Validation Report of "Coorest Carbon Standard and Methodology for Assessment of Carbon Capture"

Earthood

Document Prepared by Earthood Services Private Limited

Standard title	Coorest Carbon Standard
Version of the document	1.0
Scope of assessment	Assessment of Standard & Methodology
Sectoral scope(s)	14 (Afforestation and Reforestation)
Client	Coorest
Authors of CCS	Ipek Ozturk: Coorest Ecologist Carmen Pérez Serrano: Coorest CCS Lead William Peter ten Zijthoff: Coorest CEO Nick Zwaneveld: Coorest CTO
Report Title	Validation Report of "Coorest Carbon Standard and Methodology for Assessment of Carbon Capture"
Version of the report	1.1
Pages	26
Date of issue	12/08/2022
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Work carried out by	Team Leader: Shreya Garg Technical Reviewer: Kaviraj Singh Trainee: Riya Sharma
Name, position and signature of the approver of the validation report	 Dr. Kaviraj Singh Managing Director

Disclaimer

This report has been produced exclusively for the use of the Coorest and should not be relied on by other parties/entities to inform a potential investment decision in this. All information provided by Coorest for the validation assessment are assumed to be copies of official company documentation that conform to the originals.

The following report is a validation assessment of the “Coorest Carbon Standard and Methodology for Assessment of Carbon Capture” and not an assessment of the company Coorest or any of its subsidiaries. Information contained in this message is made available without any express or implied representation or warranty. Furthermore, Earthood Services Private Limited (ESPL) disclaim liability for any expense incurred, or any damage or loss sustained which may or could arise from direct, indirect, special, incidental, consequential or punitive damages and which may be attributable, directly or indirectly to the use of or reliance upon any information in this report.

Earthood completed this report based on review of information given in Coorest Carbon Standard document, virtual meetings, direct observations and finding clarifications and shall not be held liable for any miss re-presentation of the information whatsoever. Wherever possible, information gathered was cross-referenced with secondary sources.

Executive Summary

Coorest has contracted Earthood Services Private Limited to conduct the validation assessment of the Coorest Carbon Standard and Methodology for Assessment of Carbon Capture. The proposed Coorest Carbon Standard serves as Coorest Standard and methodology; and would outline how to calculate the CO2 sequestration per tree and convert it to Coorest Carbon tokens.

The proposed standard falls under sectoral scope 14 Afforestation and Reforestation.

The purpose of the validation was to conduct an independent assessment of the proposed Coorest Carbon Standard and methodology for Assessment of Carbon Capture. The information given in the Coorest Carbon Standard document was found to be clear, and appropriate.

Validation was performed using a combination of document review, virtual meetings, and cross-checking from available literature review.

08 clarification requests (CLs) and 06 corrective action requests (CARs) were raised as findings throughout the validation process. The Earthood Services Private Limited audit team's conclusions from the validation process have been closed. This the first version of Coorest Carbon Standard and it will be further subjected to revisions as and when required, given there shall be no deviation from the requirements of fundamental principles and materiality set in the current version of Coorest Carbon Standard.

The validation team can confirm that:

- the proposed methodology correctly identified the scope of the standard
- the document has all the required information of the Standard
- the document has correctly included method for calculation of CO2 sequestration
- uncertainties identified during the assessment of methodology were satisfactorily addressed
- all relevant information has been consistently applied within the applicable sections in the CCS document.

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Objective

Coorest contracted Earthood Services Private Limited to conduct an independent assessment of the proposed standard & methodology “Coorest Carbon Standard”. Independent Third-Party Validation of Methodology against the requirements set out in the Coorest Carbon Standard (CCS) document, Coorest Methodology Requirements, any other applicable requirements set out under the CCS Program and applicable CCS Standards / Procedures / Decisions / Guidance established. The purpose of the validation was to conduct an independent assessment of the proposed Coorest Carbon Standard and methodology for Assessment of Carbon Capture. The information given in the Coorest Carbon Standard document was found to be clear, and appropriate.

Background

About Coorest

Coorest Carbon Standard (CCS) is being developed by Coorest. The standard document also serves as methodology for the quantification of CO2 sequestration. The standard introduces Coorest tree tokens (proof of carbon compensation certificates (PoCC), Coorest’s Tree tokens (“NFTrees") and $CCO2 Tokens) and the standard formulation is based on blockchain technology. Coorest also provide other services under its carbon compensation options such as NFTrees and DApp. Coorest’s projects include the My Coorest Tree play to earn mobile games, the NovaTerra MMORPG play to earn Metaverse and the Wildlife tokenization project. /9/ The CCS document provides information of development team.

About ESPL

Earthood Services Private Limited is accredited by Executive Board (EB) of Clean Development Mechanism (CDM) as a Designated Operational Entity (DOE). The accreditation has been granted for 11 different sectoral scopes including sectoral scope 14. Afforestation and Reforestation. The information about Earthood Services Private Limited’s accreditation and sectoral scope is available at the following UNFCCC interface https://cdm.unfccc.int/DOE/list/DOE.html?entityCode=E-0066. The personal worked on the methodology has sufficient knowledge and experience of working on the projects in sectoral scope 14 Afforestation and Reforestation. /10/

Standard assessment process and methodology

The assessment was undertaken by a competent team of Earthood and involved the following:

- the desk review of documents and evidence submitted by the client in context of the reference of standard, methodology, and other evidence.
- interactions with the client
- reporting assessment findings with respect to clarifications and non-conformities and the closure of the findings, as appropriate.
- preparing a draft assessment opinion based on the raised findings and conclusions.

- technical review of the draft assessment opinion along with other documents as appropriate by an independent competent technical review team
- finalization of the third-party assessment opinion (this report)

Validation team, Technical Reviewer and Approver

Validation Team Members

#	Role	Last Name	First Name	Involvement in	
				Desk review	Findings
1.	Team Leader	Garg	Shreya	YES	YES
2.	Trainee	Sharma	Riya	YES	YES

Technical Reviewer and Approver

#	Role	Last Name	First Name
1.	Technical Reviewer	Singh	Kaviraj
2.	Approval	Singh	Kaviraj

The Team Leader, Shreya Garg is qualified by ESPL in Validation and Verification of Clean Development Mechanism Requirements (CDM projects) and other voluntary schemes as VCS, CCB and GS. She has experience of working in carbon projects, including but not limited to CDM, VCS, GS and GCC projects of more than 10 years for various sectors and methodologies. She attained her master's degree in Climate Science & Policy. She has been qualified as per the evaluation process of ESPL for competency for CDM/VCS/GS/GCC. Thus, she has the relevant competence and work experience.

Riya Sharma is a Trainee (Validator) in this project. She has been doing carbon projects under CDM/VCS/GS/GCC programs in ESPL. She attained her masters in Biodiversity and Conservation and did specialisation in forest carbon stock assessment. She worked for forest restoration project and nature-based solutions projects. She has a relevant competence and work experience and has been qualified as per the evaluation process of ESPL for competency for programs CDM/VCS/GS/GCC.

Technical Review of the project is done by Kaviraj Singh. He is the Founder and Managing Director of the Earthood Services Private Limited. He has done his PhD in Environmental Engineering from IIT, Delhi. He has an experience of more than 16 years working in the field of Climate Change and carbon market. He been qualified as per the evaluation process of ESPL for competency for CDM/VCS/GS/GCC. Thus, he has the relevant competence and work experience.

Validation assessment

Method and criteria

The proposed information given in standard & methodology document was checked taking reference of requirements of other carbon registries to form a validation opinion which is complete and correct. The validation assessment was conducted using Earthood's internal procedures. The methods and criteria have been given in this report in above section "standard assessment process and methodology".

No sampling was required during the methodology validation.

Resolution of findings

The findings may be of following types:

CAR – Corrective Action Request, it is raised when issues are identified that require further elaboration, research or expansion and modification in the document

CL – Clarification Request, it is raised if information is insufficient or not clear enough to form an opinion

FAR – Forward Action Request, it is raised to identify issues that will be addressed and resolves in further revisions of the document. Since this is the validation of the Standard as well as methodology document and all the information were required to be validated completely, no FARs were raised.

During the present validation, 08 CLs and 06 CARs were raised and successfully closed. The list of findings and their resolution are presented at Appendix IV of this report.

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.

- 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, 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.

- 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.

- 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.

The Standard document applies all the generic terms and definitions. Terms are correctly defined in the standard. The definitions were found to be consistently included in the methodology text, along with the reference. The definitions are concise and would aid in providing context of the standard and methodology and enhance the readability.

Generation of carbon tokens

The proposed Coorest Carbon Standard aims to provide Coorest carbon tokens to afforestation and reforestation project. As per the CCS's CO2 sequestration methods, sequestered CO2 is converted into Coorest Carbon $CCO2 tokens in a ratio of one (1) $CCO2 Token for every one (1) kilogram of CO2 absorbed by a tree. $CCO2 tokens are issued in proportion to the average yearly CO2 sequestration of a given tree.

Coorest carbon standard & methodology document

The assessment of the proposed standard & methodology have been completed by reviewing CCS standard, CCS other document and through independent literature review. Clarification and corrective actions raised during finding rounds were satisfactorily addressed by Coorest. Please refer appendix IV for details.

Some of the characteristics of the proposed Coorest Carbon Standard (CCS) are mentioned below:

- The CCS document is drafted with concise and logical approach, bearing all the relevant sections applicable clear to understand for readers.
- Fundamental principles of baseline, additionality have been included in the standard
- Standard has also considered non-permanence risks associated with A/R project
- All the technical terms have been defined in the standard and readers and project owners
- Calculations of total CO2 sequestration and conversion to carbon tokens have been transparently described in the Coorest CO2 sequestration calculation method excel sheet /6/
- All the steps in calculations have been correctly included and readers and trace the calculation through CFSD.
- Carbon pools and GHG sources are given in the standard

- Illustrative examples have been given in additionality section of the CCS document that will help readers and project owners to correctly identify additionality in their projects.

Upon completion of the assessment of the CCS document, Earthood concludes that:

- the CCS document serves as both Coorest Carbon standard and methodology for calculation of CO2 sequestration,
- the scope and applicability are correctly identified,
- the terminologies used in the CCS document are appropriately defined and used consistently throughout the document,
- the criteria and procedures are drafted in an easy-to-understand manner, and can be applied readily and consistently by readers
- the structure of CCS document is well defined and include all standard rules and requirements.

Scope and applicability conditions

CCS provides standard and methodological guidance for sectoral scope 14. Afforestation and Reforestation. The sectoral scope aligns with UNFCCC sectoral scope identification. The CCS is a document that serves as both standard and methodology and is applicable quantification of carbon tokens within voluntary carbon market.

Projects under voluntary market with location all over the world are applicable under CCS. The CCS proposes quantification of CO2 over time by different tree species, using parameters such as age, height and diameter of trees, and soil characteristics. CCS is applicable to both small-scale and large-scale project. However, it is to be noted that the project scale itself is not strictly defined by the Coorest. The main principle of CCS is additionality. The standard highlights correct identification of additionality in all project types such as reforestation, orchards, and agroforestry.

The allocation of CO2 tokens to the project owners will be given for 20 years. The start date of the crediting of the CO2 tokens is the date of onboarding, which is identified through signing onboarding agreement, in case the project has already started. The start date will be determined from the date of commencement the additional activities for projects in which such activities have not commenced at the date of onboarding. The amount of CO2 tokens that will be credited will correspond to how much CO2 has been absorbed since the plants were planted.

The applicability conditions provided in the proposed CCS document are assessed, and listed below:

As per the project requirements, the project developer who wish to achieve Coorest tokens will first requires to submit information through a google onboarding form available on Coorest website. The form request for preliminary information such as name, e-mail, ID Number, and address of the applicant, contact details. Project information such as project description, land area, geo-coordinates, and number, species, and age of the trees or plants. Other important information asked in onboarding form is proof of long-term rights over the land by project owner, proof of tree purchase.

Coorest has also other specific onboarding requirements. It is also mentioned that projects with a plant lifespan below 20 years from the date the project is onboarded will not be considered.

Coorest will analyse deforestation rate in the project area using the historic satellite data. Prior to the start of the project and/or the Additional Activities, the project site did not experience any deliberate deforestation for 5 (five) years.

The project area shall only plant native species to the area, especially agroforestry and orchards projects. Plantation of exotic species in reforestation project are also allowed, having demonstrated that they are non-invasive species.

Coorest also address avoidance of double counting by checking project information in various carbon registries for carbon credits. This requirement does not prevent the projects from engaging with such registries for purposes other than CO2 compensation.

The project owner shall sign onboarding agreement with Coorest which covers all project requirements, and project owner's and Coorest's obligations towards the project as well as the consequences of any potential mismanagement of the project.

Consideration of non-permanence risk

It is stated in the CCS that onboarded projects are required to plant an additional 10% of each plant species, or to leave 10% of each plant species without tokenization. In the next level, in case the above non-permanence criterion is not meet, the Coorest carbon tokens issued to project owner will not be functional and will be "black-listed" by Coorest.

Earthood concludes that the scope and applicability criteria defined by the Coorest and clear and appropriate.

Project boundary

The demarcation of project boundary in CCS is done by GIS mapping for which Coorest has developed basic manual /7/. The manual provides step-by-step approach to identify and map project boundary. The CCS document also highlights the importance of identifying vegetation type and number of trees. Information on GIS coordinate system, project area ownership information, collection of spatial data has been provided in the CCS document.

It is in Earthood's opinion that sufficient procedures have been provided in the CCS for the identification of project boundary. The spatial extent of the project boundary includes the demarcated land area where plantation activities will occur. The project owners and readers would be able to demarcate project boundary with the help of basic manual.

Carbon pools considered in CCS are above and below-ground biomass, dry weight of the tree, and soil organic carbon stock (SOCS). GHG gas applicable is CO_2.

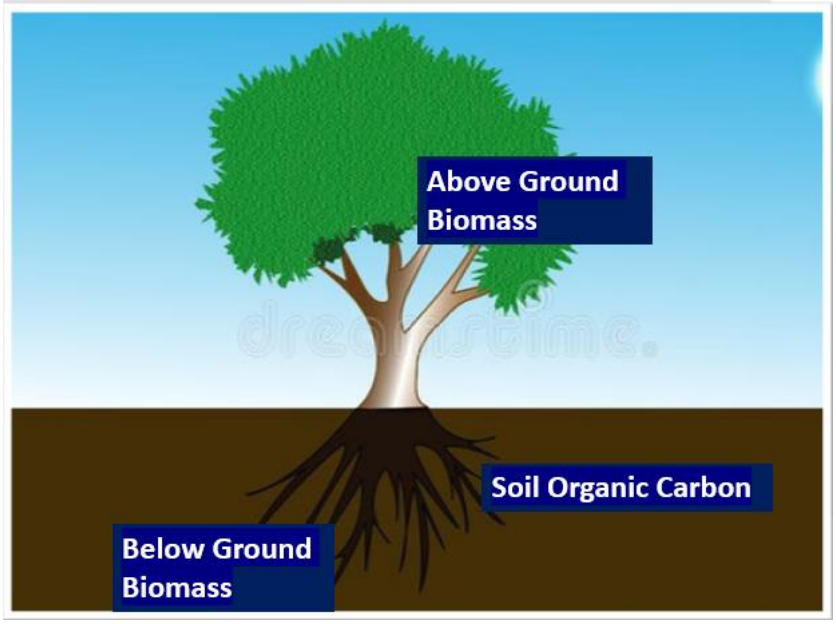

Figure 1 Showing carbon pools

Baseline scenario

The baseline scenario in CCS consists of the current rate of sequestration; and the current amount of carbon that is stored in the existing vegetation. It is stated in the CCS document that "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". Coorest has developed Coorest Sequestration Factor database (CSFD) for the calculation of baseline carbon sequestration. The database requires input of diameter at breast height, height of tree values.

In Earthood's opinion, the identification of baseline scenario is well-defined and appropriate. The procedure of data collection and analysis depicted is also transparent and non-complex.

Additionality

Additionality has been deeply focused principle in the CCS. The project wishes to get registered in CCS have to demonstrate additionality component of additional sequestration or emission reduction through implementation of project activities. The eligible project activities under CCS are:

- tree planting,
- improving soil characteristics,
- enhancing biodiversity through agroforestry methods,
- avoiding monoculture by positively affecting biodiversity,
- and others.

CCS requires project owner to confirm on additional activities planned in the project area that would benefit the project, activities should not be mandatory in the project location, and no land use change or deforestation took place in the past. Coorest will analyze, on a case-by-case basis and in accordance with the specific circumstances of every single project, whether each project complies or not with the additionality requirement.

It is concluded that the concept of additionality proposed in the CCS is appropriate and complete. Further illustrative example given in the CCS will help readers and project owners to present additionality argument correctly.

Project scenario

For this planned vegetation type, estimated future tree densities, age, and area size need to be converted to carbon dioxide sequestration. As stated in the CCS, 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.

Project leakage

Leakage is not accounted in the project until the project analysis confirms the potential sources of leakages in the project. In case of any potential leakage, the requirement of the CCS is either / and:

(a) leaving 10% of each plant species without tokenization
(b) non-tokenization of plants after the period of 20 years.

The identification of leakage scenario and its quantification is based on project-to-project cases. The above requirements will be met despite the project has leakage or not.

Estimation of carbon absorbed/sequestrated

Carbon pools and gases will be considered same for baseline, project and leakage scenarios. The total carbon stock calculated is called carbon benefit and estimated as follows.

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

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

Quantification of GHG Emission Reductions and Removals

Above tree ground biomass

$$W\ (above-ground) = \mathbf{0.25} * D^{\mathbf{2}} * H\ (for\ trees\ with\ D < \mathbf{11})$$
$$W\ (above-ground) = \mathbf{0.15} * D^{\mathbf{2}} * H\ (for\ trees\ with\ D > \mathbf{11})$$

Where,
$W_{above\text{-}ground}$ = Above-ground weight (pounds/tree)
D = Diameter at breast height (inches)
H = Height of the tree (feet)

Below ground tree biomass

The root system weight is about 20% of the above ground weight. Therefore, following equation is used:

$$W\ (below-ground)\ = W\ (above-ground)\ *\ \mathbf{0.2}$$

Wbelow-ground = Below ground biomass of tree
W below-ground= Above-ground weight *0.2 pounds/tree

Total tree biomass

The average tree includes 72.5% dry matter and 27.5% moisture. Therefore, to determine the dry weight of the tree, following equation is used.

$$W\ (total\ biomass) = W\ (above-ground) + W\ (below-ground)$$

$W_{total\ biomass}$ = Total biomass of tree (pounds/tree)

Dry woody biomass

$$W(dry\ weight)\ =\ \mathbf{0.725}\ *\ W(total\ biomass)$$

$W_{dry\ weight}$ = Dry weight of the tree (pounds/tree)

Average tree carbon content

The average carbon content is generally 50% of the tree's dry weight total volume. Therefore, following equation is used.

$$W(carbon) = W(dry\ weight) * \mathbf{0.50}$$

W_{carbon} = weight of carbon in the tree
W carbon = weight of carbon in the tree *0.5 (pounds/tree)
W carbon = weight of carbon in the tree * 0.4535923 (kg/tree)
W carbon = weight of carbon in the tree /20years= (kg/tree/year)

Soil organic carbon (SOC)

The soil organic carbon ("SOC") stock at the sampled depth (0 – 30 cm) and following equation is used for SOC estimation.

$$SOCS = SOC\ concentration * BD * SD$$

SOCS: Soil Organic Carbon Stock (kg C/tree)
SOC: Soil Organic Carbon
BD: Bulk Density
SD: Soil Depth (30 cm)

The values of SOC and bulk density will be determined from online available sources such as FAO and from published research papers.

Total carbon sequestration

Total carbon sequestration is the summation of carbon sequestration by the above and below ground parts and carbon sequestration by soil. Therefore, following equation is be used.

$$W(total - carbon) = W(carbon) + SOCS$$

$W_{total\text{-}carbon}$ = Total carbon sequestration (kg/tree/year)

$$W(carbon\ dioxide) = W(total - carbon) * \mathbf{3.67}$$

$W_{carbon\ dioxide}$ = Total weight of CO_2 sequestration (kg CO2/ tree/ year)

CO2 has one molecule of Carbon and 2 molecules of Oxygen. The atomic weight of Carbon is 12 g/mol and the atomic weight of Oxygen is 16 g/mol. The weight of CO2 in trees is determined by the ratio of CO2 to C is 44/12 = 3.67.

Coorest CO_2 tokens

$$1\ Kg\ Sequestered\ CO2 = 1\ \$CCO2\ Token$$

Monitoring

The monitoring of the project area will be done by remote sensing. In the case of project activity with avoided deforestation, the monitoring will be done at least once in a year from the date of onboarding .

Assessment conclusion

Earthood Services Private Limited (Earthood) has performed a validation of the proposed Coorest Carbon Standard document /1/. The document serves as Coorest Carbon Standard as well as Methodology document for Assessment of Carbon Capture. The validation was performed on the basis of ESPL's internal procedures and fundamental requirements set for any standard of carbon registry. Principles such as baseline, additionality, non-permanence, and monitoring parameters were assessed to review the methodology given in the Coorest Carbon Standard document. Supporting documents such as CO2 sequestration calculation method document, tree tokenisation agreement and other documents as listed in appendix II were checked to form an opinion on the correctness and consistency of the information throughout all Coorest documents.

The methodology is falling within Sectoral Scope 3 Afforestation and Reforestation. This the first version of Coorest Carbon Standard and it will be further subjected to revisions as and when required, given there shall be no deviation from the requirements of fundamental principles and materiality set in the current version of Coorest Carbon Standard.

Earthood Services Private Limited has informed the Coorest of the validation findings and outcome through the draft validation report and final validation report. The final validation report contains the information with regard to fulfilment of the requirements for validation, as appropriate.

Earthood Services Private Limited applied the following validation process for Coorest standard and methodology using a competent validation team;

- the desk review of documents and evidences submitted by Coorest,
- follow-up virtual interview, whenever required,
- reporting audit findings with respect to clarifications and non-conformities and the
- closure of the findings, as appropriate and
- preparing a draft validation opinion based on the auditing findings and conclusions
- technical review of the draft validation opinion along with other documents as
- appropriate by an independent competent technical review team
- finalization of the validation opinion (this report)

The review of the Coorest Carbon Standard, supporting documentation and subsequent follow-up actions (virtual interactions) have provided Earthood Services Private Limited with sufficient evidence to determine the fulfilment of stated criteria.

Internal Quality Control

The validation report prepared by the assessment team was reviewed by an independent technical review team to confirm if the internal procedures established and implemented by Earthood were duly complied with and such opinion/conclusion is reached in an objective manner that complies with the applicable rules/requirements. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of the technical review team were independent of the due diligence team.

The15echnicall review process may accept or reject the validation opinion or raise additional findings in which case these must be resolved before submitting the final report. The technical review process is recorded in the internal documents of Earthood, and the additional findings gets included in the report.

The final report approved by the technical reviewer is authorized by the Managing Director and issued to Coorest.

Validation Opinion

Earthood was contracted by Coorest for validation assessment of Coorest Carbon Standard. The scope of the assessment included an independent assessment of the proposed Coorest Carbon Standard and methodology for Assessment of Carbon Capture. The information given in the Coorest Carbon Standard document was found to be clear, and appropriate.

The validation conclusion was made based on the review of documents submitted by Coorest and through independent desk review. The methodology is falling within Sectoral Scope 14 Afforestation and Reforestation. Earthood Services Private Limited has informed the Coorest of the validation outcome through the draft validation report and final validation report. The final validation report contains the information with regard to fulfilment of the requirements for validation, as appropriate.

Earthood Services Private Limited is of the opinion that the proposed document consisting of Coorest Carbon Standard and Methodology for Assessment of Carbon Capture provides clear and complete information of calculation of carbon sequestration. The calculation method for achieving carbon tokens is fairly described. Therefore, the proposed “Coorest Carbon Standard” document is being recommended for the use of calculation of carbon sequestration and claiming for carbon tokens.

Dr. Kaviraj Singh

Managing Director — Date: 12/08/2022

Earthood Services Private Limited — Place: Gurgaon, Haryana

Appendix I: List of abbreviations

ABG	Above Ground Biomass
BGB	Below Ground Biomass
CAR	Corrective Action Request
CCS	Coorest Carbon Standard
CDM	Clean Development Mechanism
CL	Clarification Request
CO2	Carbon dioxide
CSFD	Coorest CO2 Sequestration Factor Database
DOE	Designated Operational Entity
EB	Executive Board
ESPL	Earthood Services Private Limited
FAR	Forward Action Request
GCC	Global Carbon Council
GHG	Greenhouse Gases
GS	Gold Standard
RS	Remote Sensing
SOC	Soil Organic Carbon
VCS	Verified Carbon Standard
UNFCCC	United Nations Framework Convention on Climate Change

Appendix II: List of documents referred

#	Title	Reference of the document	Source
1.	Coorest Carbon Standard & Methodology	Version 1.0 Dated 17/05/2022	Coorest
2.	CO2 sequestration calculation method	-	Coorest
3.	Tree Tokenization agreement between Coorest and Farmers	-	Coorest
4.	Coorest onboard registration form weblink	-	Coorest
5.	CCS Onboarding report template	-	Coorest
6.	CCS CSFD	-	Coorest
7.	CCS basic mapping instruction document	-	Coorest
8.	UNFCCC CDM Validation and Verification Body Standard for project activities https://cdm.unfccc.int/Reference/Standards/index.html	Version 3.0	UNFCCC website
9.	https://coorest.io/	Last accessed on 24/07/2022	Coorest website
10.	List of CDM DOEs https://cdm.unfccc.int/DOE/list/index.html	Last accessed on 24/07/2022	UNFCCC website

Appendix III: Competence of team members and technical reviewers

Competence Statement			
Name	Shreya Garg		
Country	India		
Education	M.Sc. (Climate Science & Policy), TERI University		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS.I.A., AMS.I.C., AMS.I.D., AMS.I.F., AMS.II.D., AMS.II.G., AMS.II.J., AMS.III.AV., AMS.III.BL, ACM0002, ACM0012		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1)		
Reviewed by	Shifali Guleria	**Date**	26/04/2022

Approved by	Deepika Mahala	**Date**	26/04/2022

Competence Statement			
Name	Kaviraj Singh		
Country	India		
Education	Ph.D. (Environmental Engineering), IIT Delhi Masters (Energy & Environmental), DAVV Indore		
Experience	15 Years +		
Field	Climate Change & Environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-II.D., ACM0006, AMS-I.A., AMS-I.C., AMS-II.B., AMS-III.H, ACM0002, ACM0001, AM0080, ACM0018, AM0056		
Local expert	YES (India)		
Financial Expert	YES		
Technical Reviewer	YES		
TA Expert	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1, TA 13.2)		
Reviewed by	Shreya Garg	**Date**	12/02/2020
Approved by	Anshika Gupta	**Date**	12/02/2020

Competence Statement			
Name	Riya Sharma		
Education	M.Sc. Biodiversity & Conservation		
Experience			
Field	Climate Change & Environment		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Deepika Mahala (Quality Manager)	**Date**	19/08/2021
Approved by	Ashok Gautam (Technical Manager)	**Date**	25/08/2021

Appendix IV: Validation findings

CAR/ CL	Finding	Finding addressed	Conclusion
CL01	It is requested to submit following documents/ information for the assessment: • Data collection instructions document • Template of legal agreement between project owner and Coorest • Basic manual on how to use smartphones for mapping project boundaries • Coorest Sequestration Factor Database (CSFD)	YES	Documents given in the Coorest Carbon Standard were asked for the validation assessment and have been provided by Coorest.
CL02	It is unclear from the information given in submitted Coorest Carbon Standard that it serves as both standard and methodology. It is requested to kindly add a separate paragraph or note either in the disclaimer section or in executive summary describing that the document serve as standard as well as methodology.	YES	Clarification has been added.
CAR01	In the “Project requirements” CCS document, it is mentioned that the Coorest aims to make the reporting and monitoring process as transparent as possible by providing report templates, data collection instructions and excel sheet s that allow easy and cost efficient data collection and spot on reporting. In relation to above statement, please provide explanation on the following points 1. Where the project data will be submitted? Kindly explain the procedure and timeline. 2. Would not it be better if the initial data also includes baseline scenario and a decision tree whether the project is eligible or	YES	Client has added the information that the project developer/owner requires to submit through the online survey form. Eligibility criterion of the project to screen at onboarding level is also included in onboarding survey form.

	not as Coorest standard focuses primarily on demonstration of additionality?		
CAR02	In the “Project requirements” compensation scheme is mentioned. In the assessor’s opinion, this is an important section for project owners to note as it deals with carbon tokens and choice of ER during natural calamities. It is requested to kindly provide justifiable heading above this information or place this information in separate section.	YES	in relation to compensation, the last version of the CSS was not in line with what we are going to implement in practice -and which is already included on the legal agreement. Coorest will not be providing any compensation for farmers, as we provide the tokenization services for free, thus we cannot afford to cover the losses (incidental or not) of any farmers. You can find our provisions for the event of plant damages (by natural disasters or otherwise) on section 3 of the CSS (“Project damages”) as well as further detailed on the legal agreement I provided you with. Specifically, we do request projects plant an additional 10% of each plant species (or leave such percentage un-tokenized), which serves as back-up in case of plant damages. We have estimated that for “normal” damages this percentage should suffice. In case of greater damages, Coorest will work with farmers to find the most beneficial solution for both parts, but if the farmer has sold the NFTrees to a third party, they are solely responsible for compensating such third party. As mentioned, please find detailed information on this on the legal agreement.
CAR03	In the “Methodology description”, it is mentioned under project boundaries step, “Homogeneous vegetation can be mapped within a single category. If various forest types or cash crops are planted in different areas of the project site then these areas need to be mapped as such”. Please provide detailed information on stratification of project site.	YES	Required information was added in the updated document.

CAR04	Following information shall be added in the shared Coorest Carbon Standard document Version of the document Date History of document at the end of the document describing changes done in the standard throughout different version of the CCS document	YES	Requested articles were added in the updated document.
CAR05	The Coorest Carbon Standard shared for the assessment is the only document that serves as standard as well as methodology. Therefore, it is requested to add definitions and abbreviations in the document. Definitions of baseline, additionality, project boundary, carbon tokens, and other relevant terms used in Coorest Carbon Standard document. Abbreviations like CCS, UNFCCC, NFT, GIS, and other abbreviations used in Coorest Carbon Standard document.	YES	Definitions and abbreviations were added in the updated document
CL03	In the “project requirement section”, basic requirements are mentioned. It is requested to discuss more about regulatory surplus and financial barriers aspects as it requires more clarification in the document It is mentioned that the project cannot receive carbon credits or units from other institutes such as, without limitation, Verra or Gold Standard. This is the case of achieving carbon tokens from emission removals achieved by the project. However, what if project developer wants to target SDGs under Gold Standard or VERRA SDVISta for their project and simultaneously registering the project under Coorest for carbon tokens only. Does the Coorest Carbon Standard has a scope of qualifying project simultaneously in two standard?	YES	we have included a sentence in the CSS stating that the CSS and tree tokenization are compatible with other organizations standards as long as those are not related to carbon compensation. Nevertheless, and answering your question here, we have not contemplated any process for qualifying project simultaneity, as what we are trying to do is precisely break with the way of doing things of other standards, as we consider these are not completely transparent.

CL04	It is requested to provide the link to access the Coorest Dapp. Please provide the current status of the app, whether it is developed or not?	YES	The link is: https://app.coorest.io/ This is only used for the claiming. The app is in beta-testing and will go live after we integrated the satellite data and the contract has been audited by a software auditor.
CL05	Point 18. of the online onboarding form is related to receiving carbon credits from other institutions. Does the agreement also covers this point? In case, the agreement does not cover it, it is suggested to ask for undertaking from the farmers or project representatives.	YES	The shared copy of agreement was reviewed, and it was confirmed that the undertaking is covered under this agreement.
CAR06	This is reference to point 16. of the online onboarding form. It was noticed that geo-coordinates of the land area is not asked in the online form, however only pictures of the current status of the land is asked.	YES	Size of the land, and geo-coordinates were added in the online onboarding form.
CL06	Leakage question is added in the point 21. of online onboarding form is checked. However, it is not clear how the leakage is accounted in this standard and methodology.	YES	In the end, we will not be taking leakages into account, as: 1) Projects are required to plant an additional 10% of trees that are not tokenized, as a backup, so CO2 absorbed by such trees is enough to cover any potential leakages. 2) Furthermore, we only tokenize the CO2 the trees absorb during 20 years and then stop, so the CO2 that is absorbed after those 20 years is more than enough to cover any potential leakages.
CL07	In the CO2 sequestration calculation method, calculation of total tree biomass	YES	1. This equation can be used for all species, The research paper shows that it is

	Equations are referred from article published in EcoMatcher. Is Coorest considering this as credible source for biomass calculation? we request you to provide the primary source of general equation used for the calculation. The equation: 1. should be general and therefore can be used for calculation of AGB of every species. 2. source of the equation should be primary 3. source should be reliable (peer reviewed paper, international governmental reports, etc).		calculated by using many different kind of tree species. 2. The reference already showed in "references" part. (Clark, A., Saucier, J., & McNab, W. (1986). Total Tree Weight, Stem Weight and Volume Tables for Hardwood Species in the Southeast. Research Division Georgia Forestry Commission. /add refere/ Now, added in text too. 3. It is from U.S. forestry commission and It is a method that has been used since 1986 and it is a very reliable source because it is still valid.
CL08	The equations added in the document for calculation of AGB, BGB, total biomass needs to be backed up by primary reference here. It is needed to validated that how these equations can be considered appropriate for calculation of carbon stock of every tree species in this standard.	YES	References added in text also.
	Method to estimate SOC concentration and bulk density are not included. we require to know the specific public information & databases that you are going to consider for the calculation of SOC. For the validation of the SOC part, considering above statement "SOC concentration by using very reliable sources which are showing the SOC concentration or directly SOCS depending on the location and soil characteristic", we request you to kindly confirm the sources from where the values of SOC will be taken.	YES	Source for SOC calculation has been added. Lopez-Bellido, Lopez-Bellido, Fernandez-Garcia, Munoz-Romero, & Lopez-Bellidob, 2016)