



AGREENACARBON PROJECT



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Client	Agreena ApS
Prepared by	Earthood Services Limited
Approved by	Deepika Mahala
Work carried out by	Team Leader: Kaviraj Singh

TA (14.1) Expert: Sadaf Nazneen

Verifier : Ashok Kumar Gautam

Verifier: Rahi Sarkar

Local Expert: Zacc Farodoye

Local Expert: Oleksandra Shcherbakova

Local Expert: Carolina Tapoc

GIS & Remote Sensing Expert: Waris Hooda¹

GIS & Remote Sensing Expert: Harshit Bhasin

Technical reviewer: Deepika Mahala

TA (14.1) Expert to TR: Napolion Borah

Summary:

Earthood Services Ltd. (Earthood) has carried out the verification assessment of the project activity “AgreenaCarbon Project” VCS 4022. The project activity falls under sectoral scope 14, Agriculture Forestry and Other Land Use (AFOLU) type and category Agriculture Land Management (ALM) and eligible ALM activity being Improved Cropland Management (ICM) as per the VCS Standard, v4.7. This is a large-scale project which involves implementation of improved agricultural land management activities that will lead to emission reductions and removals. The project is being implemented by Agreena ApS and supported by contractors and advisors. The latest version of approved VCS methodology VM0042, v2.0 has been applied to quantify the amount of greenhouse gas reductions and removals achieved through this project. The project has successfully reduced 2,679,896.74mtCO₂eq in the first monitoring period from 15/09/2021–31/12/2023. The calculations of emissions reductions and removals have been carried out in a transparent and conservative manner and were made available in emission reductions and removals calculations spreadsheets for the validation assessment.

This assignment is an independent assessment by a Third Party (Earthood) of the proposed “AgreenaCarbon Project” VCS 4022 against all defined criteria set for the registration under the VCS Standard, Version 4.7 Verification is conducted using Earthood procedures which are developed in line with the requirements specified in the VCS Validation and Verification Manual v3.2. The purpose of the verification is to confirm that the project and all related project documentation are in accordance with all rules and requirements of the VCS Standard v4.7 applied methodology (VM0042, v2.0) and its associated tool VMD0053, v2.0.

This is the first monitoring period spanning from 15/09/2021- 31/12/2023

The verification team has reviewed the project activity in accordance with the rules and requirements specified in the latest versions of VCS standard and checked the applicability of the project against the applied methodology and tools which includes the following:

VCS Standard, Version 4.7

VCS Program Guide, version 4.4

VCS Program Definitions, version 4.5

Registration and issuance process 4.6

AFOLU Non-Permanence Risk Tool, version 4.2

The project activity such as sustainable management practices found to be appropriately eligible under Project Scope 14 “Agriculture, Forestry, and Other Land Use (AFOLU) and Improved Cropland Management (ICM) of category Agriculture Land Management (ALM).

During the verification stage 10 CLs and 30 CARs were raised and successfully resolved. 01 Forward Action Request (FAR) is raised in the first verification period.

There were no uncertainties associated with the verification process. The verification team has checked the information given in the monitoring report and checked the calculation of emission reductions achieved in this monitoring period. Each detail has been checked through document review which is not only confined to information provided by project proponent (PP) but also by undertaking an independent evaluation of relevant publicly available information by making use of technical expertise of the assessment team. Project implementation activities, monitoring activities and contributed SDGs have also been confirmed during a remote site visit and the responses provided by stakeholders were positive. Thus, there are no evident uncertainties associated with the verification in this monitoring period.

In conclusion, it is Earthood’s opinion that the project activity “AgreenaCarbon Project” (VCS 4022), meets all relevant requirements for VCS standards and guidelines, and correctly applies the methodology VCS VM0042, version 2.0 for the calculation of baseline, for determining additionality and to monitor emission reductions. For the current monitoring period, the implementation of the project activities has resulted in emission reductions of 2,679,896.74tCO₂e.

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1 INTRODUCTION

1.1 Objective

Earthood was contracted by Agreeena ApS to undertake the verification of the project activity “AgreeenaCarbon Project” (VCS ID 4022) which is under the VCS Verification /12/.

The objective of the verification is to undertake an independent third-party assessment and to confirm that AgreeenaCarbon Project and all the related project documentation & supporting documents are in accordance with the rules and requirements of the VCS Standard v4.7/4/.

Especially the project's implementation plan, and the quantification of emission reduction & removal and non-permanence risk analysis is in line with relevant VCS requirements and host Country criteria are assessed to confirm that the project implementation, as documented, is comprehensive and practical and meets the identified criteria. Independent third-party assessment is a requirement for all VCS projects and is mandatory to provide assurance to the Verra and other stakeholders of the quality of the project and its achieved Verified Carbon Units (VCUs) generation.

1.2 Scope and Criteria

The scope of the services provided by the Earthood for the project is to perform VCS verification of the project AgreeenaCarbon Project (VCS 4022). The scope of verification is to assess the claims and assumptions made in the project description (PD) against the VCS Standard Version 4.7, applied methodology VM0042 v2.0 and its associated tool and other relevant rules and requirements established for VCS project activities.

Verification Process and Methodology

- The verification process is undertaken by a competent Verification team and involves the following:
- The desk review of documents and evidence submitted by the project participant in context of the reference VCS guidelines issued by Verra
- Validate whether the project activity meets the requirements of VCS Standard v4.7, VCS program guide v4.3 & VCS program definition v4.5
- Evaluate whether the baseline and monitoring plan are in conformance with the applied VCS methodology VM0042, v2.0
- Undertaking/conducting site visit, interview, or interactions with the representative of the project participant,

- Reporting audit findings with respect to clarifications and non-conformities and the closure of the findings, as appropriate and
- Preparing a draft Verification opinion based on the auditing findings and conclusions
- Technical review of the draft Verification opinion along with other documents as appropriate by an independent competent technical review team
- Finalization of the Verification opinion (this report)
- An independent technical review team reviews the verification report made by the verification team. After the final report is accepted by the technical reviewer it is then approved by Earthood which is processed further according to the VCS procedures

Earthood has performed verification based on a risk-based approach focusing mainly on the significant risks to meet the qualification criteria and the ability to generate VCUs. The verification is not meant to provide any consulting towards the client. However, stated request for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3 Level of Assurance

In accordance with the VCS Standard v4.7 para 4.1.2 and 4.1.8, the level of assurance of this Verification report is reasonable. VVB has reviewed sufficient evidence to verify the project design, ex-post and monitored parameters, monitoring plan and achieved emission reductions and removals and VCUs generated in the first verification period. Further clarifications were asked, and all the discrepancies found during the Verification assessment have been raised as audit findings, and successfully closed. With respect to VCS Standard version 4.7 para 4.1.10.4, the threshold for materiality with respect to the aggregate of errors, omissions, and misrepresentations relative to the total reported GHG emission reductions and/or removals shall be five percent for projects and one percent for large projects. The scale of the project is large scale. Therefore, 1% is the materiality threshold (large scale project).

1.4 Summary Description of the Project

AgreenaCarbon project focusses on helping the farmers to shift from conventional agricultural practices to regenerative agricultural practices. The practices introduced through this project are reduced or no tillage, residue management, planting cover or catch crop and reduction in application of synthetic fertiliser. The project is a grouped project and is being implemented in the European continent. The fields included in each country are identified as Project Activity Instances (PAI). There are 10 countries included in this project at this Verification stage, namely, Bulgaria, Denmark, Estonia, Latvia, Lithuania, Romania, UK, Moldova, Ukraine and Spain. The implementation of the project is in its first monitoring period covering the period of 15/09/2021 to 31/12/2023 and has resulted in the emissions reduction of 2,679,896.74tCO₂e during the first verification period covering 15/09/2021- 31/12/2023. The project is under sectoral scope 14 of Agriculture Forestry and Other Land Use (AFOLU). In this verification period a total of project area covered was 1,652,643.85ha in the vintage years 2021, 2022 and 2023. The net GHG emission reductions and removals achieved amounted to 2,679,896.74mtCO₂e out of which 355,183.10mtCO₂e is the buffer pool. The project is being implemented by Agreena ApS. The project applied VM0042: Methodology for Improved Land Management Version 2.0 and its associated tools to quantify the amount of greenhouse gas reductions achieved through this project. The calculation of project emissions reductions achieved for the current monitoring period has been carried out in a transparent and conservative manner and were made available in emission reductions calculations spreadsheets for the verification assessment.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification process adopted by the VVB is in accordance with the Earthood internal auditing procedures and VCS Standard version 4.7/4/ and VCS Verification and Verification Manual version 3.2 /5/ and are as follows.

The verification process involved the following.

- A review of the data and information presented by the project proponent in context of the reference VCS rules and guidelines to verify their completeness.
- Undertaking site visit, interview, or interactions with the representative of the project proponent, project employees and local stakeholders,
- A review of the monitoring plan, the monitoring methodology including applicable tool(s) and, where applicable, the applied standardized baseline, and the quality assurance and quality control procedures.
- A review of calculations and assumptions made in determining the GHG data and emission reductions and removals.
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.
- Site inspections were carried out including interviews with representatives of PP. The sampling approach followed by the verification team is given in section 2.4 of this report.

Key Milestones	Dates
Public Comment Period	21-January-2023 – 19-February-2023
Kickoff meeting between VVB and PP	10-February- 2023
Desk review	10 -February 2023 to 31-January 2025
NOVS sent to VERRA	-
1 st on sit and remote audit	30-May-2023 to 06-June-2023
2 nd On-site audit	23-September-2024 to 28-September-2024
2 nd Remote audit	10-October 2024 to 6-December-2024
Verification report	10- April 2024 to 4 -February 2025
Independent technical review	4-February-2025 – 15 February-2025

2.2 Document Review

The VCS verification of the project was performed by Earthood through the document review and on site visit completed in line with the requirements specified in the VCS standard v4.7, VVB manual and applied methodology VM0042 version 2.0 and other VCS documents.

Additionally, cross checks were performed for information provided in the monitoring report (MR) using other independent source of information. The list of documents reviewed during the verification process is provided under Appendix III of this verification report. Remote site inspection was carried out by Team Leader, Technical Area Expert and the Verifiers that covered interviews with farm owners and entities, review of photographic evidence and videos of sampled agricultural fields. Below are the details of verification team members and technical reviewer

Verification team members

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Verification findings
1.	Team Leader	IR	Singh	Kaviraj	Central Office	Y	Y	Y	Y
2.	Team Leader	IR	Garg	Shreya ¹	Central Office	Y	N	N	Y
3.	TA Expert (14.1)	IR	Nazneen	Sadaf	Central Office	Y	N	Y	Y
4.	Verifier	IR	Sharma	Riya ¹	Central Office	Y	N	Y	Y
5.	Verifier	IR	Gautam	Ashok Kumar	Central Office	Y	Y	Y	Y
5.	Verifier(Trainee)	IR	Sarkar	Rahi	Central Office	Y	N	Y	Y
6.	Local Expert	EI	Farodoye	Zacc ¹	Central Office	Y	Y	Y	Y
7.	Local Expert	EI	Shcherbakova	Oleksandra	Central Office	Y	N	Y	Y
8.	Local Expert	EI	Tapoc	Carolina	Central Office	Y	N	Y	Y
9.	RS & GIS Expert	IR	Hooda	Waris ¹	Central Office	Y	N	N	Y
10.	RS & GIS Expert New	IR	Bhasin	Harshit	Central Office	Y	N	N	Y

Technical reviewer and approver of the Verification report

¹ Previous team members

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical Reviewer	IR	Mahala	Deepika	Central Office
2.	TA Expert (14.1) to TR	IR	Borah	Nepolion	Central Office
3.	Approver	IR	Deepika	Mahala	Central Office

2.3 Interviews

Team members of the verification team visited the project site and conducted the site inspection in two parts viz., one during the validation and later after the monitoring period was expanded. In accordance with VCS Standard version 4.7 section 4.1.11, VVB conducted physical site visit for most of the countries under the project. Few of the samples were covered remotely due to unrest situation and security concerns in Ukraine. The physical site visit has been conducted by TL and Local Expert from 30/05/2023 – 06/06/2023 at the time of validation.

To verify the inclusion of new PAIs in the year 2023, additional samples were covered on site from 23/09/2024 to 28/09/2024 (Spain and Moldova) and remote site visits were carried out from 10/10/2024 -17/10/2024 and 27/11/2024 - 06/12/2024. The selection of samples has been explained in section 2.4 of this verification report. The interviews were carried out with the PP, participating farmers, farm entities and representatives from farmers' associations sampled for the visit. The list of farmers interviewed during the first campaign in 2023 has been incorporated in the registered project validation report. The following is the list of people interviewed on-site as well remotely in the second verification campaign.

No.	Interviewee			Date*	Subject	Team member(s)
	Last name	First name	Affiliation			
1.	Kinegaard	Sebastian	Agreena	23/09/2024 - 28/09/2024	Project design and implementation, documentation and management, objectives, project additionality, Verification of the project activities implemented on the fields under the Agreena project, crop yield, monitoring plan, grievance registration and redressal,	Ashok Kumar Gautam
2.	Garcia	Jesus	Agreena	23/09/2024 - 28/09/2024	Project design and implementation, documentation and management, objectives, project additionality. Roles and responsibilities of PP team, baseline identification, additionality of the project, monitoring plan, start date of the project, local stakeholder consultation, and monitoring activities, advisory company, Verification of the project activities implemented on the fields under the Agreena project, crop yield, monitoring plan, grievance registration and redressal,	Ashok Kumar Gautam

3	Bozian	Camelia	Agreena	23/09/2024 - 28/09/2024	Project design and implementation, documentation and management, objectives, project additionality. Roles and responsibilities of PP team, baseline identification, additionality of the project, monitoring plan, start date of the project, local stakeholder consultation, and monitoring activities, advisory company, Verification of the project activities implemented on the fields under the Agreena project, crop yield, monitoring plan, grievance registration and redressal,	Ashok Kumar Gautam
4	Pavlenko	Andrei	Agreena	23/09/2024 - 28/09/2024	Project design and implementation, documentation and management, objectives, project additionality. Roles and responsibilities of PP team, baseline identification, additionality of the project, monitoring plan, start date of the project, local stakeholder consultation, and monitoring activities, advisory company, Verification of the project activities implemented on the fields under the Agreena project, crop yield, monitoring plan, grievance registration and redressal,	Ashok Kumar Gautam
5.	Ursu	Ancuta	Agreena Representative, Romania	10/10/2024	Verification of the project activities implemented on the PAIs	Ashok Kumar Gautam & Sadaf Nazneen
6.	Chepynoga	Svetlana	Agreena Representative, Ukraine	11/10/2024	Verification of the project activities implemented on the fields under the Agreena project.	Ashok Kumar Gautam & Sadaf Nazneen
7.	Serebriakova	Nina	Farmer entity, Ukraine	11/10/2024	Verification of the project activities implemented on the fields under the Agreena project.	Ashok Kumar Gautam & Sadaf Nazneen

8.	Solomko	Olga	Farmer, Ukraine	11/10/2024	Verification of the project activities implemented on the fields under the Agreeena project.	Sadaf Nazneen
9.	Dumitru	Mihai	Farmer, Romania	10/10/2024	Verification of the project activities implemented on the fields under the Agreeena project.	Sadaf Nazneen
10.		Continental Farmer Group (company name Salic)	Farmer entity	16/10/2024	Verification of the project activities implemented on the fields under the Agreeena project, crop yield, monitoring plan, grievance registration and redressal,	Sadaf Nazneen
11.	Bekes	Arnold	Farmer, Denmark	03/12/2024	Verification of the project activities implemented on the fields under the Agreeena project, crop yield, monitoring plan, grievance registration and redressal.	Riya Sharma
12.	Kelly	Patrick	Farmer, UK	06/12/2024	Verification of the project activities implemented on the fields under the Agreeena project, crop yield, monitoring plan, grievance registration and redressal.	Riya Sharma
13.	Gold	Julian	Farmer, UK	06/12/2024	Verification of the project activities implemented on the fields under the Agreeena project, crop yield, monitoring plan, grievance registration and redressal.	Riya Sharma

2.4 Site Visits

VCS standard and applied methodology VM0042 does not instruct to use particular sampling approach, rather it is mentioned in the VCS standard that where, due to the number of project activity instances, it is unreasonable to undertake an individual assessment of each initial or new instance, the Verification/verification body shall document and explain the sampling methods employed for the Verification of such instances. Such sampling methods shall be statistically sound (para 4.1.23 VCS standard, Version 4.7).

Therefore, VVB applied the simple random sampling approach considering 90/10 (confidence interval and precision – CI/P) considering the population size of 40,571PAIs for this monitoring period. The

required minimum sample size based on the selected statistical constraints/parameters (CI/P) was found to be 68 (*refer to the picture below*). Following criteria was chosen for selection of samples:

- (a) Number of PAIs and hectares under project implementation in each country
- (b) Practice change (all practice change combinations have been captured, however, tillage is given preference as tillage is the determining agricultural practice change and confirmation of farmers onboarding in project)
- (c) Soil sampling results and its region (to cross check the results in this verification and cover different climatic regime).
- (d) Number of fields belonging to the different farmers
- (e) Percent of VCUs per country in 2023 (MP Vintage Considered)

What margin of error can you accept? 5% is a common choice	10 %
What confidence level do you need? Typical choices are 90%, 95%, or 99%	90 %
What is the population size? If you don't know, use 20000	40571
What is the response distribution? Leave this as 50%	50 %
Your recommended sample size is	68

The sample size for the PAIs in this monitoring period came out to be 68 and 57 samples were already covered at the time of validation during the first on site and Remot visits (RSVs) carried out in the year 2023 which is documented in the registered PD. This has been further explained in section 3.3 of this report. Additionally, 39 samples were covered through on site (Spain and Moldova) and remote visits (Ukraine, Romania, UK, Denmark and Lithuania) in the year 2024 to verify the new PAIs added in the project in the vintage 2023 which was also the end of the first monitoring period. These samples were randomly selected for the remaining 28,373 PAIs added in the project in the year 2023. Since all the new PAIs included in the year 2023 had the same eligibility criteria as defined in the registered PD, a sample size of 39 was considered sufficient to cover the new PAIs. The list of additional samples covered through RSV/OSV is presented in the table below. The sample size for RSV was kept proportionate to the number of PAIs added and percentage VCUs generated in each country. To maintain confidentiality the name of all the farmers interviewed has not been provided here, however some names have been included in the interview list provided. In total 96 samples were covered for the first monitoring period (vintages 2021, 2022 and 2023) with total PAIs numbering 40,571. Achieved sample size of 96 substantially exceeds the minimum requirement of 68 samples at a 90% confidence level with 10% precision (see referenced screenshot). The evidence-gathering approach used to verify PAIs added in 2023 is outlined below.

New PAIs Site Visit Sampling

The evidence gathering activity by VVB was done prior to the site visit as per section 3.6.17 of the VCS standard v 4.7. VVB checked the following before drawing the samples for verification.

- 1) New PAIs occur within one of the designated geographic areas specified in the project description.
- 2) Conform with at least one complete set of eligibility criteria for the inclusion of new project activity instances as described in section 3.1 and 3.3 of the MR.
- 3) Are included in the monitoring report with sufficient technical, financial, geographic, and other relevant information to demonstrate conformance with the applicable set of eligibility criteria. The information was verified through AgreeCarbon Platform which stores monitoring data including land ownership, fuel use, PAI boundaries, historic farming practices (5-year lookback), soil type (sand, silt, clay), crop-types, tillage practise, residue management, cover/catch crop implementation and fertiliser inputs. The platform gathers and monitors data during farmer outreach, data collection, field inspections, soil sampling, internal data QA/QC, and remote sensing inspections /22/.

- 4) Have evidence of project ownership, in respect of each project activity instance, held by the project proponent from the respective start date of each project activity instance (i.e., the date upon which the project activity instance began reducing or removing GHG emissions).
- 5) Have a start date that is the same as or later than the grouped project start date /163/.
- 6) Only be eligible for crediting from the later of start date of the project activity instance or the start of the verification period in which they were added to the grouped project, through to the end of the total project crediting period.
- 7) Not be or have been enrolled in another VCS project. The VVB verified this through the project KMLs to check if there is any overlap /17//18//46/.

Table: List of Samples for OSV/RSV

2023 Farmers worksheet "Vintage 2023"					
#		Country selected based on sampling criteria	Total PAIs	Remarks/ Mode of Interviews conducted	Sample number
1		Romania	4357	Remote	8
2		Moldova	3594	On site/Remote	7
3		Spain	2071	On site/Remote	7
4		Ukraine	18851	Remote	9
5		Denmark	2238	Remote	2
6		Lithuania	3447	Remote	3
7		United Kingdom	3974	Remote	3

Total			38532		39
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During the on-site visit, the fields under verification were visited, interviews with PP and implementing partners were conducted to discuss, baseline scenario and confirm verification details, implementation plan, monitoring plan, achieved outcomes in this verification period other project details. The interactions included baseline conditions, practice changes implemented, crop yield, fertilizer management, grievance register and redressal mechanism as per the PD and MR.

The reviewed evidence along with other supporting documents were also provided to the verification team for assessment by the PP as listed in Appendix III. The record of interviews conducted has been maintained in the form, photographs taken at project site and attendance sheets /62//63//64/.

The onsite visit was performed in order:

- To understand and evaluate the project area/boundary, project additionality and expected outcomes
- Interviews with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the Monitoring Plan
- To validate the carbon pools identified in this project and to calculate carbon stock
- To interact with the farmers and their advisors to perceive their understanding of project
- To check the project management, meet the management team, check the monitoring plan and it's on ground implementation practices
- To verify the project documentation including project maps, etc.

Conclusion:

Monitoring of the project activity were also discussed, and it was found that the monitoring plan given in PD is consistently followed on site. It was confirmed that data are captured and stored electronically and digitized onto GIS layers where applicable.

The verification team has reviewed the shared evidence and considered all the responses of the interviewees during site visit. The site visit was completed for the project in compliance with the VCS VVB Manual, v3.2 /5/.

2.5 Resolution of Findings

The process for raising the findings (corrective actions, non-conformities, or other findings) by the validation team is carried out after thoroughly reviewing supporting documents shared by project proponent. Observations of site visit inspection was also raised as findings. As an outcome of the validation process, the validation team can raise different types of findings as per the following understanding:

A Clarification Request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable VCS requirements have been met

Where a non-conformance arises the team leader shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions.
- The VCS standard, methodology and modules requirements have not been met; - there is a risk that emission reductions cannot be monitored or calculated.
- The validation process may be halted until this information has been made available to the team leader's satisfaction. Information or clarifications provided as a result of a CL may also lead to a CAR.

A Clarification Request (CL) will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A Forward Action Request (FAR) will be issued when certain issues related to project implementation should be reviewed during the following verification assessment.

During the verification process, total 10 CLs and 17 CARs were raised and resolved satisfactorily. The list of CARs/CLs raised, and the response provided, the mean of validation, reasons for their closure and references to correction in the relevant documents are provided in Appendix IV of this report. Further 02 FARs have been raised have been raised from this verification.

2.5.1 Forward Action Requests

Three FARs were raised at the time of validation. FAR#01 & FAR# 03 have been resolved., However, FAR#02 remains open as a FAR from validation and this current verification and must be assessed in the next verification period. A detailed description of the FARs has been provided in Appendix V.

Description of the FAR from this Verification

The next verifying VVB shall check how the recommendation provided by IME in the Third review Model Validation report Agreea V4.0 dated Sept 2023 Chapter: Outlook have been addressed by PP in the Model Validation Report, in the verification assessment. Below are the recommendations

provided by IME in the IME Evaluation report. This recommendation acknowledges the data scarcity that characterizes some of these combinations by recommending that more data should be supplemented when available, and ensures that deviations from validation thresholds are temporary and systematically corrected over time, in line with the standard. This data should be included in the next iteration of the MVR, addressing both model robustness and uncertainty reduction. A complete description of the FAR#02 has been described in Appendix V.

2.6 Eligibility for Validation Activities

Earthood is eligible for both validation and verification of this sector as per Verra Eligibility Criteria for VVBs. Earthood is accredited by the Verra Board for validation and verification in the VCS sectoral scope 14 AFOLU/154/.

3 VALIDATION FINDINGS

3.1 Methodology Deviations

There are two methodology deviation which are applied to the project in accordance with VM0042. The project data shall be quantified using one of the three accepted quantification approaches and the data shall be acquired directly from the project participants.

1. Liming

The Project uses Box 1 for the emission parameter 'Liming' in both baseline and Project data, applying a conservative approach to sourcing field actuals. Typically, Project participants provide qualitative data about on-farm activities for each field, including information on agricultural lime use. In the absence of farmer-reported data, the Project uses regional data from National Inventory Reports (NIPs) submitted to the UNFCCC, which follow IPCC guidelines/67/ and the Common Reporting Format for standardised, comparable emissions reporting. The NIPs provide verified data on lime use and agricultural land area, ensuring accuracy and completeness. This method avoids data gaps and accounts for all emissions, making it more robust and accurate than hypothetical estimations. It also ensures that GHG emission reductions and removals are not overestimated, following the principles of conservativeness and accuracy. This data was verified by VVB through the IPCC guidelines and was found to be correct.

2. Potential leakage from diversion of biomass residues

- a. The second deviation is associated with leakage from diversion of biomass residues. The Project does not collect this information directly from the farmer but uses public data

sources. With the VM0042 methodology, a project is required to estimate leakage due to diversion of biomass residues from other applications in year y ($LE_{BR,Div,y}$). Leakage here is quantified due to diversion of biomass residues to the Project to be used for energy applications in the baseline scenario. Crop residue management is a component of the Project activity, and those crop residues could be diverted from energy applications in the baseline scenario, leading to a risk of leakage. This leakage has been calculated according to Equation 15 in CDM Methodological Tool: Project and leakage emissions from biomass. The residue used for energy production was divided by the theoretical amount of crop residue produced for each country to obtain the fraction of crop residue used by a country. Globally, 16% (or 0.16) of crop residue on an average is used for other purposes including bioenergy production has been obtained from the publication of Smerald et al., 2023/168/. For the purpose of conservativeness, this value was set as a benchmark whereby countries with a fraction <0.16 would tend to rely less on crop residue for energy production and countries >0.16 would use a larger proportion of crop residue for energy production. Countries like UK and Estonia have higher biomass consumption as compared to the other 08 countries under the project. The higher values for biomass utilization in Estonia and UK have been well adjusted through average calculation. There are countries where the biomass utilization is less than 16%. Hence the higher values of these two countries are averaged out and aligned to the principle of conservativeness and hence leakage has been appropriately calculated. Sections 3.2.2 and 5.3.4 of the MR are updated to provide clear and traceable calculations for the BPPJ,n,y values applied for other countries that are not UK and Estonia. The leakage is calculated according to Equation 15 in CDM Methodological Tool: Project and leakage emissions from biomass². The quantification approach is further detailed in Appendix 6. The Monitoring Report, Appendix 6, has been updated to provide a more detailed description of the calculation procedure and to include values applied for countries other than the UK and Estonia, thereby ensuring greater clarity in the calculation of BPPJ,n,y. The national values to be tested against the global average of 0.16 are presented in Appendix 6, Table A6-3, under the column “*Fraction of residue used for energy*”y. Detailed calculation country-wise was verified through the leakage calculations provided in a separate spreadsheet /164/. The leakage calculation has been updated in the ERR sheet. The ERR spreadsheet has included further information explaining the traceability of leakage redistribution for each PAI with traceability. The leakage calculation due to biomass diversion and leakage due to manure have now been presented in two separate columns with clarity and traceability /165//166//.

² <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-16-v5.0.pdf>

3.2 New Project Activity Instances in Grouped Projects

The number of PAIs at the end of year 2022 were 12,198, which was found to be comparable to the PAIs (12,606) included during the validation itself. However, during the year 2023 the grouped project activity was expanded to include 28,373 more PAIs that increased the number of PAIs at end date of current monitoring period to 40,571. Consequently, there was substantial increase in the area that is covered through the inclusion of new PAIs. Now, the total area covered by the project activity measures stands at 1,652,643.85 hectares at the end date of current monitoring period and all of which was under the subject of verification.

The site visit conducted during the validation covered at total of 57 samples and considering the contractual scope included verification these were also covered for the verification scopes. However, due to the increase in number of PAIs 39 additional samples were also covered in the year 2024. Therefore, a total of 96 samples were visited (on site/RSV) by the verification team exceeding the 68 samples requirement for the entire population.

The quality and completeness of the evidence was no different than what was applied during the validation and considering that majority of samples were already covered during the validation (57 out of 96) the conclusion drawn for additional samples was no different.

VVB considers that the new PAIs included in the year 2023 met the eligibility criteria as set out in the registered VCS PD. A detailed description of the inclusion of new PAIs based on the eligibility criteria has also been described in section 3.3 of the MR. Therefore, the inclusions of new PAIs is valid based on the defined criteria.

Inclusion of new PAI's in the grouped project:

The total number of PAI's and hectares per country for vintages 2021, 2022 and 2023 are as follows:

Country	PAIs	Hectares
Bulgaria	488	11192
Denmark	2238	33925
Estonia	839	13214
Latvia	712	16525
Lithuania	3447	68857
Moldova	3594	178236
Romania	4357	141798

Spain	2071	28084
Ukraine	18851	1106636
United Kingdom	3974	54178
Total	40571	1652645

Eligibility criteria for grouped projects:

The verification team verified the addition of new PAIs in the vintage year 2023 against the VCS requirements and applied methodology VM0042 V2.0. The eligibility criteria mentioned in sections 3.3 of the MR has been verified against the following requirements:

Being the first Monitoring Period since project inception and validation, the PAIs included in this verification period comprise:

- PAIs presented during validation (covering Vintages 2021 and 2022), and
- Newly added PAIs covering Vintage 2023, as this vintage falls within the current monitoring period and cycle of the Project.

The new PAIs introduced in the Monitoring Report (relative to the initial PAIs in the PD) were added sequentially, meaning they joined the project after the initial PAIs and their reporting practices began in Vintage 2023. Accordingly, the start dates of these new PAIs are the same as, or later than, the grouped project start date. The VVB verified this information through the spreadsheet provided by PP listing all the PAIs included in the project in the first monitoring period (including vintages 2021, 2022 and 2023). The spreadsheet with the details of the PAIs years wise and sequential inclusion with a start same as the start date of the grouped project or later has been provided in a separate spreadsheet /163/.

All PAIs covering this verification period (Vintages 2021–2023) meet the eligibility criteria defined for the initial PAIs in Section 1.4.1 of the PD and Section 3.6.16 of the VCS Standard v4.7 for the inclusion of new PAIs. This report demonstrates that:

- All PAIs underwent a full eligibility assessment in line with project requirements,
- All new PAIs fall under the baseline scenario described in Section 3.4 of the PD.
- All new activities commenced on or after the grouped project start date i.e 15-September-2021/163/ and,
- All PAIs have undergone QA/QC as per Section 5.3 of the PD and the monitoring cycle requirements under VCS standard v4.7.

Each PAI annexed to the project area during the monitoring period was evaluated against the project's eligibility criteria (in line with the points referred in Figure 1-2 and Table 1-4 in the PD). These criteria were verified in alignment with the VCS Standard v4.7 and VM0042 methodology requirements. Additionally, the newly added PAIs met the baseline scenario determined in the project description for the specified project activity and geographic area. The PAIs were added sequentially after the start date of the project /163/.

The eligibility criteria of grouped projects is in line with VCS Standard 4.7, para 3.6.16 and 3.6.17 and VM0042. The means of verification has been summarized in the table below:

Eligibility Criteria	AgreenaCarbon Fulfilment of Conditions	Means of assessment
1. Occur within one of the designated geographic areas specified in the project description	Must be located in one of the 10 eligible countries/geographic areas (GAs): Bulgaria; Denmark; Estonia; Latvia; Lithuania; Moldova; Romania; Spain; Ukraine; United Kingdom. These countries have been assessed against the 3-step additionality test prescribed by VM0042 and detailed fully in the PD. The outcome of the Common Practice Test also determines which Project-supported practices are additional in each GA, as explained in criteria (5). GA-level data (e.g., from national statistics) supplements missing field-level data for setting PAI-specific baseline and Schedule of Activities (SoA). The KML file showcases the exact geographic coordinates for all PAIs included throughout the three Vintage years, as detected by remote sensing models.	The VVB has verified and confirmed that the new PAIs are located within the geographic areas specified in the Project Description (PD), namely: Bulgaria, Denmark, Estonia, Latvia, Lithuania, Moldova, Romania, Spain, Ukraine, and the United Kingdom. This verification has been conducted using KML /46/files and field boundaries. The new PAIs have also been confirmed as additional, following the three-step additionality test recommended under methodology VM0042, as detailed in the PD. The KML files reviewed and verified by the VVB clearly indicate the geographic locations of all PAIs included across the 2021, 2022, and 2023 vintages, and their inclusion aligns with the applicable eligibility criteria.

2. The project area must not have been cleared of native ecosystems within the 10-year period prior to the project start date	Must comprise only historical farmland where no land use conversion took place for, at a minimum, the 10 years prior. Ensuring that no native ecosystem conversion occurred in the PAI(s) for at least 10 years as required under VM0042. AgreenaCarbon verifies that no ecosystem conversion has occurred in the past 10 years or more in any of the PAIs included via remote-sensing models. This process has been described in detail in Section 4.3.1.7 as well as under 2.3.1 Ecosystem Conversion.	The project is implemented on croplands (farmers field) and this has been verified through KML files of project zones and geodetic coordinates. The verification team checked the area and geodetic coordinated through google earth /65/. Global map of land use/land cover (LULC) 2022 derived from ESA Sentinel-2 imagery at 10m resolution was used to confirm the same /69/. Hence, the project meets the applicability criteria.
3. Must present distinct field boundaries from any other PAI included in the Project area	Analysts check every PAI's geometries to ensure there is no overlapping of field boundaries, and the size of prospective PAIs is confirmed through remote sensing through field boundary detection.	An analysis of the KML files/46/, Google Earth imagery/65/, and Land Use/ Global map of land use/land cover (LULC) 2022 derived from ESA Sentinel-2 imagery at 10m resolution maps confirms that each PAI has distinct field boundaries, with no overlaps observed between any of the PAIs.

4. Must be able to implement at least one additional Project activity	The Common Practice Test, conducted at the GA-level, determines which ALM activities are additional for a given PAI. During onboarding, prospective Project participants are informed which practices they would have to adopt in order to be eligible for VCU issuance. In Ukraine, Latvia and Lithuania, all Project-support practices are additional. In Denmark, Romania, Spain, and Moldova, organic fertiliser application is a common practice, so prospective participants located in these countries have to transition to at least one other Project activity. In Bulgaria and Estonia, reduced tillage is non-additional, whereas in the UK both reduced tillage and organic fertiliser use are non-additional. The full overview and results of the Common Practice Test can be found in Section 3.5.3 of the Project Description (PD).	Based on the review of Section 3.5.3 of the PD/1/, the Common Practice Test has been appropriately applied. All PAIs meet the eligibility criterion by demonstrating the ability to implement at least one additional project activity, in line with geographic-specific additionality requirements and is further verified from the interviews done on site and remotely and is also mentioned in detail in the registered PD/1/. The implementation of Project activities is monitored and verified every harvest year as detailed in section 4.3 Monitoring Plan of the MR. VVB checked the inclusion of at least one additional Project Activity through Agreena's QA/QC procedure and inputs in the carbon platform on sample basis. Further, this was verified on site field visits and remote interviews /128/.
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5. Must be implementing at least one improved practice compared to SoA and compatible with local GA additionality	If the PAI-specific historical SoA already includes an additional farming practice, the PAI-manager must adopt a further improved practice(s) to generate ERRs eligible for VCUs issuance. The implementation of Project activities is monitored and verified every harvest year as detailed in section 4.3 Monitoring Plan of the MR.	The project includes a monitoring plan, outlined in Section 4.3 of the Monitoring Report (MR) which is designed to track and verify all project activities. If any historical SOA activities are identified within the new PAIs, the farmer is required to adopt an improved agricultural practice to generate Emission Reduction Removals (ERRs) and Verified Carbon Units (VCUs). The claims have been further verified during the remote and on-site visits/62//76/.
6. Must not be participating in another carbon credit program. AgreeaCarbon avoids the risk of double issuance by requesting prospective participant's declarations	Demonstrations of land ownership and tenure for the area through remote-sensing imagery as well as internal checks to avoid any form of double-counting.	From the assessment of land tenure/50/ and land ownership documents and through interviews from on site and remote site visit/62//76/ it is concluded there are no risk of double issuance or registrations
7. Must pass and be approved by the Quality Assurance (QA) and Quality Control (QC) flagging processes	Detailed in sections 4.3.1.6, 4.3.1.7 and 4.3.1.8 of the MR. The goal of these processes is to not only assure eligibility as per VCS requirements, but also check the reliability of the data participants provide throughout the Monitoring Period, avoiding under-/over-estimation of ERRs.	PP has provided detailed description of the quality control and quality checks under sections 4.3.1.6, 4.3.1.7 and 4.3.1.8 which was further enquired during Remote and on site Visit the VVB has verified and confirmed that the new PAI meets the eligibility criteria.

3.3 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No

The project did not go through baseline reassessment during the monitoring period.

4 VERIFICATION FINDINGS

4.1 Project Details

Item	Evidence gathering activities, evidence checked, and assessment conclusion:
Audit history	The audit history has been described under section 1.2 of the MR/127/ and has been confirmed from the publicly available information and found consistent
Double counting and participation under other GHG programs	The project is registered under ISO 14064-2:2019. Greenhouse Gas standard and has been validated and verified by Den Norske Veritas (DNV) for the years 2021, 2022, and 2023/126/. However specific measures are taken to ensure that double counting is avoided, and outcomes of ISO certification does not overlap with the generation of Emission Reduction and Removals (ERR) leading to issuance of VCU under other GHG programs. Measures such as Segregation of ISO outcomes, Monitoring and traceability and inventory and utilization of Third-party registries for the management of ISO certificates are implemented ensuring double counting and ensuring compliance with both ISO and VCS requirements. Detailed description has been provided in section 1.10.2 of the MR/127/.A possible issue of overlap was flagged with respect to a field in Lithuania. The issue concerns two neighbouring fields managed by different farmers, one included in Agreea Carbon Project 4022 and the other in VCS Project 4021. The overlap occurs over the following parcels:

Parcel 7128/0004:0041 – contains a field from Agreeena Carbon Project 4022

Parcel 7128/0004:0079 – contains a field from Project 4021

Timeline and Evidence

- Project 4022 inclusion at Validation: Agreeena Carbon Project 4022 included the relevant field and farmer at the time of validation. A publicly available .kml file of PAIs was provided.
- Project 4021 boundary identification: Project 4021 used this .kml file to identify one field boundary in Lithuania, amounting to 0.8 hectares of overlap. Upon detailed assessment it was observed that the two fields enrolled in two different projects (4022 and 4021) were adjacent and an overlap of 0.8 occurs as they share boundaries. Further, an overlap of 0.8 hectares is not material according to the section 4.1.10 of the VCS standard considering the fact that Agreeena is a large scale project.
- Farmer engagement: The farmer enrolled in Project 4022 was contacted during this period. No concerns were raised, and the farmer provided supporting documentation from the national land registry and their land lease agreement.
- Remote sensing and boundary review: Agreeena Carbon reviewed its remote-sensing modelling and compared available .kml files for potential overlaps. However, the Project 4021 .kml file only displays country borders (not PAIs), preventing a full comparison.

Compliance and Validation

As a registered Verra project, Project 4022 has already undergone boundary and ownership verification by its VVB and by Verra, in line with the methodology and standard requirements:

- Project Boundary denoted by Ai (VM0042 v2.0, Section 9.2 Table Ai)

	Boundaries were delineated using a combination of GIS coverages, ground survey data, remote imagery, and other appropriate datasets. - Project Ownership (VM0042 v2.0, Section 3.7.1 (6)) Ownership is demonstrated through an enforceable and irrevocable agreement with the legal landholder. This agreement vests project ownership in the project proponent, Agreeena Carbon/169//170//. - The project is not registered or seeking registration under any other GHG programs. - The project has not been rejected by any other GHG program The PP has submitted the declaration/27/ which states that the net GHG emission reductions generated by the project activity will not be used for double counting and participation under other GHG programs for the same period.
No double claiming with emissions trading programs or binding emission limits	It was confirmed that there is no risk of double claiming (as mentioned in the validated MR (section 1.11.1). Also, PP has not received or pursued any other form of environmental credit as confirmed through a risk-based review by the verification team. The non-participation declaration has been shared by the PP/22/.
No double claiming with other forms of environmental credit	It was confirmed that there is no risk of double claiming (as mentioned in the validated MR (section 1.11.2). Also, PP has not received or pursued any other form of environmental credit as confirmed through a risk-based review by the verification team. The non-participation declaration has been shared by the PP/27/.
Supply chain (scope 3) emissions double claiming	AgreeenaCarbon, as a representative of the project participants, is not a direct seller of the product(s) (crops) that are produced within the boundaries of the AgreeenaCarbon project. AgreeenaCarbon has contracts with each individual participant and supports them in the sale of the VCU's as part of this project. Agreeena carbon applied as an expert participant working group to Verra's request for experts for the Scope 3 Standard Pilot Program, i.e. Verra

	S3S (https://verra.org/verra-begins-piloting-of-scope-3-standard-program/). Interested parties were asked to prepare a proposal to support Verra in the development of methodologies within the S3S Program. Agreeena was among many applicants that included other project developers, but was not chosen to participate. AgreeenaCarbon previously applied to be a participant in the Verra Scope 3 Standard Pilot Program as a project developer and stakeholder dealing with participants directly impacting scope 3 emissions. Interoperability is a key focus for Agreeena in order to ensure farmers remain dedicated to the transition towards regenerative practices. The conclusion was that Agreeena was not selected to participate in the Scope 3 Standard pilot program. The project is an authorized representative and has posted a public statement on their website saying, "Carbon credits may be issued through the Verified Carbon Standard project [project ID] for the greenhouse gas emission reductions or removals associated with [project proponent or authorized representative organization name(s)] [name of product(s) whose emissions footprint is changed by the project activities]." The statement could be found on the following two sites: https://agreeena.com/agreena-business-solutions/ https://agreeena.com/about/
Sustainable development contributions	• The project contributes to SDG 2, 13 and 15. For SDG 2 the total number of hectares which are under the project is 1,652,643.85 which for the current monitoring period and is verified from the ERR sheet and is being monitored throughout the project period/16/. For SDG 13 the net GHG emission and reduction are equal to 2,679,896.7430mtCO₂eq which has been verified through ERR sheet, KML files and RothC model/16//46/. For SDG 15, 1,652,643.85ha are under the sustainable agriculture management system. Which has been checked from the ERR sheet/16/ KML files/46/ and RothC calculations sheet • It was concluded during site visit and through the review of supporting documents provided and interviewing PP, communities and other stakeholders that the project sustainable development goals were implemented as mentioned in the validated MR/127/.

Additional information
relevant to the project

- All commercially sensitive information has been provided in Appendix 1 of the MR

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	PP has identified the relevant stakeholders keeping in mind the project activity the main stakeholders are the farmers along with NGOs, Agricultural Associations academia (universities, institutes, etc.), agriculture experts, advisors and suppliers, government representatives, policy leaders, carbon and soil science experts, and business leaders /24//25//28/. The stakeholder identity did not change during the extended monitoring period.
Legal or customary tenure/access rights	The Project is implemented exclusively on privately owned or leased historical farmland, with participants required to have legal tenure and operational rights over the enrolled fields. For those leasing land, the farmer must show willingness to renew the lease , with a commitment to renewal. Property rights and ownership are clearly defined during the onboarding phase and outlined in the Benefits Contract/19/ and adhere to Benefit contract terms and conditions/20/, which all participants must sign to officially join the Project. No indigenous peoples, local communities reliant on the affected resources, or other customary rights holders have been identified in the Project's geographical area during this monitoring period. Given the nature of land rights across Europe, no conflicts related to property, tenure, or access are anticipated throughout the Project's lifetime which was verified during OSV/128/ and desk review. Agreeena has established QA/QC and monitoring procedures, supported by local market partners, to ensure participants do not encroach on land or resources without legal or customary rights. Any such violations would be addressed promptly, with potential expulsion from the program.

Stakeholder diversity and changes over time	The stakeholder comprised of farmers along with NGO's, Agricultural Associations academia (universities, institutes, etc.), agriculture experts, advisors and suppliers, government representatives, policy leaders, carbon and soil science experts, and business leaders of the various countries the project has its activities. There are no changes in the diversity of the stakeholders over time.
Expected changes in well-being	Transitioning to regenerative agriculture supported by the project may initially place an economic strain on farmers due to the investment in new equipment and potential short-term yield reductions as soil adapts to new practices. However, these costs are expected to be offset over time, leading to long-term economic benefits, including revenue from carbon credit sales, increased profitability, and financial independence. Additionally, regenerative practices reduce reliance on costly inputs like synthetic fertilizers, cutting operational costs by up to 30%, and improving profit margins. Focusing on profit per hectare instead of yield per hectare also reduces vulnerability to market price fluctuations and extreme weather events. Beyond financial benefits, the Project promotes environmental co-benefits, such as improved water quality through reduced fertilizer use, better soil water retention, and reduced risks of droughts and floods. Soil preservation through no-tillage practices and the use of cover crops enhances soil health and reduces erosion. Biodiversity also improves, with benefits to pollinators, birds, and soil microbiota, which help control pests and pathogens. These environmental improvements can extend beyond the Project area, enhancing ecosystems and fostering resilience against climate change impacts, including extreme weather, soil erosion, and pest outbreaks.
Location of stakeholders	The location of stakeholders remains same as covered during the validation and except for the expansion of the project activities within the validated geographies requiring no new locations.
Location of resources	The location of the resources available to the Project Participants are provided in their own location which was verified through KML analysis/46/.

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Ongoing consultation	PP has carried out series of stakeholder consultation through workshops, focus group meetings, stakeholder engagement meeting. Section 2.2 of the MR explained the local stakeholder consultation process and provided stakeholder engagements in tabulated forms. The dates and number of attendees provided in MR are verifiable. Stakeholder engagement procedures have been accomplished in line with the VCS standard requirements. The categories of stakeholders included are Board of Directors, Carbon Advisory Board, established markets in Denmark and UK and local stakeholders including farmers. Agreeena has established two way communication channels to receive inputs from stakeholders which includes several modes such as call center, chat support, webinars, enquiry mail educational tours social media and farm visits. Records of project level meetings (online and offline), local level meetings (invitation proof and invitee list) and farmers feedback and responses were checked. /56//57//58//59//60/. In MR section 2.1 and it was found that PP has explained about both co benefits and negative impacts of the project. It was confirmed that the stakeholder agreed to the project design and showed enthusiasm to implement the project. Mechanism of ongoing communication has been mentioned through identified themed meetings. Also, the project conforms with the 3.16.2, 3.16.3 and 3.16.4 of the VCS Standard v4.6 The process of ongoing consultation and feed back has been developed by PP whereby the local stakeholders are provided contact with the market lead of the local respective markets and local phone numbers for each of the countries. Grievance forms are submitted and addressed through Agreeena Grievance and Complaints Procedure/60/ which provides descriptions and procedures in detail the procedures for the lodging, acknowledgement and addressal of the grievances PP also provides continuous chat support for the stakeholders year-round for direct communication. PP has developed a supplier code of conduct// a multi stakeholder collaborative for the promotion and acknowledgement of ESG safeguards.

	The verifying VVB has assessed several evidence such as Photographs of call logs between customer success personnel and PP Surveys of field inspection, Webinars and cultural playbook/135//136/ VVB has checked Agreeena's Website. During the Verification RSVs it was observed, the respondents were well aware of these channels of communication.
Date(s) of stakeholder consultation	PP has conducted series of meeting before the start of the project. The in person meetings were also held in different countries. All the feedback received from stakeholder meetings are well recorded and submitted by PP for this verification assessment Project level consultation was done as a part of the annual monitoring plan on the following dates in person and online : Harvest year 2022 Autumn visits: between 11/09/2021 and 12/11/2021 Spring visits: between 13/14/2022 and 29/05/2022 Harvest Year 2023 Autumn visits: between 07-10-2022 and 20/12/2022, though there were late visits in January, February, and March 2023 Spring visits: between 18/04/2023 and 11/06/2023 where feedback was taken on the project and its activities were taken. /56/. There were considerable number of Project participants, therefore communication of monitored results occurred continuously over certain time windows. For HY 2022, Project participants received information about their yearly ERRs and performance between May and July 2023. For HY 2023, the Project developed and issued Credit Reports (see next row in this table) between September and October 2024. This information was verified from AgreeenaCarbon Platform /22/. The Agreeenacarbon dashboard represented the realtime stakeholder communication data. Further, this was verified by farmers on site and remote interviews. The farmers and entities confirmed that there are continuous engagement with the Agreeena team.
Communication of monitored results	After a thorough comparison of farmers' self-reported data with the results gathered during field visits, Agreeena generates individualized Farm Reports. These reports, which are accessible to participants

	through the Agreeena platform/22/, are provided in a language that is tailored to the participant's preference, ensuring ease of understanding and engagement. Any updates related to the project or operations, based on feedback from stakeholders, are communicated on a case-by-case basis. Any feedback is resolved on individual basis depending on case by case basis. This approach ensures that all parties are kept informed and that any necessary adjustments are made in response to specific feedback or circumstances.
Consultation records	The consultation records are recorded via Note taking with documentation and feedback provided by farmers in the survey app “Fulcrum” and stored into Projects Could Drive, Intranet (Notion) with employee access and are submitted to Senior Leadership, Regulatory, Program, Product and customer success teams /58/.
Stakeholder input	AgreeenaCarbon demonstrates a robust and responsive approach to stakeholder engagement by systematically recording, reviewing, and addressing all comments, concerns, and input received through ongoing communication channels. Feedback is carefully analyzed to identify areas for improvement, emerging trends, and issues that require action, with necessary escalation within the company's internal structure. This proactive approach has led to several enhancements during the verification period, including the development of a comprehensive FAQs section, new forms for special requests, a pilot app for tracking participant progress, and the expansion of the eligible crop list. These improvements reflect AgreeenaCarbon's commitment to continuous project refinement and ensuring effective communication with all stakeholders.

4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	PP has taken prior consent of local stakeholders and government to implement the project activity in the project region which was checked from the Farmers attestation in Agreeena Platform/21/ and partner contacts /25//24//28/. It was confirmed that the stakeholder agreed to the project design and showed enthusiasm to implement the project. During the Monitoring Report period, no conflicts related to

	land use, property rights, territory access, or customary rights were identified, and such issues are not expected to arise in the future. The AgreeenaCarbon Project operates exclusively on legally owned or leased farmland, with farmers required to confirm their ownership or operational rights before joining/50/. The onboarding process ensures farmers' explicit consent and understanding of the Project, with support from multilingual and culturally aware personnel/34/. Throughout the process, farmers are educated on the Project's goals, activities, and benefits, including carbon credit generation and benefit sharing. Agreeena prioritizes conflict resolution and addresses any non-compliance with a case-by-case, context-sensitive approach.
Outcome of FPIC discussion	It was confirmed that the stakeholder agreed to the project design and showed enthusiasm to implement the project.

4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	There were no grievance recorded in the current Monitoring period which has been verified from OSV/62/ as well as RSV/68//76/. Any Grievances can be presented by external and internal stakeholders through a dedicated email (grievance@agreeena.com) or Whistleblower Hotline which is then regularly checked by dedicated personnel to ensure that any new grievance that may have been filed towards AgreeenaCarbon is flagged which was verified from the Schreenshot of Agreeenas internal IT systems/137/
Grievance redress procedure	Grievance forms are submitted and addressed through Agreeena Grievance and Complaints Procedure/60/ which provides descriptions and procedures in detail the procedures for the lodging, acknowledgement and addressal of the grievances. The process starts with the filing of grievances via email and PP will acknowledge the grievances in 10 working days. PP will then register the grievance in the Grievance Register after which the investigation on the grievance will be commenced where PP will appoint an investigating officer. The officer will then investigate the grievances and will contact the stakeholder in case of any doubt. The investigating officer will then analyse and determine the best way to resolve it. The Resolution of

	the Grievance if not solved through amicable negotiation will be solved by two steps namely: Mediation: whereby a mediation shall be requested in between Local Stakeholder and Agreeena which will be in accordance to the rules and regulations of the Danish Institute of Mediation/72/ and an attempt for resolution within 30 days would be done. Arbitration: If the grievance is not solved amicably or by mediation then it shall be settled through Arbitration following the rules and the procedures of Danish Institute of Arbitration/73/ where the tribunal shall be consisted of one arbitrator.
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4.2.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
All comments received were the part of pipeline listing and has been address accordingly during the time of validation	No comments were raised after the public commenting period	VVB has checked from the Verra website/12/ and also from general internet search and confirms that no more comments were raised after the public comment period.
Monitoring Period Comment The comment was from an anonymous source containing a general overview of the VCM and concerns related to land used for forestry projects versus agriculture.	Due to the fact that the public comment cannot be validated as it is from an anonymous source, the details within cannot be verified. Nevertheless, there are several important points that are brought forward that AgreeenaCarbon has responded to. The overview is presented in the Verification Report.	VVB has checked and assessed the Public comment which was raised and confirms that Project proponent has addressed all the points sufficiently which were indicated in the Public comment along with sufficient evidences.

4.2.6 Risks to Local Stakeholders and the Environment

4.2.6.1 Management Experience

AgreenaCarbon's management team possesses extensive expertise and relevant experience in the design and implementation of the project. The team is adept at engaging with key stakeholders, ensuring that the project is executed in accordance with its objectives and timelines. The details about the management were verified from Agreena Carbon Management team document/124/ as well interviews with the team members on site/62/.

4.2.6.2 Risk Assessment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Natural and human induced risks to stakeholders' wellbeing	No risk identified as the project is designed with a strong focus on supporting pan-European farmers in their transition from conventional agricultural practices to regenerative, agroecological farming through the adoption of key Agricultural Land Management (ALM) practices. It is structured in a way that minimizes any potential risks or adverse impacts on the wellbeing of stakeholders, including project participants, neighbouring farmers, and external business partners. The project does not introduce any new natural or human-induced stressors that could affect these groups, ensuring that it aligns with sustainable farming practices.
Risks to stakeholder participation	The project has identified several risks to stakeholder participation and also its mitigation and preventive measures: Initial Financial toll: The AgreenaCarbon Project identifies an initial financial risk for participants due to short-term yield decreases and the cost of adopting new farming implements necessary for regenerative practices. To mitigate this, Agreena provided an initial pre-payment for estimated Environmental Risk Reduction (ERRs) based on market estimates, offering immediate compensation. Further compensation will depend on the future sale of carbon credit certificates. Additionally, year-round communication channels with dedicated personnel ensure that participants can express concerns and receive ongoing support, helping to manage financial risks during the transition period.

	Negative peer judgment and social isolation: Project participants may face negative peer judgment and social isolation from neighbouring farmers who perceive changes to traditional farming practices as disruptive. To mitigate this social risk, Agreeena promotes capacity building and organizes stakeholder engagement events at the market level. The Project also provides year-round communication channels, such as webinars, farm visits, and social media updates, allowing participants to connect with one another and build a supportive network. These initiatives help foster a sense of belonging, especially for participants in remote areas, and reduce the impact of social isolation. This was verified through on site visit and interview with the project participants (farmers and farming entities).
Working conditions	No risk identified as Agreeena Carbon Project operates in pan-European countries that adhere to international conventions on working conditions. The Benefit Contract/19/, which all participating farmers must sign, requires compliance with applicable laws, including those related to safe and fair working conditions/20/. Agreeena's Supplier Code of Conduct/59/ aligns with international guidelines such as the UN Guiding Principles on Business and Human Rights and the International Labour Organization's Declaration on Fundamental Principles and Rights at Work.
Safety of women and girls	No risk identified as in the pan-European countries in which Agreeena operates have recognized and adopted international conventions aimed at safeguarding the rights, well-being, and safety of minority and marginalized groups, including children. The Benefit Contract/19/, which all participating farmers must sign, requires compliance with applicable laws, including those related to safe and fair working conditions/20/. Through robust QA/QC procedures and accessible grievance, complaints, and whistleblower channels, Agreeena can detect and address any breaches by stakeholders. Non-compliance may lead to legal action or expulsion from the Project, ensuring that unlawful or unsafe working conditions for women girls are prevented.
Safety of minority and marginalized groups, including children	The pan-European countries where Agreeena operates have adopted international conventions to protect the rights, well-being, and safety of minority and marginalized groups, including children. As part of the program, farmers must sign a Benefit Contract/19/ that ensures compliance with all relevant laws, which include protections against child labor, workplace discrimination, and safeguards for minorities, marginalized groups, and children.

	Agreena's Supplier Code of Conduct, which applies to all stakeholders, aligns with international standards on working conditions, such as the UN Guiding Principles on Business and Human Rights and the International Labour Organization's Declaration on Fundamental Principles and Rights at Work. Through QA/QC procedures and accessible grievance, complaints, and whistleblower channels, Agreena aims to identify violations by project participants or other stakeholders. In case of identification of any non-compliance, may result in legal action or expulsion from the Project, ensuring that the program aims to maintain a strong commitment to protecting the safety and rights of vulnerable groups.
Pollutants (air, noise, discharges to water, generation and release of hazardous materials and chemical pesticides and fertilizers)	The risk of agrochemical discharges to water and soil pollution arising from the AgreenaCarbon Project is considered negligible, given the nature of the farming practices promoted and the strict regulations in place to control agrochemical use. While the agricultural activities involved in the Project may require the use of pesticides and fertilizers to some extent, the level of environmental impact would be not greater if not lowered compared to conventional farming practices, which typically involve higher input intensity and more frequent agrochemical applications. One of the risk mitigation strategies within the Project is the reduction in the use of synthetic fertilizers. The regenerative Agricultural Land Management (ALM) practices that Agreena promotes are designed to improve soil health, increase soil fertility, and enhance the biodiversity of farmland ecosystems. By enhancing soil health, these practices can reduce farmers' dependence on external chemical fertilizers, leading to lower fertilizer usage over time. Additionally, the improvement of soil structure and organic matter supports the natural cycling of nutrients, decreasing the need for artificial inputs. The Project's focus on soil and ecosystem restoration encourages the growth of diverse faunal, fungal, and plant communities. These natural communities provide ecosystem services, such as pest control, weed management, and pathogen suppression. Over time it is expected that the farmers might be less reliant on chemical pesticides and herbicides, which would directly reduce the associated environmental risks of agrochemical discharge. This shift in farming practices results in a significantly lower risk of water and soil pollution compared to conventional high-input farming, where frequent agrochemical applications are the norm.

The Project also ensures that all participants adhere to environmental regulations governing agrochemical use. As part of their participation, farmers are contractually obligated to comply with applicable local, national, and international laws, including those related to the safe and regulated use of fertilizers and pesticides. European countries, where the Project operates, are known for their rigorous environmental regulations and their commitment to the precautionary principle. These regulations are designed to minimize the environmental impact of agricultural chemicals and ensure that agrochemicals are used responsibly.

- For further risk mitigation, Agreena employs comprehensive Quality Assurance/Quality Control (QA/QC) mechanisms to monitor compliance with these regulations. Through these systems, Agreena ensures that the use of fertilizers by Project participants stays within the legally established limits. In cases of non-compliance or any breach of regulations, the project includes necessary actions: including providing guidance to correct practices or expelling participants from the Project if necessary. This strict monitoring system helps to ensure that agrochemical use remains within safe and legal boundaries, thereby protecting the environment from pollution. The use of agrochemicals such as RoundUp remains subject to pre-existing legal restrictions and is not introduced or promoted by the project. Project monitoring includes annual data collection supported by a robust carbon assurance process that integrates farmer engagement, direct farm contact, and remote sensing technologies. PP conducts Internal farm visits on a sample basis to verify practices and identify potential issues. The project maintains farmer support channels and grievance mechanisms for real-time issue reporting by stakeholders. The on site visit by VVB verified the claim that Roundup or other pesticides and weedicides are not commonly used by the project participants. None of the farmers interviewed on-site or remotely were using RoundUp in their fields/76/.

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4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination	During this monitoring period, no discrimination occurred as verified by VVB during stakeholder interview on site visit /62//76 and through Agreeena Cultural playbook/137/.
Sexual harassment	During this monitoring period, no discrimination occurred as verified by VVB during stakeholder interview in site visit /62//76/ and Agreeena cultural playbook/136/. AgreeenaCarbon fosters an inclusive and supportive workplace culture, guided by its Culture Playbook/136/, which all new employees are introduced to during onboarding. The Playbook outlines core values such as empathy, safety, and inclusion, serving as a foundation for expected workplace behavior and interpersonal conduct. These principles are reinforced by the company's Code of Conduct, aligned with ILO conventions and the UN Global Compact's Ten Principles. Agreeena Carbon has clear system of preventive measures and well as a procedure for the reporting of such incidents Preventive Measures AgreeenaCarbon has implemented robust preventative systems to mitigate the risk of discrimination, sexual harassment, and gender-related incidents. The Culture Playbook, introduced during onboarding, reinforces values of empathy, inclusion, and psychological safety across the organization. This is supported by the Code of Conduct, grounded in ILO conventions and UN Global Compact principles. Publicly accessible grievance procedures/162/ further enhance transparency and accessibility, and the company has grown its internal HR capacity through the addition of People Business Partners responsible for wellbeing and incident escalation. In addition there are complete Grievance procedures and policies in place and available publicly on the Agreeena website to inform stakeholders on mitigation of discrimination and sexual harassment. Incident Reporting Mechanisms Two formal reporting channels are in place:

	1. An internal Whistleblower Hotline, managed independently by the external legal firm Poul Schmith, ensures confidential and impartial handling of internal complaints. 2. An external grievance email channel (grievance@agreena.com) is monitored by dedicated staff and serves as a formal reporting line for stakeholders, including farmers. Field visits and direct engagement with participants further support early identification and resolution of concerns. Evidence submitted, including screenshots and system records, confirms that no incidents have been reported to date, aside from an internal test message which is provided under Appendix VI. VVB concludes that the project proponent has established and operationalized comprehensive preventive and reporting mechanisms in line with VCS Standard Section 3.19.11.
Gender equity in labor and work	During this monitoring period, no incidents related to gender inequity in labor or the workplace were reported through Agreena's available external (Grievance & Complaints Procedure) and internal (Whistleblower Hotline) channels. Agreena's QA/QC mechanisms help ensure that any such incidents are promptly detected. All Project participants and stakeholders are required to comply with international and national laws safeguarding gender equity in the workplace, as well as Agreena's Code of Conduct. Any breaches of these regulations would be swiftly addressed, with non-compliance potentially leading to expulsion from the Project and/or legal action.
Forced labor	No incident of forced labor, was reported in this MP through Agreena's available external (Grievance & Complaints Procedure) and internal (Whistleblower Hotline) channels. Which were verified from the stakeholder interviews during the on-site visit and remote site visit/62//76/. All Project participants and stakeholders are required to comply with international and national laws safeguarding gender equity in the workplace, as well as Agreena's Code of Conduct. Any breaches of these regulations would be swiftly addressed, with non-compliance potentially leading to expulsion from the Project and/or legal action.
Child labor	No incident of child labor, was reported in this MP through Agreena's available external (Grievance & Complaints Procedure) and internal (Whistleblower Hotline) channels. Which were verified from the stakeholder interviews during the on site visits and remote site visit/62//76/.

Human trafficking

No risk identified as the nature of the project is local scale and agronomy based. Which has also been verified through on site visit

4.2.7.2 Human Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	PP has developed a supplier code of conduct/59/ which is a multi-stakeholder collaborative which promotes in acknowledging the Environment, social and governance safeguards which is derived from principles outlined in the United Nations Global compact initiative the UN Guiding Principles on Business and Human Rights, and the International Labor Organization's Declaration on Fundamental Principles and Rights at Work. Which concludes that the project respects and promotes the protection of rights of the people and the stakeholders.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	During this verification period, the Project did not involve Indigenous Peoples (IPs), which was confirmed from on site visit and remote site visit/67//76/ and its activities did not impact the cultural heritage of participants or surrounding communities. The project ensures that all communication is culturally appropriate and respectful, tailored to the language and social norms of each country involved in the Project.

4.2.7.4 Property Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
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No risk identified	The land is Agricultural land which is owned or leased by the project participants. The land has been an agricultural land before the implementation of the project which was verified through the KML files/17//18/. There are no IP, LC or customary rights holder who have property access besides the Project participants. No disputes over land rights occurred as the land rights- Owned or leased are established during the onboarding and validation phases which ensures that each project participant has legal control and operational control . Consent of the farmers were taken before implementing the project activities to their respective farms which was verified from the Farmers Declaration/50/. There were no disputes of rights to terrorist and resources as the project activity is not situated in a place which has terrorism which was verified from the Agreeana Carbon website ad through Remote site visit/17//18/.
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4.2.7.5 Benefit Sharing

The benefit sharing plan is not applicable as there are no local communities or indigenous people who has rights over the land. The land belongs to the farmers who are a part of the project

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	N/A
Benefit sharing during the monitoring period	N/A

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
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Impacts on biodiversity and ecosystems	No risk identified as the project poses no threat to pan-European ecosystems or biodiversity. Rather the transition from conventional to regenerative agriculture is expected to enhance local wildlife protection, support the well-being of biotic communities, and improve the delivery of ecosystem goods and services. Regenerative farming practices, such as the use of cover crops and reduced tillage, are shown to preserve pollinators and bird biodiversity better than conventional farming/77/. These practices promote healthier ecosystems by fostering soil microbiota, including beneficial Arbuscular Mycorrhizal Fungi (AMF), which contribute to plant growth, nutrient cycling, and drought resistance. Additionally, the reduction in synthetic inputs like fertilizers, which harm farmland birds and pollinators, supports biodiversity/78//79//80/. Large-scale adoption of regenerative practices is expected to improve water quality by reducing pollution in watercourses and help control invasive species outbreaks by fostering thriving native species.
Soil degradation and soil erosion	No risk is identified. The European Union (EU) authorities mandate that farmers receiving CAP support should follow GAECs stipulations (GAEC)/73/ in order to prevent soil erosion, maintenance of soil organic matter, maintaining permanent grassland, protecting biodiversity, and protecting and managing water.
Water consumption and stress	No risk identified. The Project's Agricultural Land Management (ALM) practices have several co-benefits including mitigation of droughts and floods risk while also reducing water dependency and consumption among farmers. While agricultural activities inherently require water, especially for irrigation, the water footprint of Project participants is expected to be lower than that of conventional farmers. This is because the ALM practices promote more efficient water use, resulting in less overall water consumption and reduced stress on local water resources compared to traditional farming methods. By improving the water holding and water infiltration capacity of agricultural soils, Project practices can also lower irrigation needs.

These practices improve the soil's ability to absorb and retain water/81/, increasing its water infiltration and holding capacity. For instance, soils with higher organic matter content (e.g., 4%) can hold more than double the amount of water compared to soils with lower organic matter (e.g., 1%)/82/. As a result, the fields cultivated by Project participants, which benefit from these practices, require less irrigation than conventionally farmed fields.

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	The Project is expected to have a positive environmental impact on farmland ecosystems, improving soil health, nutrient cycling, water quality, and the thriving of soil microbiota. These benefits may extend to adjacent ecosystems, providing additional shelter and forage for wildlife, including birds from nearby pristine habitats. The Project is implemented on historically managed croplands, and all participants must comply with relevant national and international biodiversity legislation, ensuring no harm to rare or endangered species or habitats. In both EU and non-EU countries, such as the UK, Ukraine, and Moldova, various legal protections safeguard local biodiversity, and breaches are monitored and addressed by Agreeena/83//84//85//86/. Compared to conventional farming, the Project exerts less stress on local ecosystems and habitats
Areas needed for habitat connectivity	The project is designed to have a positive or neutral environmental impact on the areas surrounding the Project Activity Instances (PAIs), with the expectation that it will be less detrimental than the business-as-usual scenario where conventional agriculture practices would continue. The Monitoring, Reporting, and Verification (MRV) mechanisms, particularly satellite imagery and remote sensing, enable AgreeenaCarbon to ensure that the size of each PAI remains consistent throughout the crediting period. Additionally, these mechanisms verify that any new additions or expansions are the result of legal processes, ensuring there is no land encroachment or conversion of pristine areas, which are important for habitat connectivity.

Evidence gathering activities, evidence checked, and assessment conclusion	
Habitats for rare, threatened, and endangered species	There is no anticipated threat to habitats for rare, threatened, or endangered species due to the project. The project's monitoring mechanisms, including satellite imagery and remote sensing, ensure that the project activities do not result in land encroachment or the conversion of pristine areas. These measures help protect habitats that are crucial for maintaining biodiversity and habitat connectivity.
Areas for habitat connectivity	There is no anticipated threat Area for habitat connectivity due to the project. The project's monitoring mechanisms, including satellite imagery and remote sensing, ensure that the project activities do not result in land encroachment or the conversion of pristine areas. These measures help protect habitats that are crucial for maintaining biodiversity and habitat connectivity.

4.2.8.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion
N/A	Not applicable since the project did not introduce any non-native species. All the species reported in the project has been native to the European Farmland/128//129/. These crops are native or adapted to the agro-ecological zones of the 10 countries involved in the project. Crop types are carefully selected and assessed, with certain combinations of crop types, agroecological zones, and cultivation techniques being approved. While many agricultural crops used in Europe are technically non-native, none of the species eligible for the Project are listed under the EU's Invasive Alien Species Regulation/128//129// which prevents the introduction of harmful species.

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
	Through enhancing native biodiversity and farmland habitat quality, the regenerative farming practices supported by the Project can indirectly mitigate against the spread of alien species. The growth and spread

	Invasive Alien Species (IAS) can be combated by the dominance of native species in the farmlands under the project. These practices are expected to have a lower environmental impact compared to conventional farming, potentially reducing the spread of alien species. Regulatory compliance plays a key role in managing these risks, as all Project participants are required to follow applicable laws related to the management of invasive species. Each country within the Project area has specific national and international policies to control invasive species. For instance, Ukraine, Moldova, the UK, and EU countries have established laws, such as the EU Invasive Alien Species Regulation (1143/2014), and additional national legislations aimed at preventing the introduction and spread of harmful non-native species /129/. The Project participants are legally obliged to adhere to these regulations, and non-compliance can lead to expulsion from the Project. The enforcement of these policies helps to protect native ecosystems from the threats posed by invasive species.
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Evidence gathering activities, evidence checked, and assessment conclusion	
Invasive species	Invasive species of agricultural pests and pathogens may have an outbreak, disrupting crop production and project activities implementation, However the Project addresses the risk of invasive alien species (IAS) and agricultural pests by enhancing biodiversity through regenerative farming practices, which are more effective than conventional farming. Increased biodiversity helps prevent the spread of IAS through natural ecological processes like resource competition and predation. The Project also complies with regulatory frameworks that manage IAS and pest outbreaks at PAI levels, including the EU Plant Health Law and the Invasive Alien Species Regulation, which require monitoring, eradication, and prevention measures. Moldova, the UK, and Ukraine follow similar IAS control mechanisms, and all Project countries collaborate through the European and Mediterranean Plant Protection Organisation (EPPO) for early pest detection and management. The information on invasive

species was verified through several EU regulations and publications referred in the MR. VVB verified the information by referring to these Regulations and publications/129//130/.

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	The project participation may encourage ecosystem clearing and conversion to arable land. However, the project ensures that no participant activity instance (PAI) is located on land cleared from native ecosystems in the past 10 years. Prospective participants must provide a statement confirming their fields have not been cleared of native habitats recently. As part of the quality assurance process, AgreeenaCarbon verifies this using regional data and remote sensing. Fields are flagged red if there has been significant loss of forest canopy (over 0.5 ha) or if more than 5% of the field area has been cleared from non-forest native ecosystems. These checks are conducted using Global land Analysis Discovery GLAD datasets, which track deforestation and land cover changes from satellite data. Any flagged fields are reviewed through consultations with the project participant.

4.3 Accuracy of Reduction and Removal Calculations

Data and parameters available at validation:

Data/ Parameter	Unit	Means of verification	Appropriateness of the values used in the MR
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AR	Percent	The parameter represents the Weighted mean adoption rate and is correctly mentioned in the MR which has been verified from equation 1 of the methodology /8/. It is used for calculation of the project across the group for all activity instances. The values are calculated for the projects across the group for all activity instances and is in line to the methodology <table><tr><th>Country</th><th>(EA) RT + OF</th><th>(EA) RT + CC</th><th>(EA) RT + M</th><th>(AR) Tilling + OF + CC + M</th></tr><tr><td>Bulgaria</td><td>4.07%</td><td>0.09%</td><td>1.76%</td><td>0.33%</td></tr><tr><td>Denmark</td><td>4.84%</td><td>1.71%</td><td>0.40%</td><td>0.86%</td></tr><tr><td>Estonia</td><td>4.92%</td><td>0.94%</td><td>5.03%</td><td>4.24%</td></tr><tr><td>Spain</td><td>6.78%</td><td>1.41%</td><td>1.51%</td><td>8.67%</td></tr><tr><td>Latvia</td><td>0.79%</td><td>0.23%</td><td>0.45%</td><td>0.29%</td></tr><tr><td>Lithuania</td><td>1.42%</td><td>0.24%</td><td>0.21%</td><td>0.53%</td></tr><tr><td>Romania</td><td>0.62%</td><td>0.04%</td><td>0.29%</td><td>0.80%</td></tr><tr><td>United Kingdom</td><td>12.31 %</td><td>1.48%</td><td>6.13%</td><td>1.45%</td></tr><tr><td>Ukraine</td><td>0.33%</td><td>0.04%</td><td>0.29%</td><td>0.46%</td></tr><tr><td>Moldova</td><td>0.86%</td><td>0.04%</td><td>0.29%</td><td>0.43%</td></tr></table>	Country	(EA) RT + OF	(EA) RT + CC	(EA) RT + M	(AR) Tilling + OF + CC + M	Bulgaria	4.07%	0.09%	1.76%	0.33%	Denmark	4.84%	1.71%	0.40%	0.86%	Estonia	4.92%	0.94%	5.03%	4.24%	Spain	6.78%	1.41%	1.51%	8.67%	Latvia	0.79%	0.23%	0.45%	0.29%	Lithuania	1.42%	0.24%	0.21%	0.53%	Romania	0.62%	0.04%	0.29%	0.80%	United Kingdom	12.31 %	1.48%	6.13%	1.45%	Ukraine	0.33%	0.04%	0.29%	0.46%	Moldova	0.86%	0.04%	0.29%	0.43%	The value applied for the parameter is considered in line with the methodology VM0042/8/. The verification team confirmed the value of the parameter from equation 1 of the methodology/8/ and the Monitoring section from the registered PD/1/ and verifies that that the value of the parameter is consistently applied in the ER sheet /16/.
Country	(EA) RT + OF	(EA) RT + CC	(EA) RT + M	(AR) Tilling + OF + CC + M																																																						
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EA _{ay}	Percent	The parameter was verified from public data sources namely survey data, peer-reviewed scientific literature, independent research data, or reports/assessments compiled by industry associations for the projects enrolled in EU and National GHG inventory reports/87//67/ and was found correct and in line to the methodology. <table><tr><th>Country</th><th colspan="2">Tillage</th><th rowspan="2">Cover Crops</th><th rowspan="2">Residue Managem ent</th><th rowspan="2">Organic Fertiliser</th></tr><tr><th></th><th>Reduced Tillage</th><th>No Tillage</th></tr><tr><td>Bulgaria</td><td>41.21%</td><td>0.15%</td><td>0.21%</td><td>4.28%</td><td>9.88%</td></tr><tr><td>Denmar k</td><td>10.70%</td><td>1.35%</td><td>15.94%</td><td>3.75%</td><td>45.27%</td></tr><tr><td>Estonia</td><td>26.59%</td><td>10.76%</td><td>3.54%</td><td>18.90%</td><td>18.51%</td></tr><tr><td>Spain</td><td>17.62%</td><td>6.45%</td><td>8.02%</td><td>8.57%</td><td>38.47%</td></tr><tr><td>Latvia</td><td>5.32%</td><td>1.00%</td><td>4.38%</td><td>8.51%</td><td>14.90%</td></tr><tr><td>Lithuani a</td><td>9.46%</td><td>1.21%</td><td>2.58%</td><td>2.17%</td><td>14.97%</td></tr><tr><td>Romani a</td><td>2.78%</td><td>9.45%</td><td>1.47%</td><td>10.37%</td><td>22.13%</td></tr><tr><td>United Kingdo m</td><td>35.49%</td><td>5.09%</td><td>4.18%</td><td>17.29%</td><td>34.69%</td></tr><tr><td>Ukraine</td><td>2.78%</td><td>9.45%</td><td>1.47%</td><td>10.37%</td><td>11.93%</td></tr><tr><td>Moldov a</td><td>2.78%</td><td>9.45%</td><td>1.47%</td><td>10.37%</td><td>30.76%</td></tr></table> Values highlighted in red are the adoption rate of the y largest most common proposed practice (see Table 3-12) of MR	Country	Tillage		Cover Crops	Residue Managem ent	Organic Fertiliser		Reduced Tillage	No Tillage	Bulgaria	41.21%	0.15%	0.21%	4.28%	9.88%	Denmar k	10.70%	1.35%	15.94%	3.75%	45.27%	Estonia	26.59%	10.76%	3.54%	18.90%	18.51%	Spain	17.62%	6.45%	8.02%	8.57%	38.47%	Latvia	5.32%	1.00%	4.38%	8.51%	14.90%	Lithuani a	9.46%	1.21%	2.58%	2.17%	14.97%	Romani a	2.78%	9.45%	1.47%	10.37%	22.13%	United Kingdo m	35.49%	5.09%	4.18%	17.29%	34.69%	Ukraine	2.78%	9.45%	1.47%	10.37%	11.93%	Moldov a	2.78%	9.45%	1.47%	10.37%	30.76%	The value is sourced from data sources survey data, peer-reviewed scientific literature, independent research data, or reports/assessments compiled by industry associations for the projects enrolled in EU and National GHG inventory reports/87//67/ and National GHG report. The assessment of the parameter was done following the annexure 1 if the registered PD and was found correct. The Remote sensing data is used for EA data is in accordance to the monitoring plan of the MR /127/ and PD/1/.
Country	Tillage		Cover Crops	Residue Managem ent	Organic Fertiliser																																																																			
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Moldov a	2.78%	9.45%	1.47%	10.37%	30.76%																																																																			

Area _{ay}	Hectares	This parameter represents the area of proposed project-level adoption of each activity ay. The value of the parameter is verified from the monitoring of the farmers reported input data and the description, source of data is correctly mentioned in the MR	The Value is determined after the farmers input data. VVB has verified the parameter with the help of KML files/17/ given by the PP and has been found correct. The initial area size is based on detected field boundaries using a remote sensing model. This model helps to accurately estimate the field size through satellite imagery, providing a reliable method for capturing field boundaries. Once the area is determined, the value is corrected to a more conservative estimate after monitoring and reviewing the input data. This adjustment ensures that the reported area is not overstated and reflects a cautious approach. To ensure accuracy, a quality control (QC) procedure is implemented, which uses satellite imagery to double-check the field boundaries. The process of monitoring and verifying these boundaries is further explained in Section 4.3 of the Monitoring Plan//
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ay	Unitless	The parameter represents Proposed project activity commitments to a1 to ay where a1 covers the largest area in the project region. And the description and source of data are the farmers inputted data and is correctly mentioned in the MR	The value of the parameter is calculated using the documentation of activities to be implemented in the project for each sample unit and is considered in line with the applied methodology VM0042/8/ the ay parameter denotes which activity is implemented on the project activity area. The source of data comes from farmers data as documented for each PAI by PP.
j _{bsl} / j _{wp}	Dimensionless	The parameter represents Type of fossil fuel combusted and the value is sourced from the attestation of farms and is used for the calculation of baseline and project emissions	The source of data is farm attestation records. VVB has checked the farm attestation records and also checked the procedure of collecting data and providing input for ERR spreadsheet /17//18/. The procedure and calculation approach found appropriate and as per the applied methodology.
FFC _{bsl,j,i,t}	Liters	The parameter represents consumption of fossil fuel type j (gasoline or diesel) for sample unit i in year t which is sources from box 1 of VM0042. The annual fuel efficiency data is sourced from peer-reviewed published data. The value applied is Diesel: 98.2 ± 6.2 l/ha. The parameter is used for calculation of baseline. The reference Values were checked from the peer reviewed published data/88//89//90/ and was found correct and in line to the methodology /8/.	The value of the parameter was taken from peer reviewed published data/88//89//90/. The values were found consistent according to box 1 of the applied methodology/8/.

FFC _{wp,j,i,t}	Litres/ hectare	The parameter represents Consumption of fossil fuel type j (gasoline or diesel) for PAI i in year t in the project scenario from the initial project instances the values are sources from Farmers attestation data. The values are collected for the calculation of project emission and the values applied are: <table><tr><td>Fossil fuel type (i)</td><td>FFC_{wp} (l/ha)</td></tr><tr><td>Diesel</td><td>50 ± 18</td></tr><tr><td>Gasoline</td><td>70 ± 0</td></tr></table> The ex-post calculations for the project scenarios involve determining the fuel consumption by averaging the expected fuel usage of the initial project instances for the first year. During the verification phase, this data will be refined and adjusted using farmer-reported data for each individual Project Activity Instance (PAI).	Fossil fuel type (i)	FFC _{wp} (l/ha)	Diesel	50 ± 18	Gasoline	70 ± 0	The value of the parameter is sourced from IPCC. Measuring and reporting frequency is in accordance with monitoring plan, as documented in the PD/1/ and methodology/8/. The verification team confirmed that the value of the parameter to be determined is in line with applied methodology /8/. This has been verified by the verification team during the on-site visit /63/, hence considered valid.
Fossil fuel type (i)	FFC _{wp} (l/ha)								
Diesel	50 ± 18								
Gasoline	70 ± 0								
EF _{CO2,j, bsl} /EF _{CO2,j, wp}	t CO ₂ e/l	The parameter represents Emission factor for the type of fossil fuel j (gasoline or diesel) combusted and is sourced from Table 3.3.1 Chapter 3 Volume 2 - Energy of the “2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories”/93/. The value applied is For calcitic limestone, EFLimestone = 0.12 t C/t limestone; For dolomite, EFDolomite = 0.13 t C/t dolomite. And is used for the calculation of baseline and project emission.	The value is sourced from IPCC 2019 National Greenhouse gas inventories The verification team confirmed that the value of the parameter to be determined is in line with applied methodology /8/.						

$EF_{limestone,bsl}$ and $EF_{dolomite,bsl}$ / $EF_{limestone,wp}$ and $EF_{dolomite,wp}$	t C/t (limestone or dolomite)	The parameter represents Emission factor for the application of calcitic limestone and dolomite and is sourced from Section 11.3, Chapter 11, Volume 4 in the 2019 Refinement to the 2006 IPCC National Greenhouse Gas Inventories/94/ the value applied for the parameter is For calcitic limestone, $EFLimestone = 0.12$ t C/t limestone; For dolomite, $EFDolomite = 0.13$ t C/t dolomite.	The value of the parameter is sourced from IPCC. Measuring and reporting frequency is in accordance with monitoring plan, as documented in the MR/127/ and methodology /8/. The validation team confirmed that the value of the parameter to be determined is in line with applied methodology /8/. This has been verified by the verification team during the on-site visit /63/, hence considered valid.																								
$M_{Limestone,bsl,i,t}$ and $M_{dolomite,bsl,i,t}$ $M_{Limestone,wp,i,t}$ and $M_{Dolomite,wp,i,t}$	Tonnes/year	The parameter represents Amount of calcitic limestone and dolomite applied to sample unit i in year t in the baseline scenario. The value of the parameter was sourced from regional data collated from the UNFCCC National Inventory Reports /67/ PP has applied equation 9 and 10 of the applied methodology. The parameter was assessed and was found in line to the applied methodology/8/. The value for the parameters are: <table><tr><th rowspan="2">Country</th><th colspan="2">2016-2020 (Baseline)</th><th colspan="2">2021 (Project scenario)</th></tr><tr><th>$M_{Limestone,bsl,i,t}$</th><th>$M_{dolomite,bsl,i,t}$</th><th>$M_{Limestone,wp,i,t}$</th><th>$M_{Dolomite,wp,i,t}$</th></tr><tr><td>Bulgaria</td><td>55817</td><td>0</td><td>55994</td><td>0</td></tr><tr><td>Denmark</td><td>498705</td><td>5</td><td>616005</td><td>5</td></tr><tr><td>Estonia</td><td>33330</td><td>3125</td><td>50848</td><td>12822</td></tr></table>	Country	2016-2020 (Baseline)		2021 (Project scenario)		$M_{Limestone,bsl,i,t}$	$M_{dolomite,bsl,i,t}$	$M_{Limestone,wp,i,t}$	$M_{Dolomite,wp,i,t}$	Bulgaria	55817	0	55994	0	Denmark	498705	5	616005	5	Estonia	33330	3125	50848	12822	The value of the parameter for baseline scenario for lime CO2 emission was estimated using data from UNFCCC national inventory reports/67/ and was found consistent and in line to the methodology.
Country	2016-2020 (Baseline)			2021 (Project scenario)																							
	$M_{Limestone,bsl,i,t}$	$M_{dolomite,bsl,i,t}$	$M_{Limestone,wp,i,t}$	$M_{Dolomite,wp,i,t}$																							
Bulgaria	55817	0	55994	0																							
Denmark	498705	5	616005	5																							
Estonia	33330	3125	50848	12822																							

		<table><tr><td>a</td><td></td><td></td><td></td><td></td></tr><tr><td>Latvia</td><td>59510</td><td>23910</td><td>119000</td><td>44900</td></tr><tr><td>Lithuania</td><td>35029</td><td>4618</td><td>128725</td><td>890</td></tr><tr><td>Moldova*</td><td>109920</td><td>5002</td><td>150368</td><td>260</td></tr><tr><td>Romania</td><td>109920</td><td>5002</td><td>150368</td><td>260</td></tr><tr><td>Spain</td><td>76678</td><td>435</td><td>69203</td><td>120</td></tr><tr><td>Ukraine</td><td>338705</td><td>0</td><td>400520</td><td>0</td></tr><tr><td>United Kingdom</td><td>1980635</td><td>338074</td><td>2392724</td><td>257385</td></tr></table>	a					Latvia	59510	23910	119000	44900	Lithuania	35029	4618	128725	890	Moldova*	109920	5002	150368	260	Romania	109920	5002	150368	260	Spain	76678	435	69203	120	Ukraine	338705	0	400520	0	United Kingdom	1980635	338074	2392724	257385	
a																																											
Latvia	59510	23910	119000	44900																																							
Lithuania	35029	4618	128725	890																																							
Moldova*	109920	5002	150368	260																																							
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Spain	76678	435	69203	120																																							
Ukraine	338705	0	400520	0																																							
United Kingdom	1980635	338074	2392724	257385																																							
EL _{bsl} / EL _{wp}	ktCO ₂ e	The parameter represents CO₂ emissions from liming to PAI i in year t. and is sourced from Box 1, option 4 in VM0042 v2.0/8/. The regional data are derived from from Table 3.G-1 of the UNFCCC National Inventory Reports/91/ and is used for the calculation of baseline and project emissions CO₂ emissions from liming in each country (ktCO₂e) <table><tr><td>Country</td><td>2016-2020 (Baseline)</td><td>2021 (Project scenario)</td></tr><tr><td>Bulgaria</td><td>123</td><td>123</td></tr><tr><td>Denmark</td><td>1097</td><td>1355</td></tr><tr><td>Estonia</td><td>81</td><td>142</td></tr></table>	Country	2016-2020 (Baseline)	2021 (Project scenario)	Bulgaria	123	123	Denmark	1097	1355	Estonia	81	142	The value of the data was sourced in accordance from box 1, option 4 in VM0042 from Table 3. G-1 of UNFCCC National Inventory reports/91/ . PP has sought deviation for Liming emission in the PD /1/. The parameter was found consistent and is found in line and appropriate to the methodology.																												
Country	2016-2020 (Baseline)	2021 (Project scenario)																																									
Bulgaria	123	123																																									
Denmark	1097	1355																																									
Estonia	81	142																																									

		<table><tr><td>Latvia</td><td>188</td><td>369</td><td></td></tr><tr><td>Lithuania</td><td>88</td><td>285</td><td></td></tr><tr><td>Moldova*</td><td>254</td><td>331</td><td></td></tr><tr><td>Romania</td><td>254</td><td>331</td><td></td></tr><tr><td>Spain</td><td>170</td><td>152</td><td></td></tr><tr><td>Ukraine</td><td>745</td><td>881</td><td></td></tr><tr><td>United Kingdom</td><td>5163</td><td>5877</td><td></td></tr></table> *Moldova is a non-Annex I country; thus, no data on liming was available.	Latvia	188	369		Lithuania	88	285		Moldova*	254	331		Romania	254	331		Spain	170	152		Ukraine	745	881		United Kingdom	5163	5877							
Latvia	188	369																																		
Lithuania	88	285																																		
Moldova*	254	331																																		
Romania	254	331																																		
Spain	170	152																																		
Ukraine	745	881																																		
United Kingdom	5163	5877																																		
Country actual agricultural land area (A)	k ha	The parameter represents area of country in Table 4.B of national inventory reports. The value is sourced in accordance to box 1 option 4 in VM0042. The values applied are: <table><tr><td>Country</td><td>A_{bst}</td><td>A_{wp}</td></tr><tr><td>Bulgaria</td><td>3161</td><td>3174</td></tr><tr><td>Denmark</td><td>2669</td><td>2631</td></tr><tr><td>Estonia</td><td>924</td><td>922</td></tr><tr><td>Latvia</td><td>1299</td><td>1291</td></tr><tr><td>Lithuania</td><td>1282</td><td>1334</td></tr><tr><td>Moldova*</td><td>NA</td><td>NA</td></tr><tr><td>Romania</td><td>4793</td><td>4139</td></tr><tr><td>Spain</td><td>17507</td><td>17272</td></tr><tr><td>Ukraine</td><td>34759</td><td>34756</td></tr><tr><td>United Kingdom</td><td>3601</td><td>3550</td></tr></table> * Moldova is a non-Annex I country; thus, no data on liming was available.	Country	A _{bst}	A _{wp}	Bulgaria	3161	3174	Denmark	2669	2631	Estonia	924	922	Latvia	1299	1291	Lithuania	1282	1334	Moldova*	NA	NA	Romania	4793	4139	Spain	17507	17272	Ukraine	34759	34756	United Kingdom	3601	3550	The value of the data was sourced in accordance from box 1, option 4 in VM0042 from Table 4.B of UNFCCC national inventory report. PP has sought deviation for Liming emission in the PD /95/. The parameter was found consistent and is found in line and appropriate to the methodology/08/.
Country	A _{bst}	A _{wp}																																		
Bulgaria	3161	3174																																		
Denmark	2669	2631																																		
Estonia	924	922																																		
Latvia	1299	1291																																		
Lithuania	1282	1334																																		
Moldova*	NA	NA																																		
Romania	4793	4139																																		
Spain	17507	17272																																		
Ukraine	34759	34756																																		
United Kingdom	3601	3550																																		

$FSN_{bsl,i,t}$	$t\ N$	The parameter represents N inputs from N containing synthetic fertiliser applied for PAI i in year t in the baseline the data is sourced from signed attestation of farmer adhering the requirement and rules of Box 1, option 1. Where data is not available the baseline data is retrieved from EuropeAgriDB/96/ v1.0 and Eurostat database/97/. The values of the parameter are: <table><tr><th>Country</th><th>Synthetic fertiliser application rate (tN/ha) if only synthetic fertiliser is applied</th><th>Synthetic fertiliser application rate (tN/ha) if mixed fertiliser is applied</th></tr><tr><td>Bulgaria</td><td>0.17</td><td>0.085</td></tr><tr><td>Denmark</td><td>0.2</td><td>0.1</td></tr><tr><td>Estonia</td><td>0.17</td><td>0.085</td></tr><tr><td>Latvia</td><td>0.17</td><td>0.085</td></tr><tr><td>Lithuania</td><td>0.17</td><td>0.085</td></tr><tr><td>Moldova</td><td>0.17</td><td>0.085</td></tr><tr><td>Romania</td><td>0.1245</td><td>0.062</td></tr><tr><td>Spain</td><td>0.1385</td><td>0.069</td></tr><tr><td>Ukraine</td><td>0.17</td><td>0.085</td></tr><tr><td>United Kingdom</td><td>0.2307</td><td>0.115</td></tr></table> For baseline year Cumulative N inputs containing synthetic fertilizer in all the PAIs in the baseline per year (t N/ year) in AgreeenaCarbon Project <table><tr><th>Fertiliser type</th><th>$FSN_{bsl,t}$</th></tr><tr><td>Only synthetic</td><td>73638</td></tr><tr><td>Mixed</td><td>459</td></tr><tr><td>Only organic</td><td>0</td></tr></table>	Country	Synthetic fertiliser application rate (tN/ha) if only synthetic fertiliser is applied	Synthetic fertiliser application rate (tN/ha) if mixed fertiliser is applied	Bulgaria	0.17	0.085	Denmark	0.2	0.1	Estonia	0.17	0.085	Latvia	0.17	0.085	Lithuania	0.17	0.085	Moldova	0.17	0.085	Romania	0.1245	0.062	Spain	0.1385	0.069	Ukraine	0.17	0.085	United Kingdom	0.2307	0.115	Fertiliser type	$FSN_{bsl,t}$	Only synthetic	73638	Mixed	459	Only organic	0	The purpose of the parameter is for the calculation of baseline emission. The data is sourced as per Box 1 of VM0042 from farmers attested data or from regional average values from EuropeAgriDB /96/ and Eurostat Database/97/. The parameter was found consistent and is found in line and appropriate to the methodology/08/.
Country	Synthetic fertiliser application rate (tN/ha) if only synthetic fertiliser is applied	Synthetic fertiliser application rate (tN/ha) if mixed fertiliser is applied																																										
Bulgaria	0.17	0.085																																										
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Estonia	0.17	0.085																																										
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Fertiliser type	$FSN_{bsl,t}$																																											
Only synthetic	73638																																											
Mixed	459																																											
Only organic	0																																											

		At verification, for both current and future project instances, the data was refined using farmer-reported data for every PAI. In cases where farmer attestation was missing for any year(s) within the baseline SoA, default values for nitrogen application rates from synthetic fertilizers were derived from regional average values sourced from agricultural census data or other relevant sources within the 20-year period preceding the project start date, or from the 10 most recent iterations of the datasets																			
FON _{bsl,i,t}	t N	This parameter represents N inputs from N-containing organic fertiliser applied for PAI i in year t in the baseline, mean values collected in the project are. The value of the parameter is sourced from signed attestation of farmer adhering the requirement and rules of Box 1, option 1. Where data is not available the baseline data is retrieved from EuropeAgriDB/96/v1.0 and Eurostat database/97/. The values of the parameter are: <table><tr><th>Country</th><th>Organic fertiliser application rate (tN/ha) if only organic fertiliser is applied</th><th>Organic fertiliser application rate (tN/ha) if mixed fertiliser is applied</th></tr><tr><td>Bulgaria</td><td>0.104</td><td>0.052</td></tr><tr><td>Denmark</td><td>0.144</td><td>0.072</td></tr><tr><td>Estonia</td><td>0.104</td><td>0.052</td></tr><tr><td>Latvia</td><td>0.104</td><td>0.052</td></tr><tr><td>Lithuania</td><td>0.104</td><td>0.052</td></tr></table>	Country	Organic fertiliser application rate (tN/ha) if only organic fertiliser is applied	Organic fertiliser application rate (tN/ha) if mixed fertiliser is applied	Bulgaria	0.104	0.052	Denmark	0.144	0.072	Estonia	0.104	0.052	Latvia	0.104	0.052	Lithuania	0.104	0.052	The purpose of the parameter is for the calculation of baseline emission. The data is sourced as per Box 1 of VM0042 from farmers attested data. Or from regional average values from EuropeAgriDB/96/ and Eurostat Database/97/. The parameter was found consistent and is found in line and appropriate to the methodology/08/.
Country	Organic fertiliser application rate (tN/ha) if only organic fertiliser is applied	Organic fertiliser application rate (tN/ha) if mixed fertiliser is applied																			
Bulgaria	0.104	0.052																			
Denmark	0.144	0.072																			
Estonia	0.104	0.052																			
Latvia	0.104	0.052																			
Lithuania	0.104	0.052																			

Moldova	0.104	0.052
Romania	0.1049	0.052
Spain	0.1541	0.077
Ukraine	0.104	0.052
United Kingdom	0.1697	0.085

For baseline year Cumulative N inputs containing synthetic fertilizer in all the PAIs in the baseline per year (t N/ year) in AgreeaCarbon Project

Fertiliser type	FON _{bsl,t}
Only organic	32228.5
Mixed	690
Only synthetic	0

At verification, for both current and future project instances, the data was refined using farmer-reported data for every PAI. In cases where farmer attestation was missing for any year(s) within the baseline SoA, default values for nitrogen application rates from synthetic fertilizers were derived from regional average values sourced from agricultural census data or other relevant sources within the 20-year period preceding the project start date, or from the 10 most recent iterations of the datasets

FSN _{wp,i,t}	t N	The parameter represents N inputs from N-containing synthetic fertilizer applied for sample unit i in the project scenario from the initial project instances, mean values collected in the project area and is sourced from the Farmers attestation data. The values of the parameter are: <table><tr><td>Fertiliser type</td><td>FSN_{wp,i,t}</td></tr><tr><td>only synthetic</td><td>35755</td></tr><tr><td>mixed</td><td>1858</td></tr><tr><td>only organic</td><td>0</td></tr></table> For the ex-post calculations of the project scenarios, the nitrogen (N) input from synthetic fertiliser is determined as the cumulative amount of expected N inputs from synthetic fertiliser for the initial project instances in the first year of the project. At verification, the data will be refined by incorporating farmer-reported data for each PAI	Fertiliser type	FSN _{wp,i,t}	only synthetic	35755	mixed	1858	only organic	0	The value is used for the calculation of project emissions. The value comes from the Farmers attestation data which is verified from on site visit/128/ through interviews as well as remote interviews. The parameter was found consistent and is found in line and appropriate to the methodology/08/.
Fertiliser type	FSN _{wp,i,t}										
only synthetic	35755										
mixed	1858										
only organic	0										
FON _{wp,i,t}	t N	The parameter represents N inputs from N-containing organic fertiliser applied for PAI i in the project scenario from the initial project instances, the mean values are collected in the project area. The value of the parameter is sourced from from signed attestation of farmer. The values applied for this parameter is: <table><tr><td>Fertiliser type</td><td>FON_{wp,i,t}</td></tr><tr><td>only organic</td><td>797</td></tr><tr><td>mixed</td><td>1908</td></tr><tr><td>only synthetic</td><td>0</td></tr></table>	Fertiliser type	FON _{wp,i,t}	only organic	797	mixed	1908	only synthetic	0	The parameter is used for the calculation of project emissions. The value is sourced from the farmers attested data. The parameter was found consistent and is found in line and appropriate to the methodology/08/.
Fertiliser type	FON _{wp,i,t}										
only organic	797										
mixed	1908										
only synthetic	0										

OF_{bsl} / OF_{wp}	Dimensionless	The parameter represents Type of organic N fertilizer For the parameter OF_{bsl} data is collected through signed attestation of the farmers in accordance to Box 1, option 1 where. In case of unavailability of data, reference data shall be derived from FAO database as per Box 1 option 4. For parameter OF_{wp} the data is collected through farm attestation.	The parameter is used for the calculation of project emission which represents the type of organic Nitrogen fertilizer used in the project. The values are taken from farm attestation data or from the reference data stated as per Box 1. The The parameter was found consistent and is found in line and appropriate and in line to the methodology/08/.								
$M_{bsl,OF,i,t}$	t fertilizer	The parameter represents Mass of N containing organic fertilizer OF applied for sample unit i in year t. The values are sourced from farmers attestation data in accordance to Box 1,Option 1 in case of unavailability of data, in accordance to box 1 option 4 in VM0042. The dataset referenced on per country basis is peer reviewed literatures and national statistical records//. The values applied for the parameter is: <table><tr><td>Fertiliser type</td><td>$M_{bsl,OF,i,t}$</td></tr><tr><td>only organic</td><td>1528462</td></tr><tr><td>mixed</td><td>106983</td></tr><tr><td>only synthetic</td><td>0</td></tr></table>	Fertiliser type	$M_{bsl,OF,i,t}$	only organic	1528462	mixed	106983	only synthetic	0	The parameter is measured and calculated according to VM0042 equation 21. The parameter is used for calculation of baseline emissions. PP has sourced this data from peer reviewed literature. The verification team confirms that the parameter is in line to the methodology/4/.
Fertiliser type	$M_{bsl,OF,i,t}$										
only organic	1528462										
mixed	106983										
only synthetic	0										

		At verification, for both current and future project instances, the data was refined using farmer-reported data for every PAI. In cases where farmer attestation was missing for any year(s) within the baseline SoA, default values for nitrogen application rates from synthetic fertilizers were derived from regional average values sourced from agricultural census data or other relevant sources within the 20-year period preceding the project start date, or from the 10 most recent iterations of the datasets									
Mwp,OF,i,t	t fertilizer	The parameter represents the Mass of N-containing organic fertiliser type OF applied in the project for PAI i in year t in the project scenario from the initial project instances. The data is sourced from farm attestation. The value applied for the parameter in all PAI in the project scenario is : <table><tr><td>Fertiliser type</td><td>Mwp,OF,i,t</td></tr><tr><td>only organic</td><td>91412</td></tr><tr><td>mixed</td><td>359491</td></tr><tr><td>only synthetic</td><td>0</td></tr></table>	Fertiliser type	Mwp,OF,i,t	only organic	91412	mixed	359491	only synthetic	0	The parameter denotes the mass of the Nitrogen containing organic fertilizer which is applied in the project for the project area instances. The value of the parameter is sourced from the farm attestation data which is confirmed from interviews the on site visit/128/.
Fertiliser type	Mwp,OF,i,t										
only organic	91412										
mixed	359491										
only synthetic	0										

NCOF,bsl / NCOF,wp	t N/t fertilizer	The value represents the Nitrogen fraction of organic fertilizer. The values are sourced form several peer reviewed literature/98/. The value of the parameter are: <table> <tr> <td>Organic fertiliser</td> <td>N%</td> </tr> <tr> <td>Broiler/Turkey litter</td> <td>3.4</td> </tr> <tr> <td>Cattle Digestate - 0.26% N</td> <td>0.26</td> </tr> <tr> <td>Cattle digestate - 0.6% N</td> <td>0.6</td> </tr> <tr> <td>Cattle manure</td> <td>0.6</td> </tr> <tr> <td>Cattle slurry</td> <td>0.26</td> </tr> <tr> <td>Compost (fully aerated production)</td> <td>1</td> </tr> <tr> <td>Compost (non-fully aerated production)</td> <td>1</td> </tr> <tr> <td>Compost (zero emissions)</td> <td>1</td> </tr> <tr> <td>Horse digestate</td> <td>0.7</td> </tr> <tr> <td>Horse manure</td> <td>0.7</td> </tr> <tr> <td>Pig digestate - 0.36% N</td> <td>0.36</td> </tr> <tr> <td>Pig digestate - 0.7% N</td> <td>0.7</td> </tr> <tr> <td>Pig manure</td> <td>0.7</td> </tr> <tr> <td>Pig slurry</td> <td>0.36</td> </tr> <tr> <td>Poultry layer digestate</td> <td>1.9</td> </tr> <tr> <td>Poultry layer manure</td> <td>1.9</td> </tr> <tr> <td>Separated pig slurry (liquid part)</td> <td>0.36</td> </tr> <tr> <td>Separated pig slurry (solid part)</td> <td>0.5</td> </tr> <tr> <td>Sheep digestate</td> <td>0.7</td> </tr> <tr> <td>Sheep manure</td> <td>0.7</td> </tr> </table>	Organic fertiliser	N%	Broiler/Turkey litter	3.4	Cattle Digestate - 0.26% N	0.26	Cattle digestate - 0.6% N	0.6	Cattle manure	0.6	Cattle slurry	0.26	Compost (fully aerated production)	1	Compost (non-fully aerated production)	1	Compost (zero emissions)	1	Horse digestate	0.7	Horse manure	0.7	Pig digestate - 0.36% N	0.36	Pig digestate - 0.7% N	0.7	Pig manure	0.7	Pig slurry	0.36	Poultry layer digestate	1.9	Poultry layer manure	1.9	Separated pig slurry (liquid part)	0.36	Separated pig slurry (solid part)	0.5	Sheep digestate	0.7	Sheep manure	0.7	The value is used for the calculation of project emission. The values are sourced from several peer reviewed literature which has been verified independently. The verification team confirms that that the parameter is in line to the methodology/4/.
Organic fertiliser	N%																																												
Broiler/Turkey litter	3.4																																												
Cattle Digestate - 0.26% N	0.26																																												
Cattle digestate - 0.6% N	0.6																																												
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Sheep manure	0.7																																												

GWP _{N20,bsl} / GWP _{N20,wp}	t CO _{2e} / t N ₂ O	The value is used to represent the Global warming potential for N ₂ O and is sourced from IPCC Fifth Assessment Report/99/. The N ₂ O is converted using 100 year global warming potential which is derived from the IPCC fifth assessment report and the value applied is 265.	The value is used for the calculation of baseline and project emissions and the data is sourced from IPCC fifth assessment report/99/. The verification team confirms that the value is consistent and is in line to the applied methodology /8/
EF _{Ndirect,bsl} / EF _{Ndirect,wp}	t N ₂ O-N/t N applied	The value represents Emission factor for direct nitrous oxide emissions from N additions from synthetic fertilizers, organic amendments and crop residues and is sourced from Table 11.1, Chapter 11, Volume 4 in IPCC (2019) the value applied is 0.01. The value is applied conservatively for the estimation of N ₂ O-N emissions from the addition of synthetic organic fertilisers and crop residues across multiple regions	The value is used for calculation of baseline and project emission and is sourced from Table 11.1, Chapter 11, Volume 4 in IPCC (2019). The verification team verified the value of data and found it consistent and in line to the methodology /8/
EF _{Nvolat,bsl} / EF _{Nvolat,wp}	t N ₂ O-N / (t NH ₃ -N + NO _x - N volatilized)	The parameter represents Emission factor for nitrous oxide emissions from atmospheric deposition of N on soils and water surfaces the value is sourced from Table 11.1, Chapter 11, Volume 4 in IPCC (2019) the value applied is 0.01. The value is applied conservatively for the estimation of N ₂ O-N emissions from the addition of synthetic organic fertilisers and crop residues across multiple regions	The value is used for calculation of baseline and project emission and is sourced from Table 11.1, Chapter 11, Volume 4 in IPCC (2019). The verification team verified the value of data and found it consistent and in line to the methodology /8/
EF _{Nleach,bsl} / EF _{Nleach,wp}	t N ₂ O-N/t N leached and runoff	The parameter represents Emission factor for nitrous oxide emissions from leaching and runoff the value is sourced from Table 11.1, Chapter 11, Volume 4 in IPCC (2019) the value applied is 0.01. The value is applied conservatively for the estimation of N ₂ O-N emissions from the addition of synthetic organic fertilisers and crop residues across multiple regions	The value is used for calculation of baseline and project emission and is sourced from Table 11.1, Chapter 11, Volume 4 in IPCC (2019). The verification team verified the value of data and found it consistent and in line to the methodology /8/

FracGASM,I,S, bsl / FracGASM,I,S, wp	Dimensionless	The parameter represents Fraction of all organic N added to soils and N in manure and urine deposited on soils that volatilizes as NH ₃ and NO _x the data is sourced from Table 11.3, Chapter 10, Volume 4 in IPCC (2019). The value applied is 0.21	The value is used for the calculation of baseline and project emissions. The value is sourced from IPCC the verification team has verified the value and found it consistent and in line to the methodology/8/									
FracLEACH,I,S, bsl / FracLEACH,I,S, wp	Dimensionless	The parameter represents Fraction of N added (synthetic or organic) to soils and N in manure and urine deposited on soils that is lost through leaching and runoff in regions where leaching and runoff occur. The value of the parameter sourced from Table 11.3, Chapter 10, Volume 4 in IPCC (2019).The value applied is 0.24	The value is used for the calculation of baseline and project emissions. The value was verified by the verification team through remote and on site visits and found the value to be consistent an in line to the methodology /8									
MBg,bsl,i,t / MBg,wp,i,t	t dm	The parameter represents Annual dry matter, including aboveground and below ground of N-fixing species g returned to soils for PAI i at time t in the baseline or project scenario from the initial project instances The calculations of MBg,bsl,i,t and MBg,wp,i,t use yield-to-residue equations from Tables 11.1A and 11.2, Section 11.2.1.3, Chapter 11, Volume 4 of the IPCC 2019 Refinement guidelines. Baseline crop yield data come from farm attestation, following Box 1, option 1. If baseline yield data is unavailable, option 4 is used, and values are sourced from regional data in the FAO (faostat_qcl)/100/ and Eurostat (apro_cp; apro_acs)/101/ databases. Crop yield data for the project scenario are based on farm attestation. The values for the parameter are: <table><tr><td>MB</td><td>MBg,bsl,i,t</td><td>MBg,wp,i,t</td></tr><tr><td>Above-ground</td><td>17212</td><td>111020</td></tr><tr><td>Below-ground</td><td>45048</td><td>50817</td></tr></table> The annual dry matter of N-fixing species is calculated using IPCC yield-to-residue equations from Tables 11.1A and 11.2, Section 11.2.1.3, Chapter 11, Volume 4 of the IPCC 2019 Refinement guidelines. It	MB	MBg,bsl,i,t	MBg,wp,i,t	Above-ground	17212	111020	Below-ground	45048	50817	The value is used for the calculation of baseline and project emission The value is sourced from FAO and Eurostat/100//101/ and is with accordance to Box 1, option 1 of the methodology /8/
MB	MBg,bsl,i,t	MBg,wp,i,t										
Above-ground	17212	111020										
Below-ground	45048	50817										

		represents the total above-ground and below-ground residues of N-fixing species. For ex-post calculations, baseline data are based on crop yield information from farm attestation and/or regional data (as per Table 3-4 of AgreeaCarbon PD v1.3). The annual dry matter for the project scenario is calculated based on expected practices for the first year of the project.																
g_{bsl} / g_{wp}	Dimensionless	The data represents Type of N-fixing species in the baseline or project scenario from the initial project instances. The value of the parameter g_{bsl} is sourced from data collected through signed farmer records in accordance to Box 1 Option 1 in case of unavailability of data values are taken from FAO database in accordance to Option 4 box 1 of methodology /08/ and the value of the parameter g_{wp} is sourced from farm attestation. The value of the para meter are Soybean; Beans and pulses; Grass-Clover mixtures.	The parameter is used for the calculation of baseline and project emissions and is sourced from the farms attestation data. The verifying team verified the data during the on site and remote visit/68/ and confirms that the parameter are consistent and in line with the methodology /8/															
$N_{content,g,bsl} / N_{content,g,wp}$	$t\ N/ t\ dm$	The parameter represents Fraction of N in dry matter for N-fixing species g. The value of the parameter is sourced from Table 11.1A, Section 11.2.1.3, Chapter 11, Volume 4 in the IPCC 2019 Refinement guidelines. The values of the parameter are: <table><tr><td>IPCC N-fixing Crop</td><td>Nag(T)</td><td>Nbg(T)</td></tr><tr><td>Alfalfa</td><td>0.03</td><td>0.019</td></tr><tr><td>Beans and pulses</td><td>0.01</td><td>0.008</td></tr><tr><td>Grass-Clover mixtures</td><td>0.03</td><td>0.016</td></tr><tr><td>Soybean</td><td>0.01</td><td>0.008</td></tr></table>	IPCC N-fixing Crop	Nag(T)	Nbg(T)	Alfalfa	0.03	0.019	Beans and pulses	0.01	0.008	Grass-Clover mixtures	0.03	0.016	Soybean	0.01	0.008	The parameter is used for the calculation of baseline and project emissions. The values are taken from the IPCC 2019 refinement. The verification team confirms that the parameter is consistent and in line with the methodology/8/.
IPCC N-fixing Crop	Nag(T)	Nbg(T)																
Alfalfa	0.03	0.019																
Beans and pulses	0.01	0.008																
Grass-Clover mixtures	0.03	0.016																
Soybean	0.01	0.008																

$P_{bsl,p} / P_{wp,p}$	t / ha	These parameters represents Average productivity for product p during the historical baseline period. The value of the $P_{bsl,p}$ is collected through farmers attestation in case of unavailability of data the value is taken from the default values of FAO (faostat_qcl) and Eurostat (apro_cp; apro_acs) databases/102//103/. The values applied for the parameter are : $P_{bsl,p} : 8.88 \pm 11.67 \text{ t / ha}$ $P_{wp,p} : 4.44 \pm 3.92 \text{ t / ha}$ For ex-post calculations, the average productivity for product p is based on farmer-reported baseline data and the expected practice in the first year of the project. If farmer attestation is missing for any year(s) within the baseline SoA, default values are used, derived from the statistical average productivity in the PAI's region, in line with Box 1, option 4 from VM0042 v2.0. These averages are sourced from the FAO (faostat_qcl)/102/ and Eurostat (apro_cp; apro_acs) /103/databases, covering the 5-year baseline period from 2017 to 2021.	
$RP_{bsl,p}$	Output kg/ha	The parameter defines Average regional productivity for product p during the same years as the historical baseline period The data is sourced from farmer-reported data for annual crop yields. In cases where farmer-reported data is unavailable, regional average values for historic crop yield data are used, derived from the FAO (fao_all_data_prod) and complemented by datasets from Eurostat (apro_cshr)/104/105/. The value is applied in accordance to Box 1 option 4 of the methodology /8/	The parameter is used for the determination of baseline productivity ratio for future market leakage analysis. The parameter is sourced from FAO and Eurostat/104//105/. The verifying body has verified the value and found it be consistent and in line with the methodology/8/

A_{bsl} / A_{wp}	Hectare (ha)	The parameter defines Farmer collected data prior to validation which is checked during QA against remote sensing data. And is sourced from farmers collected data and verified through Remote sensing. Field boundaries are determined using a combination of farmer-reported data and remote-sensing technology. The value is then corrected to the most conservative estimate after monitoring input data. The QC procedure for determining the area involves satellite imagery to verify PAI and field boundaries, as detailed in Section 4.3 of the Monitoring Plan/1/. The value of the parameter is 479,834.1 ha. However, the value at the end date of current monitoring period was found to be 1,652,643.85hectares.	The value is used for the calculation of baseline and project emissions. The value is sourced from farmers data collected prior verification and verified against Remote sensing data. The verification team verified the data during on site and remote site visits and found it to be consistent and in line to the methodology /8/																		
$DPM_{bsl,i,t}$ $RPM_{bsl,i,t}$ $HUM_{bsl,i,t}$ $BIO_{bsl,i,t}$ $IOM_{bsl,i,t}$ $DPM_{wp,i,t}$ $RPM_{wp,i,t}$ $HUM_{wp,i,t}$ $BIO_{wp,i,t}$ $IOM_{wp,i,t}$	tC/ha	The parameter defines the five soil carbon pools DPM, RPM,HUM,BIO and IOM as defined by the RothC (Rothamsted Carbon) model. These pools represent different forms of organic matter in the soil, each playing a distinct role in the carbon cycle. The data is sourced from The carbon pools are derived from direct soil measurements for the ex-post calculations. The value of the data is <table> <tr> <th>Carbon pool</th> <th>Baseline (tC/ha)</th> <th>Project (tC/ha)</th> </tr> <tr> <td>DPM</td> <td>0.41</td> <td>0.50</td> </tr> <tr> <td>RPM</td> <td>7.52</td> <td>7.83</td> </tr> <tr> <td>BIO</td> <td>1.04</td> <td>1.07</td> </tr> <tr> <td>HUM</td> <td>41.32</td> <td>41.37</td> </tr> <tr> <td>IOM</td> <td>4.73</td> <td>4.73</td> </tr> </table>	Carbon pool	Baseline (tC/ha)	Project (tC/ha)	DPM	0.41	0.50	RPM	7.52	7.83	BIO	1.04	1.07	HUM	41.32	41.37	IOM	4.73	4.73	The data is used for the calculation of baseline and project soil carbon emission. SoilGrids data is selected for its high-resolution (250-meter) global coverage, essential for large-scale soil carbon modeling. It combines ground measurements and remote sensing, processed with machine learning and geostatistics, providing accurate soil property maps, including SOC, texture, and pH. The verification team did independent assessment on the carbon pools along with interview during on site and remote site visit// and confirms that the value is consistent and in line with the methodology /8/.
Carbon pool	Baseline (tC/ha)	Project (tC/ha)																			
DPM	0.41	0.50																			
RPM	7.52	7.83																			
BIO	1.04	1.07																			
HUM	41.32	41.37																			
IOM	4.73	4.73																			

Green Cover _{bls, i,t} / Green cover _{wp, i,t}	Number of green cover months / year	This parameter represents the number of months an area is covered by green vegetation throughout the year. For parameter Cover_{bls, i,t} the data is sourced from farmers attestation in accordance to box 1 option 1 in case of unavailability of data option 4 box 1 is followed and default values are obtained from Eurostat database (ef_mp_soil; sc_cov_intcr) the value of the parameter are: <table><tr><th>Cover crop adoption</th><th>Green cover months</th></tr><tr><td>none</td><td>4 months</td></tr><tr><td>winter</td><td>5 months</td></tr><tr><td>spring</td><td>9 months</td></tr><tr><td>catch</td><td>10 months</td></tr></table> Average green cover months per PAI in the baseline: 4.08 ± 0.61 months; Average green cover months per PAI in the project scenario: 4.35 ± 1.27months;	Cover crop adoption	Green cover months	none	4 months	winter	5 months	spring	9 months	catch	10 months	The parameter is used for the calculation of baseline and project emissions. For the parameter The RothC model uses the duration of green cover on the soil as input, referring to periods when the soil is covered by cash or cover crops. For ex-post calculations, we used the average number of green cover months reported at the start of the project. If farmer attestation is missing for any year(s) in the baseline SoA, default values are sourced from regional data in the Eurostat database (ef_mp_soil; sc_cov_intcr), as outlined in Table 3-4 of AgreeaCarbon PD v1.3/1/. The verification team confirms that the value is consistent and in line to the methodology/8/
Cover crop adoption	Green cover months												
none	4 months												
winter	5 months												
spring	9 months												
catch	10 months												
k _{Sbsl} / k _{Swp}	Unitless	The parameter k_s represents the decomposition rate constants for different soil carbon pools in the RothC model. It determines how quickly organic matter decomposes and transitions between pools. The value is derived from long-term experimental data collected at Rothamsted Research in the UK, which includes field experiments and laboratory studies. The value for the current verification is derived from Published literature/106//108/. The values for the parameter are: k.DPM = 10 k.RPM = 0.3 k.BIO= 0.66	The parameter is used for Calculation of baseline and project emissions. The values are default parameters which were extracted from published literature for the development of RothC model. The verification team confirms that the values are consistent and in line to the methodology/8/.										

		k.HUM= 0.02 k.IOM = 0									
In _{bsl} / In _{wp}	tC/ha	The parameter 'In' represents the annual input of organic carbon to the soil. This includes carbon inputs from mulching plant residues and is sourced from farmers attestations. The value for the parameter is: In_{bsl} : 0.13 ± 0.34 tC/ha In_{wp} : 0.59 ± 0.42 tC/ha The Biomass residue for each sampling unit is calculated using equations from the IPCC (2019) Refinement guidelines, applied to average crop yields in the baseline scenario. For project scenario emissions (Inwp), values are based on the average projected crop yields from farmers for the first year of the project. The verification team confirms the value during the interview on site and during remote site visit// equations were used from IPCC(2019).	The value is used for the calculation of baseline and project emissions. The verification team confirms that the values are consistent in the MR and is in line to the methodology/8/.								
FYM _{bsl} / FYM _{wp}		The parameter 'FYM' represents the annual input of organic carbon specifically from farmyard manure.and is sourced from farmers attestation data Farmyard manure (FYM) plays a critical role in maintaining soil fertility and enhancing soil carbon dynamics, which are essential for sustainable agriculture. By providing organic matter and essential nutrients, FYM improves soil structure, water retention, and microbial activity. The method used to calculate FYM involves two main components: the amount of manure applied and its respective carbon content. The formula is as follows: FYM = MOF_{i,t} × CCOF_{i,t} The value of the parameter are as follows: <table border="1"> <thead> <tr> <th>FYM Inputs</th><th>Field Number</th><th>FYM_{bsl} (tC/ha)</th><th>FYM_{wp} (tC/ha)</th></tr> </thead> <tbody> <tr> <td></td><td></td><td></td><td></td></tr> </tbody> </table>	FYM Inputs	Field Number	FYM _{bsl} (tC/ha)	FYM _{wp} (tC/ha)					The parameter is used for the calculation of baseline and project emission and is sourced from the farmers attestation data. The verification team verified the value of the parameters during on site visit/128/ and confirms that the value is consistent and in line to the methodology/8/.
FYM Inputs	Field Number	FYM _{bsl} (tC/ha)	FYM _{wp} (tC/ha)								

		Yes	434	0	0.64 ± 0.73	
		No	9768	0	0	
clay _{bsl} / clay _{wp}		Te parameter represents Clay content of the soil and the value is sourced from SoilGrids/108/, a global soil information system providing high-resolution soil property maps. The data is generated using a combination of ground measurements and remote sensing. The value of the parameter are as follows: clay_{bsl} : 30.9 ± 9.8% clay_{wp} : 30.9 ± 9.8%				The parameter is used for the calculation of baseline and project emissions. The value of the parameter is sourced from a global soil information SoilGrids/108/ which was verified by the verification team and confirms that the value of the parameter is consistent and in line to the methodology /8/

Temperature,bl / Temperature,wp		The parameter represents Monthly average surface temperature and is sourced from NASA's Prediction Of Worldwide Energy Resources (POWER) project/111/ <table><tr><td>Months</td><td>Temperature,bls (°C)</td><td>Temperature,wp (°C)</td></tr><tr><td>January</td><td>-2.70 ± 3.78</td><td>-2.70 ± 3.78</td></tr><tr><td>February</td><td>-1.21 ± 3.47</td><td>-1.21 ± 3.47</td></tr><tr><td>March</td><td>3.26 ± 2.69</td><td>3.26 ± 2.69</td></tr><tr><td>April</td><td>9.19 ± 2.12</td><td>9.19 ± 2.12</td></tr><tr><td>May</td><td>15.04 ± 2.59</td><td>15.04 ± 2.59</td></tr><tr><td>June</td><td>19.45 ± 3.15</td><td>19.45 ± 3.15</td></tr><tr><td>July</td><td>22.09 ± 3.42</td><td>22.09 ± 3.42</td></tr><tr><td>August</td><td>21.65 ± 3.36</td><td>21.65 ± 3.36</td></tr><tr><td>September</td><td>16.15 ± 2.56</td><td>16.15 ± 2.56</td></tr><tr><td>October</td><td>9.77 ± 2.40</td><td>9.77 ± 2.40</td></tr><tr><td>November</td><td>3.84 ± 2.63</td><td>3.84 ± 2.63</td></tr><tr><td>December</td><td>-1.06 ± 3.47</td><td>-1.06 ± 3.47</td></tr></table>	Months	Temperature,bls (°C)	Temperature,wp (°C)	January	-2.70 ± 3.78	-2.70 ± 3.78	February	-1.21 ± 3.47	-1.21 ± 3.47	March	3.26 ± 2.69	3.26 ± 2.69	April	9.19 ± 2.12	9.19 ± 2.12	May	15.04 ± 2.59	15.04 ± 2.59	June	19.45 ± 3.15	19.45 ± 3.15	July	22.09 ± 3.42	22.09 ± 3.42	August	21.65 ± 3.36	21.65 ± 3.36	September	16.15 ± 2.56	16.15 ± 2.56	October	9.77 ± 2.40	9.77 ± 2.40	November	3.84 ± 2.63	3.84 ± 2.63	December	-1.06 ± 3.47	-1.06 ± 3.47	The value of the parameter is sourced from Calculation of baseline and project emissions. The parameter is sourced from NASA's Prediction Of Worldwide Energy Resources (POWER) project/111/ the verification team confirms that the value is consistent and in line with the methodology/8/.
Months	Temperature,bls (°C)	Temperature,wp (°C)																																								
January	-2.70 ± 3.78	-2.70 ± 3.78																																								
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		The use of monthly average temperature data from NASA's POWER project is a reliable choice due to its high resolution, global consistency, and accuracy. By utilizing synthetic weather stations within 50 km of the modelled field, the data ensures precision. Averaging daily temperatures into monthly values offers a dependable representation of climatic conditions, enhancing the accuracy of environmental modelling.	
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Precipitation _{bsl} / Precipitation _{wp}		The parameter represents Monthly precipitation and is sourced from NASA's Prediction Of Worldwide Energy Resources (POWER) project/111/. The value of the parameters are as follows: <table><tr><th>Months</th><th>Precipitation_{bsl} (mm)</th><th>Precipitation_{wp} (mm)</th></tr><tr><td>January</td><td>43.64 ± 14.19</td><td>43.64 ± 14.19</td></tr><tr><td>February</td><td>38.08 ± 9.91</td><td>38.08 ± 9.91</td></tr><tr><td>March</td><td>41.04 ± 7.49</td><td>41.04 ± 7.49</td></tr><tr><td>April</td><td>43.28 ± 6.25</td><td>43.28 ± 6.25</td></tr><tr><td>May</td><td>57.81 ± 12.13</td><td>57.81 ± 12.13</td></tr><tr><td>June</td><td>68.36 ± 15.98</td><td>68.36 ± 15.98</td></tr><tr><td>July</td><td>64.24 ± 20.37</td><td>64.24 ± 20.37</td></tr><tr><td>August</td><td>52.32 ± 18.35</td><td>52.32 ± 18.35</td></tr><tr><td>September</td><td>51.08 ± 11.77</td><td>51.08 ± 11.77</td></tr><tr><td>October</td><td>52.49 ± 16.84</td><td>52.49 ± 16.84</td></tr><tr><td>November</td><td>48.82 ± 15.43</td><td>48.82 ± 15.43</td></tr><tr><td>December</td><td>48.96 ± 15.13</td><td>48.96 ± 15.13</td></tr></table>	Months	Precipitation _{bsl} (mm)	Precipitation _{wp} (mm)	January	43.64 ± 14.19	43.64 ± 14.19	February	38.08 ± 9.91	38.08 ± 9.91	March	41.04 ± 7.49	41.04 ± 7.49	April	43.28 ± 6.25	43.28 ± 6.25	May	57.81 ± 12.13	57.81 ± 12.13	June	68.36 ± 15.98	68.36 ± 15.98	July	64.24 ± 20.37	64.24 ± 20.37	August	52.32 ± 18.35	52.32 ± 18.35	September	51.08 ± 11.77	51.08 ± 11.77	October	52.49 ± 16.84	52.49 ± 16.84	November	48.82 ± 15.43	48.82 ± 15.43	December	48.96 ± 15.13	48.96 ± 15.13	The parameter is used for Calculation of baseline and project emissions. The parameter is sourced from NASA's Prediction Of Worldwide Energy Resources (POWER) project/111/ the verification team confirms that the value is consistent and in line with the methodology/8/.
Months	Precipitation _{bsl} (mm)	Precipitation _{wp} (mm)																																								
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		The monthly average precipitation data from NASA's POWER project is a reliable choice, offering high resolution, global consistency, and accuracy. By using synthetic weather stations within 50 km of the modelled field and averaging daily data, it provides an accurate representation of monthly precipitation patterns, ensuring dependable climatic modelling.																															
Evapotranspiration_{bsl} / Evapotranspiration_{wp}		The parameter represents Monthly evapotranspiration The value of the parameter is sourced from NASA's Prediction Of Worldwide Energy Resources (POWER) project/111/ The values of the parameter are: <table> <tr> <th>Months</th> <th>Evapotranspiration_{bsl} (mm)</th> <th>Evapotranspiration_{wp} (mm)</th> </tr> <tr> <td>January</td> <td>0.43 ± 1.70</td> <td>0.43 ± 1.70</td> </tr> <tr> <td>February</td> <td>0.97 ± 3.32</td> <td>0.97 ± 3.32</td> </tr> <tr> <td>March</td> <td>5.40 ± 6.73</td> <td>5.40 ± 6.73</td> </tr> <tr> <td>April</td> <td>28.96 ± 9.78</td> <td>28.96 ± 9.78</td> </tr> <tr> <td>May</td> <td>74.77 ± 22.55</td> <td>74.77 ± 22.55</td> </tr> <tr> <td>June</td> <td>95.92 ± 41.24</td> <td>95.92 ± 41.24</td> </tr> <tr> <td>July</td> <td>85.44 ± 49.16</td> <td>85.44 ± 49.16</td> </tr> <tr> <td>August</td> <td>48.36 ± 36.58</td> <td>48.36 ± 36.58</td> </tr> <tr> <td>September</td> <td>20.05 ± 14.26</td> <td>20.05 ± 14.26</td> </tr> </table>	Months	Evapotranspiration _{bsl} (mm)	Evapotranspiration _{wp} (mm)	January	0.43 ± 1.70	0.43 ± 1.70	February	0.97 ± 3.32	0.97 ± 3.32	March	5.40 ± 6.73	5.40 ± 6.73	April	28.96 ± 9.78	28.96 ± 9.78	May	74.77 ± 22.55	74.77 ± 22.55	June	95.92 ± 41.24	95.92 ± 41.24	July	85.44 ± 49.16	85.44 ± 49.16	August	48.36 ± 36.58	48.36 ± 36.58	September	20.05 ± 14.26	20.05 ± 14.26	The parameter is used for Calculation of baseline and project emissions. The parameter is sourced from NASA's Prediction Of Worldwide Energy Resources (POWER) project/111/ the verification team confirms that the value is consistent and in line with the methodology/8/.
Months	Evapotranspiration _{bsl} (mm)	Evapotranspiration _{wp} (mm)																															
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		<table><tr><td>October</td><td>6.92 ± 3.33</td><td>6.92 ± 3.33</td></tr><tr><td>November</td><td>1.28 ± 1.39</td><td>1.28 ± 1.39</td></tr><tr><td>December</td><td>0.44 ± 1.23</td><td>0.44 ± 1.23</td></tr></table> The monthly average evapotranspiration data from NASA's POWER project is a reliable source due to its high resolution, global consistency, and accuracy. Using synthetic weather stations within 50 km of the modeled field and averaging daily data ensures a precise and dependable representation of monthly evapotranspiration patterns for effective modelling.	October	6.92 ± 3.33	6.92 ± 3.33	November	1.28 ± 1.39	1.28 ± 1.39	December	0.44 ± 1.23	0.44 ± 1.23	
October	6.92 ± 3.33	6.92 ± 3.33										
November	1.28 ± 1.39	1.28 ± 1.39										
December	0.44 ± 1.23	0.44 ± 1.23										
TRM	unitless	The parameter represents the Tillage Rate Modifier (TRM) is a parameter used in the SoilR RothC implementation to adjust decomposition rate constants based on the intensity of tillage practices. The value of the parameter is sourced from Jordon et al (2022)/112/ <table><tr><td>Tillage</td><td>TRM</td></tr><tr><td>Conventional tillage</td><td>1</td></tr><tr><td>Reduced tillage</td><td>0.93</td></tr><tr><td>No tillage</td><td>0.95</td></tr></table> The function for quantifying soil organic carbon (SOC) stocks, as outlined in the VM0042 v2.0/8/ guidelines, uses a consistent model for both baseline and project scenarios. By omitting scenario-specific indices for clarity, it streamlines the process while accounting for various factors like DPM, RPM, cover crop adoption, and climate variables. This approach ensures a reliable and efficient calculation of SOC, facilitating accurate projections of soil carbon under different management conditions.	Tillage	TRM	Conventional tillage	1	Reduced tillage	0.93	No tillage	0.95	The parameter is used for Calculation of baseline and project emission and the value is sourced from Jordon et al (2022)/112/. The verification team have verified the parameter and confirms consistent and in line to the methodology /8/	
Tillage	TRM											
Conventional tillage	1											
Reduced tillage	0.93											
No tillage	0.95											

$SOC_{bsl,i,t} / SOC_{wp,i,t}$	t C/ha	The parameter represents The average soil organic carbon stocks for sample unit i in year t under the baseline and Project scenarios the value of the parameter is sourced from Modeled and measured in the project area. The values of the parameter are: $SOC_{bsl,i,t} : 55.07 \pm 17.30$ t C/ha $SOC_{wp,i,t} : 55.27 \pm 17.33$ t C/ha The SOC function, following VM0042 v2.0/8/ guidelines, effectively quantifies soil organic carbon stocks for both baseline and project scenarios using a consistent model. By omitting scenario-specific indices for simplicity, it focuses on key factors such as DPM, RPM, climate variables, and management practices, ensuring an accurate and streamlined approach for SOC projections across different conditions.	The parameter is use for Calculation of baseline and project emission. The value is sourced from Modeled and measured in the project area. The verification team confirms that the value is consistent and in line to the methodology /8/								
$M_{OA_{wp,i,t}}$		The value represents Mass of organic amendment applied as fertilizer on the project area in year t. The value is sourced form farms attestation data and is same as $M_{wp,OF,i,t}$. For ex-post calculations, the mass of organic amendment is determined using farmer-reported data from the initial project instances, specifically for the first year of the project. This approach ensures that the organic amendment mass is accurately reflected for each PAI, providing reliable data for the assessment of the project’s impact over time. <table border="1"> <tr> <td>Fertiliser type</td> <td>$M_{OA_{wp,i,t}}$</td> </tr> <tr> <td>only organic</td> <td>33142591412</td> </tr> <tr> <td>mixed</td> <td>255019359491</td> </tr> <tr> <td>only synthetic</td> <td>0</td> </tr> </table>	Fertiliser type	$M_{OA_{wp,i,t}}$	only organic	33142591412	mixed	255019359491	only synthetic	0	The parameter is used for the Calculation of leakage from application of new organic amendments from outside of the project area. The value is sourced from farmers attestation data and was verified during on site visit and remote site visit/68/ and confirms the value is consistent and in line to the methodology /8/
Fertiliser type	$M_{OA_{wp,i,t}}$										
only organic	33142591412										
mixed	255019359491										
only synthetic	0										

CC _{bsl,i,t} / CC _{wp,i,t}	%	The parameter represents Carbon content of organic amendment applied as fertilizer in the project area in year t and is sourced from peer review published data/113/. The value of the parameter are: <table><tr><td>Manure</td><td>Carbon content (%)</td></tr><tr><td>Broiler/Turkey litter</td><td>22.78</td></tr><tr><td>Cattle Digestate - 0.26%N</td><td>0.83</td></tr><tr><td>Cattle digestate - 0.6% N</td><td>5.9</td></tr><tr><td>Cattle manure</td><td>9.26</td></tr><tr><td>Cattle slurry</td><td>1.3</td></tr><tr><td>Compost (fully aerated production)</td><td>14.99</td></tr><tr><td>Compost (non-fully aerated production)</td><td>14.99</td></tr><tr><td>Compost (zero emissions)</td><td>14.99</td></tr><tr><td>Horse digestate</td><td>8.53</td></tr><tr><td>Horse manure</td><td>13.37</td></tr><tr><td>Pig digestate - 0.36% N</td><td>1.21</td></tr><tr><td>Pig digestate - 0.7% N</td><td>6.25</td></tr><tr><td>Pig manure</td><td>9.8</td></tr><tr><td>Pig slurry</td><td>1.89</td></tr><tr><td>Poultry layer digestate</td><td>7.27</td></tr></table>	Manure	Carbon content (%)	Broiler/Turkey litter	22.78	Cattle Digestate - 0.26%N	0.83	Cattle digestate - 0.6% N	5.9	Cattle manure	9.26	Cattle slurry	1.3	Compost (fully aerated production)	14.99	Compost (non-fully aerated production)	14.99	Compost (zero emissions)	14.99	Horse digestate	8.53	Horse manure	13.37	Pig digestate - 0.36% N	1.21	Pig digestate - 0.7% N	6.25	Pig manure	9.8	Pig slurry	1.89	Poultry layer digestate	7.27	The parameter is used for the Calculation of leakage from application of new organic amendments from outside of the project area. The values are default values which are sourced from peer reviewed published sources and are consistent and in line to the methodology /8/
Manure	Carbon content (%)																																		
Broiler/Turkey litter	22.78																																		
Cattle Digestate - 0.26%N	0.83																																		
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		<table><tr><td>Poultry layer manure</td><td>11.4</td></tr><tr><td>Separated pig slurry (liquid part)</td><td>1.51</td></tr><tr><td>Separated pig slurry (solid part)</td><td>4.59</td></tr><tr><td>Sheep digestate</td><td>7.14</td></tr><tr><td>Sheep manure</td><td>11.2</td></tr></table>	Poultry layer manure	11.4	Separated pig slurry (liquid part)	1.51	Separated pig slurry (solid part)	4.59	Sheep digestate	7.14	Sheep manure	11.2															
Poultry layer manure	11.4																										
Separated pig slurry (liquid part)	1.51																										
Separated pig slurry (solid part)	4.59																										
Sheep digestate	7.14																										
Sheep manure	11.2																										
EF _{CO2,LE}	t CO2 / GJ	The parameter represents Emission factors of coal, oil and natural gas and is sourced from Table 2.2, Chapter 2, Volume 2 in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories/114/ and National energy statistics for each country were obtained from the International Energy Agency /115/. The values of the parameter are: <table><tr><th>Countries</th><th>Most common fossil fuel source</th><th>Share of energy supply (%)</th><th>Emission factor (tCO2e/GJ)</th></tr><tr><td>Bulgaria</td><td>Coal</td><td>26.70</td><td>0.0946</td></tr><tr><td>Denmark</td><td>Oil</td><td>37.70</td><td>0.0741</td></tr><tr><td>Estonia</td><td>Coal</td><td>63.00</td><td>0.0946</td></tr><tr><td>Latvia</td><td>Oil</td><td>33.80</td><td>0.0741</td></tr><tr><td>Lithuania</td><td>Oil</td><td>45.90</td><td>0.0741</td></tr></table>	Countries	Most common fossil fuel source	Share of energy supply (%)	Emission factor (tCO2e/GJ)	Bulgaria	Coal	26.70	0.0946	Denmark	Oil	37.70	0.0741	Estonia	Coal	63.00	0.0946	Latvia	Oil	33.80	0.0741	Lithuania	Oil	45.90	0.0741	The parameter is used for Calculation of leakage from diversion of biomass residues used for energy applications in the baseline scenario the values were obtained from IPCC National Gas inventories /114/ and International Energy Agency website /115/. VVB has verified the values and confirms them to be consistent and in line to the methodology /8/ and deviation sought in the PD. Further the leakage calculation for each country is provided in the spreadsheet <i>VCS_Methodology_Deviation_Assess_Biomass_Leakage</i> /164/. The VVB assessed the calculations and found to be appropriately describing the leakage due to biomass removal.
Countries	Most common fossil fuel source	Share of energy supply (%)	Emission factor (tCO2e/GJ)																								
Bulgaria	Coal	26.70	0.0946																								
Denmark	Oil	37.70	0.0741																								
Estonia	Coal	63.00	0.0946																								
Latvia	Oil	33.80	0.0741																								
Lithuania	Oil	45.90	0.0741																								

		<table> <tr> <td>Moldova</td><td>Natural gas</td><td>57.00</td><td>0.0561</td></tr> <tr> <td>Romania</td><td>Oil</td><td>30.70</td><td>0.0741</td></tr> <tr> <td>Spain</td><td>Oil</td><td>43.50</td><td>0.0741</td></tr> <tr> <td>Ukraine</td><td>Natural gas</td><td>27.10</td><td>0.0561</td></tr> <tr> <td>United Kingdom</td><td>Natural gas</td><td>39.40</td><td>0.0561</td></tr> </table>	Moldova	Natural gas	57.00	0.0561	Romania	Oil	30.70	0.0741	Spain	Oil	43.50	0.0741	Ukraine	Natural gas	27.10	0.0561	United Kingdom	Natural gas	39.40	0.0561	
Moldova	Natural gas	57.00	0.0561																				
Romania	Oil	30.70	0.0741																				
Spain	Oil	43.50	0.0741																				
Ukraine	Natural gas	27.10	0.0561																				
United Kingdom	Natural gas	39.40	0.0561																				
BR _{wp,n,y}		The value represents Quantity of biomass (tonnes) residues of category n used in facilities which are located at the project site and included in the project boundary in year y. the value is sourced from Farm attestation data. The value of the parameter is same as I_{nwp}. BR_{wp,n,y} : 0.59 ± 0.42 tC/ha The calculation of biomass residues for each sampling unit, based on the IPCC (2019) Refinement guidelines, ensures a scientifically grounded approach to estimating organic inputs. By applying these equations to average crop yields for each baseline scenario, the method captures realistic biomass estimates. For ex-post calculations, using the reported crop yields from farmers for the first year of the project provides accurate, context-specific data for each PAI, enhancing the reliability of the biomass residue estimates and improving the assessment of project outcomes over time.	The parameter is used for Calculation of leakage from diversion of biomass residues used for energy applications in the baseline scenario. The value is sourced from farm attestation data the verification team verified the values during on site and remote visit and confirms it to be consistent and in line to the methodology /8/																				

NCV _{n,y}	GJ / tonne of dry matter	The parameter represents Net calorific value of the biomass residues of category n in year y the parameter is sourced from Teagasc Agriculture and Food Development Authority; Danish Energy Agency/116//117/. The value of the parameter is 14.44.	The parameter is used for Calculation of leakage from diversion of biomass residues used for energy applications in the baseline scenario. The verification team has verified the values from its sources /116//117/ and confirms that the value is consistent and in line to the methodology.
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Data and parameters not applicable for the project in its first verification period:

Parameter	Justification for non applicability	VVB assessment
$EF_{ent,l}$	These parameters are not applicable in the AgreeenaCarbon Project as it does not incorporate livestock emissions or accept farmers that own livestock.	VVB has assessed and confirms that the project does not incorporate livestock emission as a part of project activity.
$Pop_{wp,l,i,P}$		
$Pop_{bsl,l,i,P}$		
$l, dimensionless$		
$P, unitless$		
$AWMS_{l,i,t,P,S}$		
$EF_{CH4,md,l}$		
S		
$VS_{rate,l}$		
$W_{wp,l,i,t}$		
$W_{bsl,l,i,t}$		
$CC_{prj,i,t}$		
p		
$EF_{N2O,md,l,S}$		
Nex_l		

$MS_{bsl,i,t}$		
$N2O_{md_{bsl,i,t}}$		
GWP_{CH4}		
CF_c	The parameters are not applicable in the AgreeenaCarbon Project as it does not allow any participants for residue burning while in the project	VVB has assessed and confirmed that there are no residue burning in the project
$EF_{c,CH4}$		
$MB_{wp,c,i,t}$		
$EF_{c,N2O}$		
$\Delta C_{SHRUB,bsl,i,t}$	Not applicable in the project as approach 3 is used for the calculation of nitrogen Fluxes	VVB confirms that Quantification approach 3 is used for the calculation of Nitrogen fluxes.
$\Delta C_{TREE,wp,i,t}$		
$\Delta C_{SHRUB,wp,i,t}$		
$f(N2O_{soilbsl,i,t})$	Not applicable in the project as approach 3 is used for the calculation of Methane Fluxes	VVB has verified and confirms that approach 3 is used for the calculation of methane fluxes
$f(CH4_{soilbsl,i,t})$		
SF	Not applicable since the project collects the nitrogen application rates directly from the farmers or are derived from the regional data. Therefore equation 20 is not applied in the project. The synthetic fertilizer (N) applied to PAI I in Year t in the baseline or project scenario is calculated by multiplying Nitrogen application rates of synthetic fertilizer by the size of PAI	VVB has verified and confirms that Equation 20 is not used in the project as the Nitrogen application is based on the farmers reported data and regional data.
NC_{SF}		
$M_{bsl,SF,i,t}$		
$M_{wp,SF,i,t}$		

Data and parameters monitored:

Data/Parameter	Unit	Means of verification	Appropriateness of the values used in MR
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MDD	tCO ₂ e /ha	The parameter represents Minimum detectable difference in SOC stocks between two points in time. The data is sourced from the measurement methods and procedure is as per VM0042/08/ and is monitored prior to each verification event. The data is monitored at the project start or within +/- 5 years from the start date of the project start date the value of the parameter is 0-30cm. The QA/QC procedure is detailed as per section 4.3 of the Monitoring plan of the MR/127/	The parameter is used for the calculations of the number of PAIs and samples required to detect the minimum detectable change in SOC stocks for different strata for each verification period. The verification team confirms that the value is consistent and in line to the methodology
S	Dimensionless	The parameter represents Standard deviation of the difference in SOC stocks between t0 and t1 and is sourced from Estimation of the smallest difference in SOC stocks between two monitoring events that may be detected as statistically significant. The description of measurement methods and procedure is in line to section 8.2.1 of VM0042/8/. The frequency of monitoring period is prior to each verification event. The value monitored is 17.8553 tC/ha. The QA/QC procedure is as per Monitoring Plan section 4.3 of the MR/127/.	The parameter is used for the calculations of the number of PAIs and samples required to detect the minimum detectable change in SOC stocks for different strata for each verification period. The verification team confirms that the value is consistent and in line to the methodology
n	Dimensionless	The parameter represents Estimated number of samples required to detect specified (minimum) difference in SOC stock between resampling. And is sourced from Estimation of the smallest difference in SOC stocks between two monitoring events that may be detected as statistically significant. The description of measurement methods and procedure is in line to section 8.2.1 of VM0042// the parameter is monitored prior to each verification event. The QA/QC procedure is as per section 4.3 of the MR//. The value is 2159	The parameter is to calculate the number of PAIs and samples required to detect the minimum detectable change in SOC stocks for different strata for each verification period. The value is consistent and in line to the methodology /8/

n-1	Dimensionless	The parameter represents Degrees of freedom for the relevant t-distribution and is sourced from Estimation of the smallest difference in SOC stocks between two monitoring events that may be detected as statistically significant the measure methods and procedures are in line to section 8.2.1 of VM0042 v2.0. the parameter is monitored prior to each verification event. The value is 2158 the QA/QC procedure is as per section 4.3 of the MR/127/.	The parameter is used for calculate the number of PAIs and samples required to detect the minimum detectable change in SOC stocks for different strata for each verification period. The parameter is consistent and in line to the methodology.						
$t_{\frac{\alpha}{2},v}, t_{1-\beta,v}$	Dimensionless	The parameter represents Estimation of the smallest difference in SOC stocks between two monitoring events that may be detected as statistically significant. The data is sourced from Estimation of the smallest difference in SOC stocks between two monitoring events that may be detected as statistically significant. The measurement methods and procedures are in line to section 8.2.1 of VM0042. The parameter is monitored prior to each verification event. For QA/QC procedure guidance from FAO(2019) was taken which was verified independently by the verification team	The parameter is used to calculate the number of PAIs and samples required to detect the minimum detectable change in SOC stocks for different strata for each verification period. And the calculation is done the method mentioned in Equation 2 and 3 of section 8.2.1.6 of VM0042.						
M _{n,dl,SOC}	kg/ha	The parameter represents SOC mass in soil sample n in depth layer. The value is measured after the soil sampling in the project data. The frequency of the data monitoring is prior to each verification period. The value of the parameter is: <table><tr><td>Depth layer (dl, cm)</td><td>Average SOC mass (kg/ha)</td></tr><tr><td>0-15</td><td>31431.52</td></tr><tr><td>15-30</td><td>27871.65</td></tr></table>	Depth layer (dl, cm)	Average SOC mass (kg/ha)	0-15	31431.52	15-30	27871.65	The value of the parameter is correctly calculated and applied in the ER sheet. PP has applied equation 4 of the methodology which was found to be consistent. The parameter is used for the calculation of project emission and was found consistent throughout the report
Depth layer (dl, cm)	Average SOC mass (kg/ha)								
0-15	31431.52								
15-30	27871.65								

		<table><tr><td>30-60</td><td>32022.08</td></tr></table> The purpose of the parameter is the calculation of project emission. The soil sampling plan follows the VM0042 requirements and has been verified	30-60	32022.08							
30-60	32022.08										
$M_{n,dl,Sample}$	g	The parameter represents soil mass in sample n in depth layer dl. The data is monitored prior to each verification event. The purpose of the data is Calculation of project emissions. The values of the parameter are: <table><tr><td>Depth layer (dl, cm)</td><td>Average mass of soil sample (g)</td></tr><tr><td>0-15</td><td>139.72</td></tr><tr><td>15-30</td><td>158.74</td></tr><tr><td>30-60</td><td>289.37</td></tr></table>	Depth layer (dl, cm)	Average mass of soil sample (g)	0-15	139.72	15-30	158.74	30-60	289.37	The value of the parameter is correctly calculated and applied in the ER sheet. The parameter is used for the calculation of project emission and was verified through supplementary materials/131//132/ and was found consistent throughout the report
Depth layer (dl, cm)	Average mass of soil sample (g)										
0-15	139.72										
15-30	158.74										
30-60	289.37										

D	mm	The parameter represents Inside diameter of probe or auger the data is sourced from measurements as a part of project monitoring the frequency of monitoring of data is prior to each verification event. The data is used for determining the value of $SOC_{bsl,i,t}$. <i>The value monitored is 36 and the monitoring equipment is Wintex 2000 automatic soil sampler.</i>	The value of the parameter is correctly calculated and applied in the ER sheet//. The parameter is used for the calculation of project emission and was found consistent throughout the report. The verification team confirmed that the value of the parameter to be determined is in line with applied methodology /8/. This has been verified by the validation team during the on-site visit /63/, hence considered valid.
N	Unitless	The parameter represents Number of cores sampled the data is sourced from measurements in the project area the parameter is monitored prior to each verification event the purpose of the data is to determine the project emissions. The value of the parameter is 8,341 core samples across six samples from the year 2022 -2023 which was verified through soil sample analysis //.	The verification team confirmed that the value of the parameter to be determined is in line with applied methodology /8/. This has been verified by the validation team during the on-site visit /63/, hence considered valid.

OC _{n,dl}	g/kg	The parameter represents organic carbon concentration in sample n from depth layer dl it is sourced from the measurement in the project area and is monitored prior to each verification event The values of the parameter are: <table><tr><td>Depth Layer (dl, cm)</td><td>Average OC (%)</td></tr><tr><td>0-15</td><td>1.83</td></tr><tr><td>15-30</td><td>1.50</td></tr><tr><td>30-60</td><td>1.06</td></tr></table> The Monitored equipment is soil cores through which soil samples are collected. The purpose of the data is the calculation of project emissions.	Depth Layer (dl, cm)	Average OC (%)	0-15	1.83	15-30	1.50	30-60	1.06	The verification team confirmed that the value of the parameter to be determined is in line with applied methodology /8/. This has been verified by the validation team during the on-site visit /62/ and supplementary materials/131//132/, hence considered valid.
Depth Layer (dl, cm)	Average OC (%)										
0-15	1.83										
15-30	1.50										
30-60	1.06										
BD _{corr}	g/cm ³	The parameter represents Corrected bulk density of the fine soil fraction (after subtracting the mass proportion of the coarse fragments) it is sourced from the measurement in the project area and is monitored prior to each verification event and the purpose of the data is calculation of baseline and project emission. The monitoring equipment used is laser diffraction The values of the parameter are: <table><tr><td>Depth layer (dl, cm)</td><td>Average corrected bulk density (g/cm³)</td></tr><tr><td>0-15</td><td>1.21</td></tr><tr><td>15-30</td><td>1.31</td></tr><tr><td>30-60</td><td>1.37</td></tr></table>	Depth layer (dl, cm)	Average corrected bulk density (g/cm ³)	0-15	1.21	15-30	1.31	30-60	1.37	The verification team confirmed that the value of the parameter to be determined is in line with applied methodology /8/. This has been verified by the validation team during the on-site visit /63/ and supplementary materials/131//132/ hence considered valid.
Depth layer (dl, cm)	Average corrected bulk density (g/cm ³)										
0-15	1.21										
15-30	1.31										
30-60	1.37										

d	cm	The parameter represents soil depth and is sourced from the soil sampling plan and it is to be monitored prior to each verification event. The monitoring equipment is soil cores and the purpose of the data is the calculation of baseline and project emission	The value monitored is 0-60cm which was calculated by soil sample analysis. Measuring and reporting is in accordance with the methodology /4/ The verification team confirmed that the value of the parameter to be determined is in line with applied methodology /8/. This has been verified by the validation team during the on-site visit /63/, hence considered valid
i	Dimensionless	The parameter represents Sample unit, defined area that is selected for measurement or monitoring such as a field. The data is sourced from field boundaries are detected using a deep learning algorithm that uses satellite imagery as the inputs. Imagery from the Sentinel 2 constellation is used, namely the bands: • B02 (Blue) • B03 (Green) • B04 (Red) • B08 (Visible Near Infra-red) The frequency of data monitoring is prior to each verification event and the monitoring equipments are Sentinel-1 and Sentinel-2. The purpose of this data is the calculation of baseline and project emissions.	The value is determined through the utilization of high-resolution satellite imagery (Sentinel-2) over entire growing season and was verified through KML files/17//18/.

A_i	Unit area	The parameter represents Area of sample unit i. the source of data are The field boundaries are detected using a deep learning algorithm that uses satellite imagery as the inputs. Imagery from the Sentinel 2 constellation is used, namely the bands: • B02 (Blue) • B03 (Green) • B04 (Red) • B08 (Visible Near Infra-red) The data is monitored prior to each verification period. The monitoring equipment are sentinel -1 and Sentinel-2 and is used for the calculation of baseline and project emissions	The value monitored is 350138 hectares which was determined by utilization of high-resolution satellite imagery (Sentinel-2) over entire growing season and was verified through KML files/17-18/ and found correct and in accordance with the quality control protocols.																		
j_{bsl} / j_{wp}	Dimensionless	The parameter represents Type of fossil fuel combusted. The Fossil fuel type is determined prior to each verification event the value of the parameter is sourced from digital farmer's attestation and is monitored prior to each verification event Type of fossil fuel combusted in the baseline: Diesel <table><tr><td>j_{bsl}</td><td colspan="2">Field Number</td></tr><tr><td>Diesel</td><td colspan="2">40571</td></tr></table> Type of fossil fuel combusted in the project scenario: <table><tr><td>j_{wp}</td><td>2021</td><td>2022</td></tr><tr><td>Diesel</td><td>421</td><td>12197</td></tr><tr><td>Gasoline</td><td>0</td><td>1</td></tr><tr><td>Bioethanol</td><td>0</td><td>0</td></tr></table>	j_{bsl}	Field Number		Diesel	40571		j_{wp}	2021	2022	Diesel	421	12197	Gasoline	0	1	Bioethanol	0	0	The value of the parameter was verified through the Digital portal of Agreena and was found consistent. The data of the parameter is sourced to determine the sample unit I and is sourced from digital farmers attestation. The verification team confirms that the parameter is consistent and in line to the methodology/8/
j_{bsl}	Field Number																				
Diesel	40571																				
j_{wp}	2021	2022																			
Diesel	421	12197																			
Gasoline	0	1																			
Bioethanol	0	0																			

$FFC_{bsl,j,i,t}$	Litre/hectare	The parameter represents Consumption of fossil fuel type j (gasoline or diesel) for sample unit i in year t in the baseline and is sourced from The qualitative data of tillage practices are directly collected from farmer reported data for every sample unit i. The quatitative information of fuel amount consumption is estimated in accordance to Box 1 option 4 of VM0042// and from peer reviewed published data/118/.The parameter is monitored prior to each verification period. The value of the parameter are: Consumption of fossil fuel in the baseline <table><tr><td>jbsl</td><td>FFC_{bsl} (l/ha)</td></tr><tr><td>Diesel</td><td>98.2 ± 6.10</td></tr></table>	jbsl	FFC_{bsl} (l/ha)	Diesel	98.2 ± 6.10	The value of the parameter was verified through the Digital portal of Agreena and was found consistent. The data of the parameter is sourced to determine the sample unit I and is sourced from digital farmers attestation. The verification team confirms that the parameter is consistent and in line to the methodology/8/		
jbsl	FFC_{bsl} (l/ha)								
Diesel	98.2 ± 6.10								
$FFC_{wp,j,i,t}$	Liters/hectare	The parameter represents Consumption of fossil fuel type j in the project for sample unit i in year t in the project scenario and is sourced from farm attestation data. The parameter is monitored at least every five years or prior to each verification event if less than five years and the equipment used for the monitoring is digital farmers attestation. The values of the parameter are: <table><tr><td>Fossil fuel type (i)</td><td>FFC_{wp} (l/ha)</td></tr><tr><td>Diesel</td><td>50 ± 18</td></tr><tr><td>Gasoline</td><td>70 ± 0</td></tr></table>	Fossil fuel type (i)	FFC_{wp} (l/ha)	Diesel	50 ± 18	Gasoline	70 ± 0	The value of the parameter is used for the calculation of project emission the verification which was verified through the digital portal of agreena and was confirmed in line to the methodology and consistent throughout the monitoring report.
Fossil fuel type (i)	FFC_{wp} (l/ha)								
Diesel	50 ± 18								
Gasoline	70 ± 0								

$EF_{CO2,j}$	t CO ₂ e/liter	The parameter represents Emission factor for the type of fossil fuel j (gasoline or diesel) combusted and the data is sourced from Table 3.3.1 Chapter 3 Volume 2 - Energy of the “2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories”/119/. The verification of the parameter will be done prior to each verification period. The values of the parameter are: Where j = gasoline, $EF_{CO2,j}$ = 0.002810 t CO₂e per liter. Where j = diesel, $EF_{CO2,j}$ = 0.002886 t CO₂e per liter. Where j = bioethanol, $EF_{CO2,j}$ = 0.000008887 t CO₂e per liter.	The parameter is used for the calculation of baseline and project emissions. The values are sourced from IPCC/119/ and was found valid and consistent.														
$M_{Limestone,bsl,i,t}$ and $M_{Dolomite,bsl,i,t}$ / $M_{Limestone,wp,i,t}$ and $M_{Dolomite,wp,i,t}$	Tonnes/year	The parameter represents Amount of calcitic limestone and dolomite applied to sample unit i in year t in the baseline scenario. The value of the parameter was sourced from regional data collated from the UNFCCC National Inventory Reports /67/ PP has applied equation 9 and 10 of the applied methodology. The parameter was assessed and was found in line to the applied methodology/8/. The value for the parameters are: <table><tr><th rowspan="2">Country</th><th colspan="2">Baseline</th><th colspan="2">Project scenario</th></tr><tr><th>$M_{Limestone,bsl,i,t}$</th><th>$M_{Dolomite,bsl,i,t}$</th><th>$M_{Limestone,wp,i,t}$</th><th>$M_{Dolomite,wp,i,t}$</th></tr><tr><td>Bulgaria</td><td>55846</td><td>0</td><td>55456</td><td>0</td></tr></table>	Country	Baseline		Project scenario		$M_{Limestone,bsl,i,t}$	$M_{Dolomite,bsl,i,t}$	$M_{Limestone,wp,i,t}$	$M_{Dolomite,wp,i,t}$	Bulgaria	55846	0	55456	0	The value of the parameter for baseline scenario for lime CO₂ emission was estimated using data from UNFCCC national inventory reports/67/ and was found consistent and in line to the methodology.
Country	Baseline			Project scenario													
	$M_{Limestone,bsl,i,t}$	$M_{Dolomite,bsl,i,t}$	$M_{Limestone,wp,i,t}$	$M_{Dolomite,wp,i,t}$													
Bulgaria	55846	0	55456	0													

		<table><tr><td>Den mark</td><td>521500</td><td>0</td><td>558300</td><td>0</td></tr><tr><td>Estonia</td><td>37672</td><td>5193</td><td>75849</td><td>5592</td></tr><tr><td>Latvia</td><td>78380</td><td>27960</td><td>134000</td><td>39700</td></tr><tr><td>Lithuania</td><td>55577</td><td>3802</td><td>106566</td><td>3315</td></tr><tr><td>Moldova*</td><td>117483</td><td>3793</td><td>147051</td><td>242</td></tr><tr><td>Romania</td><td>117483</td><td>3793</td><td>147051</td><td>242</td></tr><tr><td>Spain</td><td>72383</td><td>356</td><td>59527</td><td>340</td></tr><tr><td>Ukraine</td><td>355130</td><td>0</td><td>249900</td><td>0</td></tr><tr><td>United Kingdom</td><td>2068997</td><td>312280</td><td>2460805</td><td>205216</td></tr></table>	Den mark	521500	0	558300	0	Estonia	37672	5193	75849	5592	Latvia	78380	27960	134000	39700	Lithuania	55577	3802	106566	3315	Moldova*	117483	3793	147051	242	Romania	117483	3793	147051	242	Spain	72383	356	59527	340	Ukraine	355130	0	249900	0	United Kingdom	2068997	312280	2460805	205216	
Den mark	521500	0	558300	0																																												
Estonia	37672	5193	75849	5592																																												
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Moldova*	117483	3793	147051	242																																												
Romania	117483	3793	147051	242																																												
Spain	72383	356	59527	340																																												
Ukraine	355130	0	249900	0																																												
United Kingdom	2068997	312280	2460805	205216																																												
EL _{bsl} / EL _{wp}	ktCO ₂ e	The parameter represents CO₂ emissions from liming to PAI i in year t. and is sourced from Box 1, option 4 in VM0042 v2.0/8/. The regional data are derived from from Table 3.G-1 of the UNFCCC National Inventory Reports/91/ and is used for the calculation of baseline and project emissions CO₂ emissions from liming in each country (ktCO₂e) <table><tr><td>Country</td><td>2017-2021 (Baseline, ktCO₂e/</td><td>2022 (Project scenario, ktCO₂e/yr)</td></tr></table>	Country	2017-2021 (Baseline, ktCO ₂ e/	2022 (Project scenario, ktCO ₂ e/yr)	The value of the data was sourced in accordance from box 1, option 4 in VM0042 from Table 3. G-1 of UNFCCC National Inventory reports/91/ . PP has sought deviation for Liming emission in the PD /1/. The parameter was found consistent and is found in line and appropriate to the methodology.																																										
Country	2017-2021 (Baseline, ktCO ₂ e/	2022 (Project scenario, ktCO ₂ e/yr)																																														

		<table><tr><td></td><td>yr)</td><td></td></tr><tr><td>Bulgaria</td><td>25</td><td>24</td></tr><tr><td>Denmark</td><td>229</td><td>246</td></tr><tr><td>Estonia</td><td>19</td><td>36</td></tr><tr><td>Latvia</td><td>47</td><td>78</td></tr><tr><td>Lithuania</td><td>26</td><td>49</td></tr><tr><td>Moldova*</td><td>54</td><td>65</td></tr><tr><td>Romania</td><td>54</td><td>65</td></tr><tr><td>Spain</td><td>32</td><td>26</td></tr><tr><td>Ukraine</td><td>156</td><td>110</td></tr><tr><td>United Kingdom</td><td>1059</td><td>1181</td></tr></table> *Moldova is a non-Annex I country; thus, no data on liming was available.		yr)		Bulgaria	25	24	Denmark	229	246	Estonia	19	36	Latvia	47	78	Lithuania	26	49	Moldova*	54	65	Romania	54	65	Spain	32	26	Ukraine	156	110	United Kingdom	1059	1181	
	yr)																																			
Bulgaria	25	24																																		
Denmark	229	246																																		
Estonia	19	36																																		
Latvia	47	78																																		
Lithuania	26	49																																		
Moldova*	54	65																																		
Romania	54	65																																		
Spain	32	26																																		
Ukraine	156	110																																		
United Kingdom	1059	1181																																		
EF _{limestone} and EF _{dolomite}	t C/t (limestone or dolomite)	The parameter represents Emission factor for the application of calcitic limestone and dolomite and is sourced from Section 11.3, Chapter 11, Volume 4 in the 2019 Refinement to the 2006 IPCC National Greenhouse Gas Inventories/120/. The parameter will be monitored prior to every verification period. The value of the parameter is:	The parameter is used for the calculation of baseline and project emissions the value is taken from IPCC 2019/120/ the values are default hence acceptable. The verification team confirms that the value is consistent and acceptable.																																	

		For calcitic limestone, EFLimestone = 0.12 t C/t limestone; For dolomite, EFDolomite = 0.13 t C/t dolomite.																																		
Country actual agricultural land area (A_{bsl} / A_{wp})	$k\ ha$	The parameter represents Area of country in Table 4.B of the National Inventory Reports and is sourced as per Box 1 option 4. Regional data is derived from UNFCCC national Inventory reports/121/. The value of the parameter is monitored prior to each verification event. The value of the parameter is: Agricultural land area for each country <table><tr><th>Country</th><th>Absl (k ha)</th><th>Awp (k ha)</th></tr><tr><td>Bulgaria</td><td>3358</td><td>3331</td></tr><tr><td>Denmark</td><td>2682</td><td>2652</td></tr><tr><td>Estonia</td><td>927</td><td>926</td></tr><tr><td>Latvia</td><td>1296</td><td>1289</td></tr><tr><td>Lithuania</td><td>1305</td><td>1366</td></tr><tr><td>Moldova*</td><td>NA</td><td>NA</td></tr><tr><td>Romania</td><td>4574</td><td>3960</td></tr><tr><td>Spain</td><td>17429</td><td>17188</td></tr><tr><td>Ukraine</td><td>34756</td><td>34756</td></tr><tr><td>United Kingdom</td><td>3589</td><td>3528</td></tr></table>	Country	Absl (k ha)	Awp (k ha)	Bulgaria	3358	3331	Denmark	2682	2652	Estonia	927	926	Latvia	1296	1289	Lithuania	1305	1366	Moldova*	NA	NA	Romania	4574	3960	Spain	17429	17188	Ukraine	34756	34756	United Kingdom	3589	3528	The parameter is used for the calculation of baseline and project emissions. Default values are used from the UNFCCC national inventory reports and hence are found valid consistent and in line to the methodology /8/
Country	Absl (k ha)	Awp (k ha)																																		
Bulgaria	3358	3331																																		
Denmark	2682	2652																																		
Estonia	927	926																																		
Latvia	1296	1289																																		
Lithuania	1305	1366																																		
Moldova*	NA	NA																																		
Romania	4574	3960																																		
Spain	17429	17188																																		
Ukraine	34756	34756																																		
United Kingdom	3589	3528																																		

		* Moldova is a non-Annex I country; thus, no data on liming was available. As Moldova is most similar to Romania in size, and geography, we assume that the liming application in Moldova is the same as Romania. Therefore, we apply the liming data of Romania to indicate the liming application in Moldova				
c	Dimensionless	The parameter represents Type of agricultural residue and is sourced from sample unit I the frequency of monitoring of the data is prior to each verification event. And is used for the calculation of baseline and project emission. However the parameter is not being monitored since the parameter is used for the calculations of methane and nitrous oxide emissions and such emissions are not included in the project boundary.	VVB has conducted the assessment and concludes that the emission of nitrous oxide and methane emission from biomass burning is absent in the project scenario and boundary			
$FSN_{bsl,i,t}$	$t N$	The parameter represents N inputs from N containing synthetic fertiliser applied for PAI i in year t in the baseline the data is sourced from signed attestation of farmer adhering the requirement and rules of Box 1, option 1. Where data is not available the baseline data is retrieved from EuropeAgriDB/96/ v1.0 and Eurostat database/97/. The values of the parameter are monitored prior to every verification event. The values of the parameter are: <table><tr><td>Country</td><td>Synthetic fertiliser application rate (tN/ha) if only synthetic fertiliser is applied</td><td>Synthetic fertiliser application rate (tN/ha) if mixed fertiliser is applied</td></tr></table>	Country	Synthetic fertiliser application rate (tN/ha) if only synthetic fertiliser is applied	Synthetic fertiliser application rate (tN/ha) if mixed fertiliser is applied	The purpose of the parameter is for the calculation of baseline emission. The data is sourced as per Box 1 of VM0042 from farmers attested data. Or from regional average values from EuropeAgriDB/96/ and Eurostat Database/97/. The parameter was found consistent and is found in line and appropriate to the methodology/08/.
Country	Synthetic fertiliser application rate (tN/ha) if only synthetic fertiliser is applied	Synthetic fertiliser application rate (tN/ha) if mixed fertiliser is applied				

		<table><tr><td>Bulgaria</td><td>170.0</td><td>85</td></tr><tr><td>Denmark</td><td>200.0</td><td>100</td></tr><tr><td>Estonia</td><td>170.0</td><td>85</td></tr><tr><td>Latvia</td><td>170.0</td><td>85</td></tr><tr><td>Lithuania</td><td>170.0</td><td>85</td></tr><tr><td>Moldova</td><td>170.0</td><td>85</td></tr><tr><td>Romania</td><td>124.5</td><td>62</td></tr><tr><td>Spain</td><td>138.5</td><td>69</td></tr><tr><td>Ukraine</td><td>170.0</td><td>85</td></tr><tr><td>United Kingdom</td><td>230.7</td><td>115</td></tr></table>	Bulgaria	170.0	85	Denmark	200.0	100	Estonia	170.0	85	Latvia	170.0	85	Lithuania	170.0	85	Moldova	170.0	85	Romania	124.5	62	Spain	138.5	69	Ukraine	170.0	85	United Kingdom	230.7	115	
Bulgaria	170.0	85																															
Denmark	200.0	100																															
Estonia	170.0	85																															
Latvia	170.0	85																															
Lithuania	170.0	85																															
Moldova	170.0	85																															
Romania	124.5	62																															
Spain	138.5	69																															
Ukraine	170.0	85																															
United Kingdom	230.7	115																															
$FSN_{wp,i,t}$	t N	The parameter represents N inputs from N-containing synthetic fertilizer applied for sample unit i in the project scenario from the initial project instances, mean values collected in the project area and is sourced from the Farmers attestation data. The values of the parameter are: <table><tr><td>Fertiliser type</td><td>$FSN_{wp,i,t}$</td></tr><tr><td>only synthetic</td><td>35755</td></tr><tr><td>mixed</td><td>8914</td></tr><tr><td>only organic</td><td>0</td></tr></table>	Fertiliser type	$FSN_{wp,i,t}$	only synthetic	35755	mixed	8914	only organic	0	The value is used for the calculation of project emissions. The value comes from the Farmers attestation data which is verified from on site visit/128/ through interviews as well as remote interviews. The parameter was found consistent and is found in line and appropriate to the methodology/08/.																						
Fertiliser type	$FSN_{wp,i,t}$																																
only synthetic	35755																																
mixed	8914																																
only organic	0																																

		For the ex-post calculations of the project scenarios, the nitrogen (N) input from synthetic fertiliser is determined as the cumulative amount of expected N inputs from synthetic fertiliser for the initial project instances in the first year of the project. At verification, the data will be refined by incorporating farmer-reported data for each PAI																									
$FON_{bsl,i,t}$		This parameter represents N inputs from N-containing organic fertiliser applied for PAI i in year t in the baseline, mean values collected in the project are. The value of the parameter is sourced from signed attestation of farmer adhering the requirement and rules of Box 1, option 1. Where data is not available the baseline data is retrieved from EuropeAgriDB/96/ v1.0 and Eurostat database/97/. The values of the parameter are: <table><tr><th>Country</th><th>Organic fertiliser application rate (tN/ha) if only organic fertiliser is applied</th><th>Organic fertiliser application rate (KgN/ha) if mixed fertiliser is applied</th></tr><tr><td>Bulgaria</td><td>104.0</td><td>52</td></tr><tr><td>Denmark</td><td>144.0</td><td>72</td></tr><tr><td>Estonia</td><td>104.0</td><td>52</td></tr><tr><td>Latvia</td><td>104.0</td><td>52</td></tr><tr><td>Lithuania</td><td>104.0</td><td>52</td></tr><tr><td>Moldova</td><td>104.0</td><td>52</td></tr><tr><td>Romania</td><td>104.9</td><td>52</td></tr></table>	Country	Organic fertiliser application rate (tN/ha) if only organic fertiliser is applied	Organic fertiliser application rate (KgN/ha) if mixed fertiliser is applied	Bulgaria	104.0	52	Denmark	144.0	72	Estonia	104.0	52	Latvia	104.0	52	Lithuania	104.0	52	Moldova	104.0	52	Romania	104.9	52	The parameter is used for the calculation of baseline emissions the values are sourced from farms attestation data or from EuropeAgriDB/96/ v1.0 and Eurostat database/97/.
Country	Organic fertiliser application rate (tN/ha) if only organic fertiliser is applied	Organic fertiliser application rate (KgN/ha) if mixed fertiliser is applied																									
Bulgaria	104.0	52																									
Denmark	144.0	72																									
Estonia	104.0	52																									
Latvia	104.0	52																									
Lithuania	104.0	52																									
Moldova	104.0	52																									
Romania	104.9	52																									

		<table><tr><td>Spain</td><td>154.1</td><td>77</td></tr><tr><td>Ukraine</td><td>104.0</td><td>52</td></tr><tr><td>United Kingdom</td><td>169.7</td><td>85</td></tr></table>	Spain	154.1	77	Ukraine	104.0	52	United Kingdom	169.7	85	
Spain	154.1	77										
Ukraine	104.0	52										
United Kingdom	169.7	85										
		For baseline year Cumulative N inputs containing synthetic fertilizer in all the PAIs in the baseline per year (t N/ year) in AgreeaCarbon Project <table><tr><td>Baseline Fertilizer Type</td><td>FONbsl (tN/yr)</td></tr><tr><td>Only Organic</td><td>31657</td></tr><tr><td>Mixed</td><td>685</td></tr></table>	Baseline Fertilizer Type	FONbsl (tN/yr)	Only Organic	31657	Mixed	685				
Baseline Fertilizer Type	FONbsl (tN/yr)											
Only Organic	31657											
Mixed	685											
		At verification, for both current and future project instances, the data was refined using farmer-reported data for every PAI. In cases where farmer attestation was missing for any year(s) within the baseline SoA, default values for nitrogen application rates from synthetic fertilizers were derived from regional average values sourced from agricultural census data or other relevant sources within the 20-year period preceding the project start date, or from the 10 most recent iterations of the datasets										

$FON_{wp,i,t}$	$t\ N$	The parameter represents N inputs from N-containing organic fertiliser applied for PAI i in the project scenario from the initial project instances, the mean values are collected in the project area. The value of the parameter is sourced from signed attestation of farmer. The values applied for this parameter is: <table><tr><td>Fertiliser type</td><td>$FON_{wp,i,t}$</td></tr><tr><td>only organic</td><td>797</td></tr><tr><td>mixed</td><td>1908</td></tr><tr><td>only synthetic</td><td>0</td></tr></table>	Fertiliser type	$FON_{wp,i,t}$	only organic	797	mixed	1908	only synthetic	0	The data is sourced from Farm attestation unit for sample i and the quantitative data is sourced from Box 1 of VM0042. Regional data is derived from EuropeAgriDB version 1.0 /133/, FAOSTAT and Eurostat databases /134/
Fertiliser type	$FON_{wp,i,t}$										
only organic	797										
mixed	1908										
only synthetic	0										
$M_{bsl,OF,i,t}$	$t\ fertilizer$	The parameter represents Mass of N containing organic fertilizer OF applied for sample unit i in year t. The values are sourced from farmers attestation data in accordance to Box 1,Option 1 in case of unavailability of data, in accordance to box 1 option 4 in VM0042. The dataset referenced on per country basis is peer reviewed literatures and national statistical records//. The values applied for the parameter is: <table><tr><td>Fertiliser type</td><td>$M_{bsl,OF,i,t}$</td></tr><tr><td>only organic</td><td>11811375</td></tr><tr><td>mixed</td><td>242508</td></tr><tr><td>only synthetic</td><td>0</td></tr></table>	Fertiliser type	$M_{bsl,OF,i,t}$	only organic	11811375	mixed	242508	only synthetic	0	The parameter is measured and calculated according to VM0042 equation 21. The parameter is used for calculation of baseline emissions. PP has sourced this data from peer reviewed literature. The verification team confirms that the parameter is in line to the methodology/4/.
Fertiliser type	$M_{bsl,OF,i,t}$										
only organic	11811375										
mixed	242508										
only synthetic	0										

		At verification, for both current and future project instances, the data was refined using farmer-reported data for every PAI. In cases where farmer attestation was missing for any year(s) within the baseline SoA, default values for nitrogen application rates from synthetic fertilizers were derived from regional average values sourced from agricultural census data or other relevant sources within the 20-year period preceding the project start date, or from the 10 most recent iterations of the datasets																			
OF_{bsl}	<i>Dimensionless</i>	The parameter represents Type of organic N fertilizer For the parameter OF_{bsl} data is collected through signed attestation of the farmers in accordance to Box 1, option 1 where. In case of unavailability of data, reference data shall be derived from FAO database as per Box 1 option 4.the parameter will be monitored prior to each verification event. The values of the parameter are: <table><tr><td>Country</td><td>Type of Organic N fertilizer</td></tr><tr><td>Bulgaria</td><td>cattle</td></tr><tr><td>Denmark</td><td>pig</td></tr><tr><td>Estonia</td><td>cattle</td></tr><tr><td>Latvia</td><td>cattle</td></tr><tr><td>Lithuania</td><td>cattle</td></tr><tr><td>Republic of Moldova</td><td>cattle</td></tr><tr><td>Romania</td><td>cattle</td></tr><tr><td>Spain</td><td>pig</td></tr></table>	Country	Type of Organic N fertilizer	Bulgaria	cattle	Denmark	pig	Estonia	cattle	Latvia	cattle	Lithuania	cattle	Republic of Moldova	cattle	Romania	cattle	Spain	pig	The parameter is used for the calculation of project emission which represents the type of organic Nitrogen fertilizer used in the project. The values are taken from farm attestation data or from the reference data stated as per Box 1. The The parameter was found consistent and is found in line and appropriate and in line to the methodology/08/.
Country	Type of Organic N fertilizer																				
Bulgaria	cattle																				
Denmark	pig																				
Estonia	cattle																				
Latvia	cattle																				
Lithuania	cattle																				
Republic of Moldova	cattle																				
Romania	cattle																				
Spain	pig																				

		<table><tr><td>Ukraine</td><td>cattle</td></tr><tr><td>United Kingdom</td><td>cattle</td></tr></table>	Ukraine	cattle	United Kingdom	cattle												
Ukraine	cattle																	
United Kingdom	cattle																	
OF_{wp}	Dimensionless	The parameter represents type of organic N fertilizer for the parameter OF_{bsl} data is collected through signed attestation of the farmers in accordance to Box 1, option 1 where. In case of unavailability of data, reference data shall be derived from FAO database as per Box 1 option 4. For parameter OFwp the data is collected through farm attestation. The annual data will be monitored prior to each verification event . The values of the parameter <table><tr><td>OF_{wp}</td><td>2021</td><td>2022</td></tr><tr><td>Broiler /Turkey litter</td><td>0</td><td>90</td></tr><tr><td>Cattle Digestate - 0.26% N</td><td>0</td><td>48</td></tr><tr><td>Cattle digestate - 0.6% N</td><td>0</td><td>37</td></tr><tr><td>Cattle manure</td><td>1</td><td>149</td></tr></table>	OF_{wp}	2021	2022	Broiler /Turkey litter	0	90	Cattle Digestate - 0.26% N	0	48	Cattle digestate - 0.6% N	0	37	Cattle manure	1	149	The parameter is used for the calculation of project emission which represents the type of organic Nitrogen fertilizer used in the project. The values are taken from farm attestation data or from the reference data stated as per Box 1. The parameter was found consistent and is found in line and appropriate and in line to the methodology/08/.
OF_{wp}	2021	2022																
Broiler /Turkey litter	0	90																
Cattle Digestate - 0.26% N	0	48																
Cattle digestate - 0.6% N	0	37																
Cattle manure	1	149																

		Cattle slurry	1	67		426
		Compost (fully aerated production)	0	22		0
		Compost (non-fully aerated production)	0	0		122
		Compost (zero emissions)	0	64		262
		Horse manure	0	4		8
		Pig digestate - 0.36% N	1	96		343
		Pig digestate - 0.7% N	1	29		114

		Pig manure	0	46		90
		Pig slurry	45	495		1020
		Poultry layer digestate	0	78		478
		Poultry layer manure	1	59		630
		Separated pig slurry (liquid part)	0	16		118
		Sheep digestate	0	4		39
		Biosolid	0	0		146
		Horse digestate	0	0		2

		<table><tr><td>Separated pig slurry (solid part)</td><td>0</td><td>0</td><td></td><td>18</td></tr><tr><td>Sheep manure</td><td>0</td><td>0</td><td></td><td>51</td></tr></table>	Separated pig slurry (solid part)	0	0		18	Sheep manure	0	0		51	
Separated pig slurry (solid part)	0	0		18									
Sheep manure	0	0		51									
$M_{wp,OF,i,t}$	t fertilizer	The parameter represents Mass of N containing organic fertilizer applied in the project for sample unit i in year t in the project scenario. The data is sourced from sample unit I, from the farmers attestation data and the data is monitored prior to each verification event. The values of the parameter are: Mass of N containing organic fertilizer applied in the project scenario for 2022 <table><tr><th>Project Fertilizer Type</th><th>$M_{wp,OF,i,t}$ (t)</th></tr><tr><td>Only organic</td><td>415116</td></tr><tr><td>Mixed</td><td>468347</td></tr></table> Mass of N in organic fertiliser is present in the fertiliser manual as an attachment to the monitoring report	Project Fertilizer Type	$M_{wp,OF,i,t}$ (t)	Only organic	415116	Mixed	468347	The parameter is used for Calculation of project emissions and is extracted from the farms attestation data. The verification team confirmed the values from the on site and remote site visit/68/				
Project Fertilizer Type	$M_{wp,OF,i,t}$ (t)												
Only organic	415116												
Mixed	468347												

$NCOF_{,bsl} / NCOF_{,wp}$	$t \text{ N/t fertilizer}$	The value represents the Nitrogen fraction of organic fertilizer. The values are sourced from several peer reviewed literature/98/. The value of the parameter are:	The value is used for the calculation of project emission. The values are sourced from several peer reviewed literature which has been verified independently. The verification team confirms that that the parameter is in line to the methodology/8/.									
$MBg_{,bsl,i,t} / MBg_{,wp,i,t}$	$t \text{ dm}$	The parameter represents Annual dry matter, including aboveground and below ground of N-fixing species g returned to soils for PAI i at time t in the baseline or project scenario from the initial project instances The calculations of $MBg_{,bsl,i,t}$ and $MBg_{,wp,i,t}$ use yield-to-residue equations from Tables 11.1A and 11.2, Section 11.2.1.3, Chapter 11, Volume 4 of the IPCC 2019 Refinement guidelines. Baseline crop yield data come from farm attestation, following Box 1, option 1. If baseline yield data is unavailable, option 4 is used, and values are sourced from regional data in the FAO (faostat_qcl)/100/ and Eurostat (apro_cp; apro_acs)/101/ databases. Crop yield data for the project scenario are based on farm attestation. The values for the parameter are: <table><tr><td>MB</td><td>$MBg_{,bsl,i,t}$</td><td>$MBg_{,wp,i,t}$</td></tr><tr><td>Above-ground</td><td>17212</td><td>111020</td></tr><tr><td>Below-ground</td><td>45048</td><td>50817</td></tr></table> The annual dry matter of N-fixing species is calculated using IPCC yield-to-residue equations from Tables 11.1A and 11.2, Section 11.2.1.3, Chapter 11, Volume 4 of the IPCC 2019 Refinement guidelines. It represents the total above-ground and	MB	$MBg_{,bsl,i,t}$	$MBg_{,wp,i,t}$	Above-ground	17212	111020	Below-ground	45048	50817	The Parameter is used for the calculation of project emissions and is Monitored prior to each verification event and is sourced from digital farmers attestation The verification team confirms that that the parameter is in line to the methodology/8/.
MB	$MBg_{,bsl,i,t}$	$MBg_{,wp,i,t}$										
Above-ground	17212	111020										
Below-ground	45048	50817										

		below-ground residues of N-fixing species. For ex-post calculations, baseline data are based on crop yield information from farm attestation and/or regional data (as per Table 3-4 of AgreeaCarbon PD v1.3). The annual dry matter for the project scenario is calculated based on expected practices for the first year of the project.																						
g_{wp}	Dimensionless	The data represents type of N Fixing species in the baseline or project scenario from the initial project instances. The value of of the parameter g_{bsl} is sourced from data collected through signed farmer records// in accordance to Box 1 Option 1 in case of unavailability of data values are taken from FAO database in accordance to Option 4 box 1 of methodology /08/ and the value of the parameter g_{wp} is sourced from farm attestation. The value of the para meter are Soybean; Beans and pulses; Type of N-fixing species in the project scenario <table><tr><td>g_{wp}</td><td>2021</td><td>2022</td></tr><tr><td>ALFALFA</td><td>0</td><td>96</td></tr><tr><td>ALFALFA-SEED-HARVEST</td><td>0</td><td>0</td></tr><tr><td>BEAN-DRY-FORAGE-HARVEST</td><td>0</td><td>0</td></tr><tr><td>BEAN-FAVA-FORAGE-HARVEST</td><td>0</td><td>0</td></tr><tr><td>BEAN-FAVA-SEED-HARVEST</td><td>0</td><td>0</td></tr><tr><td>BEAN-FAVA-WINTER-FORAGE-HARVEST</td><td>0</td><td>0</td></tr></table>	g_{wp}	2021	2022	ALFALFA	0	96	ALFALFA-SEED-HARVEST	0	0	BEAN-DRY-FORAGE-HARVEST	0	0	BEAN-FAVA-FORAGE-HARVEST	0	0	BEAN-FAVA-SEED-HARVEST	0	0	BEAN-FAVA-WINTER-FORAGE-HARVEST	0	0	The parameter is used for the calculation of baseline and project emissions and is sourced from the farms attestation data. The verifying team verified the data during the on site and remote visit// and confirms that the parameter are consistent and in line with the methodology /8/.
g_{wp}	2021	2022																						
ALFALFA	0	96																						
ALFALFA-SEED-HARVEST	0	0																						
BEAN-DRY-FORAGE-HARVEST	0	0																						
BEAN-FAVA-FORAGE-HARVEST	0	0																						
BEAN-FAVA-SEED-HARVEST	0	0																						
BEAN-FAVA-WINTER-FORAGE-HARVEST	0	0																						

		BEAN-FAVA-WINTER-SEED-HARVEST	0	0	157
		CLOVER	0	37	0
		CLOVER-CRIMSON-FORAGE-HARVEST	0	0	3
		CLOVER-RED-FORAGE-HARVEST	0	0	50
		CLOVER-RED-SEED-HARVEST	0	0	26
		CLOVER-WHITE-FORAGE-HARVEST	0	0	14
		CLOVER-WHITE-SEED-HARVEST	0	0	24
		DRY-BEAN	0	29	28
		GRASS-CLOVER-MIX	0	37	0
		GRASS-CLOVER-MIX-FORAGE-HARVEST	0	0	148
		HORSEBEANS	2	152	209
		LENTIL-SEED-HARVEST	0	0	28
		LUPINE-SEED-HARVEST	0	0	5
		OTHER-LEGUME	0	29	50
		OTHER-N-FIXING-FORAGE	0	21	23
		PEA-COW-SEED-HARVEST	0	0	13
		PEA-SPRING-FORAGE-HARVEST	0	0	22
		PEA-SPRING-SEED-HARVEST	0	0	327
		PEA-WINTER-FORAGE-HARVEST	0	0	13
		PEA-WINTER-SEED-HARVEST	0	0	137
		PEAS	0	98	45
		SOYABEAN	18	914	2867

		<table> <tr> <td>SOYBEAN-FORAGE-HARVEST</td><td>0</td><td>0</td><td>5</td></tr> <tr> <td>VETCH-FORAGE-HARVEST</td><td>0</td><td>0</td><td>25</td></tr> <tr> <td>VETCH-SEED-HARVEST</td><td>0</td><td>0</td><td>90</td></tr> </table>	SOYBEAN-FORAGE-HARVEST	0	0	5	VETCH-FORAGE-HARVEST	0	0	25	VETCH-SEED-HARVEST	0	0	90	
SOYBEAN-FORAGE-HARVEST	0	0	5												
VETCH-FORAGE-HARVEST	0	0	25												
VETCH-SEED-HARVEST	0	0	90												
p	Categorical variable	The parameter represents Crop product and is sourced from <i>Farmer reported data from farm attestation the parameter is will be monitored prior to each verification event. The data is collected through internal field inspection and is provided in detail in Agreeena Adaptive management plan.</i>	The parameter is used for Identification of crop product for project emissions and market leakage analysis. The data is sourced from Farm attestation data.												
$P_{wp,p}$	t / ha	The parameter represents Average productivity for product p during the project period and is sourced from the determination in sample unit i. The data is obtained from farm attestation data which is uploaded in agreeena's digital platform. The data is monitored prior to each verification event. The average values are present in appendix 8 of the MR/01/	The value of the parameter is sourced from the farmer's attestation data which was verified from the on site /62/ and remote site visit /68/. The values were deemed consistent and in line to the methodology/8/.												
$RP_{wp,p}$	Output (e.g., kg)/ha	The parameter represents the Average regional productivity for product p during the same years as project period the data is sourced from governmental data, industry, published, academic or international organization sources/122/ The value is monitored every 10 years.	The parameter is used for the Determination productivity ratio for market leakage analysis the value is sourced from different sources such FAO, USDA Actual Production History data. The verification team confirms that the parameter is consistent and in line to the methodology/08/.												

$DPM_{bsl,i,t}$ $RPM_{bsl,i,t}$ $HUM_{bsl,i,t}$ $BIO_{bsl,i,t}$ $IOM_{bsl,i,t}$ $DPM_{wp,i,t}$ $RPM_{wp,i,t}$ $HUM_{wp,i,t}$ $BIO_{wp,i,t}$ $IOM_{wp,i,t}$ tC/ha The parameter defines the five soil carbon pools: DPM, RPM, HUM, BIO and IOM as defined by the RothC (Rothamsted Carbon) model. These pools represent different forms of organic matter in the soil, each playing a distinct role in the carbon cycle. The data is sourced from the carbon pools derived from direct soil measurements for the ex-post calculations. The value of the data is <table><tr><th>Carbon pool</th><th>Baseline (tC/ha)</th></tr><tr><td>DPM</td><td>0.41 ± 0.12</td></tr><tr><td>RPM</td><td>7.52 ± 1.69</td></tr><tr><td>BIO</td><td>1.04 ± 0.24</td></tr><tr><td>HUM</td><td>41.32 ± 9.42</td></tr><tr><td>IOM</td><td>4.73 ± 1.25</td></tr></table> The data is used for the calculation of baseline and project soil carbon emission. SoilGrids data is selected for its high-resolution (250-meter) global coverage, essential for large-scale soil carbon modeling. It combines ground measurements and remote sensing, processed with machine learning and geostatistics, providing accurate soil property maps, including SOC, texture, and pH. The verification team did independent assessment on the carbon pools along with interview during on site and remote site visit// and confirms that the value is consistent and in line to the methodology /8/.	Carbon pool	Baseline (tC/ha)	DPM	0.41 ± 0.12	RPM	7.52 ± 1.69	BIO	1.04 ± 0.24	HUM	41.32 ± 9.42	IOM	4.73 ± 1.25
Carbon pool	Baseline (tC/ha)											
DPM	0.41 ± 0.12											
RPM	7.52 ± 1.69											
BIO	1.04 ± 0.24											
HUM	41.32 ± 9.42											
IOM	4.73 ± 1.25											

$SOC_{bsl,i,t}, SOC_{wp,i,t}$	$t \text{ C/ha}$	The parameter represent average soil organic carbon stocks for sample unit i in year t under the baseline and project scenarios. The data is sourced from fields which follows the soil sampling stratification/52/. The modelled SOC are calculated on a yearly basis and the SOC measurements are repeated at 5 year intervals. The method used for quantifying soil organic carbon (SOC) stocks, following the VM0042 /8/guidelines, integrates a comprehensive approach by utilizing the RothC model for both baseline and project scenarios. By including various soil and environmental factors—such as decomposable and resistant plant material, microbial biomass, cover crop adoption, and climate variables—the model offers a robust framework for accurate projections of SOC stocks. The soil sampling procedure ensures reliability by extracting cores to a depth of ≥ 30 cm (or bedrock if the profile is shallow), and measuring SOC concentration and bulk density. The use of georeferenced sampling locations and a stratified random sampling strategy further enhances the precision and representativeness of the data. Additionally, regular re-sampling every five years ensures that long-term trends in SOC stocks are accurately captured. This systematic and scientifically grounded approach facilitates effective monitoring of SOC dynamics over time, contributing to a better understanding of the impact of agricultural practices on soil carbon sequestration. The values of $SOC_{bsl,i,t}$, $SOC_{wp,i,t}$ are provided in the supplementary materials/131//132/	The parameter is used for calculation on project emissions and re-assessing initial SOC (Soil Organic Carbon) stocks. The monitoring is done through Soil carbon model/55//52/. Field data collection is conducted via field inspection and the data is reflected in Agreena Adaptive Management Plan/45/. The verification team confirms that the data is consistent and in line with the methodology/08/
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Green Cover_{bls, i, t} / Green cover_{wp, i, t}	Number of green cover months / year	The parameter represents the number of months that an area is covered by green vegetation throughout the year. The data is sourced from Farmers attestation/50/. The use of the RothC model to incorporate the duration of green cover, including both cash and cover crops, is crucial for accurately modeling soil organic carbon dynamics. By monitoring cover crop application through satellite imagery within the MRV process, the model ensures precise tracking of soil coverage periods. This approach enhances the reliability of carbon sequestration projections, as it accounts for the significant impact of green cover on soil organic matter and overall soil health in agricultural systems. The values of the parameter are: Number of green cover months in the baseline and project scenario <table><tr><th>Green cover months</th><th>Field number in the baseline (bsl)</th><th>Field number in the project (wp)</th></tr><tr><td>4 months</td><td>10138</td><td>9221</td></tr><tr><td>5 months</td><td>58</td><td>319</td></tr><tr><td>9 months</td><td>6</td><td>509</td></tr><tr><td>10 months</td><td>0</td><td>153</td></tr></table>	Green cover months	Field number in the baseline (bsl)	Field number in the project (wp)	4 months	10138	9221	5 months	58	319	9 months	6	509	10 months	0	153	The data is used for Calculation of baseline and project emissions. RothC modelling is used for the calculation of data which is verified by the verifying body /52/ the values are consistent and in line to the methodology /8/
Green cover months	Field number in the baseline (bsl)	Field number in the project (wp)																
4 months	10138	9221																
5 months	58	319																
9 months	6	509																
10 months	0	153																

$clay_{bsl} / clay_{wp}$	%	The value represents Clay content of the soil and is sourced from Soilgrids/108/which is a global soil information system.. The data is monitored prior to each verification event The value of the parameter is : $clay_{bsl} : 30.4 \pm 9.9 \%$ $clay_{wp} : 30.4 \pm 9.9 \%$	The parameter is used for Calculation of baseline and project emissions. The values are sourced from Soilgrids/108/ which is a public soil information database the data was verified the verifying body and hereby confirms that the value is consistent and in line to the methodology /8/
$Temperature_{bsl} / Temperature_{wp}$	°C	The parameter represents Monthly average surface temperature. The data is sourced from synthetic weather stations located 50km of modelled baseline, derived from from NASA's Prediction Of Worldwide Energy Resources (POWER) project./111/. The data is monitored prior to each verification event. $Temperature_{bsl} : 9.6 \pm 2.3 \text{ }^{\circ}\text{C}$ $Temperature_{wp} : 9.6 \pm 2.3 \text{ }^{\circ}\text{C}$	The value of the parameter is sourced from Calculation of baseline and project emissions. The parameter is sourced from NASA's Prediction Of Worldwide Energy Resources (POWER) project/111/ the verification team confirms that the value is consistent and in line with the methodology/8/.

<i>Precipitation_{bsl}/</i> <i>Precipitation_{wp}</i>	mm	The parameter represents Monthly precipitation and is sourced from NASA's Prediction Of Worldwide Energy Resources (POWER) project/111/. The parameter is monitored prior to each verification event. The monthly average precipitation data from NASA's POWER project is a reliable choice, offering high resolution, global consistency, and accuracy. By using synthetic weather stations within 50 km of the modeled field and averaging daily data, it provides an accurate representation of monthly precipitation patterns, ensuring dependable climatic modeling The value of the parameters are as follows: <i>Precipitation_{bsl} : 51.4 ± 10.2 mm</i> <i>Precipitation_{wp} : 51.4 ± 10.2 mm</i>	The parameter is used for Calculation of baseline and project emissions. The parameter is sourced from NASA's Prediction of Worldwide Energy Resources (POWER) project/111/ the verification team confirms that the value is consistent and in line with the methodology/8/.
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<i>Evapotranspiration_{bsl} / Evapotranspiration_{wp}</i>	<i>Monthly evapotranspiration</i>	The parameter represents Monthly evapotranspiration. The value of the parameter is sourced from NASA's Prediction Of Worldwide Energy Resources (POWER) project/111/. The parameter is monitored prior to each verification event. The values of the parameter are: The monthly average evapotranspiration data from NASA's POWER project is a reliable source due to its high resolution, global consistency, and accuracy. Using synthetic weather stations within 50 km of the modeled field and averaging daily data ensures a precise and dependable representation of monthly evapotranspiration patterns for effective modelling. <i>Evapotranspiration_{bsl} : 30.9 ± 12.6 mm</i> <i>Evapotranspiration_{wp} : 30.9 ± 12.6 mm</i>	The parameter is used for Calculation of baseline and project emissions. The parameter is sourced from NASA's Prediction Of Worldwide Energy Resources (POWER) project/111/. The verification team confirms that the value is consistent and in line with the methodology/8/.
<i>TRM</i>		The parameter represents The Tillage Rate Modifier (TRM). The TRM is a parameter used in the SoilR RothC implementation to adjust decomposition rate constants based on the intensity of tillage practices. The value of the parameter is sourced from Jordon et al (2022)/112/. The function for quantifying soil organic carbon (SOC) stocks, as outlined in the VM0042 v2.0/8/ guidelines, uses a consistent model for both baseline and project scenarios. By omitting scenario-specific indices for clarity, it streamlines the process while accounting for various factors like DPM, RPM, cover crop adoption, and climate variables. This approach ensures a reliable and efficient calculation of SOC,	The parameter is used for Calculation of baseline and project emission and the value is sourced from Jordon et al (2022)/112/. The verification team have verified the parameter and confirms consistent and in line to the methodology /8/.

		facilitating accurate projections of soil carbon under different management conditions. <table border="1"> <thead> <tr> <th><i>Tillage</i></th><th><i>TRM</i></th><th>Field number in the baseline</th><th>Field number in the project year</th></tr> </thead> <tbody> <tr> <td>Conventional tillage</td><td>1</td><td>9606</td><td>0</td></tr> <tr> <td>Reduced tillage</td><td>0.93</td><td>495</td><td>7129</td></tr> <tr> <td>No tillage</td><td>0.95</td><td>101</td><td>3073</td></tr> </tbody> </table>	<i>Tillage</i>	<i>TRM</i>	Field number in the baseline	Field number in the project year	Conventional tillage	1	9606	0	Reduced tillage	0.93	495	7129	No tillage	0.95	101	3073	
<i>Tillage</i>	<i>TRM</i>	Field number in the baseline	Field number in the project year																
Conventional tillage	1	9606	0																
Reduced tillage	0.93	495	7129																
No tillage	0.95	101	3073																
In_{bsl} / In_{wp}	tC/ha	The parameter 'In' represents the annual input of organic carbon to the soil. This includes carbon inputs from mulching plant residues and is sourced from farmers attestations. The value for the parameter is: $In_{bsl} : 4.23 \pm 1.60$ tC/ha $In_{wp} : 4.85 \pm 1.63$ tC/ha The Biomass residue for each sampling unit is calculated using equations from the IPCC (2019) Refinement guidelines, applied to average crop yields in the baseline scenario. For project scenario emissions (In_{wp}), values are based on the average projected crop yields from farmers for the first year of the project. The verification team confirms the value during the interview on site and during remote site visit// equations were used from	The value is used for the calculation of baseline and project emissions. The verification team confirms that the values are consistent in the MR and is in line to the methodology/8/.																

		IPCC (2019)													
FYM _{bsl} / FYM _{wp}		The parameter represents The parameter 'FYM' represents the annual input of organic carbon specifically from farmyard manure.and is sourced from farmers attestation data Farmyard manure (FYM) plays a critical role in maintaining soil fertility and enhancing soil carbon dynamics, which are essential for sustainable agriculture. By providing organic matter and essential nutrients, FYM improves soil structure, water retention, and microbial activity. The method used to calculate FYM involves two main components: the amount of manure applied and its respective carbon content. The formula is as follows: $FYM = MOF_{i,t} \times CCOF_{i,t}$ The value of the parameter are as follows: <table border="1"> <thead> <tr> <th>FYM Inputs</th><th>Field Number</th><th>FYM_{bsl} (tC/ha)</th><th>FYM_{wp} (tC/ha)</th></tr> </thead> <tbody> <tr> <td>Yes</td><td>434</td><td>0</td><td>0.62 ± 0.80</td></tr> <tr> <td>No</td><td>9768</td><td>0</td><td>0</td></tr> </tbody> </table>	FYM Inputs	Field Number	FYM _{bsl} (tC/ha)	FYM _{wp} (tC/ha)	Yes	434	0	0.62 ± 0.80	No	9768	0	0	The value is used for the calculation of baseline and project emissions. The verification team confirms that the values are consistent in the MR and is in line to the methodology/8/.
FYM Inputs	Field Number	FYM _{bsl} (tC/ha)	FYM _{wp} (tC/ha)												
Yes	434	0	0.62 ± 0.80												
No	9768	0	0												

$M_{OA_{wp,i,t}}$	tonnes	The value represents Mass of organic amendment applied as fertilizer on the project area in year t. The value is sourced from farms attestation data and is same as $M_{wp,OF,i,t}$. For ex-post calculations, the mass of organic amendment is determined using farmer-reported data from the initial project instances, specifically for the first year of the project. This approach ensures that the organic amendment mass is accurately reflected for each PAI, providing reliable data for the assessment of the project's impact over time. The data is monitored prior to each verification event. The same values are applied as $M_{wp,OF,i,t}$ as shown above.	The parameter is used for the Calculation of leakage from application of new organic amendments from outside of the project area. The value is sourced from farmers attestation data and was verified during on site visit and remote site visit/62/ and confirms the value is consistent and in line to the methodology /8/														
$CC_{i,t}$	%	The parameter represents Carbon content of organic amendment applied as fertilizer in the project area in year t. The parameter is sourced from various peer reviewed literature /123/ The data is monitored prior to each verification event. The values of the parameter are: <table> <tr> <td>Manure</td> <td>Carbon content (%)</td> </tr> <tr> <td>Broiler/Turkey litter</td> <td>22.78</td> </tr> <tr> <td>Cattle Digestate - 0.26%N</td> <td>0.83</td> </tr> <tr> <td>Cattle digestate - 0.6% N</td> <td>5.9</td> </tr> <tr> <td>Cattle manure</td> <td>9.26</td> </tr> <tr> <td>Cattle slurry</td> <td>1.3</td> </tr> <tr> <td>Compost (fully</td> <td>14.99</td> </tr> </table>	Manure	Carbon content (%)	Broiler/Turkey litter	22.78	Cattle Digestate - 0.26%N	0.83	Cattle digestate - 0.6% N	5.9	Cattle manure	9.26	Cattle slurry	1.3	Compost (fully	14.99	The parameter is used for Calculation of project emissions and leakage from application of new organic amendments from outside of the project area. The values of the parameter are taken from published literature which has been independently verified by the verifying body and confirms that the values are consistent and in line to the methodology /8/
Manure	Carbon content (%)																
Broiler/Turkey litter	22.78																
Cattle Digestate - 0.26%N	0.83																
Cattle digestate - 0.6% N	5.9																
Cattle manure	9.26																
Cattle slurry	1.3																
Compost (fully	14.99																

		aerated production)	
		Compost (non-fully aerated production)	14.99
		Compost (zero emissions)	14.99
		Horse digestate	8.53
		Horse manure	13.37
		Pig digestate - 0.36% N	1.21
		Pig digestate - 0.7% N	6.25
		Pig manure	9.8
		Pig slurry	1.89
		Poultry layer digestate	7.27
		Poultry layer manure	11.4
		Separated pig slurry (liquid part)	1.51
		Separated pig slurry (solid part)	4.59
		Sheep digestate	7.14
		Sheep manure	11.2

BR _{pj,n,y}	Tonnes on dry-basis	The parameter represents Quantity of biomass residues of category n used in facilities which are located at the project site and included in the project boundary in year y. The Biomass residue for each sampling unit is calculated using equations from the IPCC (2019) Refinement guidelines, applied to average crop yields in the baseline scenario. For project scenario emissions (In _{wp}), values are based on the average projected crop yields from farmers for the first year of the project. The equations were used from IPCC(2019).The parameter is monitored prior to each verification event .The value of the parameter is same as In _{wp} as shown above.	The value is used for the calculation of baseline and project emissions. The verification team confirms that the values are consistently represented in sections 3.2.2 and 5.3.4 in the MR and is in line with the methodology/8/.				
•	Dimensionless	The parameter represents Gas or pool and is sourced from sample unit i. The frequency of monitoring is at least every five years or prior to each verification event if less than five years. And is used to calculate baseline and project emission	The parameter is used for the calculation of baseline and project emissions and is sourced for the determination of sample unit I the verifying team confirms that the parameter is consistent and in line to the methodology /8/				
Δ• _{,t} and • _t	t CO2e/unit area	The parameter represents Average emission reductions from pool or source •, or stock of pool •, in year t and is calculated from modeled values in the project data. The parameter is monitored prior to each verification event and the monitored via soil carbon. The purpose of data is for calculation of emission reduction The value of the parameter are: <table><tr><td>Vintage</td><td>Δ̄•_t (tCO₂e/ha)</td></tr><tr><td>2021</td><td>0.93</td></tr></table>	Vintage	Δ̄• _t (tCO ₂ e/ha)	2021	0.93	The value for the parameter is sourced from modeled and calculated value in the project area and is estimated using statistical responses outlined in VMD0053, equation /53/,/54/,/55/. And therefore it is found to be appropriate
Vintage	Δ̄• _t (tCO ₂ e/ha)						
2021	0.93						

		2022	0.84	
		2023	0.95	
Buffer _t	tCo2e	The parameter represents Number of buffer credits to be contributed to the AFOLU pooled buffer account in year t and is sourced from NPR tool. The purpose of this data is calculation of project emission and buffer credits.		The value for this parameter is Vintage 2021: 3,147.94tCO₂e Vintage 2022: 70,898.16tCO₂e Vintage 2023: 281,137.00tCO₂e and is the number of buffer credits which is to be contributed into AFOLU buffer pool in year t. The value is verified from the ERR sheet/16/ and from the NPR tool/15/.

Parameters not applicable for the project in its initial verification period:

Parameter	Justification for non applicability	VVB assessment
EF _{ent,l}	These parameters are not monitored as this parameter is optional for project and may be considered in future iterations and verification periods. Therefore, it is not considered in the AgreeenaCarbon Project.	The parameters are not applicable for this PAI.
Pop _{wp,l,i,P}		
Pop _{bsl,l,i,P}		
I, dimensionless		
P, unitless		
AWMS _{i,i,t,P,S}		
EF _{CH4,md,l}		

S	These parameter are not applicable in the AgreeenaCarbon Project as it does not incorporate livestock emissions or accept farmers that own livestock. Livestock farmers may included in future iterations and verification periods. The parameter “c” is used specifically for calculating methane and nitrous oxide emissions from biomass burning in the baseline scenario. The project does not allow participants to conduct any burning of residues, and the gas sources are therefore outside the project boundary	This project does not incorporate livestock emissions therefore the parameters are not Applicable. The project does not allow project participants to conduct any burning of residues, and the gas sources CH₄ and N₂O therefore need not be included in the project boundary and therefore not monitored.
VS _{rate,l}		
W _{wp,l,i,t}		
W _{bsl,l,i,t}		
CC _{prj,i,t}		
p		
c		
EF _{N2O,md,l,S}		
Nex _l		
MS _{bsl,l,i,t}		
N2O_md _{bsl,i,t}		
GWP _{CH4}		
CF _c		
EF _{c,CH4}		
MB _{wp,c,i,t}		
EF _{c,N2O}		
ΔC _{SHRUB,bsl,i,t}		
ΔC _{TREE,wp,i,t}		
ΔC _{SHRUB,wp,i,t}		
f(N2O_soil _{bsl,i,t})		
f(CH ₄ soil _{bsl,i,t})		
SF	These parameters are not applicable in the AgreeenaCarbon Project as the Project does not allow participants to conduct any burning of residues in entering the Project.	There is no burning of residues in this project therefore these parameters are not applicable
NC _{SF}		
M _{wp,SF,i,t}		
M _{bsl,SF,i,t}		
SF		

All data entries, calculations, and references have been accurately carried over from source documents and verified datasets. Cross-checks between the Monitoring Report, supporting documentation, and associated data files confirm consistency and accuracy throughout.

The data inputs applied for RothC Model Verification are listed in table below.

Table : **Data inputs and outputs for calculating the uncertainty deduction**

Parameter	Value	Unit	Source	Notes
$cov(\hat{\Delta}_{pr}, \hat{\Delta}_{bsl})$	0	-	Conservative estimate	Implies $\rho=0$ in Equation 52 (VM0042 v 2.0)
$s_{model, \Delta}^2$	0.333085	$(t\ CO_2e/ha)^2$	Equation 51 (VM0042 v2.0) and the MVR following VMD0053 v2.0	
A_h	676,245.88	ha	Post QA/QC field boundaries	
A	1,692,286	ha	Post QA/QC field boundaries	
n_h	11,632	# fields	Post QA/QC field boundaries	
$\Delta_{h,ip,t}$	0.404	$t\ CO_2e/ha$	Model runs from soil sampling initial values, $ip = 1$	
$\overline{\Delta}_{h,t}$	0.387	$t\ CO_2e/ha$	Mean of ip points within strata h	
$s_{sampling, \Delta, h, t}^2$	1153858	$(t\ CO_2e/ha)^2$	Equation 53 (VM0042 v2.0) – not yet normalised by total Project area	
$s_{sampling, \Delta, t}^2$	87042144	$(t\ CO_2e/ha)^2$	Equation 53 (VM0042 v2.0) – not yet normalised by total Project area	

$s_{\Delta,t}^2$	0.333355	$(t\ CO_2e/ha)^2$	Equation 54 (VM0042 v2.0)	
$\overline{\Delta \cdot t}$	1.20314	$t\ CO_2e/ha$	Monitoring report/ERR sheet – average SOC stock increase for the period	
$t_{\alpha=0.666}$	0.4307	-	Sample size, thus degrees-of-freedom for the t - distribution, is sufficiently large for this approximation	
$UNC_{\overline{\Delta \cdot t}}$	21.77	%	Equation 65 (VM0042 v2.0)	Uncertainty deduction applied to SOC stock removals, used in Equation 38 (VM0042 v2.0)

The model uncertainty deduction for verification was described in Section 5.4.4 of the MR. The observed covariance between the baseline data points in the CVD results from the rarity of long-term paired trial data collection; therefore, the vast majority of data in the CVD come from peer-reviewed scientific articles that use the time-for-space substitution method, where BSLt0 = BSLt1. Under this condition, the covariance equals zero, which is a conservative assumption. The same has been accepted by IME with some limitation which can be worked once sufficient data is available from the project activities going forward. The uncertainty value is 21.77% and CVD value (Covariance for the determination of uncertainty) = "0". This is verified through the IME reports dated September 2023 and again in its updated version provided in October 2024 /151//152/. The justification for CVD being negligible was also verified through the publication /153/. The Pooled Measurement Uncertainty (PMU) of the CVD, as required by Appendix 1, Step 3(b) of VMD0053 v2.0, was calculated and the values are shown in the Model Validation Report V 4.0/149/. The PMU is verified through the IME reports dated June 2023 (Report 1972.N.23)".

Baseline Emission:

The GHG emission and removal of the project are analysed on the basis of Agricultural field activities, field monitoring, changes in agricultural management practices and calculation procedures. The baseline emission was calculated by the cumulative value of emissions for all fields which was verified from the emission calculation excel sheet/16/. PP has modelled the baseline emissions and stock changes using RothC model which has been verified from the Model Calibration Report v3.0/52/ and further through updated Model Validation Report (MVR) V 4.0/149/ and was found correct. Values of all the parameters applicable in the project activity has been correctly stated and the same has been clearly presented in emission calculation excel sheet/16/. The project follows Quantification approach 1 for soil SOC and Quantification approach 3 for other GHG emissions. Equation 6 of the methodology was used for calculation of soil organic stock For Carbon di oxide (CO₂) and emissions occurring from combustion from agricultural vehicles within the project boundaries were calculated according to Equation 7 and 8 of the applied methodology. Emissions from lime application were calculated using equation 9 and 10. Equation 17 to 26 were applied of the applied methodology. All the Equations were used from the applied methodology and the justifications of the parameters are provided in section 4.4 of the methodology. The number of farmers those who are included in the baseline was cross checked with the Country baseline document/75/ and was found correct and consistent.

Project Emission

The project emission was calculated based on the data reported by the farmers and via calculation or modelling. Post harvest data was collected based on the reporting of the farmers which was then compared to the baseline data and was verified from the ERR sheet /16/. All the parameters used in the calculation of the project emission were verified and were found correct and valid. Each parameters application and source was verified and found to be consistent and traceable in line with the methodology requirements.

The verification team confirms that the calculation and data is authentic. The quality of supporting documents submitted for verification is adequate. The assessment team confirms that the proper evidence is available for the whole monitoring period and the same is verifiable and the data collection system meets the requirement of the monitoring plan and the applied methodology according to the assessment carried out. None of the instruments or equipment used require calibration and therefore no calibration requirements were deemed relevant.

The verification team confirms the quality of evidence to determine the GHG reductions and removals are satisfactory and the detailed information regarding the roles and responsibilities have been provided in the MR /127/.

4.4 Non-Permanence Risk Analysis

The non-permanence risk report and risk calculation sheet and report /18//19/ are provided by PP, the risk assessment was conducted according to the VCS “AFOLU Non-Permanence Risk Tool” v4 /7/. Each risk category was calculated based on the VCS guidance. The information was validated and cross-checked through document review, onsite visits of the project area and interviews conducted. The project is a grouped project with project areas spanning over 10 Geographical Areas(GA) in order to maintain the conservativeness of the project Agreea has adopted the highest risk rating amongst the GA's in order to be most conservative. Details of the assessment are provided as follow.

Risks	Assessment of the risk factor justification	Risk rating
Internal risks		
Project management (PM)	The verification team completed the project risk analysis in line with AFOLU Non permanence risk tool. This is a grouped project which involves improved agricultural land management practices. The first PAI includes implementation of agricultural practices in the identified project region. As per section 2.2.1 of tool /7/ and table 1. Project management, species planted, ongoing enforcement to prevent encroachment by outside actors rated NA as it does not apply to the project. Agreea carbon provide advice and support throughout the project lifetime however these re not treated as training and therefore a risk of 2 has been provided . Management team is located less than a day travel from the site, The team has sufficient experience in experience in AFOLU project design and implementation(more than 5 years) /124/, carbon accounting and reporting under the VCS Program or other approved GHG programs, therefore risk is rated in this section. The project has an active adaptive management plan/138/ in place that includes a monitoring plan. As per AFOLU non permanence risk tool which is in line to NPRT version 4.2 section 2.2 Point 5 The project has an active adaptive management plan/138/ in place which identify, assess and	Risk rating: 0

	create a mitigation plan for potential risks to the project inclusive of those identified under the document and any other obstacles to the project Implementation. The adaptive management plan is detailed and has several section Such as Onboarding of Farmers and collection of baseline data, Input of field actuals to calculate Earnings Potential, Quantification of Baseline data and Emission Reductions and removals and annual Monitoring Reporting. Each steps defines the data flow process Their objectives, potential risks and its mitigation action has been clearly defined. A dedicated team Quality manager and back up Quality manager is present for each data flow stage for reviewing the process. Furthermore the adaptive management plan is updated annually . The Mitigation has been rated -2 as the team includes with significant (i.e., more than five years) experience in AFOLU project design and implementation, carbon accounting, and reporting (e.g., individuals who have successfully managed projects through validation, verification, and issuance of GHG credits) under the VCS Program or other approved GHG programs which has been verified by assessment of “AgreenaCarbon_Management team” /124/. The farmers are well aware of the decrease of the potential yield due to the transition to improved agricultural practise as they have been clearly intimated. The clause is also mentioned under section 17.3 of Agreena’s Terms and conditions which was verified during on site visit//.Agreena also has a Help center page/160/ where effects of regenerative agriculture is entioned . During the Interviews with the farmers it was confirmed that they are well aware of the potential decrease in the production during the initial shift to improved agricultural practices therefore the score of 0 is justified	
CFinancial viability (FV)	The applicable financial viability risk categories are (e) and (i). Based on the FV analysis (attached as a separate excel), the project cash flow breakeven point is 4 years or less, and the project has secured 80% or more of funding needed to cover the total cash out before it reaches breakeven. The risk is rated 0 as the risk factor does not apply to project.	Risk rating: 0
Opportunity costs (OC)	The applicable category is (d) under this risk rating which implies NPV from the most profitable alternative land use is expected be 20% or less than from project activities. The risk is rated 0. The financial viability assessment carried out using the Agrena Carbon Risk Tool/163/ demonstrates that the Net Present Value (NPV) of the project activities is approximately €780,000–808,000 over the modelled period. This figure represents the discounted value of expected revenues and costs associated with the project scenario. To assess the risk of land diversion and the relative attractiveness of alternative land uses, the NPV of the most profitable alternative land use scenario was also estimated. The results indicate that the most profitable alternative generates an NPV	Risk rating: 0

	not exceeding €156,000, which is 20% or less of the project activity NPV. The analysis justifies that the NPV from the most profitable alternative land use is expected to be 20% or less of the NPV from the project activities	
Project longevity (PL)	The project longevity is 40 years and renewable till 100 years. The ownership of the project resides with PP which was verified from signed contracts with agreena /50/and declarations/23/. The project falls under tool project longevity category (a) without legal agreement or requirement to continue the management practice. The project have a management, financial and monitoring plan for the entire project longevity/139/ /141/.	$= 24 - (\text{project longevity} / 5)$ Considering the above equation Risk rating: 17
Internal risk rating	PM + FV + OC + PL	score is $0 + 0 + 0 + 17 = 17$ but in accordance with the Tool, total may not be less than zero Internal risk score = 17
External risks		
Land Tenure and Resource Access/ Impacts (LT)	The conditions (a) of the Land Tenure and Resource Access/ Impacts table are rated 0 and the justification provided in the NPR was checked and verified through Land tenure risk mitigation/142/ Binding legal agreement/23/and KML files/46/. The AgreenaCarbon Project has implemented a clear and proactive grievance mechanism to address potential land tenure and resource access issues. Participants are required to confirm legal ownership or usage rights of the land they enroll, including the size and location of each Project Activity Instance (PAI). During onboarding and annually thereafter, participants must reaffirm their access and use rights, supported by lease	Risk rating: 0

	or ownership documents. Remote sensing is used to verify field boundaries and prevent overlaps with other land uses, reducing the risk of disputes. For the land tenure risk the project has taken the reference of Bulgaria from the 10 GA where land tenure risk was deemed as highest. Bulgaria government has a history of land intervention in land rights as recent as in the past 20 years/155/. The risk is however mitigated as per VCS AFOLU Non permanence risk tool guidelines Section 2.3.1 Point 6 as the case has been resolved against the Bulgarian Government.	
Community engagement (CE)	The local population i.e the farmers are not reliant on the Project affected area for their survival as the produce cultivated in the project area are for profit for sale therefore response “No” was stated for Q1 which was verified through interviews during on site and remote visits/76//62/ The AgreeenaCarbon Project operates exclusively on privately owned or leased farmland, with no defined local populations or communities relying on the project area for economic or cultural purposes. All Project Activity Instances (PAIs) have a history of commercial crop production and will continue serving this purpose post-enrollment, ensuring that the land remains economically productive for private actors. Project implementation is not expected to negatively affect local agricultural supply or economic benefit, as the enrolled areas represent a small fraction of total farmland. Economic risks to participants are addressed in the Project Design and Monitoring Report, with projections indicating long-term net positive outcomes. Farmland within the project area continues to provide key ecosystem services—such as crop production, nutrient cycling, water regulation, and soil stabilization. The adoption of improved agricultural land management (ALM) practices, like no-tillage, is supported by scientific evidence showing increased ecosystem service delivery and enhanced resilience to climate change.	Risk rating: 0
Political risk (PC)	PP has calculated governance score from the mean of Governance Scores across the six indicators of the World Bank Institute’s Worldwide Governance Indicators (WGI The 5-year WGIs average for Ukraine is -0,62, falling under row (b) "Governance score of -0.79 to less than -0.32" and therefore giving a political risk score of 4. The overall risk score is however 2 because of applicable mitigation discount. VVB has assessed the political score of Ukraine from the data available in the world bank website which is presented therein:	Risk rating: 2

List of Countries	Voice and Accountability	Political Stability and No Violence	Government Effectiveness	Regulatory Quality	Rule of Law	Control of Corruption	Total Average
Bulgaria	0,31	0,39	-0,09	0,43	-0,07	-0,21	0,13
Denmark	1,55	0,92	1,89	1,72	1,84	2,25	1,69
Estonia	1,18	0,68	1,12	1,55	1,32	1,53	1,23
Latvia	0,87	0,49	0,89	1,18	0,94	0,58	0,82
Lithuania	0,99	0,78	1,01	1,18	1,00	0,70	0,94
Moldova	-0,03	-0,40	-0,45	-0,01	-0,41	-0,56	-0,31
Romania	0,56	0,42	-0,17	0,37	0,39	-0,12	0,24
Spain	1,02	0,36	0,92	0,87	0,89	0,68	0,79
Ukraine	0,03	-1,50	-0,43	-0,27	-0,76	-0,79	-0,62
United Kingdom	1,28	0,42	1,32	1,57	1,49	1,70	1,30
VVB confirms that Ukraine has the lowest trend on political risk therefore the most conservative. The mitigation measure measures as per AFOLU Non permanence risk tool are: 1. The project is in a country that: 1) is party to the Paris Agreement and has submitted an NDC to the UNFCCC Secretariat in the last five years, 2) includes AFOLU commitments (conditional or unconditional) in its NDC, and 3) has a documented and active climate change plan that includes the project activity, VVB confirms that all the GA are applicable to the mitigation measures .							

External risk	LT + CE + PC	score is 0 + 0 + 2 = 2 but in accordance with the Tool, total may not be less than zero. External score = 2
Natural risks		
Fire (F);	The risk category was found to be applicable although insignificant however mitigation measures are at place which has been described in detail in Natural risk chapter /125/. The project area is an agriculture land and not a forested land therefor it is very unlikely to have the risk of fire rather it could help prevent the spread of overall damage of wildfire. The highest likelihood (i.e., more than once every 10 years) has been attributed to this risk dimension. - on account of mitigation measures and extensive Project size .Since the amount of biomass is less agriculture land might help to reduce the progression of fires /144/. For mitigation measures various methods such as landscape planning /145//146/ the help of national wildlife committee/147/ and strategic guidelines/148/ are to be followed For the risk of fire the project has taken Spain as the reference for the highest Historical incidence and severity of wildfires/156//157/. The other EU member states have numerous prevention measures implemented to ensure Improved prevention measures for wildfires.	Risk rating: 1
Pest and Disease outbreaks (PD)	The risk category was found to be applicable, however very low. Future projected temperature rise might impact the alteration in the phenology of several insect species resulting in their expansion of niche. However Mitigation measures are in place which are explained in detail and verified through Natural risk chapter AgreeenaCarbon NPRR MR/125/.Therefore, mitigation score of 0.25 is considered. However, as per Non-Permanence Risk Tool v4.0 para 2.4.1.4 (a) and (b), the risk is calculated to be 1. For pests and diseases, the project has taken the whole Pan European region as highest risk area. The pest and disease outbreaks have an impact on the crops which have a High impact both economically and environmentally. Several Mitigation measures have been undertaken for the	Risk rating: 1

	prevention of these outbreaks/158/ across the whole GA where the project is situated and have safeguards in place.	
Extreme Weather (W)	The risk category was found to be Applicable however minor; various literature have been consulted related to extreme weather which are detailed in Natural Risk chapter Agreea NPRR MR/125/. However preventive action is in place. Therefore a risk of 1.25 is considered.	Risk rating: 1.25
Geological risk (G)	Risks such as drought and erosion are rated 1 . The only risk of geological nature that is applicable to the Project is earthquakes and earthquake-induced landslides. This risk dimension was rated of minimal on account of most PAIs being located in geologically stable geographies and low-risk locations For geological risks The project has taken Spain and Romania as the Highest risk country as the seismic activity in these area could have a high impact on the project. However numerous measures/159/ are in place so that the seismic activities could be detected and the aftermath of the events can be handled.	Risk rating: 1
Other natural risk (ON)	Through site visit inspection and interview with PP it was confirmed that chances of occurrence of other risks are not applicable	Risk rating: 0
Natural risks	F + PD + W + G + ON	Score is 1 + 1 + 1.25 + 1 + 0 = 4.25
Future Impact Factor	PP has explained the risk associated under this category. NPR report provided complete information of Natural risk associated with climate change impact (NR-c). The AgreeaCarbon Project demonstrates strong adaptive capacity by fulfilling all five Adaptive Criteria during its first monitoring period/161/: Variety: The project integrates a wide range of international, national, and regional climate policies into its design. A dedicated Regulatory and Standards Affairs (RSA) team, with input from a Carbon Advisory Board (CAB), ensures that country-specific regulations and climate goals are consistently monitored and addressed. Room for Change: Agreea utilizes multi-scale climate data from national reports to IPCC assessments and early warning systems to	Risk rating: 4.45

	inform decision-making. This data supports project resilience planning, informs risk assessments (e.g., NPRR), and helps guide adjustments in management to maintain carbon permanence. 3. Leadership: Agreena exhibits long-term climate vision and leadership through its ESG Strategy and active participation in climate policy discussions. The project promotes regenerative agriculture as a core strategy to address climate impacts while ensuring economic benefits for participants. 4. Resources: The project invests significantly in scientific and technical expertise, with a specialized team of scientists, modellers, and MRV professionals. A €14 million annual R&D budget underlines its commitment to innovation and technical excellence. Financial and human resources are also dedicated to shaping and supporting climate-related policies. 5. Innovation: The implementation of regenerative agriculture practices such as no-till, cover cropping, and reduced synthetic fertiliser use is central to the Project. These are globally recognized as “win-win-win” strategies by the IPCC for addressing climate adaptation, mitigation, and food security. Natural risk associated with climate change impact (NR-c)= 3.45 Natural risk NOT associated with climate change impact (NR-c)=1.00	
Total Natural Risk	Agg sub-total risk*Future Impact factor	Risk rating: 4.45
Overall risk rating	Internal risk + external risk + natural risk	17 + 2 + 4.45 = 24.0%.

5 VERIFICATION OPINION

5.1 Verification Summary

Earthood has been contracted by Agreeena ApS Project to conduct the first verification of the project activity titled “AgreeenaCarbon Project”(VCS ID 4022). PP is responsible for the information about the implementation of the project activity.

Earthood completed the verification assessment of the final version of MR, emission reductions calculation sheets, project documents, and evidence provided by PP in line with the requirements set in based on the applied methodology VM0042: Methodology for Improved Agricultural Land Management, Version 2.0 and its associated tools, VCS standard and VVB manual.

5.2 Verification Conclusion

Earthood’s verification approach is based on the understanding of the risks associated with reporting the project activity, estimates of GHG emission data and the controls to be implemented to mitigate these. Earthood planned and performed the verification by obtaining evidence, remote site visit, other information, and explanations that Earthood considered necessary to give reasonable assurance that the estimated GHG emission reductions are fairly achieved.

The verification team confirms that:

- the project activity is in accordance with all relevant host countries and VCS rules and requirements version 5 .
- the monitoring and implementation plan of the project activity is in accordance with all conditions of the latest version of applied methodology.
- the local stakeholders’ consultation has been performed in accordance with host country and VCS requirements.
- the environmental assessment is appropriate and sufficient.
- the monitoring plan is transparent and adequate.
- all information has been consistently applied in the VCS MR.
- the implementation of the project has been done as per description in the VCS MR.

Verification period: From 15/09/2021 to 31/12/2023

Quantity of GHG emission reductions or removals in tCO₂ equivalent achieved by the project during the verification period is as follows:

Verified GHG emission reductions and carbon dioxide removals in the above verification period:

The non-permanence risk rating (%)	24.0%
If applicable, the Long-term Average (LTA), whether it has been properly updated, and if it has been reached.	NA
Whether a loss has been appropriately accounted for, in accordance with the VCS Program rules, if applicable.	NA

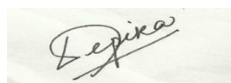
ii) Complete the table below:

Vintage period	Baseline emissions (tCO ₂ e)	Project emissions (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Buffer pool allocation (tCO ₂ e)	Reductions VCU (tCO ₂ e)	Removals VCU (tCO ₂ e)	Total VCU issuance (tCO ₂ e)
Year 1 (15 September 2021 – 31 December 2021)	24,316.95	-2,765.47	698.76	3,147.94	9,617.29	9,968.48	19,585.77
Year 2 (1 January 2022 – 31 December 2022)	591,010.01	-83,265.35	19,875.60	70,898.16	276,786.56	224,510.84	501,297.40
Year 3 (1 January 2023 – 31 December 2023)	2,031,385.22	-455,592.76	76,040.96	281,137.00	913,563.31	890,267.1616	1,803,830.47
Total	2,646,712.18	-541,623.59	96,615.32	355,183.1	1,199,967.15	1,124,746.49	2,324,713.64

5.3 Ex-ante vs Ex-post ERR Comparison

Vintage period	Ex-ante estimated reductions/removals	Achieved reductions/removals	Percent difference	Explanation for the difference
Year 1 (15 September 2021 – 31 December 2021)	21,231	22,734	+7%	Buffer pool allocation impacted slightly the difference following new AFOLU NPRR.
Year 2 (1 January 2022 – 31 December 2022)	547,456	572,196	+5 %	Buffer pool allocation impacted slightly the difference following new AFOLU NPRR.
Year 3 (1 January 2023 – 31 December 2023)	543,554	2,084,967	+284 %	Increase in the amount of hectares. ³ Please see Section 3.3 for the justification of fields undergoing full eligibility check and QA/QC Process.
Total	1,112,241	2,679,896.74	+ 107 %	N/A

Approved by



Deepika Mahala

Technical Manager

Earthood Services Limited

Date: 12- September -2025

Place: Gurugram, Haryana, India

³ Due to the nature of grouped projects and inclusion of new PAIs, different PAIs will implement different and improved practices and therefore lead to an increase in overall VCUs and ERRs. The rate of increase in VCUs is proportionate to the increase of hectares due to the addition of new PAIs in the grouped project. For more information please see Section 3.3 on Grouped Projects.

APPENDIX I: COMMERCIALLY SENSITIVE INFORMATION

As per the definition of commercially sensitive information mentioned in VCs standard 4.5 and VCS program definition A commercially sensitive information is

“Trade secrets, financial, commercial, scientific, technical or other information whose disclosure could reasonably be expected to result in a material financial loss or gain, prejudice the outcome of contractual or other negotiations or otherwise damage or enrich the person or entity to which the information relates. Also referred to as “Commercially Sensitive Information”; or “ Internal policy decisions, classified, financial, commercial, scientific, technical or other information whose public disclosure could reasonably be expected to undermine or negatively affect the development and/or implementation of a program, or damage national security. Also referred to as “Program Sensitive Information”

As per the definition The project proponent has designated certain materials such as the VMD0053 report, the breakdown of stratification clusters, and model parameters as commercially sensitive due to their proprietary nature. The RothC model has been specifically parameterized using data that Agreeena acquired through significant financial investment and collaboration with external researchers. Disclosure of these parameters, data sources, or model adaptations would reveal intellectual property that forms a core part of Agreeena’s competitive advantage.

Furthermore, Agreeena has developed a novel stratification approach in alignment with VM0042 version 2.0, incorporating specific criteria, thresholds, and spatial analyses. Making this methodology public could allow competitors particularly those offering stratification services to replicate it without incurring equivalent development costs. This could diminish Agreeena’s market position and reduce broader incentives for innovation and investment in model and stratification development.

The proponent has already made publicly available sufficient information through the MVR to allow for full replication of Emission Reduction Removals (ERRs), thereby meeting transparency requirements while appropriately protecting proprietary information.

Section	Information	PP’s Justification	VVB’s Assessment method and conclusion
Appendix 2	Soil Sampling Protocol, the procedure used by AgreeenaCarbon in accordance to methodology requirements.	Is not directly tied to the quantification or the setting of the baseline or additionality tests. All requirements laid out in VCS 4.7 will be answered in the body of the MR.	Soil sampling protocol is considered as commercially sensitive as the procedure is used by Agreeena Carbon. However The soil sampling protocol is not related to the quantification procedure therefore it is in line to the commercially sensitive

			information as per VCS standard v. 4.7
Appendix 3	QA/QC Table, exemplifying the flagging process	Is not directly tied to the quantification or the setting of the baseline or additionality tests. All requirements laid out in VCS 4.7 will be answered in the body of the MR. The figure is already presented in the body of the MR.	The QA/QC table is already present in the Monitoring Report. The QA/QC procedure is not related to the Quantification process or baseline or additionality tests. Therefore Appendix 3 is inline as per in line to the commercially sensitive information as per VCS standard v. 4.7.
Appendix 4	Emissions Reduction and Removals	Is provided as a public attachment not directly tied to the quantification or the setting of the baseline or additionality tests. All requirements laid out in VCS 4.7 will be answered in the body of the MR to the MR..	Public version of the Emission reduction is provided in the MR. Therefore the Emission Reduction spreadsheet i.e Appendix 4 is inline as per in line to the commercially sensitive information as per VCS standard v. 4.7.
Appendix 6	Accounting for leakage from diversion of Biomass Residue used for energy applications in the Baseline Scenario, summary of how the analysis is done	Is not directly tied to the quantification or the setting of the baseline or additionality tests. All requirements laid out in VCS 4.7 will be answered in the body of the MR. The values are traceable in the ERR spreadsheet.	The leakage values and calculations are traceable in the Emission Reduction spreadsheet and is not directly related to the quantification, Leakage and additionality. Therefore Appendix 6 is inline as per in line to the commercially sensitive information as per VCS standard v. 4.7.
Appendix 7	Productivity reporting for future assessment of LEakage Leakage due to biomass declines(Pwp,P)	Is not directly tied to the quantification or the setting of the baseline or additionality tests. All requirements laid out in VCS 4.7 will be answered in the body of the MR.	Productivity reporting for future assessment of Leakage Leakage due to biomass declines(Pwp,P) is not directly related to the Quantification, Baseline or additionality. Any public requirements would be presented in the MR. Therefore Appendix 7 is inline as per in line to the commercially sensitive information as per VCS standard v. 4.7.

Supplementary Calculation Material	Calculation step-by-step supplementary material contains code from RothC and model-building information.	Per the definition of sensitive information can be “scientific, technical or other information whose public disclosure could reasonably be expected to undermine or negatively affect the development and/or implementation of a program.”	Code From RothC is considered as “scientific, technical or other information whose public disclosure could reasonably be expected to undermine or negatively affect the development and/or implementation of a program.” Therefore it is inline as per the commercially sensitive information stated in VCS standard v. 4.7.
VMD0053 Report and IME Report	Containing full validation and calibration of the RothC model built by Agreea.	Per the definition of sensitive information can be “scientific, technical or other information whose public disclosure could reasonably be expected to undermine or negatively affect the development and/or implementation of a program.” However a public version of the MVR has been uploaded barring the sensitive information for the current verification period	There are several data used in the preparation of the Model Validation Report (MVR) which are technical and provide exclusivity and conservativeness to the project. Therefore, several sections of the MVR have been considered commercially sensitive, and a public version of the MVR has been provided with sensitive information redacted from the public domain.
Supplement for Clustering of Strata	Breakdown of clusters for stratification approach.	Per the definition of sensitive information can be “scientific, technical or other information whose public disclosure could reasonably be expected to undermine or negatively affect the development and/or implementation of a program.”	Breakdown of clusters for stratification approach is in line to the definition of sensitive information whose public disclosure could reasonably be expected to undermine or negatively affect the development and/or implementation of a program.”

<i>Section</i>	<i>Information</i>	<i>PP's Justification</i>	<i>VVB's Assessment method and conclusion</i>
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Section 2.8.5.2 Baseline and Carbon pool initialization	Describing the optimization process introduction	Not necessary for the traceability or reproduction of the model results or ERRs. Refers to information that can be considered proprietary scientific development (parameter choices, data processing and data imputation algorithms).	Not necessary for the traceability or reproduction of the model results or ERRs. Refers to information that can be considered proprietary scientific development (parameter choices, data processing and data imputation algorithms).
Section 2.12.1 Data clustering and k-fold validation	Description of the approach to group clusters to determine the combinations.	Not necessary for the traceability or reproduction of the model results or ERRs. Partial redaction is done in order to provide a clear picture of the methods for clustering.	Not necessary for the traceability or reproduction of the model results or ERRs. Partial redaction is done in order to provide a clear picture of the methods for clustering.
Section 4, Conclusions Related to Results	Several paragraphs and sentences related to the combinations presented in the project.	Not necessary for the traceability or reproduction of the model results or ERRs. Partial redaction is done in order to show the necessary results for the model output.	Not necessary for the traceability or reproduction of the model results or ERRs. Partial redaction is done in order to show the necessary results for the model output.
Appendix (Section 6.1) (MVR)	Declaration of CFGs	Not necessary for the traceability or reproduction of the model results or ERRs. Refers to information that can be considered proprietary scientific development (parameter choices, data processing and data imputation algorithms).	The data on CFGs is needed for model calibration and validation but not necessary for the traceability or reproduction of the model results or ERRs. This data can be considered proprietary scientific development (parameter choices, data processing and data imputation algorithms). Hence is commercially sensitive from Project Proponent's perspective and cannot be made available in public domain.

APPENDIX II: ACRONYMS

Abbreviations/ ACRONYMS	Full texts
GENERAL	
AFOLU	Agriculture, Forestry and Other Land Use
BE	Baseline Emission
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
CO ₂	Carbon di oxide
CO	Conservation Outcomes
CP	Crediting Period
DR	Desk Review
EI	External Individual
ER	Emission Reductions
ESPL	Earthood Services Private Limited
FAR	Forward Action Request
GHG	Green House Gas
GPS	Global Positioning System
Ha	Hectares
NGO	Non-Governmental Organization
PAI	Project Activity Instances
PD	Project Description
PP	Project Proponent
RS	Remote Sensing
SDG	Sustainable Development Goals
SOP	Standard Operating Protocol
tCO ₂ e	tonnes (t) of carbon dioxide (CO ₂) equivalent (e)
UNFCCC	United Nations Framework Convention on Climate Change
V	Version
VCS	Verified Carbon Standard
VCUs	Verified Carbon Units
VER	Verified Emission Reduction
VVB	Validation and Verification Body
VVS	Validation and Verification Standard
MVR	Model validation report

APPENDIX III: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWER

Competence Statement			
Name	Kaviraj Singh		
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, AM0073, AMS-III.AU. VM0042		
Local expert	YES (India)		
Financial Expert	YES		
Technical Reviewer	YES		
TA Expert (X.X)	YES (TA 1.1, TA 1.2, TA 3.1, TA 13.1, TA 13.2)		
Reviewed by	Shifali Guleria (Quality Manager)	Date	13/07/2022
Approved by	Deepika Mahala (Technical Manager)	Date	13/07/2022

Competence Statement	
Name	Shreya Garg
Country	India
Education	M.Sc. (Climate Science & Policy), TERI University
Experience	9 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	Parul Srivastava		
Education	PhD Forest Ecology and Environment M.Sc. Botany B.Sc. Botany and Chemistry		
Experience	20 years		
Field	Forestry		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	NO		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (14.1)	YES		
Reviewed by	Shifali Guleria (Quality Manager)	Date	13/04/2023
Approved by	Deepika Mahala (Technical Manager)	Date	13/04/2023

Name	Dr. Sadaf Nazneen
Education	PhD (Environmental Sciences)
Experience	5+ Years
Field	Climate Change & Environment
Approved Roles	
Team Leader	NO
Validator	YES
Verifier	YES
Methodology Expert	NO
Local expert	NO
Financial Expert	NO
Technical Reviewer	NO
TA Expert (X.X)	YES (14.1)

Reviewed by	Shifali Guleria (Quality Manager)	Date	11/09/2024
Approved by	Deepika Mahala (Technical Manager)	Date	11/09/2024

Competence Statement			
Name	Riya Sharma		
Education	M.Sc. Biodiversity & Conservation		
Experience	1+ years		
Field	Climate Change & Environment, Forestry		
Approved Roles			
Team Leader	Yes (VM)		
Validator	Yes (VM)		
Verifier	Yes (VM)		
Local expert	Yes (India)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Reviewed by	Shifali Guleria, Quality Manager	Date	29/11/2022
Approved by	Deepika Mahala, Technical Manager	Date	29/11/2022

Competence Statement			
Name	Rahi Sarkar		
Education	M.Sc. Ecology and Environmental Studies B.Sc. Forestry		
Experience	NA		
Field	NA		
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	Shifali Guleria (Quality Manager)	Date	31/10/2022
Approved by	Deepika Mahala (Technical Manager)	Date	31/10/2022

Competence Statement			
Name	Zacc Farodoye		
Education	BA(Hons) Economics		
Experience	5 Years		
Field	Renewable Energy, Utilities, Property, and Finance.		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	YES (United Kingdom)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Trainee	YES		
Reviewed by	Shifali Guleria (Quality Manager)	Date	30/03/2023
Approved by	Deepika Mahala (Technical Manager)	Date	30/03/2023

Competence Statement			
Name	Carolina Tapoc		
Education	Bachelor's and Master's in Dental Medicine		
Experience	1 years		
Field	Dentist		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	YES (Romania)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	NO		
Reviewed by	Shifali Guleria (Quality Manager)	Date	17/07/2023
Approved by	Deepika Mahala (Technical Manager)	Date	17/07/2023

Competence Statement			

Name	Waris Hooda		
Education	Master of Science (Geo-Information Science and Earth Observation) Bachelor of Engineering (Computer Engineering)		
Experience	1+ years		
Field	Geo-Information Science and Earth Observation (Specialization: Geo-informatics)		
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	Shifali Guleria (Quality Manager)	Date	08/12/2022
Approved by	Deepika Mahala (Technical Manager)	Date	15/12/2022

Competence Statement			
Name	Ashok Gautam		
Country	India		
Education	M. Sc. (Environmental Sciences) M. Tech. (Energy & Environmental Management)		
Experience	16 Years +		
Field	Energy, Climate Change & Environment		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	AMS-I.D., AMS-I.A., AMS-I.C., AMS-I.E, AMS-II.D., AMS-II.G., AMS-III.E., AMS-III.H., AMS-III.Q, AMS-III.Z., AMS-III.AV., AMS III.AR, AM0029, AM0025, AM0056, ACM0001, ACM0002, ACM0004, ACM0012, ACM0006, AM0018, ACM0017, ACM0009, AM0034, AMS.I.B, ACM0016, AMS-III.BL, AMS-II.L, AMS-I.I., AMS-III.A.O., ACM0010, ACM0025		
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)		
Reviewed by	Shifali Guleria	Date	06/03/2023

Approved by	Deepika Mahala	Date	06/03/2023
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Competence Statement			
Name	Deepika Mahala		
Country	India		
Education	M. Sc. (Environment Management), GGSIP University B.Sc. Hons. (Chemistry), Sri Venkateshwar College, DU		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	ACM0002, AMS.I.D., AMS.I.A, AMS.III.AV, AMS.II.G, AMS-II.C		
Local expert	YES (India, Bangladesh)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2, TA 3.1, TA 13.1, TA 1.1)		
Reviewed by	Shifali Guleria (QM)	Date	25/09/2023
Approved by	Kaviraj Singh (MD)	Date	25/09/2023

Competence Statement			
Name	Dr. Napolion Borah		
Education	M.Sc. in Ecology & Environmental Science, Ph.D. in Forest Ecology		
Experience	13 Years (4 years in Measuring and Monitoring Forest Carbon Stocks)		
Field	Forest Ecology and Climate Change		
Approved Roles			
Team Leader	NO		
Validator	NO		
Verifier	NO		
Methodology Expert	NO		
Local expert	YES (India)		
Financial Expert	NO		
Technical Reviewer	NO		
TA Expert (X.X)	YES (TA 14.1)		
Reviewed by	Shifali Guleria (Quality Manager)	Date	08/08/2023
Approved by	Deepika Mahala (Technical Manager)	Date	08/08/2023

APPENDIX IV: LIST OF DOCUMENTS REFERRED

Ref no.	Author	Title	Reference to the document	Provider
1	PP	Registered VCS Project Description (PD)	Version 1.3 dated 18/12/2024	PP
2	VCS	VCS Project Description template	Version 4.2	Others
3	VCS	VCS Program Guide	Version 4.4	Others
4	VCS	VCS Standard	Version 4.7	Others
5	VCS	VCS Validation and Verification Manual	Version 3.2	Others
6	VCS	VCS Program Definitions	Version 4.5	Others
7	VCS	VCS AFOLU Non-Permanence Risk Tool	Version 4.2	Others
8	VCS	VM0042 Methodology for Improved Agricultural Land Management	Version 2.1	Others
9	VCS	VMD0053 Model Calibration Validation and Uncertainty Guidance for the Methodology for Improved Agricultural Land Management	Version 2.0	Others
10	UNFCCC	CDM Standard: Sampling and surveys for CDM project activities and programmes of activities	Version 9.0	Others
11	UNFCCC	CDM Guideline: Sampling and surveys for CDM project activities and programmes of activities	Version 4.0	Others

12	VERRA	VCS Project webpage https://registry.VERRA.org/app/projectDetail/VCS/4022	Last accessed on 21/02/2025	Others
13	VERRA	VCS Project Description template	Version 4.2	Others
14	VERRA	VCS Non-Permanence Risk Report template	Version 4.0	Others
15	PP	VCS Non-Permanence Risk report	-	PP
16	PP	Net GHG Emission Reductions and Removals spreadsheet	-	PP
17	PP	KML file of project boundary	-	PP
18	PP	Separate KML files of field boundaries of included countries Bulgaria, Denmark, Estonia, Latvia, Lithuania, Romania, UK, Moldova, Ukraine and Spain	-	PP
19	PP	Benefit contracts (several, sample basis)	-	PP
20	PP	Benefit contract terms and conditions	-	PP
21	Agreena	https://agreena.com/	Last accessed on 21/02/2025	PP
22	PP	AgreenaCarbon Platform IT Environment of the Agreena Carbon Platform	-	PP
23	PP	Declaration of the AgreenaCarbon Project	23/02/2023	PP
24	PP	Partner Agreement between PP and Danish Agro A.M.B.A	11/10/2022	PP
25	PP	Partner Agreement between PP and Asociación agrupación de producción integrada Galpagro (Balam)	30/06/2022	PP
26	PP	Consultant Agreement between Agreena ApS and Global Carbon Initiatives Limited	16/08/2022	PP

27	PP	Sales Partner Agreement between PP and Sisteme Agro Digitale (Tudor Sales) (Romania)	06/09/2022	PP
28	PP	Partner Agreement between PP and Proteh-Agro, SRL (Moldova)	16/09/2021	PP
29	Ministry of Foreign Affairs of Denmark, The Trade Council	Market Search Hungary, Proposal Prepared for Agreeena ApS	12/09/2022	PP
30	Ministry of Foreign Affairs of Denmark, The Trade Council	Market Search Go-to-Market and Expansion/ Poland	05/09/2022	PP
31	Ministry of Foreign Affairs of Denmark, The Trade Council	Partner Search in Romania	13/09/2022, 04/11/2022	PP
32	PP	Farmer journey document	-	PP
33	PP	AgreeenaCarbon Help center screenshot	-	PP
34	PP	Farmer Onboarding flow document	-	PP
35	PP	Field validation process document	-	PP
36	DNV	Agreeena Carbon Validation Audit	17/01/2022	PP
37	PP	Screenshot of filled farmers information in Agreeena Platform	-	PP
38	PP	Recruitment Process		PP
39	PP	Tillage Manual presentation		PP
40	PP	Stakeholder Engagement and Risk Analysis document	-	PP
41	PP	Terms of reference for Advisory Board	-	PP

42	PP	Implementation of Remote-Sensing Technology document	-	PP
43	VERRA	Comments received by Verra during the public comment period 20 January – 19 February 2023 of the AgreeenaCarbon Project (project ID4022)	20/02/2023	PP
44	PP	AgreeenaCarbon Risk Tool_Financial_Viability_Assessment-Model	-	PP
45	PP	AgreeenaCarbon_Risk Tool_Adaptive Management Plan	-	PP
46	PP	KML file of Baseline data for PAIs under first verification	-	PP
47	PP	Cover Crop Transition from 2019/20 to 2020/21 document	-	PP
48	PP	Carbon removals calculation tutorial	-	PP
49	PP	Python files – IPCC carbon calculator main	-	PP
50	PP	Farmers signed contracts	Various	PP
51	PP	Screenshots of farmers information in Agreeena website dashboard with user ID	-	PP
52	PP	Model Calibration validation report	-	PP
53	PP	Responses received from PP against IME's comment	-	PP
54	PP	Agreeena Field description table	-	PP
55	PP	Agreeena SOC Monitoring Protocol	-	PP
56	PP	Records of project level meetings (online and offline)	-	PP
57	PP	Records of local level meetings (invitation proof and invitee list)	-	PP
58	PP	Records of farmers feedback and responses	-	PP

59	PP	Agreena Supplier code of conduct	-	PP
60	PP	Agreena Grievance and Complaints Procedure	-	PP
61	PP	Crop list	-	PP
62	Earthood	On-site photographs and audit records		Others
63	Earthood	Filled attendance lists		Others
64	PP	Recording received of Ukrainian farmers' field	-	PP
65	Google earth	https://www.google.com/earth	Last accessed on 22/10/2023	Others
66	IPCC	2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 Agriculture, Forestry and Other Land Use https://www.ipcc-nggip.iges.or.jp/public/2019rf/vol4.html	Last accessed on 21/02/2025	Others
67	IPCC	IPCC Fifth Assessment Report https://www.ipcc.ch/report/ar5/wg1/	Last accessed on 01/08/2023	Others
68	Agreena	Start date HTML file	-	PP
69	EO Browser	https://apps.sentinel-hub.com/eo-browser/?zoom=9&lat=42.37797&lng=12.18274&themeld=DEFAULT-THEME&visualizationUrl=https%3A%2F%2Fservices.sentinel-hub.com%2Fogc%2Fwms%2F963c9e66-1271-4862-82ab-3457709f4237&datasetId=IO_LULC_10M_ANNUAL&fromTime=2022-01-01T	Last accessed on 21/02/2025	Others
70	IME	Approved IME Model Validation Report	-	Others
72		https://voldgiftsinstitutet.dk/wp-content/uploads/2015/01/rules-on-mediation.pdf	-	Others

73		https://www.gov.uk/government/publications/code-of-good-agricultural-practice-for-reducing-ammonia-emissions/code-of-good-agricultural-practice-cogap-for-reducing-ammonia-emissions Good agricultural and environmental condition of land (GAEC)	-	others
74	Agreena	AgreenaCarbon_Fertilizers_Master_Table	-	PP
75	Agreena	Country baseline breakdown		PP
76.	-	On-site and Remote site visit documents and photographs	-	-
77.	-	Michels (2022), Regenerative Agriculture Effects on Invertebrate and Bird Communities and Insect-Provided Ecosystem Services, South Dakota State University	-	-
78.	-	Carrié, R., Ekroos, J., & Smith, H. G. (2018). Organic farming supports spatiotemporal stability in species richness of bumblebees and butterflies. Biological Conservation, 227, 48–55. https://doi.org/10.1016/j.biocon.2018.08.022	-	-
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103	-	https://ec.europa.eu/eurostat/databrowser/view/apro_cpshr/default/table?lang=en&category=agr.apro.apro_crop.apro_cp.apro_cpshr	-	-
104	-	https://www.fao.org/faostat/en/#data/QL	-	-
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134	PP	Eurostat (lan_lcv_oww) databases	-	-

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135.	PP	Photographs of : 1. Call logs 2. Field survey inspection 3. Webinars	-	-
136	PP	Agreena Cultural Playbook	-	-
137	PP	Grievance mechanism: Agreena's Internal IT system Photograph	-	-
138	PP	Adaptive Management plan	-	-
139	PP	Agreena Permanence Management Plan	-	-
140	PP	Agreenacarbon Project Boundaries	-	-
141	PP	Financial Viability assessment Model	-	-
142	PP	Land Tenure risk-mitigation	-	-
143	PP	Financial Model	-	-
144	PP	https://joint-research-centre.ec.europa.eu/document/download/26b6a16d-2559-45ae-a27e-2f32cb80079f_en?filename=09_pesetaiv_wildfires_sc_august2020_en.pdf	-	-
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150	Verra	Verra Registry Earthhood as VVB	-	Verra website
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163	PP	see spreadsheet "VCS MR_AgreenaCarbon 4022_List of AgreenaCarbon Eligible Fields_5AUG2025_CommerciallySensitive"		

164	PP	VCS_Methodology_Deviation_Assess_Biomas s_Leakage		
165	PP	VCS MR_AgreenaCarbon_ERR_spreadsheet _PRR2_6Aug2025_CommerciallySensiti ve		
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APPENDIX V: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUESTS

Table 1. Remaining FAR from validation and/or this verification

FAR ID	01	Section no.		Date : 08/11/2023
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Description of FAR

The following FAR is raised on the tillage model. VVB at the first verification assessment shall address this.

Currently, the validation process has indicated that the binary and ternary F1 scores for the UK and North Eastern Europe exhibit a satisfactory range of results of 0.67 and 0.68, respectively. However, a different scenario emerges for Central Europe, Iberian Peninsula, and South Eastern Europe, where the ternary F1 scores fall short of expectations, despite fairly satisfactory binary F1 scores. It is noteworthy that positive strides are being made through the expansion of Agreeena's dataset and fine-tuning of model parameters. As part of Earthood's assessment, the model's outputs are undergoing further cross-validation within each respective climatic region, in strict accordance with the QA/QC procedures outlined in the PD.

Agreeena will continue to invest in ground truth data collection across all regions that the models will be applied to. Models will be retrained on a yearly basis before being used to verify on a specific harvest year. The retraining of the data is occurring now and will be completed throughout September and October 2023 prior to verification completed. As additional evidence, regional performance of last year's tillage verification model per Agreeena's Standard Operational Procedure on Tillage is presented in the table below.

Region	Ternary F1 score	Binary F1 score (conservation vs conventional)	# fields in validation set
UK	0.67	0.77	972
Central Europe	0.60	0.63	143
North-Eastern Europe	0.68	0.74	511
Iberian Peninsula	0.47	0.5	151
South-Eastern Europe	0.60	0.66	200

Project participant response

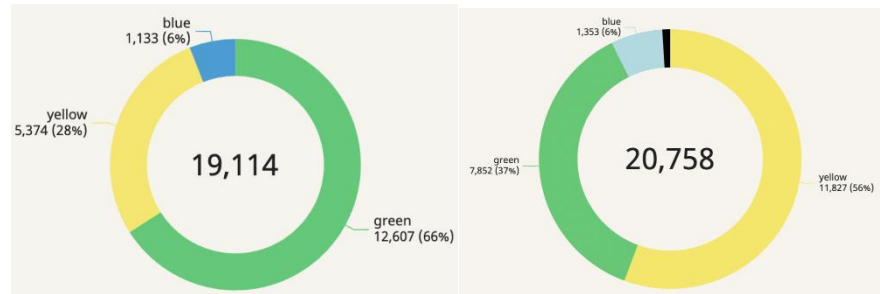
Date : 19/03/2024

Tillage Verification:

Agreeena has conducted two live demos in response to this finding raised by the VVB. The regional models have improved to the acceptable validation threshold of 0.67 specified by the VVB and the code was run for the VVB during the demos that took place on the 22nd of November and the 12th of December. Recordings were done in each demo and have been attached here as further evidence to demonstrate the acceptability of the tillage verification for coming verification periods.

As a key portion of this verification finding, ground truth data has been provided to demonstrate that beyond the new F1 scores that are being used for future verifications, the scores will continue to improve, lessening the reliance and weight on the QA/QC flagging system. The

current F1 scores are below and the comparison of flags in relation to the F1 scores are presented below to show that due to the rigorous nature of our QA/QC system, there were a comparable number of flags to account for the low remote sensing scores.



In addition, Agreena has provided all ground truth data files (10GB) in an external drive in order to provide assurance to the model and the training of the model. Ground truth and satellite image stats shared contains all data used to train and test our European tillage models.

- Sentinel-1, Sentinel-2, SoilGrids, ECMWF weather
- **field_latitude, field_longitude**: the centroid of each field
- **till_type_code**: the label as determined by one of our in-field data collectors
- **till_type_visit_{N}** and **gt_date_visit_{N}** represent individual field visits
- **field_season_till_type_code**: the final (most intensive) tillage type for the field

Region	Ternary F1 score	Binary F1 score (conservation vs conventional)	# fields in training set	# fields in test set
UK	0.67	0.77	8,467	972
Central Europe	0.79	0.81	4,501	543
Eastern Europe	0.74	0.78	5,327	600
Iberian Peninsula	0.67	0.82	10,536	1,176

QA/QC 2022:

As part of the verification process, the VVB asked for the number of edits made to tillage fields during the checking process as a way to ensure that the reliance is not entirely on the remote sensing models with the lower F1 scores. **The value reflected in the monitoring report in Table 4-5 is 274 fields receiving actuals (project activity) edits based on the flagging system. The Customer Success farmers called 168 farmers were contacted during CQC to check whether information entered was corrected. 8 farmers were called and further**

had edits made in their actuals (transition data). More information on the QA/QC process has been elaborated in the MR and presented in demos to the VVB.

As part of the response to this FAR, Agreeena conducted multiple demos in order to provide a full picture of the weight that is put on the remote sensing models as compared to the flags raised during QA/QC. Agreeena has also provided the VVB with the flags that were raised during the checking of baseline data, i.e. during QA and those that were raised during the checking of actuals, i.e. QC. The file will be provided for verification and the sample of the data that is presented in the table is presented below:

Farmer Reported										Final Calculate									
UPL	FEID	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Reported	Reported	Reported	Reported	Reported	Reported	Reported	Reported	Reported	Reported
UPL	FEID	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Baseline	Reported	Reported	Reported	Reported	Reported	Reported	Reported	Reported	Reported	Reported
5763	14000	Conventional	No 18	yellow	Farmer Cst CQA Meeting	Tillage addressed, and tillage baseline confirmed to be conventional.	N/A	N/A	N/A	2023-03-04	Case detail	Conventional	Reduced	No 18	green	9	20	100	100
5718	12865	Conventional	Conventional	green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conventional	Reduced	No 18	green	60	60	100	100
5826	14000	Conventional	Conventional	green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conventional	Reduced	No 18	green	40	40	100	100
1460	14000	Conventional	Reduced	yellow	Farmer Cst CQA Meeting	Tillage addressed, and tillage baseline confirmed to be conventional.	N/A	N/A	N/A	2023-03-04	Case detail	Conventional	Reduced	No 18	green	40	40	100	100
4240	14000	Reduced	Conventional	blue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Reduced	No 18	No 18	green	40	40	100	100
4074	4000	Reduced	Conventional	blue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Reduced	No 18	No 18	green	60	60	100	100
1309	10078	No 18	Reduced	blue	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Reduced	No 18	No 18	green	2	2	100	100
0465	42006	Conventional	Conventional	green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conventional	Reduced	Reduced	green	2	2	100	100
1462	12167	Conventional	Conventional	green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conventional	Reduced	Reduced	green	52	52	100	100
5273	14410	Conventional	Conventional	green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conventional	Reduced	Reduced	green	50	50	100	100
5274	14430	Conventional	Conventional	green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conventional	Reduced	Reduced	green	30	30	100	100
1163	11110	Conventional	Conventional	green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conventional	Reduced	Reduced	green	60	60	100	100
1467	14000	Reduced	Reduced	green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Reduced	Reduced	Reduced	green	50	50	100	100
1561	12077	Conventional	Conventional	green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conventional	Reduced	Reduced	green	50	50	100	100
1462	12167	Conventional	Conventional	green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conventional	Reduced	Reduced	green	52	52	100	100
1463	14000	Conventional	Conventional	green	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Conventional	Reduced	Reduced	green	50	50	100	100

The information contained within the file shows the data from the entirety of the flagging system at Agreeena that is described in detail in the PD as well as in the MR. The flags represent discrepancies in the farmer reported data and what remote sensing models have detected as well as other checks that catch the farmer inputs. The flags will result in a call to the farmer and an edit is made in case the farmer has made a mistake in their baseline reported data (input alongside farmer success representative) which is captured in the table. *The number of flags are expected to decrease relative to the farmer reported data throughout subsequent verification periods as the remote sensing models are improving in accuracy.*

Documentation provided by project participant

AgreeenaCarbon_Recording of Tillage Verification Demo 22 November 2023

AgreeenaCarbon_Recording of Tillage Verification Demo 12 December 2023

Ground Truth Data Files

Input has been provided into the MR related to the continuous improvement of the models and the QA/QC process for 2022.

AgreeenaCarbon_QAQC Flagging Outcomes_Tillage Verification 2022

VVB assessment

Date: 26/03/2024

VVB has checked the performance of tillage model through demo. The data presented was verified through ground truth data files and it was found that the tillage model has demonstrate the improved F score. The final determination of change in tillage activity in the project is not determined by only model performance rather it is also determined through other checks given in QA/QC system and the elaborate flagging system. VVB has checked the data of all flagging outcomes for the farmers reporting any deviation from the identified tillage practice change. Further the system of maintaining call records for any practice change and its including in final project data was checked and found to be existing in line with monitoring plan given in PD. VVB

found these checks sufficient to verify the tillage practice change for the first monitoring period. Given the fact that tillage model is also an important aspect in this project, it is required to update and monitor the results of model also in order to check the project compliance with its monitoring plan and QA/WC procedures, therefore VVB confirmed that the values of the tillage activity is confirmed for this monitoring period however for project adherence to its monitoring plan, the performance of revisions in the tillage model is required to be checked at next verification. FAR#01 has been closed for the tillage activity results for this monitoring period but FAR#02 is open to ensure and check the updates in project tillage model.

FAR ID	02	Section No.		Date : 07/06/2024; 23/04/2025
Description of FAR				
The next verifying VVB shall check how the recommendation provided by IME in the Third review Model Validation report Agreea V4.0 dated Sept 2023 Chapter: Outlook have been addressed by PP in the Model Validation Report, in the verification assessment. Below are the recommendations provided by IME in the IME Evaluation report. 1. We recommend to extend the data sources now in the CVD. We advise to consider the following data resources on long-term changes in soil carbon; the Catch-C project (http://www.catch-c.eu/), the long-term Rothamsted soil carbon experiments (https://www.era.rothamsted.ac.uk/), and the Swiss Agroscope long-term agriculture experiments (https://www.agroscope.admin.ch/agroscope/en/home/topics/environment-resources/monitoring-analytics/long-term-trials/zofe.html). Adding this data may also improve upon the uncertainty ranges. In particular the work could benefit from the inclusion of the wealth of soil data from the United Kingdom. 2. Considering the practise change and requirements under VM0042, it is crucial that the PC included in this project be fully additional, also in the context of European Agricultural requirements. 3. The scale of the model applicability is key to consider. As per Verra VMD0053 the model needs to be provided at least for each unique combination of CZ, PC and CFG. It could be investigated how representative a regional, broad model is on a farm level. In regional models, extremes (low, high) are often averaged out. However, each individual farm may be on a more variable spectrum, which the regional model does not capture. Considering this element, enhancing the resolution of the modelling may enhance the applicability of the modelling and may reduce the uncertainty.				
Project participant response				Date : 16/05/2025

As per the requirements set out by VMD0053 v2.0, the model shall be calibrated and validated by an Independent Modelling Expert prior to the conclusion of the first verification process, but the work should begin under validation. Therefore, this FAR should be treated under the second verification as it should be raised as a finding prior to the conclusion of the first verification.

1. Please see response to CAR ID 29 (PRR Issue 4) outlining the details related to the CVD. As per the IME's September 2023 Evaluation Note (0008.N.24-12, "Outlook" chapter) VMD0053 v2.0 permits the use of conservative substitutions or model validations in cases of data scarcity, provided such exceptions are explicitly disclosed and approved by the IME. The IME emphasizes that: "In summary, we give one type FAR in this note as a response to the requested PC/CFG/CZ replacements as requested by Agreeena. The FAR applies to a non-conservative replacement or biased model. This FAR entails that the model validation be supplemented by more data when available as a priority and/or supplemented by field-based measurements." (NMI 0008.N.24-12, p.3)

This recommendation acknowledges the data scarcity that characterizes some of these combinations by recommending that more data should be supplemented when available, and ensures that deviations from validation thresholds are temporary and systematically corrected over time, in line with the standard.

In addition to the evaluations in the November 2024 note (NMI 0008.N.24-12), Agreeena also presented to the IME an extensive plan detailing how we collected additional data to expand the CVD according this recommendation, which was approved by the IME. This data will be included in the next iteration of the MVR, addressing both model robustness and uncertainty reduction.

2. All practice changes (PCs) proposed in the project have been shown to be fully additional in strict accordance with VM0042: Regulatory-surplus test, Common-practice analysis, Barrier/financial test.
Because the project passes all three additionality tests set out in VM0042, every included practice change is fully additional both under the methodology and within the context of European agricultural requirements.
3. The scale of model applicability has been considered and therefore Agreeena implements RothC models SOC stocks and SOC changes at the field level with the finest resolution currently possible—250 m—limited only by the availability of soil maps with higher-resolution soil data.

Documentation provided by project participant

0008.N.24_Agreeena_Scenario_Verification_29OCT2024_CommerciallySensitive
1972.N.23_IME_Evaluation_Agreeena_VMD0053_3rd_review_230901_CommerciallySensitive

VVB assessment

Date: 30/05/2025

1. In response to the IME's observations, PP had emphasized data scarcity. The IME accepted the data scarcity for certain PC/CFG/CZ combinations. Additionally, IME's September 2023 Evaluation Note (0008.N.24-12, "Outlook" chapter) VMD0053 v2.0 permits the use of conservative substitutions or model validations in cases of data scarcity, provided such exceptions are explicitly disclosed and approved by the IME. The IME emphasizes that: "In summary, we give one type FAR in this note as a response to the requested PC/CFG/CZ replacements as requested by Agreeena. The FAR applies to a non-conservative replacement or biased model. This FAR entails that the model validation be supplemented by more data when available as a priority and/or supplemented by field-based measurements." (NMI 0008.N.24-12, p.3). This recommendation acknowledges the data scarcity that characterizes some of these combinations by recommending that more data should be supplemented when available, and ensures that deviations from validation thresholds are temporary and systematically corrected over time, in line with the standard. Furthermore, in the Chapter Outlook of the IME Report dated 23rd September, 2023, it is mentioned that recommendations made are outside of the scope of the VMD0053 requirements. However, these recommendations are helpful in further development of the Project. PP has provided sufficient reasons which has been accepted by IME in alignment with the VDM0053 approach.

2. On re-assessment of the additionality section of the PD by VVB, it is established that Agreeena project passes all three additionality tests set out in VM0042. Therefore, every included practice change is fully additional both under the methodology and within the context of European agricultural requirements. Closed

3. The RothC Model applied is applicable to the different climatic zones. As per VDM0053 each climate zone relevant to the project must be represented in the validation dataset, but a separate validation per climate zone is not required. Further, Agreeena validates each unique combination of PC, CFG and CZ for the single ES SOC and the three dominant soil textural classes in the project's geography have been included. A total of 60 combinations were tried for model calibration and validation out of which 53 were accepted by the IME. This has been done Furthermore, Agreeena implements RothC models SOC stocks and SOC changes at the field level with the finest resolution currently possible which is 250 metres which provides a reasonable assurance that the model fits on a farm level assessment. Closed.

The FAR raised by IME for point 1 requires action in the next verification period only. Therefore, it will be carried forward.

FAR ID	03	Section No.		Date : 07/06/2024; 23/04/2025
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Description of FAR	
During the initial assessment of project validation, PP has made the model validation report as per version 1,0 of VMD0053. However, the latest and applicable version of module VMD0053 has been version 2.0 at the time of final submission. Therefore, VVB and IME have reviewed the requirement of VM0042 and VMD0053 version 2.0 and it was confirmed that the project model is in conformance with VMD0053 version 2.0. A gap assessment has been completed by IME between Version 1 and Version 2 and has been completed by the IME confirming that Agreeena can be assessed under Version 2.0 . Moreover, in the IME Evaluation version migration report, IME informed that IME will also review the updates Agreeena has made to the existing model in order to evaluate and close outstanding recommendations. This shall be addressed by verifying VVB in the first verification. More details are provided in CAR#32 table.	
Project participant response	Date : 16/05/2025
This has already been accounted for due to the finding brought forward under validation by Verra in PRR1 where the report previously prepared by the IME was assessed and determined to be valid for version 2.0 of VMD0053. The IME was contracted for additional work and assessment and issued a report stating that the version 2.0 of VMD0053 can be an acceptable version for the assessment of the model. Therefore this finding can be treated as finalised and the report provided here is evidence of the same. This has also been submitted as part of verification assessment.	
Documentation provided by project participant	
<i>IME_evaluation_Agreeena_version_migration_CommerciallySensitive</i>	
VVB assessment	Date: 30/05/2025
VVB confirms that the MVR was migrated to VDM0053 V 2.0 and this is mentioned in the IME report issued in June 2024. Therefore, this FAR is closed.	

Table 2. CL from this verification

CL ID	01	Section no.		Date : 05/08/2023
Description of CL				

In section 1.11 Table 1-4 of the MR the following inconsistencies have been observed:

- 1) According to PD version 07, under appendix 3 "SDG indicator Analysis" row number 1 it is stated as "Over the project lifetime, the estimated total hectares should reach 10,000,000 hectares which, by the definition of regenerative agriculture is resulting in an increased area under sustainable agriculture." which is inconsistent with the MR table 1-4
- 2) According to PD version 07, under appendix 3 "SDG indicator Analysis" row number 2 it is stated as "Over the project lifetime, the estimated emission reductions and removals are equal to 26,4000,000 mtCO₂eq" which is inconsistent with the MR table 1-4
- 3) According to PD version 07, under appendix 3 "SDG indicator Analysis" row number 3 it is stated as "Over the project lifetime, the estimated total hectares should reach 10,000,000 hectares which, by the definition of regenerative agriculture is resulting in an increased area under sustainable agriculture. " which is inconsistent with the MR table 1-4

PP is requested to clarify the following inconsistencies and also provide evidences in support of the following SDG Contributions.

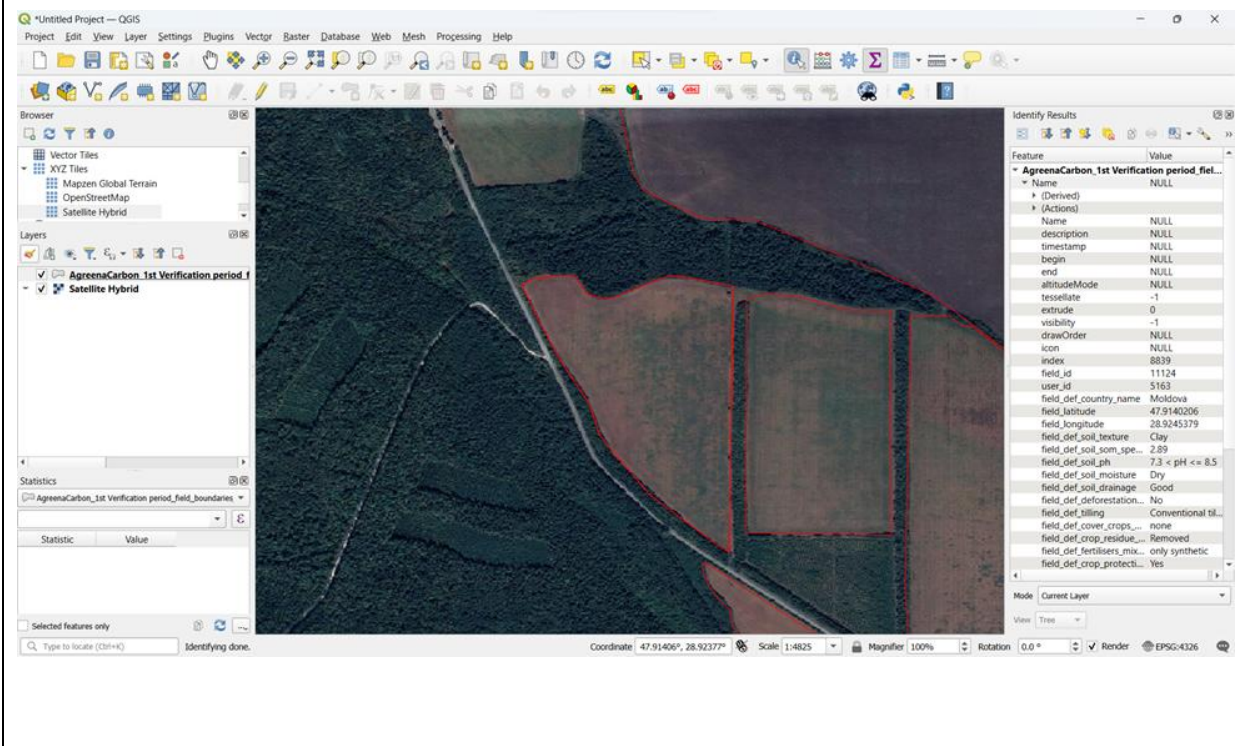
Project participant response	Date : 15/09/2023
<i>The error was identified and addressed in the Monitoring report v2.</i>	
Documentation provided by project participant	
<i>Monitoring report v2</i>	
VVB assessment	Date: 08/11/2023
VVB has assessed the revised monitoring report and found out that the inconsistencies have been updated successfully. Therefore CL#01 is closed.	

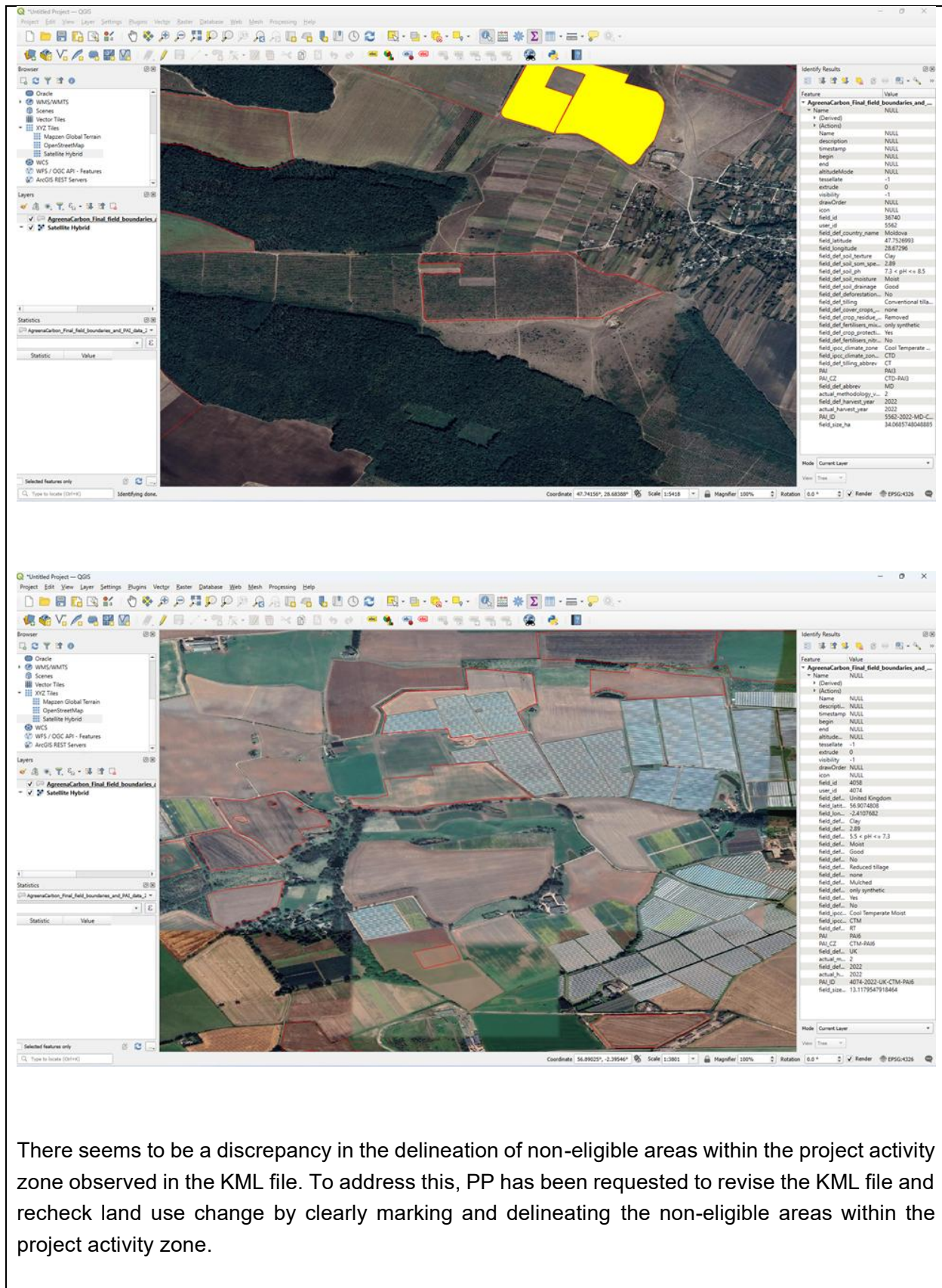
CL ID	02	Section no.		Date : 05/08/2023
Description of CL				
The area mentioned in MR is 517,237.98 ha, while the area coming from KML file named "AgreenaCarbon_Final_field_boundaries_and_PAI_data_20231024" is 517431.57 hectares. Please clarify and confirm the area.				
Project participant response				Date : 13/11/2023
AgreenaCarbon does not use QGIS to calculate the area of field boundaries in the KML file provided with the documentation because QGIS uses a single projection for the entire file (native projection system). This makes the calculation fast, but reduces accuracy. Instead, we use in-house Python code which determines the Universal Transverse Mercator (UTM) zone for each field boundary individually, and reprojects each boundary based on that UTM projection to have a more accurate and localised boundary and hectare count (area). In order to reproduce the area, the UTM projection must be used.				
Documentation provided by project participant				
VVB assessment				Date: 22/12/2023

The MR document entitled “AgreenaCarbon_Monitoring_Report_1st_Verification_Period_V4_20231219_Clean.docx” provided by PP presents conflicting information regarding the total project area:

1. Section 4.3.2: States the total project area as 340,534.9 hectares for 12,560 fields.
2. Table 1-2 of MR (for 790 PAIs): Indicates the total project area as 505,327.26 hectares.
3. KML: Shows a different total area of 505,519.42 hectares for 18,017 fields.

The inconsistency between these figures prompts a request for PP to clarify and reconcile the discrepancy in the reported project area. Understanding and rectifying these inconsistencies are crucial for ensuring the accuracy and reliability of the project's data and documentation.





There seems to be a discrepancy in the delineation of non-eligible areas within the project activity zone observed in the KML file. To address this, PP has been requested to revise the KML file and recheck land use change by clearly marking and delineating the non-eligible areas within the project activity zone.

Project participant response	Date : DD/MM/YYYY
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In response to the KML findings in the fields mentioned above, Agreeena has done a full analysis on these fields in order to prove that these fields are not located in 'ineligible areas' and were not subject to clearing prior to entering the program. The screenshots presented by the VVB above are assessed and addressed here. The following points are also addressed:

1. The first point is referring to fields that were approved without further consultation during the QA/QC process. This is not the total hectare count of the program and is clearly outlined in the text and will not change as this refers to the QA/QC system and the number of hectares that were approved following detection from remote sensing. **"In total, 12,560 fields (340,534.9 ha) could be approved without further consultations or admin edits made to the reported field actual practices. The data reported for these 12,560 fields were reasonable and there was not detected any discrepancies between the reported data and expected/acceptable values."**
2. The hectare count is now equal to what is presented in the latest KML. The value has changed throughout verification and validation due to findings raised by the VVB. As mentioned above and in other findings, "AgreeenaCarbon does not use QGIS to calculate the area of field boundaries in the KML file provided with the documentation because QGIS uses a single projection for the entire file (native projection system)." It is important for the VVB to note this when looking at the file that there is a different projection system. The final value of hectares is correct and as stated above: 505,327.26 hectares.
3. AgreeenaCarbon does not use QGIS to calculate the area of field boundaries in the KML file provided with the documentation because QGIS uses a single projection for the entire file (native projection system). A UTM should be used which is more accurate. KML is provided.

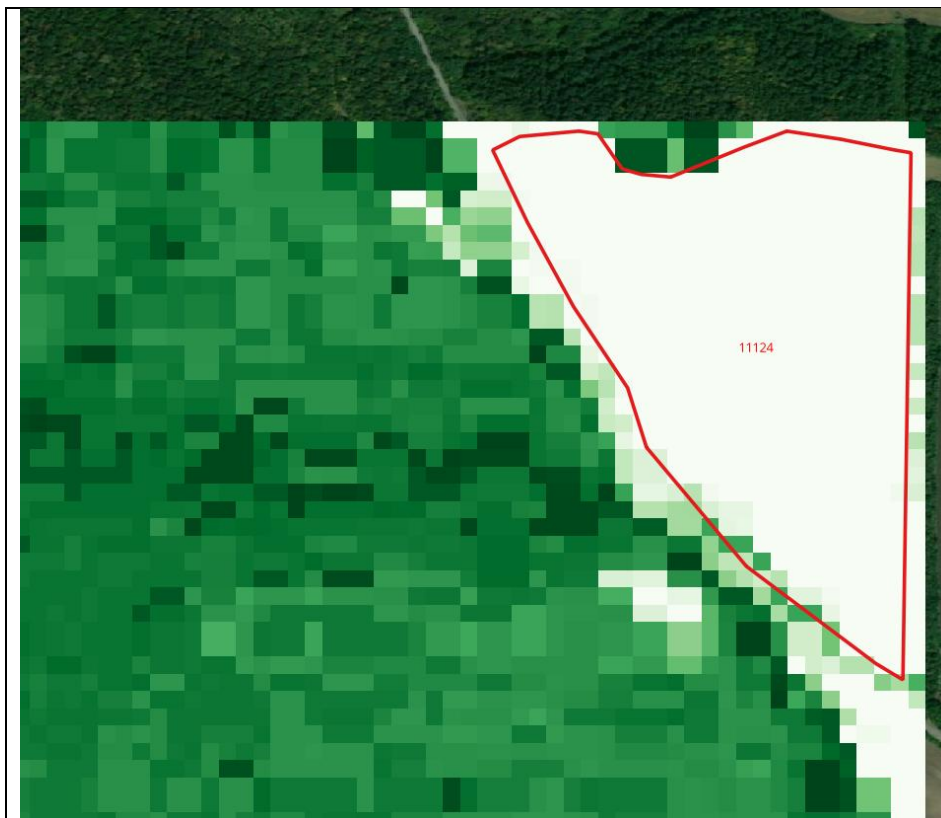
With regard to the fields presented above at risk for deforestation, the deforestation assessment was run and determined that these fields did not experience and clearing of forests or native ecosystems for the last 20 years as shown below.

The image below is an easy-to-read color-coded example from our deforestation model. We see 0.0 for both fields across all years, indicating 0 hectares were deforested.

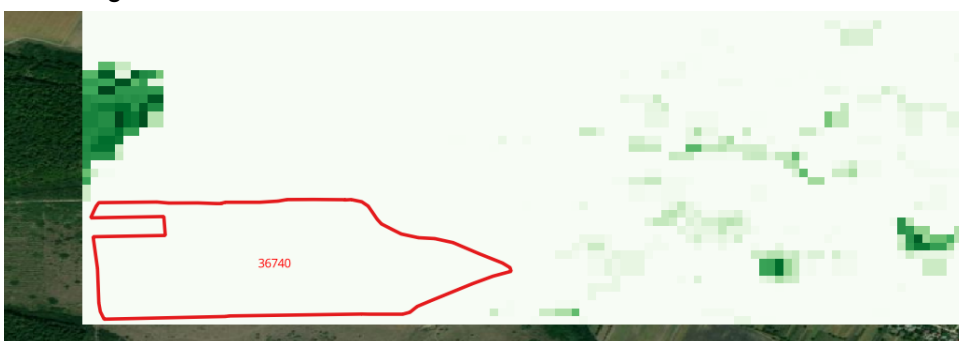
field_id	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
11124	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36740	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

The deforestation process is better understood visually, therefore I have added the images below to further aid in visually understanding the result.

First image below shows the field 11124 outlined as a red polygon. The white pixels in the image means that no forest was recorded in 2000. The green pixelated boxes around it are understood to be forest, the colour darkness indicating percentage forest cover (0-100 %). *Note: that there is a satellite image placed behind the deforestation data, which is why you see a sharp boundary between pixelated modelled imagery and real satellite imagery.*



The image below shows the same for field 36740 with no deforestation detected:



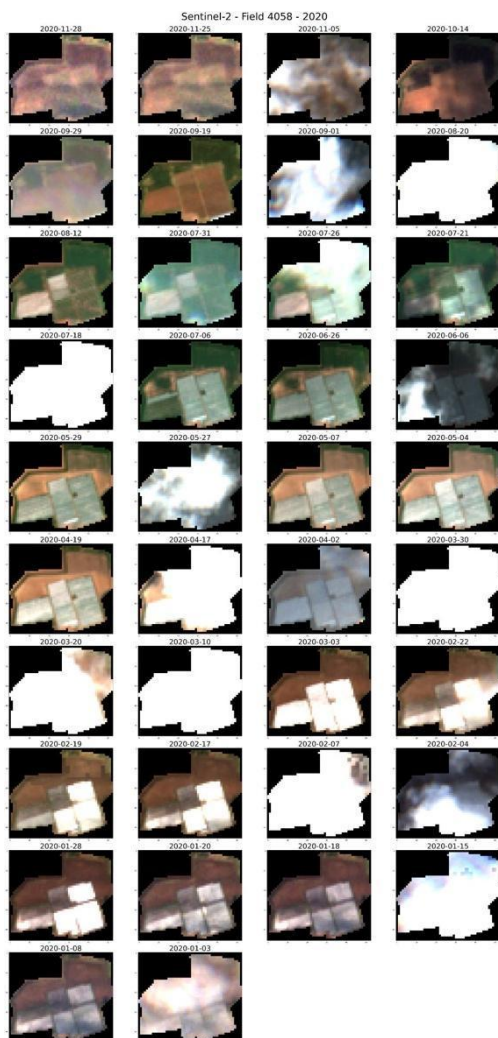
For the investigation into field 4058, imagery was assessed from the farmer's baseline period 2016 and up until the end of 2023. The farmer entered the programme in 2021 and no polytunnels were detected in the year that the farmer became an Agreea farmer. The following imagery is imagery from 2020 shows that there were no poly tunnels in 2020 and information about the baseline is as follows.

Farmer tillage baseline in ERRs: Reduced Tillage

Farmer remote sensing detected baseline: No tillage

Agreea decision from QA 2022: Yellow flag from remote sensing resulted in an assessment of the field and while farmer was regularly doing no-tillage while having polytunnels, Agreea

took the conservative decision for his baseline to be reduced tillage in order to account for the existence of the tunnels.



Documentation provided by project participant

Agreena/Earthood: Overview of 85 Field Samples (2024-01-19 11:32 GMT+1)
Agreena Carbon Assurance 2022 Tillage Verification Samples

VVB assessment

Date: 09/02/2024

VVB has checked the call logs provided as evidence for the 85 sample fields. Monitoring results were checked following MR Table 4-5 Quality Control flags and procedures. The results were found correctly reported. CL#02stands closed.

CL ID	03	Section no.	ER sheet	Date : 08/11/2023
Description of CL				

1) Under tab ER calculation some of the values are 0 under “Residue Inputs” “actual_fertiliser_n2o_emissions” PP is requested to clarify why the values are 0. 2) Under tab “Key” cell E34 and E36 “Assumptions Table-more detail needed” is written. PP is requested to clarify what details are needed.	
Project participant response	Date : 13/11/2023
1) "Residue Input" is equal to 0 when the C input from residue left on the field is 0, i.e., when there residue is removed from the field and not mulched. Regarding parameter "Actual Fertilizer N2O Emissions", it is zero when no N fertilizer is applied in the field. Please note that there are occasions where parameter "Actual Fertilisers Mixed" is indicated as "only synthetic" yet the Parameter "Actual Fertilizer N2O Emissions" is still 0. In these cases farmers have reported "Synthetic fertilizer" and applied components other than N (E.g., P or K). 2) Cell E34 and E36 corrected to "Project Calculations"	
Documentation provided by project participant	
VVB assessment	Date: 13/12/2023
1)PP has clarified that the residue input is 0 when the “C” input from the residue is not mulched and is removed from the field. PP have also clarified that the parameter value for “Actual fertilizer N2O Emissions “is 0 where the farmers have applied synthetic fertilizer and applied components other than Nitrogen. 2) The Cell E34 and E36 have been corrected to “Project calculations” from “Assumptions Table-more detail needed”. All the inconsistencies have been addressed therefore CL#03 has been closed.	

CL ID	04	Section no.		Date : 01/12/2023
Description of CL				
Section 1.1 of the MR The section requires PP to provide the implementation status of the project. It is clear that project applied technologies as given in table 1, however it is not clear from the description how all listed technologies are applied. Please provide clarity.				
Project participant response				Date : 08/12/2023
Input added into the AgreeenaCarbon Monitoring Report v4.0 into Table 1-1 including implementation status and dates of implementation.				
Documentation provided by project participant				
AgreenaCarbon_Monitoring Report_1st Verification Period_V4_20231208				
VVB assessment				Date: 13/12/2023
VVB has assessed the revised MR and found out that PP has added two columns under table 1-1 where they have provided Implementation status and the date of implementation. However it is still not clear how the technologies are being used in the implementation phase. PP is requested to clarify, CL#04 remains OPEN				

Project participant response	Date : 15/12/2023
Reference has been included in Table 1-1 to Section 3 Implementation Status of Project and specifically to Table 3-1 where implementation status is included and source data is presented. The table provides the percentage of farmers that have implemented the practices/technologies over the course of the verification period.	
Documentation provided by project participant	
VVB assessment	Date: 20/12/2023
VVB has assessed the updated MR, PP has provided the reference in table 1-1 which refers to table 3-1. In table 3-1, PP has provided the detailed description about the implementation status and the basis on which the data is presented in table 1-1, All the inconsistencies are addressed and CL#04 is closed	

CL ID	05	Section No.		Date : 22/12/2023
Description of CL				
MR section 4.3.2 Clarification is requested for the QC procedures and its results reported in section 4.3.2 of the MR. It is stated in the MR that 517,237.98 hectares were approved through QC procedures as of the end of the Verification period. Following the project's Quality Control Decision Tree procedures, PP identified 30.29% of the fields had the reported actuals changed 5887 edits were made across 5458 fields (201 users and 164,792.36 hectares). The MR reports that 170 farmers were consulted while the shared document "AgreenaCarbon_Edits Made During CQC_Tillage.xlsx" provided 274 field edits. It is required to demonstrate how the information presented in Table 4-5 Quality Control flags and procedures and results from monitoring were concluded. Furthermore, the document "AgreenaCarbon_Edits Made During CQC_Tillage.xlsx" does not provide details of no. of farmers, no. of fields, area hectares, and contact sources as provided in Table 4-5 of MR. Also, provide call logs for verification.				
Project participant response				Date : 22/01/2024

There is a mistake in section 4.3.2 and the correct total is 505,327.26 hectares as stated and this has been updated in the MR where this is stated. As a response to this clarification, Agreena has conducted two demonstrations of the QA/QC procedures that were conducted in 2022. It was agreed in one of the demos that Agreena would provide information on 85 fields and the flagging journey and changes made, if made, during the baseline data entry and the project activity data entry. The number of flags made during both the tillage baseline detection as well as the project activity detection were provided as a way to demonstrate that while the F1 scores were not deemed sufficient, there were numerous flags made and consultations to nearly every farmer during the quality check process. Overview of both systems are presented below to support the assessment:

Baseline: As specified in VM0042, farmer baseline related to ALM practices is determined via farmer attestation which Agreena does with individual validation meetings with every farmer followed by full QA system of checking the fields using remote sensing.

Project Activity: Additional checks introduced as a means to verify all the data is fully accurate through QC system of cross-checking using remote sensing as well as fuel-usage as a parameter to check all fields regardless of tillage detection.

The recordings of the call are provided as evidence as well as the 85 sample fields and their QA/QC outcome.

Documentation provided by project participant

Agreena/Earthood - Carbon Assurance (2024-01-12 11:33 GMT+1)

Agreena/Earthood: Overview of 85 Field Samples (2024-01-19 11:32 GMT+1)

Agreena Carbon Assurance 2022 Tillage Verification Samples

VVB assessment

Date: 29/02/2024

VVB has checked the call logs provided as evidence for the 85 ample fields. Monitoring results were checked following MR Table 4-5 Quality Control flags and procedures. The results were found correctly reported. CL#05 stands closed.

CL ID	06	Section no.		Date : 20/08/2024
Description of CL				

Document name: Supplement to model validation and calibration report, v4.0 dated 16/08/2023 (page 3)

Recommendation 2: Considering the setting of the Project in Europe we do recommend to also incorporate more available data from this region that covers the range in carbon stocks that can be expected in this region.

IME concluding remarks: "The IMEs have checked that the SOC and Clay content in the CVD for the two relevant climate zones (Warm temperate Moist and Cool Temperate Moist) cover the ranges in SOC and Clay that can be expected in the region (based on SoilGrids). We do recommend to indeed continue to further improve the model by including data from the UK to further strengthen the model as the Project teams indicates."

Clarification requested: VVB would like to seek clarification as per below points.

- (a) Is the recommendation stands closed? VVB would like to seek clarification the concluding remarks and explanation on how this could be addressed in the project.
- (b) Does the open recommendation affect the overall application of model in the project?
- (c) Does the open recommendation need complete closure in the first verification cycle? If not when the implementation as per recommendation shall be fulfilled, means in which verification cycle?
- (d) Does the open recommendation affect the conservativeness of ERR calculated in the first verification?

IME response

Date : 12/09/24

The 2022 ERR was based on the MVR repor v.4t of August 2023.

- (a) IMEs confirm that this recommendation can be closed. The Agreena team have done the best possible to collect as many datapoints as possible.
- (b) No
- (c) The recommendation is closed.
- (d) No

Note: in any case this was a recommendation for optimal model performance, not a requirement.

Documentation provided by project participant

VVB assessment

Date: 08/01/2025

The findings responses provided by IME has been reviewed along with updated MVR version 4.0 dated August 2023. Recommendations are closed and the model validation is fully completed as per the requirements of VMD0053. IME has confirmed that the open recommendations does not affect the conservativeness of ERR calculated for first verification period. VVB confirmed that project is correctly applying VM0042, v2.0 for the quantification approach one and the module VMD0053, v2.0 for the applied RothC model.
CL#06 stands closed.

CL ID	07	Section no.		Date : 20/08/2024
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Description of CL	
Document name: Supplement to model validation and calibration report, v4.0 dated 16/08/2023 (page 5/6) Recommendation 7: Figure 2.6 shows that cf parameter multiplication factors inversely correlate with carbon stores, particularly with the decomposition rate Ks. A reflection on what causes this range would be helpful. Provide clarification. IME concluding remarks: The closure of the recommendation could not confirmed from the document. The response from PP also suggests to refer recommendation point 6. Clarification requested: VVB would like to seek clarification as how the recommendation point 7 has been addressed and closed.	
IME response	Date : 31/10/2024
IMEs clarify that indeed this was already closed during the third IME review. See on IME evaluation Van der Voort and Ros (2023): Third review Model Validation Report Agreeana, page 2. “Determination of optimal calibrated factors (cfs) There has been a major improvement in the determination and documentation around the cf values. The approach to determine the optimal values for the calibrated factors (cf) values for each climate zone is appropriate. ”	
Documentation provided by project participant	
VVB assessment	Date: 08/01/2025
IME has clarified that the recommendation 7 has been closed based on the improvement demonstrated by PP in the determination and documentation around the cf values. VVB has reviewed the final version of model validation report and the IME evaluation report and found that all assessment points are complete now and all recommendations proposed by IME for the model has been adequately addressed by PP. CL#07 stands closed.	

CL ID	08	Section no.	Date : 20/08/2024
Description of CL			
Document name: Supplement to model validation and calibration report, v4.0 dated 16/08/2023 (page 7) Recommendation 7: Considering the lack of alternatives, we recommend that the TRM can be			

implemented, provided it is based on peer- reviewed literature and from the appropriate region. We note that the approach Tillage Rate Modifier of Jordan et al. (2022) is solely based on the United Kingdom (UK) data. Based on what the Project report shows in Figure 3.3, there is no calibration data taken from the UK region. We recommend the inclusion of data from the United Kingdom.

IME concluding remarks: The closure of the recommendation could not be confirmed from the document. The response from PP also suggests futuristic activities for the model validation uncertainty. Quoting from the document “We thank the IME for recommending the use of a UK-specific TRM. We certainly appreciate that this would be a great opportunity to reduce model validation uncertainty as we would be applying a specific calibration factor (i.e TRM) on a country level. Following your recommendation, we will prioritize the use of local science-based values as often as possible according to VMD0053.”

Clarification requested: VVB would like to seek clarification as how the recommendation point 10 has been addressed and closed.

IME response

Date : 12/09/2024

IMEs confirm that this recommendation can now be closed. The Agreeena Team has used the best available scientific knowledge on the Tillage Rate modifiers in the this geography, published by Jordon et al. (2022). There are researchers globally continuing to work on this topic, as exemplified by the recent paper by Hyun and Yoo (2024) on TRM. No UK specific TRM is available as of now. The Agreeena approach to incorporate local data when available suffices.

Documentation provided by project participant

VVB assessment

Date: 08/01/2025

VVB reviewed that recommendation point 10 has been addressed by PP and upon review of updated model run, IME has closed the recommendation. Since, there is no further clarification sought pertaining to mode functioning by IME, VVB found the finding is deemed addressed and closed.

CL#08 stands closed.

CL ID	09	Section no.	Date : 20/08/2024
Description of CL			
Document name: Supplement to model validation and calibration report, v4.0 dated 16/08/2023 (page 10)			
Recommendation 14: The Project can leverage open data sources such as SoilGrids to get an estimate. If the range overlaps the models are appropriate. If they do not overlap, we recommend extending the dataset for calibration and validation. We recommend the Project provide details			

that indicate that the CVD baseline data underpinning the calibration are representative for the baseline of the actual fields the model will be applied to..

IME concluding remarks: The closure of the recommendation could not confirmed from the document. The response from PP also suggests referring recommendation point 13

Clarification requested: VVB would like to seek clarification as how the recommendation point 14 has been addressed and closed.

IME response

Date : 12/09/2024

IMEs confirm that this recommendation was closed during the last (third) IME review. The Agreena team has put in an effort to extend the CVD so that they cover the range found in the project, as exemplified in The Third IME review Figure 1 (see below).

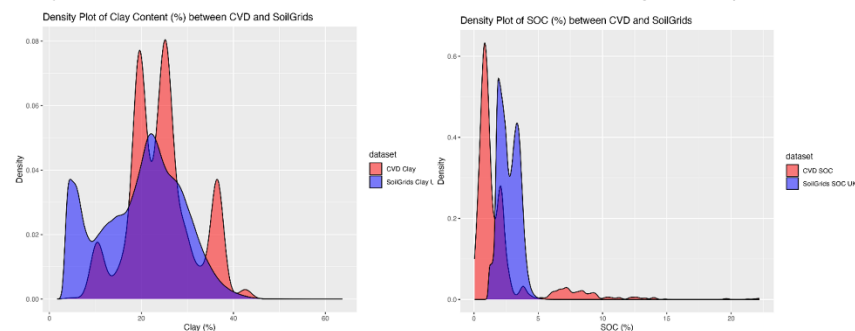


Figure 1 Overview properties United Kingdom based on SoilGrids as compared to aggregated CVD for clay (left) and SOC (right). Provided by Agreena to IME 04-09-2023.

Documentation provided by project participant

VVB assessment

Date: 08/01/2025

VVB reviewed that recommendation point 14 has been addressed by PP and upon review of updated model run, IME has closed the recommendation. Since, there is no further clarification sought pertaining to mode functioning by IME, VVB found the finding is deemed addressed and closed. CL#09 stands closed.

CL ID	10	Section no.		Date : 20/08/2024
Description of CL				
VVB request clarification from IME whether the model has been calibrated for the entire geographic area considering key variables including climate zones and soil types of the project's first activity instances.				
Please confirm the completeness of the model and its appropriateness to verify the achieved ERRs calculated in the first verification cycle (15-September-2021 to 14-September-2022).				
IME response				Date : 31/10/2024

We refer to the IME evaluation note 0008.N.24-12.

Agreena has confirmed the geography concerns Europe. IMEs recommend that the 53 PC/CFG/ES combinations can be accepted, noting a subset is conditionally accepted with an explicit FAR due to data-limitations and/or non-conservative replacements. In summary the IMEs found this:

1. The IME review of September 2023 evaluated combinations #1 up to #30, out of which 11 combinations (#5, #6, #13, #14, #19, #20, #23, #24, #25, #26 and #30) were accepted according to the VMD0053 criteria.
2. Agreena provided more information on each combination in September 2024, such as the amount of papers used. We re-reviewed in September/October 2024 these combinations (Tables 1 and 2) and (conditionally) accept the combinations #10, #18, #27 and #28, so four in total. For combination #28 we do recommend a forward action request (FAR) to collect more data and/or validate with field data, as the model residuals are biased.
3. Agreena has additionally requested a number of replacements, for a total of 38 combinations.
 - a. Agreena requested a replacement by a similar CZ, whilst PC and CFG are the same. This is already aligned with VMD0053 and is accepted. This applied to 5 combinations in total, #1, #3, #8, #41 and #50.
 - b. Agreena requested a replacement with a more conservative or highly similar CFG. This is permitted as per VMD0053, and accepted. We recommend that an effort is made for the next iteration to include more data. This applies to 12 combinations in total: #11, #15, #16, #17, #21, #29, #31, #32, #35, #51, #52, #53
 - c. Agreena requested a replacement with a less conservative CFG for 21 combinations.
This concerns either a replacement by a non N-fixing by an N-fixing crop, or the replacement of a perennial by an annual CFG.
This concerns the combinations #2, #4, #7, #9, #12, #22, #33, #34, #36, #37, #38, #39, #40, #42, #43, #44, #45, #46, #47, #48 and #49.

Replacement by a less conservative CFG is not permitted as per VMD0053. We have evaluated the possibilities given the data limitations faced by this project. There is no option for this project due to data limitations except for a non-conservative CFG replacement in these cases. We conditionally accept the non-conservative replacement with a forward action request (FAR) for each combination for which a non-conservative CFG replacement is requested.

The FAR for non-conservative CFG replacement is that the model validation be supplemented by more data when available as a priority and/or supplemented by field-based measurements. This recommendation is based on modelling and agronomic expertise. We anticipate that each PC combination will likely increase SOC stock, with the actual magnitude varying due to the impact of CFG, soil type, and climate. Following the FAR, if significant discrepancies are found between predicted and measured values, we advise re-evaluating the model.

Documentation provided by project participant

VVB assessment

Date: 08/01/2025

CL#10 stands closed based on the assessment of model presented by IME and upon the review of the assessment, VVB find deemed appropriate to raise the FAR to review the replacement of non-conservative CFG. Please refer to FAR section for the raised FAR.

Table 3. CAR from this verification

CAR ID	01	Section no.		Date : 05/08/2023
Description of CAR				
PP is requested to update the front style, size and all the tables in the report in line to the VCS Monitoring report ver 4.2 template.				
Project participant response				Date : 15/09/2023
The monitoring report v2 is fully aligned with the Monitoring report ver. 4.2 template VCS template				
Documentation provided by project participant				
Monitoring report v2				
VVB assessment				Date: 08/11/2023
PP has updated the relevant font style and tables, and the MR is now in line to VCS Monitoring report ver 4.2. CAR#01 stands closed.				

CAR ID	02	Section no.		Date : 05/08/2023
Description of CAR				
In Subsection 3.1.1 The equation Number for the following equation $LE_t = \sum_l \left(M_{manure_{prj,l,t}} * CC_{prj,l,t} * 0.12 * \frac{44}{12} \right)$ is inconsistent with VM0042 version 2.0 methodology. PP is requested to update the equation number.				
Project participant response				Date : 15/09/2023
The error was identified and addressed in the Monitoring report v2.				
Documentation provided by project participant				
Monitoring report v2				
VVB assessment				Date: 08/11/2023
The section 3.1.1 was removed from the updated MR. Please check and confirm the Therefore, the finding remains open.				
Project participant response				Date : 08/12/2023
The version 3 of the monitoring report moved Section 3.1.1. entirely to Section 5.3 in order to keep the leakage chapters together. The same information from the previous section is in v3 of the monitoring report as part of this assessment. Section 5.3 in the report references Equation 34 which is the leakage equation in VM0042 version 2.0.				
Documentation provided by project participant				
AgreenaCarbon_Monitoring Report_1st Verification Period_V4_20231208				
VVB assessment				Date: 13/12/2023

VVB has assessed the revised MR and found that all the information about leakage has been compiled to section 5.3 of the MR. Reference of Equation 34 has also been provided in detail under section 5.3.2 of the MR. The inconsistencies have been addressed therefore CAR#02 is closed.

CAR ID	03	Section no.		Date : 08/11/2023
Description of CAR				
Under section 5.4, Table 5-1 is provided for Project Emission Reduction and removals however the same could not be found in the ER sheet and therefore could not be verified. PP is requested to update the ER sheet accordingly.				
Project participant response				Date : 08/12/2023
In Table 5.1 we have input the following data:				
"Baseline emissions* or removals (tCO ₂ e)": In this field we have only included the calculated emissions of the baseline scenario (706,300). Baseline is assumed to not have removals.				
"Project emissions* or removals (tCO ₂ e)": In this field we have included the calculated emissions (385,437) and the calculated generated Removals (431,650) of the Project scenario.				
"Net GHG emission reductions or removals (tCO ₂ e)": = (BSL Emissions - ACT Emissions) + (ACTRemovals - BSL Removals) = (706,300-385,437)+(431,650) = 752,513 T CO ₂ eq				
Documentation provided by project participant				
AgreenaCarbon_Monitoring Report_1st Verification Period_V4_20231208				
AgreenaCarbon_ERRs_Monitoring report_1st Verification Period_v4_20231208				
VVB assessment				Date: 13/12/2023
In table 5-2 the value for "Baseline Emissions" is stated as 682,632 and the "project emission" is 374,781 which is inconsistent with the values provided as clarification by the PP. likewise the net GHG emission should be: (682,632-374,781)+(425,223)= 733074. The values are also inconsistent with the values provided in the ER sheet, PP is requested to update the values accordingly. CAR#03 remains OPEN				

Project participant response				Date : 15/12/2023
The values presented in the ERR sheet are now reflected in the monitoring report. These values have been updated based on the most recent (final) values and are as follows:				
Baseline emissions or removals = 682,632				
Project emissions or removals = 374,781 emissions and 452,223 removals				
Net GHG emission reductions and removals = 733,074 or (682,632-374,781)+452,223				
Documentation provided by project participant				
AgreenaCarbon_ERRs_Monitoring Report_1 st Verification period v4_20231211				

VVB assessment	Date: 20/12/2023
VVB has checked the revised ERR sheet and found that the ERR values are consistent in MR and ERR calculation sheet. CAR#03 stands closed.	

CAR ID	04	Section No.		Date : 01/12/2023
Description of CAR				
VCS MR template section 1.1 also requires PP to provide relevant implementation dates of the project in order to provide the implementation status of the project in this monitoring period. Also, this section does not include total GHG emission reductions or removals generated in this monitoring period. Please check VCS MR template section 1.1 guidelines which are as follows • A summary description of the implementation status of the technologies/ measures (e.g., plant, equipment, process, or management or conservation measure) included in the project. • The relevant implementation dates (e.g., dates of construction, commissioning, and continued operation periods). • The total GHG emission reductions or removals generated in this monitoring period.				
Project participant response				Date : 08/12/2023
The input to this finding is presented in the AgreeaCarbon Monitoring Report Section 1.1 and has been updated to include a summary of implementation status of the technologies/practices as well as the implementation dates. The GHG emissions are included as well in the Chapter.				
Documentation provided by project participant				
AgreeaCarbon_Monitoring Report_1st Verification Period_V4_20231208				
VVB assessment				Date: 12/12/2023
PP has updated the following in section 1.1 of the revised MR: • Added a summary description of the implementation status of the technologies/ measures (e.g., plant, equipment, process, or management or conservation measure) included in the project. • Added The relevant implementation dates (e.g., dates of construction, commissioning, and continued operation periods). • The total GHG emission reductions or removals generated in this monitoring period has been mentioned All inconsistencies had been addressed therefore CAR#04 is closed				

CAR ID	05	Section No.		Date : 01/12/2023
Description of CAR				
Section 4.1 of the MR The parameter tables include in this section does not require to include "equations" row. Please check MR template section 4.2 tables and complete the section by giving information as mentioned in data and parameter table template.				
Project participant response				Date : 08/12/2023

Input provided in AgreeenaCarbon Monitoring Report v4 in Parameter Tables Section 4.2 to reflect the updates to Value Monitored and Monitoring Equipment. This is now in line with the monitoring report template. In addition, F1 scores are compared to flagging process. This is outlined below:

The proportion of green flags for HY2022 was 52% (65.5% for baseline and 38.6% for actuals; Table 1). As previously demonstrated, tillage model performance in different regions was variable, with highest performance of 0.67 in the UK and Eastern Europe (Table 2).

In general we use F1 scores to assess model performance because F1 accounts for both precision and recall, which is helpful for multi-class classification. However, green flags represent the percentage agreement between reported and detected values, so the correct metric to compare flags with model performance is accuracy because it represents how often the model was correct on the validation data.

The regions with lower performance were regions containing fewer fields in HY2022. The majority of fields in the program in HY2022 were from Eastern Europe, so any comparison of model performance with the number of flags raised should weight regional performance appropriately. When model performance is calculated across all validation fields, the combined F1 score of the model is 0.66. The number of fields in the validation set follows a similar distribution to the number of fields in HY2022 i.e. the majority of fields are in countries with higher performance.

As expected, the percentage of green flags was lower than model performance. Noise and uncertainty in farmer reported data leads to this lower agreement than the accuracy of models on validation data. This uncertainty can come from a range of factors, including different interpretations and assessments of tillage practice thresholds.

When comparing flags for baseline with actuals, there was lower agreement between reported and detected values for actuals. This is also as expected because baseline practices are more aligned with the current state of agricultural practices, whereas actuals represent practice change. The ground truth data we use to train and validate our models is more closely aligned with the baseline (historic) data than actuals, hence the closer agreement. The majority of flags for actuals for HY2022 were yellow, indicating that we detected a more intense tillage practice than the farmer reported. As detailed in the Project Description, QAQC is performed on all fields, and so fuel usage data is cross referenced and where differences remain, farmers are contacted.

	# Fields	# Green flags	% Green flags
Total Baseline (CQA)			
Total Actuals (CQC)			
Total Baseline + Actuals			
Sample Baseline (CQA)			
Sample Actuals (CQC)			

CAR ID	06	Section No.		Date : 01/12/2023
Description of CAR				
Section 4.2 of the MR				
The parameter tables include in this section does not include "value monitored" row.				
Please check MR template section 4.2 tables and complete the section by giving information as mentioned in data and parameter table template.				
Project participant response				Date : 08/12/2023
Input provided in AgreeaCarbon Monitoring Report v4 in Parameter Tables Section 4.2 to reflect the updates to Value Monitored and Monitoring Equipment. This is now in line with the monitoring report template.				
Documentation provided by project participant				
AgreeaCarbon_Monitoring Report_1st Verification Period_V4_20240122				
VVB assessment				Date : 13/12/2023

PP has updated the MR and updated "value monitored" row in the revised MR. therefore CAR#06 is closed

CAR ID	07	Section No.		Date : 01/12/2023
Description of CAR				
Section 5 of the MR Project details provided in the MR is insufficient and does not provide sufficient information to reproduce the achieved ERR calculations. Please refer MR template section 5.1, 5.2 and 5.3 required PP to "Quantify the baseline/ project/ leakage emissions and/or removals, providing sufficient information to allow the reader to reproduce the calculation.				
Project participant response				Date : 08/12/2023
Full update to the Agreea Carbon Monitoring Report in Section 5.1, 5.2 and 5.3 to allow the reader to quantify the baseline project and leakage emissions. References are made to the ERRs in order to follow the line of calculation.				
Documentation provided by project participant				
AgreenaCarbon_Monitoring Report_1st Verification Period_V5_20240122				
VVB assessment				Date: 13/12/2023
PP has revised the MR and updated sections 5.1, 5.2 and 5.3 accordingly with complete description to Quantify the baseline/ project and leakage emissions and/or removals and has provided sufficient information in order to reproduce calculations. Therefore CAR#07 is closed				

CAR ID	08	Section No.		Date : 08/01/2025
Description of CAR				
TR round comments (1) PP is to update the MR into its latest template version 4.4. The current template version on which MR is submitted is version 4.3. https://verra.org/documents/vcs-monitoring-report-template-v4-4/ According to Verra requirement and document April 2024 Overview of VCS Program Updates and Effective Dates, released on 16 April 2024, All project templates have been updated to align with the revised requirements in the VCS Standard and Registration and Issuance Process effective from all projects requesting submission on or after 1 January 2025. (2) PP is to also update the MR sections and apply latest version of VCS standard version 4.7.				
Project participant response				Date : 24/01/2025
The latest version of the template has now been used for the MR and the latest update has been sent using template v4.4. In addition, version 4.7 of the VCS Standard is updated and applied across the Project for verification.				

Documentation provided by project participant	
VCS MR_AgreenaCarbon 4022_15SEP2021-31DEC2023_27JAN2024	
VVB assessment	Date : 05/02/2025
The MR has been updated to latest VCS template version 4.4 and verification process has applied standard version 4.7. Therefore, this finding is CLOSED.	

CAR ID	09	Section No.	Date : 08/01/2025
Description of CAR			
TR round comments PP is requested to update the MR section 1.12 Sustainable Development Contributions with the following information related to the latest template v4.4. As per the MR template requirements, provide a brief description that includes the following (no more than 100 words): •A summary description of project activities implemented during the monitoring period that result in SD contributions (i.e., technologies/measures implemented, activity location). •An explanation of how project activities result in the SD contributions described in Table 1 of this report. •Identification of which SD contributions described in Table 1 of this report contribute to achieving any nationally stated sustainable development priorities, including any provisions for monitoring and reporting these. Evidence of the project's SD contributions shall be provided as appendices to monitoring report. Also, where possible, relate all contributions to official SDG targets and indicators. Refer to the SDG metadata repository for guidance on the definitions and concepts included in the SDG indicators.			
Project participant response			Date : 24/01/2025
SDG section 1.12 has been updated to reflect the template requirements including a short description (100 words) as well as the summary description of project activities, explanation of how project activities result in SD contributions, and identification of SD contributions. The full text is provided in the PD and an additional appendix with specific indicators and targets are also provided in the PD in Appendix 6.			
Documentation provided by project participant			
VCS MR_AgreenaCarbon 4022_15SEP2021-31DEC2023_27JAN2024			
VVB assessment			Date: 5/02/2025

The section 1.12 Sustainable Development Contributions of the MR has been updated as per the MR v4.4 template requirement. Further, table 1.14 of the MR describes in detail the specific SDG indicators achieved in this monitoring period. VVB has reviewed the updates made and has found them to be correct. Therefore, this finding is **CLOSED**.

CAR ID	10	Section No.	Date : 08/01/2025
Description of CAR			
TR round comments In section 1.1 1) PP is required to highlight the major project activities performed during the monitoring period 2) PP is required to provide more clarity on the project activities performed and the technologies used during the monitoring period 3) PP is required to provide clarity on how in table 1-1: 85.26% ha of increased incorporation of residue incorporation included in the soil In section 1.12 1) SDG 2: PP is required to provide more clarity on how and what percent of target SDG 2 (Zero Hunger) was achieved during this monitoring period 2) SDG 13: PP is required to mention the achieved SDG target as per the methodology. Please mention how much of this SDG achieved during this monitoring period with evidence. 3) SDG 15: PP is required to mention how much land area has been avoided land degradation during this monitoring period. Section 2 1) Water Quality : PP should mention that what percentage of synthetic fertilizer reduction took place during this monitoring period and what percentage water quality improved or reduce pollution. 2) Drought and Flood Risk Mitigation: PP is required to mention if the project was influenced by any drought and flood in baseline scenario or during the monitoring period in similar geographical region. Section 2 1) Stakeholder Consultation: PP is requested to highlight major input or feedbacks from these consultation meetings. The description is not clear whether it was positive or negative feedback received during the consultation meeting and how the PP has addressed same. Section 5 Though MR section 5 have provided the equations used in the ERR calculations, however, elaborate explanation is required in the MR on the ERR calculation steps so that VVB can verify that the ERR values are correct and reproducible.			
Project participant response			Date : 24/01/2025

Section 1.1

Comments have been integrated and table 1-1 updated to include all the clarifications and information requested with the most recent data.

Section 1.12

Table 1-3 has been updated to reflect Project's contribution to three SDGs: Zero Hunger (SDG 2, measured as "Proportion of agricultural area under productive and sustainable agriculture"), Climate Action (SDG 13, measured as "Tonnes of greenhouse gas emissions avoided or removed" as per VM0042 Methodology guidelines), and Life on Land (SDG 15, measured as "Proportion of land that is degraded over time"). Because Project-supported farming practices stimulate sustainable agricultural production while restoring soil health and preventing further soil degradation, the total hectares of cropland enrolled in the Project constitute a correct estimate of contributions to SDG 2 and SDG 15. During this monitoring period, the total hectares included in the Project area amounted to 350,138.16. As per SDG 13, Project's contributions amounted to 493,075 mtCO₂eq of ERRs achieved in this monitoring period.

Section 2

- 1) Improvements to water quality in the Project area is synonymous with reduction in synthetic fertiliser use - and, consequentially, nitrates and phosphates discharges to local watersheds. During this verification report, AgreeenaCarbon verified that in 13.4% of the total hectares of Project area there was a complete elimination of synthetic fertiliser use. Therefore, water pollution from agricultural discharges was reduced by 13.4% among the farms included in the Project area during this monitoring period.
- 2) In this monitoring period no participant was affected by floods, but certain Spanish participants reported they could not implement Project practices due to drought conditions. Their PAIs were marked as "fallow" and amounted to 84 out of 548 Spanish fields.
- 3) Stakeholder consultation tables have been updated to include more information on the feedback received and how it was acted upon. Please consult section 2.1.2 for further details.

Documentation provided by project participant

VCS MR_AgreeenaCarbon 4022_15SEP2021-31DEC2023_27JAN2024

VVB assessment

Date: 05/02/2025

VVB has checked section 1.12 of the MR and has found relevant information on SDGs added in table 1-4. All the information pertaining to the specific targets of SDGs achieved during this monitoring period has been included in the MR. SDG 2 & 15 are achieved through improvement in the degrading land due to project activities, which increases crop yield and additionally removing GHGs from the atmosphere and storing them in the soil. The PP has claimed improved water quality of 13,4% because of reduction in the synthetic fertilizers usage which is responsible for nitrate and phosphate pollution in water bodies. Similarly increase in the agricultural land being sustainably managed is due to the reduced tillage and other regenerative practices. All the SDGs

achieved have been aptly recorded and justified for this monitoring period. Therefore, this finding is closed.

Upon review VVB confirms that Section 2.1.2 of the MR has included all the required information on stakeholders. VVB has checked the Stakeholder consultation tables which include information on the feedback received from the stakeholders, how it is stored in their database 'fulcrum'. Further, PP introduced more tech-friendly approaches, like (a) platform usability processes and (b) personal interviews, an additional in-person feedback collection channel with a focus on understanding common traits and challenges faced by Project participants. This part of finding is closed.

CAR #10 stands CLOSED.

CAR ID	11	Section No.	Date : 08/01/2025
Description of CAR			
TR round comments			
Section 4.2			
1) $f(SOC_{bsl,i,t-1})$: PP is required to clarify and provide more details on equation 6. As per the table in methodology calculation method is not applicable for this parameter. 2) i : PP is requested to clarify how Sentinel I and II is considered as an equipment and not a data. As per methodology table no calculation method is applicable. Please clarify. 3) j : Methodology table says No calculation method is applicable. PP is requested to clarify how Equation 7 and 8 are considered 4) $FFC_{wp,j,i,t}$: PP is required to clarify which option is used of Box 1 for the source of data 5) $EF_{limestone}$ and $EF_{limestone}$: PP is requested to check if Equation 9 is used for this equations. PP is requested to clarify if the equations are sourced from VM0042 VMD0053 or other tool 6) $EF_{Ndirect}$: IPCC guidelines is not a valid monitoring equipment. Please revise 7) EF_{Nleach} : Please mention the Frequency of monitoring/recording in the appropriate column.			
Project participant response			Date : 24/01/2025
All parameters have been updated in Chapter 4.2 to include more detail including parameter details per geographic area, when relevant.			
1. For SOC in the bsl, the calculation method is not relevant as this is a modelled parameter which has been outlined in the PD. 2. Updated to reflect that the remote sensing data from Sentinel I and II are used as means to develop models for monitoring PAIs. Modelled output is not calculated and therefore the parameter is not applicable. 3. j refers to the type of fossil fuel combusted. Details on the parameter have been filled in but calculation method is not applicable as this value is provided via farmer attestation. 4. Option 4 has been provided for this parameter per Box 1 5. IPCC data is used to determine the emission factors for limestone. 6. The parameter has been revised 7. The parameter has been revised			
Documentation provided by project participant			

VCS MR_AgreenaCarbon 4022_15SEP2021-31DEC2023_27JAN2024	
VVB assessment	Date: 07/02/2025
VVB has checked the section 4.2 of the MR. The data and parameters have now been included in detail. 1.Data for SOC $f(SOC_{bsl,i,t-1})$, is a modelled parameter and calculation method is not relevant. It is aptly justified, therefore finding is closed. 2.The required information has been updated in the MR to reflect that the remote sensing data from Sentinel I and II are used as means to develop models for monitoring PAIs. Modelled output is not calculated and therefore the parameter is not applicable. This justification is correct, hence the finding is closed. 3. The calculation method of the parameter j has not been described as this parameter has been derived from farmer attestation. This justification is correct, therefore the finding is closed. 4. VVB has checked that option 4 from Box 1 has been used for parameter $FFC_{wp,j,i,t}$ and found the information to be correct. Therefore, this finding is closed. 5. PP has applied default IPCC value for limestone emission factors which has found to be correct by VVB. Therefore, the finding is closed. 6. The revision made is correct. Hence, finding is closed. 7. The revision made is correct. Therefore, finding is closed. CAR#11 is CLOSED	

CAR ID	12	Section No.		Date : 08/01/2025
Description of CAR				
PP is to clarify and submit the final ERR spreadsheet to be considered for assessment of verification for the monitoring period spanning from 15-September-2021 to 14-September-2023. Currently, VVB has following dataset in ERR spreadsheets. (1) VCS MR AgreenaCarbon 2022 ERRs 15SEP2021-14SEP2022 DRAFT 12082024 (2) AgreenaCarbon_ERRs_2022-2023_15NOV2024 The following table lay out the details provided in each file. PP is to address the following. (1) Compile and share single ERR spreadsheet for the first monitoring period. (2) Provide consistent and complete details as per the ALM practice changes. (3) Clarify either in the MR or ERR spreadsheet different between 'field definition' and 'actual' and confirm which one is considered to be final value for quantification. (4) Site visit (on-site and remote) observations for the missing details such as fertilizer application shall be shared later once received the complete data, in case VVB identified any inconsistencies.				

File: VCS MR AgreenaCarbon 2022 ERRs 15SEP2021-14SEP2022 DRAFT 12082024	File: AgreenaCarbon_ERRs_2022-2023_15NOV2024
User ID	User ID
Field ID	Field ID
Field Size (ha)	Field Size (ha)
Field Definition Country Name	Field Definition Country Name
Field Definition Harvest Year	Field Definition Harvest Year
Actual Harvest Year	Actual Harvest Year
Actual Crop Name	Actual Crop Name
Actual Crop Gross Yield	Actual Crop Gross Yield
Field Definition Tilling	Field Definition Tilling
Actual Tilling	Actual Tilling
Field Definition Fertilisers Mixed	
Actual Fertilisers Mixed	
Field Definition Fertilisers Summary Nitrogen Organic (kg/ha)	
Actual Fertilisers Summary Nitrogen Organic (kg/ha)	
Field Definition Crop Residue Management	Field Definition Crop Residue Management
Actual Crop Residue Management	Actual Crop Residue Management
Field Definition Cover Crops Adoption	Field Definition Cover Crops Adoption
Actual Cover Crops Adoption	Actual Cover Crops Adoption
Baseline Fuel Emissions	
Baseline Soil N2O Emissions	
Baseline Fertilizer N2O Emissions	
BSL_Emissions_Mon_Rep_Table	
Actual Fuel Emissions	
Baseline Lime CO2 Emissions (5y)	
Actual Lime Emissions	
Eq. 44 Change in Lime Emissions	
Actual Soil N2O Emissions	
Actual Fertilizer N2O Emissions	
Project_Emission_Mon_Rep_Table	
Eq. 41 Change in Fossil Fuel Emissions	
Eq. 49 Change in Soil N2O Emissions	
Eq. 65 Uncertainty Deductions for Removals	
Leakage	
Net crop residue applied (tC/ha)	

Net org. fert. carbon applied (tC/ha)	
Eq. 37 Emission Reductions per Field	
Eq. 38 Carbon Removals per Field	
Eq. 39 Emission Reductions and Removals	
Buffer per Field	
Eq. 66 VCU per Field	Eq. 66 VCU per Field
Project participant response	Date : 24/01/2025
File provided with 2022 and 2023 combined harvest years was a draft version to be shared as part of the site visits conducted in December 2024. The new file has been shared containing all relevant parameters and baseline data, including the 5 year lookback period.	
Documentation provided by project participant	
VCS MR_AgreenaCarbon 4022_ERRs_15SEP2021-31DEC2023_27JAN2024	
VVB assessment	Date: DD/MM/YYYY
VVB has checked and verified the updated ERR sheet. The equations and requirement have been updated as per VM0042 methodology. VCS MR_AgreenaCarbon 4022_ERRs_15SEP2021-31DEC2023_27JAN2024, the updated ERR sheet provided by the PP has included the equations and required inputs for easy traceability. Therefore, this finding is CLOSED .	

CAR ID	13	Section No.		Date : 08/01/2025
Description of CAR				
RSV Observations VVB has interviewed farmer with User ID 7260 (Ukraine sample). PP is to clarify the following inconsistencies. - Farmer reported 13 fields included in year 2023 during interview. - The Benefit Contract of the farmer also informs 13 fields (screenshot attached). - Excel sheet AgreenaCarbon_ERRs_2022-2023_15NOV2024 has 12 fields, instead of 13 (screenshot attached – yellow highlight). - Farmer reports no cover crop grown in the year 2023. However, the submitted excel sheet reports cover crop adoption in the winter season (screenshot attached – green highlight, column J). - For practice change crop residue management, Farmer reports practice of mulching both in baseline as well as project scenario. PP is to confirm why mulching is considered for the ALM				

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Agreena

Таблица А

№ з/п Sn. No.	Назва ділянки/поля Area/Field Name	Поле/ Field ID	Країна/розташування Country/Location
1.	АНВ Агро_3	160314	Україна
2.	АНВ Агро_4	160315	Україна
3.	АНВ Агро_5	160316	Україна
4.	АНВ Агро_6	160317	Україна
5.	АНВ Агро_7	160318	Україна
6.	Ей Сі Дам Юкрейн_1	160319	Україна
7.	Зернопром-Плюс_1	160320	Україна
8.	Прогресс_1	160321	Україна
9.	Прогресс_2	160322	Україна
10.	Прогресс_3	160323	Україна
11.	Прогресс_4	160324	Україна
12.	АНВ Агро_1	160438	Україна
13.	АНВ Агро_2	160439	Україна

[illegible]

143564 Conventional tillage										
Field ID	User ID	Eq. 66 VCU per Field	Field Size (ha)	Field Definition Country Name	Field Definition Cover Crops Adoption	Field Definition Crop Residue Management	Field Definition Harvest Year	Field Definition Tilling	Actual Cover Crops Adoption	Actual Crop Gross Yield
43549	160309	7482	16.72136017	7.22 Denmark	none	Removed	2018	Conventional tillage	none	
43550	160312	7482	11.99389433	14.02 Denmark	none	Removed	2018	Conventional tillage	none	
43551	160313	7482	2.20658776	10.08 Denmark	none	Removed	2018	Conventional tillage	none	3
43552	160314	7260	87.5272437	87.4 Ukraine	none	Removed	2018	Conventional tillage	none	2
43553	160315	7260	85.857907	54.82 Ukraine	none	Removed	2018	Conventional tillage	none	2
43554	160316	7260	80.66089216	68.21 Ukraine	none	Removed	2018	Conventional tillage	none	2
43555	160317	7260	45.10217298	43.43 Ukraine	none	Removed	2018	Conventional tillage	none	3
43556	160318	7260	119.4971996	84.2 Ukraine	none	Removed	2018	Conventional tillage	none	2
43557	160320	7260	613.6963612	374.73 Ukraine	none	Removed	2018	Conventional tillage	none	5
43558	160321	7260	412.6367611	200.14 Ukraine	none	Removed	2018	Conventional tillage	winter	4
43559	160322	7260	169.9495153	184.55 Ukraine	none	Removed	2018	Conventional tillage	winter	4
43560	160323	7260	104.5449628	116.62 Ukraine	none	Removed	2018	Conventional tillage	winter	4
43561	160324	7260	64.3520467	41.11 Ukraine	none	Removed	2018	Conventional tillage	none	4
43562	160361	7846	3.93227437	4.23 Spain	none	Removed	2018	Conventional tillage	none	1
43563	160438	7260	116.2187552	101.32 Ukraine	none	Removed	2018	Conventional tillage	none	2
43564	160439	7260	25.26172383	15.96 Ukraine	none	Removed	2018	Conventional tillage	none	2
43565	160444	7846	9.28025561	5.3 Spain	none	Removed	2018	Conventional tillage	none	6.
43566	160458	7846	5.096748227	4.71 Spain	none	Removed	2018	Conventional tillage	none	1
43567	160459	7846	4.68702512	5.36 Spain	none	Removed	2018	Conventional tillage	none	1
43568	160465	7846	7.117826167	4.24 Spain	none	Removed	2018	Conventional tillage	none	1
43569	160484	7846	4.41577218	5.08 Spain	none	Removed	2018	Conventional tillage	none	1
43570	160488	7846	0.72080767	6.18 Spain	none	Removed	2018	Conventional tillage	none	1
43571	160514	7846	8.440321389	5.56 Spain	none	Mulched	2018	Reduced tillage	none	1
43572	160526	7846	16.90605038	10.81 Spain	none	Removed	2018	Conventional tillage	none	1
43573	160540	7846	11.27940003	4.62 Spain	none	Removed	2018	Conventional tillage	none	1
43574	160550	7846	6.20961782	11.69 Spain	none	Removed	2018	Conventional tillage	none	1
43575	160620	3704	15.1950802	13.6 Romania	none	Removed	2018	Conventional tillage	none	7
43576	160621	3704	148.2803706	138.6 Romania	none	Removed	2018	Conventional tillage	none	8
43577	160622	3704	127.9384216	129.41 Romania	none	Removed	2018	Conventional tillage	none	3
43578	160623	3704	113.020806	112.67 Romania	none	Removed	2018	Conventional tillage	none	10
43579	160624	3704	128.9671196	79.6 Romania	none	Removed	2018	Conventional tillage	none	7
43580	160625	3704	99.53459387	72.24 Romania	none	Removed	2018	Conventional tillage	none	3
43581	160626	3704	201.5283839	129.36 Romania	none	Removed	2018	Conventional tillage	none	3
43582	160627	3704	112.6509789	64.83 Romania	none	Removed	2018	Conventional tillage	none	10

Project participant response

Date : 24/01/2025

- 1 - 3). Farmers are informed after the process of QA/QC is finalised with regards to the results of the process related to practice or fields. The fields that are removed from the eligibility check remain in the *Agreena Programme* and are still accounted for through Agreena's other offerings, as referenced in regards to the ISO program in Section 1.15.1 in the PD. Therefore a farmer may still have 13 fields and report these, yet 12 remain following QA/QC in Verra. This split remains for the rest of the permanence period.
The field count for User ID 7260 has been confirmed through checking the number of fields that were able to make it through the AgreenaCarbon QA/QC process, as outlined in the PD in Section 5.3 and in the MR in Section 4.3. As farmers undergo a QA/QC check, their reported data is cross-checked with the remote sensing models to flag for practices on the fields and determine several eligibility factors at the onset, including whether the fields are eligible per eligibility criteria in Section 1.3 of the PD/ The fields that have been removed from the project are presented in the documentation provided as part of this submission with one of the eligibility reasons per field.
4. As a part of the QA/QC process the farmer-reported data undergoes comparative analysis as referenced in Section 5.3 of the PD and Section 4.3 of the MR. In this process remote sensing (RS) is utilised to check farmer reported input. In the case of User 7260, three of the fields were approved for cover crop (CC) up until Winter (160321, 160322, 160323) while one field (160324) had their CC until winter removed after RS assessment. The farmer reported on four fields but one was found to be without cover crop which is the field referred to in the RSV assessment. Farmer documentation has been attached as evidence.
5. As a part of the QA/QC process the farmer-reported data undergoes comparative analysis as referenced in Chapter 5 Section 5.3.1.6 of the PD. In this process remote sensing (RS) is utilised to check farmer reported input. In the case of User 7260, two fields

(160314 and 160321) had 'residue removed' in their field definition and mulched in actuals (this is the 'practice activity' column). The remaining fields have no practice change in regard to residue management, but are additional in other eligible project activities (see Table 1-4 of the PD), therefore there is a 'practice change' in those fields, according to the baseline setup of the AgreeenaCarbon Project and they are therefore included in the Project. The farmer documentation has been attached as evidence.	
Documentation provided by project participant	
- AgreeenaCarbon 2023 Verification RSV Findings - Field Eligibility List - CAR 13_Farmer Documentation_7260 Eduard field actuals 2023.xlsx	
VVB assessment	Date: 05/02/2025
1, 2 & 3. The query was raised to understand the inconsistent values for plots under verification. However, the response provided by PP makes it clear that Agreeena records will show 13 farms, however only 12 farms passed the QA/QC and hence included for actual verification. The documentation provided has been checked by VVB and the information provided has been found to be correct. Therefore, this finding is closed. 4.From the response provided above and after checking the evidence provided, it is clear that one of the farm's did not have cover crop and this is the farm, project participant referred to during the RSV. Therefore, this finding is closed. 5.The discrepancy in data appeared because of difference in understanding by the project participant (User 7260). The fields which reported the residue removed meant that the residue was removed from the fields and mulched. The response provided by PP clearly explains this, therefore this finding is CLOSED. CAR #13 is CLOSED	

CAR ID	14	Section No.		Date : 08/01/2025
Description of CAR				
RSV Observations VVB has interviewed farmer with User ID 7079 (UK sample). PP is to address the following: 1. Farmer reports 25 field added in the year 2023, however, the excel sheet only accounts 6 (attached screenshot – yellow highlight) 2. The practice change for tillage confirmed by farmer is 'No till' for the crop grown winter wheat. However, the excel sheet reports both no tillage and conventional tillage under column O – Actual Tilling.				

3. Lime application has been confirmed by farmer in the fields in the year 2023. As per the validated PD section 3.6 methodology deviation, PP has sought deviation from methodology requirement of Box 1 data source for the estimation of carbon dioxide emissions for liming and the values for the estimation are done using literature value. However, in case of this UK farmer, how PP take into account of lime application and incorporated the actual value for the calculation. PP is to justify the appropriateness of calculation approach for the estimation of carbon dioxide emission from liming.

4. The benefit contract copy is yet to be received. PP is to submit the benefit contract copy of farmer for the year 2023 for verification assessment.

A33414 117971										
Field ID	User ID	Eq. 66 VCU per Field	Field Size (ha)	Field Definition Country Name	Field Definition Cover Crops Adoption	Field Definition Crop Residue Management	Field Definition Harvest Year	Field Definition Tilling	Actual Cover Crops Adoption	Actual Crop Yield
1402	117921	6891	137.785223	88.2 Ukraine	none	Removed	2018	Conventional tillage	none	
1403	117922	6891	83.433685	69.7 Ukraine	none	Removed	2018	Conventional tillage	none	
1404	117923	6891	204.990155	140.69 Ukraine	none	Removed	2018	Conventional tillage	none	
1405	117942	6891	11.7236007	9 Ukraine	none	Removed	2018	Conventional tillage	none	
1406	117943	6891	32.03594379	39.14 Ukraine	none	Removed	2018	Conventional tillage	none	
1407	117944	6891	39.5382542	23.31 Ukraine	none	Removed	2018	Conventional tillage	none	
1408	117946	7079	13.48651107	11.05 United Kingdom	none	Removed	2018	Conventional tillage	none	
1409	117948	7079	7.20106665	6.49 United Kingdom	none	Removed	2018	Conventional tillage	none	
1410	117952	7079	2.52534812	8.31 United Kingdom	none	Removed	2018	Conventional tillage	none	
1411	117956	7079	6.903849943	4.97 United Kingdom	none	Removed	2018	No tillage	none	
1412	117957	7079	12.80111484	6.05 United Kingdom	none	Removed	2018	Conventional tillage	none	
1413	117930	7079	9.364993496	5.69 United Kingdom	none	Removed	2018	Conventional tillage	none	
1414	117921	6891	8.376887188	6.5 Ukraine	none	Removed	2018	Conventional tillage	none	
1415	117972	6891	13.77537651	15.96 Ukraine	none	Removed	2018	Conventional tillage	none	
1416	117973	6891	29.38490734	20.4 Ukraine	none	Removed	2018	Conventional tillage	none	
1417	117974	6891	15.08281758	10.05 Ukraine	none	Removed	2018	Conventional tillage	none	
1418	117975	6891	19.01964069	21.22 Ukraine	none	Removed	2018	Conventional tillage	none	
1419	117976	6891	10.41590253	12.43 Ukraine	none	Removed	2018	Conventional tillage	none	
1420	117977	6891	49.2157703	37.3 Ukraine	none	Removed	2018	Conventional tillage	none	
1421	117978	6891	54.72705411	33.37 Ukraine	none	Removed	2018	Conventional tillage	none	
1422	117979	6891	8.720441161	9.48 Ukraine	none	Removed	2018	Conventional tillage	none	
1423	117980	6891	41.16885369	25.54 Ukraine	none	Removed	2018	Conventional tillage	none	
1424	117981	6891	16.34376116	10.75 Ukraine	none	Removed	2018	Conventional tillage	none	
1425	117982	6891	10.82017845	9.12 Ukraine	none	Removed	2018	Conventional tillage	none	
1426	117983	6891	28.85283392	21.76 Ukraine	none	Removed	2018	Conventional tillage	none	
1427	117984	6891	21.13715148	19.03 Ukraine	none	Removed	2018	Conventional tillage	none	
1428	117985	6891	33.05354104	29.03 Ukraine	none	Removed	2018	Conventional tillage	none	
1429	117991	6891	16.50213151	9.6 Ukraine	none	Removed	2018	Conventional tillage	none	
1430	117992	6891	185.340673	116.96 Ukraine	none	Removed	2018	Conventional tillage	none	
1431	117993	6891	21.44067518	9.54 Ukraine	none	Removed	2018	Conventional tillage	none	
1432	117994	6891	47.00788478	41.83 Ukraine	none	Removed	2018	Conventional tillage	none	
1433	117995	6891	15.29411443	12.79 Ukraine	none	Removed	2018	Conventional tillage	none	
1434	117996	6891	15.98922155	9.65 Ukraine	none	Removed	2018	Conventional tillage	none	
1435	118039	6891	21.72016203	21.99 Ukraine	none	Removed	2018	Conventional tillage	none	

AgreenaCarbon_ERRs_2022-2023_15NOV2024								
L33413 PLAIN-GRASS								
Field ID	User ID	Field Definition Tilling	Actual Cover Crops Adoption	Actual Crop Gross Yield	Actual Crop Name	Actual Crop Residue Management	Actual Harvest Year	Actual Tilling
3406	117943	6891 Conventional tillage	none		4.3 WINTER-WHEAT	Mulched	2023	Reduced tillage
3407	117944	6891 Conventional tillage	none		1.2 FLAX-LINSEED-SEED-H	Mulched	2023	No tillage
3408	117946	7079 Conventional tillage	none		25 PLAIN-GRASS	Removed	2023	No tillage
3409	117948	7079 Conventional tillage	none		25 PLAIN-GRASS	Removed	2023	Conventional tillage
3410	117952	7079 Conventional tillage	none		8.6 WINTER-WHEAT	Removed	2023	Conventional tillage
3411	117956	7079 No tillage	none		25 PLAIN-GRASS	Removed	2023	No tillage
3412	117957	7079 Conventional tillage	none		8.6 WINTER-WHEAT	Mulched	2023	Reduced tillage
3413	117970	7079 Conventional tillage	none		25 PLAIN-GRASS	Removed	2023	Conventional tillage
3414	117971	6891 Conventional tillage	none		1.1 FLAX-LINSEED-SEED-H	Mulched	2023	Reduced tillage
3415	117972	6891 Conventional tillage	none		3 MILLET	Mulched	2023	Reduced tillage
3416	117973	6891 Conventional tillage	none		1.2 FLAX-LINSEED-SEED-H	Mulched	2023	Reduced tillage
3417	117974	6891 Conventional tillage	none		4.5 WINTER-WHEAT	Mulched	2023	Reduced tillage
3418	117975	6891 Conventional tillage	none		1.2 FLAX-LINSEED-SEED-H	Mulched	2023	Reduced tillage
3419	117976	6891 Conventional tillage	none		3.5 MAIZE-CORN	Mulched	2023	Reduced tillage
3420	117977	6891 Conventional tillage	none		3.5 MAIZE-CORN	Mulched	2023	Reduced tillage
3421	117978	6891 Conventional tillage	none		14 MAIZE	Removed	2023	Reduced tillage
3422	117979	6891 Conventional tillage	none		4.2 WINTER-WHEAT	Mulched	2023	Reduced tillage
3423	117980	6891 Conventional tillage	none		3.5 MAIZE-CORN	Removed	2023	Conventional tillage
3424	117981	6891 Conventional tillage	none		14 MAIZE	Removed	2023	Conventional tillage
3425	117982	6891 Conventional tillage	none		4 WINTER-WHEAT	Mulched	2023	Reduced tillage
3426	117983	6891 Conventional tillage	none		20 MAIZE	Removed	2023	Reduced tillage
3427	117984	6891 Conventional tillage	none		14 MAIZE	Removed	2023	Conventional tillage
3428	117985	6891 Conventional tillage	none		4.7 WINTER-WHEAT	Mulched	2023	Reduced tillage
3429	117991	6891 Conventional tillage	none		4.1 WINTER-WHEAT	Mulched	2023	Reduced tillage
3430	117992	6891 Conventional tillage	none		5.1 WINTER-WHEAT	Mulched	2023	Reduced tillage
3431	117993	6891 Conventional tillage	none		1.5 OAT-BLACK-GRAIN-HA	Mulched	2023	Reduced tillage
3432	117994	6891 Conventional tillage	none		4.2 WINTER-WHEAT	Mulched	2023	Reduced tillage
3433	117995	6891 Conventional tillage	none		4.3 WINTER-WHEAT	Mulched	2023	Reduced tillage
3434	117996	6891 Conventional tillage	none		20 MAIZE	Removed	2023	Conventional tillage
3435	118039	6891 Conventional tillage	none		14 MAIZE	Removed	2023	No tillage
3436	118040	6891 Conventional tillage	none		1.5 OAT-BLACK-GRAIN-HA	Mulched	2023	Reduced tillage
3437	118041	6891 Conventional tillage	none		1.5 OAT-BLACK-GRAIN-HA	Mulched	2023	Reduced tillage
3438	118042	6891 Conventional tillage	none		1.5 OAT-BLACK-GRAIN-HA	Mulched	2023	Reduced tillage
3439	118139	7045 Conventional tillage	none		4 BEAN-FAVA-SEED-HAR	Mulched	2023	Reduced tillage

Project participant response

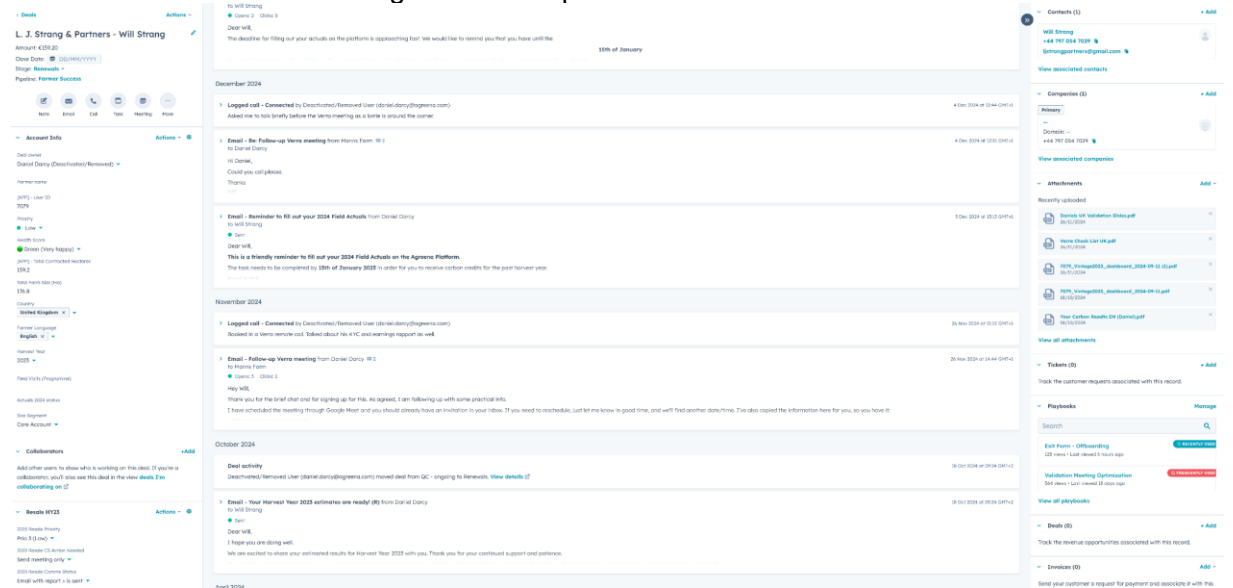
Date : 05/02/2025

- Farmers are informed after the process of QA/QC is finalised with regards to the results of the process related to practice or fields. The fields that are removed from the eligibility check remain in the *Agreena Programme* and are still accounted for through Agreena's other offerings, as referenced in regards to the ISO program in Section 1.15.1 in the PD. Therefore a farmer may still have 25 fields and report these, yet 6 remain following QA/QC in Verra. This split remains for the rest of the permanence period. The field count for User ID 7079 has been confirmed through checking the number of fields that were able to make it through the AgreenaCarbon QA/QC process, as outlined in the PD in Section 5.3 and in the MR in Section 4.3. As farmers undergo a QA/QC check, their reported data is cross-checked with the remote sensing models to flag for practices on the fields and determine several eligibility factors at the onset, including whether the fields are i) smaller than 4 hectares, ii) have had native ecosystem clearance in the last 10 years or iii) are reported as fallow in the first year of the project, indicating no additional practices. The fields that have been removed from the project are presented in the documentation provided as part of this submission with one of the eligibility reasons per field.
- As a part of the QA/QC process the farmer-reported data undergoes comparative analysis as referenced in Section 5.3 of the PD and Section 4.3 of the MR. In this process remote sensing (RS) is utilised to check farmer reported input. In the case of 7079, the farmer reported reduced tillage in his project activity (actuals) while the RS data detected conventional for field 117952 and therefore approved as conventional to align with the detailed QA/QC process (Section 5.3 of PD and Section 4.3 of MR). A portion of the farmers fields are no till as per site visit report, but only after confirmation

with RS data and therefore a small portion of fields are no tillage and the rest are also considered as conventional to remain conservative. This is outlined in the QA/QC process in the PD and MR in sections 5.3 and 4.3, respectively. 3. As per the methodology deviation (Section 3.6 of PD), the liming parameter is sourced from regional default values. This has been confirmed and accepted under validation. The regional value data is sourced from the IPCC National Inventory Reports. For the National Inventory Reports, countries submit data on the quantity of lime (MLimestone,bsl,i, MDolomite,bsl,i as well as MLimestone,wp,i, MDolomite,wp,i, t/yr), the emission factors (t CO₂-C/t) and the total emissions (kt CO₂e) from liming activity for the agricultural sector (Table 3.G-1). The CO₂ emissions from liming (CO₂_limebsl,i,t as well as CO₂_limewp,i,t; equation 9 in VM0042 v2.0) are calculated by dividing the total emissions (kt CO₂e) by the the actual agricultural land area (k ha; Table 4.B) to obtain the CO₂ emissions per unit area for each country (t CO₂e/ha). Thus, all of the data under agriculture are validated. Additionally, this approach for determining the baseline scenario avoids gaps in the data and includes all emissions associated with the activity. This method for calculating an activity's emission is therefore more robust and accurate, in comparison to an alternative method of estimating lime CO₂ emissions under hypothetical scenarios. 4. The Benefit contract has been provided to the VVB and listed in the documentation below.	
Documentation provided by project participant	
- <i>AgreenaCarbon 2023 Verification RSV Findings - Field Eligibility List</i> - <i>Agreena-Benefits-Contract-userID-7079</i> - <i>CAR 14_Farmer Documentation_CQC 7079 - L J STRANG & PARTNERS Field actuals 2023</i>	
VVB assessment	Date: 05/02/2025
The response significantly explains the process of farms inclusion based on QA/QC. There may be 25 farms mentioned by the farmer, however only 06 may have implemented the practices which is also cross-checked through Remote Sensing application. However, from the Remote site visit (RSV) response of the farmer, it appears that all the 25 farms have adopted the regenerative practices. VVB would like to understand why the farmer is not aware that regenerative practices were implemented in only 06 fields out of 25. This may lead to confusion at farmer's end. VVB would like to understand how this is resolved at the farmer level ? Finding remains OPEN. 2. The section 5.3 of the validated PD and Section 4.3 of the MR clearly outline the process of monitoring and data reported by farmers and actual data recorded after QA/QC of Agreena. Further, it is clear that the project participant reported more fields under no tillage, however the QA/QC detected fewer fields with no tillage and still there were more fields under conventional tillage. After review and checking all the evidence, the explanation provided by VVB is justified. Therefore, this finding is CLOSED. 3. VVB has checked the information how CO₂ emissions from liming has been calculated. PD and MR detail the methodology deviation and the process of emission calculations from lime application. After review the application of regional values in the present case is justified as per the MR. Therefore, this finding is CLOSED. 4. The benefit Contract shared by the PP has been checked by VVB and found to be appropriate. Therefore, this finding is CLOSED.	

Project Proponent response 07-02-2025

- Overall the process of interacting with farmers depends on the time of year. This is due to seasonality but also that as the AgreeenaCarbon project has undergone Verra Validation the review of calculations and eligibility has also updated and so once the completion of changes and hopeful success of Verra Verification and Issuance occurs- the farmers will receive communications not on estimates but on final field eligibility and ERRs.
- Once the annual QA/QC mechanisms are completed, AgreeenaCarbon creates personalised farm reports for each Project participant, shared between September and November circa along with an educational PowerPoint containing key information. Please see attached documentation. The Farm Report clearly states how many of a farmer's fields were eligible for Verra program participation after QA/QC, and how many had to be removed because they did not meet the eligibility check. If participants have any questions regarding eligibility checks or any other aspect of the farm reports, they are invited to ask them during ensuing one-on-one meetings with CS personnel, or through any of the available communication channels.
In the case of User ID 7079, they received an email on 18th of October due to their small size and usual high responsiveness (see SOP). Then, on 26th of November, the Customer Success Rep got in contact via phone with them to organise a call due to lack of response. End of Oct/beginning Nov is also a holiday season in the UK for farmers, which likely explains the lack of responsiveness. On 4th of December, the Customer Success Rep and the farmer talked about the whole process and reviewed the report together. By taking these steps, AgreeenaCarbon ensured that User ID 7079 is aware of which of their fields met the eligibility criteria and which had to be excluded from credit generation.
- Please see the screenshot of the Hubspot interactions below, which demonstrates the call dates and meetings held with User 7079 and also the sharing of documentation on the estimated fields eligible in the report.

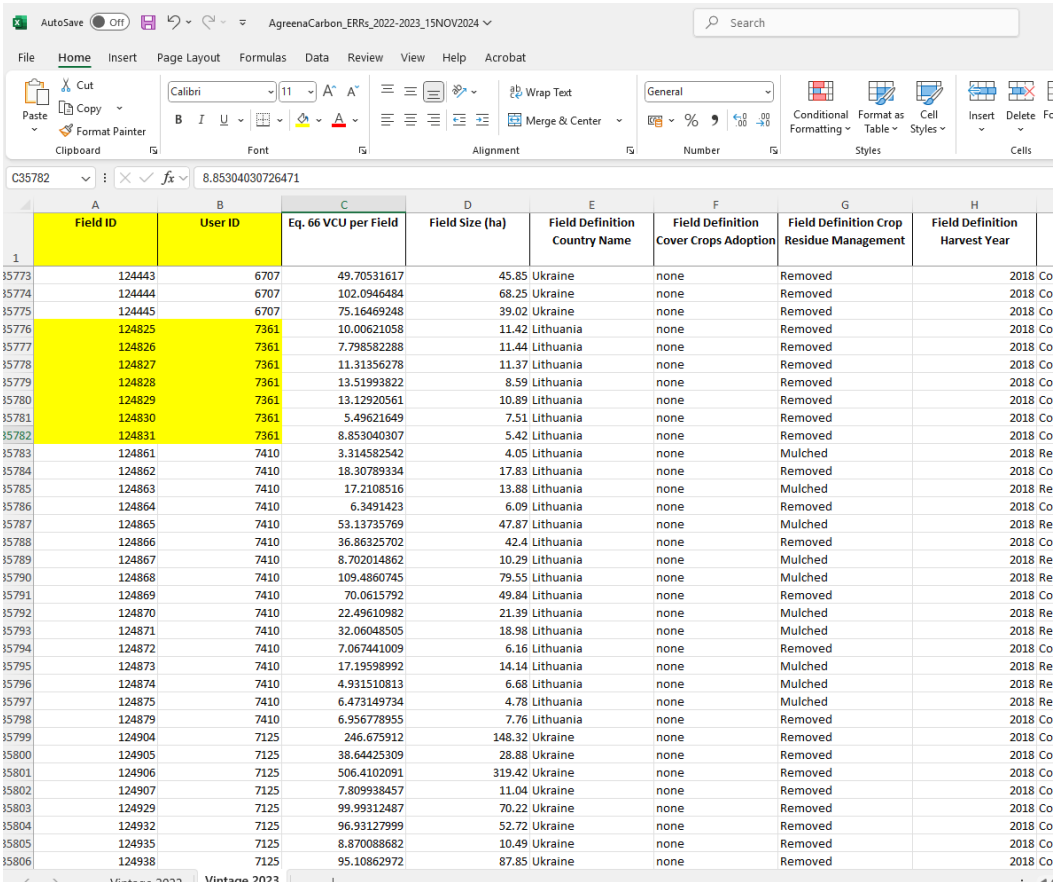


Documentation provided by project participant

VVB Response

- 7079_Vintage2023_dashboard_2024-09-11.pdf
- Your Carbon Results EN (Cornelia).pdf
- SOP - Standard Operating Procedure - Farmers Results 2023.pdf

- VVB has reviewed the response provided and associated evidence and found them to sufficiently explain the question asked. The document 7079_Vintage2023_dashboard_2024-09-11.pdf shows the dashboard screen reflects out of 25 farmers only 14 are eligible for carbon credits. The numbers reflected on dashboard can further reduce and this information is explained to the farmer through the document "Your Carbon Results EN (Cornelia).pdf" and SOP - Standard Operating Procedure - Farmers Results 2023.pdf. The procedure has been well explained by PP and found to be appropriate.
- Therefore, this finding is **CLOSED**.

CAR ID	15	Section No.		Date : 08/01/2025
Description of CAR				
RSV Observations				
VVB has interviewed farmer with User ID 7361 (Lithuania sample). PP is to address the following Farmer confirms adding 8 fields in the year 2023 to the Agreea project, however, the ERR spreadsheet only list 7 fields.				
				

The field list submitted by farmer also include field ID 124833, totalling to 8 fields added in year 2023.

CAR ID	16	Section No.		Date : 08/01/2025
Description of CAR				
RSV Observations				

VVB has interviewed farmer with User ID 3799 (UK sample). PP is to address the following

1. Farmer confirms adding 41 fields in the year 2023 to the Agreea project, however, the ERR spreadsheet only list 22 fields (screenshot attached – yellow highlight). The field list and copy of benefit contract submitted by farmer also confirms 41 fields.

2. For tillage practice change, farmer confirmed direct seeding and 5 cm tillage. While the submitted excel sheet documents reduced tillage under column I - Field Definition Tilling and both reduced tillage and no tillage under column O – Actual tilling. It is not clarified why those fields are considered for quantification purpose where no change recorded in tillage practice (reduced [?] reduced tillage). Screenshot below with green highlight is attached for reference. VVB seeks clarity on field definition and actual values.

AgreeaCarbon_ERRs_2022-2023_15NOV2024										
Field ID	User ID	Eq. 66 VCU per Field	Field Size (ha)	Field Definition Country Name	Field Definition Cover Crops Adoption	Field Definition Crop Residue Management	Field Definition Harvest Year	Field Definition Tilling	Actual Cov Adopt	
44246	5673	39.82602012	30.59	Romania	none	Removed	2018	Conventional tillage	none	
44247	5673	110.2182839	89.92	Romania	none	Removed	2018	Conventional tillage	none	
44248	5673	73.4646917	92.7	Romania	none	Removed	2018	Conventional tillage	none	
44250	3799	13.46400057	16.97	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44251	3799	25.92581669	13.69	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44252	3799	56.87638953	22.16	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44253	3799	33.41968163	27.7	United Kingdom	none	Mulched	2018	Reduced tillage	spring	
44254	3799	14.2622398	13.25	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44255	3799	87.56487801	53.81	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44256	3799	5.873865597	11.95	United Kingdom	none	Mulched	2018	Reduced tillage	spring	
44257	3799	20.88605201	14.38	United Kingdom	none	Mulched	2018	Reduced tillage	spring	
44260	3799	5.602676767	5.74	United Kingdom	none	Mulched	2018	Reduced tillage	spring	
44261	3799	13.08589594	13.37	United Kingdom	none	Mulched	2018	Reduced tillage	spring	
44262	3799	59.34253411	30.09	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44263	3799	33.04577269	23.18	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44264	3799	48.91767072	45.36	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44265	3799	48.76637001	27.17	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44266	3799	14.12049623	10.02	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44267	3799	7.252104266	5.05	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44269	3799	9.403777437	13.64	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44270	3799	12.87653565	12.65	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44271	3799	18.1349231	12.35	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44272	3799	4.31633099	17.48	United Kingdom	none	Mulched	2018	Reduced tillage	none	
44273	3799	50.2559891	43.05	United Kingdom	none	Mulched	2018	Reduced tillage	spring	
44274	3799	23.2643441	21.63	United Kingdom	none	Mulched	2018	Reduced tillage	spring	
44292	5665	87.23991433	55.47	Romania	none	Removed	2018	Conventional tillage	winter	
44293	5665	33.33674764	36.23	Romania	none	Removed	2018	Conventional tillage	none	
44294	5665	89.37157497	96.23	Romania	none	Removed	2018	Conventional tillage	none	
44298	5665	9.412593624	19.64	Romania	none	Removed	2018	Conventional tillage	none	
44299	5665	21.75618463	15.5	Romania	none	Removed	2018	Conventional tillage	none	
44300	5665	14.74543364	11.49	Romania	none	Removed	2018	Conventional tillage	none	
44301	5665	21.46521801	18.58	Romania	none	Removed	2018	Conventional tillage	none	
44302	5665	103.2127947	163.02	Romania	none	Removed	2018	Conventional tillage	none	
44303	5665	10.58499487	12.1	Romania	none	Removed	2018	Conventional tillage	none	

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Project participant response

Date : DD/MM/YYYY

- Farmers are informed after the process of QA/QC is finalised with regards to the results of the process related to practice or fields. The fields that are removed from the eligibility check remain in the *Agreena Programme* and are still accounted for through Agreena's other offerings, as referenced in regards to the ISO program in Section 1.15.1 in the PD. Therefore a farmer may still have 41 fields and report these, yet 22 remain following QA/QC in Verra. This split remains for the rest of the permanence period. The field count for User ID 3799 has been confirmed through checking the number of fields that were able to make it through the AgreenaCarbon QA/QC process, as outlined in the PD in Section 5.3 and in the MR in Section 4.3. As farmers undergo a QA/QC check, their reported data is cross-checked with the remote sensing models to flag for practices on the fields and determine several eligibility factors at the onset, including whether the fields are i) smaller than 4 hectares, ii) have had native ecosystem clearance in the last 10 years or iii) are reported as fallow in the first year of the project, indicating no additional practices. The fields that have been removed from the project are presented in the documentation provided as part of this submission with one of the eligibility reasons per field.
- As a part of the QA/QC process the farmer-reported data undergoes comparative analysis as referenced in Section 5.3 of the PD and Section 4.3 of the MR. In this process remote sensing (RS) is utilised to check farmer reported input. In the case of User 3799, there are several transition practices on different fields. For farmer baseline data, five fields were confirmed as no-till with farmer answers as well as RS results.

Three fields were approved as reduced tillage. The documentation is provided in the CQA table. In the project activity check (actuals) two fields were flagged on tillage with one field (44266) detected as conventional tillage, while the farmer had claimed no-tillage while reporting reduced tillage originally. In order to maintain conservativeness, the field was changed to reduced tillage. The second field (44269) RS detected reduced tillage but the farmer attested to no-tillage leading to an approval of the field. The CQC template is attached with project activity documentation.	
Documentation provided by project participant	
- <i>AgreenaCarbon 2023 Verification RSV Findings - Field Eligibility List</i> - <i>CAR 16_Farmer Documentation_CQA 3799 - Hendred Farm Partnership Field definition 2023</i> - <i>CAR 16_Farmer Documentation_CQC 3799 - Hendred Farm Partnership Field actuals 2023</i>	
VVB assessment	Date: 05/02/2025
1.The response explains very well that not all the farms reported by the farmer is eligible for verification after the QA/QC process. However, VVB would like to understand whether the farmer understands this arrangement. The Benefit Sharing contract mentions 41 fields and during the interview also farmer mentioned 41 fields. Does Agreena have a process of communication to the farmers on the process that not all the fields will pass QA/QC and lesser number of fields may be added for verification ? PP is requested to explain this. Further, how is it ensured that only 22 out of 41 fields data have been included for calculations? PP shall explain this. Finding remains OPEN. 2. The explanation provided by the PP for considering all the fields for reduced tillage is appropriate. Therefore, this finding is CLOSED.	
Project proponent response 07-02-2025	
1. Overall the process of interacting with farmers depends on the time of year. This is due to seasonality but also that as the AgreenaCarbon project has undergone Verra Validation the review of calculations and eligibility has also updated and so once the completion of changes and hopeful success of Verra Verification and Issuance occurs- the farmers will receive communications not on estimates but on final field eligibility and ERRs. 2. Once the annual QA/QC mechanisms are completed, AgreenaCarbon creates personalised farm reports for each Project participant, shared between September and November circa along with an educational PowerPoint containing key information. Please see attached documentation. The Farm Report clearly states how many of a farmer's fields were eligible for Verra program participation after QA/QC, and how many had to be removed because they did not meet the eligibility check. If participants have any questions regarding eligibility checks or any other aspect of the farm reports, they are invited to ask them during ensuing one-on-one meetings with CS personnel, or through any of the available communication channels. In the case of User ID 3799, the farmer received the email on 30th of September, as they tend to be very reactive and proactive (see SOP). On 9th of October, the farmer and the Customer Success Representative had a meeting to discuss the results of the report, thus ensuring that User ID 3799 understood the arrangement above-mentioned by the VVB	

3. Please see the screenshot of the Hubspot interactions below, which demonstrates the call dates and meetings held with User 3799 and also the sharing of documentation on the estimated fields eligible in the report.

Documentation provided by project participant

- 3799_Vintage2023_dashboard_2024-09-10.pdf
- Your Carbon Results EN (Cornelia).pdf
- SOP - Standard Operating Procedure - Farmers Results 2023.pdf

- VVB assessment

Date: 12/02/2025

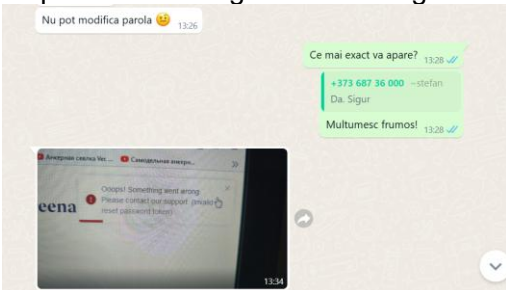
- Upon review of the 3799-dash-board screenshot (3799_Vintage2023_dashboard_2024-09-10.pdf) and corresponding explanation provided upon verification not all the farms pass the QA/QC. This is dully conveyed to the farmers through the documents "Your Carbon Results EN (Cornelia).pdf and SOP - Standard Operating Procedure - Farmers Results 2023.pdf." The information has been found to be appropriate upon review. Therefore, this finding is **CLOSED**.

CAR ID	17	Section No.		Date	08/01/2025
Description of CAR					
RSV observations: grievance records Out of all the onsite and remote samples, only two samples confirmed submitting grievances. PP is to share the grievance records and also explain how those grievances have been resolved. User ID 5116 – Moldova sample; also share copy of benefit contract as well. User ID 6055 – Romania sample; copy of benefit contract is received. PP is to justify in the MR how the following requirement of VCS standard v4.7 has been met. <u>Section 3.18.4 (page 42):</u> The project proponent shall develop a grievance redress procedure to address disputes with stakeholders that may arise during project planning and implementation,					

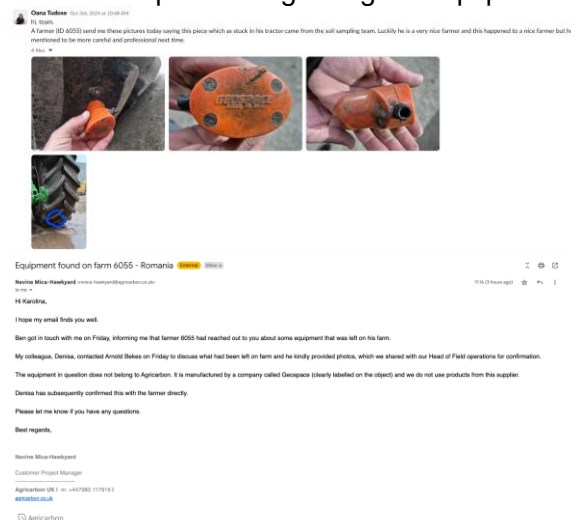
including with regard to benefit sharing and all other safeguard and stakeholder engagement requirements mentioned in Sections 3.18 and 3.19 respectively. The procedure shall include processes for receiving, hearing, responding and attempting to resolve grievances within a reasonable time period, taking into account culturally appropriate conflict resolution methods. The procedure and documentation of disputes resolved through the procedure shall be made publicly available. The procedure shall have three stages:

- 1) The project proponent shall attempt to amicably resolve all grievances and provide a written response in a manner that is culturally appropriate.
- 2) Any grievances that are not resolved by amicable negotiations shall be referred to mediation by a neutral third party.
- 3) Any grievances that are not resolved through mediation shall be referred either to a) arbitration, to the extent allowed by the laws of the relevant jurisdiction or b) competent courts in the relevant jurisdiction, without prejudice to a party's ability to submit the grievance to a competent supranational adjudicatory body, if any.

NOTE: Section 3.18 and 3.19 requirements are effective for all project requests submitted on or after 1 March 2024. Except for Section 3.19.27(3) and Section 3.18.2.

Project participant response	Date : DD/MM/YYYY
The AgreeenaCarbon grievance procedure ensures that farmers can file formal complaints if need be and they would be assessed on whether an escalation is needed. Still, due to the nature of the Project and the close communication between the CS team and farmers at Agreeena, farmers typically write to Agreeena via WhatsApp or phone call, as they have close relationships with their representatives. These complaints are then delegated to the right person or team to resolve the matter amicably and in a culturally appropriate manner. This is outlined in Section 2.2.6 of the PD. - For User 5116, there has been no grievance record submitted and email communication or phone communication have not identified grievances or complaints towards the Project itself. The only evidence of a complaint was when the User could not change his password on the platform which was registered on WhatsApp. This was resolved over the phone. The following picture is the message sent regarding the password reset issue as proof of tracking and recording of the complaint.  - For User 6055, the only evidence of a grievance was a minor complaint submitted to the Customer Success team on October 24, 2024 in reference to potential soil sampling equipment left, not by Agreeena, but by the soil sampling team. The complaint was logged and investigated and it was found that the soil sampling equipment is not from the company with which Agreeena partners for soil sampling and this was communicated	

with the farmer as follow-up. The attached screenshot depicts this. The benefit contract has also been shared with the VVB. The following pictures show the message sent regarding the equipment as proof of tracking and recording of the complaint as well as the follow-up email regarding the equipment.



Documentation provided by project participant

- *Agreena-Benefits-Contract-UserID-5116*

VVB assessment

Date: 05/02/2025

1.The Grievance Redressal Procedure has been described in Section 2.1.4 of the MR. The process described in the PD and MR are as per the Sections 3.18 and 3.19 of the standard v4.7. Further, there was a minor complaint made by the farmer (USER ID 5116) through a Whatsapp message. This was resolved over WhatsApp by Agreena team. There was no formal complaint raised by the farmer. The information has been reviewed and found to be correct. The benefit Therefore, this finding is closed.

2. VVB has checked related to Grievance raised by User 6055 and the resolution provided by the Agreena team through email communication. The screenshot for the same has been provided by the PP in the response above. Therefore, this finding is **closed**.

CAR #17 is CLOSED.

PRRI

CAR ID	18	Section no.	PRR Issue 1	Date : 23/04/2025
Description of CAR				
Section 3.3 of the monitoring report (MR) does not sufficiently demonstrate that the new project activity instances (PAIs) added to the project during this monitoring period meet the eligibility criteria for inclusion of new project activity instances described in Section 1.4 of the Project Description (PD).				
Kindly demonstrate the same using objective evidence against each eligibility criterion for new PAIs included in the verification.				
Project participant response				Date : 16/05/2025

To clarify the eligibility criteria, Section 3.3 of the MR has been amended and further information added. In addition, a list of all fields that passed the eligibility check has been prepared and provided as a source of evidence to present the assessment and acceptance of fields further into the AgreeenaCarbon Project.	
Documentation provided by project participant	
<i>VCS MR_AgreeenaCarbon 4022_15SEP2021-31DEC2023_16MAY2025_CommerciallySensitive, Section 3.3</i> <i>VCS MR_AgreeenaCarbon 4022_List of AgreeenaCarbon Eligible Fields_16MAY2025</i>	
VVB assessment	Date: 23/05/2025
Section 3.3 of the MR has been updated and required information about applicability conditions for new PAIs has been added. Therefore, this finding is closed.	

CAR ID	19	Section no.	PRR Issue 2	Date : 23/04/2025
Description of CAR				
Section 1.1 of the MR mentions the use of the chemical RoundUp as a part of project activities such as the use of cover crops or catch crops. However, - The use of RoundUp is not described in the PD. - It is unclear if the use of RoundUp is higher in the project scenario as compared to the baseline. - The impacts of the use of RoundUp are not described. Kindly demonstrate the same in the context of the Action Required item 1(a) and 1(b) and revising the pertinent sections of MR viz., 1.1 and 2.2.2 along with objective evidence.				
Project participant response				Date : 16/05/2025
The inclusion of RoundUp in Section 1.1 was an error, and it has now been eliminated from the MR's main text. RoundUp usage is not prescribed as part of Project activities, it was included in the text as an example of a technology Project participants may, independently from Project implementation, apply on their crops. This technology is not within the Project boundaries for the quantification of GHG emission reductions and removals, and is therefore not assessed. Because RoundUp is not a technology included in the project design, there is consistency with the MR.				
Documentation provided by project participant				
<i>VCS MR_AgreeenaCarbon 4022_15SEP2021-31DEC2023_16MAY2025_CommerciallySensitive, Section 1.1</i>				

VVB assessment	Date: 23/05/2025
As explained by PP, the inclusion of RoundUp in Section 1.1 of MR was an error, and it has now been eliminated from the MR's main text. RoundUp usage is not prescribed as part of Project activities, it was included in the text as an example of a technology Project participants may, independently from Project implementation, apply on their crops. This technology is not within the Project boundaries for the quantification of GHG emission reductions and removals, and is therefore not assessed. Upon review the explanation has been found to be appropriate, therefore this finding is closed.	
VVB assessment (PRR II)	Date: 04/08/2025
Section 1.1 of the MR has been updated to remove mention of RoundUp, as it is not a direct project activity, and is not included in the project boundary. However, the issues raised have not been addressed, and the finding cannot be closed. 1. While the use of RoundUp is not a direct project activity, it is unclear if the use of RoundUp has increased in the project scenario compared to the baseline as a direct or indirect result of a project activity (e.g., planting of cover crops or catch crops). PP is requested to demonstrate that a. They have monitored and concluded that the use of chemicals, including herbicides/weedicides like RoundUp, has not increased in the project scenario due as an impact (direct or indirect) of implementation of project activities. b. There is no net harm caused by the release of chemicals due to project activities and that any potential risks have been identified, minimized, and mitigated by the project. (Section 2.2.2 of the MR). All the information is required to be substantiated for this Monitoring Period as well as going forward in the project.	
Project participant response	Date : 08/08/25

As identified by the review, RoundUp is not a direct project activity, and therefore this response will focus on the context and alignment of the VCS Standard v4.7, Section 3.19.1 (*“Project proponents shall identify any potential negative impacts of project activities and design and implement measures to mitigate them”*) and 3.19.10 (*“The project proponent shall identify, minimize, and mitigate any impacts caused by ... chemical pesticides and fertilizers as a result of project activities.”*).

1. In response to Action 1.a. and in reference to 3.19.1 VCS Standard v4.7: The Project identification of negative impacts from project activities, chemical pesticides and fertilisers:
 - Through No Net Harm analysis as well in the VCS AgreeenaCarbon PD as well as the Risk Assessment provided in Section 2.2.2 of the MR, AgreeenaCarbon has made it explicit that due to the nature of a regenerative agriculture transition the risk of chemical use, including agrochemical pollutants is expected to decrease over time due to the sustainable practices being promoted with participants.
 - Section 2.1 of the PD further explains how the project aligns with national best practice guidance on maintaining or improving environmental standards in the project area. This section also identifies the impacts of project activities and the ability to provide co-benefits.
2. In response to Action 1.b and in reference to 3.19.10 VCS Standard v4.7.: Mitigation activities to minimise negative impacts or risks by the project:
 - Section 2.2.2 the table includes a row titled *“Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials, and chemical pesticides and fertilizers)”* which details a full review of the existing regulations related to pesticides, with specific requirements related to the use of RoundUp in order to provide further clarity on the heavily regulated chemical.
 - Section 2.2.2 of the MR includes a breakdown of activities to minimise negative impacts including but not limited to:
 - i. *Improved soil fertility may reduce reliance on synthetic fertilizers.*
 - ii. *Increased farmland biodiversity can help naturally manage pests, pathogens, and weeds.*
 - iii. *Project participants are contractually expected to respect all inter-/national laws that may apply to Project implementation.*
 - The highly conscious regulatory sphere where the project is operating, pesticides and fertilizers are heavily controlled and regulated with strict load requirements, this applies within the EU legislation and modelled by UK, Moldova and Ukraine who have previously had or seek future alignment with EU policy.
 - The nature of agrochemicals such as RoundUp have stringent requirements and their use in a regenerative agriculture system is subject to existing legal use requirements prior to project start.
3. To address the request to *“ensure the project demonstrates they have monitored...”* this takes place through farmer engagements, monitoring of how farm practices change over time and also during internal farm visits carried out. This monitoring comprises of annual data collection, coinciding with a strict carbon assurance process that blends direct farm contact with remote-sensing technologies aims to to monitor the project activities and associated impacts throughout the project (detailed breakdown in the table of Section 2.2.2). In addition internal farm visits are carried out on a sample of farms to inspect for any issues that may arise (see Section 4.3.1.4 of the MR), as well as the previously mentioned customer success channels to farmers and grievance procedures which are available on the AgreeenaCarbon website for any external stakeholders to report such issues that may occur in real-time (see Section 2.1.4 of the MR).

4. Further there is currently no requirement to measure the use of Round-up as it is not a project activity and this is not required under the VCS Standard v4.7 Section 3.19.1 or 3.19.10.

In addition, the samples covered in VVB site visits did not identify the use of Roundups in the sampled fields. Hence, it can be confirmed that use of RoundUp is not present in the project geography.

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Therefore, CAR#19 is closed.

Documentation provided by project participant

VCS MR_AgreenaCarbon 4022_30JUL2025_PRR2_Clean, Section 2.2.2

VVB Assessment

Date: 18/08/2025

As identified in the VVB review, RoundUp is not a direct project activity, However in the context and alignment of the VCS Standard v4.7, Section 3.19.1 (“Project proponents shall identify any potential negative impacts of project activities and design and implement measures to mitigate them”) and 3.19.10 (“The project proponent shall identify, minimize, and mitigate any impacts caused by ... chemical pesticides and fertilizers as a result of project activities.”).

1. In response to Action 1.a. and in reference to 3.19.1 VCS Standard v4.7: The Project identification of negative impacts from project activities, chemical pesticides and fertilisers:

Through No Net Harm analysis as well in the VCS AgreeenaCarbon PD as well as the Risk Assessment provided in Section 2.2.2 of the MR, AgreeenaCarbon has made it explicit that due to the nature of a regenerative agriculture transition the risk of chemical use, including agrochemical pollutants is expected to decrease over time as a result of sustainable practices being promoted with participants.

Section 2.1 of the PD further explains how the project aligns with national best practice guidance on maintaining or improving environmental standards in the project area. This section also identifies the impacts of project activities and the ability to provide co-benefits.

2. In response to Action 1.b and in reference to 3.19.10 VCS Standard v4.7.: Mitigation activities to minimise negative impacts or risks by the project:

Section 2.2.2 the table includes a row titled “Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials, and chemical pesticides and fertilizers)” which details a full review of the existing regulations related to pesticides, with specific requirements related to the use of RoundUp in order to provide further clarity on the heavily regulated chemical.

Section 2.2.2 of the MR includes a breakdown of activities to minimise negative impacts including but not limited to:

- i. Improved soil fertility may reduce reliance on synthetic fertilizers.
- ii. Increased farmland biodiversity can help naturally manage pests, pathogens, and weeds.
- iii. Project participants are contractually expected to respect all inter-/national laws that may apply to Project implementation.

The highly conscious regulatory sphere where the project is operating, pesticides and fertilizers are heavily controlled and regulated with strict load requirements, this applies within the EU legislation and modelled by UK, Moldova and Ukraine who have previously had or seek future alignment with EU policy.

The nature of agrochemicals such as RoundUp have stringent requirements and their use in a regenerative agriculture system is subject to existing legal use requirements prior to project start.

3. To address the request to “ensure the project demonstrates they have monitored...” this takes place through farmer engagements, monitoring of how farm practices change over time and also during internal farm visits carried out by Agreeena team. This monitoring comprises of annual data collection, coinciding with a strict carbon assurance process that blends direct farm contact with remote-sensing technologies aimed to monitor the project activities and associated impacts throughout the project (a detailed breakdown has been provided in the table of Section 2.2.2 o). VVB verified the abovementioned information through visiting the Agreeena’s carbon platform where data is stored.

In addition internal farm visits are carried out on a sample of farms to inspect for any issues that may arise (see Section 4.3.1.4 of the MR), as well as the previously mentioned customer success channels to farmers and grievance procedures which are available on the AgreeenaCarbon website for any external stakeholders to report such issues that may occur in real-time (see Section 2.1.4 of the MR). It is worth noting that there is currently no requirement to measure the use of Round-up as it is not a project activity and this is not required under the VCS Standard v4.7 Section 3.19.1 or 3.19.10.

VVB site visits did not identify the use of Roundups in the sampled fields therefore it can be confirmed that use of RoundUp has not increased or been used during the monitoring period.

Therefore, this finding is closed.

CAR ID	20	Section no.	PRR Issue 3	Date : 23/04/2025
Description of CAR				
The project is located across 10 different countries/geographic areas (GAs). However, only a single NPRR has been submitted. It is not demonstrated how a single risk assessment is applicable to the entire project area.				
Project participant response				Date : 16/05/2025

To remain consistent with the Validation process, a single NPRR, covering all 10 countries/geographic areas (GAs) included in the Project area, was provided. This document was based on the NPRR approved by both VCS and Earthood auditors in Validation of the PD. To summarise previous Validation responses, and highlight the validity of a single-NPRR, each risk category is justified in the sections below for either conservativeness or justification for a whole-project approach.

Internal Risk:

- a. Project management: 0
 - i. The Customer Success team located within the headquarters covers all geographies, while the technical team is identical across the entire Project. Across the 10 GAs, there is at least one representative per geography based in proximity to the local Project area. Please see table with no. of representatives provided as part of the NPRR.
- b. Financial viability: 0
 - i. Assessed across the entire Project, taking into consideration pessimistic scenarios for carbon credit prices as well as highest investment costs. FADN data across the entire Project was used to determine the break-even point. The model is conservative in its estimates: high costs and low credit prices are used to determine the point when the Project would break even. That is to say, the pessimistic scenario is used. Evidence is provided in the form of Agreena's Financial Viability Assessment as part of the NPRR.
- c. Opportunity cost: 0
 - i. Similar to the financial viability model, the NPV is across the Project and is therefore taking into consideration all 10 GAs.
- d. Project Longevity: 17
 - i. All Benefit Contracts across the entire Project are identical for each and every participant, and therefore the same risk level can be applied to all 10 geographies.

External Risk:

- a. Land Tenure and Resource Access: 0
 - i. Benefit Contracts are identical for all Project participants. Regarding ownership, there may be more volatile land allocation cases across the Project area. The ownership and use rights may belong to different entities as reported in Bulgaria. To maintain conservativeness, the risk is flagged across the whole Project.
- b. Stakeholder engagement: 0
 - i. Local populations throughout the 10 GAs are not reliant on the Project-affected area for their survival. This is the case due to the nature of the products being cultivated.

- ii. Concerning the point on the Stakeholder Engagement risk raised by VCS auditors in Finding #3, the reasoning behind selecting “No” to Q1 is that no community reliant on Project area for essential food, fodder or fuel to their survival exists. Instead, the vast majority of the agricultural products Project participants (i.e., farmers) harvest are for profit, for sale on agri-food inter-/national markets.

c. Political Risk: 2

- i. Specifically, Ukraine’s average Worldwide Governance Indicators (WGIs) score is the lowest among the 10 GAs, and was therefore used across the whole Project-level Political Risk rating.

Natural Risks:

a. Fire:

- i. While fire risk is present across all regions, it is disproportionately greater in Spain. Due to Spain’s historical fire incidence, this risk dimension was attributed the highest likelihood at the Project-level, and significance was determined based on the PAIs in zones of high fire risk. Mitigation activities were assessed for Spain and a few other countries in different European regions.

b. Extreme Weather:

- i. Extreme weather phenomena (flooding, drought, storm...) are prevalent, and increasingly so, across the entire Project area. Thus the risk was treated as high to maintain conservativeness. Mitigation tactics were captured for the whole of the EU as well as specific countries across different climate zones included in the Project.

c. Pest and Disease:

- i. Agricultural pests & pathogens outbreaks occur at a high frequency across the whole Project area and are therefore attributed the highest likelihood. Mitigation is tracked across the UK and the EU in order to adequately capture this risk and the steps taken to combat it.

d. Geological Risk:

- i. Seismic activity is the main Geological Risk relevant to Project permanence. Most GAs are geologically stable but this risk is historically present in Romania and Spain, although the impacts on agricultural SOC are not widely studied nor reported at lower magnitudes. The significance was assessed by calculating the vulnerability to seismic impacts of the PAIs in high-risk GAs according to their geographic location. Mitigation is also looked at for Spain and Romania.

AgreenaCarbon has shared key documents uploaded as evidence to corroborate its Digital AFOLU NPRR on the Verra Project Hub, and these are listed below.

Documentation provided by project participant

<i>Agreena Adaptive Project Management Plan_27SEP2024.pdf</i> <i>Agreena Culture Playbook.pdf</i> <i>Agreena ESG Policy.pdf</i> <i>AgreenaCarbon Climate Change Adaptive Management Plan (CCAMP)_202524112232080.pdf</i> <i>AgreenaCarbon Permanence Management Plan.pdf</i> <i>Appendix 3_Regulatory Surplus - Internal Policy Tracker.xlsx</i> <i>Carbon Advisory board_ToR.pdf</i> <i>changestofinancialviabilitymodel_V2.png</i> <i>CIDs evidence.pdf</i> <i>Fiancial-model-PnL-SepForecast2024withRnDsplit.xlsx</i> <i>History of Containing Natural Risks.pdf</i> <i>Natural Risk Chapter - AgreenaCarbon NPRR MR.pdf</i> <i>v2_AgreenaCarbon Risk Tool_Financial_Viability_Assessment-Model.xlsx</i>	
VVB assessment	Date: 24/05/2025
The Project Proponent Agreena has a well-structured Adaptive Management Plan. The Risk Mitigation scores are conservatively applied, taking into account the project targets 10 countries. The score provided in each category has considered all the 10 countries covering 1st PAI. The justification provided by PP is deemed appropriate. Therefore, this finding is CLOSED.	
VVB assessment (Verra PRR II)	Date04/08/2025

1. There is insufficient assessment of the single NPRR

a. PP is requested to provide more information related to if there were risks likely to be different across GA, The most conservative risk have been applied For example, risks related to land tenure, political risk, and natural risks.

b. Justification on i) If the governance score of Ukraine was the lowest and therefore more conservative ii) Mitigation score applied is applicable to all the countries included in the project.

2. Project Management:

a. PP is requested to clarify if the adaptive management plan meets the requirements of the NPR tool version 4.2. PP is requested to further provide information on how a score of -2 has been added as per adaptive management plan.

b. PP is requested to provide more information on if the farmers are aware of the potential for yields to decrease temporarily due to the transition to improved agricultural practices, thus enabling a score of 0 for the risk. PP is requested to provide any documentation any declaration or other supporting documents regarding this.

4. Land Tenure and Resource Access:

i. PP is requested to provide more information related to the due process undertaken by the project to discover any disputes over ownership and land, resource access, or use rights.

5. The response to “No” to whether local populations are reliant on the project area is inadequately justified, as it narrowly interprets reliance in terms of subsistence and does not consider broader forms such as economic, cultural, or ecosystem service dependence. PP is requested to provide more clarity.

6. Natural Risks

a. PP is requested to provide more information on the adaptive capacity.

The NPRR provided was at the time of validation, however all the scored of NPR should be supported for the verification period/monitoring period. Kindly justify the scores in light of the verification.

Project participant response

Date : 08/08/25

The following text aims to aid the VVB in their assessment of the NPRR. Key evidence and documents have been re-shared.

Issue 1

The rating for a variety of external and natural risk categories listed in the NPRR differ GA from GA. To maintain conservativeness, AgreeenaCarbon has consistently adopted at the grouped project-level the risk rating of the GA with the highest risk level.

(a) Land Tenure

Bulgaria is the GA where Land Tenure risk was deemed highest. Land lease contracts in Bulgaria are often with the government, and the Bulgarian government has a history of intervention in land rights as recently as in the past 20 years. Thus, Bulgaria has been used as the reference GA for Land Tenure Risk estimation at the Project level.

(b) Natural Risks

Fire and Geological risks level hinge on the specific location, geography, climate and weather patterns of a given GA. Spain presents the highest historical incidence and severity of wildfires, whereas earthquake occurrence is greatest in Romania as well as Spain. For Pests & Disease outbreaks, there is no clear GA where likelihood peaks: agricultural pests & pathogens are widespread in all pan-European countries and regularly cause disturbances. Likewise, the risk category of Extreme Weather is ubiquitous across all GAs. Southern GAs are most affected by drought, while flooding and cold spells are more frequent in northern regions. The files “*History of Containing Natural Risks*” and “*Natural Risk Chapter - AgreeenaCarbon NPRR MR*” show how AgreeenaCarbon analysts used either the GA with the highest likelihood or the most conservative likelihood available to assess each Natural Risk dimension at the Project-level.

(c) Political Risk

i. Please find below tables summarising the average WGIs scores in the 10 GAs across the years 2018-2022. Those were the five most recent years of data available in the WorldBank website when the NPRR was redacted. Average index values show that Ukraine has the most conservative Political Risk rating among all GAs.

List of Countries	Voice and Accountability	Political Stability and No Violence	Government Effectiveness	Regulatory Quality	Rule of Law	Control Corruption	Total Average
Bulgaria	0,31	0,39	-0,09	0,43	-0,07	-0,21	0,13

Denmark	1,55	0,92	1,89	1,72	1,84	2,25	1,69
Estonia	1,18	0,68	1,12	1,55	1,32	1,53	1,23
Latvia	0,87	0,49	0,89	1,18	0,94	0,58	0,82
Lithuania	0,99	0,78	1,01	1,18	1,00	0,70	0,94
Moldova	-0,03	-0,40	-0,45	-0,01	-0,41	-0,56	-0,31
Romania	0,56	0,42	-0,17	0,37	0,39	-0,12	0,24
Spain	1,02	0,36	0,92	0,87	0,89	0,68	0,79
Ukraine	0,03	-1,50	-0,43	-0,27	-0,76	-0,79	-0,62
United Kingdom	1,28	0,42	1,32	1,57	1,49	1,70	1,30

ii. Evidence that the mitigation score for Political Risk (“*The project is in a country that 1) is party to the Paris Agreement and has submitted a NDC to the UNFCCC Secretariat in the last five years; 2) Includes AFOLU commitments (conditional or unconditional) in its NDC, and 3) has a documented and active climate change plan that included the project activity*”) is applicable in all GAs included in the Project besides Ukraine has been obtained from the UNFCCC official NDC Registry and via policy review. To summarise:

- Bulgaria
 1. Ratified the Paris Agreement, latest NDC in 2023
 2. Part of the EU-wide NDC, where the Agriculture and LULUCF sector (thus including AFOLU) are clearly included in the NDC scope.
 3. The EU-level policy CAP and related GAEC set out goals and supportive policy goals that envision and promote more sustainable agriculture practices.
- Denmark
 1. Ratified the Paris Agreement, latest NDC in 2023
 2. Part of the EU-wide NDC, where the Agriculture and LULUCF sector (thus including AFOLU) are clearly included in the NDC scope.
 3. The EU-level policy CAP and related GAEC set out goals and supportive policy goals that envision and promote more sustainable agriculture practices.
- Estonia
 1. Ratified the Paris Agreement, latest NDC in 2023
 2. Part of the EU-wide NDC, where the Agriculture and LULUCF sector (thus including AFOLU) are clearly included in the NDC scope.
 3. The EU-level policy CAP and related GAEC set out goals and supportive policy goals that envision and promote more sustainable agriculture practices.
- Latvia
 1. Ratified the Paris Agreement, latest NDC in 2023
 2. Part of the EU-wide NDC, where the Agriculture and LULUCF sector (thus including AFOLU) are clearly included in the NDC scope.
 3. The EU-level policy CAP and related GAEC set out goals and supportive policy

goals that envision and promote more sustainable agriculture practices.

- Lithuania
 1. Ratified the Paris Agreement, latest NDC in 2023
 2. Part of the EU-wide NDC, where the Agriculture and LULUCF sector (thus including AFOLU) are clearly included in the NDC scope.
 3. The EU-level policy CAP and related GAEC set out goals and supportive policy goals that envision and promote more sustainable agriculture practices.
- Moldova
 1. Ratified the Paris Agreement, submitted its latest NDC in 2025, while its first NDC was submitted in 2020. The 2020 NDC will be here considered as the former is out of the temporal bounds of the MR.
 2. The agriculture and the LULUCF sectors are included in the NDC's scope and coverage.
 3. In the "National Climate Change Adaptation Programme until 2030" agriculture is among the focus areas for the development of climate change adaptation measures. No-till and conservative farming systems figure among the recommended climate change adaptation measures for the agricultural sector - see Subsection 1 of this policy.
- Romania
 1. Ratified the Paris Agreement, latest NDC in 2023
 2. Part of the EU-wide NDC, where the Agriculture and LULUCF sector (thus including AFOLU) are clearly included in the NDC scope.
 3. The EU-level policy CAP and related GAEC set out goals and supportive policy goals that envision and promote more sustainable agriculture practices.
- Spain
 1. Ratified the Paris Agreement, submitted its latest NDC in 2023
 2. Part of the EU-wide NDC, where the Agriculture and LULUCF sector (thus including AFOLU) are clearly included in the NDC scope.
 3. The EU-level policy CAP and related GAEC set out goals and supportive policy goals that envision and promote more sustainable agriculture practices.
- United Kingdom
 1. Ratified the Paris Agreement, submitted its latest NDC in 2025, its previous submission was in 2022. The 2022 NDC will be here considered as the former is out of the temporal bounds of the MR.
 2. The agriculture and the LULUCF sectors are clearly included in the scope and coverage of the United Kingdom's NDC.
 3. The Sustainable Farming Initiative (SFI) provides policy support and goals for a more sustainable agricultural sector with lower environmental and GHG footprint (such as regenerative agriculture).

Issue 2 Project Management

(a) Adaptive Management Plan

- (i) The NPRR tool version 4.2 section 2.2, point (5), requires projects to: "*identify, assess, and create a mitigation plan for potential [internal] risks to the project, including those identified in this document, and any other obstacles to project*

implementation". The AgreeenaCarbon Adaptive Management Plan, in alignment with the requirements, details the Data Flow process (i.e., from baseline data collection to quantification of ERRs and annual monitoring), related potential risks and mitigation actions. Process for monitoring progress and incorporating past lessons is included.

- (ii) To respond to the request for further clarification on how a score of -2 has been added as per adaptive management plan is not possible, as this does not align with the terminology used in the NPRR submission. The Verra PRR2 Finding 3 point 2 (a) quotes the Verification report response from PRR1 from the VVB which says *"The risk has been rated -2 as a part of the adaptive management plans"* and this is a misleading statement which should not have been included in the Verification report and will need to be addressed by the VVB. The only activity that has received a score of -2 in the section 'Project Management' is: *(h) Mitigation: Management team includes individuals with significant (i.e., more than five years) experience in AFOLU project design and implementation, carbon accounting, and reporting (e.g., individuals who have successfully managed projects through validation, verification, and issuance of GHG credits) under the VCS Program or other approved GHG programs"*. The evidence and details for meeting this mitigation criterion is detailed in the file *"AgreeenaCarbon_Management team"*, as previously provided to the VVB.

(b) Farmers awareness of potential yield decrease

- (i) Section 2.2.3 of the PD includes information about the farmer onboarding process, and the process for collecting participants information such as yield data. Yield information is collected on an annual basis as part of the verification process and for inclusion into the project and is closely tracked and monitored for losses. The occurrence of a potential initial drop in yield has been documented throughout the PD (Section 2.1, Section 2.2.3, Section 2.3, Section 3.2 etc.) which has been public and undergone a full validation process as well as stakeholder engagement process.
- (ii) Section 17.3 in the Terms and Conditions of the AgreeenaCarbon Project includes the text *"... loss of anticipated profits (such as expected crop yield)"* as a potential consequence of entering the Project. All participants must review and sign the Terms and Conditions before becoming officially enrolled in the Project.
- (iii) During various farmers engagements (e.g., outreach events, webinar, onboarding phase and Validation Meetings, or engagements with partner organisations) in the Monitoring Period, AgreeenaCarbon's external-facing teams have discussed the potential of initial yield and related earnings decrease. See the Slide *"Intro to AgreeenaCarbon.png"* for an example of the information shared during these engagements.
- (iv) Project participants can access at any time educational and informative content through either the Agreeena public website or the platform Intercom under "Help Center". The materials include the page "Effects of Regenerative Agriculture", where yield variability in conventional vs non-conventionally managed crops is discussed (<https://help.agreena.com/en/articles/5695039-effects-of-regenerative-agriculture>).

Issue 3 Opportunity Cost

- (a) Assessment of the risk score was included in the VR and included review of Declarations and Farmer signed contracts

Issue 4 Land Tenure and Resource Access

Point 3.18.4 of the VCS standard states that project proponents “*shall develop a grievance redress procedure to address disputes [...]. The procedure shall include processes for the receiving, hearing, responding and attempting to resolve grievances*”. The AgreeenaCarbon Project Grievance & Complaints mechanism was developed accordingly (see related sections in PD and MR) so as to promptly address any potential land tenure and resource access issue.

Further, all participants are requested to confirm their legal ownership and/or access and use rights. Specifically, prospective Project participants are requested to confirm (a) the size and location of the PAI they wish to enroll, and (b) their legal rights to access, use and manage the farmland they wish to enroll in during the onboarding phase and as they sign the Benefit Contract and Terms & Conditions. As part of the QA procedure, remote sensing analysts verify the location, size and boundaries of each PAI enrolled to verify participant-reported data and ensure no enrolled PAI overlaps with another field or other land use types (e.g., pasture land, pristine habitats). Boundary verification thus helps minimise the risk of land disputes (e.g., on ownership, use or access rights) from arising during Project implementation. During the yearly monitoring and verification of data for ERRs estimation, participants are asked again to report the situation of each PAI, confirm their ownership or lease agreement with use rights.

Issue 5 Stakeholder Engagement

There are no defined “local populations” nor “local communities” that rely on the Project area land and related sources for economic or cultural purposes. All PAIs consist of privately owned or leased farmland that has been used for crop production during the previous 10 years or more, and would continue to be used for crop production after enrollment in the Project. Thus it is private actors who are reliant on the land included in the Project area for economic profit, given that the crop types allowed are commercial commodities typically cultivated for inter-/national agricultural trade. The provision of economic benefits from the Project area would not be significantly affected during implementation. The main text of the PD and MR explains how economic risks to participants are addressed, showing expected net positive economic outcomes in the long-term.

Farmland habitats provide ecosystem services to all and any population and/or community, here intended in the broadest sense. The most direct and relevant one is the provision of agricultural goods. Project implementation would not halt the production of agricultural commodities on the land enrolled. Even if yield was to initially decrease, the PAIs enrolled in the Project do not constitute such a proportion of total available farmland to locally jeopardise agricultural supply chains. Other key ecosystem services generated by farmland include nutrient cycling, water cycling, soil stabilisation, achieved also by improving the habitat quality for local biodiversity. There is abundant evidence in the scientific literature that implementation of the ALM practices supported by the Project (e.g., no tillage) boosts farmland habitats' capacity to supply these crucial ecosystem services, and resilience in the face of Climate Change.

Issue 6 Natural risks

- a. To aid the VVB in a more thorough assessment of AgreeenaCarbon adaptive capacity, a structured review has been developed and shared ("*Adaptive Criteria.pdf*"). The relevant evidence to demonstrate the fulfillment of each adaptive capacity criteria has been re-uploaded for the VVB convenience.

NPRR updated for Verification

A documented NPRR was provided and assessed at Validation by the VVB and Verra. Upon submission of the NPRR for verification the AgreeenaCarbon Project completed the new digital NPRR assessment to verify the estimation of future climate impact as required by Verra. The Digital NPRR assessment has been completed using the Monitoring Period (2021-2023) as reference and the most up to date VCS v4.7 guidelines. Due to the intrinsic nature of Natural Risks, which are bound to ecological and weather dynamics, and the manner in which they are assessed under VCS guidelines, their rating did not change over the short time frame (i.e., 3 years) between Validation and Verification.

Documentation provided by project participant

Adaptive Criteria.pdf
Agreena Adaptive Project Management Plan_27SEP2024.pdf
AgreenaCarbon Climate Change Adaptive Management Plan (CCAMP)_202524112232080.pdf
AgreenaCarbon_Management team.pdf
Agreenca Culture Playbook.pdf
Agreena ESG Policy.pdf
Appendix 3_Regulatory Surplus - Internal Policy Tracker.xlsx
Carbon Advisory Board_ToR.pdf
CIDs evidence.pdf
CIDs evidence_Eastern and W&C Europe
Financial-model-PnL-SepForecast2024withRnDsplitt.xlsx
History of Containing Natural Risks.pdf
Intro to AgreenaCarbon.png
Natural Risk Chapter - AgreenaCabron NPRR MR.pdf
v2_AgreenaCarbon Risk Tool_Financial_Viability_Assessment-Model.xlsx

VVB assessment

Date: 16/08/2025

1. Insufficient VVB assessment of the single NPRR:

a) VVB has provided the justification related to risks assessment under section 4.4 of the NPR of the revised VR, The project is a grouped project with project areas spanning over 10 Geographical Areas(GA) in order to maintain the conservativeness of the project Agreeena has adopted the highest risk rating amongst the GA's in order to be most conservative. VVB has provided detailed explanation on which country has been considered for the risk score under several sections of section 4.4 of the NPR analysis section of the VR for Land Tenure, Political risk and natural risk.

b) VVB has updated the justification Under section 4.4 of the VR for the political risk

The governance score of Ukraine is derived from the data available at world bank website and VVB confirms that Ukraine has the lowest trend on political risk therefore the most conservative. The mitigation measure measures as per AFOLU Non permanence risk tool are:

The project is in a country that: 1) is party to the Paris Agreement and has submitted an NDC to the UNFCCC Secretariat in the last five years, 2) includes AFOLU commitments (conditional or unconditional) in its NDC, and 3) has a documented and active climate change plan that includes the project activity, VVB confirms that all the GA are applicable to the mitigation measures.

2. Project management

a) VVB has provided the assessment of the adaptive management plan: As per AFOLU non permanence risk tool which is in line to NPRT version 4.2 section 2.2 Point 5 The project has an active adaptive management plan in place which identify, assess and create a mitigation plan for potential risks to the project inclusive of those identified under the document and any other obstacles to the project Implementation. The adaptive management plan is detailed and has several sections Such as Onboarding of Farmers and collection of baseline data, Input of field actuals to calculate Earnings Potential, Quantification of Baseline data and Emission Reductions and removals and annual Monitoring Reporting. Each steps defines the data flow process Their objectives, potential risks and its mitigation action has been clearly defined. A dedicated team Quality manager and back up Quality manager is present for each data flow stage for reviewing the process. Furthermore the adaptive management plan is updated annually.

The Mitigation risk has been rated -2 as the team includes with significant (i.e., more than five years) experience in AFOLU project design and implementation, carbon accounting, and reporting (e.g., individuals who have successfully managed projects through validation, verification, and issuance of GHG credits) under the VCS Program or other approved GHG programs which has been verified by assessment of "AgreenaCarbon_Management team".

b)VVB has updated the assessment regarding the awareness of the potential yield decrease of the participating farmers under section 4.4 of the revised VR. The farmers are well aware of the decrease of the potential yield due to the transition to improved agricultural practise as they have been clearly intimated. The clause is also mentioned under section 17.3 of Agreeena's Terms and conditions which was verified during on site visit.Agreeena also has a Help center page. where effects of regenerative agriculture is mentioned . During the Interviews with the farmers it was confirmed that they are well aware of the potential decrease in the production during the initial shift to improved agricultural practices therefore the score of 0 is justified.

3. Opportunity Cost

a. VVB has provided the assessment of the risk score and appropriateness of opportunity cost in section 4.4 of the updated VR.

4. Land Tenure and Resource Access

a. i) VVB has updated the assessment related to land tenure risk and the due process undertaken for the discovery of any disputes over ownership and land, Resource access or usage rights under section 4.4 of the revised MR: The AgreeenaCarbon Project has implemented a clear and proactive grievance mechanism to address potential land tenure and resource access issues. Participants are required to confirm legal ownership or usage rights of the land they enroll, including the size and location of each Project Activity Instance (PAI). During onboarding and annually thereafter, participants must reaffirm their access and use rights, supported by lease or ownership documents. Remote sensing is used to verify field boundaries and prevent overlaps with other land uses, reducing the risk of disputes. Along with this during the On site visit the sampled farmers reported no dispute over the land.

5. The appropriateness of the mitigation score applied in point 'o'. Stakeholder Engagement

a. More information related to dependency of farmers to the project land was provided by the VVB in section 4.4 of the revised VR: The AgreeenaCarbon Project operates exclusively on privately owned or leased farmland, with no defined local populations or communities relying on the project area for economic or cultural purposes. All Project Activity Instances (PAIs) have a history of commercial crop production and will continue serving this purpose post-enrollment, ensuring that the land remains economically productive for private actors.

Project implementation is not expected to negatively affect local agricultural supply or economic benefit, as the enrolled areas represent a small fraction of total farmland. Economic risks to participants are addressed in the Project Design and Monitoring Report, with projections indicating long-term net positive outcomes.

Farmland within the project area continues to provide key ecosystem services—such as crop production, nutrient cycling, water regulation, and soil stabilization. The adoption of improved agricultural land management (ALM) practices, like no-tillage, is supported by scientific evidence showing increased ecosystem service delivery and enhanced resilience to climate change.

6. Natural Risks

a. VVB has provided more information related to the future climate impact factor.

b. VVB has now provided a detailed assessment of adaptive capacity of the project: The AgreeenaCarbon Project demonstrates strong adaptive capacity by effectively fulfilling all five Adaptive Criteria during its first monitoring period. It integrates a diverse range of international, national, and regional climate policies into its design, supported by a dedicated Regulatory and Standards Affairs team and Carbon Advisory Board. The project leverages multi-scale climate data from national reports to IPCC assessments and early warning systems to inform risk assessments and adaptive management. Agreeena shows long-term leadership through its ESG Strategy and advocacy for regenerative agriculture, which it positions as both a climate solution and an economic opportunity.

With a €14 million annual R&D budget and a team of scientific experts, it ensures access to the resources needed for innovation and technical excellence. Central to the project's innovation is the adoption of regenerative practices like no-till, cover cropping, and reduced synthetic fertiliser use strategies endorsed by the IPCC for their triple benefit to climate adaptation, mitigation, and food security.

Action Required

1. a. VVB has provided the assessment and confirmation to the appropriateness of a single NPRR for the entire PA, including addressing the points raised in Issue 1.
- b. Described all the steps taken for the assessment of non-permanence risk rating determined by the project proponent, addressing all points raised in Issue 2. For each risk factor including
 - i. An assessment of all rationale, assumptions and justification used to support the risk score has been provided
 - ii. An assessment of the quality of documentation and data provided to support the risk score has been provided.
 - ii. A conclusion regarding the appropriateness of the risk rating has been provided.
2. VVB has ensured that there has been no corresponding changes in the risk score as the result of the assessment.

Therefore, this finding is closed.

CAR ID	21	Section no.	PRR Issue 4	Date : 23/04/2025
Description of CAR				

Appendix 1 of the MR does not sufficiently demonstrate that the information included as 'Commercially sensitive' meets the requirements for commercially sensitive information per the <i>VCS Program Definitions, v4.4</i> and <i>VCS Standard v4.7</i>. a. Appendix 1 of the MR does not demonstrate how the documents listed meet the definition of commercially sensitive information. b. It is unclear how documents/information such as 'VMD0053 Report and IME Report', or 'Breakdown of clusters for stratification approach' can be considered commercially sensitive, as they are required for the ERR calculations.	
Project participant response	Date : 16/05/2025

The main reason the documents are left as commercially sensitive is that they relate to “scientific, technical or other information whose public disclosure could reasonably be expected to undermine or negatively affect the development and/or implementation of a program” as per VCS Program Definitions v4.5 of Sensitive Information.

- a. Appendix 1 has been updated to ensure that there is sufficient justification and/or public versions of the reports.
- b. Agreena has generated a public version of the VMD0053 report (as outlined in the Registration and Issuance document v4.6, Section 4.2.7) as well as provided additional information and justification of commercial sensitivity in the Monitoring report, Appendix 1. The materials including the VMD0053 report, the assignment of PAIs to clusters for stratification can be considered commercially sensitive as the materials contain significant, proprietary information that falls under ‘scientifically or technically sensitive information for the business.’

The RothC model has been parameterized using data that Agreena has sourced and invested in financially to gather. Public disclosure of the specific parameters, data sources, or model adaptations would directly reveal the results of this investment, allowing competitors to benefit without incurring similar costs. In addition, Agreena has developed a novel stratification approach in line with VM0042 version 2.0 including criteria, threshold and spatial analysis that would expose the intellectual property of Agreena to others, including those whose entire business model relies on offering stratification services. The stratification supplement, specifically, necessitates disclosing soil sample results, which have been produced through significant costs on the side of the proponent and contain location data.

To conclude, immediate replication of the information provided could also reduce incentive to invest in research and development on both model development and stratification. The information that has been provided already, including the complete assignment of PAIs to strata and strata average SOC stocks, and the public version of the MVR allows for a complete replication of our ERRs, which is in line with the requirements of commercially sensitive information definition (Registration & Issuance Process, Section 4.2, VCS Program Definitions v4.5 and VCS Standard 4.7).

Documentation provided by project participant

VCS-Model-calibration-validation-report_v4.0_PublicVersion

VCS MR_AgreenaCarbon 4022_15SEP2021-31DEC2023_16MAY2025_CommerciallySensitive, Appendix 1

VVB assessment

Date: 24/05/2025

PP has provided rationale and logic behind not including certain sensitive information in the MR. However, publicly available versions have been made available with restricting only sensitive information. Agreeena has explained the rationale behind keeping certain information related to parameters restricted as this may cause them commercial losses and this is unique to the project which PP may not like to share. The justification provided by PP is deemed appropriate. Therefore, this finding is closed.	
VVB assessment (PRR II)	Date: 04/08/2025
1. It is unclear a. Whether the documents/information designated by the project proponent as commercially sensitive meet the VCS Program definition of commercially sensitive information. b. If any of the documents/information cannot be considered commercially sensitive per the <i>VCS Standard, v4.5</i>, Section 3.5.4. PP is requested to provide more information.	
Project participant response	Date : 08/08/25

1. The definition provided by Verra's Program Definitions v4.5 and furthermore in VCS Standard v4.7, Section 3.5.4, Commercially Sensitive Material is described as “*scientific, technical or other information whose public disclosure could reasonably be expected to undermine or negatively affect the development and/or implementation of a program*” and is related to the (1) *determination of the baseline scenario*, (2) *demonstration of additionality*, (3) *quantification of the estimated emission reductions and removals*, (4) *monitoring of GHG emissions*, (5) *calculation of the non-permanence score*.
 - a. Based on the definition in the VCS Program Definitions v4.5, the Appendix 1 of the Monitoring Report (MR) has been updated to outline in detail each of the documents that are commercially sensitive as part of the Verification process. The Public Version of the Model Validation Report (MVR) has been provided and each of the sections that are redacted are described in detail below.
 - b. Based on the VCS Standard v4.7 Section 3.5.4, the material that has been redacted from the public version of the Project documents including the MVR, MR and supplementary material (see Appendix 1 of the MR) is *not* in conflict to the VCS program definition of commercially sensitive information as detailed above. A full breakdown of each redacted section in the MVR is provided in the table below to support clarity in the assessment of the information that is described as commercially sensitive. Please note that after further review sections that had previously been redacted are now present in the public version of the MVR (please see *AgreenaCarbon_4022_VCS-Model-calibration-validation-report_v4.0_PublicVersion*)

Model Validation Report (MVR) Section	Content	Justification for Commercially Sensitive Material
Report Summary	Description of the combinations present in the project area.	Not necessary for the traceability or reproduction of the model results or ERRs. Contains information that may negatively affect the project.
Section 2.8.5.2 Baseline and Carbon pool initialization	Describing the optimization process and equation used for this.	Not necessary for the traceability or reproduction of the model results or ERRs. Refers to information that can be considered proprietary scientific development (parameter choices, data processing and data imputation algorithms).
Section 2.12 Calibration and validation procedure	Description of the calibration and validation process	Not necessary for the traceability or reproduction of the model results or ERRs.
Section 2.12.1 Data clustering and k-fold validation	Description of the approach to group clusters to determine the combinations.	Not necessary for the traceability or reproduction of the model results or ERRs. Partial redaction is done in order to provide a

		clear picture of the methods for clustering.
Section 3.3, PMU Estimates	Description and results of the Pooled Measured Uncertainty Results	Not necessary for the traceability or reproduction of the model results or ERRs. Refers to information that can be considered proprietary scientific development (parameter choices, data processing and data imputation algorithms).
Section 3.4 Validation Results	Description and results of the Validation	Not necessary for the traceability or reproduction of the model results or ERRs. Refers to information that can be considered proprietary scientific development (parameter choices, data processing and data imputation algorithms).
Section 4, Conclusions Related to Results	Several paragraphs and sentences related to the combinations presented in the project.	Not necessary for the traceability or reproduction of the model results or ERRs. Partial redaction is done in order to show the necessary results for the model output.
Appendix (Section 6.1) (MVR)	Declaration of CFGs	Not necessary for the traceability or reproduction of the model results or ERRs. Refers to information that can be considered proprietary scientific development (parameter choices, data processing and data imputation algorithms).
2. The public MVR provided in the project allows for a full replication of the ERRs per point (3) in Section 3.5.4 related to the quantification of the estimated ERRs. All ERRs are fully traceable per Verra's requirements. The public MVR was provided to the VVB on the 22nd May 2025 via email, with the document title <i>AgreenaCarbon_4022_VCS-Model-calibration-validation-report_v4.0_PublicVersion</i>		
Documentation provided by project participant		
<i>AgreenaCarbon_4022_VCS-Model-calibration-validation-report_v4.0_PublicVersion</i> <i>VCS MR_AgreenaCarbon 4022_30JUL2025_PRR2_Clean, Appendix 1</i>		
VVB assessment		Date : 18/08/2025

1. a. VVB has provided detailed assessment related to the commercially sensitive information and provided detailed assessment related to how the commercially sensitive information meets the VCS program definition of commercially sensitive information under Appendix 1. A table has been provided describing the commercially sensitive information of each section as well as its adherence to the commercially sensitive information description in *VCS Program Definitions, v4.4* and Section 3.5.4 of the *VCS Standard, v4.7*.
- b. VVB has gone through a comprehensive assessment and has provided its assessment on whether any of the documents/information cannot be considered commercially sensitive per the *VCS Standard, v4.5*, Section 3.5.4.

2. VVB shall submit the public version of the MVR to verra for review.

Action Required

1. the VR is updated by the VVB and all the information designated by the project proponent has been duly assessed as per the definition in *VCS Program Definitions, v4.4* and Section 3.5.4 of the *VCS Standard, v4.7*.
2. VVB shall submit the public version of the MVR to verra for review.

Therefore CAR #21 is closed.

CAR ID	22	Section no.	PRR Issue 5	Date : 23/04/2025
Description of CAR				

1. MR, Section 1.11.3: The project does not justify, with evidence: a. That project activities affect the emissions footprint of any product(s) (goods or services) that are part of a supply chain. And, b. The project proponent is not a buyer or seller of the product(s) (goods or services) that are part of a supply chain. 2. PD, Section 1.16.2: “This section is not applicable as the Project is not currently tracking Scope 3 emissions. The AgreeenaCarbon Project will notify Verra immediately if this changes.” 3. Please provide clarity on item 3, in particular, the <i>locus standi</i> on “Agreena Carbon has proposed Verra to be included in its scope 3 pilot program in order to develop scope 3 methodology.”	
Project participant response	Date : 16/05/2025

1. Section 1.11.3 of the MR is now aligned with the PD and includes additional text to address 1a and 1b.
 - a. Arable crops are integral to many supply chains, serving as raw materials for food, feed, and industrial products, and thus directly influence a product's emissions footprint—particularly Scope 3 emissions under the GHG Protocol (Category 1: Purchased Goods and Services). Projects listed under Verra's VM0042 methodology, which implement improved agricultural land management practices (e.g., reduced tillage, optimized fertilizer use, cover cropping), can reduce GHG emissions and increase soil carbon sequestration. These changes lower the emissions intensity of the crops themselves, resulting in measurable upstream emissions reductions for downstream buyers and supply chain actors, thereby justifying the project's impact on overall emissions footprints.
 - b. AgreeenaCarbon, as a representative of the project participants, is not a direct seller of the product(s) (crops) that are produced within the boundaries of the AgreeenaCarbon project. Nevertheless, AgreeenaCarbon has contracts with each individual participant and supports them in the sale of the VCU's as part of this project. Therefore, the statement has been changed to "Yes" and the statement is present on Agreeena's website in order to signal that participants within the AgreeenaCarbon project are generating carbon credits.

The statement is visible on the following two sites:

<https://agreeena.com/agreena-business-solutions/>

<https://agreeena.com/about/>



Carbon credits may be issued through the Verified Carbon Standard project No. 4022 for the greenhouse gas emission reductions and/or removals associated with the agricultural products sold by the participants enrolled in the AgreeenaCarbon Programme.

2. Please see note above. As per the PD, where Agreeena will notify Verra if this changes, the update has been made to ensure that any supply chain activities are made apparent, per Verra Monitoring Report Template v4.4.
3. AgreeenaCarbon previously applied to be a participant in the Verra Scope 3 Standard Pilot Program as a project developer and stakeholder dealing with participants directly impacting scope 3 emissions. Interoperability is a key focus for Agreeena in order to ensure farmers remain dedicated to the transition towards regenerative practices. The conclusion was that Agreeena was not selected to participate in the Scope 3 Standard pilot program.

Documentation provided by project participant

https://agreeena.com/agreena-business-solutions/ https://agreeena.com/about/ VCS MR_AgreeenaCarbon 4022_15SEP2021- 31DEC2023_16MAY2025_CommerciallySensitive, Section 1.11.3	
VVB assessment	Date:24/05/2025
The answers provided in response to Verra's query is reasonable and appropriate. However, the third point is not clear. The PP writes "<i>The conclusion was that Agreeena was not selected to participate in the Scope 3 Standard pilot program</i>". PP should explain as to what is being referred here. CAR # 22 is OPEN	
Project participant response	Date: 03/06/2025
Point three in the response refers to the fact that Agreeena applied as an expert participant in the working group to Verra's request for experts for the Scope 3 Standard Pilot Program, i.e. Verra S3S (https://verra.org/verra-begins-piloting-of-scope-3-standard-program/). Interested parties were asked to prepare a proposal to support Verra in the development of methodologies within the S3S Program. Agreeena was among many applicants that included other project developers, but was not chosen to participate.	
VVB assessment	Date: 15/06/2025
PP has provided more clarification regarding the Scope 3 emission. VVB verified the claim that Agreeena was asked to participate as an expert in the Pilot Program on Verra's Scope 3 emissions. The link provided in the response above substantiates Verra's Pilot Program initiation. Agreeena was among the participants, however not chosen to participate. The justification was found satisfactory and therefore the Finding is closed.	

CAR ID	23	Section no.	PRR Issue 8	Date : 23/04/2025
Description of CAR				

1. PP is requested to provide evidence for the ongoing stakeholder consultation
2. PP is requested to provide clarification on the steps taken to verify that no grievances were received on the duration of the current Monitoring Period including evidences
3. PP is requested to provide clarification on the steps taken to verify that no discrimination or sexual harassment incidents have occurred on the duration of the current Monitoring Period.

Though no deficiency is highlighted in the MR in this context, we would still request PP to review the comments raised in particular 2 to 5, and provide objective evidence, management system in place to record such instances. During the site visit, sampled farmers orally confirmed that that they had no grievances, but no other supporting documents were available for non sampled farmers.

Project participant response

Date : 16/05/2025

- (a) Randomly selected examples of call logs between Customer Success personnel and Project participants, redacted to maintain the privacy of both parties. See screenshots below.

(b) A screenshot of the survey associated with field inspections. The section highlighted shows direct efforts to collect qualitative feedback from Project participants and assess their understanding of key aspects of the Project.

Section 6 of 8

F. Level of customer satisfaction

Description (optional)

F1. Do you have any ideas for improvements of the programme? *

Long-answer text

F2. What is your understanding surrounding carbon storage in your soils? *

Long-answer text

F3. Are you aware of how an external third party annually verifies our carbon certificates? *

Long-answer text

F4. How was your overall experience with the Agreeena Carbon platform? *

Long-answer text

F5. When you had questions about the programme, was it easy for you to find your answers or get help? *

Long-answer text

(c) Examples of the outreach events Agreeena organized in the Monitoring Period. Invites for both webinars were forwarded via email to a variety of stakeholders, including: Agreeena farmers, non-Agreeena farmers, agricultural companies, students & academia. These events were also publicized on the company's official social media channels (e.g., LinkedIn). Both webinars were recorded, and are made available on demand to interested stakeholders through Agreeena's website.

- Webinar "Regenerative Agriculture Seen from Space", held on 10th November 2023.



Dear Test,

We are excited to invite you to our next webinar, **Regenerative Agriculture Seen From Space** hosted by Thomas Gent with guest Matthew Guinness, Head of MRV Solutions at Agreeena.

In this webinar we'll dive into:

- ✓ How does Monitoring, Reporting and Verification (MRV) work within our carbon programme?
- ✓ What are they able to detect from satellites?
- ✓ Where do they see the future of this technology going?

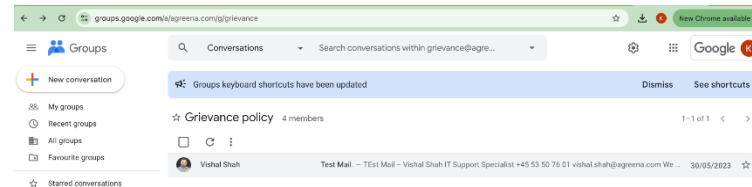
Join us on **10th November, 12:00 pm GMT**, and learn more about how satellites are building support for regenerative farmers.

[Sign up for free here](#)

- Webinar “Carbon Farming”, held on 15th December 2022 in collaboration with Danish Agro and FRDK. This event was market-specific, tailored to Danish stakeholders operating in the agriculture and carbon market industries.



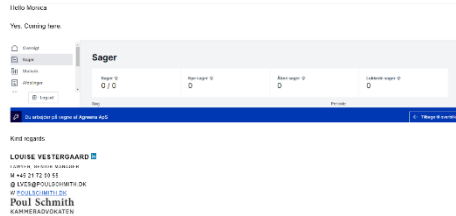
- Grievances can be presented by external and internal stakeholders through a dedicated email (grievance@agreena.com) or Whistleblower Hotline. See point (3) for further information on the latter. The Grievance channel is regularly checked by dedicated personnel to ensure that any new grievance that may have been filed towards AgreenaCarbon is flagged. The following image is a screenshot of all grievances filed to date which only includes one test email from Agreena's internal IT system.



- AgreenaCarbon's Culture Playbook, which all new hires are encouraged to read as part of the Culture onboarding sessions, emphasises company core values such as empathy, and the will to create a safe, supportive, and inclusive environment for everyone. Likewise, the internal Code of Conduct is built on ILO conventions and the Ten Principles of the UN Global Compact, and all employees are encouraged to read it. The former document has been attached to this submission, whereas the latter was provided to VVB and VCS auditors as an attachment to the Risk Report. At the very beginning of the Monitoring Period, the company size was limited. The few employees were instructed to contact the HR department for reporting concerns of any nature, including incidents of sexual harassment or discrimination. As the company grew during 2022 and 2023, so did the capabilities of the People Team and two People Business Partners were hired. Their main responsibilities included supporting employees' wellbeing and acting as the point of contact and escalation for harassment and/or discrimination incidents. Internal monitoring efforts became more proactive. A

feedback culture through quarterly development conversations and exit interviews was established. Through these, employees are directly encouraged to raise concerns and/or report incidents. At the beginning of 2023, the first employee survey was launched, an additional channel to collect concerns and anonymous reports of potential harassment or discrimination incidents. In winter 2023, the Whistleblower System was set up. It is managed by an external lawyer to ensure complete neutrality and unbiased approach. To this date (April 2025), they confirmed no reports have been made.	
Documentation provided by project participant	
VCS MR_AgreenaCarbon 4022_15SEP2021-31DEC2023_16MAY2025_CommerciallySensitive, Section 2.1 Agreena_Culture_Playbook.pdf	
VVB assessment	Date: 24/05/2025
The evidence provided for stakeholder consultation and Grievance Redressal Mechanism has been found to be appropriate. 1.The PP engages into continuous stakeholder consultations as explained in the response above. There have been quite a few webinars where the stakeholders have been invited through emails and other channels. This ensures stakeholders are well engaged and aware of the developments in the project. PP has sufficiently described in MR Section 2.1.2, several communication channels are in place to ensure ongoing and bi-directional engagement with key stakeholders. To corroborate this VVB has checked Agreena's Website. During the Verification RSVs it was observed, the respondents were well aware of these channels of communication. Therefore, this finding is closed.	
VVB assessment (PRR II)	Date: 04/08/2025
1. PP is requested to provide more details to confirm that there were no incidents of sexual harassment occurred during this monitoring period. 2. It is unclear how the it cross-checked and confirmed that no incidents related to gender inequity in labor or the workplace were reported through Agreena's available external (Grievance & Complaints Procedure) and internal (Whistleblower Hotline) channels. PP is requested to provide more information	
Project participant response	Date : 08/08/25

In this technical response for Finding 8, the AgreeenaCarbon project considers two key aspects to abide by Section 3.19 of the VCS Standard, including 1. Mitigation & Preventative Measures, and 2. Reporting of Incidences. The following content aims to demonstrate the evidence to align with VCS Standard requirements (Section 3.19.11 “*Project proponent shall ensure that no discrimination or sexual harassment occurs in the project design or implementation*”), by providing an overview of the previously provided documents detailing how to mitigate and prevent discrimination or sexual harassment, with additional evidence of monitoring procedures and reporting on such incidents. Both internal (Whistleblower Hotline) and external (Grievance & Complaints Procedure) are accounted for in the response on these aspects and included additional evidence for both in terms of mitigation and reporting.

1. Mitigation & Preventative Measures to ensure that no discrimination, sexual harassment or gender-related incidents occur:
 - a. The previous response in PRR1 outlined the role of the Culture Playbook as an internal policy document of the project proponent, which all new hires are encouraged to read as part of the Culture onboarding sessions. The Playbook emphasises company core values such as empathy, and the will to create a safe, supportive, and inclusive environment for everyone.
 - b. Full details and access to Grievance procedures and policies are available publicly on the Agreeena website <https://agreeena.com/documentation/>
2. Reporting of Incidents including discrimination, sexual harassment or gender-related cases:
 - a. Detail on each risk, the mitigation and preventative measures taken and accompanying documentation is provided in the Monitoring report (Section 2.3.1).
 - b. To demonstrate the outcome of incidences or events there are two key forms of reporting mechanisms including:
 - i. The internal Whistleblower Hotline summary and evidence received from an external lawyer (Poul Schmith) who handles Agreeena incidents. See screenshot of the reporting dashboard and email below with credentials. This includes all cases related to discrimination, sexual harassment, corruption or gender-related incidents:
 

The screenshot shows a web-based reporting dashboard titled 'Sager' with a table for tracking incidents. Below the dashboard is an email from Louise Vesterdaard to Poul Schmith, dated 14-05-2023, regarding a reporting incident.

Case ID	Reporting ID	Reporting ID	Reporting ID
0 / 0	0	0	0
 - ii. The Grievance channels for external reporting of cases related to discrimination, sexual harassment, corruption or gender-related incidents go through a dedicated email (grievance@agreeena.com). This includes the monitoring of a Grievance specific email inbox (see screenshot) to report any incidents that may occur. In addition, further interaction with farmers on this topic include a dedicated farmer relations team for farmers to

connect and share feedback and internal field visits with project participants should any incidents occur. If any case was to arise via this in-person platform, it would be followed up through formal Grievance channel. The Grievance channel is regularly checked by dedicated personnel to ensure that any new grievance that may have been filed towards AgreeenaCarbon is flagged. The following image is a screenshot of all grievances filed to date which only includes one test email from Agreeena's internal IT system. See screenshot below also provided in PRR 1



- c. The following table can summarise the content above of cases per calendar year of either Whistleblower cases (internal) or Grievances reported (external).

Year	Grievance Cases	Whistleblower Cases
2021	0	0
2022	0	0
2023	0	0

Documentation provided by project participant

"Agreeena Culture Playbook.pdf"

VVB Assessment

Date: 18/08/2025

1. VVB has revised the assessment related to sexual harassment and has provided more information under section 4.2.7.1, AgreeenaCarbon has established and effectively operationalized comprehensive preventive and reporting mechanisms to address discrimination, harassment, and gender-related incidents. Guided by its Culture Playbook and Code of Conduct aligned with ILO conventions and the UN Global Compact the project fosters an inclusive and safe workplace culture. Robust preventive measures are supported by publicly accessible grievance procedures and strengthened HR capacity. Two formal reporting channels, including an independently managed whistleblower hotline and an external grievance email, ensure confidentiality and accessibility. Verified evidence confirms no incidents reported to date, demonstrating compliance with VCS Standard Section 3.19.11. VVB has assessed the reporting mechanism and also evidences provided to confirm that there had been no such incidents which are affixed under appendix V of the VR. In conclusion VVB confirms that there has been no such incidents in the project till date and is in line with VCS standard 3.19.1.

2. VVB confirms that the project proponent has implemented adequate and effective preventive and reporting mechanisms to identify and address potential incidents of discrimination, sexual harassment, and gender-related misconduct.

As part of the verification process, the VVB assessed internal policies and procedures, including the Culture Playbook and Code of Conduct, which are introduced during onboarding and reinforced throughout employment. These documents explicitly promote inclusion, empathy, and psychological safety, and are aligned with international standards, including ILO conventions and the UN Global Compact.

The VVB further reviewed the grievance procedures, which are publicly accessible and actively maintained. The existence and operational status of two reporting channels—a confidential whistleblower hotline managed by the external legal firm Poul Schmith and a grievance email channel monitored by Agreeena staff were verified through system documentation and evidence of a test submission.

In addition, the VVB interviewed relevant staff and reviewed HR documentation confirming the presence of People Business Partners tasked with wellbeing and escalation of incidents. Based on this comprehensive review, the VVB concludes that the systems in place are appropriate, fully operational, and support a safe and inclusive environment. No actual incidents were reported during the monitoring period.

Therefore, this finding is closed.

CAR ID	24	Section no.	PRR Issue 9	Date : 23/04/2025
Description of CAR				
1. <i>Liming</i>: The methodology deviation was presented during validation (Section 3.6 of the PD) and is also included in the MR (Section 3.2). The wording and justification differ between the PD and MR, therefore justification is needed for these differences so as to evaluate if the changes are appropriate, valid, and consistent with the initial deviation. 2. <i>Biomass residues</i>: Lack of justification of how the deviation to monitoring $BR_{PJ,n,y}$ is as accurate or more conservative. Specifically, a. While logical, whether the method of estimating the difference in residue energy potential is accurate or more conservative than monitoring, and b. Whether a 16% value of residue used for mulching is as accurate or more conservative.				
Project participant response				Date :16/05/2025

1. The wording for the MD related to liming has been updated in Section 3.2.2 in the M.R. and is now consistent with the PD Section 3.6. The information is also consistent with the ERR calculations. A paragraph from section 3.6 of the PD v1.3 has been inserted into the MR (section 3.2.2):

“Countries submit data on the quantity of lime (MLimestone,bsl,i,t MDolomite,bsl,i,t as well as MLimestone,wp,i,t MDolomite,wp,i,t), the emission factors (t CO₂-C/t) and the total emissions (kt CO₂e) from liming activity for the agricultural sector (Table 3.G-1). The CO₂ emissions from liming (CO₂_limebsl as well as CO₂_limewp; equation 9 in VM0042 v2.0) are calculated by dividing the total emissions (kt CO₂e) by the actual agricultural land area, referred to here as the “Cropland remaining Cropland” category (k ha, Table 4.B) to obtain the CO₂ emissions per unit area for each country (t CO₂e/ha).”

"Please note that the liming values have been updated to the latest published data, and the calculations are based on 5 year average emissions".

2. Biomass Residues in the MR has been reviewed (BR_{PJ,n,y}.)
 - a. AgreenaCarbon must account for leakage when biomass residues from energy production as crop residue management is a project activity. In this scenario, leakage can occur where fields have previously removed crop residue in the baseline and implemented mulching as a project activity. The retention of crop residue on the field may cause energy producers to use a more intensive fossil fuel source as a replacement, thereby increasing CO₂ emissions as a result. This calculation was a new requirement for VM0042 v2.0. This meant that no primary quantitative data was collected for biomass residue (BR_{PJ,n,y}) used for the purpose of energy production, nor was their qualitative data on whether residue was used on site or exported from the farm downstream for energy conversion, when VM0042 v1.0 was active. The project has therefore requested for a Methodology deviation for calculation liming using external sources. The full description is provided in section 3.2.1 and in Appendix 7 of the M.R.

The residue used for energy production was divided by the theoretical amount of crop residue produced for each country to obtain the fraction of crop residue used by a country. Globally, 16% (or 0.16) of crop residue on average is used for other purposes including bioenergy production (Smerald et al., 2023). In order to further ensure conservativeness, this value was set as a benchmark whereby countries with a fraction <0.16 would tend to rely less on crop residue for energy production and countries >0.16 would use a larger proportion of crop residue for

energy production. Thus, understanding the fate of residue would help determine which countries were at risk of leakage.

Estonia and the United Kingdom use proportionally more residue for energy production compared to other EU nations and the global average. Leakage was then calculated for all fields in these countries reporting a change in crop residue management practice from removed to mulched.

- b. According to Searle and Mullins (2015), the agricultural residue utilised for livestock, mushrooms, and horticulture is assumed to remain constant until 2030. The first iteration of the methodology deviation stated that where residue was mulched, 16% value for the biomass would have been used for bioenergy purposes. The value for $BR_{PJ,n,y}$ has been modified to 38% for Estonia and 22% for the United Kingdom of biomass based on UN statistics on vegetal residues used for energy and the global assessment of crop residue management and its fate by Smerald et al. (2023). These values are considered to be more accurate and more conservative than the original value of 16%. Furthermore, all countries with a benchmark below 16%, have kept the 16% value for conservativeness. AgreeaCarbon also ensures a conservativeness by accounting for leakage emissions for all fields in Lithuania and the United Kingdom that transitioned from removed to mulched crop residue management.

Documentation provided by project participant	
VCS MR_AgreenaCarbon 4022_15SEP2021-31DEC2023_16MAY2025_CommerciallySensitive, Section 3.2	
VVB assessment	Date: 23/05/2025

1. Upon review of the query raised in PRR on liming, it was found that MR has been updated with the correct description aligning with the registered PD. “Countries submit data on the quantity of lime (MLimestone,bsl,i,t MDolomite,bsl,i,t as well as MLimestone,wp,i,t MDolomite,wp,i,t), the emission factors (t CO₂-C/t) and the total emissions (kt CO₂e) from liming activity for the agricultural sector (Table 3.G-1). The CO₂ emissions from liming (CO₂_limebsl as well as CO₂_limewp; equation 9 in VM0042 v2.0) are calculated by dividing the total emissions (kt CO₂e) by the actual agricultural land area, referred to here as the “Cropland remaining Cropland” category (k ha, Table 4.B) to obtain the CO₂ emissions per unit area for each country (t CO₂e/ha).”

Moreover, the ERR sheet has been updated to the latest published data, and the calculations are based on 5 year average emissions.

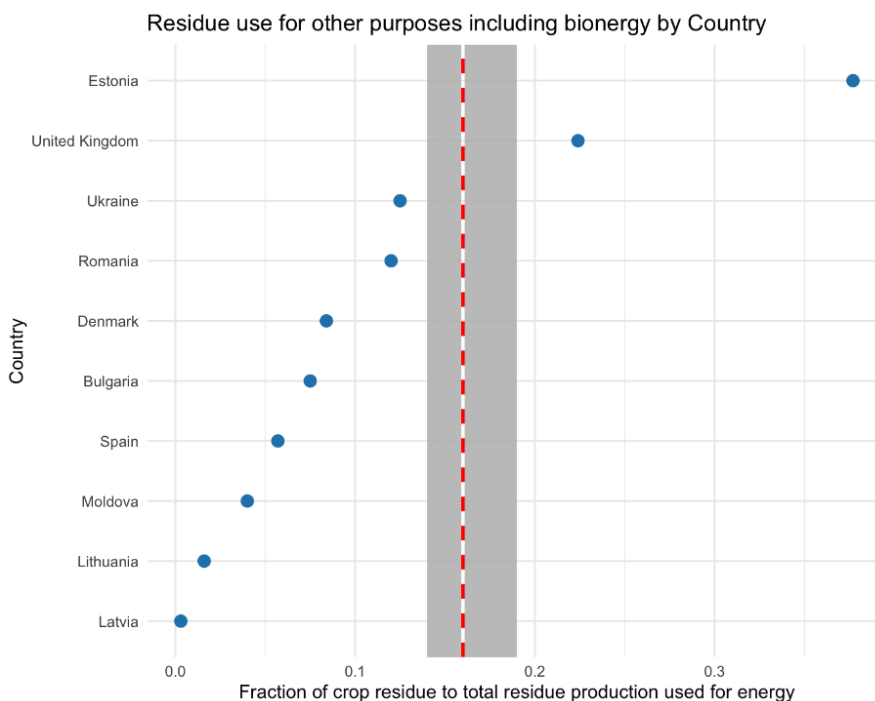
2.(a) The explanation provided by PP “The residue used for energy production was divided by the theoretical amount of crop residue produced for each country to obtain the fraction of crop residue used by a country. Globally, 16% (or 0.16) of crop residue on average is used for other purposes including bioenergy production (Smerald et al., 2023). In order to further ensure conservativeness, this value was set as a benchmark whereby countries with a fraction <0.16 would tend to rely less on crop residue for energy production and countries >0.16 would use a larger proportion of crop residue for energy production. Thus, understanding the fate of residue would help determine which countries were at risk of leakage..” is deemed appropriate and in alignment with the principle of conservativeness.

(b) Two countries, Estonia and the United Kingdom use proportionally more residue for energy production compared to other EU nations and the global average. Leakage was then calculated for all fields in these countries reporting a change in crop residue management practice from removed to mulched. According to the study by Searle and Mullins (2015), the agricultural residue utilised for livestock, mushrooms, and horticulture is assumed to remain constant until 2030. The first iteration of the methodology deviation stated that where residue was mulched, 16% value for the biomass would have been used for bioenergy purposes. PP has considered higher values of biomass removal from UK and Estonia. The value for BR_{PJ,n,y} has been modified to 38% for Estonia and 22% for the United Kingdom of biomass based on UN statistics on vegetal residues used for energy and the global assessment of crop residue management and its fate by Smerald et al. (2023). However, the average value for leakage through biomass burning comes to 16%. Upon review the values for Estonia and UK align to the principle of conservativeness and hence leakage has been appropriately calculated.

Therefore, this finding is closed.

VVB assessment (PRR II)	Date: 04/07/2025
While the justification provided for the modified $BP_{PJ,n,y}$ are clear for the UK and Estonia, there is insufficient description and traceable calculations provided for other countries, which does not clearly illustrate how the deviation is conservative or accurate for other countries. The GHG ERR spreadsheet does not provide any traceable calculations, nor are there examples demonstrating the calculation method. PP is requested to ensure that: 1. Section 3.6, 5.3 or the Appendix of the PD is updated to provide clear and traceable calculations for the $BP_{PJ,n,y}$ values applied for other countries that are not UK and Estonia. Include an example similar to Table 5-14.	
Project participant response	Date : 08/08/25

1. To address the request in Action point 1 of PRR 2 Finding 9, Appendix 7 (Updated numbering to **Appendix 6** in this version) of the MR*, has been updated to ensure traceability and clarity to the calculations of Leakage due to Biomass residue diversion. Four steps have been taken to further clarify this point, including:
 - a. The Monitoring Report, Appendix 6 has been updated with a more detailed description of the calculations procedure and to include values applied for other countries that are not UK and Estonia in order to provide further clarity for the calculations of $BP_{PJ,n,y}$. The national values to be tested against the global average of 0.16 are illustrated in the MR, in Appendix 6, table A6-3, in column "Fraction of residue used for energy". A graphic illustration is also provided below. For equal redistribution of the amount of tCO₂eq generated from leakage from diversion of residue biomass, the project redistributed this loss to all fields in the project.
 - b. Section 3.2.2** and 5.3.4 of the MR are updated to provide clear and traceable calculations for the $BP_{PJ,n,y}$ values applied for other countries that are not UK and Estonia. In Specific Table 3.2 has been removed to avoid duplicates (the values are now all shown in Table 5.14)
 - c. Table 5-14 has been updated to Table 5-14a and 5-14b and include an example from another country(Denmark) that is not the UK or Estonia.
 - d. An additional spreadsheet("VCS_Methodology_Deviation_Assess_Biomass_Leakage") is created and shared in the Supplementary material ("ERR_Calculation_Supplementary_Material_PRR2//Supplementary_material_3_Leakage//data"), with all the steps of the leakage assessment and calculations presented in detail.
 - e. GHG ERR spreadsheet will now include further information explaining the traceability of leakage redistribution per PAI , as well as separating the calculations between leakage due to biomass diversion and leakage due to manure in two separate columns..



Note: the red dashed line represents the global average of 16% and the grey rectangles represent the range (14-19%) adapted from [Smerald et al. \(2023\)](#)

** The Monitoring Report (MR) has been updated not the Project Description (PD) as requested in Finding 9 as this seems to be an error.*

*** Section 3.2 not 3.6 as requested in Finding 9 as this seems to be an error - Section 3.6 does not exist in the MR*

Documentation provided by project participant

VCS_Methodology_Deviation_Assess_Biomass_Leakage

VCS MR_AgreenaCarbon 4022_30JUL2025_PRR2_Clean, Appendix 6

ERR_Calculation_Supplementary_Material_PRR2

VVB assessment

Date: 19/08/2025

1. To address issue in point 1 of PRR 9, Appendix 6 (earlier Appendix 7) in this version of the MR has been updated to ensure traceability and clarity to the calculations of Leakage due to Biomass residue diversion. Four steps described below explain the leakage calculations due to biomass diversion as follows:

a. The Monitoring Report, Appendix 6 has been updated with a more detailed description of the calculations procedure and to include values applied for other countries that are not UK and Estonia in order to provide further clarity for the calculations of BPPJ,n,y. The national values to be tested against the global average of 0.16 are illustrated in the MR, in Appendix 6, table A6-3, in column "Fraction of residue used for energy". A graphic illustration is also provided below.

b. Section 3.2.2 and 5.3.4 of the MR are updated to provide clear and traceable calculations for the BPPJ,n,y values applied for other countries that are not UK and Estonia. The leakage is calculated according to Equation 15 in CDM Methodological Tool: Project and leakage emissions from biomass⁴. The quantification approach is further detailed in Appendix 6.

Since the calculation of leakage due to biomass removal for every country has been explained in detail and is traceable in the ERR sheet, this finding is closed.

⁴ <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-16-v5.0.pdf>

CAR ID	25	Section no.	PRR Issue 10	Date : 23/04/2025
Description of CAR				
1. There is no assessment of uncertainty in the IME report that demonstrate that the uncertainty calculation is accurate. Especially considering the applied methodology deviation (Issue 2). 2. Unreported methodology deviation for uncertainty calculation. Section 5.4.4 of the MR states that there are insufficient paired fields to estimate covariance across all practice changes, and so the covariance is taken as '0' as consequence of making correlation of errors in project and baseline scenario pairs as zero. However, this is not reported, justified and assessed as a methodology deviation. a. The conservativeness or accurateness of the approach is not demonstrated. b. The calculation of the variance of modeled estimates is unclear: i. In the supplementary information it is unclear why the '<i>modelled_diff</i>' is calculated with '<i>final_soc_modelled</i>' and '<i>initial_soc_measured</i>'. And, ii. Whether Equation 51 is correctly applied.				
Project participant response				Date : 16/05/2025

1. Following our request for clarification, VERRA confirmed on 2 May 2025 that the “uncertainty assessment” cited in Point 1 (Issue 2) refers specifically to the pooled measurement uncertainty (PMU) required under Appendix 1, Step 3(b) of VMD0053 v2.0. The PMU is already calculated in the Model Validation Report and is presented in 2.12.2 Assessment of uncertainty for each practice category (page 33) and results are presented in Section 3.3 PMU estimate, see Equation 10 MVR 4.0. No findings or recommendations were raised regarding these sections in the IME Validation report. Uncertainty has been assessed in Table 3 and 4 (page 6 and 7) of the MVR and closed off as fulfilled in Column 2. In a discussion with the IME and VVB, it was confirmed that PMU is assessed for every model validation and calibration and will be brought forward in case it is determined that PMU is not calculated properly. It is important to note that the September 2023 version of the report, is the correct version and should be treated for evaluation:

1972.N.23_IME_Evaluation_Agreena_VMD0053_3rd_review_230901_CommerciallySensitive

A follow up communication with the IME dated 15th May 2025 via email reaffirms this.

2. The project does not deem the submission of a methodology deviation necessary, but has updated Section 5.4.4 of the MR in order to more clearly explain the process for estimating the covariance for the uncertainty calculation and demonstrate the conservativeness and accuracy of the approach more clearly.

To demonstrate the accuracy and conservativeness of this approach, the wording “The CVD has insufficient paired fields to estimate $Cov[\hat{\Delta}_{pr}, \hat{\Delta}_{bsl}]Cov[\hat{\Delta}_{pr}, \hat{\Delta}_{bsl}]$ ” is referring to the fact that the collection of data from long-term paired trials are rare, and therefore the grand majority of data collected in the CVD are coming from peer-reviewed scientific articles which use the time-for-space substitution method, where BSLto = BSLt1. Under this condition, Covariance equals 0, which is a conservative value. The wording in section 5.4.4. has therefore been updated.

A more detailed clarification on the calculation methods is described below to further support the accuracy of this approach:

The papers included in the CVD make use of a standard “space-for-time” substitution (See, e.g., [Lovell et. al. \(2023\)](#)), to assess the effect of practice changes. Such substitutions permit scientific assessment of the sequestration effects of changed agricultural land management (ALM) over shorter timescales, as long-running, side-by-side trials are rare and expensive.

To include studies using space-for-time substitutions in our validation data, we obtain initial SOC stock, y_0 , from scientific studies in our validation data. In the space-for-time substitution method, , for a validation at $t = 1$, that measured baseline SOC stock

$y_{1,bsl} = y_0$, and by identical modelling assumption we have $\hat{y}_{1,bsl} = y_0$. We obtain the measured SOC stock in the project (non-baseline) arm at time $t=1$ (or whenever remeasurement occurred) from the studies, and denote it $y_{1,pr}$, likewise corresponding modelled estimate of SOC stock as $\hat{y}_{1,pr}$. The result is that when we follow bullet point 2) of Section 8.6.1.1 and compute the covariance of the errors we obtain:

$$\begin{aligned} \text{cov}(\hat{\Delta}_{pr}, \hat{\Delta}_{bsl}) &= \text{cov}((\hat{y}_{1,pr} - y_{1,pr}), (\hat{y}_{1,bsl} - y_{1,bsl})) \\ &= \text{cov}((\hat{y}_{1,pr} - y_{1,pr}), 0) \\ &= 0 \end{aligned}$$

$$\begin{aligned} \text{cov}(\hat{\Delta}_{pr}, \hat{\Delta}_{bsl}) &= \text{cov}((\hat{y}_{1,pr} - y_{1,pr}), (\hat{y}_{1,bsl} - y_{1,bsl})) \\ &= \text{cov}((\hat{y}_{1,pr} - y_{1,pr}), 0) \\ &= 0 \end{aligned}$$

- a. The project is following strictly the requirements set in VM0042 V2.0, ensuring accurateness of the approach, and is further outlined in the section above and now additionally included in the MR Section 5.4.4.
The conservativeness of the approach is further demonstrated by setting a covariance to 0. Alternative assumptions show that covariance would result in a positive number which would therefore reduce UNC %. Since long-term paired trials are rare, covariance would have to be estimated using external assumptions (e.g., De-Rosa et al., 2023), and the approach would therefore result in a methodology deviation. Using a covariance of 0, is therefore demonstrating that the maximum value of UNC is deducted from the project, and is therefore conservative.
- b. We have updated the variable name in the supplementary material "Computing the VM0042-v2.0-improved uncertainty deduction".
 - i. When computing 'modelled_diff' it is now, for clarity, expressed as 'final_soc_modelled - initial_soc_modelled', which corresponds to $\hat{\Delta}_{t,pr}$ for $t = 1$.
 - ii. We believe Equation (51) to be correctly applied - as required by (51) we are computing ρ (as above) and s_{model}^2 , as "Estimated variance of errors made by model prediction of emissions in gas or pool •".

Documentation provided by project participant

1972.N.23_IME_Evaluation_Agreena_VMD0053_3rd_review_230901_CommerciallySensitive
VCS MR_AgreenaCarbon 4022_15SEP2021-

31DEC2023_16MAY2025_CommerciallySensitive, Section 5.4.4

De-Rosa, Daniele; C. Ballabio; E. Lugato; M Fasiolo; A. Jones; P. Panagos. 2023. Soil organic carbon stocks in European croplands and grasslands: How much have we lost in the past decade? Global Change Biology, Vol. 30. Iss.1.

<https://doi.org/10.1111/gcb.16992>

VVB assessment

Date: 24/05/2025

1. The PMU is explained in the Model Validation Report (MVR). The uncertainty related to each PMU is calculated.
2. PP has rightly mentioned that the the collection of data from long-term paired trials are rare, and therefore the grand majority of data collected in the CVD are coming from peer-reviewed scientific articles which use the time-for-space substitution method, where $BSL_{to} = BSL_{t1}$. Under this condition, Covariance equals 0, which is a conservative value. The data for long term paired trials may not be available always, hence data from peer reviewed publications have been obtained. The same has been accepted by IME with some limitation which can be worked once sufficient data is available from the project activities going forward.

Since this has been reported and sufficiently justified by PP, and thoroughly assessed by the VVB, CAR #25 stands closed

CAR ID	26	Section no.	PRR Issue 11	Date : 23/04/2025
Description of CAR				
Section 4.2 of the MR has insufficient information on the following:				
1. No monitored values (or at minimum average or aggregate values) reported or referenced for data/parameters $M_{n,dl,SOC}$, $M_{n,d,sample}$, $O_{cn,dl}$, B_{dcorr}, c and p. 2. Incomplete values reported or referenced for data/parameters $P_{wp,p}$, $SOC_{bsl,i,t}$ and $SOC_{wp,i,t}$ by crop and year, respectively.				
Project participant response				Date :16/05/2025

1. The Parameter tables have been updated to include all relevant information for parameters $M_{n,dl,SOC}$, $M_{n,d,sample}$, $O_{cn,dl}$, B_{dcorr}, c and p. a. Monitored values for $M_{n,dl,SOC}$, $M_{n,d,sample}$, $O_{cn,dl}$, B_{dcorr} have been supplied in Section 4.2, and further detail provided in supplementary material "soil-sampling-strata-soc-stock-sheet", tab "soil-samples-raw-all-properties". b. Parameter c - type of agricultural residue, has been changed to "not monitored". The parameter c is used for specifically calculating methane (Equation 15) and nitrous oxide (Equation 33) emissions from biomass burning, in the baseline scenario. The project does not allow participants to conduct any burning of residues, and the gas sources are therefore outside the project boundary. Table 4.1 has been updated to include c, in addition to CF_c, EF_{c,CH_4}, $MB_{wp,c,i,t}$, and EF_{c,N_2O}, as a parameter not monitored in the AgreeaCarbon Project. c. Monitored values for p (crop product) have been included as data parameters in sections 4.1 and 4.2. 2. Section 4.2 of the M.R. is now updated to reference the relevant table for reporting monitored values of the following parameters: Average values by crop and vintage of $P_{wp,p}$, are now provided in Appendix 8 "Assessment of Productivity between the Baseline and Project Years ($P_{bsl,p} / P_{wp,p}$)" Average values, by vintage year, of $SOC_{bsl,i,t}$ and $SOC_{wp,i,t}$ have been provided in the monitoring report parameter tables. Complete breakdowns by strata have been provided in supplementary material "2025-05-15_soil-sampling-strata-soc-stock-sheet.xlsx", tab "soc-per-strata-summary-all-vintages".	
Documentation provided by project participant	
VCS MR_AgreeaCarbon 4022_15SEP2021-31DEC2023_16MAY2025_CommerciallySensitive, Section 4.2 2025-05-15_soil-sampling-strata-soc-stock-sheet.xlsx	
VVB assessment	Date: 24/05/2025
1.VVB has reviewed the MR and concludes that parameter table has been updated in section 4.2 to include relevant information on parameters $M_{n,dl,SOC}$, $M_{n,d,sample}$, $O_{cn,dl}$, B_{dcorr}, c and p. The parameter c which has not been included in the calculations has been mentioned as not monitored in the updated MR, thus leaving out any misunderstanding. 2.VVB confirms the parameters $P_{wp,p}$, $SOC_{bsl,i,t}$ and $SOC_{wp,i,t}$ by crop and year have been included in section 4.2 in the parameters table. It is further confirmed that Complete breakdowns by strata have been provided in supplementary material "2025-05-15_soil-sampling-strata-soc-stock-sheet.xlsx", tab "soc-per-strata-summary-all-vintages". CAR#26 is closed.	

CAR ID	27	Section no.	PRR Issue 12	Date : 23/04/2025
Description of CAR				
1. The baseline, project, leakage and uncertainty calculations are reported in the GHG ERR spreadsheet but not traceable. Specifically, the emissions calculated via QA3 are not traceable to the data/parameters and equations applied. 2. The example baseline values shown in Table 5-6 in Section 5.1.6 of the MR has several values for years 4 and 5 that are not consistent with the " farmer_reported_field_data" sheet. For example: a. FSNbsl in year 5 is '0' in the table, but '0.2307' tons in the Excel spreadsheet. b. NCOF,bsl in year 5 is '0.026', but according to the spreadsheet, there was no organic fertilizer application in that year, but there was in year 4.				
Project participant response				Date : 16/05/2025
1. Details of data and equations for the emissions calculated via QA3 are now provided in the ERR calculation supplementary material_2_IPCC to aid traceability. In addition, the data source for the ERR calculations is now clearly highlighted in the GHG ERR spreadsheet, and the connection between the GHG ERR spreadsh#eet and the ERR calculation supplementary materials has been further demonstrated. 2. The values in Table 5-6 in Section 5.1.6 of the MR, the GHG ERR spreadsheet and the ERR calculation supplementary materials have been updated to ensure consistency.				
Documentation provided by project participant				
<i>VCS MR_AgreenaCarbon 4022_15SEP2021-31DEC2023_16MAY2025_CommerciallySensitive, Section 5.1.6</i> <i>ERR calculation supplementary materials_CommerciallySensitive</i>				
VVB assessment				Date: 29/05/2025
1. The data and parameters in the Quantification Approach 3 (QA3) has been mentioned in the ERR sheet, alongwith the supplementary material 2. The values in Table 5-6 in Section 5.1.6 of the MR, the GHG ERR spreadsheet and the ERR calculation supplementary materials has been reviewed and found to be consistent. CAR #27 is closed.				

CAR ID	28	Section no.	PRR Issue 13	Date : 23/04/2025
Description of CAR				

There are inconsistent values reported across the GHG ERR spreadsheet and Section 5.4 of the MR. Specifically, 1. The sum of buffer contribution in the “Summary” tab is 369,195 (rounded up), but the MR states 369,267. 2. The estimated VCUs for issuance in the “Summary” tab is 2,341,575 (rounded down), but the MR states 2,341,576.	
Project participant response	Date : 16/05/2025
1. The values in Section 5.4 of the MR, the GHG ERR spreadsheet and the ERR calculation supplementary materials have been updated to ensure the consistency.	
Documentation provided by project participant	
<i>VCS MR_AgreenaCarbon 4022_15SEP2021-31DEC2023_16MAY2025_CommerciallySensitive, Section 5.1.6</i> <i>VCS MR_AgreenaCarbon 4022_ERRs_15SEP2021-31DEC2023_16MAY2025</i> <i>ERR calculation supplementary materials_CommerciallySensitive</i>	
VVB assessment	Date: 24/05/2025
1.The values of Buffer Pool has now been updated and is consistent in MR and ERR sheet. 2. The estimated VCUs for issuance has been updated and is consistent across the documents. Therefore, CAR #28 is CLOSED.	

CAR ID	29	Section no.	PRR Issue 14	Date : 23/04/2025
Description of CAR				
The follow-up IME verification issued in October 2024 lists several issues that are not accepted nor entirely approved by the IME. The MVR version submitted (dated August 2023) does not discuss whether these IME opinions have been addressed or mitigated. These issues include: a. Table 2 of the IME report states that PC/CFG/CZ combinations 4 and 7 does not quality due to insufficient range and bias. b. Combinations 31 – 53 have not been evaluated by the IME, even though they are included in the verification cycle.				
Project participant response				Date : 16/05/2025

a. PC/CFG/CZ combinations 4 and 7 Issue raised in the IME report:

As part of an additional assessment of the AgreeenaCarbon model report, the IME produced an additional verification of the combinations PC/CFG/CZ. In the report, in Table 2 on page 3 of the IME report NMI 0008.N.24-12 states that both combinations “do not qualify” due to an insufficient calibration range (comb. 4) and biased residuals (comb. 7).

How this has been addressed: To mitigate these issues, combinations 4 and 7 have been replaced by combination 5 (same PC and CZ, CFG 1) (Table 3, page 4). This substitution is explicitly “conditionally accepted with a FAR” by the IME, allowing verification to proceed while additional data is collected to eventually validate the original combinations.

The IME acknowledges that Agreeena has “planned and partially prepared” sampling to increase the data to cover all combinations, allowing the original combinations to be reevaluated in a future MVR.

In sum, the issues with combinations 4 and 7 have been effectively addressed through a compliant substitution and a transparent, actionable FAR that is explicitly to be addressed as more data becomes available. This is also explicitly stated in the Verification Report issued by the VVB under CL ID 10 on page 152, “The FAR for non-conservative CFG replacement is that the model validation be supplemented by more data when available as a priority and/or supplemented by field-based measurements.”

b. Combinations 31–53

These combinations were not included in the MVR v4.0 but have since been fully assessed in Table 3 of the October follow-up note NMI 0008.N.24 Agreeena Scenario Verification.

- Combinations 31, 32, 50, 51, 52, and 53 are fully accepted due to similar or more conservative CFGs.
- The remaining combinations are conditionally accepted with a FAR, as their CFGs are less conservative.

In this way, the IME made recommendations for all 53 combinations: 11 combinations were already accepted in 2023, 4 additional ones were accepted or conditionally accepted in 2024, and all remaining cases are accepted subject to one uniform FAR-linked mitigation path. This is also explicitly stated in the Verification Report issued by the VVB under CL ID 10 on page 152, “The FAR for non-conservative CFG replacement is that the model validation be supplemented by more data when available as a priority and/or supplemented by field-based measurements.”

VMD0053 v2.0 permits the use of conservative substitutions or model validations in cases of data scarcity, provided such exceptions are explicitly disclosed and approved by the IME. The IME emphasizes that: “In summary, we give one type FAR in this note as a response to the requested PC/CFG/CZ replacements as requested by Agreeena. The FAR applies to a non-conservative replacement or biased model.

This FAR entails that the model validation be supplemented by more data when available as a priority and/or supplemented by field-based measurements.” (NMI 0008.N.24-12, p.3) This recommendation acknowledges the data scarcity that characterizes some of these combinations by recommending that more data should be supplemented when available, and ensures that deviations from validation thresholds are temporary and systematically corrected over time, in line with the standard. To conclude, the identified issues have been addressed through approved substitutions and clearly defined FAR, ensuring compliance and a pathway for future validation as more data becomes available.	
Documentation provided by project participant	
0008.N.24_Agreena_Scenario_Verification_29OCT2024_CommerciallySensitive	
VVB assessment	Date: 30/05/2025
1. VVB has reviewed the explanation provided by PP in response to point a. above. All data may with different combinations may not be available for model validation. However, this slightly insufficient data does not impact the model validation. This has been reported in the updated IME report version 23rd September, 2023. The IME has raised a FAR to supplement the validation of Model with more data when available. “The FAR for non-conservative CFG replacement is that the model validation be supplemented by more data when available as a priority and/or supplemented by field-based measurements.” 2. In updated IME report dated October 2024 identified issues have been addressed through approved substitutions and clearly defined FAR, ensuring compliance and a pathway for future validation as more data becomes available. Combinations 31, 32, 50, 51, 52, and 53 are fully accepted due to similar or more conservative CFGs. The remaining combinations were conditionally accepted with a FAR, as their CFGs are less conservative. The updated IME evaluation has been reviewed by VVB and confirms that there is sufficient level of evaluation on different combinations. Hence CAR # 29 stands closed.	
VVB assessment (PRR II)	Date: 04/08/2025

However the finding cannot be closed:

1. The IME report issued in October 2024 clarifies that combinations 10, 18, 27 and 28 do not meet the 90% prediction interval requirement and recommends data expansion to mitigate this. Despite this, combinations 10 and 18 are selected to as “reasons for exemption” for eight combinations that also fail to meet the prediction interval and lack sufficient data (see Background). However the IME does not provide a clear assessment for why combinations 10 and 18 are valid as exemption for the eight combinations for this monitoring period.
2. In response 3(c) of CL10 in the VR, the IME states that 21 combinations were replaced with a less conservative CFG. However, there is no assessment on why less conservative CFGs are an acceptable replacement, given that this is a significant number of combinations out of the 53 combinations.

PP is requested to

1. Provide substantiated justification for using combinations 10 and 18 as exemptions for eight combinations included during this monitoring period, even if combinations 10 and 18 do not meet the 90% prediction interval requirement.
2. **Must further justify why the IME’s response 3(c) to CL10 is accepted, given that a large number of combinations were replaced by less conservative combinations.**

Project participant response

Date : 08/08/25

1. The substantiated justification for using combinations 10 and 18 as exemptions for eight combinations included during this monitoring period is detailed here.

Confidence Interval (CI) coverage requirements under VMD0053 §5.2.5

VMD0053 requires that *“a minimum confidence coverage of 90 percent should be demonstrated for 90 percent prediction intervals on independent test data.”* At the same time, it recognizes that, under limited datasets, *“there may be circumstances where model uncertainty bounds are appropriately set even where 90 percent confidence coverage is not achieved,”* giving the example that missing one observation in seven or eight will drop coverage below 90%. In such cases, a petition may be made to validate use with those bounds. *“Such a petition must be approved by the IME.”*

IME position on Combinations 10 and 18

In their **October 2024** note, the IMEs re-reviewed the combinations and accepted #10 and #18 despite falling just short of 90% coverage on the following basis:

- Combination 10 has 9 measured data points, of which 8 fall within the 90% CI. This corresponds to an 89% coverage, missing the threshold by a single observation.
- Combination 18 includes 16 data points, of which 14 are within the 90% CI, equivalent to 88% coverage. Inclusion of one additional in-bound observation would bring this combination to the threshold.

Why combinations #10 and #18 can be cited as “reasons for exemption” for other combinations

VMD0053 allows exceptions under data-limited conditions, subject to IME approval/VVB review. Because #10 (89%, n=9) and #18 (88%, n=16) are both near-misses explicitly accepted by the IMEs in their Note NMI 0008.N.24-12 of October 2024, they are valid anchors for referencing CFG substitutions. This is consistent with VMD0053’s petition pathway.

Why are the potential errors in the eight exempted combinations not compounded or worsened by the lack of prediction data?

As explained in more detail in Part 2 of this response, RothC does not simulate crop-specific processes and does not use crop-dependent parameters. The model represents SOC dynamics based on environmental and management factors, treating crop–soil interactions homogeneously. Therefore, the characteristics used in VMD0053 to define CFGs are not represented in the model parameters and thus do not affect modeled SOC stock changes.

Additionally, VMD0053 links model uncertainty to crediting deductions via the RMSE formula

$$RMSE = \sqrt{\sum_{i=1}^n (\hat{y}_i - y_i)^2 / n}$$

HYPERLINK "https://www.codecogs.com/eqnedit.php?latex=%20RMSE%20%3D%20%5Csqrt%7B%5Csum_%7Bi%20%3D%201%7D%5E%7Bn%7D(%5Chat%7By_i%7D%20-%20y_i)%5E2%20%2F%20n%7D%20". As a general statistical principle, increasing the number of observations n HYPERLINK "https://www.codecogs.com/eqnedit.php?latex=n%20" tends to reduce or stabilize RMSE for an unbiased model, as demonstrated in our MVR for those combinations (§3.4). It is therefore reasonable to expect that, if we had sufficient data for the eight underrepresented combinations, we would observe an overall lower RMSE and thus reduced uncertainty deductions, not increases.

Finally, with a small or negative bias and acceptable prediction intervals for combinations 10 and 18 (as shown in our validation MVR, §3.4), it is reasonable to expect that, with these theoretical substitutions, the eight combinations would not overstate SOC changes. On the contrary, the negative bias and applied uncertainty deductions conservatively account for any residual model error resulting from the present limited validation dataset.

2. The following technical note provides a substantiated justification for why a theoretical substitution of parameters used to model a Crop Functional Group (CFG) according to the IME response 3(c). This note provides a justification for, the PRR2 comment that the replacement combinations are deemed “less conservative”, by referring to the biophysical crop characteristics established by VMD0053, and why this does not erode the conservativeness of estimates in the AgreeenaCarbon project modeling framework under Quantification Approach 1.

Technical

note

Introduction

The calibration/validation exercise reported in the AgreeenaCarbon project Model Validation Report (MVR) follows the guidance in *VMD0053 Model Calibration, Validation and Uncertainty Guidance*. This has been confirmed in the project's validation by the IME, VVB, and Verra, as well as in the current verification assessment by the IME and VVB. The overarching aim is to demonstrate that the selected process-based model reproduces GHG flows within the project domain with known, bounded error—thereby ensuring that ex-ante crediting remains conservative.

In this project, the relevant emission source is soil organic carbon (SOC) stock change only. Other fluxes, such as N₂O from fertilizer use or CH₄ from methanogenesis, are not estimated using the RothC model but are accounted for through VM0042 Quantification Approach 3. They are therefore outside the scope of VMD0053, as detailed in the PD (Table 3-3) and MR (Table 4-4).

In this context, and in response to CAR #CL10, it was clarified that the use of substitute Crop Functional Groups (CFGs) in 21 out of 53 validated combinations was introduced to address data scarcity and the absence of available studies within the Practice Change × Climate Zone × CFG (PC/CZ/CFG) combination. This rationale has already been acknowledged and accepted by the IME, and documented in both the October IME follow-up note (NMI 0008.N.24-12) and the Verification Report issued by the VVB.

Specifically, the IME confirms that Agreena has planned and initiated additional data collection to improve the empirical coverage of these combinations, with the clear intent to supplement model calibration and validation with more data when available, or, alternatively, to incorporate field-based measurements.

While earlier responses to issues related to this topic have consistently emphasized the procedural compliance of this substitution strategy—and remain valid—this technical note provides additional justification. It demonstrates why a theoretical substitution of parameters used to model a Crop Functional Group (CFG) with a deemed “less conservative” CFG, based on the biophysical crop characteristics established by VMD0053, does not erode the conservativeness of estimates in the AgreenaCarbon project modeling framework under Quantification Approach 1.

AgreenaCarbon	Project	model	choice
The RothC model was selected to simulate SOC stock dynamics, as detailed in the project Model Validation Report (MVR). RothC is a widely applied process-based model with a long track record in simulating SOC dynamics in agricultural systems¹. It allocates soil organic matter into five conceptual pools with different decomposition rates, subject to modifying factors for temperature, soil moisture, and land cover.			

SOC inputs in this context are determined from crop residues and manure application. SOC turnover is governed by the following function:

$$SOC = f(C, k, In, FYM, DR, CL, XI)$$

Where:

- C = initial carbon
- k = decomposition rate
- In = carbon inputs from plant material
- FYM = organic inputs from manure
- DR = Ratio of biomass inputs that should go to the soil pool decomposable vs resistant plant material
- CL = clay content
- XI = decomposition rate modifiers as a function of temperature, precipitation, and evapotranspiration

The model does not simulate plant physiology or nutrient cycling explicitly. Instead, differences in land management are translated into changes in residue inputs and decomposition conditions, which are independent of crop type ²³.

In other words, **RothC is crop-agnostic**: it requires only the total carbon input, not species traits. Physiological differences between, for example, wheat and sugar beet manifest only through exogenous biomass input magnitudes.

Calibration and conservativeness

For this reason, the use of crop functional groups (CFGs) in RothC's validation framework has a different role than in models that explicitly simulate crop biology. In VMD0053, CFGs are introduced as clustering criteria to ensure that model validation is stratified along biologically meaningful differences in carbon and nitrogen dynamics emerging from soil–crop interactions. In RothC, these differences are not represented in the model structure and therefore cannot be explicitly adjusted on a crop level.

Additionally, the deliberate choice to create parameter sets on a climate-zone level (cf1, cf2, and cf3, as explained in MVR § 2.11) means that no parameters are tuned specifically for a type of crop or CFG. Therefore, any heterogeneity in soil dynamics arising from crop–soil interactions manifests in the estimated error between observed and predicted SOC changes during validation.

Based on this premise, the conservativeness of any CFG substitution in our crop-agnostic RothC implementation is supported by three main points:

1. RMSE and uncertainty deductions:

The RMSE required by VMD0053 explicitly captures the variability that arises from intra-CFG plant-physiology differences whenever the model itself cannot simulate those

processes. In a crop-agnostic model such as RothC, this “missing-process” variability appears as systematic error, and is fully penalised through the uncertainty deductions specified in VM0042 § 8.6. Under the standard **bias–variance decomposition** for a reduced model with only k HYPERLINK "https://www.codecogs.com/eqnedit.php?latex=k#0" out of p HYPERLINK "https://www.codecogs.com/eqnedit.php?latex=p#0" active parameters⁴, the expected test-set error is

$$\mathbb{E}[(y - \hat{y}_k)^2] \approx \sigma^2 + \sum_{j=k+1}^p \beta_j^2$$

"https://www.codecogs.com/eqnedit.php?latex=%5Cmathbb%7BE%7D%5C!%5Cbigl%5B(y-%5C%5C%7B%7D_k)%5E%7B2%7D%5Cbig%5D%20%5C%3B%5Capprox%5C%3B%20%5Csigma%5E%7B2%7D%20%5C%3B%2B%5C%3B%20%5Csum_%7Bj%3Dk%2B1%7D%5E%7Bp%7D%20%5Cbeta_%7Bj%7D%5E%7B2%7D#0"

where σ^2 is the irreducible noise variance, and the β_j^2 represent the omitted crop physiology coefficients.

If the omitted effects β_j^2 are of comparable size c , the expression simplifies to

$$\mathbb{E}[(y - \hat{y}_k)^2] \approx \sigma^2 + c(p - k)$$

Hence, the $(p - k)$ HYPERLINK "https://www.codecogs.com/eqnedit.php?latex=(p-k)#0" missing crop physiological parameters in RothC inflate the RMSE, and VM0042 treats that additional RMSE as a direct increase in methodological uncertainty, leading to higher deductions.

2. Bias assessment:

The bias assessment mandated by VMD0053 addresses the same omission from another angle: **omitted-variable bias**. Let the true SOC response be $y = a + bx + c\pi_g + u$, where x bundles climate and management inputs, π_g is a physiology trait for Crop Functional Group g , and $u \sim (0, \sigma^2)$. Because RothC does not distinguish crop types, it replaces π_g with one global constant $\bar{\pi}$, yielding $\hat{y} = a + bx + c\bar{\pi}$.

The expected residual (bias) for any CFG is therefore:

$$b_g = \mathbb{E}[y - \hat{y} \mid g] = c(\pi_g - \bar{\pi}).$$

If $\pi_g \neq \bar{\pi}$ the bias is non-zero, but—exactly as in the previous RMSE explanation—it enters the mean-squared error as $\mathbb{E}[(y - \hat{y})^2] = \sigma^2 + b_g^2$, so that $\text{RMSE} = \sqrt{\sigma^2 + b_g^2}$.

Thus, any systematic error caused by the missing crop physiology parameters is already embedded in RMSE and, consequently, in the VM0042 uncertainty deduction (§ 8.6).

Empirically, the average bias across all validated PC/CZ/CFG combinations is small and negative (MVR § 3.4: -0.51 tC/ha on average). Using validated combinations as substitutes is therefore conservative and does not overstate emission removals.

3. Reduced Parameterization:

RothC was calibrated using four parameter sets (one for each climate zone present in the project area), each with three model parameters. This limited parameterization of calibration coefficients supports robustness and generalizability. The parameter sets are calibrated broadly across CFGs, meaning individual crop-type effects on predictions would appear as validation errors or systematic biases, which have already been accounted for. Moreover, three of the four major practices promoted in our program—tillage reduction, increased green cover period, and manure application—are management changes whose SOC effects are reasonably considered independent of crop-specific physiology, further reducing the risk that cross-CFG substitution could bias results upward.

CFG

substitution

The theoretical framing explained above is important when interpreting the issue of CFG substitution. VMD0053 requires conservative substitution of missing CFGs, meaning that, in principle, baseline simulations should use a CFG with lower expected CO₂ emissions and project simulations with higher expected CO₂ emissions to avoid overstating credits. However, in a SOC-only, crop-agnostic model such as RothC, this requirement cannot be implemented in the same way as in models that incorporate crop-specific physiology.

The “conservativeness” of a substitution must be understood within the scope of what the model actually simulates: SOC stock changes attributable to management, climate, and soil. It does not extend to N₂O dynamics or crop-specific physiology. In practice, when we validate RothC against empirical data grouped by CFG, we are already testing whether these differences materially affect SOC predictions. Where RothC cannot distinguish between CFGs, differences are absorbed into the error distribution and accounted for in the uncertainty deduction.

For this reason, substituting across CFGs in the Project’s modeling framework using RothC does not increase the risk of over-estimation. On the contrary, it is conservative in the three ways explained above; through 1. RMSE and uncertainty deductions; 2. Bias assessment; 3. Reduced parameterization.

Substitution to a “less conservative” CFG

In response to Verra’s specific concern that 21 of 53 combinations involved substitution with a “*less conservative*” CFG, the AgreeenaCarbon Project’s previous submissions followed VMD0053 guidance by documenting substitutions, and, in alignment with the VMD0053 guidance for IMEs (Appendix A 1.1), presented them to the IME to enable “*The IME assessment report [to] be submitted to and approved by the VVB*”.

To support the closure of Finding 14, this technical note and justification aim to clarify the AgreeenaCarbon project’s approach: that, in the case of RothC, a “less conservative” CFG substitution remains acceptable because the model does not produce CFG-specific responses. Substitutions do not produce a systematic over-estimation of carbon sequestration, because the model cannot distinguish among individual crops. On the contrary, the conservative parameterization increases the RMSE and enlarges the associated uncertainty deductions, thus justifying the cautious nature of the approach. The observed variability is carried into the quantified prediction error, and the conservative uncertainty deductions applied under VM0042 ensure that any overestimation is neutralized.

Conclusion

The proposed substitutions are consistent with both the scope of VMD0053 and the operational design of RothC. While VMD0053 frames conservativeness in terms of crop-specific emissions, for a crop-agnostic SOC model such as RothC, conservativeness is enforced through empirical error quantification and subsequent uncertainty deductions. Our substitutions, therefore, do not undermine credit integrity and should be considered acceptable within this methodological framework, as detailed in the MVR and subsequent IME assessments previously conducted.

1. FAO. *Global Soil Organic Carbon Sequestration Potential Map – GSOCseq v.1.1: Technical Report*. (FAO, Rome, Italy, 2022). doi:10.4060/cb9002en.
2. Coleman, K. & Jenkinson, D. RothC-26.3 - A Model for the turnover of carbon in soil. in

Evaluation of Soil Organic Matter Models Using Existing, Long-Term Datasets vol. 38 237–246 (1996).

3. Jordon, M. W. *et al.* Can Regenerative Agriculture increase national soil carbon stocks? Simulated country-scale adoption of reduced tillage, cover cropping, and ley-arable integration using RothC. *Sci. Total Environ.* **825**, 153955 (2022).

4. Hastie, T., Tibshirani, R. & Friedman, J. *The Elements of Statistical Learning*. (Springer New York, New York, NY, 2009). doi:10.1007/978-0-387-84858-7.

Documentation provided by project participant

VVB assessment

Date: 18/08/2025

VVB accepted the combination 10 and 18 after thorough evaluation of the IME note of October 2024. Detailed explanation in this context is provided below:

IME position on Combinations 10 and 18

In their October 2024 note, the IMEs re-reviewed the combinations and accepted #10 and #18 despite falling just short of 90% coverage on the following basis:

- Combination 10 has 9 measured data points, of which 8 fall within the 90% CI. This corresponds to an 89% coverage, missing the threshold by a single observation.
- Combination 18 includes 16 data points, of which 14 are within the 90% CI, equivalent to 88% coverage. Inclusion of one additional in-bound observation would bring this combination to the threshold.

This has been confirmed in the project's validation by the IME, VVB, and Verra, as well as in the current verification assessment by the IME and VVB. The overarching aim is to demonstrate that the selected process-based model reproduces GHG flows within the project domain with known, bounded error—thereby ensuring that ex-ante crediting remains conservative.

In this project, the relevant emission source is soil organic carbon (SOC) stock change only. Other fluxes, such as N₂O from fertilizer use or CH₄ from methanogenesis, are not estimated using the RothC model but are accounted for through VM0042 Quantification Approach 3. They are therefore outside the scope of VMD0053, as detailed in the PD (Table 3-3) and MR (Table 4-4).

In this context, and in response to CAR #CL10, it was clarified that the use of substitute Crop Functional Groups (CFGs) in 21 out of 53 validated combinations was introduced to address data scarcity and the absence of available studies within the Practice Change × Climate Zone × CFG (PC/CZ/CFG) combination. This rationale has already been acknowledged and accepted by the IME, and documented in both the October IME follow-up note (NMI 0008.N.24-12) and the Verification Report issued by the VVB.

The idea behind validating all the stated combinations is to avoid biases in SOC accumulation values.

However, the proposed substitutions are consistent with both the scope of VMD0053 and the operational design of RothC. While VMD0053 frames conservativeness in terms of crop-specific emissions, for a crop-agnostic SOC model such as RothC, conservativeness is enforced through empirical error quantification and subsequent uncertainty deductions. The substitutions, therefore, do not undermine credit integrity and does not lead to overestimation of SOC. This fact is also consolidated by the argument that Roth C is not particular about the crop type, Rather it takes into account the type of organic matter added to the soil pool.

Therefore, acceptance of combination 10 and 18 and further substitution based on them do not lead to overestimation in the SOC and should be considered acceptable within this methodological framework, as detailed in the MVR and subsequent IME assessments previously conducted.

in the case of RothC, a “less conservative” CFG substitution remains acceptable because the model does not produce CFG-specific responses. Substitutions do not produce a systematic over-estimation of carbon sequestration, because the model cannot distinguish among individual crops. On the contrary, the conservative parameterization increases the RMSE and enlarges the associated uncertainty deductions, thus justifying the cautious nature of the approach. The observed variability is carried into the quantified prediction error, and the conservative uncertainty deductions applied under VM0042 ensure that any overestimation is neutralized.

Uncertainty Deduction

The RMSE required by VMD0053 explicitly captures the variability that arises from intra-CFG plant-physiology differences whenever the model itself cannot simulate those processes. In a crop-agnostic model such as RothC, this “missing-process” variability appears as systematic error, and is fully discounted through the uncertainty deductions specified in VM0042 Section 8.6.

The points explained above provide a strong justification for accepting certain substitutions with acceptable limitations.

Therefore, CAR 29 is Closed

CAR ID	30	Section no.		Date : 24/05/2025
Description of CL				

Verra received a public comment outside the public comment period (PCP) for the project. The comments have been itemized in three broader perspectives for specific responses from PP and evaluation by VVB without deleting anything (except minor edits).

1. Talking with the farmers they don't consider this additional, but just a financial contribution of what in all circumstances would happen in most European countries. It is not helping the reputation of the voluntary carbon market. We should never accept carbon credit projects without firm acceptance of the involved countries. It creates mistrust to the entire voluntary carbon market, and it should not be possible to trade these credits. Please clarify.
2. The practice in Europe is that we have already significant subsidies for changing the conventional agricultural practices. It is supported also by different incentives, and it is often not followed by strong legal requirement. Huge agricultural land areas are taken out of production, in the form of stop tilling, nature restoration, and huge areas are planted with trees. It is financially supported by the governments, but also private donations. Common practice should be an evaluation based on all the financial incentives and the concrete implementation that supported the change in the conventional agricultural practice. It seems that the farmers can receive more financial incentives. Please argue whether this will be acceptable and whether it will harm the justification of additionality.
3. The project type will push in a direction of less stable carbon pool compared to e.g., forest restoration. Before starting an initiative in a country there should have a country approval and written acceptance and this is also what VERRA is promoting at different events, mainly in developing countries. A product in the carbon market shall not be accepted without clear acceptance by the countries both due to account in the national registry and also in case they would like to a transaction fee. Furthermore, the countries shall confirm that the projects are without other subsidies and the projects are considered additional.

Project participant response

Date : 16/05/2025

Due to the fact that the public comment cannot be validated as it is from an anonymous source, the details within cannot be verified. Nevertheless, there are several important points that are brought forward that AgreeenaCarbon has responded to. Agreeena's full response is below with point by point responding to each claim made by the public commenter.

1. If the carbon credits are to be used for international purposes, that is for another country's national inventory or against other national targets, there should be 'firm acceptance' and the credits should be authorized for use. While some countries, e.g. Ghana, have processes for registering and accounting for all carbon projects run within their country, many countries don't have processes in place, including in Europe. This would stifle the speed of private investment flows.
2. The upcoming CRCF regulation which covers carbon farming does allow for a blend of public and private subsidies. Additionally, removing crop lands for forestry would be treated as land use change and under the EU's LULUCF policy, not within the realm of an arable crop carbon project. Financial additionality is not a requirement under the Verra VM0042 methodology for Improved Agricultural Land Management.
3. The binary comparison between agricultural carbon projects and forest restoration oversimplifies complex land management decisions. There is an assumption that carbon projects can't be used within private companies accounting and national inventory accounting. This is false, as it is the difference between dual accounting and double counting. Country approval will be requested by Agreeena if the credits are to seek Article 6 tagging for the use in international offsetting schemes. The distinction between dual accounting and double counting is crucial. Dual accounting occurs when both a private entity and a country account for the same emission reduction. This is permitted and even encouraged to accelerate climate action. Double counting occurs when multiple countries count the same reduction toward their national targets, this is prohibited under the Paris Agreement.

Documentation provided by project participant

See answer above.

VVB assessment

Date: 25/05/2025

1. PP has provided justification mentioning that there is a difference between the compliance market where the host country approval is needed and voluntary market where the host country approval is not needed. While Some countries like Ghana has detailed process for registration and accounting for all the carbon projects going on in the country many of the countries does not have such mechanisms in place. However
 - i) PP has not provided justification for the statement *“Talking with the farmers they don’t consider this additional, but just a financial contribution of what in all circumstances would happen in most European countries. It is not helping the reputation of the voluntary carbon market.”* Which essentially means that the farmers don’t think that the project is additional or it brings any added benefits to their farms. PP needs to further clarify
 - ii) The concern was also about trust in the voluntary carbon market, not just legal or procedural compliance. PP does not directly address why these credits are legitimate from an environmental integrity perspective. PP needs to further update their response and clarify
2. PP has clarified that the CRCF framework which is being developed by the EU permits the use of both public and private finance implying that the subsidies do not negate the credibility for carbon crediting. PP also clarified that Financial Additionality is not a requirement as per VM0042 methodology and that changing from agricultural land to Forest land would be treated as land use change However
 - i) PP shall address how does the project ensure additionality when there is already significant subsidies for changing the conventional agricultural practices to that of Stop tilling and nature restoration.
 - ii) PP should address if there are subsidies for Agriculture and whether the proposed practices in mentioned in the project would still be adopted in the absence of carbon credits. If there are and those existing subsidies alone are sufficient to make the project activities financially viable, this may affect the justification of additionality. Therefore, the PP should provide a clear rationale and supporting evidence to demonstrate that the carbon credits is necessary to enable the implementation of the improved practices.
3. PP has provided justification between dual accounting and double accounting. PP has clarified that from a voluntary and compliance market perspective dual accounting is permissible for a private company and country however Double accounting is prohibited under paris agreement . The writer has written that a host country approval is needed before the start of the project however since this is a voluntary market there is no such clause where the host country approval is mandatory. PP has clarified that if Agreena seeks to have Article 6 (Compliance

market) tagging they will be seeking host country approval. The justification is deemed sufficient. However i) PP shall clarify that Agreeena Carbon project is not under any additional subsidies and is additional in nature. OPEN	
Project participant response	28/05/2025
Despite the fact that the public comment received is fully anonymous, meaning that the veracity of its claims and/or the resources used to draw such claims is non verifiable, AgreeenaCarbon understands the importance of expanding on its previous answers. Please find below response to the public comment's three paragraphs, which will be addressed separately and individually to explicitly tackle each point raised by the VVB in its first assessment of AgreeenaCarbon's initial response. 1. Regarding the level of trust in the additionality of Europe-based Carbon Projects within the global Voluntary Carbon Market a. Regarding the statement <i>"Talking with the farmers they don't consider this additional, but just a financial contribution of what in all circumstances would happen in most European countries. It is not helping the reputation of the voluntary carbon market"</i> there are several key points. The comment does not provide evidence for any official or documented interactions with farmers. It is not specified how many farmers were involved in such conversations, nor whether they were independently sampled. Regarding the reference to whether the Project is <i>"additional"</i>, Agreeena reverts to the requirements of the VCS (VM0042 v2.0 Section 7). According to the VCS specifications, additionality is demonstrated through (a) the presence of social, institutional, cultural, and economic barriers to practice implementation, (b) regulatory surplus, and (c) passing the common practice test. AgreeenaCarbon has been validated and registered under VM0042 v2.0 and therefore additionality can be confirmed for all farmers participating in the Project. Please refer to Section 3.5 "Additionality" of the PD for further information. While it is true that there are voluntary GAEC subsidies accessible to EU farmers if they were to adopt some of the Project activities, the fact that a low percentage of EU farmers do pursue those subsidies by adopting regenerative ALM practice is in and of itself a clear statement of the additionality of the Project among European countries. A final consideration on this topic is that AgreeenaCarbon regularly engages with Project participants, as outlined in the PD Section 2.2. b. Trust in the Voluntary Carbon Market does hinge on the environmental integrity of active and approved projects. The environmental integrity of the AgreeenaCarbon Project is rooted in the effectiveness of the supported ALM practices in (a) sequestering carbon by stimulating local SOC stocks, (b) reducing agricultural production GHG footprint, and (c) protecting if not	

promoting the well-being of farmland and surrounding ecosystems. The literature offers substantial evidence that the Project-supported practices (i.e., reduced/no tillage, cover or catch cropping, mulching of crop residue, transitioning towards organic fertiliser), often catalogued as either carbon farming or regenerative/conservation agriculture, can deliver those three points (Lahmar, 2010⁵; Demeyer et al., 2021⁶; European Environmental Bureau, 2021⁷; European Commission, 2021⁸; McDonald et al., 2021⁹; Rodrigues et al., 2021¹⁰; European Commission Staff Working Document, 2021¹¹). Considering the number of papers published by the EU or researchers associated with EU bodies in support of the value of carbon farming for inter-/national carbon sequestration objectives, the environmental integrity of Project-supported practices appears sufficiently justified.

2. Regarding the (financial) additionality of Project practices

- a. The financial subsidies available to EU Project participants to e.g., reduce tilling of their fields and pursue nature restoration practices are entirely voluntary. Thus, the second step of the VCS Additionality 3-step 'Regulatory Surplus' is wholly met. Provided that financial additionality is not under scope in the VCS assessment of additionality, and considering that existing subsidies often bring significant administrative costs of entry (see point ii), the AgreeenaCarbon considers that the Project's additionality is sufficiently demonstrated.
- b. The existing EU subsidies supporting farmers adoption of Project-supported practices bring about significant administrative costs, both for entry and implementation, and high bureaucratic burden on the farmers seeking CAP support through Eco-schemes¹². Peer-reviewed studies exploring barriers to regenerative agriculture transition among EU farmers often report that lack of accessible subsidies and unfavourable policy environment are key barriers. Please review PD 3.5.2 "Step 2: Identify Barrier" for a thorough review.

⁵ <https://www.sciencedirect.com/science/article/abs/pii/S0264837708000227>

⁶ <https://northsearegion.eu/media/18284/whitepaper-carbon-farming-digital.pdf>

⁷ [Carbon Farming for Climate, Nature, and Farmers report](#)

⁸ https://climate.ec.europa.eu/system/files/2021-12/com_2021_800_en_0.pdf

⁹ [https://www.europarl.europa.eu/RegData/etudes/STUD/2021/695482/IPOL_STU\(2021\)695482_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/STUD/2021/695482/IPOL_STU(2021)695482_EN.pdf)

¹⁰ <https://research.wur.nl/en/publications/towards-climate-smart-sustainable-management-of-agricultural-soil>

¹¹ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52021SC0451>

¹² https://eu-cap-network.ec.europa.eu/publications/study-simplification-and-administrative-burden-farmers-and-other-beneficiaries-under_en

Considering that despite the presence of EU-provided subsidies through Eco-scheme participation the adoption of Project-supported practices is not widespread among EU countries is a clear signal that Project participation, and associated incentive from carbon credit sale, is necessary to enable the implementation of the improved practices. If that was not the case, EU-level adoption of all Project-supported improved ALM practices would be greater. Plus, financial additionality, meaning a project would not be financially viable without carbon credit revenue, is not a strict requirement under the Verra VM0042 methodology for Improved Agricultural Land Management.	
3. The additionality of the AgreeenaCarbon Project has been previously discussed in Point 1 and 2 of this response, and can also be reviewed in the PD Section 3.5 “Additionality”. AgreeenaCarbon is not under any additional subsidies at the time being, and will follow due diligence and VCS requirements if the situation comes to change. AgreeenaCarbon analysts would also like to point out that the commenter’s criticism “<i>The project type will push in a direction of less stable carbon pool compared to e.g., forest restoration</i>” oversimplifies complex land management decisions to an arbitrary and binary comparison with agricultural carbon projects.	
VVB assessment	Date: 03/06/2025
PP has revised the responses and provided satisfactory and detailed explanation on all the points. PP has provided substantial evidence as proof. Therefore, the finding is closed.	

Table 4. FAR from this verification

FAR ID	02	Section No.	Validation Report, PRR Issue 6	Date : 07/06/2024; 23/04/2025
Description of FAR				

The next verifying VVB shall check how the recommendation provided by IME in the Third review Model Validation report Agreea V4.0 dated Sept 2023 Chapter: Outlook have been addressed by PP in the Model Validation Report, in the verification assessment. Below are the recommendations provided by IME in the IME Evaluation report.

1. We recommend to extend the data sources now in the CVD. We advise to consider the following data resources on long-term changes in soil carbon; the Catch-C project (<http://www.catch-c.eu/>), the long-term Rothamsted soil carbon experiments (<https://www.era.rothamsted.ac.uk/>), and the Swiss Agroscope long-term agriculture experiments (<https://www.agroscope.admin.ch/agroscope/en/home/topics/environment-resources/monitoring-analytics/long-term-trials/zofe.html>). Adding this data may also improve upon the uncertainty ranges. In particular the work could benefit from the inclusion of the wealth of soil data from the United Kingdom.
2. Considering the practice change and requirements under VM0042, it is crucial that the PC included in this project be fully additional, also in the context of European Agricultural requirements.
3. The scale of the model applicability is key to consider. As per Verra VMD0053 the model needs to be provided at least for each unique combination of CZ, PC and CFG. It could be investigated how representative a regional, broad model is on a farm level. In regional models, extremes (low, high) are often averaged out. However, each individual farm may be on a more variable spectrum, which the regional model does not capture. Considering this element, enhancing the resolution of the modelling may enhance the applicability of the modelling and may reduce the uncertainty.

Project participant response

Date : 16/05/2025

As per the requirements set out by VMD0053 v2.0, the model shall be calibrated and validated by an Independent Modelling Expert prior to the conclusion of the first verification process, but the work should begin under validation. Therefore, this FAR should be treated under the second verification as it should be raised as a finding prior to the conclusion of the first verification.

1. Please see response to CAR ID 29 (PRR Issue 4) outlining the details related to the CVD. As per the IME's September 2023 Evaluation Note (0008.N.24-12, "Outlook" chapter) VMD0053 v2.0 permits the use of conservative substitutions or model validations in cases of data scarcity, provided such exceptions are explicitly disclosed and approved by the IME. The IME emphasizes that: "In summary, we give one type FAR in this note as a response to the requested PC/CFG/CZ replacements as requested by Agreeena. The FAR applies to a non-conservative replacement or biased model. This FAR entails that the model validation be supplemented by more data when available as a priority and/or supplemented by field-based measurements." (NMI 0008.N.24-12, p.3)

This recommendation acknowledges the data scarcity that characterizes some of these combinations by recommending that more data should be supplemented when available, and ensures that deviations from validation thresholds are temporary and systematically corrected over time, in line with the standard. In addition to the evaluations in the November 2024 note (NMI 0008.N.24-12), Agreeena also presented to the IME an extensive plan detailing how we collected additional data to expand the CVD according this recommendation, which was approved by the IME. This data will be included in the next iteration of the MVR, addressing both model robustness and uncertainty reduction.

2. All practice changes (PCs) proposed in the project have been shown to be fully additional in strict accordance with VM0042: Regulatory-surplus test, Common-practice analysis, Barrier/financial test.
Because the project passes all three additionality tests set out in VM0042, every included practice change is fully additional both under the methodology and within the context of European agricultural requirements.
3. The scale of model applicability has been considered and therefore Agreeena implements RothC models SOC stocks and SOC changes at the field level with the finest resolution currently possible—250 m—limited only by the availability of soil maps with higher-resolution soil data.

Documentation provided by project participant

0008.N.24_Agreeena_Scenario_Verification_29OCT2024_CommerciallySensitive
1972.N.23_IME_Evaluation_Agreeena_VMD0053_3rd_review_230901_CommerciallySensitive

VVB assessment	Date: DD/MM/YYYY
1. In response to the IME's observations, PP had emphasized data scarcity. The IME accepted the data scarcity for certain PC/CFG/CZ combinations. Additionally, IME's September 2023 Evaluation Note (0008.N.24-12, "Outlook" chapter) VMD0053 v2.0 permits the use of conservative substitutions or model validations in cases of data scarcity, provided such exceptions are explicitly disclosed and approved by the IME. The IME emphasizes that: "In summary, we give one type FAR in this note as a response to the requested PC/CFG/CZ replacements as requested by Agreeena. The FAR applies to a non-conservative replacement or biased model. This FAR entails that the model validation be supplemented by more data when available as a priority and/or supplemented by field-based measurements." (NMI 0008.N.24-12, p.3). This recommendation acknowledges the data scarcity that characterizes some of these combinations by recommending that more data should be supplemented when available, and ensures that deviations from validation thresholds are temporary and systematically corrected over time, in line with the standard. Furthermore, in the Chapter Outlook of the IME Report dated 23rd September, 2023, it is mentioned that recommendations made are outside of the scope of the VMD0053 requirements. However, these recommendations are helpful in further development of the Project. PP has provided sufficient reasons which has been accepted by IME in alignment with the VDM0053 approach. This point remains Open. 2. On re-assessment of the additionality section of the PD by VVB, it is established that Agreeena project passes all three additionality tests set out in VM0042. Therefore, every included practice change is fully additional both under the methodology and within the context of European agricultural requirements. Therefore, this finding is closed. 3. The RothC Model applied is applicable to the different climatic zones. As per VDM0053 each climate zone relevant to the project must be represented in the validation dataset, but a separate validation per climate zone is not required. Further, Agreeena validates each unique combination of PC, CFG and CZ for the single ES SOC and the three dominant soil textural classes in the project's geography have been included. A total of 60 combinations were tried for model calibration and validation out of which 53 were accepted by the IME. This has been done Furthermore, Agreeena implements RothC models SOC stocks and SOC changes at the field level with the finest resolution currently possible which is 250 metres which provides a reasonable assurance that the model fits on a farm level assessment. Therefore third point is closed. Since a FAR has been raised by IME for point 1, this can be verified in the next verification and this FAR shall be carried forward for the next verification.	

FAR ID	03	Section No.	Validation Report, PRR Issue 6	Date : 07/06/2024
Description of FAR				
During the initial assessment of project validation, PP has made the model validation report as per version 1,0 of VMD0053. However, the latest and applicable version of module VMD0053 has been version 2.0 at the time of final submission. Therefore, VVB and IME have reviewed the requirement of VM0042 and VMD0053 version 2.0 and it was confirmed that the project model is in conformance with VMD0053 version 2.0. A gap assessment has been completed by IME between Version 1 and Version 2 and has been completed by the IME confirming that Agreeena can be assessed under Version 2.0 . Moreover, in the IME Evaluation version migration report, IME informed that IME will also review the updates Agreeena has made to the existing model in order to evaluate and close outstanding recommendations. This shall be addressed by verifying VVB in the first verification. More details are provided in CAR#32 table.				

Project participant response	Date : 16/05/2025
This has already been accounted for due to the finding brought forward under validation by Verra in PRR1 where the report previously prepared by the IME was assessed and determined to be valid for version 2.0 of VMD0053. The IME was contracted for additional work and assessment and issued a report stating that the version 2.0 of VMD0053 can be an acceptable version for the assessment of the model. Therefore, this finding can be treated as finalised and the report provided here is evidence of the same. This has also been submitted as part of verification assessment.	
Documentation provided by project participant	
<i>IME_evaluation_Agreena_version_migration_CommerciallySensitive</i>	
VVB assessment	Date: 07/06/2024
The version migration has been reflected in IME report through additional work. The VVB has reviewed this and found it to be appropriate. Therefore, this FAR is closed.	

APPENDIX VI: PHOTOGRAPHS

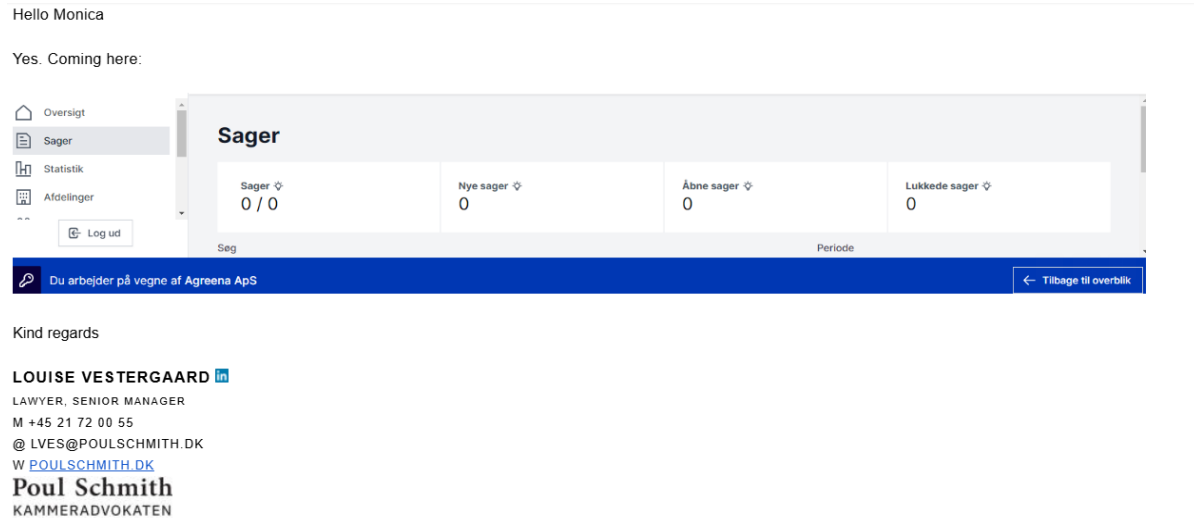


Figure 1: Reporting Dashboard for Wistleblower Hotline Summary

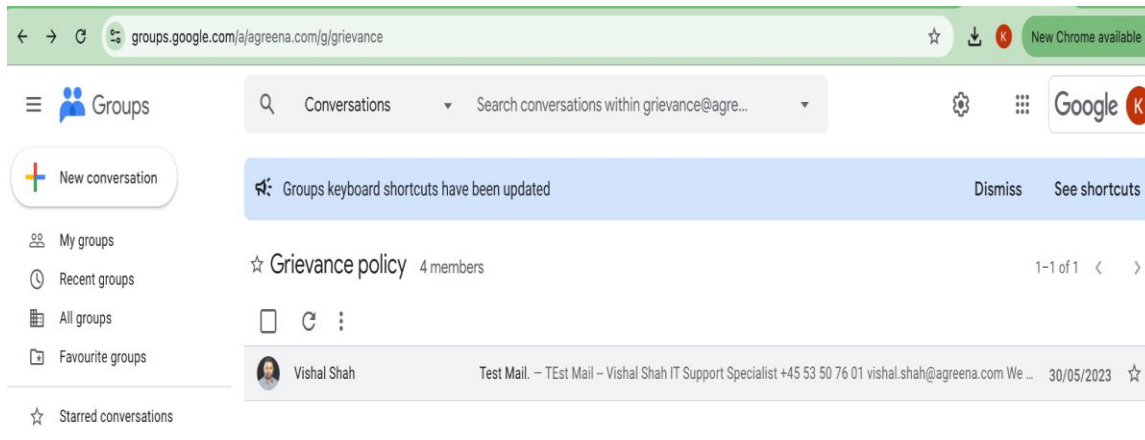


Figure 2: Agreena Carbon's internal IT Email