Coorest Carbon Standard

Coorest OÜ

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ABBREVIATIONS

Abbreviation	***Meaning***
CCS	Coorest Carbon Standard
CEO	Chief Executive Officer
CO2	Carbon Dioxide
CSFD	Coorest Sequestration Factor Database
DApp	Decentralized App (for compensating CO2)
GHG	Greenhouse Gasses
GIS	Geographic Information System
GPS	Global Positioning System
GPX	GPS Exchange Format
KML	Keyhole Markup Language
KP	Kyoto Protocol
NFT	Non-Fungible Token
PA	Paris Agreement
SHP	Shapefile
UNFCCC	United Nations Framework Convention on Climate Change

DEFINITIONS

- *Additionality:* Additionality is a determination of whether a proposed activity will produce some "extra good" in the future relative to a reference scenario, which we refer to as a baseline. In other words, additionality is the process of determining whether a proposed activity is better than a specified baseline[1].

- *Baseline Scenario:* Baseline scenarios depict a future state of society and/or environment in which no new environmental policies are implemented apart from those already in the pipeline today; or in which these policies do not have a discernable influence regarding the questions being analyzed. The baseline scenario aims to estimate the current rate of carbon emission or carbon sequestration[2], this is the carbon emission or sequestration rate before any Additional Activities are carried out.

- *Carbon Accounting:* Techniques that are used to estimate how much carbon dioxide equivalents a business emits. It is typically used to produce the carbon credit commodity that is traded on carbon markets by states, businesses, and individuals (or to establish the demand for carbon credits).

- *Carbon Credit/Offset:* A carbon credit (often called a carbon offset) is a credit for greenhouse emissions reduced or removed from the atmosphere by an emission reduction project, which can be used by governments, industry, or private individuals to compensate for the emissions they generate elsewhere[3].

- *Compliance Markets:* The compliance market follows a top-down approach where states and industries are forced by government regulations to comply with certain carbon regulations.

- *Project Boundary:* A project's boundaries define what is included in the scope of work. They set the lines or limits that mark what is included and what is excluded. Planners need to know a project's boundaries in order to produce a project scope statement[4].

- *Voluntary Carbon Markets:* Voluntary markets follow a grass-root approach where organizations and industries can voluntarily offset their carbon emission by investing in projects that remove carbon from the atmosphere.

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1 *"What Is Additionality?" - Michael Gillenwater (2012)*

2 *"EEA Glossary: Baseline Scenario" -European Environment Agency*

3 *"The Global Carbon Cycle and Climate Change" -David E. Reichle (2020)*

4 "Project Boundaries" -*www.skillmaker.edu.au (2016)*

DISCLAIMER

Please note that the present document includes both the Coorest Carbon Standard (CCS) and the applicable Coorest Methodology. Through this integration, the CCS is meant to be informative but also firmly directed to action.

The CCS is developed to serve carbon offsetting within the Voluntary Market. Coorest does not operate in the Compliance Market, and therefore the present CCS is in no way applicable in relation to carbon allowances. Compliance Markets are regulated at a state level across the world and have very specific rules and regulations. The Compliance Market serves the regional industries and each state has its own set of rules and Carbon Allowances for each industry. Unfortunately, it is recognized by many that Carbon Allowances are not delivering the sustainability goals intended by the Paris Agreement and Kyoto Protocol, and some even argue that Carbon Allowances cause more harm to the environment, as opposed to the initial aim intended for Carbon Allowances of restoring, protecting and supporting the fight against climate change and GHGs mitigation (Cames et al, 2016).

The CCS operates in the Voluntary Market. Crucial to the CCS is the concept of Additionality. Additionality demonstrates a project's reduction of CO_2 emissions or the absorption/sequestration of GHGs. As such, the CCS aims to quantify carbon absorption or CO_2 fluxes with the method and standard presented in this document. The capital benefits that arise from CCS's approach are in line with the consensus of all users and communities that understand that action can be taken by the smallest groups down to the individual in which the main goal and roadmap lie in contributing towards the preservation of our environment by restoring damaged areas, soils, and ecosystems. By means of the aforementioned activities Coorest would be (i) contributing to reducing the amount of CO_2 emitted to the atmosphere and GHGs mitigation; (ii) supporting the removal of CO_2 from the atmosphere through projects that contribute to the sequestration of CO_2; and (iii) acting both in accordance and independently to the Paris Agreement and Kyoto Protocol via a community consensus of protecting our planet's ecosystem and biodiversity.

Disclaimer of Warranty: THE READER IS RESPONSIBLE FOR CARRYING OUT THEIR OWN INDEPENDENT RESEARCH ON THE TOPIC OF CARBON SEQUESTRATION AND GHGS MITIGATION REGARDLESS OF THE INFORMATION CONTAINED IN THE PRESENT CCS. COOREST PRESENTS THE INFORMATION HEREIN ON AN "AS IS" BASIS, AND MAKES NO REPRESENTATION OR WARRANTY WHATSOEVER RELATING TO THE COMPLETENESS OR ACCURACY OF SUCH INFORMATION. ANY AND ALL ACTIONS DERIVED OUT OF OR IN CONNECTION WITH THIS DOCUMENT ARE ENTIRELY THE RESPONSIBILITY OF THE READER. COOREST IS NOT RESPONSIBLE FOR ANY ACTION OR DECISION UNDERTAKEN BASED ON THIS STANDARD AND OUTSIDE THE COOREST PROJECTS UNLESS OTHERWISE AGREED IN WRITING.

DEVELOPMENT TEAM

The Coorest team members that have contributed to the development of the current CCS are the following:

- *Ipek Ozturk*: Ipek is an ecologist in Coorest. She has practical skills in environmental engineering via several internships on carbon footprint, biogas and energy production, waste characterization, and occupational health and safety. Her responsibilities in Coorest are working on the Coorest Carbon Standard, creating a database of different types of trees and their CO_2 absorption rates, and consulting the board of leadership in project planning and development.

- *Carmen Pérez Serrano*: Carmen is a corporate lawyer with main activities in Spain. She is also part of the Coorest Management Team

- *William ten Zijthoff*: William is the CEO and co-founder of Coorest. William started the project back in 2021 and has seen tremendous interest and support for Coorest vision. His goal with Coorest is to bridge the gap between the real and digital world.

- *Nick Zwaneveld:* Nick Zwaneveld is the co-founder and CTO of Coorest. He is focussed on bringing carbon sequestration to the blockchain to enhance carbon compensation accounting. Coorest technology allows onboarding of green projects on a global scale.

EXECUTIVE SUMMARY

The CCS aims to set out a number of guidelines that the potential onboarded projects need to follow in order to comply with the reporting requirement necessary for receiving Coorest's Carbon Tokens (hereinafter referred to as "**$CCO2 Tokens**"). By following these guidelines, a project will be able to quantify the amount of CO2 such project sequesters and report this in a uniform manner to Coorest. This document is designed to be cost-effective and informative for the projects, by detailing both Coorest's Standard and Methodology in a brief and simple way.

The CCS's cornerstone is Additionality, which refers to any project's activities or features that are incorporated in addition to any pre-existing conditions and activities, which are included and operated in order to improve and enhance the project's carbon compensation ("**Additional Activities**"). Additional Activities will include tree planting together with new agricultural activities or additions that contribute to decreasing carbon dioxide emissions. Any and all activities carried out by the projects which increase CO2 absorption may be considered as Additional Activities, and therefore potentially subject to obtaining $CCO2 Tokens by means of the present CCS. Some illustrative examples of Additional Activities include, without limitation:

- The improvement of soil characteristics, provided it results in enhanced CO2 absorption;
- The enhancement of biodiversity through agroforestry methods provided it results in enhanced CO2 absorption; or
- Avoiding monoculture, i.e., changing the biodiversity for the well being of the environment, provided it results in enhanced CO2 absorption.

The increase or change in CO2 absorption will be calculated by Coorest's science team. The projects with quantifiable and proven additionality that comply with the requirements herein set forth may be subject to onboarding. An onboarded project will receive Coorest's Tree tokens ("NFTrees") and $CCO2 Tokens (hereinafter jointly referred to as the "**Tokens**") in proportion to the characteristic of their project and the CO2 absorbed by it. The Tokens are part of the voluntary Market and can be operated, sold, and/or bought within the Coorest DApp.

The Coorest DApp is a platform created and operated by Coorest with open access to everyone, which offers an easy and transparent way for individuals and businesses to compensate for their carbon footprints through the purchasing, selling, or burning of the Tokens. The Coorest DApp collects all Tokens, functions, and tools in a single place, in order to make the platform accessible and user-friendly. The DApp will feature the CCS in detail, Coorest's partnerships, instructions on how to create an account and claim/operate the Coorest Tokens step by step, use cases for individuals and businesses as well as onboarded and onboarding projects and their details.

This standard contains both the specific applicable methods to collect field data and templates of calculation. Continuity is an important variable that contributes to the success of a project. As a result, monitoring and accountability are essential, thus the present document details how such activities will be conducted using remote imagery from drones, GIS data, and/or satellite imagery.

One of the aims of the CCS is to provide participants, such as local farmers and landowners, the opportunity to protect the environment and contribute to GHG mitigation while tapping into a new source of income that was not available to them until now.

Coorest welcomes projects from all over the world and aims to continue the activities herein set forth for at least 20 years to the extent it's materially possible. In order to ensure local farmers and landowners gain knowledge of the CCS, Coorest works with a network of farmer unions and farmer cooperatives. In addition, Coorest cooperates with other environmental projects and foundations featuring green projects, tree planting, and afforestation, among others. In order to make the process smoother for onboarded projects, Coorest will offer technology consulting and instructions to facilitate the access to and use of Coorest DApp, to minimize technical and technological challenges for farmers.

BACKGROUND INFORMATION

Historical background

There is a global concern with respect to the status of our planet's sustainability, which is often paired with a consensus regarding pollution and intense exploitation of natural resources due to the progressive growth in market demands as the cause. Pollution and exploitation of natural resources are leading ecosystems to extreme conditions and biodiversity collapse. It is a fact that the integrity of natural habitats is key to maintaining the fragile eco-socio-environmental balance via biological and geological interactions to increase the resilience of local ecosystems. Sustainable ecosystems are the foundations for the evolution of civilizations since the early ages of history.

The Paris Agreement and the Kyoto Protocol are two of the most relevant international efforts to tackle the causes and effects of climate change, which have rapidly risen and deteriorated after the years of endless exploitation of natural resources. First adopted in 1997, the Kyoto Protocol has established the firm commitment of its signing parties to reduce GHGs emissions. In 2015, the parties to the UNFCCC reached an agreement at COP-21, the Paris Agreement, to further proceed with the appliance of environmental solutions by proposing numerous actions and targets, thus motivating states and industries to reduce GHGs emissions. One of the most notorious resolutions uptaken is found in Article 2 of the Paris Agreement, which aims to limit the current average global temperature to no more than 2 degrees celsius increase from the average global temperatures in the pre-industrial era.

Coorest

Coorest seeks to build a decentralized ecosystem for real-world linked NFTs and carbon emission compensation. This ecosystem aims to reduce CO_2 emissions, improve livelihoods, and protect wildlife. Through the tokenization of wildlife, trees, and CO_2 capturing, Coorest enables a transparent and globally accessible market. By connecting real-world linked NFTs to the digital world (metaverses), new business models can be created. This allows participants to start or support new sustainable projects via the Coorest DApp while keeping the value within the Coorest's ecosystem at the same time.

Compliance Market vs. Voluntary Market

There are two different and independent carbon markets: the Compliance Market and the Voluntary Market. The Compliance Market follows a top-down approach where states and industries are forced by government regulations to comply with certain carbon regulations. In particular, most regulations

regarding the Compliance Market involve quotas on limits of emitted carbon, which can be bought and sold to companies below their quota.
Voluntary Markets follow a grass-root approach where organizations and industries can voluntarily offset their carbon emission by investing in projects that remove carbon from the atmosphere, which is often represented through carbon compensation units such as carbon credits or offsets. With this aspect, the CCS is specifically designed for Voluntary Markets and aims to create a brand-new carbon compensation unit, the $CCO2 Token, that, unlike carbon credits, is completely transparent, accurate, and verifiable.

Carbon Accounting

Carbon Accounting is the process of measuring how much CO2 an entity emits or sequesters. In this standard, Coorest has come up with a solid methodology that enables it to carry out Carbon Accounting in a relatively simple but conservative manner. There are several concepts deeply intertwined with Carbon Accounting that must be acknowledged for the interpretation and appliance of the present CCS.

Firstly, carbon is one of the most essential chemical elements that form the base of all life on earth. It is found in all organic materials and living species, but it is also present in various non-organic forms such as diamonds, limestone, and carbon dioxide (CO2). Although carbon and CO2 are often used interchangeably, this is technically incorrect. When carbon is present in organic molecules or biomass, it is often referred to as carbon. When these organic molecules are burnt or decomposed, they react with oxygen to form a molecule named carbon dioxide (CO2). The mass of one carbon atom is 3.67 times higher when it binds to two oxygen atoms to form CO2. A tree absorbs CO2 from the air in the process of photosynthesis, through which CO2 is turned into biomass containing organic carbon. Once organic carbon is completely stored, the amount of carbon released into the atmosphere can be quantified by simply multiplying this amount by 3.67 (a single metric ton of CO2 equals 3.67 metric tons of carbon). This value is expressed as carbon using CO2 equivalent.

Coorest has developed a unique model to estimate how much carbon is sequestered over time by different tree species, based on specific factors such as age, height and diameter of trees, and soil characteristics. This model uses a compilation of many different tree species, soil types, and locations in order to estimate carbon sequestration for species that have been studied in less depth. This information allows Coorest to create and complete its databases.

COOREST CARBON STANDARD

& METHODOLOGY

1. Introduction

Coorest presents the Coorest Carbon Standard & Methodology, the CCS, a standard based on scientific methods focusing on accurate carbon accounting and monitoring with minimum cost. The CCS can be applied by both small and large projects within their carbon mitigation activities. In order to issue and assign its own carbon compensation units, the $CCO2 Tokens, in a fully transparent way, Coorest has created a whole new ecosystem. In the following sections, this document will introduce the reader to the CCS, with a special focus on Additionality in reforestation, orchards, and agroforestry projects. In order to make calculations efficient and effective, the CCS assumes that the projects will be onboarded, hence $CCO2 tokens will be assigned, for 20 years from the moment a project is onboarded through the signature of the onboarding agreement.

The CCS method for CO2 absorption calculation considers above and below-ground biomass, dry weight of the tree, an soil organic carbon stock (SOCS) in which the Additional Activities are carried out. The CCS calculation method results in very conservative numbers in order to ensure that $CCO2 Tokens are never overrepresenting the actual amount of carbon sequestered; furthermore, this provides a simple yet effective way of reporting, which does not require additional investments from the project owner other than time and the costs of any potential audits.

2. Project requirements

Projects need to fulfill several requirements in order to be eligible to receive $CCO2 Tokens. First of all, all projects must provide information on their activities, area, and carbon reduction as demanded by the CCS herein.

The projects will be required to meet the following requirements in order to be considered for onboarding by Coorest:

- *Submission of information:* all projects must submit information and documentation regarding their projects to Coorest, in order for Coorest to be able to analyze whether or not a project is in

line with the CCS herein. Such information will be submitted to Coorest through a Google Form which the projects will find on the Coorest DApp. The information that is required to be submitted by all projects is the following:

- Name, e-mail, ID Number, and address of the applicant, whether a legal entity or an individual, as well as address and phone number for communication purposes;

- Proof of identity of the applicant: applicants -project owners, must submit scanned proof of their identity.
  - For individuals, a scanned copy of their local ID, passport, or driver's license is sufficient.
  - For legal entities, proof of incorporation or official registry excerpts is considered sufficient.

- Name and ID Number of the project's representative: the project's representative is the individual or individuals who will be signing the agreement on behalf of the project owner. If the project owner is a legal entity, the representative will be any person with the legal ability to represent such an entity. If the project owner is an individual, they will be signing the agreement, hence they are considered the representative.

- Proof of identity of the representative:
  - A scanned copy of their local ID, passport, or driver's license is considered sufficient proof of identity.

- Project information:
  - Project description: the farmers are asked for the type of business/project they operate, in order for them to provide Coorest with a summary of the activities they carry out. With this, Coorest would be able to start analyzing whether the activities may fall under the Additionality principle or not.
  - The total size of the land in which the project that is subject to onboarding by the present CCS is or will be developed (hereinafter referred to as the "**Land**").
  - The coordinates of the Land, mapped by any of the mapping methods suggested by Coorest on the Basic Guidelines fot Project Mapping.
  - The address of the Land.
  - The number, species, and age of the trees or plants which, through Additional Activities, are absorbing CO_2 and therefore are potentially subject to onboarding by Coorest.

- Proof of a long-term right over the Land: because Coorest wants to make sure that the Additional Activities result in long-term carbon absorption, projects are required to have

long-term rights over the Land. Long-term rights over the Land include, without limitation, legal ownership, lease, or similar legal agreements with a term of at least 20 years from the moment the project is onboarded.

- A scanned copy of the agreement, public deed, or public registry information is considered sufficient proof.

- Proof of tree purchase: when the Additional Activities consist of tree planting and to the extent the project owner does have to purchase the trees or plants, the projects are requested to submit proof of purchase of the trees. In the event the Additional Activities are different to tree planting (i.e., soil enhancement), projects are encouraged to submit any kind of proof -which can be determined by both Coorest and the projects depending on the Additional Activity.
  - Some illustrative examples for proof of tree purchase (or any Additional activities) are receipts or tickets.

- Pictures and/or videos of the plans: projects are required to submit at least two (2) pictures or videos per plant or tree species subject to the Additional Activities.

- Number of years the project intends to maintain the green assets in their property and in maintaining the carbon compensation produced by the Additional Activities. Projects with a plant lifespan below 20 years from the date the project is onboarded will not be considered.

- Possible leakages arising out of or in connection with the project, as set forth in Step 6 of the Methodology description section herein.

- *Project characteristics:* projects must comply with a series of requirements, detailed in the present document, in order to be considered for onboarding. The requirements all projects must comply with are the following:

  - Additionality: the project needs to demonstrate that the activities resulting in enhanced CO_2 compensation would not have occurred without the Additional Activities subject to onboarding and tokenization; Additionality is further detailed in the Methodology description section of the present CCS. As Additionality is an extremely abstract concept, Coorest will analyze, on a case-by-case basis and in accordance to the specific circumstances of every single project, whether each project complies or not with the Additionality requirement. Projects that do not feature Additionality will not be considered for onboarding.

- Carbon compensation activities must be retained and/or maintained for at least 20 years from the moment the project is onboarded. As previously mentioned, the CCS requires that the carbon compensation is maintained for at least 20 years, and for such purpose Coorest will only onboard projects that intend to maintain such compensation activities for at least 20 years. Shorter projects will not be considered for onboarding.

- The project site has not undergone any intentional deforestation in the 5 (five) years prior to the beginning of project and/or the Additional Activities. This will be checked by Coorest using the historic satellite data. Projects which have undergone any extent of deforestation in such a period of time will be insufficient for onboarding. As expressly mentioned, only intentional deforestation activities by the project owner prevent the project from being considered for onboarding, and accidents or natural disasters are not a deterrent when it comes to evaluating a project's adequacy for onboarding.

- Tree planting can only be carried out using vegetation types that are native to the area. Projects that use vegetation that is not in line with this requirement will not be considered for onboarding.

- Agroforestry and orchard projects can only use non-invasive species. Exotic species are allowed, provided these are also non-invasive, but where possible native species are preferred. Projects that use vegetation that is not in line with this requirement will not be considered for onboarding.

- The project must not have created or received any kind of carbon compensation units (i.e., carbon offsets, carbon credits or carbon tokens) in exchange for the Additional Activities that are going to be subject to tokenization, This is, a project cannot receive or have received carbon compensation units, such as carbon credits or offsets, from other institutes such as Verra or Gold Standard. This is done in order to avoid double counting. Coorest will check this in the various registries. This requirement does not prevent the projects from engaging with such institutions for purposes other than CO_2 compensation.

- *CCS Baseline scenario:* before being subject to an Additionality assessment by Coorest, all projects are analyzed against the baseline scenario established in the Section Methodology Step 2 of the present CCS as an initial condition to decide whether these projects are sufficient to proceed or not.

- *Signed Onboarding Agreement*: all projects are required to sign a legal agreement with Coorest (the "**Onboarding Agreement**"). In the Onboarding Agreement, all project requirements (as stipulated in the Coorest Carbon Standard & Methodology) are listed, acknowledged, and agreed by Coorest and the project owner. Furthermore, the Onboarding Agreement also contains the

project owner's and Coorest's obligations towards the project as well as the consequences of any potential mismanagement of the project, such as the removal of trees.

3. Project damages

As described in detail in the Onboarding Agreement, onboarded projects are required to plant an additional 10% of each plant species, or to leave 10% of each plant species without tokenization. This percentage will serve as back-up for the event any plant damages occur, ensuring the Tokens are still duly associated with real-life trees and absorbed CO2.

In the event the backup is not enough to cover all the plant damages, Coorest will work together with the project owner, closely and in good faith, to find out the solution that best fits the interests of both part. If an agreement that restores the trees and the CO2 absorption ratio cannot be reached, Coorest will proceed to "black-list" the Tokens, which means that the Tokens will not be functional anymore, and will be marked in a way that ensures the public is aware of such conditions. This is done in order to prevent the circulation of tree tokens and CO2 that are longer material.

The projects should bear in mind that they are solely responsible for any plant damages or black-listed tokens before third-party purchasers, as the decision of selling the Tokens is exclusive of the project owners' and under their own risk. Coorest cannot compensate the projects or potential third-party purchasers for these Tokens, as Coorest is providing the onboarding services for free, and does not have any effective and material control over any potential plant damages.

4. Methodology description

Step 1 - Project boundaries

Each project site needs to be mapped using GPS surveys, drone mapping, and/or high or medium resolution satellite imagery. Coorest will provide project owners with a basic manual on how to use smartphones for mapping project boundaries. Mapping will need to fulfill the following criteria:

The projects may include homogeneous vegetation (single tree species plantation), mixed vegetation (different tree species plantation), or agroforestry methods. Project owners should map their project sites following a single consistent method, and they will be able to use the instructions included in the basic manual that Coorest provides for all types of projects. Nevertheless, project owners should indicate what kind of project they wish to onboard; if a project includes mixed vegetation or agroforestry, project owners should provide Coorest with all necessary information, such as the number of different tree species and how many hectares of different tree species have been or will be planted. If a project includes homogeneous vegetation, project owners must map the project area and provide information regarding the number of planted trees. In case the project has not yet started, the map must indicate the boundaries of the planned activities.

- For each area, the total surface area needs to be estimated using a geographic information system (GIS) or a smartphone application (for which a manual will be provided). Area calculations should be done using the local projected WGS84 UTM coordinate system. The area should be reported in hectares with two digits (eg. 23.03 ha). More digits are acceptable, but not fewer;

- For all mapped areas official ownership or other long-term rights agreement should be provided. These contracts should last for at least 20 years from the moment the Onboarding Agreement is signed;

- Data should be created with a scale of 1:5,000. This is roughly equivalent to a GPS survey for which every five (5) meters a waypoint is recorded; and

- Spatial data should be provided in SHP, KML, or GPX format. (manual will be provided).

Step 2 - Baseline scenario

The baseline scenario aims to estimate the current rate of carbon emission or carbon sequestration, this is, the rate of carbon emission or carbon sequestration prior to the Additional Activities. For this, we use carbon sequestration rates based on the current vegetation type and age. These rates vary for various forest and vegetation types and agricultural uses. For the referred estimations, we prefer to use the carbon emission factors in the available published literature, which should be at least obtained from similar localities or soil conditions.

The baseline can consist of two components: (i) the current rate of sequestration; and (ii) the current amount of carbon that is stored in the existing vegetation.

In the event project activities have started prior to calculating the baseline, the project needs to estimate the above-ground biomass using historical information about vegetation type and satellite imagery for estimating vegetation density.

➢ The Coorest Sequestration Factor Database

The Coorest Sequestration Factor Database is a database that forms the backbone of Coorest's methodology. Within this database, the following data will be stored:

- Sequestration curves for various tree species and forest types;
- Location;
- Planting density;
- Name of the species; and
- Soil characteristics.

With these data, Coorest aims to develop a model that represents a general sequestration index (time vs. relative rate of carbon sequestration) in which Coorest can account for localities, soil type, and planting density. We estimate that we will need data from several tree species before we can make an accurate, useful, and valid model. The model will be based on nonlinear regression techniques.

The CSFD will contain sequestration factors for many different tree species, forest types, and agroforestry systems. These factors change over time as seen in Figure 1. The database will contain models that incorporate the age of the tree stand and its respective sequestration factor in order to provide a standardized, low-cost, and situation-specific solution to estimating carbon storage and sequestration.

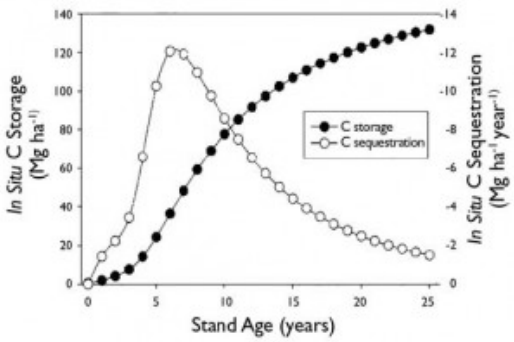

Figure 1. Carbon storage and sequestration change over time (Project Learning Tree, 2022)

Step 3 - Additionality demonstration

Additionality is at the core of the CCS. Additionality is the added carbon benefits that result specifically from the project activities. Each project has to demonstrate Additionality, otherwise, the project does not qualify for onboarding. To demonstrate Additionality, projects have to show Additional Activities initiated with the intention to reduce GHGs by either sequestration or emission reduction. These extra activities include, without limitation, tree planting, improving soil characteristics, enhancing biodiversity through agroforestry methods, and avoiding monoculture by changing the biodiversity for the well-being of the environment, among others, to the extent these activities increase the amount of sequestered carbon.
Additionality is required to ensure that the activities increase the carbon sequestration or emission reduction in comparison to the baseline scenario. This increase is what can be used for offsetting. Some illustrative scenarios are provided hereinafter to help the reader understand the concept of Additionality:

Illustrative example: Jamie says that he planted a few trees on his land to sequester carbon. He wants to get Coorest Tokens Tokens for this so that it can be used for offsetting and he will receive some income. This seems all of them are acceptable at this point, but planting a tree is not always considered Additional. The following scenarios illustrate what Additionality means:

- *Scenario A*. Jamie says that the government has issued a local mandate which makes it compulsory for him to plant a certain amount of trees per year. With this mandate in place, all the trees planted per the government's mandate are not considered offsetting, hence such activities would lack additionality, as the carbon compensation associated is already accounted for by the government.

- *Scenario B.* Before planting his trees, Jamie cut down a few productive fruit trees that were native and good for the environment. In this case, Jamie's trees are not considered additional because he simply exchanged the productive tree for another.

- *Scenario C.* Jamie owns an old apple orchard with 1.000 trees. He knows his trees sequester carbon so he wants to monetize this carbon. He does not do any activities other than what he has been doing for the last 10 years. In this case, there is no additional carbon sequestered in comparison to the baseline.

- *Scenario D.* Jamie's parents owned farmland that was covered in forest 10 years ago. Jamie has bought the land and decides to plant fruit trees on this land in order to receive carbon tokens plus an income from his fruits. In this case, Jamie's activities really improved carbon sequestration and emission reduction, something that would otherwise not have happened. In this case, there is Additionality.

- *Scenario E.* Jamie has learned that his new land required the process of soil improvement to enhance the carbon sequestration of each tree (at least 25 $kg.ha^{-1}$), so he should consider the below-ground carbon and soil characteristics. In this case, Jamie's activities really improved carbon sequestration and emission reduction, something that would otherwise not have happened. In this case, there is Additionality.

Projects that are able to demonstrate Additionality should clearly describe the specific details below:

1. What activities (Additional Activities) they are doing or planning to do;
2. How these activities are different from what has been done to the land priorly; and
3. If there has been any deforestation taken place in the last 5 years using historical satellite imagery.

Step 4 - Project scenario

The carbon reduction or emission is estimated after the project activities (Step 3) have been implemented. For afforestation, reforestation, agroforestry, and orchard projects we consider above-ground and below-ground biomass, dry weight of the tree, and soil organic carbon stock (SOCS) in which the Additional Activities are carried out. The methodology for the project scenario is similar to that of the baseline scenario. Project activities need to be converted to carbon sequestration. For this planned vegetation type, estimated future tree densities, age, and area size need to be converted to carbon sequestration. Based on the CEFD these values will provide a first estimate of the annual carbon yield over the coming 20 years. In case project activities have started prior to the application, the data can be based on randomly distributed sample plots.

Step 5 - Leakage

Leakage is when the carbon-reducing project activities cause an increase in carbon emissions elsewhere. For example, Jamie has farmland on which he grows potatoes. He decided that he is going to plant trees on half of that land for carbon tokens. The other half remains planted with potatoes. After a year Jamie noticed a reduced yield in potatoes because he only uses half the land. To achieve this, he decided to intensify the farm practices to increase the yield by utilizing more fertilizer and pesticides. This action emits extra carbon and should be deducted from the benefits achieved by planting trees. Not every project causes leakage. However, every project needs to consider whether their project is or is not causing any significant leakage. If the project does cause leakage this needs to be translated into carbon so that it can be added to the carbon-benefit model under step 6. Projects need to describe the aspects below:

1. Is there any leakage expected?
2. In case there is leakage, what does this constitute and what is the expected carbon emission from this.

Unless any significant leakages arise out of the analysis herein, Coorest will not be taking into account any leakages for the calculation of the carbon benefit in accordance with the present CCS, as it is considered that any potential leakages are covered by either or both of the following:

- The carbon absorbed by the 10% of backup plants that are not tokenized; and
- The carbon that will be absorbed by the plants subject to onboarding after the period of 20 years, as Coorest only tokenizes plants and absorbed carbon for such period. Thereinafter, the plants will still continue absorbing carbon, and such carbon will not be tokenized by Coorest.

Step 6 - Carbon benefit

Carbon benefits are the total amounts of carbon that are reduced/stored. This is calculated using the equation below Projects will receive the result of the calculation herein in the Onboarding Report issued by Coorest after signing the Onboarding Agreement.

Estimation of carbon absorbed/sequestrated

$$C_B = C_{project} - C_{base} - C_{leak}$$

Where

C_B = Carbon Benefits

C_{proj} = carbon stock or sequestration rate in the project scenario

C_{base} = carbon stock or sequestration rate in the baseline scenario

C_{leak} = carbon emission caused by leakage

Step 7 - Estimation of $CCO2 Tokens

The estimation of $CCO2 Tokens to be issued will be a direct result of the previous step, Step 6, in which the carbon absorbed/sequestrated is converted to a base unit over time, taking into account the change in sequestration rate as a result of aging vegetation. These numbers are automatically calculated using the CSFD. The unit that Coorest pegs to the carbon tokens is in kilogram per year (kg/y).

Step 8 - Monitoring

Coorest will monitor onboarded projects by using satellite data at least once a year from the date of onboarding in order to ensure that the Project duly complies with the requirements herein set forth for the 20 years term.

Step 9 - Coaching and support

Coorest believes that support and coaching are a high priority to maximize the impact of projects. Support and coaching allow the individuals involved to understand the fundamentals behind “Additionality”, carbon sequestration, and GHGs mitigation leading to a more holistic capacity in creating a sustainable low carbon economy. This means Coorest is prepared to share the knowledge contained in this standard throughout the project duration in the form of reading material and dialogues with project participants as well as being reachable for any questions and inquiries related to Coorest's activities and vision.

3. Compatibility & Regulations

As set forth in the Compliance Market vs. Voluntary Market section of the Background Information herein, Coorest operates within the Voluntary Market. As such, and regardless of the recognition or acknowledgment its Tokens may be subject to, Coorest does not make any promises or claims regarding the value and/or function within any regulatory framework of the Tokens. All projects are advised to research the uses, functions and/or value the Coorest Tokens may have in their jurisdiction.

As part of the Voluntary Market, Coorest considers that its Tokens do not interfere with any regulatory actions any governments may undertake, and for this reason, it will not perform any analysis of the project’s jurisdiction and/or legal framework regarding the tokenization of the project. The only incompatibility projects may face is in the event the carbon compensated by the Additional Activities subject to onboarding with Coorest are already considered as “compensated” for a purpose, (i.e., a project governments have created carbon units our of their trees) in which case Coorest would not be able to consider the project for onboarding, as that would result in double-counting of carbon. The projects are responsible of researching and disclosing whether any carbon compensation claim has arised out of or in connection with the Additional Activities. If this is the case, Coorest will not consider the project for onboarding.

4. Independent Partners' role

The importance of auditing partners with the activities related to $CCO2 Tokens is essential to keep the integrity of the process and assessment independent and free from conflict of interests. Coorest independent partners' information can be found on the website.

5. Methodology associated projects

Coorest's main activities focus on reforestation projects. This means that the majority of the projects involve the sowing of tree seeds. These projects vary in size, but the CCS focuses on small farmers and landowners.

6. Funding

The development of the Coorest Carbon Standard was completed internally by the dedicated staff. No funding was received or accepted during the entire life of preparing the standard.

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VERSION HISTORY

Row #	Document & Version	Revision Date	Revision Description
1	*[Name of version]*	*[DD/MM/YY]*	*[Description of changes]*