CCC+ Standard

Certified Carbon Calculation +

CCC+ (V1-0) EN

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CCC+ REFERENTIAL

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INTRODUCTION

The CCC+ Referential defines the rules for the carbon balance calculation in a production unit. It is intended for agricultural, livestock, livestock and/or forestry production units.

This Referential defines the rules for clarifying the information required for this certification, what information is required and the calculation methodology.

The entity holding the Referential is CERTIS. This Referential is a dynamic document that can be updated and improved permanently, at the suggestion of either the client or CERTIS or other interested parties. The decision to change will be made by the holder of the Referential.

REGULATORY BASES

Any production unit that applies for the control of the CCC+ Referential implicitly undertakes to respect the legislation, directives and regulations applicable in its field of activity.

This Standard shall apply without prejudice to the various international, Community and/or national provisions, governing the health, safety and general regulatory compliance of the production unit.

REGULATION

1. SCOPE AND DEFINITIONS

1.1. Scope

This Referential is applicable to:

a) any production unit: forestry, agricultural, livestock and/or agricultural;
b) any geographical location anywhere in the globe – with the respective need to adapt the standard values used, according to the specificities of the type of crops/species to the region concerned (to be carried out by CERTIS).

1.2. Definitions

For the purposes of this document, the following terms have the meanings defined below:

Audit - Systematic, independent and documented process to obtain and evaluate, in an objective manner, evidence that determines whether the unit in question (e.g. production unit), complies with the audit criteria of the CCC+ Referential established for the unit.

Certification – An act by which an independent third party asserts that it is reasonably realistic to expect a product or service, duly identified, to conform to the specified Referential.

Production unit – physical space geographically delimited by the limits of ownership and by the same type of management.

Registration - Document that expresses results obtained or provides evidence of the activities carried out.

Verification - Confirmation, through objective evidence, that the requirements for a specific use or application have been met.

2. CCC+ ACCESSION REQUIREMENTS

2.1. Requirements

In order to be able to proceed to the application for the CCC+ Certification, the following information is required from the production unit:

- Annual soil analyses (by homogeneous areas and by crops)
- Shapefile of the production unit (for biomass calculation through satellite system);
- Annual and updated field notebook with information on:
  - Total area of the production unit
  - Areas by types of culture
  - Animal herds (by species)

2.2. Certification document (certificate)

2.2.1. The CCC+ certificate is annual and is valid until 31 December of the year in which it is issued, after the certification decision.

2.2.2. The Certificate, issued in the name of the production unit, shall contain the following information:

- Data of the entity / organization / company (name, tax address and Vat number)
- Production unit data (location – district, total area, carbon units obtained by the calculation formula expressed in tons of carbon equivalent for the total area of the production unit subject to certification:

- Value of the initial carbon stock (January of year 0 of the certificate)
- Value of the carbon balance (December of year X of the certificate)
- Accumulated carbon stock (December of year X of the certificate)

- Date on which the certification is granted (date of issue) and validity of the certificate[2];
- Certificate Number.

2.2.3. The certificate shall only be issued or issued concomitantly with the certification decision making, with the fulfillment of the certification requirements and after the signature of the contract by the CERTIS Certification Department.

2.3. Supplement to the certificate

The CCC+ certificate is accompanied by a report where a set of emergy indicators are presented, which aims to be a decision support to the production unit manager. This indicators will allow an approach in the perspective of continuous improvement of the unit provision, as a whole and by culture account.

3. COMMUNICATION RULES ASSOCIATED WITH THE USE OF THE MARK

3.1. Product labelling

After the evaluation actions carried out to the unit and, if the value of the carbon balance is negative (sequestration), the labeling of the products produced in that unit may be authorized. This authorization is continuous, whenever the annual balance is negative, i.e., of carbon sequestration. The label should have the information "Product produced in a production unit that has sequestered carbon".
The label must comply with national and Community legislation as well as the product specification.

4. CALCULATION METHODOLOGY

4.1. Carbon balance calculation formula

4.1.1. The CERTIS calculation formula was developed by a team of experts, transposing the experience in scientific research to the real needs in the production units, respecting the principles of the IPCC (Intergovernmental Panel on Climate Change) and the APA (Portuguese Environment Agency);

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

- Specific data of each production unit - all inputs and outputs over a period of 1 year (January to December), covering all emission values and carbon

sequestration in all cultural operations of the production unit throughout the year;

- Biomass value of the plant component - calculated by satellite (in cases where the plant component has a height greater than 1 meter from ground level) or with values taken from scientific literature (verified and referring to each type of crop/species).

4.1.3. In the audit process, CERTIS must have access to the following information:

- annual soil analyses (by homogeneous areas and by crops);
- Shapefile of the production unit (for biomass calculation through satellite system)
- Annual and updated field notebook with reactive information to:
  - Total area of the production unit;
  - Areas by types of culture;
  - Animal numbers (by species, weights and ages);
  - Fertilization;
  - Pruning;
  - Production (total annual quantity);
  - Energy expenditure (fuel, electricity, gas, biomass, among others);
  - External and internal workers and their working hours.

4.2. Emergy indicators

The calculation of the production unit carbon balance is complemented with environmental indicators that allow a more complete characterization of the environmental performance of the production unit. Namely, regarding the management of the available water, the efficiency of use of the resources allocated to the unit, the general impact of the activity on the natural environment and the degree of dependence on renewable and non-renewable inputs.

This more comprehensive environmental assessment is carried out using emergy assessment, a method developed in the USA by Howard T. Odum, and which has been widely applied in agricultural systems, all over the world, with special emphasis on the countries of Latin America, China, African countries, and Europe. This is considered a very robust method of assessing the environmental performance of the systems, since it is based on quantitative data of the environmental variables that affect them, instead of using qualitative methods with a high degree of subjectivity.