CCC+ REFERENCE

CERTIFIED CARBON CALCULATION +

Version 4 PT

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Version	Description	Date
V1-0	First version of the CCC+ Framework	06/06/2021
V2-0	Updating some concepts	06/14/2024
V3-0	Review of the entire reference and adaptation for the national and international market	09/09/2024
V3-1	Clarification on the Methodology Used	02/10/2024
V3-2	Adding Formulas and Constants	04/01/2025
V4-0	Complete overhaul with substantial improvements and alignment with international requirements	07/16/2025

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Preface

CERTIS: Tradition and Innovation at the Service of Quality

Founded on November 16, 1998, CERTIS has a rich and remarkable history, standing out nationally and internationally as a benchmark in certification and training. Since its inception, CERTIS has embraced tradition and innovation simultaneously, building on solid values and a futuristic vision that allows it to be at the forefront of the sector.

CERTIS began its journey with a commitment to a culture of excellence, focused on offering integrated and innovative solutions for contemporary challenges. Over the years, it has established itself as a leading certification body, distinguished by the credibility and rigor of its services.

The company has progressively acquired prestigious accreditations, recognized by entities such as the Portuguese Accreditation Institute (IPAC) and other international organizations, which reinforces its leadership position. These accreditations attest to CERTIS's compliance with the most demanding quality standards and reflect its commitment to continuous improvement and customer satisfaction.

CERTIS offers a wide range of certification services, covering various sectors such as quality and sustainability. These services are provided with a high degree of specialization and are constantly updated to keep up with market trends and demands, demonstrating its innovative approach.

In addition to certification, CERTIS invests significantly in training to empower professionals and organizations to face new challenges. CERTIS's training programs are highly qualified and designed to develop skills that boost companies' competitiveness and sustainable development.

CERTIS's journey is marked by constant adaptation and innovation. Incorporating the latest technologies, the company has implemented digital solutions that facilitate and streamline certification and training processes. This focus on technological innovation

has allowed CERTIS to stay ahead of the curve, offering high-quality services with greater efficiency and effectiveness.

Since 2022, CERTIS has become part of the QIMA group, a world leader in quality control and certification services. This integration has brought significant value to CERTIS's operations, allowing us to leverage QIMA's extensive experience and global presence. With operations in more than 85 countries, QIMA offers integrated solutions that ensure the highest standards of compliance and quality, further strengthening our commitment to excellence and sustainability.

Today, CERTIS continues to be synonymous with trust, transformation, and progress. With a highly qualified team and a strong commitment to its founding values, CERTIS is prepared to face future challenges and continue its mission of promoting quality and excellence in all sectors of the economy.

The Certified Carbon Calculation Program (CCC+) was developed to enable production units (forestry, agricultural, and livestock) to demonstrate the annual carbon balance of their on-farm activities. Initially, this arose from the need for primary producers to clearly demonstrate their contribution to carbon sequestration, specifically their agricultural activities (given widespread misinformation in the media about livestock production, which only refers to emissions, considering these as a whole, regardless of whether extensive or intensive).

In its most recent phase, this program arose from the need to achieve the goals established by the United Nations to mitigate climate change, as all stakeholders must be involved and integrated into mitigation and compensation systems. Therefore, this program was developed based on national and international benchmarks.

The framework is aligned with national policies/programs (e.g.: RNC2050, Law No. 4/2024, etc.) and international policies/programs (IPCC, Paris, CORSIA/ICVCM, whenever relevant).

This reference is integrated into the CERTIS normative context (e.g.: link to the Quality manual, procedures, minutes and forms and flowcharts), respecting the highest accreditation standards.

This is a dynamic document that can be constantly updated to meet the changing needs of producers and the carbon market. It allows for interventions from all stakeholders for continuous improvement, with final publication responsibility falling solely to CERTIS.

Luis Vaz Freire

Responsible for the CERTIS CCC+ Certified Carbon Calculation Scheme

1. Introduction

The Certified Carbon Calculation Reference + (CCC+) is a certification scheme developed by CERTIS to provide project developers with detailed information on their contributions to carbon neutrality and national and international climate commitments. Developed with the participation of technical and scientific experts and based on the ISO standard, the methodology developed by CERTIS allows for the annual calculation of the carbon balance of projects, following nationally and internationally recognized guidelines, such as those of the Intergovernmental Panel on Climate Change (IPCC) and the Portuguese Environment Agency (APA), among others.

This methodology includes essential components, such as standards to be met (reference), formulas and mathematical models for calculating carbon emissions and sequestration, with adjustments for regional and specific variables for each type of project (forestry, agricultural, livestock), and procedures for monitoring, verification, and the issuance and withdrawal of carbon credits.

The CCC+ standard is applicable to various projects, regardless of size or geographic location, and covers their various components, including forestry, agriculture, and livestock, as long as they meet the eligibility criteria. Thus, small-scale projects and/or those without a forestry component can contribute to national and global climate goals. CCC+ certification provides project developers with information on their project's annual carbon balance, whether carbon sequestration or carbon emissions, encouraging the reduction of emissions and the increase of carbon sequestration through sustainable management decisions in social, environmental, and economic terms. This certification reflects the project developer's commitment and concern for environmentally conscious management of their project, contributing to carbon neutrality goals and promoting continuous improvement in project management.

Additionally, CCC+ provides access to the voluntary carbon credit market, allowing project developers to participate in these markets according to their interests.

2. Objective

The purpose of this reference is to establish the rules to be followed for CCC+ certification and the respective issuance of certificates and carbon credits.

3. Definitions and Abbreviations

Definitions:

Additionality	The principle that greenhouse gas (GHG) emission reductions or carbon removals are only considered additional if they exceed the level of reductions or removals that would have occurred in the absence of the specific project, intervention, or activity. Additionality is, therefore, a measure of the project's effectiveness in generating climate benefits that would not have occurred otherwise.
Follow-up Audit	Systematic, independent and documented examination of processes and documentation, carried out periodically after the initial audit, with the aim of ensuring continued compliance with the requirements established by the certification system and identifying any needs for improvement.
Audit	Systematic, independent and documented process to obtain and objectively evaluate evidence that determines whether the project in question (e.g. project) complies with the CCC+ Standard audit criteria established for it.
Document Audit	This type of audit focuses on reviewing the organization's documents and records to verify compliance with standards and regulations and the accuracy of reported information.

	Examples of documents include inventories, annual production reports, energy and fuel consumption records, invoices, etc. These can be performed remotely, at a lower cost, and with less disruption to daily operations.
On-site Audit	Audits conducted in person at the organization's facilities or project site for visual inspection and direct verification of practices and operations. The process includes interviews with employees and other stakeholders, equipment inspection, observation of operational procedures, and direct measurement of emissions or processes.
Remote Sensing Audit	Use of advanced technologies to monitor and evaluate operations and practices remotely, such as drones, remote sensors, satellites and geographic information systems (GIS).
Mixed Audit (Hybrid)	Combination of documentary, on-site and remote audits for a more complete and robust approach.
Biodiversity	The diversity of life forms existing in a given ecosystem, region, or across the planet, which includes genetic variability within populations and between different species, as well as the diversity of the ecosystems in which these species occur. Biodiversity encompasses all forms of life, from microorganisms to large animals, and is fundamental to the balance and resilience of ecosystems, providing essential services such as pollination, climate regulation, and the maintenance of soil and water quality.
Cancellation	Permanent removal of a carbon credit from the electronic registry without claiming the associated emission reductions or removals for any voluntary, mandatory, or other purposes. Cancellation may be for the following purposes: compensation for reversals, compensation for previous excess emissions, or administrative cancellation for reissuance of carbon credits for the same reductions or

	removals under a different program. Only one purpose is associated with each cancellation, and this use must be clearly specified.
Category (of Carbon Credits)	Carbon credits, with common characteristics, can be classified into different categories based on the origin and type of greenhouse gas (GHG) mitigation activity.
Base Scenario	Description of the situation and the expected or assumed outcome that would occur in the absence of the incentives generated by carbon credits and their associated mitigation activities, holding all other factors constant.
Certification	Act by which an independent third party states that it is reasonably expected that a product or service, duly identified, will be in conformity with the specified Standard.
Credibility	An essential attribute of a certification process that ensures that all assessments, audits, and decisions are reliable, impartial, and based on objective and rigorous criteria. Credibility implies that the certifying body maintains high standards of technical competence, transparency, and integrity, ensuring that the certificates issued are valid, recognized, and trustworthy.
Carbon Credit	One unit corresponds to one metric ton of carbon dioxide equivalent (CO_2e) of net greenhouse gas (GHG) reduction or removal, effectively removed from the atmosphere and duly verified.
Verified Carbon Credits	Carbon credits issued after an effective reduction of greenhouse gas (GHG) emissions or carbon sequestration by the project, duly verified by an independent, duly qualified verifier, in accordance with the criteria established in this reference.

He must	It is used to indicate an obligation or mandatory requirement. When a requirement states that something "must" be done, it means that it is imperative that the action, condition, or procedure in question be met or performed, with no flexibility or room for choice. Failure to meet a requirement marked "must" typically results in nonconformity with the standard.
It should	It is used to indicate a recommendation or best practice that is advisable but not mandatory. The term implies that following the suggested action or condition is beneficial and desirable, but not imperative. Thus, "should" establishes clear guidance on what is considered appropriate or preferable, but allows for flexibility and judgment on the part of the normative subjects.
Double counting	Double counting of carbon credits refers to a situation where the same greenhouse gas (GHG) emission reduction or removal is accounted for more than once by different parties or entities in the context of climate targets and carbon credits. Double counting can occur through double issuance, double use, and double claiming.
Double Issue	This occurs when two or more carbon credits coexist simultaneously for a reduction or removal of GHG emissions, under the same or different carbon credit programs or other programs. Double issuance can also occur when two or more mitigation activities have overlapping GHG accounting limits. The carbon credit program must have provisions that prevent the issuance of more than one credit for the same GHG emissions reduction or removal in these cases.
Double Claim	When two different entities claim the same emissions reduction. For example, a country counts the reduction

	toward its national targets, while a company uses the same credit to offset its own emissions.
Dual Use	This occurs when a carbon credit is claimed for multiple mitigation goals/objectives (e.g., once by two different entities or twice by one entity). For example, a REDD+ (Reducing Emissions from Deforestation and Forest Degradation) project may be claimed by both the country where the forest is located and another country that financed the project.
Ecoregions	Relatively large geographic units characterized by a homogeneous ecological composition and structure in terms of flora, fauna, and environmental conditions. Each ecoregion possesses a specific set of natural habitats, biological communities, and ecological phenomena, distinguishing it from its surrounding regions.
Greenhouse Gases (GHG)	Gaseous components of the atmosphere, whether natural or resulting from human activity, that have the ability to absorb and emit radiation in specific wavelength ranges within the thermal infrared radiation spectrum. This radiation is emitted by the Earth's surface, the atmosphere, and clouds. This absorption and emission of radiation is what causes the greenhouse effect, contributing to global warming and climate change.
Effective governance	Effective governance is crucial to integrity, as it significantly improves transparency and accountability, and can encourage greater participation in the Voluntary Carbon Market (VCM). It can also improve public and stakeholder responsiveness and engagement, offering greater relevance and reliability, enabling reporting comparisons, and providing better insight into program/benchmark performance.

Impartiality	Absence of conflicts of interest and maintenance of a neutral stance, ensuring that conclusions and results are based exclusively on objective evidence and established criteria. This ensures the integrity, reliability, and acceptance of the certifications issued.
Influence of Animals on the Carbon Cycle	The process by which animals, through their biological, behavioral, and ecological activities, indirectly affect the flows and distribution of carbon in ecosystems. This occurs through various interactions in the animal-soil relationship.
Stakeholders	Stakeholders refer to all individuals, groups, or organizations that have a direct or indirect interest in the execution, results, or impacts of a project or activity. They can influence or be influenced by the actions, objectives, and policies of the organization involved. Stakeholders are crucial to the decision-making process and project management, ensuring transparency and accountability. Common types of stakeholders include: Internal (Employees, Managers, Owners) and External (Customers, Local Community, Suppliers, Government and Regulators, Non-Governmental Organizations (NGOs), Interest Groups, Investors, and Financial Partners).
Period of credit	Time during which a design drawing is considered valid and during which removals can be verified.
He can	It is used to indicate a possibility or permission, without implying obligation or restriction. The term is often used to allow a person to choose, among several options or courses of action, the one they consider most appropriate.
Global Warming Potential (GWP)	It's a measurement that shows how much a given mass of a greenhouse gas is capable of trapping heat in the atmosphere, compared to the same mass of CO2 equivalent. The GWP value is always calculated for a given

period (such as 20, 50, or 100 years) and considers the absorption capacity of infrared rays. CO2 is used as a reference for the calculation, and its GWP has been established as the standard and is 1. The higher the GWP value, the greater the impact on global warming. The GWP of other gases is calculated based on CO2.

Global warming potential (GWP100)

(Source: IPCC 2021)

Gas	GWP
CO_2	1
CH_4	27.2
N_2THE	273

Project

A set of activities carried out at a production unit. Projects that meet the standards and requirements of the CCC+ Program can generate emissions reduction or removal credits, and these credits can function as offsets when certified and removed from the CCC+ Program's online registry.

Carbon offset project

It is considered a “carbon offset” project if the GHG reductions or removals it generates are used to offset GHG emissions occurring elsewhere.

Traceability

Traceability is achieved through registries. A carbon credit registry is a central, secure database that stores detailed information about carbon credits issued by the program, including the mitigation activity where they were generated, their ownership, and their transaction history. Each carbon credit, along with the associated mitigation activity and other relevant attributes, is uniquely identified through this registry. These carbon credit registries also

	provide comprehensive information about the proponents of the mitigation activities and the MVC participants.
Registration	Document that expresses results obtained or provides evidence of activities carried out.
Removal	Refers to the process of removing carbon dioxide (CO2) from the atmosphere through human actions and storing it durably in terrestrial or geological deposits or in products.
Withdrawal	Permanent removal of a carbon credit from a registry, with the aim of claiming the corresponding emission reductions or removals, to meet compliance requirements or voluntary targets. Each withdrawal must be associated with a single use, which must be clearly specified.
Scope 1	Direct, own greenhouse gas emissions from project sources.
Scope 2	Indirect emissions, both own and non-own, of greenhouse gases that are generated outside the project boundaries.
Scope 3	Indirect, non-own greenhouse gas emissions from the useful life of products, which do not come from project sources and are not controlled by the project.
Natural Carbon Sequestration	The process by which living organisms, such as trees and other plants, remove carbon dioxide (CO_2) from the atmosphere and store it in their biomass (trunk, branches, leaves, and roots) through photosynthesis.
Sustainability	The ability to meet the needs of the present without compromising the ability of future generations to meet their own needs. This concept encompasses three fundamental pillars: environmental, economic, and social.

	In the environmental sphere, it encompasses the responsible management of natural resources, the preservation of biodiversity, and the minimization of negative environmental impacts. In the economic context, it refers to development that promotes inclusive and efficient economic growth without depleting natural resources. In the social sphere, sustainability seeks to promote equity, social justice, and well-being for all communities.
Project lifetime	A period defined by a project in its Project Design, which indicates the minimum interval during which the project must demonstrate continued greenhouse gas (GHG) reductions or removals. All carbon credits issued by the project will have a lifetime equal to this established threshold. In other words, the threshold represents the minimum expectation that environmental benefits (such as carbon sequestration) will be maintained and guaranteed during this period.
Transparency	The quality or characteristic of being clear, open, and easily verifiable in information, processes, and decisions. It promotes accountability, trust, and facilitates informed decision-making, ensuring that all actions and policies are carried out ethically and in accordance with established standards.
Production Unit	Physical space of the project, geographically delimited by property limits and type of management.
Robust validation and verification by independent third parties	This refers to conducting external audits, an essential tool for ensuring the accuracy, consistency, transparency, and integrity of carbon credit issuance and for ensuring trust in the MVC. Auditing by Validation and Verification Bodies (VVBs) provides independent confirmation that the

	mitigation activity achieves the claimed GHG emission reductions or removals.
Verification	Confirmation, through objective evidence, that the requirements for a specific use or application have been met.
Conservation Zones and Protected Areas	Specifically designated and managed geographic areas with the aim of conserving biodiversity, protecting natural and cultural ecosystems, and maintaining essential ecosystem services.

Abbreviations:

APA	Portuguese Environment Agency
CCC+	Certified Carbon Calculation
CO2	Carbon Dioxide
FSC	*Forest Stewardship Council*
GHG	Greenhouse Gases
IPCC	*Intergovernmental Panel on Climate Change*
MVC	Voluntary Carbon Market
OC	Certification Body
NGO	Non-Governmental Organizations
PEFC	*Program for the Endorsement of Forest Certification*
VVB	Validation and Verification Body - Verified/Validation Body

4. Reference Standards

Reference	Title

Portuguese Environment Agency (APA)	Portuguese Environment Agency. (2021). State of the Environment Report 2020. Lisbon: APA. Portuguese Environment Agency. (2021). National Inventory of Atmospheric Pollutant Emissions 1990-2019.
Organic Farming	European Commission. (2007). Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91. Official Journal of the European Union, L 189, pp. 1–23.
Bio Suisse	Bio Suisse. (2020). Bio Suisse Standards for the Production, Processing and Trade of "Bud" Products. Basel: Bio Suisse. Bio Suisse. (2022). Bio Suisse Standards for the Production, Processing and Trade of "Bud" Products. Basel: Bio Suisse.
Convention on Biological Diversity (CBD)	Convention on Biological Diversity. (1992). Text of the Convention on Biological Diversity. Montreal: Secretariat of the Convention on Biological Diversity.
Decree-Law No. 4/2024, of January 5	Establishes the voluntary carbon market and establishes the rules for its operation.
Aquatic Ecoregions (Nature Conservancy and WWF)	Abell, R., et al. (2008). Freshwater Ecoregions of the World: A New Map of Biogeographic Units for Freshwater Biodiversity Conservation. BioScience, 58(5), 403-414.
	Avery, TE, & Burkhart, HE (2015) - "Forest measurements". Waveland Press.
	Bird, DN, Pena, N., Schwaiger, H., & Zanchi, G. (2010) - "Review of existing methods for carbon accounting". CIFOR, Occasional Paper (54).
	Cline, MG (1944) - "Principles of soil sampling". Soil Science, 58(4), 275–288.
	Cochran, WG (1977) - "Sampling techniques". John Wiley & Sons.
	Ducey, M.J., Williams, M.S., Gove, J.H., Roberge, S., & Kenning, R.S. (2013) - Studies on methods related to limited distance measurement.
Ecoregions of the World (World Wildlife Fund - WWF)	Olson, DM, et al. (2001). Terrestrial Ecoregions of the World: A New Map of Life on Earth. BioScience, 51(11), 933-938.

Technical Specification for Certification of Sustainable Production of Alentejo Wines (ET-PSVA)	Alentejo Regional Wine Commission. (2015). Technical Specification for the Certification of Sustainable Production of Alentejo Wines (ET-PSVA). Évora: CVRA.
Forest Stewardship Council (FSC)	Forest Stewardship Council. (2015). FSC Principles and Criteria for Forest Stewardship. FSC-STD-01-001 V5-2 EN.
Global Biodiversity Outlook (GBO)	Secretariat of the Convention on Biological Diversity. (2020). Global Biodiversity Outlook 5. Montreal: SCDB.
Greenhouse Gas Protocol (GHG Protocol)	GHG Guidance
Guide to Sustainable Development	17 Goals to Transform our World
Intergovernmental Panel on Climate Change (IPCC)	IPCC. (2018). Global Warming of 1.5°C. An IPCC Special Report on the Impacts of Global Warming of 1.5°C above Pre-Industrial Levels and Related Global Greenhouse Gas Emission Pathways, in the Context of Strengthening the Global Response to the Threat of Climate Change, Sustainable Development, and Efforts to Eradicate Poverty. Geneva: World Meteorological Organization. IPCC. (2019). Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories.
International Organization for Standardization (ISO)	ISO 14067 ISO 14064
Millennium Ecosystem Assessment	Millennium Ecosystem Assessment. (2005). Ecosystems and Human Well-being: Biodiversity Synthesis. Washington, DC: World Resources Institute.
Integrated Production Mode (PRODI)	Directorate-General for Agriculture and Rural Development. (2012). National Reference for Integrated Production. Directorate-General for Agriculture and Rural Development (DGADR). (2022). National Reference Framework for Integrated Production.

International Labour Organization (ILO)	ILO Declaration on Fundamental Principles and Rights at Work (1998)
Program for the Endorsement of Forest Certification (PEFC)	PEFC Council. (2010). Sustainable Forest Management – Requirements. PEFC ST 1003:2010.
National Reference for Sustainability Certification of the Wine Sector (RNCSSV)	Institute of Vine and Wine, IP (2020). National Reference Framework for Sustainability Certification of the Wine Sector (RNCSSV). Lisbon: IVV.
The Integrity Council for the Voluntary Carbon Market	The Fundamental Principles of Carbon

5. Working Language

The CCC+ approved languages are Portuguese, Spanish, and English. All project-related documents must be submitted in one of the program's approved languages. Stakeholder engagement is conducted in a way that provides access to local stakeholders within the project's jurisdiction, i.e., in the jurisdiction's official language, with English translation also available.

6. Reference updates

This document is dynamic and subject to continuous updates to incorporate relevant changes in legislation, market, and/or scientific matters. These reviews are completed within a maximum period of six months from the date the need for an update is identified. Furthermore, the document is reviewed on a scheduled basis every two years since its last revision.

Any changes resulting from this process are subject to public consultation. After the changes are incorporated, the updated version of the document is made available on the CERTIS website, along with a clear explanation of the comments received and how they influenced the changes made.

Whenever the document is updated, all related procedures and minutes are automatically adjusted accordingly.

CERTIS reserves the right to suspend and/or withdraw procedures if justified reasons arise.

6.1 Versions

Version numbers will be updated according to the following:

- Significant update that may impact project eligibility, auditing practices, or credit issuance.
- Updated when non-critical information has been added or removed from the document
- Updates for non-material changes, such as wording adjustments or references.

Version history is always indicated on the first pages of the document.

6.2 Impact of Document Updates on Projects

Updates to documents within the CCC+ framework are designed to ensure the continued relevance, integrity, and technical rigor of greenhouse gas (GHG) emissions and removals quantification methodologies. It is critical to understand and appropriately manage the impact of these updates on registered projects and carbon credits issued.

a) **Applying Updates to Existing Projects**- All substantial updates to the documents, including methodological revisions and changes to eligibility or monitoring

criteria, will be binding on all certified projects. This means that previously validated and certified projects must comply with the provisions of the updated version of the Protocol to maintain compliance with the CCC+ standard.

b) **Transition between Versions**- When a new version of a document comes into effect, a transition period is established to allow project developers to adapt to the methodological changes. During this period, projects must begin implementing the new requirements and, in duly justified cases authorized by CERTIS, may complete monitoring cycles initiated under previous versions.

c) **Impact on Credit Issuance**Carbon credits issued under previous versions of the documents remain valid and registered; however, future credit issuances will be subject to the requirements of the updated version. Any changes that affect the quantification of carbon reductions or removals must be reflected in monitoring reports and validated by independent audits.

d) **Reversal, Suspension and Cancellation-**Significant updates that reveal inconsistencies or overestimation of reductions may lead to the temporary suspension or permanent cancellation of the issuance of related credits, as defined in CERTIS's control and supervision procedures. In these cases, the project promoter will be notified and advised on the necessary corrective measures.

e) **Communication and Transparency**- All updates and their impacts will be communicated clearly and transparently to project promoters, certification bodies and interested parties, ensuring access to updated documentation and technical justifications that support the changes made.

f) **Responsibilities of Promoters**- Project developers are responsible for ensuring continued compliance with the updated version of the documents and implementing any necessary changes to monitoring, reporting, and mitigation practices. Failure to comply with the updated versions may result in corrective actions, including suspension of the issuance of certified credits.

7. Internal Policies

CCC+ follows the internal policies of QIMA and CERTIS publicly available at

Company Policies | QIMA-https://www.qima.com/company-policies

Public Documenthttps://certis.pt/documento-publico/

8. Public Consultation of CCC+ documents

CERTIS reaffirms its commitment to transparency and scientific rigor in the development of the CCC+ standard and its procedures, implementing a structured and comprehensive public consultation process. This process consists of two complementary and essential stages: technical review by scientific experts and stakeholder consultation.

This integrated model ensures that the CCC+ framework is developed based on solid scientific foundations, while reflecting the needs and expectations of stakeholders, promoting the legitimacy and acceptance of the framework.

Appropriate revisions should be made to the documents, taking into account all comments received. The final version and a report detailing the changes made and the reasons for them should be published on the CERTIS website and communicated to interested parties.

8.1 Review by scientific experts

Review by scientific experts is a fundamental element in ensuring the validity and technical credibility of the CCC+. CERTIS invites recognized experts in the field of carbon emissions calculation and management to evaluate the methodology and documents associated with the CCC+.

Experts are selected based on their knowledge and scientific recognition, and their participation is voluntary and unpaid. Their comments are considered in the document improvement process, ensuring the robustness and technical excellence of the reference.

The review is carried out whenever there is a substantial update of documents and at least every 3 years.

8.2Stakeholder consultation

CERTIS maintains a comprehensive list of stakeholders, including community representatives, non-governmental organizations, companies, researchers, and other relevant entities. These parties are formally invited to participate in the review process by providing opinions and comments regarding changes or revisions to the CCC+ framework and related procedures.

Active stakeholder engagement is essential to ensure that multiple perspectives and interests are properly considered, strengthening the legitimacy, comprehensiveness, and acceptance of the CCC+ program.

8.3Requirements for stakeholder consultation

The stakeholder consultation process must be robust and transparent, both locally and globally, and include public comment and problem-solving. It must meet the following requirements:

a) **Accessibility:**

- Interested parties should be invited to participate through appropriate channels, including, but not limited to, physical correspondence, electronic mail, or notices in newspapers and public places;

- Documentation and associated communications must be made available in the local language(s) or accompanied by translation, where necessary, to ensure clarity and comprehension. Materials must be prepared in an accessible manner, respecting the technical knowledge levels of different audiences;
- The period for submitting comments in public consultations must be 30 (thirty) days, if extended for a justified reason, this cannot be longer than 60 (sixty) days, the end date of the consultation must be clear;
- Technical reviews must also involve the participation of scientific experts, who evaluate the documents using the methods mentioned above.

b) Transparency:

- All participants must declare any conflicts of interest, ensuring integrity in the process;
- All complaints, comments and responses must be documented and recorded systematically on a specific form (Q33-complaints record) and made available upon request.
- The CERTIS internal team is responsible for analyzing and responding to all contributions made by stakeholders;
- The results and conclusions of the public consultation are published on the CERTIS website;
- Whenever a current or proposed operational activity presents relevant impacts or undergoes significant changes in relation to what was foreseen in the initial public consultation, a new public consultation must be conducted aimed at the parties interested in or potentially affected by such activity;
- Anonymous comments may be made available upon formal request;
- If there are legal obligations to carry out additional or different public consultation deadlines, these must be fully complied with.

- Based on the feedback received, appropriate revisions to the documents will be made. The final updated version, accompanied by a detailed report containing the changes made and the corresponding justifications, must be published on the CERTIS website and communicated to all interested parties.
- The public consultation process must be conducted in a transparent manner, fully respecting the principles of confidentiality applicable to the information and parties involved.

9. Principles Considered

This framework was developed based on the Core Carbon Principles (CCP), aiming to ensure the integrity, transparency, and effectiveness of emissions reduction activities, as well as the verification and certification of credits prior to their issuance. Under the CCC+ framework, all carbon credits are committed to undergoing rigorous verification and certification processes prior to their issuance. These processes involve independent audits that guarantee projects' compliance with the CCC+ framework, ensuring that emissions reductions are real, measurable, and permanent. The following fundamental principles were considered in the development of the CCC+ framework:

9.1 Governance

The CCC+ program's governance is structured to ensure compliance with the Critical Core Principles (CCP), establishing clearly defined responsibilities, rigorous oversight processes, and robust internal controls. Transparency is guaranteed through documentation, data used, and validation of results, fostering stakeholder confidence. Periodic reviews are scheduled to ensure the system is continually updated in accordance with international best practices and regulatory requirements, strengthening the integrity and credibility of emissions calculations.

9.1.1 Traceability

Carbon credits issued under CCC+ certification are registered using a unique code, enabling full traceability of mitigation activities and credits from their issuance to subsequent transactions, including their eventual withdrawal or cancellation. This process ensures an unequivocal link between the credits and the supporting documentation for their verification and issuance.

9.1.2 Transparency

Transparency is ensured at every stage of the process, with all documentation relating to registered projects and their respective status being made publicly available in electronic format. Accessible and clear records are maintained documenting the monitoring, issuance, retirement, and cancellation of carbon credits, respecting the restrictions imposed by applicable confidentiality requirements.

CERTIS does not directly participate in the purchase or sale of carbon credits, nor does it charge any commissions related to transactions involving these credits.

9.1.3 Robustness: Independence in verification

CERTIS is a monitoring and certification body with over 25 years of experience, establishing rigorous requirements for the independent third-party validation and verification of project activities. Furthermore, CERTIS is responsible for the analysis, auditing, and technical evaluation of other Certification Bodies (CBs) for their formal recognition as capable of implementing the CCC+ standard.

The methodology applied by CERTIS for the validation, verification and recognition of OC is based on the principles of the International Organization for Standardization (ISO), covering the following essential aspects:

- **Unbiased Assessment:**The audit team's experience in accredited standards ensures that all verifications and assessments—including audits, decision-making reviews, and OC recognition processes—are conducted independently, impartially, and free from conflicts of interest, ensuring that products, services, and management systems meet established regulatory criteria.
- **Rigorous Audits:**Audit processes, whether for project validation or for evaluating new OCs, are conducted with technical rigor, including on-site audits and detailed document analyses, with the aim of verifying the compliance and accuracy of the information presented.
- **Transparency and Reporting:**CERTIS maintains transparent communication with stakeholders and publishes detailed, public reports on validation, verification, and recognition processes, fostering trust and credibility at all stages of the program.
- **Training and Education:**Continuous training is provided to the team of auditors and assessors on best practices and ISO standards, ensuring a high level of competence and ongoing training to ensure efficient and qualified assessments.

9.2Impact

To assess the impact of project activities, the following principles are considered:

9.2.1 Real

The GHG emission reductions or sequestration calculated by CERTIS through CCC+ are real, corresponding to the annual result of the activities carried out by the project promoter in the calendar year prior to the issuance of the certificate;

9.2.2 Additionality

The project promoter must demonstrate that the emission reductions or GHG sequestration resulting from its activities are additional, meaning that they would not have occurred in the absence of revenue from the sale of carbon credits. To achieve this,

the project must comply with the four pillars of additionality—Financial, Common Practice, Environmental, and Regulatory—proving that the claimed environmental impact would not occur in the baseline scenario.

a) **Financial Additionality-**The project may be considered financially additional if carbon sequestration or removal is the project's primary objective and primary source of revenue. Otherwise, the promoter must demonstrate that the project would not be economically viable without the additional financing obtained from the sale of carbon credits, demonstrating that economic barriers prevented the project's implementation in the absence of carbon credit financing.

b) **Common Practice Additionality-**The project must demonstrate that similar activities are not common practice in the geographic area relevant to the project. This requires a careful analysis comparing the project with existing initiatives that are similar in terms of technology, scale, and regulatory environment.

c) **Environmental Additionality-**A project presents environmental additionality when its net climate impact is negative, after subtracting the CO2 sequestration that would occur in the baseline scenario and all project-related emissions, including leakage. It must promote additionality within its production unit by implementing sustainable practices that add value to the previous scenario, including increased biodiversity, reduced emissions, and increased carbon sequestration.

d) **Regulatory Additionality-**The project must demonstrate that it is not required by any current legal, regulatory, or policy obligation. If its activities exceed the applicable minimum legal requirements, this excess may be considered additional, provided that the other additionality criteria are also met. These requirements apply regardless of the effectiveness of the implementation of the corresponding government policies, as well as any adaptation deadlines foreseen for their compliance.

Maintain a valid additionality plan throughout the project's entire lifespan, with a minimum commitment of 30 years, to ensure that credits issued are exclusively the result of proven additionality.

9.2.3 Permanence

The project promoter must:

- demonstrate that the emission reductions or carbon sequestration resulting from its activities are permanent. If there is a risk of reversal, it must indicate measures to address these risks and offset potential reversals;
- Notify the certification body, CERTIS, or the CB with which it is certified, of reversal events that impact carbon sequestration, such as fires, deforestation, and changes in soil condition. If the certification body is not notified, these events will be verified and detected during the on-site audit, if they occur beforehand, satellite readings conducted throughout the year, and soil analyses, where the events will be detected. Failure to notify results in greater risk, which will require greater scrutiny in subsequent audits.

9.2.4 Robust Quantification of Reductions and Removals

Emission reductions or carbon sequestration generated by the activity are quantified robustly, using conservative approaches, sound scientific methods, and considering all necessary aspects. Therefore, the following components are considered in the quantification:

a) **Establishing the baseline scenario –**Establishing an accurate and verifiable baseline scenario that represents the baseline value in the absence of the project. This baseline scenario should be determined based on actual conditions and data collected for each project.

b) **Calculation Methodology –**The CCC+ methodology is based on nationally and internationally recognized standards. Standardized and updated emission factors are used to calculate carbon emissions from various sources.

c) **Data collection –**Accurate and reliable data sources are used, covering direct and indirect measurements of emission reductions or GHG sequestration, and we use satellite technology to calculate actual existing biomass, always with a continuous monitoring system.

d) **Continuous monitoring –**monitoring is continuous and periodic in order to capture seasonal and operational variations.

e) **Verification and validation**– the values obtained from emission reductions or carbon sequestration result from activities that must be verified by a third-party entity.

f) **Corrections and adjustments –**In order to cover uncertainties and possible adjustments required due to changes in conditions or new, more accurate data, a percentage of the value verified and calculated in each year is retained, subject to adjustments and corrections in subsequent years in order to minimize the error.

g) **Baseline scenario reassessment**- At the end of each 5-year period, and whenever there is a change to the initial project design, the baseline scenario must be reassessed to ensure that the initial conditions and barriers remain valid, and all relevant parameters must be updated as necessary. The updated project design document must undergo a thorough and independent validation and verification process before renewal approval, thus maintaining the credibility and accuracy of emissions reductions over extended crediting periods.

9.2.5 Risk of Leakage

The project developer must ensure that reduced emissions in the project area do not result in the displacement of emitting activities to another area, resulting in increased

emissions that negate or diminish the overall benefits of the project. When leakage is identified, it must be quantified and deducted from the verified CO2 removals.

9.2.6 Reversal Risk

Only reductions that actually occur are counted. Whenever a net reversal in GHG reductions is observed, these will have to be offset through additional reductions, i.e.:

- a carbon credit is cancelled for each tonne of CO2 equivalent reversed;
- the issuance of credits is blocked until the reversal in reductions is offset.

Reversals identified by the project promoter must be communicated to the OC.

9.2.7 Commitment

The project promoter, in order to have access to the issuance of a certificate, must commit to:

a) Comply with the CCC+ standard, current version;
b) Comply with the management plans presented;
c) Communicate any changes to the plans presented;
d) Collaborate in audits and in the presentation of requested documentation;
e) Report the sale of any carbon credit with clear reference to the codes of the credits transacted and the entity that acquired them.

9.3Sustainable Development

The CCC+ program establishes clear guidelines, tools, and procedures to ensure that mitigation activities meet or exceed industry best practices in terms of social and environmental safeguards, effectively contributing to the United Nations Sustainable Development Goals (SDGs). The CCC+ methodology contributes to climate change mitigation while simultaneously promoting balanced and resilient socioeconomic development by requiring projects to demonstrate:

a) **Benefits and safeguards of sustainable development-**The activities developed by the projects must be aligned with the sector's best practices regarding social and environmental safeguards, in addition to contributing to the Sustainable Development Goals (SDGs) established by the United Nations (UN) in the host country where the project is implemented.

b) **Contribution to the transition to net zero emissions -**Projects must not only reduce existing emissions but also avoid maintaining GHG emission levels, technologies, or intensive practices that are incompatible with the goal of achieving net-zero GHG emissions. Their role in the transition to net-zero emissions can be achieved in the following ways:

- **Carbon capture and/or storage**: Reforestation, ecosystem restoration, and the preservation of existing forests help capture carbon dioxide from the atmosphere and store it in biomass and soils.
- **Improving energy efficiency**: Implementation of technologies and practices that increase energy efficiency by reducing the amount of energy required and, consequently, GHG emissions.
- **Waste management**: reduction, recycling and treatment of solid and liquid waste, which can reduce emissions of methane and other GHGs.
- **Sustainable agriculture**: agricultural practices that promote carbon sequestration in the soil, such as the use of cover crops, crop rotation and pasture management.
- **Replacement of fossil fuels**: use of cleaner alternative fuels, such as biogas, biodiesel and hydrogen, to replace traditional fossil fuels.
- **Social safeguards**: implementation of measures aimed at protecting local communities that may be affected by project activities.

c) **Continuous improvement of the assessment framework - Paris Alignment -**The CCC+ scheme is committed to constantly reviewing and improving its

methodological framework and assessment criteria to ensure continued alignment with the goals defined in the Paris Agreement, particularly regarding limiting global temperature rise to 1.5°C above pre-industrial levels. This continuous improvement includes incorporating international best practices, scientific advances, and regulatory developments, ensuring that certified projects effectively contribute to climate change mitigation and the advancement of the Sustainable Development Goals (SDGs). Furthermore, CCC+ incorporates a systematic approach to monitoring and strengthening social and environmental safeguards associated with mitigation activities, ensuring that projects respect the rights of local communities, promote social equity, and minimize adverse environmental impacts. The system encourages the adoption of innovative and responsible practices, fostering socio-environmental resilience and a just transition to a low-carbon economy.

10. Scope of Application

This reference has a national and international scope of application, being applicable without prejudice to the different international, community and/or national provisions governing health, safety and general regulatory compliance of the project.

Any project applying for control of the CCC+ benchmark implicitly undertakes to comply with the legislation, directives and regulations applicable in its field of activity, which must be managed by the same entity.

The benchmark is applicable to:

a) Any project, whether forestry, agricultural, livestock, farming, agroforestry, etc.;
b) Any geographical location on the globe, with the respective need to adapt the standard values used, depending on the specificities of the type of crops/species in the region/location in question (to be carried out by CERTIS);
c) Scope 1- Direct emissions;

d) Scope 2- Indirect energy emissions;

e) Primary sector projects whose operations depend on the sale of carbon credits.

The benchmark is NOT applicable:

a) Any transformation unit;

b) Any hotel unit;

c) Scope 3- Other indirect emissions;

d) Projects whose activities are already being monitored by another carbon credit scheme;

e) Projects whose activities have already generated carbon credits under another program and that have not canceled these credits, to avoid double issuance;

Project categories

All projects under CCC+ are categorized into one of the following categories:

a) **Afforestation and Reforestation (AR)**) - Project to plant new forests in areas where there was previously no forest or to recover degraded forests to sequester carbon dioxide from the atmosphere.

b) **Sustainable Agriculture**– Project to implement agricultural practices that reduce greenhouse gas emissions and increase soil carbon sequestration, such as direct planting, integrated crop management, and improved pastures.

c) **Improved Land Use and Forest Protection (REDD+)**- Projects to Reduce Emissions from Deforestation and Forest Degradation that protect existing forests and strengthen sustainable land management to prevent forest carbon loss.

d) **Maintenance and Conservation of Areas**- Projects that continue with the activities and cultures installed, aiming at continuous improvement.

Greenhouse gases considered

For the CCC+ calculation methodology, the following greenhouse gases are considered:

a) Carbon dioxide (CO2)

b) Methane (CH4)

c) Nitrous oxide (N2O)

To allow comparison between these gases and others in CO_2 equivalent terms, the Global Warming Potential with a 100-year horizon (GWP100) is used.

Carbon reservoirs considered

Within the scope of the CCC+ methodology, the carbon pools covered include:

a) Aboveground biomass

b) Underground biomass

c) Soil organic carbon

The quantification of the carbon accumulated in these reservoirs is carried out in metric tons, converted to carbon dioxide equivalent (t CO_2 eq), using the Global Warming Potential (GWP) factors established in the most recent guidelines of the Intergovernmental Panel on Climate Change (IPCC).

11. Requirements

This chapter defines the requirements that the project promoter must meet for the project to be validated and to be able to advance to the verification phase within the scope of the CCC+ framework.

11.1 General Requirements

Project Design

The project promoter, in order to have the project validated for monitoring and verification within the scope of the CCC+ reference, must prepare a Project Design Document, including, at a minimum, the following essential information (model available on the CERTIS website):

a) General Description:

i. Non-technical and synthetic summary of the project;

ii. project title, consistent with the certification request to be made;

iii. scope, objective and general description of the project including technologies, products and services involved, specifying the animal and plant species considered at the zero moment and in the post-start plan of the project;

iv. geographic location of the project indicating the geographic coordinates of the main building or, in its absence, the main access points to the unit;

v. project start date and credit period;

vi. Identification of reversal risks associated with the project, as well as, when applicable, the measures proposed to mitigate these risks;

vii. Leakage risk identification (if applicable).

a) Limits:

i. geographic boundaries of the project that allow for the unique identification and delimitation of the specific extent of the project (these must coincide with the geographic boundary of the project, without exception);

ii. administrative and financial limits of the project;

iii. input and output limits related to all activities covered by the project.

b) List of Interested Parties

i. Complete listing of stakeholders, communities, or other relevant entities;

ii. Description of the consultation processes and continuous communication mechanisms that will be adopted, as well as dissemination of the results of these interactions.

c) Project category, taking into account the categories considered within the scope of this reference, point 10.

The project promoter must additionally confirm the following information:

a) The proposed project, in whole or in part, is not currently registered, in the process of registration or incorporated into any other international, regional, national, subnational, or sectoral mitigation schemes involving carbon credit mechanisms;

b) If the project was previously registered or included in a recognized emissions regulation program, the registration was canceled or the project was excluded from that program before the end of the credit generation period defined by the program.

11.2 Legal Requirements

The project promoter must be legally established, formally registered, and have all the necessary authorizations to carry out the proposed activities. They must also possess the legal rights to operate the project and comply with applicable environmental, labor, tax, and economic legislation.

11.3 Environmental Requirements

The project developer must define and implement measures proportional to the scale, intensity, and risk of its activities to avoid and mitigate significant environmental impacts arising from project management. These measures must be communicated, upon request, to stakeholders, including landowners and adjacent communities. Participation in environmental awareness and technical training programs will also be encouraged.

11.3.1 Conservation zones and protected areas

The project developer must ensure the conservation of environmental protection zones and protected areas located within the project, with special attention to the preservation of endemic and native species, endangered species, and archaeological sites. The developer must avoid converting high conservation value habitats and protect ecological corridors essential for the connectivity of vulnerable species' habitats.

11.3.2 Biodiversity

The project promoter must:

a) Promote the conservation and restoration of natural habitats, increasing biodiversity throughout the project cycle, and implementing effective monitoring and control of invasive species;

b) Ensure the protection of the habitats of endangered species and areas essential for maintaining the ecological connectivity of their ecosystems;

c) Comply with international, national and local standards regarding the prevention, introduction and spread of invasive alien species that may harm local biodiversity.

11.3.3 Soil conservation

The project developer must adopt sustainable practices that promote soil conservation and minimize erosion risks. Examples include crop rotation, reduced tillage following contour lines, the use of cover crops, green manure, and the progressive replacement of chemical pesticides with natural fertilizers and pesticides.

Additionally, biodiverse pastures could be integrated into the project as a strategy to improve long-term agricultural sustainability and productivity, increasing the resilience of agricultural systems to climate change.

11.3.4 Water consumption

The project promoter must implement efficient water resource management, promoting responsible consumption practices and reducing waste through rigorous monitoring of water use (e.g., metering with probes). Whenever possible, the project should strive for water self-sufficiency.

11.3.5 Energy resources

The project promoter must implement sustainable energy resource management, optimizing the use of machinery, equipment, and other energy resources. They must also prioritize, whenever feasible, the replacement of fossil fuels with renewable energy sources.

11.4 Social Requirements

The project developer must adopt sustainable and responsible project management. These requirements aim to ensure that operations not only promote environmental and

economic benefits but also contribute positively to the well-being of local communities and other stakeholders.

11.4.1 Workers' rights

The project promoter must ensure full respect for labor principles and rights as set out in the International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work (1998). These principles include:

a) Freedom of association and effective recognition of the right to collective bargaining;
b) Eradication of forced or compulsory labor;
c) Effective suppression of child labor;
d) Elimination of discrimination in employment and occupation.

In this sense, the project promoter must maintain formalized employment contracts, updated payment records, internal equality and non-discrimination policies, as well as carry out labor audits and periodic inspections.

11.4.2 Gender equality

The project promoter must implement and promote gender equality in all practices related to employment, training, recruitment and management, ensuring equitable conditions for all employees.

11.4.3 Working conditions

The project promoter must ensure that:

a) work practices are compatible with the scale, intensity and risk associated with the project;
b) workers have ongoing training and adequate supervision to safely and efficiently carry out their activities;
c) The work environment is safe, healthy and dignified, fully complying with occupational health and safety standards, including the mandatory provision and

use of Personal Protective Equipment (PPE) and the adoption of preventive measures to reduce accidents;

d) detailed documentation is maintained, including safety inspection reports, accident and incident records, health and safety training programs and up-to-date emergency plans.

11.4.4 Local communities, indigenous peoples, local communities and cultural heritage

The project promoter must:

a) Demonstrate transparent and continuous interaction with local stakeholders;

b) Identify, prevent and resolve, in a timely manner and preferably through extrajudicial means, conflicts related to land ownership or customary rights, engaging the affected parties;

c) Maintain a comprehensive register of stakeholders, including name, contact person, preferred means of contact (email and mobile phone), type of organization (NGO, government entities, companies, unions, etc.) and respective area of interest (social, environmental, economic);

d) Obtain free, prior and informed consent (FPIC) from impacted indigenous and local communities prior to project initiation, providing complete, transparent, culturally appropriate and accessible language information about the project's objectives, impacts, benefits and potential risks;

e) Promote the continuous involvement of these communities in all phases of the project, from design to implementation and monitoring;

f) Seek to catalyze economic and social benefits for local communities;

g) Respect and protect the cultural sites, practices and traditions of indigenous peoples and local communities.

11.4.5 International Bill of Human Rights

The host country where the project is implemented must have ratified the International Bill of Human Rights, including, in particular, the Universal Declaration of Human Rights, guaranteeing a commitment to the promotion and protection of fundamental human rights in the project's activities.

11.4.6 Public consultation for projects

The project promoter must conduct a mandatory Public Consultation with stakeholders, beginning upon project registration on the CERTIS registration platform. The list of stakeholders must be comprehensive and comprehensive.

Throughout the project lifecycle, project developers must maintain ongoing dialogue with stakeholders through meetings and formal correspondence, ensuring that the interests of local stakeholders are considered and integrated into the design and execution of any carbon removal-related activities.

For transparency, both CERTIS and the promoters are responsible for publicizing the Public Consultation period on their respective websites, if possible.

Consultation with stakeholders must meet the following requirements:

a) Accessibility:
   - Interested parties should be invited to participate in the consultation through appropriate channels, including, but not limited to, physical correspondence, electronic mail, publications in newspapers and postings in public places;
   - All documentation and communication must be made available in the local language(s) or, when necessary, accompanied by translation, ensuring accessibility of the content to a non-technical audience and respecting local knowledge.

b) Transparency:

- All conflicts of interest, both of the interested parties and the project promoter, must be duly declared;
- A formal system for receiving, handling and resolving complaints must be established, where:
    - The project promoter's contact information must be accessible to all interested parties;
    - Acknowledgment of receipt of complaints must occur within a maximum of 10 (ten) days after their submission;
    - Complaints must be resolved or forwarded within a maximum period of 30 (thirty) days after receipt;
    - The project promoter must inform the Certification Body (CB) of any new complaints received within a maximum period of 10 days after receipt;
- All complaints, comments and responses must be systematically documented and made public or available upon request.
- The project promoter is responsible for recording, analyzing, and responding to all comments received. CERTIS will also record, analyze, and respond to any observations made within the scope of its work.
- Whenever a current or proposed operational activity presents relevant impacts or undergoes significant changes in relation to what was foreseen in the initial public consultation, a new public consultation must be conducted aimed at the parties interested in or potentially affected by such activity.
- If there are legal obligations to carry out additional or different public consultation deadlines, these must be fully complied with.
- The public consultation process must be conducted in a transparent manner, fully respecting the principles of confidentiality applicable to the information and parties involved.

- The public consultation period is 30 (thirty) days, and in duly substantiated cases it may last up to 60 (sixty) days. The end date of the public consultation must be clearly identified.

11.5 Economic Requirements

The project promoter must define and implement measures proportional to the scale, intensity and risk of its activities, in order to avoid and mitigate significant environmental impacts arising from project management.

11.5.1 Economic sustainability

The project developer must ensure that project operations are environmentally responsible, socially fair, and economically viable in the long term. To this end, the following aspects must be observed:

a) **Financial Sustainability:**It must ensure that the project operates with continued profitability and financial sustainability, enabling permanent investments in sustainable practices and innovative technologies.

b) **Transparency and Compliance:**It must promote transparency in financial transactions and ensure strict compliance with applicable tax and regulatory legislation, minimizing the risk of non-compliance and penalties arising from government audits.

c) **Economic Resilience:**It must foster the project's ability to withstand potential economic crises, ensuring its operational continuity and sustainable long-term success.

11.5.2 Long-term commitment

The promoter must manage the project to ensure its sustainable economic viability over the long term, incorporating, whenever possible, additional social and environmental values. To this end, the promoter must present and develop structured business plans that consider the financial sustainability and economic resilience of the production unit.

11.5.3 Records of Economic Transactions

a) **Input Log:**You must maintain detailed, auditable records of all inputs into the project, ensuring transparency and traceability. These records should include documentation/evidence such as invoices, receipts, and delivery notes.

b) **Output Record:**You must also maintain complete and transparent records of all outputs generated by the project, including all product sales and transfers, duly documented with invoices, receipts, and release notes.

c) **Financial Reports:**The project's financial operations must be guaranteed to be transparent and complete, providing documentation that allows for detailed verification of the products sold, thus avoiding double-counting of carbon credits and preserving the credibility of the certification process. This includes the annual submission of audited financial reports, such as Model 22, Simplified Business Information (IES), and IRS Annex 3, as applicable.

11.6 Management Systems Requirements

The project developer must operate a management system in accordance with the requirements established in this standard, ensuring the proper implementation, monitoring, and maintenance of the processes involved. The management system must be appropriate for the project type (forestry, agricultural, and/or livestock) and the volume of operations performed, also considering subcontracted activities that impact the project.

11.6.1 Project Documentation

The project promoter is responsible for keeping all relevant project documentation up to date, recording all changes made and periodically communicating to CERTIS any modifications that imply changes to the scope of the certification.

a) **Farm Identification Document (IE)-**The Exploration Identification Document must be permanently updated, reflecting the current characteristics of the project.

b) **Orthophotographic document of the plot (P3) -**The parcel's orthophotographic document must be kept up to date, and any changes must be communicated to the Certification Body. This document must be available in PDF, shapefile, and kml formats.

11.6.2 Project Management Planning

The project promoter must prepare and maintain a management plan integrating all the activities planned for the project, with an appropriate time horizon, in order to guarantee advance planning of operations and support for decision-making.

11.6.3 Soil Analysis

The project developer must conduct physical and chemical soil analyses at five-year intervals to monitor the evolution of soil properties (as per Annex I). In the intervening years, the soil profile is assumed to be stable, unless significant interventions alter its structure, in which case additional analyses must be performed. In the absence of analyses, the organic matter content will be considered zero for the year in question.

11.6.4 Activities

The project promoter must define and implement management activities compatible with the scale, intensity and risk inherent in agricultural, forestry and livestock operations.

a) **Implementation of activities-**Activities must be carried out in a structured and integrated manner, promoting economic viability and environmental sustainability, ensuring the efficient use of available natural resources.

b) **Activity log:**

- **Field Notebook**: A detailed record must be kept of all operations carried out throughout the calendar year on the project.
- **List of animal components:** An annual list must be presented containing the number of animals in the unit, broken down by species, age and sex.

c) **Monitoring and evaluation-**It is recommended to appoint a technical specialist to monitor the project to support technical decision-making throughout the project. The set of emissions sectors by type of activity should be identified, with the definition and implementation of mitigating measures where applicable, accompanied by quantitative estimates of the expected reductions. The potential risks of reversing emissions reductions or carbon sequestration should be identified, associating specific mitigating factors with each risk, such as:

- Deforestation;
- Forest fires;
- Disturbances in soil structure;
- Pests and diseases.

Project monitoring must take place annually, including remote satellite monitoring carried out by CERTIS.

d) Record Keeping-The project promoter must maintain records as evidence of the activities and processes carried out, including:

- Complete records of all unit inputs and outputs;
- Records of internal audits, identified non-conformities and corrective actions implemented;
- Records of complaints received and their resolutions.

These records must be archived and kept available for a minimum period of five (5) years.

11.7 Logo Usage Requirements

For products from the project to be marketed using the CCC+ logo, their traceability must be guaranteed. Project promoters wishing to use the logo to market their products must meet the following requirements:

a) After project evaluation and issuance of the certificate, the carbon balance must be positive, that is, demonstrate net carbon sequestration;
b) The use of the logo is permitted exclusively in calendar years in which the project presents carbon sequestration, and for which the accumulated historical sum also shows positive sequestration;
c) Labeling must comply with applicable national and community legislation, as well as product specifications;
d) The labeling must contain a clear statement indicating that the product was produced in a unit whose activity resulted in carbon sequestration in year X;
e) Use of the logo is subject to prior approval by CERTIS;
f) The graphic standards regarding the use of the brand and logo are established in Annex II – Logo Usage Rules.
g) Only holders of a valid contract with CERTIS may use the CCC+ logos.

For promotional use of the logo, formal approval from CERTIS is mandatory, which can be requested via emailcertis@certis.pt.

12. Carbon Credits

12.1 Carbon credit attributes

Each CCC+ credit issued represents one metric ton of actual and verified CO2 removal. Credits can be issued, transferred, withdrawn, and canceled from the CERTIS registry

according to the rules and procedures defined in the CCC+ procedure. The attributes of each credit are as follows:

a) Each credit has only one owner at any given time;

b) Each carbon credit has a publicly available history that indicates the date of issuance, date of transfer, withdrawal or cancellation, and to whom it was transferred, allowing its traceability;

c) Each credit has the following associated information:

- Unique and permanent coding;
- Date of issue;
- Project information;
- Country;
- Withdrawal date and beneficiary information;
- Cancellation date and information;
- Credit status.

12.2 Types of Carbon Credits

1. The CCC+ framework defines five main types of credits (Annex D):

A – Additionality

B – Biodiversity

C – Conservation

F – Food Production

G – Good Management

M – Maintenance

Each type of credit can also have two subtypes:

[1]- Annual balance credit

[2]- Baseline maintenance credit for 30 years

Credit Type	Definition
Additionality Credits **Code: A**	Credits resulting exclusively from additionality. Evidence of the baseline scenario is required for this consideration. Evidence of the implementation of practices and technologies that result in additional emissions reductions beyond those that would occur in a baseline scenario is essential. The use of performance benchmarks and audit reports that demonstrate effective emissions reductions is essential. It refers to a project's ability to generate GHG reductions or removals that are greater than those that would have occurred had the project not been implemented. The goal is to ensure that interventions genuinely contribute to climate change mitigation and are not simply the result of activities that would have occurred anyway.
Biodiversity Credits **Code: B**	Demonstration of measures that promote biological diversity within and around projects. Examples include native species conservation programs and the implementation of ecological corridors. Initiatives that prevent habitat loss and ensure species protection contribute to ecosystem stability and their ability to store carbon.
Conservation Carbon Credits **Code: C**	They represent the reduction or removal of one ton of carbon dioxide equivalent (CO_2e) from the atmosphere, resulting from activities that prevent greenhouse gas (GHG) emissions by protecting natural ecosystems. These credits are generally generated by initiatives that include: Prevent Deforestation: Protection of existing forests to prevent the release of carbon stored in biomass and soil.

	Protection of Sensitive Ecosystems: Conservation of areas such as mangroves, wetlands, peatlands and other ecosystems with large carbon reserves, known as "blue carbon".
Food Production Credits **Code: F**	The system reflects agricultural practices that contribute to carbon capture and promote sustainable food production. Initiatives such as regenerative agriculture and organic production can be highlighted. It may be associated with a labeling system that reflects agricultural practices that contribute to carbon capture, with these products being identified with the CCC+ seal, thus promoting sustainable food production.
Good Management Credits **Code: G**	Evidence of sustainable management practices that contribute to carbon reduction and additional sequestration. This improves existing project practices. Implementation of sustainable management practices for forests and natural ecosystems that reduce the risk of degradation and maintain carbon stocks in the long term. These practices can complement other certifications, such as forest management with sustainable management principles and criteria (PEFC or FSC certification).
Maintenance Credits **Code: M**	Projects that maintain their activity, avoiding deforestation or destruction of the existing project in the same area.

12.3 Eligibility Criteria for Different Types of Credits

12.3.1 Additionality Credit

a) Regulatory Surplus;

b) Performance Benchmark;

c) Investment Barrier;

d) Common Practice;

e) Financial Additionality;

f) Regulatory Additionality;

g) Environmental Additionality;

h) Common Practice Additionality.

i)

12.3.2 Biodiversity Credits

a) Habitat Conservation and Recovery;

b) Protection of Endangered Species;

c) Invasive Species Control;

d) Sustainable Management of Natural Resources;

e) Community Involvement;

f) Diversity of plant structures;

g) Fauna and Flora Monitoring;

h) Riparian gallery zones;

i) Buffer zones.

12.3.3 Conservation Credits

a) Habitat Conservation and Recovery;

b) Protection of Endangered Species;

c) Sustainable Management of Natural Resources;

d) Invasive Species Control;

e) Community Involvement.

12.3.4 Food Production Credit

a) Implementation of Sustainable Agricultural Practices;

b) Efficient Use of Natural Resources;

c) Sustainable Nutrient Management;

d) Reduction of Losses and Waste;

e) Animal Welfare Practices;

f) Biodiversity Conservation;

g) Community Involvement and Social Responsibility.

12.3.5 Good Management Credit

a) Implementation of Sustainable Practices;

b) Soil Conservation and Improvement;

c) Efficient Water Management;

d) Reduction of GHG Emissions;

e) Biodiversity Protection;

f) Animal Welfare;

g) Waste Management;

12.3.6 Maintenance Credit

a) Implementation of Sustainable Practices;

b) Soil Conservation and Improvement;

c) Efficient Water Management;

d) Reduction of GHG Emissions;

e) Maintenance of existing stocks, soil and tree components;

f) Maintenance commitment for a minimum period of 30 years.

Final Considerations

This framework constitutes a fundamental and comprehensive instrument for the certification, monitoring, validation, and trading of carbon credits under the CCC+ program. It establishes rigorous technical standards and clear guidelines that promote sustainable practices in the agricultural, forestry, and livestock sectors, aligning with global efforts to mitigate climate change and achieve the Sustainable Development Goals (SDGs).

CERTIS, as the entity that holds and manages this standard, assumes primary responsibility for overseeing its compliance, ensuring that all stages—from design, management, validation to the issuance and marketing of credits—are conducted with integrity, transparency, and scientific rigor.

Furthermore, the framework was designed to remain dynamic, incorporating innovative practices, scientific advances, and regulatory changes, ensuring its continuous updating. This flexibility enables the system's constant improvement, enabling certified projects to effectively and credibly contribute to reducing greenhouse gas emissions.

In addition to climate mitigation, the CCC+ framework also emphasizes the importance of social responsibility, environmental conservation, and economic sustainability, promoting integrated benefits that strengthen the resilience of the communities and ecosystems involved.

In general, this framework constitutes a solid and consistent instrument that guarantees the quality and credibility of the carbon credits issued, while also promoting sustainable production practices, promoting benefits that go beyond the environmental sphere and contribute permanently to sustainable socioeconomic development.

Annex I - Methodology for Soil Analysis

In order to comply with soil analysis requirements, the project developer must follow P46A- Procedure for Soil Analysis.

Annex II - Logo Usage Rules

All rules for using the logo are available in the CCC+ Simplified Graphic Standards Manual.

Annex III - Carbon Balance Calculation Formula

The CERTIS calculation formula was developed by a team of experts, translating scientific research experience to the real needs of projects, respecting the principles of the IPCC and APA.

For calculations, the calendar year is considered (January 1 to December 31). The formula includes:

a) Project-specific data relating to all inputs and outputs over a 1-year period (January to December), including all carbon emission and sequestration values across all project cultural operations throughout the year.
b) Biomass value of the plant component - calculated by satellite (in cases where the plant component is higher than 1 meter above ground level) or values taken from scientific bibliography (verified and referring to each type of crop/species).
c) Specific data of the documents provided to comply with the requirements announced above.

Name	Formula	
Parameters and constants(data relating to animals and vegetation, as well as conversion, emission, loss and sequestration factors are taken from bibliographic sources such as the APA, the IPCC, scientific articles)		
Global Warming Potential (GWP100)(Source: IPCC 2021)	$Emi_{CO2e(x,y)} = Emi_{(x,y)}(z) \times GWP_{(z)}$	EmiCO2e(x,y) – CO2e emissions for emissions of type "x", in year "y", (kg CO2e/year) GWP(z) – Global Warming Potential of gas "z" Emi(x,y)(z) – Emissions of type "x" of gas "z", in year "y", (kg gas z/year)
CH4 emissions from livestock effluent management		
CH4 emission factor from livestock effluent management for animal "i", in year "y", (kg CH4/(head.year)) (Source: IPCC 2006)	$EF_{GEP(i,y)}(CH_4) = (VS_{(i)} \times 365) \times \left[Bo_{(i)} \times 0{,}67 \times \sum_{jk} \frac{MCF_{(jk)}}{100} \times MMS_{(ijk)}\right]$	Volatile solids excreted on average by animal "i", (kg.dm/day) Bo(i) - Maximum CH4 production capacity of the manure of animal "i", (m3 CH4/kg VS excreted) 0.67 - Conversion factor from m3 of CH4 to kg of CH4

		MCF(j,k) - CH4 conversion factor for livestock effluent management system type “j” for climate region “k”, in year “y”, (%) MMs(i,j,k) - Fraction of livestock effluent from animal “i” treated in management system “j” in climate region “k”, (dimensionless)
N2O emissions from livestock effluent management (GEP)		
N2O emission factor by direct emission from livestock effluent managementof animal type “i”, in year “y”, (kg N2O/(head.year)) IPCC 2006 (formula 10.25)	$EF_{N2O(direct)(i,y)}(GEP) = \sum_s \left(N_{ex(i,y)} * MS_{(i,s)}\right) * EF_{3(s)} * \frac{44}{28}$	Nex(i,y) - Average annual excretion of N in the country of interest by type of animal “i”, in year “y”, (kg N/(head.year)); MS(i,s) - Fraction of nitrogen/manure per animal “i” that is treated in the effluent management system “s”, (dimensionless); EF3(s) - Direct N2O emission factor from the effluent management

		system “s”, through livestock effluent management, (kg N2O-N/kg N). 44/28 - Conversion from kg N2O-N to kg N2O.
LOSS of N due to volatilization of NH3 and Noxof the type of animal “i”, in year “y”, (kg N/(head.year)) IPCC 2006 (adapted from formula 10.26)	Volatilization-MMS =Σs[Nex(i,y)x MS(i,s)x FracGasMS(i,s)]	Nex(i,y) - Average annual excretion of N in the country of interest by the type of animal “i”, in year “y”, (kg N/(head.year)); MS(i,s) - Fraction of nitrogen/manure per animal “i” that is treated in the effluent management system “s”, (dimensionless); FracGasMS(i,s) - Fraction of N loss by NH3 and Nox volatilization by animal type “i”, in year “y”
Indirect N2O emission by N volatilization from	$N_2O_{G(mm)} = (N_{volatilization-MMS} \bullet EF_4) \bullet \frac{44}{28}$	Nvolatilization-MMS - LOSS of N from the volatilization of NH3 and

livestock effluent managementof the type of animal “i”, in year “y”, (kg N2O/(head.year)) IPCC 2006 (formula 10.27)		Nox from the type of animal “i”, in year “y”, (kg N/(head.year)) EF4 - N2O emission factor by volatilized and redeposited N [kg N2O-N (kg NH3-N + NOX-N volatilized)-1] 44/28 - Conversion from kg N2O-N to kg N2O
LOSS of N by leaching of the type of animal “i”, in year “y”, (kg N/(head.year)) IPCC 2006 (adapted from formula 10.28)	$Nleaching\text{-}MMS = \Sigma_s[Nex(i,y) \times MS(i,s) \times FracleachMS(i,s)]$	Nex(i,y) - Average annual excretion of N in the country of interest by type of animal “i”, in year “y”, (kg N/(head.year)); MS(i,s) - Fraction of nitrogen/manure per animal “i” that is treated in the effluent management system “s”, (dimensionless); FracleachMS(i,s) - Fraction of N loss by leaching by animal type “i”, in year “y”

Indirect N2O emission by N leaching from livestock effluent management of the type of animal “i”, in year “y”, (kg N2O/(head.year)) IPCC 2006 (formula 10.29)	$N_2O_{L(mm)} = \left(N_{leaching-MMS} \bullet EF_5\right) \bullet \frac{44}{28}$	Nleaching-MMS - LOSS of N derived from NH3 and Nox leaching from animal type “i”, in year “y”, (kg N/(head.year)) EF5 - N2O emission factor per N leached [kg N2O-N (kg N leached/runoff)-1] 44/28 - Conversion from kg N2O-N to kg N2O
N2O emissions from the management of AGRICULTURAL SOILS		
Amount of N from manure and urine deposition on pasturesby cattle on pasture, in year “y”, (kg N/year) IPCC 2006 (formula 11.5)	$F_{PRP,CPP(y)} = \sum_i \left(N_{(i)} \times N_{ex(i)}\right)$	N(i) - Number of heads of animals of type “i” (unit) Nex(i,y) - Average annual N excretion in the country of interest for animal “i”, in year “y”, (kg N/head.year)

Amount of available organic N from animal sources for animal type "i", (kg N/(head.year)) IPCC 2006 (adapted from formula 10.34)	FAM =Σs[Nex(i,y)*MS(i,s)*(1-FracGasMS(i,s) - FracleachMS(i,s))] + AMext	Nex(i,y) - Average annual excretion of N in the country of interest by type of animal "i", in year "y", (kg N/(head.year)); MS(i,s) - Fraction of nitrogen/manure per animal "i" that is treated in the effluent management system "s", (dimensionless); FracGasMS(i,s) - Fraction of N loss by volatilization FracleachMS(i,s) - Fraction of N loss by leaching by animal type "i", in year "y" AMext - Amount of N relative to manure from outside the farm (kg N/year)
N2O emissions from agricultural soils of direct origin	EmiN2O-direct =[(FPRP,CPPxEF3PRP,CPP) + (FPRP,SOxEF3PRP,SO)+ (FAM + FSEW + FCOMP + FOOA +	FPRP,CPP(i,y) - Quantity of N from the deposition of residues by cattle, pigs and poultry in pastures that is

(kg N2O/year) IPCC 2006 (adapted from formulas 11.1 and 11.2)	FSN)xEF1 + (FAM + FSEW + FCOMP + FOOA + FSN)FR x EF1FR] x44/28 + EmiN2O-direct(FR)	incorporated into the soil by type of animal "i", in year "y", (kg N/(head.year)); FPRP,SO(i,y) - Quantity of N from the deposition of waste by sheep and other animals in pastures that is incorporated into the soil by type of animal "i", in year "y", (kg N/(head.year)); FAM(i,y) - Amount of organic N available from animal sources, for the type of animal "i", (kg N/(head.year)) FSEW(y) - Amount of N applied through WWTP sludge in the region of interest, in year "y", (kg N/year); FCOMP - Quantity of urban waste compounds applied to the soil, in year "y", (kg DM/year);

		FOOA(y) - Amount of N applied through other organic fertilizers in year “y”, (kg N/year); EF1 - N2O emission factor from N added to the soil through synthetic or organic fertilizers or crop residues, (kg N2O-N/kg N); EF1FR - N2O emission factor from N added to the soil of RICE CROPS through synthetic or organic fertilizers or crop residues, (kg N2O-N/kg N); EF3(PRP,CPP) - N2O emission factor from N added to the soil through the deposition of cattle manure and urine, (kg N2O-N/kg N); EF3(prp,so) - N2O emission factor from N added to the soil through the waste and urine of sheep and other

		animals deposited in pastures, (kg N2O-N/kg N); 44/28 - Conversion from kg N2O-N to kg N2O. EmiN2O-direct(FR) - Direct emissions of N2O from agricultural soils due to the incorporation of agricultural residues (kg N2O/year)
Amount of N applied through agricultural residues per hectare of crop "t", in year "y" (kg N/(ha.year)) IPCC 2006 (adapted from formulas 11.1 and 11.7A)	$F_{CR(t,y)} = (AG_{DM(t)} * N_{AG(t)} * (1 - Frac_{Remove(t)})) + (AG_{DM(t)} + Crop_{(t,y)}) * R_{BG-BIO(t)} * N_{BG(t)})$	AGDM(t) - Dry matter of above-ground residues per hectare of crop "t", (kg/ha); NAG(t) - N content in aboveground residues of crop "t", (kg N/kg DM); Crop(t,y) - Dry matter harvested per hectare of crop "t", in year "y" (kg DM/(ha.year));

		RBG-BIO(t) - Ratio between the surface and the bottom layer of the soil of the crop "t", (dimensionless); NBG(t) - N content in below-ground residues of crop "t", (kg N/kg DM).
Direct emissions of N2O from agricultural soils due to the incorporation of agricultural residues of crop "t", in year "y", (kg N2O/year)	$Emi_{N2O(Direct)(t,y)}(F_{CR}) = F_{CR(t,y)} * \left(Area_{(t,y)} * \text{Frac}_{\text{Renew}(t)}\right) * EF_1 * \frac{44}{28}$	EmiN2O(direct)(t,y)(FCR) - N2O emissions from direct sources in agricultural soils due to the incorporation of agricultural residues from crop "t", in year "y", (kg N2O/year); FCR(t,y) - Amount of N applied through agricultural residues per hectare of crop "t", in year "y", (kg N/(ha.year)); Area(t,y)) - Area of crop "t", in year "y", (ha/year); Areaburnt(t,y) - Area burned of crop "t", in year "y", (ha/year);

		Cf(t) - Combustion factor of crop “t”, (dimensionless); FracRenew(t) - Fraction of the area renewed annually of the crop “t”, (dimensionless) - for annual crops = 1 EF1 - N2O emission factor from N added to the soil through synthetic or organic fertilizers or crop residues, (kg N2O-N/kg N); (For rice only) EF1FR - N2O emission factor of N added to the soil of RICE CROPS through synthetic or organic fertilizers or crop residues, (kg N2O-N/kg N); 44/28 - Conversion from kg N2O-N to kg N2O.
Indirect N2O emissions related to	$Emi_{N2O\text{-}indireta\text{-}volatilização} = [(F_{SN} \bullet Frac_{GASF}) + ((F_{ON} + F_{PRP}) \bullet Frac_{GASM})] \bullet EF_4 \bullet 44/28$	FSN(y) - Amount of N applied through synthetic fertilizers per year, in year “y”, (kg N/year);

VOLATILIZATION LOSSES in year “y”, (kg N2O/year) IPCC 2006 (formula 11.9)		FON(y) - Quantity of nitrogen (N) contained in all organic fertilizers applied to the soil, in year 'y', (kg N/year); FPRP(y) - Amount of N from the deposition of animal waste and urine on pasture, in year “y”, (kg N/year) FracGASF - Fraction of volatilized N in the form of NH3 and NOX from the application of N to the soil through synthetic fertilizers, (Dimensionless) FracGASM - Fraction of volatilized N in the form of NH3 and NOX from the application of N to the soil through organic fertilizers and the deposition of animal waste and urine in pastures, (Dimensionless) EF4 - Emission factor for N2O emissions deposited in the

		atmosphere from nitrogen in soils and surface waters, (kg N2O-N) 44/28 - Conversion from kg N2O-N to kg N2O.
Indirect N2O emissions related to LEACH LOSS resulting from soil management in year “y”, (kg N2O/year) IPCC 2006 (formula 11.10)	$Emi_{N2O\text{-}indireta\text{-}lexiviação} = (F_{SN} + F_{ON} + F_{PRP} + F_{CR}) \bullet Frac_{LEACH-(H)} \bullet EF_5 \bullet 44/28$	FSN(y) - Amount of N applied through synthetic fertilizers per year, in year “y”, (kg N/year); FON(y) - Quantity of nitrogen (N) contained in all organic fertilizers applied to the soil, in year 'y', (kg N/year); FPRP(y) - Quantity of N from the deposition of animal waste and urine on pasture, in year “y”, (kg N/year). FCR(y) - Amount of N applied to soils through agricultural residues, in year “y”, (kg N/year) FracLEACH - Fraction of N leached from the application of N to the soil

		through synthetic or organic fertilizers, from the deposition of animal manure and urine in pastures and from the incorporation of crop residues (without dimension); EF5 - Emission factor for N2O emissions from nitrogen leaching and runoff, (kg N2O-N) 44/28 - Conversion from kg N2O-N to kg N2O.
CO2 emissions from soil liming		
CO2 emissions from liming in year "y", (kg CO2/year) IPCC 2006 (formula 11.12)	$Emi_{C(y)}(CO_2) = [(F_{CaCO3} \times EF_{CaCO3}) + (F_{CaMg(CO3)2} \times EF_{CaMg(CO3)2})] \times \frac{44}{12}$	FCaCO3 - Amount of limestone (CaCO3) applied to the soil, in year "y", (kg CaCO3/year); EFCaCO3 - CO2-C emission factor due to liming with limestone (CaCO3), (kg CO2-C/ kg CaCO3)FCaMg (CO3)2 – Amount of dolomite (CaMg (CO3)2) applied to

		the soil, in year "y", (kg CaMg (CO3)/year); EFCaCO3 - CO2-C emission factor for liming with dolomite (CaMg (CO3)), (kg CO2-C/ kg CaMg (CO3)) 44/12 - Conversion from kg CO2-C to CO2
CO2 emissions resulting from the application of UREA to soils		
CO2 emissions resulting from the application of urea in year "y", (kg CO2/year) IPCC 2006 (formula 11.13)	$Emi_{CO2(y)}(Ureia) = EF_{Ureia} * F_{ureia} * \frac{44}{12}$	EFUurea - CO2 emission factor due to the application of urea to soils, (kg CO2-C/kg Urea); Urea(y) - Amount of urea applied to soils, in year "y", (kg Urea/year); 44/12 - Conversion of CO2-C to CO2.
CH4 emissions from rice cultivation		

CH4 emissions from rice cultivation in year "y", (kg CH4/year) IPCC 2006 (adaptation formula 5.1)	$Emi_{CH4(y)}(CA) = EF_{CH4(y)}(CA) * A_{rice(y)}$	EFCH4(y)(CA) - CH4 emission factor for rice crops, in year "y", (kg CH4/(ha.year)); Arice(y) - Rice area referring to year "y", (ha/year)
CO2 emissions from agricultural machinery		
CO2 emissions from agricultural machinery in year "y", (kg CO2/year)	$\mathrm{Emi_{MA(y)}(CO_2) = EF_{MA} \times F_{MA(y)}}$	EFMA - CO2 emission factor for agricultural machinery, (kg CO2/ l Diesel); FMA(y) - Quantity of diesel used by the agricultural holding, in year "y", (l Diesel)
CO2 sequestration by FOREST SPECIES		

CO2 sequestration by tree type in year “y” of tree type “i” (kg CO2/year)	SeqA(i,y)(CO2) = (wi - wf)x(1+R:S) x 0.5x44/12	wi - Initial aboveground tree biomass (kg dry matter) wf - Final aboveground tree biomass (kg dry matter) R:S - Root/root ratio 0.5 - conversion of tree biomass into stored carbon 44/12 - Conversion from kg CO2-C to CO2
CO2 sequestration by PERMANENT CROPS		
CO2 sequestration by tree type in year “y” of tree type “i” (kg CO2/year)	SeqA(i,y)(CO2) = (wi - wf)x(1+R:S) x 0.5x44/12	wi - Initial aboveground tree biomass (kg dry matter) wf - Final aboveground tree biomass (kg dry matter) R:S - Root/root ratio 0.5 - Conversion of tree biomass into stored carbon (except where other values are specified)

		44/12 - Conversion from kg CO2-C to CO2
CO2 sequestration by natural meadows and BIODIVERSAL PASTURES with LEGUMES		
CO2 sequestration by natural pastures and biodiverse pastures with legumes in year “y” (kgCO2/year)	SeqP(y)(CO2) = (AreaPN(y)xFSPN + AreaPBL(y)xFSPBL)x1000x44/12	AreaPN(y) - Area with natural pasture, in year “y”, (ha); FSPN - C sequestration factor by natural pastures (t C/ha.year) AreaPBL(y) - Area sown with biodiverse pasture rich in legumes, in year “y”, (ha); FSPBL - C sequestration factor by biodiverse pastures with legumes (t C/ha.year) 44/12 - Conversion from kg CO2-C to CO2
CO2 emissions from the production of consumed ELECTRICITY		

CO2 emissions from the production of electricity consumed	Emi (tonCO_2/year) = (f * C) /1000	f- CO2 emission factor for the production of ELECTRICITY consumed (kg CO2 /kWh)C - Total consumption of the year (kWh/year)
CO2 sequestration in soil		
Accumulated Carbon	C (ton CO2/year)=((C t ×D×P×(1−F r)×10) x44/12)/1000	C_t = Carbon content (% or g/100g) D = Bulk density of fine soil (g/cm³) P = Depth of sampled layer (cm) F_r = Volumetric fraction of coarse fragments (stoniness), between 0 and 1 10 = Conversion factor for Mg/ha
Base Scenario		
Initial stock	Initial stock (tons of CO2) = January 1 civil satellite reading + CO2 sequestration in soil	Satellite Reading = provided by CERTIS
Stock at the end of 365 days		

Final Stock 365	Final stock 365 (tons CO2) = December 31 civil satellite reading + CO2 sequestration in soil	Satellite Reading = provided by CERTIS
Project Carbon Balance		
Final formula for calculating the project's annual carbon balance	Carbon Balance (ton CO2 eq/year) = FE + GEP + GSA + CAL + UR + CA + MA + E + EF + CP + PNB + PA + AS + CAA	FE- CH4 emissions from enteric fermentation (ton/year). GEP- CH4 and N2O emissions from Livestock Effluent Management of CH4 and N2O (tons/year). GSA- N2O Emissions from Agricultural Soil Management (ton/year). CAL- CO2 emissions from soil liming (ton/year). UR- CO2 emissions from the application of Urea to soils (ton/year).

		CA- CH4 Emissions from Rice Cultivation (ton/year). MA- CO2 Emissions from Agricultural Machinery (tons/year). E- CO2 emissions from the production of electricity consumed (tons/year). EF- CO2 Sequestration by Forest Species (ton/year). CP- CO2 sequestration by Permanent Crops (ton/year). GNP- CO2 Sequestration by Natural and Biodiverse Pastures (ton/year). PA- CO2 Sequestration by Animal Production (ton/year). AS- Soil CO2 sequestration (ton/year). CAA- CO2 Emissions from the Purchase of Animal Feed (ton/year).

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