluntary carbon certification programme have been prepared in English and Spanish. CCMPs can submit their documentation in either language; notwithstanding, CCMPs are encouraged to submit the PDD in English to facilitate the trading of carbon credits in the international market. If not, it is mandatory to submit a summary of the PDD in English, using the template provided by Cercarbono for this purpose.

It is mandatory to provide, as a minimum, the information requested in the Cercarbono templates (PDD, monitoring report, validation or verification report, validation, or verification statement, among others), but it is not mandatory to use them.

5 Methodological issues

This section describes how methodologies for the quantification of GHG removals or GHG emission reductions and deviation requests are developed and accepted. For this purpose, fees have been established for anyone interested in the development, evaluation, or review of such methodologies and deviation requests. These fees can be requested at info@cer-carbono.com.

5.1 Approved methodologies

Cercarbono has developed its own methodologies in various sectors for CCMP implementation. Apart from its methodologies, Cercarbono accepts the use of CDM methodologies that are in line with its policy framework and principles. The list of approved methodologies is available at www.cercarbono.com, section: Documentation.

Cercarbono's own methodologies will be reviewed and updated at least every 5 years to ensure that they comply with the guidelines required by the international voluntary carbon market. The new versions of such methodologies will be subject to an independent third-party review.

5.2 Approval of new methodologies

If a particular CCMP activity requires methodological approaches substantially different from those existing in Cercarbono's approved methodologies, an independent third party may propose an existing methodology under another standard or programme or propose a new methodology, following the procedures described in the ***Procedures of Cercarbono's Certification Programme***, available www.cercarbono.com, section: Documentation.

If the methodology is approved, it will be included in the list of the programme's approved methodologies and will be available for use by any party interested in developing CCMPs that are adapted to that methodology.

5.3 Revision of approved methodologies

If specific aspects of an approved methodology are not applicable to a CCMP, but the project activity is significantly similar to those the approved methodology is applicable, the project proponent may submit to Cercarbono a proposal for revision of the approved methodology, following the procedures described in the ***Procedures of Cercarbono's Certification Programme*** document, available at www.cercarbono.com, section: Documentation.

If the revision is approved, it will become the latest version of the methodology and the previous version will become obsolete.

5.4 Request for methodological deviations

In cases where an approved methodology is applicable to a project activity, but minor changes in its application are required due to project-specific circumstances not foreseen in the methodology, a deviation from an approved methodology can be requested to the

VVB, who decides, based on the programme rationale and applicable validation and verification standards, whether it "proceeds" or "does not proceed". If it "proceeds", the detailed assessment and validation of the deviation is done by the VVB considering the appropriate methodological adjustments.

If such a deviation was not requested beforehand and the VVB determines during the verification that the CCMP has deviated from the provisions of the methodology or the monitoring plan, it shall request the CCMP to describe the deviation and alternative means of compliance by means of an updated monitoring report and assess whether the deviation is likely to lead to a reduction in the accuracy of the calculation of emission reductions. If the VVB considers that the deviation leads to such accuracy reduction, it shall request the CCMP to apply conservative assumptions or discount factors to calculations to ensure emission reductions are not overestimated due to the deviation.

If the deviation potentially spans over more than one verification period, a deviation request should be applied for the entire period covered by the deviation, indicating the date until when the deviation will be applied. Depending on the magnitude of the proposed deviation, the VVB may evaluate and approve or reject such a request or present the case before Cercarbono for a detailed assessment of the deviation.

Methodological deviations should not be intended to correct intentional errors, deficiencies, or improvisations in the planned implementation of CCMPs.

5.5 Request for methodological clarification

If an approved methodology is unclear or ambiguous in its methodological procedures, a written request for clarification can be submitted, which must also be responded in writing by Cercarbono's technical team.

6 CCMPs requirements

This section describes the different requirements and technical characteristics for CCMPs wishing to be part of Cercarbono's international voluntary carbon certification programme to be accepted, based on the *ISO 14064-2:2019* Standard.

Compliance with each of these requirements is assessed by Cercarbono, making sure that they comply with what is established in the validation and verification processes (independent or joint⁸) by the authorised VVBs (see [Sections 7](#) and [8](#)), thus ensuring the traceability of each CCMP. CCMP must identify, consider, and use relevant, available criteria or procedures for each stage of the project cycle as described in [Section 8](#).

6.1 Components of the CCMP

The CCMP must prepare a PDD in which the following elements are presented:

- CCMP title and objective(s).
- Information on the CCMP holder and other participants, where applicable, detailing their roles and responsibilities, including contact and stakeholder information.
- Sectoral scope of the programme or project and type of CCMP.
- Description of how the CCMP will achieve GHG removals or GHG emission reductions, including the specific types of GHGs it addresses.
- Justification of the eligibility⁹ and additionality of the CCMP.
- CCMP location and boundaries, including organisational, geographical, and physical location information, enabling its unique identification and delimitation. Such information should be reported in geo-referenced form (shp or kml), in multi-level graphics (map with location in country/national subdivision/municipality and CCMP) and in narrative form (legal description of the boundaries of the CCMP areas) in a way that facilitates the review of its location and possible overlaps with other CCMPs. It should be noted that a CCMP can only be developed in one country, but at the country level it can cover different geographical areas, as mentioned in [Section 4.1](#).
- Detailed description and support information on the ownership or right of use of the area, facility, or process. The right of use can be demonstrated, inter alia, by means of lease or long-term mandate contracts or peaceful possession, among others, which are free from legal defects.
- Characteristics and conditions of the area, facility, or process, prior to the start of the CCMP.
- CCMP technologies, products, and services and the expected level of activity.
- Description and justification of the methodology selected and applied for the quantification of GHG removal or GHG emission reduction, as appropriate to the type of CCMP.

⁸ This type of audit occurs when a first validation and verification event is performed or when modifications to the PDD need to be validated in verification events other than the first one.

⁹ From the participation in the Cercarbono programme standpoint.

- Identification of the CCMP GHG emission sources and carbon pools in baseline and project scenarios, estimated or calculated as tCO₂e.
- GHG emissions or removals in the baseline scenario, estimated or calculated as tCO₂e, considering the use of values for global warming potential as per in the IPCC Fifth Assessment Report or those values that supersede them.
- Total GHG removal or total GHG emission reduction that can occur in the project scenario, estimated, or calculated as tCO₂e.
- Net GHG removal or net GHG emission reduction that can occur in the project scenario, estimated, or calculated as tCO₂e.
- Monitoring plan. The monitoring plan is designed following the approved methodology selected for the development of the CCMP.
- Leakage, if applicable, calculated in tCO₂e.
- Identification of risks that could significantly affect GHG removal or GHG emission reductions, as well as measures to manage such risks.
- Authorisations and documents required by current legislation (including environmental legislation and their respective environmental impact assessments in line with the No Net Harm principle) governing the development and operation of the CCMP, depending on the type of programme or project.
- Relevant results of stakeholder consultations and mechanisms for ongoing communication, if applicable. Include definition regarding when and how affected or involved persons should be consulted.
- Report on the contribution of the CCMP to the achievement of the SDGs.
- Timeline or actual dates and justification for the following:
 - Duration or lifetime of the CCMP (in years): indicating the start date (day.month.year) of the activities and the end date of the programme or project (day.month.year).
 - The CCMP crediting period.
 - The CCMP monitoring period, its frequency and reporting, including relevant CCMP activities at each step of the project cycle, as appropriate.
 - The frequency of verification events, including the periods in which they are intended to be performed or are performed.

Cercarbono has **Project Description Document** templates, designed according to the sector and mitigation activity on which the CCMP is focused, available at www.cercarbono.com, section: Documentation.

6.2 CCMP start date

Climate change mitigation activities that can demonstrate additionality through the application of **Cercarbono's Tool to Demonstrate Additionality of Climate Change Mitigation Initiatives** and that have started their operation as of 01 January 2016 may be registered in Cercarbono for credit generation, regardless of the provisions of the selected methodology(ies), as long as they complete their registry in the programme by 31 July 2023, unless

the regulatory framework under which the credits are used provides for a shorter retroactivity period. This condition does not apply in the case of initiatives that have been duly registered in other certification programmes and migrate to Cercarbono, in which case the initiative may have been under implementation for longer periods of time, provided that no more than five years have elapsed since the time of its last verification. More information on this can be found in [Section 10](#). The start of operation is understood as the moment when the activity starts to generate climate change mitigation results.

From 01 August 2023, Cercarbono will allow a retroactivity of five years from the initial validation stage¹⁰, for both the start of the mitigation activity and the generation of credits.

6.3 Methodology description

A CCMP must select one methodology (if it is a grouped project or includes activities not covered by a single methodology, but complementary to its activity, it may select more than one) to demonstrate its mitigation results, which must be adopted according to the type of CCMP to which it corresponds and to the regulation under which it is framed.

The protocol allows the use of methodologies and their components, as well as complementary methods, modules, or tools (always implementing their latest version) developed in the framework of *ISO 14064-2:2019*. Methodologies include those:

- Approved by the Meth Panel of the United Nations Framework Convention on Climate Change (UNFCCC) for the CDM.
- Recognised in national contexts according to the type of CCMP, which are aligned with their current legal framework and if their use is free or authorised by the authors. For acceptance, a Cercarbono team shall assess the soundness of the methodology and its alignment with the principles and procedures of its certification programme.
- Developed by stakeholders¹¹ (CCMP's developers or holders, or independent companies) under public consultation processes supported by Cercarbono (see [Section 6.12.2](#)).
- Generated by Cercarbono, publicly consulted, and reviewed by a third party (see [Section 6.12.2](#)).

Cercarbono website lists the regulations, procedures, tools, and methodologies accepted under this protocol. Where CDM-approved methodologies are used, the use or non-use of complementary modules or tools must be justified.

Any methodology, method, module, or tool that is not on the list but meets the above characteristics may be submitted to the Cercarbono certification programme for consideration by sending a request to info@cercarbono.com.

¹⁰ It corresponds to the time when the PMCC ends its public comment period.

¹¹ For this purpose, the guidelines in the document *Procedures of Cercarbono's Certification Programme*, available at www.cercarbono.com, section: Documentation, should be followed.

Methodologies or tools from the CDM can be used without permission but must be properly referenced in the documents (name, version, year, etc.), and the current version must be implemented.

Methodologies or tools from standards or certification programmes other than the CDM can be used if the CCMP considers their copyrights or license (when applicable). To avoid conflicts with other certification schemes, it is encouraged to use Cercarbono's own methodologies or tools developed by Cercarbono, which should also be duly referenced in the CCMP documents.

New methodologies / any other tools from stakeholders involved in the carbon market context can be made publicly available on the Cercarbono website, subject to prior authorisation and support of the corresponding certification scheme (see [Section 6.12.2](#)).

CCMPs must establish and justify the applicability conditions of the selected methodology or methodological tools used to:

- Establish eligibility, in the case of a CCMP in the land use sector.
- Determine baseline and project scenarios.
- Estimate GHG emissions or removals in the baseline scenario.
- Quantify net GHG emissions and removals or net GHG emission reductions in the project scenario and leakage, if applicable.
- Identify risks of non-permanence, where appropriate.
- CCMP monitoring.

Methodologies usually integrate the following points, however, the most important components that must be fulfilled under the framework of this protocol are detailed here:

6.3.1 Additionality

Additionality criteria established by the Cercarbono certification programme are detailed in ***Cercarbono's Tool to Demonstrate Additionality of Climate Change Mitigation Initiatives***, available at www.cercarbono.com, section: Documentation.

This criterion will be reviewed by Cercarbono following certification events throughout the CCMP's crediting period, as detailed in ***Procedures of Cercarbono's Certification Programme***, available at www.cercarbono.com, section: Documentation.

The methodologies used by the CCMPs must be aligned with the additionality criteria established herein.

6.3.2 Eligibility

For land use CCMPs, eligibility requirements are defined according to the selected methodology that has been accepted or developed by Cercarbono.

This section does not apply for CCMP in sectors other than land use.

6.3.3 Non-permanence

Given that risks of reversal of GHG removal or reduction¹² (avoidance) of GHG emissions may occur in the land use sector, the CCMP shall use the ***Cercarbono's Tool to Estimate Carbon Buffer in Initiatives to Mitigate Climate Change in the Land Use Sector***, available at www.cercarbono.com, section: Documentation.

This section does not apply for CCMP in sectors other than land use.

The ***Procedures of Cercarbono's Certification Programme*** document details the management of the programme's buffer and the mechanisms for review, control, monitoring, and response to possible reversals that may occur in this type of projects.

6.3.4 Establishment of the baseline scenario

The CCMP must determine the baseline scenario according to the selected methodology, considering all plausible alternatives, including the proposed CCMP as one of the possible scenarios. If the CCMP is equal to the baseline scenario, then the CCMP is not valid as it is deemed not additional.

The CCMP must apply criteria and procedures to identify and justify the baseline scenario, considering the following:

- Description of the CCMP, including all identified GHG emission sources and carbon pools.
- Types, activities, and technologies of existing and alternative programmes or projects that provide equivalent products or services' type and level of activity for the CCMP.
- Data availability, reliability, and limitations.
- Other relevant information on present or future conditions, such as regulations or laws governing it, technical, economic, socio-cultural, environmental, geographic, site-specific, and temporal assumptions or projections.

The CCMP should demonstrate functional equivalence in the type and level of activity of the products or services provided in the baseline and project scenarios and should explain, as appropriate, any significant differences between them.

The justification of the baseline scenario should consider its future behaviour (GHG emission sources and carbon pools) to comply with the principle of conservatism.

The CCMP must select and justify assumptions, values and procedures ensuring GHG removals or GHG emission reductions are not under- or overestimated, respectively, in the baseline scenario.

¹² Non-permanence does not apply to land use CCMPs where their programme or project activity is focused on the reduction (destruction) of GHG emissions.

6.3.5 Establishment of the project scenario

The CCMP must provide a description of its activity and the means used to achieve GHG removals or GHG emission reductions consistent with the selected methodology.

A CCMP developed in the land use sector must include:

- A description of forestry activities (where applicable) including forest planning, species type and justification for use, production of plant material, establishment and maintenance of plantations and harvesting.
- A description of agricultural activities (where applicable) including type of woody species implemented and justification for their use, establishment and maintenance of crops and harvesting.
- Information (where applicable) on any conservation, management, or planting activities to be undertaken in the CCMP area, including a description of how various organisations, communities and other entities are involved.
- Information (where applicable) on innovative processes or technologies to be implemented in the CCMP area, including a description of how they generate GHG removals other than from carbon pools or GHG emission reductions from the implementation of modern technologies.

For CCMPs other than in the land use sector, the following must be included:

- A description of the main manufacturing or production technologies, systems and equipment involved, including information on the age and average lifetime of the equipment according to manufacturer's specifications and industry standards, as well as existing and expected capacities, load factors and efficiencies.
- The types and levels of services (typically in terms of mass or energy flows) supplied by the systems and equipment being modified or installed and their relationship, if any, with other manufacturing or production equipment and systems outside the CCMP limits. It should be described how this would have been done in the baseline scenario.
- If applicable, a list of the facilities, systems, and equipment in operation under the existing scenario prior to implementation of the CCMP.

The CCMP must describe the selection or establishment of criteria, procedures, or methodologies for quantifying GHG emissions and removals or GHG emission reductions during the implementation and operation of the CCMP. It should also detail the criteria and procedures for quantifying them and demonstrate that they are additional to what would occur compared to the established baseline scenario.

The possible baseline and project scenarios should cover the same time period.

6.3.6 Identification of GHG emission sources

The following are the GHG emission sources ([Table 2](#)) that can be considered in a CCMP in the baseline and project scenarios, including leakage, according to their activity type.

Table 2. GHG emission sources by CCMP type.

Sector/Activity of the CCMP	Baseline scenario			Project scenario			Leakage		
	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O
Energy									
Energy efficiency (EE)	Yes	Dp	No	Yes	Dp	Dp	Dp	Dp	No
Fuel or feedstock switch (FS)	Yes	Dp	No	Yes	Dp	Dp	Dp	Dp	No
GHG emission avoidance (GEA)	Yes	No	No	Dp	No	No	No	No	No
Displacement of a more-GHG-intensive output (DispG - RE, LCE)	Yes	Dp	No	Dp	Dp	No	Dp	No	No
Industry									
Energy efficiency (EE)	Yes	No	No	Yes	No	No	Dp	No	No
Fuel or feedstock switch (FS)	Yes	No	No	Yes	Dp	Dp	Dp	No	No
GHG emission avoidance (GEA)	Yes	Dp	Dp	Dp	Dp	Dp	Dp	No	No
GHG destruction (GDest)	Yes	Dp	No	Yes	No	No	Dp	No	No
Displacement of a more-GHG-intensive output (DispG - RE, LCE)	Yes	No	No	Yes	No	No	Dp	No	No
Construction									
Fuel or feedstock switch (FS)	Yes	No	No	Yes	No	No	Dp	No	No
Displacement of a more-GHG-intensive output (DispG - LCE)	Yes	No	No	Yes	No	No	Dp	No	No
Transport									
Energy efficiency (EE)	Yes	No	No	Yes	No	No	Dp	No	No
Fuel or feedstock switch (FS)	Yes	No	No	Yes	No	No	Dp	No	No
Displacement of a more-GHG-intensive output (DispG - RE, LCE)	Yes	No	No	Yes	No	No	Dp	No	No
Mining and mineral production									
Fuel or feedstock switch (FS)	Yes	No	No	Yes	No	No	No	No	No
GHG destruction (GDest)	Yes	No	No	Yes	No	No	No	No	No
Displacement of a more-GHG-intensive output (DispG - RE)	Yes	Dp	No	Yes	Dp	No	No	No	No
Metal production									
Energy efficiency (EE)	Yes	No	No	Dp	No	No	No	No	No
Fuel or feedstock switch (FS)	Yes	No	No	Dp	No	No	No	No	No
GHG emission avoidance (GEA)	Yes	No	No	Dp	No	No	No	No	No
Displacement of a more-GHG-intensive output (DispG - RE)	Yes	No	No	Yes	No	No	No	No	No
Fugitive emissions									
GHG emission avoidance (GEA)	Dp	Dp	No	Dp	Dp	No	Dp	No	No
GHG destruction (GDest)	Yes	Yes	No	Dp	Dp	No	No	No	No
Waste management									
Energy efficiency (EE)	Yes	Yes	No	Yes	Dp	Dp	Dp	No	No
GHG emission avoidance (GEA)	Yes	Yes	No	Yes	Yes	Dp	Dp	No	No
GHG destruction (GDest)	Yes	Yes	Dp	Yes	Yes	Dp	Dp	Dp	Dp
Displacement of a more-GHG-intensive output (DispG - RE)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
Land use									
GHG removal (GRem)	No	Dp	Dp	Dp	Dp	Dp	Dp	Dp	Dp
Fuel or feedstock switch (FS)	Yes	Dp	No	Yes	Dp	No	No	No	No
GHG emission avoidance (GEA)	Yes	Dp	Dp	Yes	Dp	Dp	No	No	No
GHG destruction (GDest)	Yes	Yes	No	Yes	Dp	No	Dp	No	No

Note: Dp: depends on the type of CCMP and the methodology applied; in these cases, it is necessary to justify its inclusion or exclusion.

The type of GHG emission source varies according to the CCMP's own characteristics. These sources are defined and justified in detail in an approved GHG quantification methodology selected for the development of a CCMP.

Table 2 highlights the most common and important GHGs generated in each sector. However, other types of GHGs that are relevant in each sector must be considered in the CCMP and the selected methodology, which prevails over the emission sources presented in **Table 2**.

Following, a general description of the GHG emission sources that could be considered in each of the sectors according to the CCMP activity type listed in **Table 2** is provided as a guideline.

6.3.6.1 Energy sector

- For EE CCMPs:

In the baseline scenario, CO₂ emissions due to the use of fossil fuels for electricity or heat generation (steam or non-steam thermal energy) or in cogeneration, where applicable, as well as those generated in the production of chilled water or for plant operation, should be considered. In addition, where applicable, CH₄ emissions from uncontrolled burning or decomposition of surplus biomass residues.

In the project scenario, CO₂ emissions due to the use of fossil fuels for electricity or heat generation (steam or non-steam thermal energy) must be considered. In CCMPs involving cogeneration, CO₂ emissions from the use of fossil fuels in parts of the process, from on-site power generation (electricity and heat), from the production of chilled water and from their installations must be considered. For CCMPs including biomass, CH₄ emissions from biomass burning for energy generation, CO₂, CH₄ and N₂O emissions due to energy crops for feedstock production and CO₂ emissions from transport or processing of biomass on-site and off-site must be considered.

In some CCMPs of this type, it is expected that no emissions will be generated by leakage; however, consideration must be given to the different activities that generate them, such as CO₂ and CH₄ emissions due to extraction, processing, liquefaction, transport, regasification, and distribution of fossil fuels in natural gas CCMPs. CO₂ emissions associated with the exhaust of recovered heat whose diversion to power units may increase emissions elsewhere, as well as CO₂ and CH₄ emissions due to the diversion of biomass residues for other applications or due to the displacement of upstream activities to the CCMP must also be considered.

- For FS CCMPs:

In the baseline scenario, CO₂ emissions due to the use of fossil fuels for electricity or heat generation (steam or non-steam thermal energy) or in cogeneration schemes must be considered, where applicable. CH₄ emissions from uncontrolled burning or decomposition of surplus biomass residues, where applicable, must also be considered.

In the project scenario, CO₂ emissions due to the use of fossil fuels for electricity or heat generation (steam or non-steam thermal power) must be considered. In CCMPs involving cogeneration, CO₂ emissions due to the use of fossil fuels for process elements, on-site power generation (electricity and heat) and by their installations must be considered. For CCMPs that include biomass, CH₄ emissions from burning biomass for energy generation and CO₂, CH₄ and N₂O emissions due to energy crops for feedstock production, as well as CO₂ emissions from transport or processing of biomass on-site and off-site must be considered.

Where applicable, the different activities that generate emissions from leakage must be considered.

- For GEA CCMPs:

In the baseline scenario, CO₂ emissions due to the use of fossil fuels for electricity or heat generation (steam or non-steam thermal energy) or in cogeneration, where applicable, must be considered.

In the project scenario, GHG emissions are expected to be avoided or not generated; however, the different activities that generate GHG emissions must be considered.

In CCMPs of this type, no emissions are generated by leakage.

- For DispG (RE - LCE) CCMPs:

In the baseline scenario, CO₂ emissions due to the use of fossil fuels or due to the generation of electricity or heat (steam or non-steam thermal energy) or in cogeneration must be considered, where applicable. CH₄ emissions from burning or decomposition of organic matter must also be considered, where applicable.

In the project scenario, it is expected that no or displaced GHG emissions will be generated; however, the different activities that generate GHG emissions should be considered.

In this type of CCMP, no significant sources of leakage are expected; however, the different activities that could generate leakage must be considered.

6.3.6.2 Industry sector

- For EE CCMPs:

In the baseline scenario, CO₂ emissions due to fossil fuel consumption and energy consumption for the preparation of raw materials, alternative fuels and for the operation of equipment must be considered.

In the project scenario, CO₂ emissions due to electricity consumption (grid and self-generated), raw material preparation, alternative fuels and equipment operation are to be considered.

Depending on the type of CCMP, different emission sources for leakage are either considered or not.

- For FS CCMPs:

In the baseline scenario, CO₂ emissions from the use of fossil fuels, from the consumption of electricity from the national grid or captive source, steam and from the preparation of alternative feedstock and fuels (e.g., drying of materials or fuels with external dryers) must be considered. CO₂ emissions, where applicable, in thermal energy processes and cogeneration plants must also be considered.

In the project scenario, CO₂ emissions due to the use of fossil fuels for electricity or heat generation (steam or non-steam thermal energy) must be considered. For cogeneration CCMPs, CO₂ emissions due to the use of fossil fuels in parts of the process, those due to on-site power generation (electricity and heat) and those generated by their installations must be considered. For geothermal CCMPs, fugitive CO₂ and CH₄ emissions from non-condensable gases contained in geothermal steam and CO₂ emissions from the use of fossil fuels must be considered. For hydro CCMPs with established reservoirs, CH₄ emissions from solid or liquid waste disposal must be considered. For solar CCMPs, CO₂ emissions from the use of fossil fuels in ancillary operations and for solar production processes must be considered. For CCMPs that include biomass, CH₄ emissions from biomass burning for energy generation, CO₂, CH₄ and N₂O emissions due to energy crops for feedstock production, CO₂ emissions from transport or processing of biomass on-site and off-site and CH₄ emissions from wastewater in biomass treatment must also be considered.

In some CCMPs of this type it is expected that no emissions by leakage will be generated; however, the different activities that generate them must be considered, such as CO₂ emissions from transport and collection of biomass, from diversion of biomass residues from other use applications, from the change of activities prior to the CCMP, and from fuel extraction, processing, liquefaction, transport, regasification, and distribution of fossil fuels.

- For GEA CCMPs:

In the baseline scenario, CO₂ emissions from fossil fuel use for heat generation and CH₄ emissions from uncontrolled burning or decomposition of biomass residues must be considered.

In the project scenario, where applicable, CO₂ emissions from fossil fuel use, on-site electricity generation and biomass transport, CH₄ emissions from biomass treatment wastewater and CH₄ and N₂O emissions from energy crops for feedstock production must be considered.

CO₂ emissions from leakage due to diversion of biomass residues and change of pre-CCMP activities must also be considered.

- For GDest CCMPs:

In the baseline scenario, CO₂ emissions from the use of fossil fuels to generate heat or power as well as fluorinated GHGs (CF₄, C₂F₆, CHF₃, CH₃F, CH₂F₂, C₃F₈, c-C₄F₈ and SF₆) that are released to the atmosphere after being used in industrial production processes are to be considered. Emissions of CH₄ from the use of biomass are considered.

In the project scenario, only CO₂ emissions from fossil fuel use must be considered, where applicable, as fluorinated GHGs are recovered and destroyed in a catalytic oxidation unit within the destruction process. In some cases, CH₄ is recovered and combusted.

In some CCMPs of this type it is expected that no emissions from leakage will be generated; however, the different activities that generate leakage must be considered.

- For DispG (RE - LCE) CCMPs:

In the baseline scenario, CO₂ emissions due to the use of fossil fuels for electricity or heat generation (steam or non-steam thermal energy) or from cogeneration, where applicable, should be considered.

In the project scenario, CO₂ emissions due to the use of fossil fuels must be considered.

Significant sources of leakage are not expected in this type of CCMP; however, the different activities that generate leakage must be considered. For CCMPs that include biomass, CO₂ emissions due to transport must be considered.

6.3.6.3 Construction sector

- For FS CCMPs:

In the baseline scenario, CO₂ emissions from fossil fuel or feedstock use within the traditional building or wall material (brick and cement) construction processes are to be considered.

In the project scenario, GHG emissions from the use of building materials and wall material (gypsum concrete) are expected to be reduced.

For some CCMPs of this type, it is expected that no emissions from leakage will be generated; however, the different activities that generate leakage should be considered.

- For DispG (LCE) CCMPs:

In the baseline scenario, CO₂ emissions from the use of fossil fuels within the traditional construction processes or material (brick and cement) walls should be considered.

In the project scenario, GHG emissions from the use of building materials and wall material (gypsum concrete) are expected to be displaced.

In some CCMPs of this type, it is expected that no emissions from leakage will be generated; however, the different activities that generate leakage should be considered.

6.3.6.4 Transport sector

- For EE CCMPs:

In the baseline scenario, CO₂ emissions by mobile sources from different modes of road (bus, minibus tour, train, motorbike, taxi), air (light aircraft, aeroplane), and sea (boat, ship, among others) transport must be considered.

In the project scenario, CO₂ emissions from fuel use and the installation of more efficient equipment that generates less energy consumption must be considered.

In this type of CCMP, no significant sources of leakage are expected; however, the different activities that generate them must be considered.

- For FS CCMPs:

In the baseline scenario, CO₂ emissions by mobile sources from different modes of road (bus, minibus tourism, train, motorbike, taxi), air (light aircraft, aeroplane), and sea (boat, ship, among others) transport must be considered.

In the project scenario, CO₂ emissions from the use of fuels or low-emission raw materials or electricity, on land, air, or sea transit journeys (feeder and trunk routes, as appropriate), must be considered.

Significant sources of leakage are not expected in this type of CCMP; however, the different activities that generate them should be considered.

- For DispG (RE - LCE) CCMPs:

In the baseline scenario, CO₂ emissions by mobile sources from different modes of road, (bus, minibus tourism, train, motorbike, taxi), air (light aircraft, aeroplane) and sea (boat, ship, among others) transport must be considered.

In the project scenario, CO₂ emissions due to fuel use are not to be considered or are reduced, as the transport modes are changed to bicycles or electric tricycles partially displacing the existing transport system operating under mixed traffic conditions. However, CO₂ emissions from the use of low-emission fuels must be considered for land, air, and maritime transit journeys (feeder and trunk routes, as appropriate).

Significant sources of leakage are not expected in this type of CCMP; however, the different activities that generate them should be considered.

6.3.6.5 Mining and mineral production sector

- For FS CCMPs:

In the baseline scenario, CO₂ emissions from the use of fossil fuels to generate energy must be considered as well as carbonates that are released to the atmosphere after being used in mineral production processes.

In the project scenario, only CO₂ emissions from fossil fuel use, where applicable, or from carbonate-containing feedstocks must be considered.

In this type of CCMP it is expected that no emissions from leakage will be generated.

- For GDest CCMPs:

In the baseline scenario, CO₂ or CH₄ emissions generated and released to the atmosphere by operating mines and geological structures must be considered.

In the project scenario, CO₂ emissions can be generated and used for power or heat generation.

In this type of CCMP it is expected that no leakage emissions are generated.

- For DispG (ER) CCMPs:

In the baseline scenario, CO₂ or CH₄ emissions are generated by burning or decomposition of biomass in materials production.

In the project scenario, CO₂ or CH₄ emissions are generated in the production of materials by lower carbon fuels and biomass burning, respectively.

No significant sources of leakage are expected in this type of CCMP.

6.3.6.6 Metal production sector

- For EE CCMPs:

In the baseline scenario, CO₂ emissions are produced by fossil fuel and material use in metal production.

In the project scenario, GHG emissions are reduced, and more efficient equipment is used.

No significant sources of leakage are expected in this type of CCMP.

- For FS CCMPs:

In the baseline scenario, CO₂ emissions are produced by use of fossil fuels within mineral or steel and iron production.

In the project scenario, GHG emissions are reduced by reduced use of polluting material and by switching from fossil fuels to charcoal (or other less carbon-intensive fuel options) as a renewable energy source or by switching to cleaner feedstocks.

No significant sources of leakage are expected in this type of CCMP.

- For GEA CCMPs:

In the baseline scenario, CO₂, PFCs and SF₆ emissions occur during metal production or smelting.

In the project scenario, CO₂, PFCs and SF₆ emissions are avoided due to the use of gas, lower energy consumption and improved metal production / smelting processes.

No significant sources of leakage are expected in this type of CCMP.

- For DispG (RE) CCMPs:

In the baseline scenario, CO₂ emissions are produced from the use of fossil fuels in metal production (especially iron and steel).

In the project scenario, CO₂ emissions are reduced in metal production by implementing processes or activities that displace the use of fossil fuels.

No significant sources of leakage are expected in this type of CCMP.

6.3.6.7 Fugitive emissions sector

- For GEA CCMPs:

In the baseline scenario, CO₂ and CH₄ emissions generated in the oil and gas and fuel production and processing, storage, transport, and distribution systems can be considered. GHG emission sources in PMCC aiming to fugitive emissions reduction to be considered include GHG emissions from leaks in systems, equipment, and components.

In the project scenario, CO₂ and CH₄ emissions can be considered.

Significant sources of leakage are not expected in this type of CCMP; however, the different activities that generate them must be considered.

- For GDest CCMPs:

In the baseline scenario, CO₂ and CH₄ emissions from production processes are to be considered. In the project scenario, CO₂ emissions are expected to be reduced (destroyed). In this type of CCMP, no emissions from leakage are expected to be generated.

6.3.6.8 Waste management sector

- For EE CCMPs:

In the baseline scenario, CO₂ emissions from heat generation and waste decomposition on site must be considered as well as CH₄ emissions from anaerobic lagoons, sludge pits and electricity generation.

In the project scenario, CO₂ emissions from fossil fuel use and electricity use must be considered, as well as CO₂, CH₄ and N₂O emissions from waste treatment processes and CH₄ emissions from wastewater treatment.

CH₄ emissions associated with composting and co-composting, anaerobic digestion, and the use of Refuse Derived Fuel (RDF) and stabilised biomass (BE) must be considered as leakage.

- For GEA CCMPs:

In the baseline scenario, CO₂ emissions due to energy generation (electricity or thermal) and due to sludge transport, as well as CH₄ emissions due to waste decomposition in the landfill and due to wastewater and sludge treatment must be considered.

In the project scenario, CO₂ emissions from electricity consumption, fossil fuel use, and transport, as well as CH₄ emissions from wastewater and sludge treatment and waste decomposition in landfills and, where applicable, CH₄ and N₂O emissions from landfill aeration must be considered.

Significant sources of leakage are not expected in this type of CCMP; however, consideration should be given to the different activities that may generate leakage.

- For GDest CCMPs:

In the baseline scenario, CO₂ emissions from electricity consumption or generation and from heat generation, CH₄ emissions from waste decomposition and from manure treatment processes, as well as CO₂ and CH₄ emissions from natural gas use and CH₄ and N₂O emissions from waste treatment processes must be considered.

In the project scenario, CO₂ emissions from the use of fossil fuels to generate electricity or heat or used for transport and CO₂ emissions due to electricity consumption, as well as CH₄ emissions from flaring, CO₂ and CH₄ emissions from landfill gas distribution and N₂O and CH₄ emissions from waste and manure treatment processes, sludge composting, and manure storage tanks must be considered.

No significant sources of leakage are expected in this type of CCMP; however, the different activities that generate CH₄ emissions from the application of treated manure to the soil, as well as those related to anaerobic digestion in a digester, in addition to CO₂, CH₄ and N₂O emissions from the application of treated waste to the soil and from the transport of treated sludge or effluent, must be considered.

- For DispG (RE) CCMPs:

In the baseline scenario, CO₂ emissions from heat generation and combustion, and CH₄ and N₂O emissions from waste decomposition on site must be considered.

In the project scenario, CO₂ emissions from fossil fuel use and electricity use must be considered, as well as CO₂, CH₄ and N₂O emissions generated in waste treatment processes and CH₄ emissions from wastewater treatment. Although GHG emissions are expected to be reduced by the implementation of alternative processes in waste treatment, such as composting, gasification, anaerobic digestion with biogas collection and flaring or its use, mechanical/thermal treatment process to produce RDF and BE and its utilisation and incineration of fresh waste for energy generation.

CH₄ emissions associated with composting and co-composting, anaerobic digestion and the use of RDF and SB must be considered as leakage.

6.3.6.9 Land use sector

- For GRem CCMP:

In the baseline scenario, CH₄ and N₂O emissions associated with site preparation and fertiliser use should be considered where applicable.

In the project scenario, burning for site preparation is not accepted (only in the woody crops segment if allowed by law); in this type of emissions, CO₂ is not considered as a source, but is accounted for as a change in carbon stock. GHG emissions from fertiliser use should be included unless they are not significant.

Significant emissions from leakage are not expected in this type of CCMP; however, emissions that generate CH₄ emissions from displacement of agricultural or livestock activities must be considered.

- For FS CCMPs:

In the baseline scenario, CO₂ emissions from fossil fuel use and CH₄ emissions from disposal of faeces, biomass or waste that decompose anaerobically and are emitted to the atmosphere must be considered.

In the project scenario, CO₂ and CH₄ emissions are reduced by changing feedstock, fuel, and due to the use of biogas.

No significant sources of leakage are expected in this type of CCMP.

- For GEA CCMPs:

In the baseline scenario, CO₂ emissions from fuel use and, where applicable, N₂O emissions from fertiliser use and CH₄ due to anaerobic decomposition of organic matter must be considered.

In the project scenario, CO₂ and CH₄ emissions are reduced by changing practices or management, fuel switch and less fertiliser usage or due to the use of nitrogen-fixing bacteria.

Significant sources of leakage are not expected in this type of CCMPs; however, consideration must be given to the different activities that may generate leakage or CCMPs that include leakage, as in the case of REDD+.

- For GDest CCMPs:

In the baseline scenario, CO₂ emissions from fossil fuel use and CH₄ emissions from disposal of faeces, biomass or waste that decompose anaerobically and are emitted to the atmosphere must be considered.

In the project scenario, CO₂ emissions from fossil fuel use and CH₄ emissions from waste or faeces management systems that are captured, destroyed, or used as an energy source must be considered.

Significant sources of leakage are not expected in this type of CCMP; however, the different activities that may generate them must be considered.

6.3.7 Identification of carbon pools

For CCMP in the land use sector, the carbon pools to be considered in the baseline and project scenarios are above-ground biomass, below-ground biomass, dead wood, litter, and soil organic carbon. When estimating carbon stocks in the carbon pools, above-ground biomass and below-ground biomass must be considered as a minimum. The CCMP may or may not consider carbon in dead wood, litter, and soil organic carbon. The inclusion of carbon pools varies according to the specific characteristics of the CCMP and is defined and justified in detail in approved and selected methodologies that include the estimation or calculation of carbon stock changes.

For CCMPs other than the land use sector, this section does not apply.

6.3.8 Selection of emission sources and carbon pools for monitoring or estimating GHG emissions and removals

The CCMP shall select and apply the criteria and procedures for estimating or monitoring the selected GHG emission sources and carbon pools, using appropriate and reliable data, providing justification for not selecting any GHG emission source or carbon pool identified as optional for monitoring, according to the criteria of the selected methodology. Monitoring methods and procedures should be consistent with the baseline and monitoring methodology(ies) used in the preparation of the PDD.

The CCMP may use direct measurement or estimation methods to identify and select GHG emission sources and carbon pools for subsequent quantification. In any case, the criteria¹³ used in their selection must be consistent with the principles set out in this protocol.

The exclusion of GHG emission sources in the quantification can be justified if comparisons between baseline and project scenarios show no changes. Meanwhile, carbon pools may be excluded in the quantification if it is demonstrated that the carbon pool is not a net source of GHG emissions or removals; therefore, the CCMP must identify the relevant GHG emission sources and pools according to which it considers controlling or which are related to or affected by the CCMP. That is, it is solely responsible for changes in GHG emissions and removals from the sources (including leakage) and carbon pools that the CCMP affects.

6.3.9 Quantification of GHG emissions and removals in the baseline scenario

The CCMP shall establish the criteria, procedures, and methodologies for quantifying GHG emissions and removals in the baseline scenario, quantifying GHG emission sources and carbon pools (if applicable) separately, converting the amount of each type of GHG to tCO₂e.

The baseline scenario is estimated for the total duration of the CCMP and should be based on the principles outlined in [Section 3.1](#).

6.3.10 Quantification of GHG emissions and removals and GHG emission reductions in the project scenario

The CCMP shall set out the criteria, procedures, and methodologies for quantifying GHG emissions and removals as well as GHG emission reductions or leakage that may occur in the project scenario, quantifying GHG emission sources, carbon pools and leakage (if applicable) separately, converting the amount of each type of GHG to tCO₂e.

The project scenario is estimated for the entire duration of the CCMP and should be based on the principles outlined in [Section 3.1](#).

In the baseline and project scenarios, if applicable, depending on the selected methodology, the CCMP must select or develop GHG emission or removal factors that:

- Are derived from a recognised source.
- Are appropriate for GHG emission sources (including leakage, if applicable), and carbon pools (if applicable).
- Are appropriate at the time of quantification.
- Generate accurate and reproducible uncertainty quantification results.

¹³ Criteria may consider a balance between practicality and cost-effectiveness with CCMP principles. It may consider the choice of good practice on how to respond to some of the decision criteria (e.g., when considering whether a GHG emission source or carbon pool is related by flows to or from the baseline or project scenario). Ultimately, the decision to estimate, measure or monitor a GHG emission source or carbon pool may be based on the costs of the monitoring effort versus the significance of the impact on the CCMP's GHG removals or GHG emission reductions.

- Consistent with the intended use of the PDD.

6.3.11 Estimation of net GHG emissions and removals and projected net GHG emission reductions

In CCMPs considering GHG removal activity, net GHG removals are quantified as the difference between the net removals (discounting emissions) in the project scenario and the net removals (also discounting emissions) in the baseline scenario.

In CCMPs considering GHG emission reduction activity, net GHG emission reductions are quantified as the difference between the net reductions (discounting emissions) in the baseline scenario and the net reductions (also discounting emissions) in the project scenario.

In both cases, these calculations must be performed annually for each GHG emission source, (including leakage if applicable) and carbon pool (if applicable) in the baseline and project scenarios, converting the amount of each type of GHG to tCO₂e.

The CCMP shall select and apply criteria and procedures from ***Cercarbono's Tool to Estimate Carbon Buffer in Initiatives to Mitigate Climate Change in the Land Use Sector***, available at www.cercarbono.com, section: Documentation, developed to support an eventual reversal of the CCMP's GHG removal or GHG emission reduction (avoidance) activity according to the selected methodology.

6.3.12 Methodological revisions and deviations

CCMP may request a deviation from an approved methodology if:

- The deviation does not adversely affect the conservative principle of the methodology.
- The deviation does not represent a violation of the regulatory framework applicable to the CCMP activity.

See **Section 5.4**.

6.4 CCMP monitoring

Once the CCMP has identified GHG emission sources and carbon pools, it must identify the data or parameters related to these sources and pools that are estimated or quantified based on actual measurements to calculate the baseline and project scenarios. Data collected at the formulation stage help to quantify the GHG emissions and removals of the baseline scenario and data collected after CCMP implementation help to quantify CCMP GHG emissions (including leakage, if applicable) and removals and GHG emission reductions.

In that regard, the CCMP must establish a monitoring plan that includes procedures for measuring or estimating, recording, compiling, and analysing important data and information for quantifying GHG emission sources and carbon pools to determine their GHG

emissions and removals and GHG emission reductions relevant to the project scenario, including, in CCMPs related to land use, a GHG information system using appropriate technologies. The monitoring plan shall include the following, as appropriate:

- Purpose of monitoring.
- List of parameters measured and monitored.
- Types of data and information to be reported, including units and time scale of measurement.
- Data source.
- Monitoring methodologies (estimation, modelling, or measurement), calculation approaches and uncertainty. In case of measurement, establish or include calibration and maintenance protocols for measurement equipment, as appropriate.
- Frequency of monitoring of different variables and components, considering the needs of stakeholders.
- Definition of roles and responsibilities, including procedures for authorising, approving and documenting changes to recorded data.
- Controls including internal assessment of input, transformation and output data, and procedures for corrective actions.
- GHG information management systems, including location and holding of stored data and data management including a procedure for transferring data between different forms of systems or documentation.
- Monitoring report structure.

The nature of the information available for the CCMP determines whether GHG emissions and removals and GHG emission reductions are estimated or quantified based on actual measurements. Normally, prior to the implementation of a CCMP, GHG emissions and removals and GHG emission reductions are estimated (ex-ante), whereas, during CCMP implementation, they can be monitored and measured directly providing actual data for quantification (ex-post). Monitoring and measurement can therefore be carried out with 100 % data measurement or based on a sampling scheme depending on the nature of the data sources.

Where measurement and monitoring equipment is used, the CCMP holder must ensure and have the evidence to demonstrate that it is used and maintained calibrated or verified, as appropriate, in line with its manufacturer's or user's manual. GHG monitoring criteria and procedures are applied according to the monitoring plan.

When the CCMP, after monitoring the CCMP activity (prior to or after a verification event), identifies significant changes in the results of its activity, a reassessment of the project scenario must be performed.

Cercarbono has **Monitoring Report** templates, designed according to the sector and mitigation activity on which the CCMP focuses, available at www.cercarbono.com, section: Documentation, which can serve as a basis for considering the most essential elements of this stage.

6.5 Grouped projects

Grouped projects are those implemented under one or more methodologies (but not using parts or calculation or monitoring methods from several methodologies for the same programme or project activity) from the same sector, focused on GHG removals or GHG emission reductions in a specific area or facility and period, structured to allow for the addition of one or more instances of the mitigation activity or its scaling up after the initial validation. The grouping and eligibility criteria must be explicitly defined in advance in the PDD to allow for the addition of new participants and implementation instances not known at the time of project implementation. The implementation of a grouped project does not require a separate registration, validation, and verification process for each new implementation instance, facilitating the future expansion of the project with reduced transaction costs.

Some examples of clustering criteria are presented below:

- Implementation by the same participants of the initial project (e.g., expansion of the same enterprise).
- Admission of new partners to an existing associative institution (e.g., a cooperative, which is the holder or developer of the project).
- Expansion of an incentive or support programme with rules defined from the outset (e.g., an international cooperation project).

The rules for the inclusion of new participants or implementation instances (eligibility criteria) must be established from the initial design of the project and cannot be modified afterwards. Specifically, the following criteria must be considered:

- The geographical scope in which implementation instances can be added must be defined from the validation stage of the project and cannot be modified afterwards. Under no circumstances may activities implemented in more than one country be grouped together.
- The number of implementation instances that can be added to a grouped project is unlimited.
- Instances that adopt technologies or processes different from those established during the project design cannot be included.
- The inclusion of new instances of implementation does not extend the lifetime of the project, nor does it affect the crediting period.
- The inclusion of new implementation instances must be validated during project verifications.
- The start of activities for each implementation instance can be retroactive up to the date of the previous project verification, starting from the second verification.
- Implementation instances must meet all eligibility requirements and other requirements established in this protocol and in the selected methodology for the initial implementation of the project.

Verifications of all PAs must be performed in a single verification event. The VVB in charge of the verification must assess the compliance of each of the implementation instances with the selected methodology and the relevant rules established in the Cercarbono's certification programme.

An additionality analysis must be carried out for the implementation instances to be added to the project, considering the potential baseline scenarios that correspond to the project status at the time those instances are added.

The baseline and project scenarios need to be updated to reflect the effect of new implementation instances addition on the project; it is not necessary to recalculate for the implementation instances in operation prior to such addition.

The monitoring system can only be changed if the legal regulatory framework of the country in which it operates changes or if such a change is duly justified.

6.5.1 Special considerations for CCMP in the land use sector

In the case of REDD+ projects, if the country where the project would be implemented has defined sub-national reference levels, project implementation can only occur at one of these sub-national levels.

In the case of REDD+ projects, all instances of implementation must include the same activities and pools as initially envisaged in the project. See the Cercarbono REDD+ methodology for more details.

In the case of REDD+ projects developed in community-owned areas, including those located in indigenous territories, remote audits are not accepted, because of the need to assess in the field what has been specified in the PDD, especially regarding ownership of the areas, legal aspects related to community representation and compliance with safeguards; however, hybrid audits could be justified.

Instances of implementation with species, technologies or species' combinations not explicitly defined during project validation may be added.

For grouped CCMPs in the land use sector, if exclusion of areas is considered, this shall occur after two years from the last verification and in this case, the CCMP shall deduct from the total mitigation achieved at the next verification an amount equal to the credits issued corresponding to the excluded areas, as a guarantee of permanence of these credits. For more details see *Section Carbon buffer management of Procedures of Cercarbono's Certification Programme*.

6.6 Programmes of activities

To facilitate and streamline the registration and validation process for project activities that can be implemented by multiple actors in a coordinated but independent manner, Cercarbono allows a **Coordinating Entity** (CEn) to manage them independently through a **Programme of Activities for Climate Change Mitigation (PoA)** in sectors other than land use.

PoAs allow for the participation of an unlimited number of new **Climate Change Mitigation Programme Activities (PAs)** throughout their crediting period, subject to the eligibility requirements set by the selected methodology(ies).

For this purpose, the PoA CEn shall submit a Project Description Document for the PoA (PDD-PoA), defining the general parameters of the PoA and the rules for the addition of new PAs, considering that:

- The geographic scope in which PAs can be aggregated must be defined at the validation stage of the PoA and cannot be modified afterwards. In no case may the PAs be added in more than one country.
- The start of activities of each PA after those registered at the beginning of the PoA can be retroactive to the date of the previous verification of the PoA, starting from the second verification.
- PAs may use any methodology approved by Cercarbono except those belonging to the land use sector.
- PAs must meet all eligibility and other requirements set out in this protocol and in the methodology selected for the initial implementation of the project.
- The inclusion of new PAs must be validated during project verifications.
- Each PA establishes its own crediting period and lifespan, according to the rules established in this protocol for CCMPs.
- Verifications of all PAs must be performed in a single verification event.

The VVB in charge of the verification must assess the compliance of each of the PAs with the selected methodology and the relevant rules set out in the Cercarbono's certification programme.

An additionality analysis must be performed for PAs that are intended to be added to the PoA, considering the potential baseline scenarios that correspond to the PoA status at the time of addition of the PAs.

To supplement information provided in this section, it is recommended to use the most recent version of the ***CDM validation and verification standard for programmes of activities***.

6.7 Useful life

The duration or useful life of the CCMP is established by the holder or developer, who must provide support for choosing such timespan, which includes, but is not limited to, action or management plans (of processes, machinery, equipment, human resources, financial resources, among others) and the useful life cycle of areas, machinery, and equipment, among others. During the validation and verification processes, the VVB must assess and check the legitimacy of the CCMP's lifetime, which is reviewed by Cercarbono during the certification stage.

To demonstrate climate change mitigation results, CCMPs can set a lifetime of 10 to a maximum of 100 years, except in the case of CCMPs in the land use sector, where the minimum lifetime must be 30 years, or CCMPs implemented under an initiative or programme with a limited, less than 10 years lifespan. The established CCMP lifetime cannot be renewed. The start of the implementation of the CCMP activity determines the start date of the CCMP lifetime and thus of the crediting period of the CCMP.

6.8 Crediting period

The crediting period is the timespan during which a CCMP can request verification of its climate change mitigation contribution for carbon credits.

The holder or developer chooses the start date of the crediting period (day.month.year). For CCMP in the land use sector, the crediting period is 20 years, starting from the time it begins generating GHG removals or GHG emission reductions. For CCMP in other sectors, the crediting period is 10 years or equal to the duration or lifetime of the CCMP, if this is less than 10 years, starting from the time it begins generating GHG emission reductions.

6.9 Renewal of the crediting period

After the initial crediting period, if the CCMP has not yet reached the end of its useful life, the crediting period can be renewed by submitting the **Application for Renewal of Crediting Period** form available at www.cercarbono.com, section: Documentation. For CCMP in the land use sector, it can be renewed as many times as desired, for periods of 10 years or for a shorter period, until the end of its lifetime. For CCMP in other sectors, it can be renewed only twice for 10-year periods or for a shorter period provided it does not exceed its useful life. The renewal of the crediting period must be done through a new validation process, in which it is assessed that the CCMP continues to be additional and continues to meet the requirements of this protocol.

Compliance with the additionality criterion is reviewed under verification and certification events throughout the CCMP's crediting period. If changes in the implementation of the CCMP that affect this criterion are detected by the CCMP or the VVB, the PDD must be updated, reassessing the baseline and project scenarios to demonstrate the additionality of the CCMP, supported by a new validation event within the established crediting period.

To renew the crediting period, the CCMP must have had, as a minimum, verifications every five years during the previous crediting period.

For CCMPs that have not performed verifications for the last five or more years, they must provide a justification for such non-performance and comply with the provisions in **Section 8.4.1**.

6.10 Safeguards

To ensure that CCMPs do not produce any net harm in environmental, social, and economic terms, they must comply with the provisions in **Safeguarding Principles and Procedures of**

Cercarbono's Certification Programme document, available at www.cercarbono.com, section: Documentation.

Provisions included in this document should be developed in parallel to the CCMPs contribution to the Sustainable Development Goals.

6.11 Contribution to the Sustainable Development Goals

In the framework of the United Nations Sustainable Development Goals, the CCMP is required to promote and demonstrate activities aimed at improving the environment and the quality of life of local populations, through the adoption of good practices, including the protection of traditional knowledge and improving the use of natural resources. Compliance with all environmental and social laws in the context in which the CCMP is developed is mandatory. In no case is it acceptable for CCMPs to worsen the quality of life of local or surrounding populations.

Therefore, the CCMP must report its contribution to the achievement of the SDGs generated by its activity by completing the **Cercarbono's Tool to Report Contributions from Climate Change Mitigation Initiatives to the Sustainable Development Goals**, available at www.cercarbono.com, section: Documentation. The application of the tool is reviewed by the VVB at validation or verification events. Actual contributions to the SDGs by the CCMP can only be reported and reviewed in the framework of verification events.

REDD+ activities must also support results regarding the safeguards framework established for the CCMP activity type, such as environmental, social and governance measures or safeguards to avoid negative impacts and promote benefits.

CCMPs requiring an environmental impact assessment must do so by following the guidelines set by the competent environmental authority in the country where they are developed. In any case, the CCMP must comply with the environmental legislation applicable in its context. If such guidelines do not exist, one of the following methods may be used:

- Expert judgement.
- Quantitative physical and mathematical models.
- Cumulative impact assessment.
- Interaction matrices and diagrams.
- Rapid Impact Assessment Matrix.
- Battelle environmental assessment system.

CCMPs that report their expected contributions to the SDGs (in their validation) have an identification on the registry platform indicating which SDGs they contribute to. CCMPs that report verified contributions have a stamp on the carbon credit issuance certificate indicating this.

6.12 Effective participation

This section presents the different environments in which Cercarbono facilitates the interaction between the different actors involved in the carbon market for the formulation, development, and transparent implementation of the CCMPs, in a way that guarantees their full and effective participation in accordance with the procedures under which they operate.

Some of these environments are public consultations, which as a planning mechanism allows the effective participation of these actors. In this regard, Cercarbono has established three public consultation types that must be considered by the different stakeholders which are implemented according to the CCMP activity and its requirements.

In addition to consultations, Cercarbono provides a space at www.cercarbono.com, dedicated to frequently asked questions and contact information in section: About us, in which the different stakeholders can also participate. These spaces for effective stakeholder participation are described below.

6.12.1 Public Consultation of CCMPs

When the CCMP is developed in an area where a local population is established or when the CCMP activity may have an environmental, social, or economic impact on local populations or society in general, a public consultation by the CCMP with interested parties is required.

The objective of this consultation is to meaningfully engage stakeholders to discuss the potential environmental, social, and economic impacts (both positive and perceived as potential risks) that may be present during the design, planning, implementation, and operation stages of the CCMP and to establish a feedback mechanism in consultation with stakeholders.

The CCMP holder must report on all mechanisms used for the dissemination of full and relevant consultation information.

If such consultation is necessary (such as in REDD+ projects), it must be carried out during the formulation or validation stages and Cercarbono must be informed in advance, so that it can disseminate it through its media and solicit public participation through the mechanism detailed in [Section 6.12.3](#). Comments received on the Cercarbono website for a period of 30 calendar days from the date of consultation reported by the CCMP are made available to the CCMP, which must give proper consideration to them to update the PDD, as applicable.

For consultation, the CCMP should prepare and make available to stakeholders a descriptive CCMP document, which should:

- Identify stakeholders, which may include a map of actors or organisations, an institutional map of governance structures or institutions and leaders associated with decision-

making in the territory, related to programme or project activities, identifying consensual decisions (and their follow-up) with local governance structures.

- Use a format and develop a content consistent with the nature of the stakeholders' group, which should include as a minimum:
 - The name of the CCMP holder.
 - A brief description of the CCMP, including name, size, location, duration, and type of activities.
 - A summary of the PDD, including GHG emissions and removals or GHG emission reductions in the project scenario and those applicable for the baseline scenario, expressed as tCO₂e.
 - Describe deviations from the selected methodology, if any, and justify why such deviations are required.
 - A list of all relevant GHG emission sources and carbon pools (including criteria for selection and quantification).
 - A description of the baseline scenario.
 - A general description of the criteria and procedures used for the calculation of GHG emissions and removals or GHG emission reductions from the CCMP and those applicable for the baseline scenario, expressed as tCO₂e.
 - The date of the report and period covered.
 - Evidence of the appointment of the authorised legal representative on behalf of the CCMP holder, if different from the CCMP holder.
 - The certification scheme to which the CCMP subscribes.
- Establish a plan or schedule of meetings for CCMP decision-making.
- Establish a mechanism for petitions, claims, complaints and requests and their traceability.
- Establish a conflict management protocol to deal with them, may they arise.
- Generate an agreement document, signed by stakeholders for the development of the CCMP.

This document should be presented and discussed in a meeting between the CCMP and the stakeholders identified in or around the CCMP area. This meeting may result in common agreements or define how stakeholders can contribute. The follow-up to such a document should be reviewed at verification events.

6.12.2 Public consultation of documents, tools and methodologies developed by Cercarbono and other stakeholders

Cercarbono and other stakeholders operating in the context of the carbon market can submit methodologies, methods, modules, or tools based on *ISO 14064-2:2019* for public consultation. For this purpose, Cercarbono has established a dedicated space in www.cercarbono.com, section: Consultations, where public consultation of any of the above referred types of documents is made available for a minimum period of 30 calendar days.

Once the consultation periods are closed, the responses given by Cercarbono and the other stakeholders to each of the comments received are permanently published in the same section.

6.12.3 Comments on projects

For the reception of requests, claims or complaints (anonymous or from an identified source) related to CCMPs registered in Cercarbono, there is a space available at www.cercarbono.com, Section: Consultations/Comments on projects. In this section, projects that are in the Formulation stage are listed for 30 calendar days.

The comments received are analysed by the certification technical team, which takes care of the due process, and duly files and maintain them, along with the response generated (if applicable), in the EcoRegistry platform as confidential documentation.

Additionally, to comment or make requests, claims or complaints about specific projects outside of this timeframe, the Request Mechanism is available, both for making requests regarding specific projects or about Cercarbono or its registry platform, as detailed in [Section 6.12.5](#).

6.12.4 Frequently Asked Questions

This section contains questions and answers relevant to the formulation, development, and implementation of CCMPs, as well as to the contextualisation of actors participating in the carbon market. This section is frequently updated.

6.12.5 Contact and Grievance Mechanism

In the contact section, the different carbon market stakeholders can submit doubts, questions, or point comments, not related to specific CCMPs, through communication channels listed therein.

For the reception of requests, claims or complaints (anonymous or from an identified source) about the Cercarbono certification programme, about the registry platform or about CCMP registered in Cercarbono, there is a space available at www.cercarbono.com, Section: About us/Request Mechanism. The functioning of this mechanism is explained in **Section Grievance Mechanism** of the *Procedures of Cercarbono's Certification Programme*, available at www.cercarbono.com, section: Documentation.

6.13 Legal and document management

CCMPs must keep and maintain all documentation and records generated to demonstrate that the CCMP activity has been implemented as designed. Any deviation of the implementation from the design must be soundly justified. Therefore, the CCMP must have documentation that demonstrates its compliance with the requirements of this protocol. Such documentation must be consistent with the validation and verification requirements of the

Cercarbono certification programme, considering the guidelines of *ISO 14064-2:2019*, which requires:

- Establishing and maintaining a comprehensive reporting system.
- Conducting internal audits and periodic technical reviews.
- Adequate training for project team members.
- Performing periodic verifications to detect technical errors.
- Conducting uncertainty assessments.

The CCMP holder must have documentation demonstrating CCMP's compliance with this protocol. Such documentation must be consistent with that assessed during the validation, verification, and certification processes. The EcoRegistry platform supports all information from the entire project cycle, generated by those responsible for each stage of the project.

6.13.1 Management of legal requirements

The CCMP shall list, describe, and justify compliance with laws, statutes, and regulatory frameworks governing it (at the local, regional, and national levels), applicable to the CCMP activity, including environmental requirements and registration of the CCMP's concrete actions in national registry systems, where applicable.

Additionally, the CCMP holder must sign a declaration that the CCMP has not been registered for carbon credits under any standard or certification scheme, nor for GHG removals or GHG emission reductions required by a specific legal or regulatory framework and that, once registered by Cercarbono, it shall not seek partial or full registration of the CCMP under any other standard or programme, or its use for the fulfilment of any climate change mitigation commitment required by a particular legal or regulatory framework, unless it withdraws the CCMP from Cercarbono in compliance with the requirements defined for that purpose. For this purpose, Cercarbono may request additional information, clarifications, or corrections regarding an already validated CCMP.

6.13.2 Data quality management

The CCMP shall establish and implement data and information quality and management procedures, including uncertainty assessment, relevant to the baseline and project scenarios, as stipulated in the selected methodology. The CCMP should minimise, as far as possible, uncertainties in the quantification of GHG removals or GHG emission reductions.

7 Authorised validation and verification bodies

Validation and Verification Bodies (VVBs) authorised by Cercarbono must demonstrate they are accredited by an International Accreditation Forum (IAF) signatory member accreditation body, which provides services regarding GHG Emission Validation or Verification Body accreditation following the requirements of *ISO 14065* and *ISO/IEC 17029:2019* (see [Section 12.3](#)). VVBs accredited before the CDM as Designated Operational Entity (DOE) are also authorised.

In national contexts, VVBs authorised by Cercarbono must be accredited with the competent national authority (such as the National Accreditation Body -ONAC- in the case of Colombia).

VVBs are required to issue a validation report and validation statement supporting the baseline and project scenario, and a verification report and verification statement indicating that the GHG removals or GHG emission reductions achieved by the CCMP were generated in accordance with the selected methodology and criteria defined in this protocol.

The performance of the VVBs is periodically assessed, as well as in each certification process by Cercarbono's technical team. The list of authorised VVBs is available at www.cercarbono.com.

Cercarbono must review any conflict of interest that arises regarding a VVB or its assigned personnel. If a conflict exists, Cercarbono must appoint a committee to study the case and based on the review and analysis of the conflict, the VVB could or could not be allowed to operate under Cercarbono's voluntary carbon certification programme. For this purpose, Cercarbono has a **VVB Declaration of Conflict of Interest** form, available at www.cercarbono.com, section: Documentation. Such declaration using said form is mandatory prior to the validation and verification processes.

Complementary elements to this section are provided in the **Procedures of Cercarbono's Certification Programme** document, available at www.cercarbono.com, section: Documentation.

8 Stages of the CCMP project cycle

Cercarbono has established the following stages for carrying out the voluntary carbon certification process: formulation, public consultation, validation, verification, and certification¹⁴. These stages are schematically presented in **Figure 2** and explained in the following sections.

8.1 Formulation

To participate in Cercarbono's voluntary carbon certification programme it is necessary to open an account, either on the EcoRegistry platform, or also by logging in through www.cercarbono.com and, in the section: Projects, redirecting to the EcoRegistry platform.

This platform hosts all the information that is part of the pre-registration, formulation, validation, verification, and certification processes for the registration of the CCMP and the issuance, monitoring, transfer, and retirement of the Carboncer.

At this stage the CCMP requests its registration in Cercarbono (and therefore in the EcoRegistry platform), at the email address: info@cercarbono.com.

The developer must have a valid representation document or a special power of attorney from the CCMP that accredits her/him as a representative. Cercarbono has two forms of powers of representation: **Power of Attorney whit Withdrawals** and **Power of Attorney Without Withdrawals**, available at www.cercarbono.com, section: Documentation.

A Cercarbono technical reviewer verifies that the documentation provided is in compliance with the requirements, including an initial review of the absence of non-compliant overlaps, the required authorisations and powers of attorney, proof of ownership or tenure of the area where the CCMP will be implemented¹⁵, among others, as detailed in the **Procedures of Cercarbono's Certification Programme**, available at www.cercarbono.com, section: Documentation.

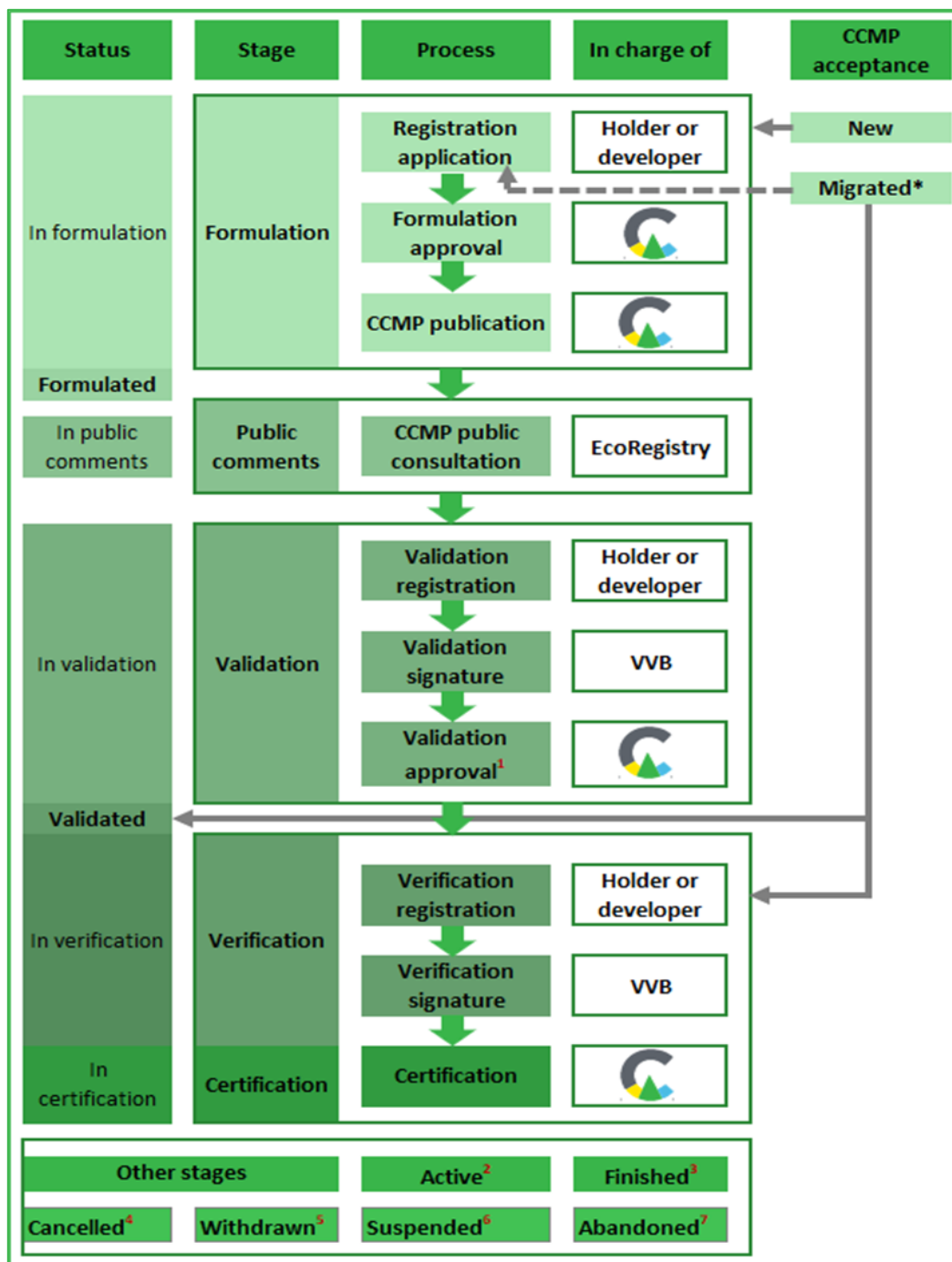
CCMP registration can be done at the formulation stage (new or migrated CCMPs) or at the validation and verification stages (migrated CCMPs).

During this stage, the CCMP appears on the EcoRegistry platform with a **Under formulation** status. Once this stage is approved, and until the validation stage starts, the CCMP appears on the platform with a **Formulated** status.

¹⁴ **Implementation**, i.e., the process by which the CCMP holder, developer or operator executes the CCMP activities set out in the PDD, whereby GHG removal or GHG emission reductions are carried out and **monitoring**, i.e., the process of carrying out measurements and calculations of GHG removal or GHG emission reductions, following the monitoring plan that forms part of the PDD, are not detailed in this section as they are internal processes of the CCMPs.

¹⁵ Specified by geodetic coordinates or polygons to delimit the geographic area(s) comprising the CCMP, in shp (ESRI Shapefile) or kml (Keyhole Markup Language) format.

Figure 2. Cercarbono's certification status, stages, processes, and responsible parties.



*Migrated CCMPs must perform the registration process, but not the remaining formulation processes.

1. Only if the CCMP does not perform joint validation and verification.

2. CCMP under implementation that is not at any other stage.

3. CCMP reaching the end of its lifespan.

4. CCMP holder or developer decides not to continue and requests its cancellation.

5. CCMP the holder withdraws from Cercarbono (e.g., for migration).

6. CCMP inactive due to sanction.

7. CCMP inactive not eligible for reactivation due to elapsed time.

See the ***Procedures of Cercarbono's Certification Programme*** document, available at www.cercarbono.com, Section: Documentation for more information.

8.2 Public comments

Once the formulation is approved, public comment space of the CCMP is opened on the Cercarbono website, which links to the CCMP record on the registry platform and remains open for 30 calendar days. Comments received are processed by Cercarbono, addressed by the CCMP, and become part of the CCMP record on the registry platform.

See the ***Procedures of Cercarbono's Certification Programme*** document, available at www.cercarbono.com, Section: Documentation for more information.

8.3 Validation

At this stage, the CCMP requests the registration of its validation, based on the assessment of its design and its baseline scenario by a VVB. Following the assessment, a validation report is produced. If the CCMP design meets all the requirements of the validation process of this protocol, the selected methodology and the current standards or laws under which it is governed, a validation statement is issued; otherwise, corrective actions are requested for adjustment of the CCMP and subsequent review by the VVB.

At this stage, the technical manager and the assigned expert(s) review the validation documents and compliance with the relevant requirements. If missing items are found or need to be corrected or expanded, change requests can be made on the platform and must be addressed by the VVB or the CCMP developer.

During this stage, the CCMP appears on the EcoRegistry platform with an **Under validation** status. Once this stage is approved, and until the verification stage starts, the CCMP appears on the platform with a **Validated** status.

Note: It is possible to perform simultaneously the validation and verification processes by a VVB, whose compliance is integrated in a single report. In these cases, if there are no corrective actions, a joint validation and verification statement may be generated, which can be used both in the CCMP registration and emission certification by Cercarbono and then in the registration and issuance of carbon credits in EcoRegistry.

The most important elements to consider in the validation process are detailed in the document ***Procedures of Cercarbono's Certification Programme***, available at www.cercarbono.com, section: Documentation.

8.4 Verification

At this stage, the CCMP requests the registration of its verification, based on the assessment of the monitoring of its implementation by a VVB. Following the assessment, a verification report is produced. If the CCMP implementation complies with all the requirements of the verification process in this protocol, the selected methodology and the current standards or laws under which it is governed, a verification statement is issued; otherwise, corrective actions are requested for adjustment of the CCMP and subsequent review by the VVB.

During this stage, the CCMP appears on the EcoRegistry platform with an **Under Verification** status. This stage is approved by Cercarbono during the Certification stage.

Once the CCMP and the VVB upload the required information to the platform and Cercarbono starts the document review, the CCMP appears on the platform with an **Under certification** status.

The most important elements to consider in the verification process are detailed in the document ***Procedures of Cercarbono's Certification Programme***, available at www.cercarbono.com, section: Documentation.

8.4.1 Timing of verification events

CCMPs may conduct verifications (depending on the type of programme or project, mitigation results achieved and developer preferences) at most every six months and at least every five years.

If a CCMP has not performed verifications for four years and nine months in a row, or if its crediting period is about to expire, it receives an automated alert indicating the need for a verification event.

If for some reason the CCMP considers it will not perform such verification within the remaining of the 5-year period, it may be granted a one year grace period, provided Cercarbono programme is notified on the expected delay with a justification, and no later than two months after five years from the last verification have elapsed or, in the case of its first verification, from the start of the CCMP.

If the notification and justification for the delay is not received and the CCMP wishes to carry out a verification with a delay of between one and two years afterwards, it must make a formal notification to Cercarbono, justifying once more such delay and providing evidence of the uninterrupted performance of the monitoring plan.

A CCMP not notifying Cercarbono programme about expected delays in verifications or not justifying such delays, or in any case not carrying out verifications before one year after the maximum allowed period between verifications has elapsed, must undergo a revalidation process justifying the absence of verifications and lose the individual buffer accumulated in previous verifications. If no verification events were carried out in the crediting period granted, the crediting period cannot be renewed; in this case, the mitigation activity can apply as a new programme or project considering the changes the baseline scenario and other implemented elements have experienced; in addition, it must comply with all the requirements set out in the validation and verification processes at the time of formulating the new CCMP.

8.5 Joint validation and verification

8.5.1 VVB requests

The VVB must report requests for clarifications, misstatements, or non-conformities to the CCMP as soon as possible and report intentional errors or non-compliance with governing laws or regulations.

If the CCMP holder fails to respond adequately within a maximum period of six months, the VVB issues a negative validation or verification opinion justifying its withdrawal from the process. Similarly, if the VVB determines that there is insufficient information to support a validation or verification statement, it must request the missing information. If such information is not provided, the process cannot continue.

8.5.2 List of VVB information

The VVB must keep the following records:

- Terms of engagement.
- Validation and verification plan.
- Evidence collection plan.
- Evidence collection.
- Requests for clarifications, corrections or non-conformities arising from the validation and verification, and conclusions reached.
- Communication with the client on important requests.
- Supporting records or documentation collected during audits and field visits.
- Conclusions and opinions of the validation and verification team.

Documentation of CCMP validation and verifications remains available on the EcoRegistry platform for a minimum period of ten years.

8.5.3 Collection of evidence

VVBs in charge of validation and verification processes should use one or more of the following collection activities and techniques:

- Observation.
- Consultation.
- Analytical tests.
- Confirmation.
- Recalculation.
- Examination.
- Tracking.
- Control tests.
- Sampling.
- Estimation.

- Cross-checking.
- Reconciliation.

If the VVB determines that there is insufficient information to issue a validation or verification statement, it should request additional information from the client. If such additional information cannot be obtained, the validator or verifier shall not proceed further.

8.5.4 Facts discovered after validation or verification

The VVB should obtain appropriate and sufficient evidence and identify relevant information up to the date of the validation and verification opinion. If facts or new information that could materially affect the validation and verification opinion are discovered after that date, the VVB should take appropriate action, including communicating the matter as soon as possible to the CCMP. The VVB may also communicate to other interested parties the fact that the reliability of the original opinion may now be compromised given the discovered facts or latest information.

If there is a material adjustment that needs to be made to the GHG statement, the validator or verifier should communicate the need for such adjustment to the responsible party.

If, in the opinion of the VVB, the responsible party does not respond appropriately within a reasonable period, the validator or verifier must inform the client, if different from the responsible party. If, in the opinion of the validator or verifier, the client does not respond appropriately within a reasonable time, the validator or verifier should (a) issue a modified validation or verification opinion or (b) withdraw the validation or verification.

The validator or verifier must communicate non-material findings to the responsible party.

If the facts are discovered after carbon credits have been issued, Cercarbono will seek to compensate for the integrity of those credits in future verifications of the same CCMP or, if this is not possible, backing such credits by means of the Cercarbono pooled carbon buffer.

8.6 Certification

Once the CCMP and the VVB upload the required information to the platform and Cercarbono starts the document review, the certification stage starts immediately, and the technical director and the assigned expert(s) review the verification documents (or validation and verification documents if it is a joint process) for compliance with the corresponding requirements. If missing items are found or need to be corrected or expanded, change requests can be made through the platform and must be addressed by the VVB or the CCMP developer.

Once compliance with the requirements has been assessed, a certification report is generated. EcoRegistry then generates the registration and issuance of the carbon credits obtained as per in the verification statement. The ***Procedures of Cercarbono's Certification Programme***, available at www.cercarbono.com, section: Documentation, sets out the process for issuing, retiring, and cancelling carbon credits.

During this stage, the CCMP appears on the EcoRegistry platform with a **In certification** status.

Once the credits are issued, the CCMP becomes **Active**, and remains so until a new verification process is initiated or until it is de-registered due to **cancellation, withdrawal, or abandonment**, in which case the CCMP remains permanently in the **Completed, Cancelled, Withdrawn, Suspended, or Abandoned** status, respectively.

The duration of the Cercarbono voluntary carbon certification process varies according to the progress of the validation and verification processes. If both stages are completed and no issues or concerns regarding support documentation are raised, the process takes a maximum of fifteen working days.

If a CCMP is validated, the time in the registration process depends on the users in charge of the progress of the CCMP in each stage, if EcoRegistry does not request missing or additional information or documentation from the holder, the developer or the VVB; otherwise, they must incorporate the requested information or documentation, which immediately resumes the process.

If a CCMP is verified, the Carboncer emission certification and registration process has a maximum duration of fifteen working days, if no (missing or additional) information or documentation is requested by the certifier. If so, the process duration is paused until the CCMP incorporates the requested information or documentation, whereupon the excess duration of the process resumes immediately.

The costs associated with the Cercarbono voluntary carbon certification process depend on the specific conditions of the CCMP and the service requested. This information can be requested by contacting directly info@cercarbono.com.

8.7 Facts discovered after certification

As part of the ongoing review process, Cercarbono's voluntary carbon certification programme monitors certified CCMPs, which can generate, if necessary, notifications on post-certification findings, which are communicated directly to the VVB and in some cases to the programme or project holders to request justifications or formal changes to the CCMPs, as applicable.

9 Registry platform

Cercarbono uses EcoRegistry¹⁶ as its CCMP registry platform. EcoRegistry is a platform based on blockchain technology that ensures transparency in carbon market accounting and security and traceability in the management of information related to mitigation initiatives.

Complementary information on the above is detailed in the document ***EcoRegistry Platform Connectivity***, available at www.ecoregistry.io/documents.

For more information on the features and use of the platform, see the ***EcoRegistry User Guide Registry Platform***, available at www.ecoregistry.io/documents.

Regarding the Cercarbono certification process, EcoRegistry's exclusive role is to provide the Cercarbono registration platform service. EcoRegistry has no influence on the decisions and results of the certification process.

This platform is responsible for record keeping and managing user accounts, information provided by the users, communications between users, keeping records of the results of the different stages of the certification cycle and the information related to the carbon credits and buffers issued.

¹⁶ www.ecoregistry.io/.

10 Migration of CCMP from other standards or certification programmes

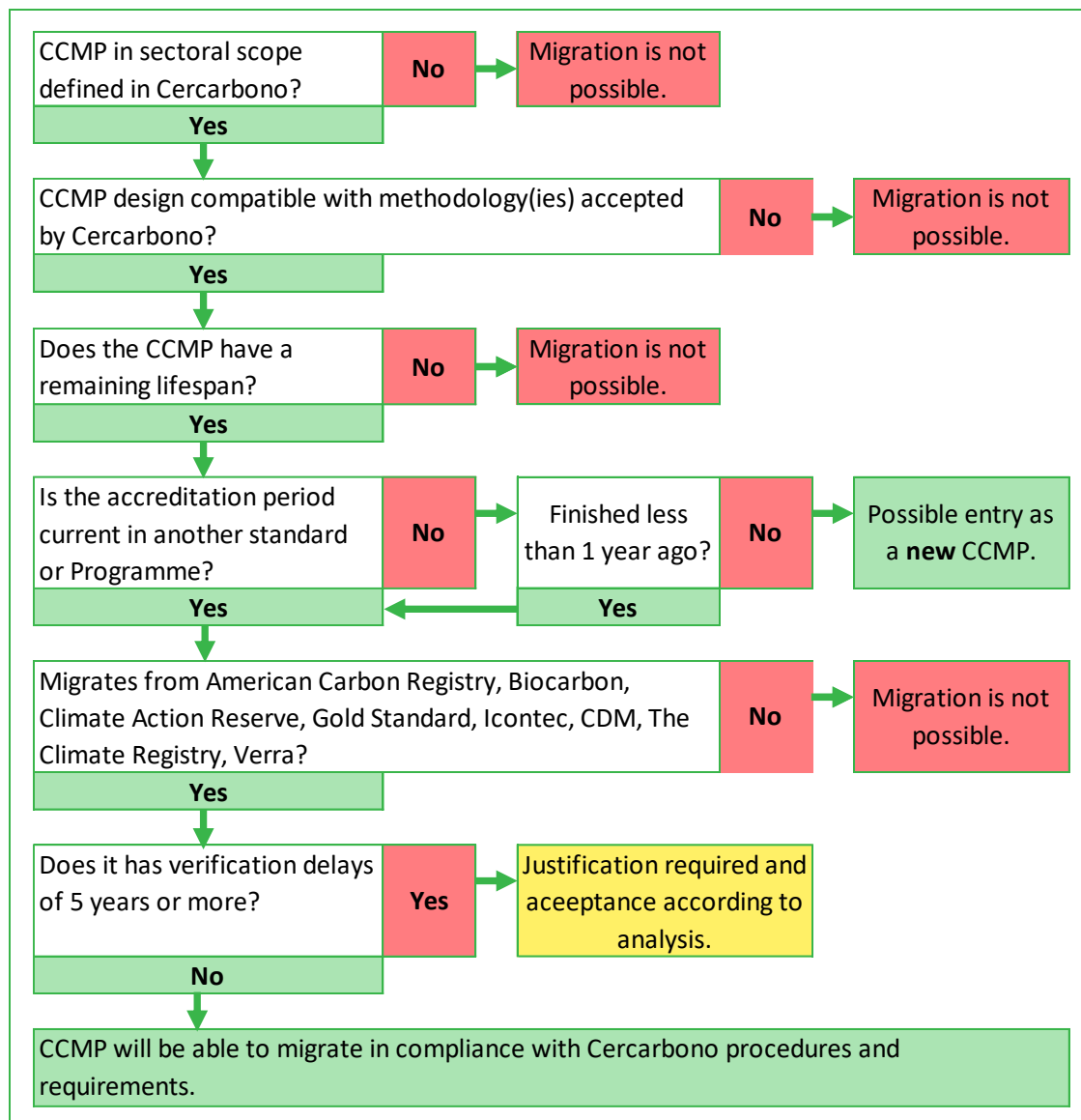
The holder or developer of a CCMP seeking to generate and certify carbon credits under the Cercarbono programme has two options to achieve this:

- Propose and develop a CCMP from its original formulation with Cercarbono.
- Existing CCMP's migration from other standards or certification schemes to Cercarbono's voluntary carbon certification scheme (see **Figure 3**).

In the first option, the CCMP should follow the steps described in **Section 6**. For the second option, the CCMP, in addition to the provisions of that section, should consider the decision tree presented in **Figure 3**.

The requirements and procedures for the migration of CCMP are detailed in the document ***Procedures of Cercarbono's Certification Programme***, available at www.cercarbono.com, section: Documentation.

Figure 3. Migration of CCMPs from other standards or certification programmes to Cercarbono.



11 Cercarbono's official reports

11.1 Reporting aligned to international commitments

Cercarbono will generate reports on credits issued by the certification programme that facilitate and support the reporting of Nationally Determined Contributions (NDCs) and corresponding adjustments of Internationally Transferred Mitigation Outcomes (ITMOs) under the cooperative approach for use towards an NDC, in accordance with Article 6 of the Paris Agreement.

Cercarbono utilise a technically justified parameterisation (also referred as “attributes”) in the serials of the carbon credit certificates issued for each tCO₂e removed or reduced by the certified CCMPs, which allows for reports generation providing specific information about the carbon credits issued by:

- Country.
- Sector.
- Type of mitigation activity.
- Year of generation.
- Pools, where applicable.
- REDD+ activity, where applicable.

The ***Procedures of Cercarbono's Certification Programme***, available at www.cercarbono.com, section: Documentation, sets out the attributes assigned to the Carboncer.

For REDD+ projects, the serials are disaggregated by REDD+ activities and pools, which will allow linking these with the activities and pools considered in the FREs established by each country, thus providing clarity on the effective use of ITMO in the NDCs.

The reports will also provide information on the trading of credits issued by Cercarbono; this information is stored in the programme's registry to prevent double counting and promote transparency.

Each country will be able to request this report from Cercarbono to assist in the preparation of the Biennial Transparency Report (BTR), which countries must start submitting by December 31, 2024, and bi-yearly after that. The BTR is expected to track the progress made by each country in complying with the NDCs.

Although the global voluntary carbon market is unclear about the corresponding adjustments to be made by each country (the one the project is implemented in and the country purchasing the credits), Cercarbono seeks to establish a way to manage the information on credits issued and demonstrate that it is possible to be environmentally honest in voluntary carbon markets through this tool.

The tool will allow the generation of an annual report on the units issued by country, according to their status of statement regarding the intention of no double counting by their host country.

In the same way, planning is in place to establish procedures, for each relevant host country, to periodically assess consistency between what is reported by the country in terms of corresponding adjustments and the units issued by Cercarbono for that country at the time of submission of its Biennial Transparency Report, the.

Cercarbono will define mechanisms to compensate, replace or otherwise reconcile mitigation subject to double claiming by a host government.

11.2 Annual report

Cercarbono generates an annual report on its performance for the year previous to the date such report is produced. It provides summary information to clients and CCMP stakeholders on the types of mitigation activities included by sector, the status of the registry, geographical distribution, certification events carried out, carbon credits (issued, retired and available) and the carbon buffer. It also includes financial information on the standard and updates or new developments in its documentary output. This report is available at www.cercarbono.com, section: Documentation.

12 Validity and transitional regimes

12.1 Protocol and procedures

The applicable versions of the *Cercarbono's Protocol for Voluntary Carbon Certification Programme* and the *Procedures of Cercarbono's Certification Programme* are those in force at the start of the formulation of the CCMPs.

12.2 Methodologies

As Cercarbono's certification programme allows the use of methodologies available from other standards or certification programmes (if they are free to use or have the necessary authorisation), a transition regime between the methodology version initially used and the current methodology version must be considered, depending on the progress of the CCMP throughout the project cycle defined by Cercarbono:

- If the CCMP is **Under formulation** or **Under validation** for a period of no more than nine months, the methodology in force when its formulation started can be used; after this period, the most recent version must be used.
- If the CCMP is **Under verification** or **Under certification**, it can use the methodology in force when it started its verification.
- CCMPs migrating from other standards or Programmes and using non-CDM methodologies (but which are in the public domain or have the approval of the standard or authors for their use), must use the most recent version of the Cercarbono methodology that covers the scope of the proposed project activities, regardless of the stage at which they are registered. If Cercarbono does not have such a methodology, they may use the most recent version of the methodology which they were based on.
- CCMPs registered in Cercarbono that still have an crediting period but were validated under a methodology external to Cercarbono no longer in force, may use a methodology approved by Cercarbono that covers the scope of the proposed project activities or, if required, request methodological deviations to such approved methodology, considering provisions in [Section 5.4](#) and in the document *Cercarbono's Certification Programme Procedures*, available at www.cercarbono.com, section: Documentation.
- In the case of CCMPs renewing their crediting period whose applied methodology version is no longer in force, they shall adjust their design and documentation to the current version.

12.3 ISO Standards

According to *IAF Resolution 2019-19* on transition arrangements for *ISO 14065:2020*, the transition regime for its implementation should be three years from its publication date (December 2020). In this regard the VVBs must:

- Be ready to carry out a transitional assessment against the new version of *ISO 14065:2020* within twelve months from the date of publication.

- Any accreditation under the new version of *ISO 14065* requires accreditation to *ISO/IEC 17029:2019*.
- Where national or local regulations require their validation and verification processes to be accredited to *ISO 14065:2013* and have not been amended to refer to the new version, the use of the previous ISO may be extended only for the three years of transition granted (ending December 2023).

Therefore, Cercarbono's international voluntary carbon certification programme establishes the following transition regime for the implementation of the new versions of *ISO/IEC 17029:2019* and *ISO:14065:2020*:

- Accredited VVBs must submit supporting documentation on their transition programme to the new version of the standard, including the requirements defined in *ISO/IEC 17029:2019*.
- VVBs that do not demonstrate compliance with *ISO/IEC 17029:2019* and *ISO 14065:2020* after December 2023 cannot operate under Cercarbono, unless national or local regulations support the use of *ISO 14065:2013* and have not been amended to refer to its new version.

13 References

- Cercarbono. (2022a). *Cercarbono's Tool to Demonstrate Additionality of Climate Change Mitigation Initiatives*. Version 2.0.1. Available at: www.cercarbono.com.
- Cercarbono. (2022b). *Cercarbono's Tool to Estimate Carbon Buffer in Initiatives to Mitigate Climate Change in the Land Use Sector*. Version 1.2. Available at: www.cercarbono.com.
- Cercarbono. (2022c). *Cercarbono's Tool to Report Contributions from Climate Change Mitigation Initiatives to the Sustainable Development Goals*. Version 1.3. Available at: www.cercarbono.com.
- Cercarbono. (2022d). *Form: Application for Renewal of Crediting Period*. Version 1.0. Available at: www.cercarbono.com.
- Cercarbono. (2022e). *Form: Power of Attorney with Withdrawals*. Version 1.2. Available at: www.cercarbono.com.
- Cercarbono. (2022f). *Form: Power of Attorney Without Withdrawals*. Version 1.2. Available at: www.cercarbono.com.
- Cercarbono. (2022g). *Form: VVB Declaration of Conflict of Interest*. Version 1.2. Available at: www.cercarbono.com.
- Cercarbono. (2022h). *REDD+ Methodology for the Implementation of REDD+ Projects Consistent with National Reference Levels*. Version 1.3.1. Available at: www.cercarbono.com.
- Cercarbono. (2022i). *Template: Joint Validation and Verification Report for CCMP in Sectors Other Than Land Use*. Version 2.0. Available at: www.cercarbono.com.
- Cercarbono. (2022j). *Template: Joint Validation and Verification Report for CCMP in the Land Use Sector*. Version 2.0. Available at: www.cercarbono.com.
- Cercarbono. (2022k). *Template: Joint Validation and Verification Statement for CCMP in Sectors Other Than Land Use*. Version 2.0. Available at: www.cercarbono.com.
- Cercarbono. (2022l). *Template: Joint Validation and Verification Statement for CCMP in the Land Use Sector*. Version 2.0. Available at: www.cercarbono.com.
- Cercarbono. (2022m). *Template: Monitoring Report for CCMP in Sectors Other Than Land Use*. Version 3.0. Available at: www.cercarbono.com.
- Cercarbono. (2022n). *Template: Monitoring Report for CCMP in the Land Use Sector*. Version 1.0.1. Available at: www.cercarbono.com.
- Cercarbono. (2022o). *Template: Project Description Document for CCMP in Sectors Other Than Land Use*. Version 3.0. Available at: www.cercarbono.com.

Cercarbono. (2022p). *Template: Project Description Document for CCMP in the Land Use Sector*. Version 2.0.1. Available at: www.cercarbono.com.

Cercarbono. (2022q). *Template: Validation Report for CCMP in Sectors Other Than Land Use*. Version 2.0. Available at: www.cercarbono.com.

Cercarbono. (2022r). *Template: Validation Report for CCMP in the Land Use Sector*. Version 2.0. Available at: www.cercarbono.com.

Cercarbono. (2022s). *Template: Validation Statement for CCMP in Sectors Other Than Land Use*. Version 2.0. Available at: www.cercarbono.com.

Cercarbono. (2022t). *Template: Validation Statement for CCMP in the Land Use Sector*. Version 2.0. Available at: www.cercarbono.com.

Cercarbono. (2022u). *Template: Verification Statement for CCMP in Sectors Other Than Land Use*. Version 2.0. Available at: www.cercarbono.com.

Cercarbono. (2022v). *Template: Verification Statement for CCMP in the Land Use Sector*. Version 2.0. Available at: www.cercarbono.com.

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

Cercarbono. (2023a). *Cercarbono Governance Overview*. Version 1.0. Available at: www.cercarbono.com.

Cercarbono. (2023b). *Procedures of Cercarbono's Certification Programme*. Version 2.0. Available at: www.cercarbono.com.

Cercarbono. (2023c). *Safeguarding Principles and Procedures of Cercarbono's Certification Programme*. Version 1.0. Available at: www.cercarbono.com.

Cercarbono. (2023d). *Template: Verification Report for CCMP in Sectors Other Than Land Use*. Version 2.0.1. Available at: www.cercarbono.com.

Cercarbono. (2023e). *Template: Verification Report for CCMP in the Land Use Sector*. Version 2.0.1. Available at: www.cercarbono.com.

Clean Development Mechanism (CDM) (2021). *CDM validation and verification standard for programmes of activities*. Version 3.0. Available at: kutt.it/9TJJr1.

EcoRegistry. (2023a). *EcoRegistry Platform Connectivity*. Version 1.0. Available at: www.ecoregistry.io/documents.

EcoRegistry. (2023b). *EcoRegistry User Guide Registry Platform*. Version 2.0. Available at: www.ecoregistry.io/documents.

ISO 14064-1:2018. *Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.*

ISO 14064-2:2019. *Greenhouse gases - Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements.*

ISO 14064-3:2019. *Greenhouse gases - Part 3: Specification with guidance for the verification and validation of greenhouse gas statements.*

ISO 14065:2020. *General principles and requirements for bodies validating and verifying environmental information.*

ISO 14066:2011. *Greenhouse gases - Competence requirements for greenhouse gas validation teams and verification teams.*

ISO/IEC 17029:2019. *Conformity assessment - General principles and requirements for validation and verification bodies.*

ISO/IEC Guide 98-3:2008. *Uncertainty of measurement - Part 3: Guide to the expression of uncertainty in measurement (GUM:1995).*

14 Document history

Version	Date	Comments or changes
1.0	23.09.2019	Initial version of the protocol in public consultation from 23.09.2019 to 07.10.2019.
1.1	30.10.2019	Version with adjustments and changes generated after public consultation.
2.0	10.03.2020	Version for public consultation integrating new definitions and programme/project activities in the energy, industry, transport, fugitive emissions, and forestry sectors. Version 2.0. Public consultation held from 10.03.2020 to 30.03.2020.
2.1	13.04.2020	Version with adjustments and changes generated after the second public consultation.
3.0	03.08.2021	Version for public consultation from 03.08.2021 to 03.09.2021.
3.1	02.11.2021	Version with adjustments and changes generated after public consultation.
4.0	22.06.2022	Version for public consultation from 22.06.2022 to 21.07.2022. New ISO Standards, sectoral scopes, scope of activities considered in the protocol and numerous minor changes are updated and added.
4.1	29.07.2022	Version with adjustments and changes generated after the second public consultation.
4.2	30.03.2023	Some texts were moved to the Procedures document; minor text adjustments, addition of references to other Cercarbono policy documents.

