

CER V2 Application Manual — CeCicle Environmental Reductions

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Application: Projects submitted for assessment and certification by CeCicle

Relationship to other documents:

- Supplements the CER-MS-001 Methodological Standard (general standard).
- Supplements the CER V2/2026 Technical Terms and Procedures (stage-specific procedures).
- Supplements the CER-BUF-001 Technical Annex (buffer parameter).

Introduction

This Application Manual is the operational instrument for CeCicle Environmental Reductions — CER V2. Its purpose is to guide proponents, inventory specialists, and assessors in the practical application of CeCicle’s methodology, technical terms, and controlled parameters.

This Manual does not replace the Methodological Standard or the Technical Terms. It organizes them sequentially, indicating what to do, in what order, using which documents, and under whose responsibility at each stage of the certification process.

The structure follows the complete project lifecycle, from the initial expression of interest through issuance and registration of the certified environmental asset.

This Manual recognizes multiple project categories, including forestry, agricultural, conservation, restoration, industrial, energy-efficiency, waste-management, and other project types eligible under CER V2. The stages are common to all categories; the applicable methodological module, parameters, equations, and category-specific requirements may vary.

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PART I — GENERAL PROVISIONS

1. Objective and Application

1.1 Objective

This Manual establishes the operational roadmap for applying CER V2 to environmental-reduction projects and projects addressing climate-related impacts.

1.2 Application

This Manual applies to:

- proponents submitting projects for CeCicle certification;
- inventory specialists responsible for the technical production of data;
- CeCicle assessors and verifiers; and
- other parties involved in the certification process.

1.3 Nature

This is an operational document. It does not create new requirements; it organizes and explains the application of requirements already established in the Methodological Standard, the Technical Terms, and the controlled parameters.

2. Reference Documents

Document	ID	Function
Methodological Standard	CER-MS-001	General standard — rules and principles
Technical Terms and Procedures	CER V2/2026	Stage-specific procedures
Buffer Parameter	CER-BUF-001	Reversal buffer (5%–60%)
Certification Protocol	To be defined	Assessment and decision
Project Design Document	PDD/PDC	Project-specific
Monitoring Report	MR	Project-specific

3. Recognized Project Categories

CER V2 recognizes different project categories, each with its own methodological module and specific requirements. The stages in this Manual are common to all categories; the applicable parameters, equations, data sources, and requirements may differ.

3.1 Forestry and land-use categories

- Forest conservation
- Forest restoration
- Rehabilitation of degraded areas
- Sustainable forest management
- REDD+ / J-REDD+
- Silviculture
- Agroforestry systems

3.2 Agricultural categories

- Low-carbon agriculture
- Crop-livestock-forestry integration (ILPF)
- Pasture management
- Rehabilitation of degraded pastures
- Soil and nutrient management

- Emissions reduction in livestock production

3.3 Industrial categories

- Industrial energy efficiency
- Fossil-fuel substitution
- Industrial CO₂ capture and use
- Reduction of industrial process emissions
- Industrial waste management
- Recycling and circular economy
- Substitution of high-carbon raw materials
- Cogeneration and heat recovery
- Reduction of fugitive emissions
- Cement, steel, chemical, and other carbon-intensive production

3.4 Energy categories

- Renewable energy generation
- Energy efficiency
- Energy-mix substitution
- Energy storage

3.5 Waste and sanitation categories

- Solid-waste treatment
- Composting
- Biogas and biomethane
- Wastewater treatment
- Landfills

3.6 Conservation and natural-resource categories

- Biodiversity conservation
- Water-resource protection
- Soil conservation
- Payment for environmental services

3.7 Other eligible categories

Other categories expressly recognized by CeCicle through an approved methodological module.

3.8 Note on industrial categories

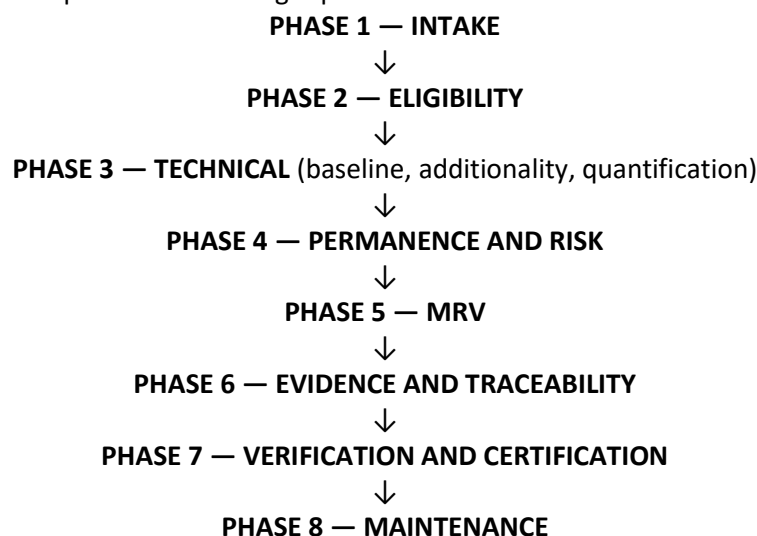
Industrial projects have specific characteristics that require project-specific methodological treatment:

- **Operational and organizational boundaries:** the project boundary may include facilities, processes, production chains, and suppliers.
- **Operational data:** measurements of consumption, production, emissions, and efficiency must be documented and traceable.
- **Baseline:** must consider the facility's historical performance, industry practice, applicable legislation, and modernization scenarios.
- **Additionality:** must consider technological, economic, regulatory, and market barriers specific to the industrial sector.
- **Leakage:** must consider production displacement, input substitution, demand changes, and market effects.

- **Permanence and reversal:** must consider equipment service life, operational continuity, maintenance, and the possibility of reverting to previous practices.
- **Uncertainty:** must consider industrial measurements, instrumentation, sector-specific emission factors, and process data.
- **Co-benefits:** may include reductions in air pollutants, water-use efficiency, circularity, job creation, and technological innovation.

4. Process Structure

The CER V2 certification process follows eight phases:



5. Responsibilities

Party	Responsibility
Proponent	Provide information; implement and maintain activities; meet obligations; report events
Inventory specialist	Produce, process, calculate, and provide technical substantiation for information
CeCicle	Establish requirements; assess conformity; certify; maintain records
Verifier	Independently assess conformity with applicable requirements

PART II — INTAKE PHASE

6. Stage 1 — Expression of Interest

6.1 What it is

The stage at which the proponent formally expresses to CeCicle an interest in submitting a project for certification.

6.2 Required documents

Document	Mandatory?
Expression-of-interest form	Yes
Proponent identification	Yes
Preliminary project description	Yes

Geographic location	Yes
Intended environmental outcome	Yes
Available supporting documentation	As applicable

6.3 Responsible party

Proponent — submits the expression of interest.

6.4 Outcome

Intake protocol registered with CeCicle.

7. Stage 2 — Preliminary Methodological Classification

7.1 What it is

CeCicle conducts a preliminary assessment of whether the project falls within the scope of CER V2.

7.2 Checks

- Compatibility with the scope of CER V2
- Existence of an applicable methodological module
- Nature of the intended environmental outcome
- Project category (forestry, agriculture, industry, energy, waste, conservation, or other)
- Preliminary certification feasibility

7.3 Responsible party

CeCicle — conducts the classification.

7.4 Outcome

- **Within scope:** proceeds to the Eligibility Phase.
- **Outside scope:** formal notice to the proponent stating the reasons.

PART III — ELIGIBILITY PHASE

8. Stage 3 — Project Identification and Characterization

8.1 What it is

The proponent and inventory specialist submit complete information identifying and characterizing the project.

8.2 Documents — Term 01

Identification:

- Project name;
- Location;
- Proponent/owner;
- Technical leads;
- Activity or intervention;
- Area or scope;
- Reference period;
- Environmental objective;
- Intended environmental outcome;
- Supporting documentation.

General characterization:

- Land use and land cover;
- Vegetation characteristics;
- Economic activity;
- Infrastructure;
- Environmental conditions;
- Site history;
- Interventions performed;
- Reference conditions.

Characterization specific to industrial projects:

- Production-process description;
- Installed capacity;
- Energy, fuel, and raw-material consumption;
- Mass and energy flows;
- Emissions by source;
- Control and measurement systems;
- Operating history;
- Relevant supplier chain;
- Applicable sectoral regulation;
- Existing efficiency programs.

8.3 Responsible parties

Proponent — institutional and documentary information.

Inventory specialist — technical information.

8.4 Outcome

Project identification and characterization dossier.

9. Stage 4 — Eligibility Assessment

9.1 What it is

CeCicle assesses whether the project meets CER V2 eligibility requirements.

9.2 Criteria — Term 01 and Chapter 5 of the Standard

CER V2 classification; project category; intended environmental outcome; defined boundaries; available documentation; assessment period; compliance with applicable methodological requirements.

9.3 Decision

Decision	Meaning
Eligible	Mandatory requirements demonstrated
Eligible subject to supplementation	Correctable outstanding items
Not eligible	Essential requirement not met

9.4 Responsible party

CeCicle — conducts the eligibility assessment.

9.5 Outcome

A documented decision identifying the project, CER V2 version, applicable module, requirements assessed, evidence, outstanding items, technical rationale, date, and responsible party.

Note: Eligibility approval does not authorize issuance of environmental assets.

PART IV — TECHNICAL PHASE

10. Stage 5 — Definition of Boundaries

10.1 What it is

Definition of the project's geographic, temporal, and environmental boundaries.

10.2 Documents — Term 04 and Chapter 6 of the Standard

Geographic boundaries:

- Polygon; coordinates;
- Reference system;
- Area;
- Editable gis files;
- Presentation maps.

Temporal boundaries:

- Reference period;
- Project start date;
- monitoring period;
- Quantification period;
- Certification period.

Excluded areas:

- Spatial identification;
- Technical justification.

Boundaries specific to industrial projects:

- Organizational boundaries (units, facilities, subsidiaries);
- Operational boundaries (processes, production lines);
- Value-chain boundaries (suppliers, inputs, distribution);
- Included and excluded emission sources;
- Relevant sinks and reservoirs;
- Energy, mass, and waste flows.

10.3 Responsible party

Inventory specialist — defines and documents the boundaries.

10.4 Outcome

Boundary maps and documentation.

11. Stage 6 — Baseline

11.1 What it is

Definition of the reference condition or scenario against which the environmental outcome will be assessed.

11.2 Documents — Term 02 and Chapter 7 of the Standard

The inventory specialist must submit:

- Reference condition;
- Relevant history;
- Scenario without the intervention;
- Documentary evidence;
- Historical data;
- Assumptions;
- Limitations;
- Technical rationale.

Baseline for industrial projects:

- Facility historical performance;
- Industry reference practice;
- Technological modernization scenarios;
- Applicable legislation and regulations;
- Market trends;
- Technology and input costs;
- Implementation barriers.

11.3 CeCicle assessment

- Plausibility of the scenario;
- Temporal consistency;
- Spatial consistency;
- Quality of evidence;
- Consistency with project characteristics;
- Compatibility with the applicable methodology.

11.4 Responsible parties

Inventory specialist — develops and documents the baseline.

CeCicle — assesses it.

11.5 Outcome

Approved baseline linked to the project, methodology, version, and period.

12. Stage 7 — Additionality

12.1 What it is

Demonstration that the environmental outcome results from conditions, actions, or benefits that would not necessarily have been achieved in the same form, scale, intensity, and period without the environmental recognition mechanism.

12.2 Documents — Term 03 and Chapter 7 of the Standard

Required analyses:

1. **Legal and regulatory aspects:** obligations, regulations, licenses, permit conditions, administrative requirements, and contractual obligations.
2. **Common practice:** reference population, location, period, comparable activities, data sources, comparability criteria, and analytical method.
3. **Financial additionality:** CAPEX, OPEX, revenues, costs, NPV, IRR, break-even point, opportunity cost, and sensitivity analysis.

4. **Barriers and independent circumstances:** financial, technical, operational, institutional, regulatory, and market-related.

Additionality for industrial projects:

- Technological barriers (availability, maturity, performance);
- Economic barriers (capital cost, return, competitiveness);
- Regulatory barriers (licensing, sectoral standards);
- Market barriers (demand, price, competition);
- Common practice in the sector;
- Investments already planned or mandatory;
- Existing sectoral programs.

12.3 Conclusive question

The inventory specialist must answer, with evidentiary support:

In the absence of the environmental benefit recognized under CER V2, would the activity be implemented or maintained in the same form, scale, intensity, and period?

12.4 Responsible parties

Inventory specialist — demonstrates additionality.

CeCicle — assesses it.

12.5 Outcome

Additionality demonstration approved or rejected.

13. Stage 8 — Stratification and Sampling

13.1 What it is

Definition of strata and sampling design for projects requiring spatially distributed characterization or quantification.

13.2 Documents — Term 05 and Chapter 6 of the Standard

Stratification:

- Remote-sensing data;
- Geoprocessing;
- Field inventory;
- Environmental characteristics;
- Land use and land cover.

Criteria:

- Internal homogeneity;
- Differentiation among strata;
- Representativeness;
- Measurability;
- Relevance to quantification;
- Ability to be validated.

Sampling:

- Random;

- Systematic;
- Stratified;
- Stratified random;
- Plots;
- Transects;
- Sampling points.

Stratification for industrial projects:

- Where applicable, stratification may consider production lines, shifts, operating regimes, input types, emission sources, or operating periods.
- Technical justification is required when operational heterogeneity may materially affect the outcome.

13.3 Responsible party

Inventory specialist — defines and justifies the design.

13.4 Outcome

Approved stratification and sampling plan.

14. Stage 9 — Inventory and Data Collection

14.1 What it is

Conducting field inventory and data collection when required by the applicable methodology.

14.2 Documents — Term 06 and Chapter 8 of the Standard

Protocol:

- Survey campaign;
- Locations of sampling units;
- Team;
- Equipment;
- Variables;
- Database;
- Field records;
- Quality control.

Variables (forestry and land use):

- DBH;
- Height;
- Species;
- Density;
- Biomass;
- Mortality;
- Vegetation condition;
- Carbon.

Pools:

- AGB (aboveground biomass);

- BGB (belowground biomass);
- SOC (soil organic carbon);
- Dead wood;
- Litter.

Data collection for industrial projects:

- Energy-consumption measurements;
- Fuel-consumption measurements;
- Production measurements;
- Emission measurements;
- Process data;
- Laboratory data;
- Operating records;
- Instrumentation data;
- Sectoral emission factors;
- Supplier data,
- Where applicable.

14.3 Responsible party

Inventory specialist — conducts the inventory.

14.4 Outcome

Field database and inventory report.

15. Stage 10 — Quantification**15.1 What it is**

Calculation of the environmental outcome attributable to the project.

15.2 Documents — Term 07 and Chapters 9 and 10 of the Standard**Selection of equations/models/factors:**

- Physiognomic type/ecosystem;
- Region;
- Vegetation;
- Variables;
- DBH range;
- Height range;
- Biomass range;
- Study population;
- Statistical quality;
- Validation;
- Uncertainty;
- Reference and source;
- Compatibility with the project.

Forestry quantification workflow:

Field data → variables → equation/model → biomass → carbon → CO₂e → methodological adjustments → outcome.

Industrial quantification workflow:

Operating data → consumption/production → emission factors → emissions → CO₂e → methodological adjustments → outcome.

Quantification for industrial projects:

- Calculation of emissions by source;
- Avoided emissions;
- Energy efficiency;
- Input substitution;
- Resource recovery;
- Reduction in carbon intensity;
- Application of appropriate emission factors;
- Conversion to CO₂e.

15.3 Restriction

Equations must not be transferred automatically across different physiognomic types, regions, or populations without technical justification. The same applies to emission factors across sectors, processes, or facilities.

15.4 Responsible party

Inventory specialist — performs the calculations.

15.5 Outcome

Calculation file/memorandum documenting the quantified outcome.

16. Stage 11 — Uncertainty, Conservativeness, and Adjustments**16.1 What it is**

Assessment of uncertainty, application of the conservativeness principle, and methodological adjustments.

16.2 Documents — Term 08 and Chapter 12 of the Standard**Sources of uncertainty:**

- Sampling;
- Measurement;
- Instruments;
- Models;
- Equations;
- Factors;
- Remote sensing;
- Classification;
- Secondary data;
- Estimates.

The inventory specialist must provide:

- Source;
- Method;
- Estimate;
- Propagation;

- Confidence level;
- Result;
- Treatment applied.

Uncertainty in industrial projects:

- Instrument measurement uncertainty;
- Emission-factor uncertainty;
- Process-data uncertainty;
- Supplier-data uncertainty;
- Product-allocation uncertainty;
- Energy-conversion uncertainty.

16.3 Conservativeness

- It must be justifiable;
- Documented;
- Traceable;
- Consistent, and proportionate to the identified limitation.

A generic percentage must not be applied without methodological grounds.

16.4 Distinction

Uncertainty is not the reversal buffer.

- Uncertainty concerns the reliability and variability of quantification.
- The buffer is a protection mechanism against future reversals.

16.5 Responsible parties

Inventory specialist — assesses and documents.

CeCicle — reviews.

16.6 Outcome

Adjusted and documented result.

PART V — PERMANENCE AND RISK PHASE

17. Stage 12 — Leakage

17.1 What it is

Assessment of whether the project displaces activity, environmental pressure, production, emissions, deforestation, degradation, consumption, economic activity, or impacts to another area or actor.

17.2 Documents — Term 09 and Chapter 11 of the Standard

Classification:

Class	Description
I	Not applicable
II	Applicable, but not material
III	Applicable and quantifiable

Quantification: when applicable and quantifiable, leakage must be calculated using an appropriate methodological procedure and taken into account in determining the certifiable outcome.

Leakage in industrial projects:

- Production displacement to other facilities;
- Emissions shifted to the supplier chain;
- Substitution of inputs with external impacts;
- Demand and market changes;
- Price and competitiveness effects;
- Displacement of waste or effluents.

17.3 Responsible party

Inventory specialist — assesses and quantifies leakage.

17.4 Outcome

Leakage report.

18. Stage 13 — Permanence**18.1 What it is**

Demonstration of the commitment to maintain the environmental outcome for the applicable period.

18.2 Documents — Term 10 and Chapter 11 of the Standard**Supporting instrument:**

- Contract;
- Commitment by the project owner;
- Landowner obligation;
- Conservation instrument;
- Maintenance plan;
- Monitoring plan;
- Contractual obligations;
- Environmental or land-tenure documentation.

Period: defined according to the project category, methodology, module, nature of the outcome, instrument used, and specific certification requirements.

Permanence in industrial projects:

- Equipment service life;
- Maintenance plan;
- Operational continuity;
- Replacement investments;
- Supply contracts;
- Applicable sectoral regulation;
- Long-term commitments.

18.3 Project-owner obligations

- Maintain the conditions necessary to preserve the certified outcome;
- Report relevant events that may affect it.

18.4 Responsible party

Proponent — undertakes the commitment.

18.5 Outcome

Approved permanence instrument.

19. Stage 14 — Reversal Risk and Buffer

19.1 What it is

Assessment of reversal risk and determination of the protection buffer.

19.2 Documents — Term 11 and Annex CER-BUF-001

Risk factors:

- Fires;
- Deforestation;
- Degradation;
- Land-use change;
- Climate events;
- Pests;
- Territorial instability;
- Economic pressure;
- Management failures;
- Industrial-specific factors include operational discontinuity, bankruptcy, change of control, technological obsolescence, and sectoral regulatory changes.

CeCicle parameter (CER-BUF-001):

Parameter	Value
Minimum buffer	5%
Maximum buffer	60%
Above 60%	Project ineligible

Risk categories:

Category	Maximum weight
Internal Risks	35%
External Risks	20%
Natural Risks	35%

Formula:

Buffer (%) = Internal Risks + External Risks + Natural Risks. Subject to:

minimum 5% | maximum 60% | above 60% → ineligible.

Note on industrial projects: natural risks may be assigned a reduced weight when they are not applicable; the assessment must be adjusted to the nature of the project, without prejudice to the 5% minimum.

19.3 Workflow

Eligible outcome → methodological adjustments → adjusted outcome → buffer → reserve → net certifiable outcome.

19.4 Nature of the buffer

- The buffer is not a net tradable quantity;
- It must be segregated and traceable;
- It must not be used to correct errors;
- It does not replace treatment of uncertainty;
- And it does not remedy additionality issues, leakage, or methodological or data deficiencies.

19.5 Responsible parties

Inventory specialist — assesses risk and calculates the buffer.

CeCicle — validates and approves.

19.6 Outcome

Calculated buffer and segregated assets.

PART VI — MRV PHASE

20. Stage 15 — Monitoring Plan

20.1 What it is

Definition of the project's applicable Monitoring, Reporting, and Verification (MRV) plan.

20.2 Documents — Term 12 and Chapter 13 of the Standard

The plan must be compatible with the project's category, methodology, environmental outcome, scale, materiality, and risk.

The plan may integrate remote sensing;

- Geospatial analysis;
- Field inventory;
- Environmental data;
- Operational data;
- Administrative records;
- Technical documentation;
- And approved evidence.

Frequency: defined according to the environmental outcome, methodology, risk, and project-specific parameters.

MRV for industrial projects:

- Continuous or periodic measurement of operating parameters;
- Instrument calibration;
- Production and consumption records;
- Verification of emission factors;
- Process-data audits;
- Input traceability;
- Emissions monitoring.

20.3 Responsible party

Inventory specialist — prepares the plan.

20.4 Outcome

Approved MRV plan.

21. Stage 16 — Monitoring Implementation

21.1 What it is

Implementation of monitoring in accordance with the approved plan.

21.2 MRV chain

Initial condition → monitoring → data → evidence → calculations → outcome → assessment → certification → registry.

21.3 Extraordinary events

Material events capable of changing the certified outcome must be reported and assessed independently of the ordinary monitoring cycle.

21.4 Future outcomes

Projected, potential, or estimated outcomes may be used for planning and feasibility analysis but must not be treated as verified or certifiable outcomes before applicable requirements are met.

21.5 Responsible parties

Inventory specialist — conducts monitoring.

Proponent — provides access and reports events.

21.6 Outcome

Monitoring Report (MR).

PART VII — EVIDENCE AND TRACEABILITY PHASE

22. Stage 17 — Evidence Organization

22.1 What it is

Organization of evidence supporting environmental claims.

22.2 Documents — Term 13 and Chapter 14 of the Standard

Evidence must have an identifiable source, period, responsible party, origin, integrity, purpose, relationship to the calculation or conclusion, and document control.

Evidence chain: Claim → Evidence → Source → Assessment → Calculation → Outcome → Verification → Certification → Digital record.

Geospatial data:

- Maps;
- Images;
- Gis files;
- Polygons;
- Remote-sensing data;
- Metadata.

Image metadata:

- Source;

- Sensor;
- Resolution;
- Acquisition date;
- Acquisition time;
- Processing;
- Product-generation date.

Evidence for industrial projects:

- Operating records;
- Instrumentation data;
- Calibration certificates;
- Input invoices;
- Supply contracts;
- Laboratory reports;
- Maintenance reports;
- Production records;
- Regulatory documentation.

22.3 Responsible party

Inventory specialist — organizes the evidence.

22.4 Outcome

Organized evidence dossier.

23. Stage 18 — Digital Record

23.1 What it is

Digital recording of evidence and results to support integrity and traceability.

23.2 Documents — Term 13 and Chapter 14 of the Standard

Possible mechanisms include blockchain, cryptographic hashes, timestamps, and QR codes. A digital record **does not replace** data, evidence, measurements, calculations, methodology, technical assessment, professional judgment, or the certification decision.

A digital record demonstrates the existence and integrity of the record at a given time; by itself, it does not establish the record’s substantive truth.

23.3 Responsible party

CeCicle — maintains the digital infrastructure.

23.4 Outcome

Digital records linked to the project.

PART VIII — VERIFICATION AND CERTIFICATION PHASE

24. Stage 19 — Verification

24.1 What it is

Assessment of project conformity with CER V2 requirements.

24.2 Documents — Term 14 and Chapter 15 of the Standard

The assessment must consider conformity of the documentation, methodology, version, eligibility, boundaries, baseline, additionality, data, evidence, equations, factors, calculations, uncertainty, leakage, permanence, risk, buffer, monitoring, and traceability.

24.3 Independence and impartiality

The assessment must be technically independent of the proponent and conducted by a competent, impartial function free from conflicts of interest.

Independence means separation between the proponent and the function responsible for technical assessment; it does not necessarily require engagement of an external organization unless expressly required.

24.4 Responsible party

CeCicle (or an approved verification function).

24.5 Outcome

Verification report.

25. Stage 20 — Certification

25.1 What it is

Formal CeCicle decision recognizing a specified environmental outcome as conforming to applicable CER V2 criteria.

25.2 Documents — Term 14 and Chapter 15 of the Standard

The certificate must identify the project;

- Owner;
- Methodology;
- Version;
- Period;
- Certified outcome;
- Unit;
- Scope;
- Unique identifier;
- And traceability records.

25.3 Limits of certification

Certification is limited to the project assessed, the period assessed, the applicable methodology, the elements actually reviewed, and the recognized environmental outcome.

Certification does not constitute general certification of all environmental, social, economic, or operational characteristics of the project.

25.4 Decision

Decision	Meaning
Approval	Requirements met
Conditional approval	Requirements met subject to conditions
Request for supplementation	Correctable outstanding items

Nonconformity	Requirement not met
Non-certification	Project cannot be certified

25.5 Responsible party

CeCicle.

25.6 Outcome

Certificate issued or non-certification decision.

26. Stage 21 — Asset Issuance and Registration

26.1 What it is

Issuance and registration of certified environmental assets.

26.2 Documents — Chapter 17 of the Standard and CER-BUF-001

Workflow:

gross outcome → methodological adjustments → eligible net outcome → buffer → net issuable quantity.

Each issued asset must have a unique, non-reusable identifier;

- Project and proponent;
- Inventory specialist;
- Methodology and version;
- Applicable module;
- Generation period;
- Source location;
- Quantity issued and allocated to the buffer;
- Verification and issuance dates;
- Ownership;
- Transfers;
- Retirement/cancellation.

26.3 Issuance formats

- An asset may be registered under different standards or formats:
- regular carbon unit;
- CPR Verde;
- tokens;
- smart contracts;
- digital currencies.

All remain subject to CeCicle governance and compliance tools and applicable international laws.

26.4 Responsible party

CeCicle — issues and registers the assets.

26.5 Outcome

Assets issued and registered.

PART IX — MAINTENANCE PHASE

27. Stage 22 — Maintenance, Reversal, and Replenishment

27.1 What it is

Ongoing monitoring of the project after certification, including the treatment of reversals.

27.2 Documents — Term 11, Chapter 17 of the Standard, and CER-BUF-001

Reversal events:

- Identification (remote sensing, fieldwork, inspection, notice, official records);
- Documentation;
- Quantification by the inventory specialist;
- Technical validation by cecicle;
- Authorization to use the buffer;
- Cancellation of corresponding units;
- Buffer replenishment;
- Entry in the record.

The buffer may be used for a confirmed and validated reversal or a total or partial loss of a certified benefit. The buffer **must not** be used for calculation errors, lack of additionality, unaccounted leakage, insufficient data, or methodological noncompliance.

Reversal in industrial projects:

- Operational discontinuity;
- Bankruptcy or change of control;
- Technological obsolescence;
- Regulatory changes that prevent continuation;
- Return to higher-emission prior practices.

27.3 Responsible parties

Inventory specialist — identifies and quantifies.

Proponent — implements measures.

CeCicle — validates and authorizes.

27.4 Outcome

Reversal addressed and recorded.

28. Stage 23 — Transfer, Retirement, and Cancellation

28.1 What it is

Recording events occurring after asset issuance.

28.2 Documents — Chapter 17 of the Standard

Transfer: recorded while preserving the asset's identification and history.

Retirement: prevents subsequent use for another environmental or commercial purpose.

Cancellation: recorded when required by the methodology or resulting from reversal, material error, duplication, regulatory requirement, or another specified event.

28.3 Responsible party

CeCicle — records the events.

28.4 Outcome

Updated asset history.

PART X — FINAL PROVISIONS

29. Summary Workflows

29.1 Complete workflow

EXPRESSION OF INTEREST → PRELIMINARY CLASSIFICATION → IDENTIFICATION AND CHARACTERIZATION → ELIGIBILITY → BOUNDARIES → BASELINE → ADDITIONALITY → STRATIFICATION AND SAMPLING → INVENTORY AND DATA COLLECTION → QUANTIFICATION → UNCERTAINTY, CONSERVATIVENESS, AND ADJUSTMENTS → LEAKAGE → PERMANENCE → REVERSAL RISK AND BUFFER → MONITORING PLAN → MONITORING IMPLEMENTATION → EVIDENCE ORGANIZATION → DIGITAL RECORD → VERIFICATION → CERTIFICATION → ASSET ISSUANCE AND REGISTRATION → MAINTENANCE, REVERSAL, AND REPLENISHMENT → TRANSFER, RETIREMENT, AND CANCELLATION.

29.2 Forestry quantification workflow

Field data → variables → equation/model → biomass → carbon → CO₂e → methodological adjustments → outcome.

29.3 Industrial quantification workflow

Operating data → consumption/production → emission factors → emissions → CO₂e → methodological adjustments → outcome.

29.4 Buffer workflow

Eligible outcome → methodological adjustments → adjusted outcome → buffer → reserve → net certifiable outcome.

29.5 Traceability workflow

Project → Monitoring → Verification → Issuance → Registration → Transfer → Retirement/Cancellation.

29.6 Reversal workflow

Identification → Documentation → Quantification → CeCicle Validation → Authorization → Cancellation → Replenishment → Record.

30. Responsibility Matrix

Legend: ● Primary responsibility | ○ Support or participation | — Not applicable

Stage	Proponent	Inventory specialist	CeCicle	Verifier
Expression of interest	●	—	○	—
Preliminary classification	○	—	●	—

Identification and characterization	●	●	○	—
Eligibility	○	○	●	—
Definition of boundaries	○	●	○	—
Baseline	○	●	○	—
Additionality	○	●	○	—
Stratification and sampling	—	●	○	—
Inventory and data collection	○	●	—	—
Quantification	—	●	○	—
Uncertainty and adjustments	—	●	○	—
Leakage	○	●	○	—
Permanence	●	○	○	—
Risk and buffer	○	●	●	—
MRV plan	○	●	○	—
Monitoring implementation	●	●	—	—
Evidence organization	○	●	—	—
Digital record	—	○	●	—
Verification	○	○	●	●
Certification	—	—	●	○
Issuance and registration	—	—	●	—
Maintenance and reversal	●	●	●	—
Transfer and retirement	○	—	●	—

31. General Application Checklist

Intake Phase

- ☐ Expression of interest formalized
- ☐ Preliminary documentation submitted
- ☐ Preliminary methodological classification completed
- ☐ Project category identified

Eligibility Phase

- ☐ Project fully identified
- ☐ Environmental, territorial, and operational characterization completed
- ☐ Supporting documentation available
- ☐ Eligibility assessed
- ☐ Decision documented

Technical Phase

- ☐ Geographic, temporal, and environmental boundaries defined

- ☐ Baseline developed and documented
- ☐ Additionality demonstrated
- ☐ Stratification and sampling defined
- ☐ Inventory and data collection completed
- ☐ Quantification performed and calculation memorandum prepared
- ☐ Uncertainty assessed and adjustments applied

Permanence and Risk Phase

- ☐ Leakage assessed and quantified
- ☐ Permanence demonstrated
- ☐ Reversal risk assessed
- ☐ Buffer calculated (minimum 5%, maximum 60%)
- ☐ Assets segregated

MRV Phase

- ☐ MRV plan prepared
- ☐ Monitoring implemented
- ☐ Extraordinary events reported
- ☐ Monitoring Report prepared

Evidence and Traceability Phase

- ☐ Evidence organized
- ☐ Evidence chain reconstructable
- ☐ Digital record made

Verification and Certification Phase

- ☐ Verification completed
- ☐ Conformity assessed
- ☐ Certification decision issued
- ☐ Assets issued and registered

Maintenance Phase

- ☐ Maintenance monitored
- ☐ Reversals addressed
- ☐ Transfers recorded
- ☐ Retirements and cancellations recorded

32. Operational Glossary

Term	Definition
Additionality	Demonstration that the environmental outcome results from the project activity and would not occur in the same form, scale, intensity, and period without the recognition mechanism.
Environmental asset	An issued and registered unit representing a certified environmental outcome.
Buffer	A reserve protecting against future reversals, calculated according to risk (minimum 5%, maximum 60%).
Certification	Formal decision recognizing a verified environmental outcome within a defined scope.

Double counting	Incompatible accounting for or claiming of the same environmental outcome under different mechanisms.
Eligibility	Satisfaction of requirements to proceed in the certification process.
Stratification	Division of an area or system into relatively homogeneous units.
Evidence	Information supporting the existence, characteristics, or magnitude of a claim.
Leakage	Displacement of activity, emissions, or environmental pressure beyond the project boundary.
Baseline	Reference condition or scenario in the absence of the project.
MRV	Monitoring, Reporting, and Verification.
Permanence	Maintenance of the environmental benefit throughout the defined period.
Reversal	Total or partial loss of a previously certified benefit.
Verification	Independent assessment of conformity with applicable requirements.

33. Final Provisions

1. This Manual is a supplementary operational instrument to the CER V2 General Methodology and the Technical Terms and Procedures.
2. Application of this Manual does not mean that all its requirements are materially applicable to every project. Applicability must be determined according to the project's scope and characteristics.
3. Where specific requirements are established by a methodology, module, or procedure approved by CeCicle, they must be observed together with this Manual.
4. Industrial, forestry, agricultural, energy, waste, conservation, and other eligible projects follow the same stages in this Manual, subject to technical adjustments specified in their respective methodological modules.
5. Material methodological changes must be submitted to the CER V2 version-control system, preserving traceability of previously applied versions.