JOINT VALIDATION AND VERIFICATION REPORT FOR THE WESTPHALEN FOREST CARBON PROJECT

Document prepared by RINA Services S.p.A (RINA)

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Work Carried Out By	Vinay Singh: Team Leader, Validator & Verifier, Technical Expert TA 14 Ramya Ramaswamy: Observer

Summary:

RINA was commissioned by Matthias Graf von Westphalen (Westphalen) to perform a joint validation and verification of the Westphalen Forest Carbon Project. The purpose of this assessment was to compare the project to the VCS Standard Version 4.4 and all applicable requirements therein, and the VM0012 Improved Forest Management in Temperate and Boreal forests (LtPF) v1.2 methodology for the proposed monitoring period.

The project defers harvesting on 772 hectares (ha) of privately owned forest land. The project is composed of non-contagious properties in the states of Schleswig-Holstein, Thuringia, North Rhine-Westphalia, and Lower Saxony.

Westphlalen has requested that RINA perform the joint validation and 1st verification audit, for which the joint Project Description & Monitoring Report and supporting documents were reviewed. RINA assessed the documents and evidence provided in person and virtually by completing a desk review, inspecting a of sample plots, conducting in person field assessments, interviewed stakeholders, interviewed the top management of the Project Proponent (PP) and interviewed with the technical and field staff of the project activity. The RINA team validated and verified the information contained and the emissions reductions and/or removals claimed in the Project Description/Monitoring Report (PD/MR).

The review identified 13 Clarification Requests, 04 Corrective Action Requests and one Forward Action Request. All findings have been successfully closed. RINA confirms that the project complies with all requirements of the Verified Carbon Standard, and that the project has generated 16,114 tCO2 equivalent emission reductions during the monitoring period 2018-21. RINA holds no restrictions or uncertainties with respect to the compliance of the project with the validation and verification criteria.

CONTENTS

1 INTRODUCTION

1.1 Objective

RINA has been commissioned by Mattias Graf von Westphalen to perform an independent validation/verification of its VCS project the "*Westphalen Forest Carbon Project*". The objective of the validation and verification is to assess the project document (PD), monitoring report (MD), non-permanence risk analysis and all supporting documentation. The validation and verification objectives were established in accordance with Section 4 of the VCS and Sections 2.1.1 and 2.1.2 of the VCS Validation and Verification Manual, V3.2.

1.1.1 Purpose of Validation

In accordance with the VCS, RINA has completed an independent assessment of the project to determine whether the project complies with VCS Program rules. In accordance with the VCS Validation & Verification Manual, the purpose of the validation process is to assess that:

- The project has been implemented in conformance to the VCS rules,
- The project adheres to all requirements and instructions of the applied methodology, including the procedure for the demonstration of additionality,
- The likelihood that the methods and procedures set out in the project description will generate verifiable GHG data and information when implemented, and
- To assess that the project has conformed to all requirements of the non-permanence risk assessment.

1.1.2 Purpose of Verification

RINA has conducted an ex-post independent assessment of the GHG emission reductions and removals that have occurred as a result of the project during the verification period, in accordance with the VCS Program rules. The purpose of the verification, as stated in the VCS Validation and Verification Manual were to evaluate the monitoring report and assess that:

- The monitoring report and other supporting documents are complete,
- The extent to which methods and procedures have been implemented in accordance with the validated project description,
- The extent to which emission reductions and removals reported in the monitoring report are materially accurate.

1.2 Scope and Criteria

1.2.1 Scope

As defined in accordance with Section 4.3.4 of ISO 14064-3:2019, the scope was defined to include:

- The project and its activities,
- The baseline scenario applicable to the project,
- The carbon pools and or greenhouse gases included in the project boundary,
- The crediting period and verification period.

1.2.2 Criteria

In accordance with Section 4.1.8(2) of the VCS Standard, the criteria for validation and verification included the following documents:

- VCS Standard, Version 4.4, 17 January 2023
- VCS Program Definitions, Version 4.3, 21 December 2022
- VCS Program Guide, Version 4.3, 17 January 2023
- VCS approved methodology: VM0012 Improved Forest Management in Temperate and Boreal Forests (LtPF), Version 1.2, 23 July 2013

1.3 Reasonableness of Assumptions and Level of Assurance

In accordance with Section 4.1.8(1) of the VCS Standard, the level of assurance was reasonable. The final joint validation/verification report was subjected to an independent internal technical review to confirm that all verification activities had been completed according to RINA's instructions, with a reasonable level of assurance. The technical review was performed by qualified reviewer(s) in accordance with RINA's qualification scheme for VCS validation and verification.

The verification team and the technical reviewers consist of the following personnel:

Role	Last Name	First Name	Country
Team Leader, Verifier, Technical Expert TA 142	Singh	Vinay	India
Local Expert	Muller Thomsen	Jan	Germany
Regional Expert	Neuenstein	Dirk	Germany
Observer	Ramaswamy	Ramya	India
Technical Reviewer	Amalorpavanathan	Cyril A A	India
Technical Reviewer (sectoral)	L. Góes	Gustavo	Brazil

1.4 Summary Description of the Project

Westphalen has developed a forest carbon offset project to achieve greenhouse gas (GHG) emissions reductions and removals through the conservation of their privately owned forest lands. The project was implemented following the VCS VM0012 – Improved Forest Management in Temperate Boreal Forests (LtPF), v1.2 methodology.

The project area is composed of properties owned by Westphalen located in nine regions throughout Germany and occupies 772 hectares (ha). The properties are non-contiguous and are located in the states of Schleswig-Holstein, Thuringia, North Rhine-Westphalia, and Lower Saxony. Properties were managed for timber harvest prior to the implementation of the carbon crediting project and managed under a forest management plan created in 2015.

Carbon emission offsets were calculated by comparing the project scenario which ceases all timber harvesting, to a baseline scenario which represents regular forest harvesting operations. The baseline scenario for the project continues the legally permitted level of commercial harvesting for the next 30 years. The harvest schedule implemented under the baseline scenario includes selective thinning and final felling, which are regionally appropriate forest management practices. The project scenario is designed to conserve current forest conditions where the carbon crediting project was implemented by Westphalen. The project will involve low levels of harvest activities to maintain forest health, enhance ecological conditions, and/or mitigate risks. The project will sequester an estimated ~211,000 tonnes of carbon dioxide equivalent (tCO_2e) from the atmosphere over the 30-year project period. It is the intention of the project proponent to maintain the project activities for 100 years, as indicated in the PD/MR and through the interview process.

2 VALIDATION AND VERIFICATION PROCESS

2.1 Method and Criteria

Validation and Verification was conducted through a combination of document review, on-site inspections, field assessments, and interviews. The assessment was made to judge conformance to the criteria described in Section 0. The audit team completed the review following a proprietary sampling plan created by RINA. This plan was used for all aspects of the audit, including on-site inspections and field assessments along with baseline justification and standing carbon calculations.

The created sampling plan is designed to address any risk where the likelihood of a material discrepancy is determined to be unacceptably high. This plan was used in both validation and verification activities. The sampling plan approach was justified and designed in accordance with ISO 14064-3:2019.

Important assumptions for field sampling and baseline establishment focused largely on project stand composition and legal requirements for Forest Management Plan (FMP) development. This FMP document is used to set harvest levels and associated curtailments that establish the project scenario.

Field visit and baseline validation was completed by using local subject matter experts and local Foresters based in Germany. Focus was directed at forest cover mapping and stand type delineation. Stand analysis considered species composition, tree height and diameter, ground conditions, and applicable harvest systems. Field results were compared with approved FMPs and authorized harvest volumes and operational conditions. Via random sampling inventory data boundaries were confirmed covering 434 ha of the project area.

Stakeholder interviews were completed in German and independent of the project proponent. The interviews conducted were used to ensure if identified issues documented/ submitted during the consultation process had been adequately addressed.

Key milestones of the Validation and Verification process included:

1. November 25, 2022 – Kick-off meeting
2. November 24 – 25, 2022 – Site Visit and Stakeholder Interviews
3. November 28, 2022 – January 27, 2023 – Desk review conducted
4. January 30 – February 27, 2023 – Internal technical review of Joint Validation and Verification report

2.2 Document Review

During the joint validation and verification audit of the Westphalen Forest Carbon Project, the PD/MR (version 2.1, dated 9 February 2023 and version 3.0 of 27-April 2023) and Non-Permanence Risk Report (dated 6 November 2022), MR were reviewed for conformance to the validation/verification criteria. Also, the following additional documentation, provided by the project listing representatives was also reviewed by the audit team:

Document	File Name	Reference
Project Description and Monitoring Report	• VCS_Joint_Project_Description_Monitoring_Report_ Westphalen v2.1 (Feb 9'23).pdf; VCS-Joint-Project-Description-Monitoring-Report-Westphalen v3.0 (Apr'23).pdf (UPDATED version - VCS-Joint-PDMR-Westphalen v4.0 (Oct'23)); UPDATED version – VCS-Joint-PDMR-Westphalen v4.1 (Dec '23)	1
Non-Permanence Risk Report	• VCS-Non-Permanence-Risk-Report-Westphalen (Nov'22).xls (UPDATED version - VCS-Non-Permanence-Risk-Report-Westphalen (Oct '23))	2

	• Westphalen – VCS-Risk-Report-Calculation-Tool-v4.0 (1) – FINAL – 2022-11-15.xls • Forest Stewardship Certification (FSC). FSC-NRA-DE V1-1, National Risk Assessment for Germany 2020. https://connect.fsc.org/document-centre/documents/resource/201 • World Bank Governance Indicators for Germany 2016 - 2020 (http://info.worldbank.org/governance/wgi/Home/Reports) • Forest Strategy 2020 "Sustainable Forest Management" by Federal Ministry of Food, Agriculture and Consumer Protection, Germany.	
Financial NPV Cash Flow Analysis	• Westphalen – NVP Analysis for Non-Perm Risk Report – 2022 – 12 – 12.xls	3
Ownership Documents	• Peus Bethke Lawyer_Notary_NRW_Properties.pdf • Raudszus & Partner – Bestatigung Eigent.pdf • WP_Ownership_GISID_2022.kml • WestphalenOwnership_GISID_PropertyID_Link.xls	
Stakeholder Consultations	• Anmeldungen Open House.xls • Westphalen_Stakeholder List (Oct22).xls • 20221004_Westphalen Forest Carbon Project - We'd like your feedback!.pdf • Westphalen - Stakeholder Consultation Presentation (Sept'22).pptx • Stakeholder Engagement Poster_Monitoring (Sep '22).pdf • Stakeholder Engagement Poster_Partners (Sep '22).pdf • Stakeholder Engagement Poster_Project Description (Sep '22).pdf	5

	• Email-PP to Verra (100yr Activity Intention) Dec '23	
SOP GHG Monitoring	• SOP - Zimmfor GHG Monitoring (Dec'22).pdf	6
SOP Stakeholder Consultation	• SOP - Zimmfor Stakeholder Consultation+Engagement (Oct '22).pdf	7
VCU Calculation Workbook	• Westphalen Final GHG Estimate (Dec'22)V1.xls (UPDATED version - Westphalen Final GHG Estimate (Oct'23))	8
HWP Emissions Calculation Workbook	• Westphalen - BSL HWP (Dec '22) v5.xls • Westphalen - PRJ HWP (Dec'22) v3.xls • UNECE: 'Forest Product Conversion Factors' (March 2020) https://unece.org/forests/publications/forest-product-conversion-factors • "Methods for Calculating Forest Ecosystem and Harvested Carbon with Standard Estimates for Forest Types of the United States". January 2006.	9
Logging/Transportation Emissions Calculation Workbook	• Emissions_BSL_Estimate (Dec'22)v3.xls • Emissions_PRJ_Estimate (Dec '22)v2.xls	10
Uncertainty	• Westphalen - Uncertainty Calculator (Dec '22).xls • BZ1 Volume-Biomass Calculations.xls • BZ2 Volume-Biomass Calculations.xls • BZ3 Volume-Biomass Calculations.xls • OZ1 Volume-Biomass Calculations.xls • OZ2 Volume-Biomass Calculations.xls • OZ3 Volume-Biomass Calculations.xls • SZ1 Volume-Biomass Calculations.xls • SZ2 Volume-Biomass Calculations.xls • Georeferenced plot photos	11

	Plot no. 1- BZ2-2 Plot no. 2- BZ1-6 Plot no.3- OZ2-2 Plot no. 4- Oz2-1	
Leakage	• Westphalen Activity Leakage (Jan'23).xls • Buyer Overview 2016_2021.xls • *MARketz Tool_Westphalen(Oct'23)v2.2*	12
Inventory Carbon Calculations	• CBM Project Summary.text • Harvest_Bio+Snags_Dec08'22.xls	13
Carbon Wood Density	• iForest_ifor1591-008_Petrillo.pdf • Decay of Oak -11-00253-v2 (1).pdf • Decay of FS - s10342-009-0264-8.pdf	14
Carbon and Inventory Dataset	• WP - SI Analysis Units (Master Aug'22).xls	15
Modelled Disturbances by Area	• DistEvents(Dec'22)_BSL.xls • DistEvents(Dec'22)_PRJ.xls • DistType_Dec'22.xls	16
Modelled Delta Ecosystem Results	• Delta_Eco_Dec08'22.pdf • Delta_Eco_Dec08'22.xls	17
Model Input Data	• WF_20221208_BSL_1.mdb	18
Field Inventory Data	• MonitorPlot_Inventory_Dec'22'.xls • Field inventory data and monitoring plan - Field inventory and planning Northrhein-Westfalia 2005 - Forest Inventory and Planning Schleswig-Holstein 2005	19
Spatial Information of Project Area	• WestphalenCarbonInstance.kml	20

	• WP_AnalysisUnits_2022.kml • WP_CarbonProjectArea_2022.kml • WP_MonitorPlots_2022.kml • WP_Ownership_GISID_2022.kml • Verified project boundaries - WP monitor plots_22 - WP Project instances_22 - Plot OZ2-1 Location Map GeoOrtho - Plot OZ2-2 Location Map GeoOrtho - Plots BZ2-2 BZ1-6 Location Map GeoOrtho	
Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3)	• Kurz et al 2009: CBM-CFS3: a model of carbon-dynamics in forestry and land-use change implementing IPCC standards.pdf • • Kull S et al 2019: Operational-Scale Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3) v1.2	21

During the document review, the audit team evaluated the implementation and operation of the proposed project activity, project area, SOPs in place, field measurement data, key personnel interviews, and crosschecks between field data and ER calculation spreadsheet. The values used in the ER calculations were validated by reviewing the client-supplied sample plot videos.

2.3 Interviews

The interview process was conducted in a way to gain an understanding of:

- Work products provided to the audit team in support of the PD, MR and NPRR,
- Actions taken to ensure conformance with the various requirements, and
- Project activities planned and implemented.

The key personnel interviewed, and the main topics of the interview are summarized below:

Individual	Affiliation	Role	Date(s) Interviewed

Jason Zimmermann, RPF	Zimmfor	Project Implementation	Throughout
Dave Brown, RPF	Zimmfor	Methodology application	Throughout
Marika Forge, RP.Bio	Zimmfor	Methodology application, monitoring, safeguards	Throughout
Zoie Richards, AdDipIGIS	Zimmfor	Monitoring, spatial analysis	Throughout
Marlo Zimmermann, CPA (CA)	Zimmfor	NPRR, Financial	Throughout
Alexandra Shaw	Zimmfor	Spatial analysis and remote sensing	Throughout
Dr. Johannes Gerst	Graf von Westphalen	Forest Manager	Throughout
Susanne Pöhler	Lower nature conservation Paderborn district administration	Employee (Paderborn District Administration)	November 25, 2022
Joachim Fischer	Wünneberg district, Hochstift Regional Forestry Office	Forester and District Manager	November 25, 2022

2.4 Site Visits

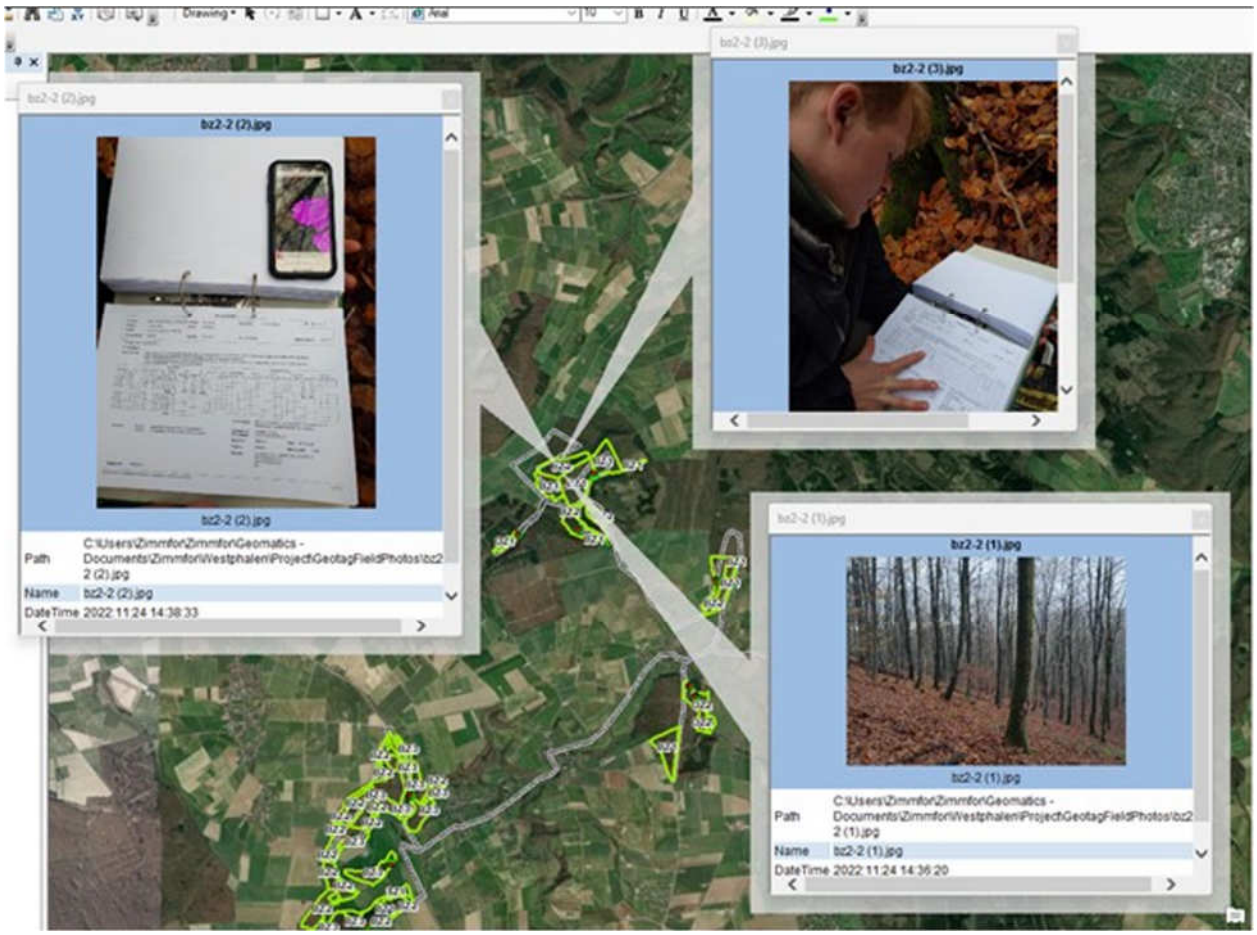
The objectives of on-site visits and meetings were to:

- Sample data and information from field observations to meet a reasonable level of assurance, and to meet the materiality requirements of the project as described in Section 4.1.2 of the VCS Standard,

- Perform a risk-based review of the project area and the project activities to ensure that the project and monitoring and quantification of GHG emission reductions and removals for the verification period is in conformance to the validation/verification criteria,
- Confirm the validity of information presented in the non-permanence risk report.

These objectives were satisfied through on-site inspections of the project area on November 24-25, 2022. The on-site audit team and the Audit Team Leader Vinay Singh were connected online via MS Teams to conduct the remote audit by video conferencing. The field audit team was composed of regional local experts, project developer representative, project proponent representative and the audit team lead (via MS Teams). The on-site audit was conducted by two local experts Mr. Dirk and Mr. Jane Müller-Thomsen at Fürstenberg and Herbram sites. The .kml files and images of the sites were provided to the audit team. Activities completed by the audit team were:

- Interviews of project personnel to gain information regarding monitoring project procedures, project activities and implementation.
- Review of the stakeholder consultation process, grievance mechanism, socio environmental impacts, and dispute resolution process.
- Meetings were requested with key and relevant Stakeholder from a list of meeting attendees to ensure independency.
- Verified project boundaries using Avenza (app) and Google Maps. Geo-referenced tracks, screen shots and geo-referenced photos were provided to the Audit Team Leader following the on-site inspection /33/ /34/ and were found to be correct.
- Conducted on-site inspections of the project's measurement and/or monitoring methodologies through the following activities:
    - As the project boundaries are established and because the forest parcels are scattered in different locations RINA's sample analysis indicted a minimum coverage of 258 hectares out of 779 hectares of the 'original' project area (i.e. 1/3 of the PAI) must be reviewed.
    - Assessment of the project's inventory, which included the audit team verifying tree measurements completed by monitoring and site crews via randomly sampling inventory plots within 434 ha, meeting the minimum statistical requirement noted above. The figure below represents the process, and the table below presents polygons visited along with location details (GIS KEY).
    - Collected GPS measurements to document plot locations and paths taken through the site area
    - Review of project site boundaries



GIS_KEY	Age	AU	Area (ha)
00940404-0470-B-H020	61	SZ1	0.76
00940404-0453-A-H010	125	OZ1	2.36
00940404-0410-A-H010	67	OZ2	7.39
00940404-0407-A-H010	82	OZ2	1.76
00940404-0403-A-H010	169	OZ2	11.04
00940404-0407-C-H010	74	OZ3	7.82
00940404-0437-A-H010	103	BZ1	10.77
00940404-0438-A-H010	88	BZ1	17.14
00940404-0436-A-H010	82	BZ1	1.02
00940404-0439-B-H010	71	BZ1	7.91
00940404-0444-C-H010	86	BZ1	7.66
00940404-0429-A-H020	103	BZ1	5.07
00940404-0404-A-H010	90	BZ1	11.64
00940404-0470-B-H010	73	BZ1	12.45
00940404-0471-A-H010	73	BZ1	9.76
00940404-0429-B-H010	122	BZ1	3.34
00940404-0442-A-H010	67	BZ2	10.14

00940404-0443-B-H010	83	BZ2	7.22
00940404-0432-B-H020	78	BZ2	1.37
00940404-0482-B-H010	83	BZ2	3.14
00940404-0482-A-H010	89	BZ2	4.40
00940404-0481-A-H010	93	BZ2	12.01
00940404-0480-B-H010	76	BZ2	1.82
00940404-0480-A-H020	23	BZ2	0.81
00940404-0477-B-H010	98	BZ2	4.15
00940404-0477-A-H010	133	BZ2	8.03
00940404-0476-A-H010	183	BZ2	7.59
00940404-0476-A-H020	32	BZ2	1.15
00940404-0476-A-H030	31	BZ2	0.25
00940404-0475-A-H030	98	BZ2	0.84
00940404-0475-A-H010	143	BZ2	12.20
00940404-0475-B-H010	13	BZ2	0.83
00940404-0474-A-H010	166	BZ2	6.87
00940404-0474-A-H020	32	BZ2	0.84
00940404-0470-A-H010	20	BZ2	1.13
00940404-0472-B-H010	162	BZ2	12.07
00940404-0472-B-H020	32	BZ2	1.07
00940404-0470-A-H020	35	BZ2	1.33
00940404-0470-C-H010	17	BZ2	0.67
00940404-0470-B-H030	61	BZ2	1.06
00940404-0472-A-H010	20	BZ2	1.20
00940404-0429-A-H010	103	BZ2	9.04
00940404-0480-C-H010	180	BZ3	0.96
00940404-0480-A-H010	180	BZ3	8.93
00940404-0480-B-H020	186	BZ3	0.14
00940404-0478-A-H010	180	BZ3	7.91
00940404-0479-A-H010	178	BZ3	5.14
00940404-0479-A-H020	48	BZ3	0.15
00940404-0475-A-H020	27	BZ3	0.78
00940404-0473-A-H010	173	BZ3	9.66
00940404-0470-D-H010	207	BZ3	1.96
00940404-0471-A-H030	207	BZ3	0.44
00940404-0471-A-H020	207	BZ3	1.14
00940303-0301-A-H010	136	OZ1	13.56
00940202-0208-B-H010	156	OZ2	3.42
00940202-0208-A-H010	131	OZ2	5.41
00940303-0361-E-H010	54	BZ1	1.24
00940202-0213-A-H010	101	BZ1	15.88
00940202-0290-D-H020	29	BZ1	1.00
00940101-0137-C-H010	30	BZ1	1.63

00940303-0316-I-H010	60	BZ2	2.35
00940303-0316-E-H090	65	BZ2	0.45
00940303-0316-D-H010	61	BZ2	7.65
00940202-0212-A-H010	101	BZ2	26.84
00940202-0209-D-H010	91	BZ2	1.83
00940202-0209-A-H010	91	BZ2	3.44
00940202-0299-E-H010	76	BZ2	1.23
00940202-0258-A-H020	67	BZ2	0.25
00940202-0257-B-H030	67	BZ2	0.31
00940202-0289-B-H060	28	BZ2	1.90
00940101-0112-C-H010	72	BZ2	1.62
00940101-0114-C-H050	56	BZ2	1.54
00940101-0116-A-H010	92	BZ2	8.15
00940101-0118-D-H010	61	BZ2	0.54
00940101-0118-D-H020	35	BZ2	0.61
00940101-0122-D-H010	126	BZ2	2.72
00940101-0122-I-H030	51	BZ2	1.63
00940101-0132-E-H020	50	BZ2	0.54
00940101-0136-A-H050	47	BZ2	0.33
00940101-0155-D-H010	14	BZ2	1.34
00940101-0155-E-H020	36	BZ2	0.98
00940202-0290-D-H010	51	BZ2	1.99
00940202-0299-E-H020	141	BZ3	0.47
00940202-0258-C-H010	116	BZ3	0.92
00940202-0257-A-H010	126	BZ3	0.69
00940202-0289-A-H010	71	BZ3	2.37
00940101-0111-C-H010	109	BZ3	2.76
00940101-0112-C-H020	166	BZ3	1.55
00940101-0122-A-H050	86	BZ3	0.15
00940101-0122-B-H010	90	BZ3	0.53
00940101-0122-C-H010	146	BZ3	5.21
00940101-0123-A-H010	141	BZ3	13.28
00940101-0123-B-H030	126	BZ3	0.20
00940101-0125-D-H010	146	BZ3	1.18
00940101-0132-H-H010	127	BZ3	1.74
00940101-0122-H-H010	86	BZ3	0.98
00940101-0130-B-H010	77	BZ3	0.88
00940101-0130-C-H010	131	BZ3	1.91
00940101-0130-D-H010	131	BZ3	0.99
00940101-0131-E-H010	126	BZ3	1.43
00940101-0132-A-H020	126	BZ3	0.20
00940101-0133-A-H040	87	BZ3	1.81
00940101-0134-A-H010	130	BZ3	3.75

00940101-0136-A-H020	71	BZ3	0.30
00940101-0142-B-H010	142	BZ3	7.48
00940101-0142-E-H010	87	BZ3	0.87
00940101-0143-B-H010	164	BZ3	1.54
00940101-0146-D-H010	126	BZ3	0.67
00940101-0148-B-H020	126	BZ3	0.81
00940101-0151-A-H010	95	BZ3	2.75

- Conducted a review of project ownership by verifying Land title, Laws and Policies, necessary approvals and permits /13/.
- To ensure that the VVB complied with VCS Standard Version 4.4 clause 4.1.7 and 4.1.17 all information provided in the joint PD & MR and ER spread sheets were verified during the site visit phase.
- The VVB checked the documents against reliable sources and conducted interviews with relevant stakeholders. The trees found on the samples were matched with the ER tables and it was confirmed that the ER tables are correct.

2.5 Resolution of Findings

Potential or actual discrepancies identified during the audit process were resolved through the issuance of findings. Findings identified by RINA are classified as:

- Corrective Action Requests: raised if the project proponents have made errors which influence the ability of the project activity to achieve real measurable emissions reductions and/or, the VCS requirements have not been met in the appropriate standard and/or, there is a risk that emissions reductions cannot be monitored or calculated.
- Classification Requests: raised if insufficient information is provided or a section is not clear enough to determine VCS Standard requirements have been met.

RINA raised 4 Corrective Action Requests and 13 Clarification Requests. Each of these findings has been sufficiently resolved and is further described in Appendix B. All findings issued by the audit team have been closed.

2.5.1 Forward Action Requests

One FAR was raised during the current verification process. The PP has been requested to submit details about leakage control and any harvesting activity information during the upcoming verification process.

3 VALIDATION FINDINGS

3.1 Project Details

In summary and as illustrated via sub-sections 3.1.1 through 3.1.15, it is concluded that the project is likely to achieve the estimated GHG emission reductions and removals as noted in the PD/MR table titled "Net GHG Emissions Reductions and Removals".

It is acknowledged that actual results may vary since the estimates are based on assumptions that are subject to change.

3.1.1 Project Type, Technologies and Measures Implemented, and Eligibility of the Project

The audit team has concluded the following regarding the project type and technologies and measures which constitute the project activities:

- The project falls under sectoral scope 14 – Agriculture, forestry and other land use (AFOLU)
- The project is eligible under the VM0012 methodology (further discussion below)
- The technologies and measures implemented, as described in Section 3 of the PD are eligible under the VCS program.

The audit team concludes the project meets the eligibility requirements of the VCS Program as it satisfies the additionality test (discussed further below) and complies with all applicability conditions of the selected methodology.

3.1.2 Project Design, Including Eligibility Criteria for Grouped Projects

The audit team has determined the following regarding the project design and eligibility criteria:
The audit team confirms that the currently existing project activity instance meets the eligibility criteria as outlined in Section 1.3 and 3.2 of the joint PD/MR, in accordance with VCS Standard v4.4, Appendices A1.3 and A1.4 as well as VM0012 – Section 4. The audit team also confirms that the project design has been set to be a grouped project and may include future activity instances that meet the eligibility criteria set out in Section 1.4.1 of the PD

3.1.3 Project Proponent and Other Entities Involved in the Project

The audit team concludes the following regarding the project proponent and other entities involved in the project:

- The project proponent is Matthias Graf von Westphalen, as identified in Section 1.5 of the PD
- Other entities involved in the project are Zimmfor Management Services Ltd. ("Zimmfor"), as identified in Section 1.6 of the PD.

- The audit team agrees with the identification of Matthias Graf von Westphalen (Westphalen) as the project proponent and agrees that Westphalen has the rights to manage the resources within the lands identified in the project area.
- The audit team agrees with the identification of Zimmfor as the additional entity involved in the project. Zimmfor was tasked with the representation of Westphalen during project implementation, development, and management of the successful registration of emission removal credits.
- The audit team has confirmed through interviews that both Westphalen and Zimmfor actively engaged in project activities.

3.1.4 Ownership

The audit team concluded that the PD has been accompanied by appropriate information which confirms project ownership. Project ownership has been demonstrated by showing statutory or contractual rights to the land, vegetation, and timberlands which exist on the properties. Georeferenced project location maps and monitoring plot locations were cross referenced with the ownership documents provided thus, the audit team was able to confirm that Westphalen has the legal right to manage forest lands of the project activity instance and that Westphalen is the rightful owner of the project parcels.

3.1.5 Project Start Date

The project start date is January 1, 2018. The audit team has reached the following conclusions regarding the conformance of the project start date to the validation criteria:

- This is the date that which Westphalen began harvest curtailments within the project area, representing the date at which the project begins generating GHG emission reductions or removals.
- Some harvesting remained within the project after the start date to address calamities detailed further in S.7.4.1 of the PD/MR.
- The audit team confirmed this date during interviews with the project team and by reviewing harvesting evidence.
- The audit team agrees that the project start date complies fully with the VCS rules.

3.1.6 Project Crediting Period

The project crediting period is from January 1, 2018, to December 31, 2047. The audit team has confirmed this by the validation of the following criteria:

- The start date of the crediting period coincides with the project start date, which is the date that harvesting deferrals began within the project area, representing the date on which the project begins generating GHG emission reductions or removals.
- The audit team confirmed this date during interviews with the project team.

- The audit team agrees that the project crediting period of 30-years complies with the VCS rules.

3.1.7 Project Scale and Estimated GHG Emission Reductions and Removals

The estimated annual GHG emissions reductions and removals generated during the crediting period from January 1, 2018 through to December 31, 2047 has been calculated to be 7,049 tonnes of CO_2e per year, as reported in the PD. The audit team agrees that the project is correctly classified as a regular sized project, as per Section 3.9.1 of the VCS Standard.

3.1.8 Project Location

The audit team has concluded the following regarding the project location:

- The project is located in Germany, in the states of Schleswig-Holstein, Thuringia, North Rhine-Westphalia, and Lower Saxony.
- The project boundary aligns with 55.058° north, 47.270° south, 15.037° east, and 5.866° west.

The audit team has checked the correctness of the provided KML files showing the project boundary and has completed field checks to verify the GPS boundaries of project areas. Also, PP has provided the details of project area polygons as appendix 8 of the PD. The same was verified during the on-site audit and found to be correct.

3.1.9 Conditions Prior to Project Initiation

The audit team has concluded the following about conditions within the project area prior to project initiation:

- The audit team has confirmed that the baseline land-use conditions prior to project initiation are documented in Section 1.13 of the PD. The baseline conditions were confirmed as part of the additionality check described in this report.
- The baseline scenario refers to a business-as-usual forestry management that includes continuous timber harvest and other forestry related operations.
- The audit team confirmed these conditions during interviews with project personnel, review of inventory data, and review of aerial imagery.

3.1.10 Project Compliance with Applicable Laws, Statutes and Other Regulatory Frameworks

The audit team has the following conclusions regarding the compliance of the project with all applicable laws, statutes, and other regulator frameworks:

- The project activities as described in Section 1.11 of the PD comply with relevant laws, statutes, and other regulatory frameworks in Germany.
- The audit team has confirmed through interviews with project team members and program participants, and through the review of the relevant national and local laws described in Section

1.14 of the PD that the project proponent provides sufficient assurance that the project complies with these applicable laws, statutes, and other regulatory frameworks.

- The audit team reviewed Tax Authority Approval letters confirming the Forest Management Plans (specifically the polygons, volumes, area, etc.) are approved and consistent with modelling.
- Legislation relating to clear cutting was reviewed as follows:
    - State Forestry Act of North Rhine Westphalia (Landesforstgezetz NRW (LFoG NRW)
        - Clear cuts up to 2 ha are legal (§10 (2))
    - State Forestry Act of Schleswig-Holstein (Waldgesetz f r das Land Schleswig-Holstein (LWaldG SH))
        - Clear cuts up to 0.3 ha are legal in SH (§5 (3))
-

3.1.11 Participation Under Other GHG Programs

The audit team concludes that the project is not currently registered under or seeking registration under another GHG program, as confirmed through the following steps:

- Through discussion with the project personnel and review of Section 1.15.1 of the PD, the audit team confirmed that the project is not currently registered of is seeking registration under another GHG program.

The audit team concluded that the project has not been rejected by any other GHG program through discussion with project personnel and review of Section 1.15.2 of the PD. The audit team has professional knowledge of the alternative GHG programs to VCS and has confirmed that the project has not been rejected by any alternative programs.

3.1.12 Other Forms of Credit

The audit team concludes that the project is not currently participating under any emission trading or other binding limit program or mechanism, as confirmed through the following steps:

- The audit team confirmed that the project does not currently nor plan to receive emission trading or other binding limit program or mechanism credits. This was determined through discussions with project personnel and review of Section 1.16.1 of the PD.

The audit team concludes that the project has not sought or received another form of GHG related environmental credit, as confirmed through the following:

- Via discussions with project personnel and review of Section 1.16.2 of the PD, the audit team confirmed that the project does not currently nor plans to receive another form of GHG related environmental credit, including renewable energy certificates.

The audit team concludes that a public statement and email notifications were issued to the public and any potential upstream or downstream companies to mitigate risk of double counting Scope 3 emissions.

- Via review of Section1.16.3 of the PD. The audit team confirmed that the project has mitigated the risk of double counting Scope 3 emissions within the supply chain impacted by the Westphalen Forest Carbon Project.

3.1.13 Sustainable Development Credits

The audit team has confirmed the following regarding the project's sustainable development contributions:

- The project proponent aims to contribute to SDGs 12 (Responsible Consumption and Production), 13 (Climate Action), and 15 (Life on Land) and the same has been elaborated in section 1.17.1 of the PD. During validation and on-site assessment, the audit team discussed and interviewed the project proponent and stakeholders about the SDGs goals and found it to be in line with the VCS guidelines.

3.1.14 Leakage Management for AFOLU Projects

The audit team has concluded the following regarding the project's leakage management strategy:

- As per Section 5.3 and 7.5 of the PD, leakage is 20% and the audit team concludes that this value has been applied appropriately by the project proponent to the Net GHG Emissions Reductions and Removals calculations.
- The calculation uses an alternative calculation method utilizing Marketz Tool and achieves a higher level of accuracy as it relates to project details (scope and scale) for market leakage quantification compared to the options within the VM0012 methodology. Furthermore, it meets the suitability criteria as set out in section 3.19 of the VCS-Standard-v4.4 for Methodology Deviations.
- The audit team reviewed the leakage calculation process, as documented in Appendix 11 of the PD/MR with the project proponent and has determined that the conclusions of the leakage calculation are accurate.
- The rationale for the deviation is adequately supported by appropriate references and utilizes the combined analysis of several important market aspects.
- The review included an assessment of the cited data sources and analysis inputs. All data used in the individual assessments are based on publicly available and verifiable data from creditable sources.
- In conclusion the increased accuracy of the methodology deviation is confirmed.

A FAR was initially raised for the assessment and monitoring of any leakage for the next verification.

3.1.15 Commercially Sensitive Information:

Commercially sensitive information was excluded from the PD. This was confirmed by the audit team through review of Section 1.18 of the PD and discussion with the project implementation team.

Commercially sensitive information consists of the four public comments received by Zimmfor from interested members of the public during stakeholder consultation. Additionally, detailed Net Present

Value (NPV) analysis data is commercially sensitive, however, sufficient detail is provided for baseline scenario determination and demonstration of additionality.

It is confirmed the financial disclosure of the detailed NPV analysis could reasonably be expected to result in a material financial loss or gain, prejudice the outcome of contractual or other negotiations and is concluded to be "Commercially Sensitive Information";

All information was provided to RINA during validation and verification and to Verra via the project registry.

3.2 Participation under Other GHG Programs

This project has not been registered and is not seeking registration under any other GHG program. This was verified by cross checking the VCS registry and also confirmed from the client by letter of undertaking.

3.3 Safeguards

3.3.1 No Net Harm

An assessment of potential negative environmental and socio-economic impacts has been performed in accordance with Section 3.18.2 of the VCS Standard and no such impacts were identified. The audit team performed the following actions to confirm the assessment:

- The audit team conducted interviews with project participants who have already been participating in the project and confirmed that no negative environmental or socioeconomic impacts have been experienced since project inception. Project participants did not express that there were potential negative impacts anticipated from project implementation.
- The audit team interviewed local officials and stakeholders to confirm that no negative impacts had been reported and that no negative impacts were anticipated.

Zimmfor has completed a Life Cycle Assessment and Aspects Analysis in accordance with the procedures outlined in the Zimmfor Stakeholder Consultation + Engagement Standard Operating Procedure. The results of this assessment indicate that there is no net harm from the project activity.

3.3.2 Local Stakeholder Consultation

In accordance with Section 3.18.3 of the VCS Standard, local stakeholder consultation was performed prior to validation. This process is described in Section 2.2 of the PD. Stakeholder consultation can be summarized as follows:

- The 30-day consultation period lasted from October 4, 2022, to November 3, 2022.
- Consultation documents were submitted to local stakeholders using both electronic documents submitted via email and in person open house meetings.

- In person open house meetings were held in Germany on October 7, 2022, and October 13, 2022. Attendance was recorded for both meetings and was confirmed by the audit team.
- The audit team confirmed that project proponents conducted stakeholder engagement activities by meeting with representatives from October 2022 through November 2022.
- The audit team interviewed representatives from Westphalen and Zimmfor to confirm the subject matter and topics of the stakeholder engagement meetings.
- The audit team reviewed evidence from these stakeholder engagements, including presentation materials, and confirmed that at these meetings stakeholders were provided with information about the project design, risks, costs and benefits, the implementation, mechanisms for continued communication and with communities and other stakeholders, and that stakeholders were given the opportunity to provide input/feedback regarding the project design.

An online form was made available on the Zimmfor website to collect stakeholder comments and feedback during the consultation process. Responses, if received, are automatically entered into a Consultation Database managed by Zimmfor. This form will be available to the public for the duration of the project, allowing for ongoing stakeholder engagement.

The audit team has confirmed that the project has not received any comments from the local stakeholder consultation processes. The audit team concludes that adequate stakeholder consultation has taken place prior to validation and that the project proponent has taken all appropriate measures to communicate and consult with local stakeholders in an ongoing process for the life of the project.

The audit team has confirmed that the following information will be shared with local stakeholders:

- The project design and implementation, including the results of monitoring via the Verra Project Registry (link provided via Zimmfor website).
- The risks, costs, and benefits other projects may bring to local stakeholders.
- All relevant laws and regulations covering worker's rights in the host country.
- The process of VCS program validation and verification and the validation/verification body's site visit.

3.3.3 Environmental Impact

Not applicable, an environmental impact assessment was not required for the Westphalen Forest Carbon Project.

3.3.4 Public Comments

A 30-day public comment period was conducted in accordance with Section 3.18.6-3.18.9 of the VCS Standard prior to validation from July 28, 2022 – August 27, 2022. Four comments were received from members of the public. All comments and responses have been saved and are listed in the PD along with how due account was taken on comments received. Comments were provided to the VVB during the validation and verification process and the audit team confirmed that the PP's responses were

appropriate, and comments did not warrant any changes to project design. No grievances have been raised as a result of public comments.

3.3.5 AFOLU-Specific Safeguards

The steps taken to assess the VCS Standard requirements in Section 3.18.3 – 3.17.19 are as follows:

Element	Audit Team Assessment
Local stakeholder identification process and the description of results	• The audit team confirmed that Section 2.2 of the PD explains the process of identification and consultation of stakeholders. • During interviews with project personnel, project participants, and other local stakeholders , the audit team concluded that all relevant stakeholders have been identified and addressed as described in detail within the Zimmfor GHG - Stakeholder Consultation + Engagement SOP
Risks to local stakeholders due to project implementation and how the project will mitigate such risks	• The proponent utilized an aspect analysis to determine all potential risks to local stakeholders due to project implementation. • In needed, procedures for mitigating risks to local stakeholders are described within Zimmfor GHG - Stakeholder Consultation + Engagement SOP • The audit team confirmed by review of the PD, Zimmfor GHG - Stakeholder Consultation + Engagement SOP, and supporting interviews and documentation from the stakeholder consultation meetings that there are no negative impacts to local stakeholders
Risks to local stakeholder resources due to project implementation and how the project will mitigate such risks, including plans to ensure the project will not impact local stakeholders' property rights without free, prior, and informed consent	• Review of land ownership rights of the project proponent and land ownership documentation. • Assess whether the project proponent will continue to provide access to the properties included in the project, where applicable. • The audit team concluded through interviews with local stakeholders and project participants to confirm that risks to local stakeholder resources because of project implementation have been communicated.
Processes to ensure ongoing communication and consultation, including a grievance redress procedure to resolve any conflicts that	• The proponent has demonstrated they have a process in place for on-going communication and consultation with local stakeholders evidenced by having a stakeholder feedback form available at all times on the zimmfor.com website. A stakeholder

may arise between the project proponent and local stakeholders	grievance form is also made available at the same location. Procedures for grievance redress can be found within Section 2.5.1 of the PD or online within Appendix 3 of the Zimmfor GHG – Stakeholder Consultation + Engagement SOP. • Assessed if project specific grievances were raised during the consultation processes. • The audit team confirmed during interviews with stakeholders that a continuing grievance mechanism was available if needed.

The audit team has confirmed that the project has been designed and is implementing plans and processes to ensure the project will not create any negative impacts on local stakeholders and has mitigation strategies available where necessary. This conclusion is justified as:

- The audit team confirmed during interviews with project participants, other local stakeholders, and the project proponent that any potential negative impacts have been identified and communicated to the stakeholders.
- The audit team concludes for any potential risk identified, the project proponent has implemented the appropriate prevention and or mitigation measures.
- The project proponent has developed and informed stakeholders of the grievance and redress procedure, outlined within the Section 2.5.1 of the PD and online within the Stakeholder Consultation and Engagement SOP. Furthermore access to a grievance submission form to the public is available online at: https://zimmfor.com/carbon/.
- The audit team confirmed that the grievance and redress procedure is in conformance with VCS requirements of Section 3.18.19.

3.4 Application of Methodology

3.4.1 Title and Reference

The title and reference of the methodology applied by the project ("the methodology") and any required tools applied to the project are identified in the table below. The audit team confirms that the versions of the methodology and applied tools were valid at the time of project validation.

Type	VCS ID	Title	Version	Validity
Methodology	VM0012	Improved Forest Management in Temperate and Boreal Forests (LtPF)	1.2	Current Version
Tool	N/A	AFOLU Non-Permanence Risk Tool	4.0	Current Version

Tool	VT0001	Tool for the Demonstration and Assessment of Additionality in VCS	3.0	Current Version

3.4.2 Applicability

Applicability Condition	Compliance Assessment	Conclusion
VM0012 – Improved Forest Management in Temperate and Boreal Forests (LtPF) v1.2		
1. Project meets criteria for VCS IFM LtPF projects	Interviews with stakeholders, review of the PD and supporting documentation confirmed that the project meets the criteria by voluntarily protecting privately owned managed forest lands within the project area	The project meets the applicability condition
2. The project is located in the Temperate of Boreal domain Global Ecological Zone and meets Tier III inventory data requirements	The audit team confirmed that all project polygons in the project area are located within the Temperate Ecological Zone, as defined on the FAO Global Ecological Zones map (https://www.fao.org/forest-resourcesassessment/ remote-sensing/global-ecologicalzones-gez-mapping/en/) Tier III inventory data requirements were confirmed by conducting interviews with stakeholders and through review of supporting documentation regarding the forest inventory standard procedures.	The project meets the applicability condition
3. The project meets the VCS Standard requirements for ownership	Ownership was confirmed by review of supporting legal ownership documentation. The audit team randomly selected polygons included in the project area to verify their legal title and compare parcel IDs to those submitted in the ownership documentation included with the PD. All sample polygons were shown to be legally owned by the project proponent.	The project meets the applicability condition
4. The average annual illegal, unplanned, and fuel wood removals in the project lands are less than 5% of total annual harvest levels	Onsite inspections and interviews with stakeholders and the project proponent conducted by the auditing team indicate that no illegal harvesting practices occur within the project area. Calamity harvesting has occurred in response to biological disturbance, but this harvest type is not specific to the project area.	The project meets the applicability condition
5. The project lands have no managed peatland forests	A geospatial assessment of peatland forests over the project area was conducted with ancillary data from FAO (https://www.fao.org/3/CA8200EN/CA8200EN.pdf). Site visits conducted by the audit team further verified that managed peatlands are not included within the project area.	The project meets the applicability condition

Applicability Condition	Compliance Assessment	Conclusion
6. The total percentage of wetlands in the project area is not expected to change as part of project activities	The audit team has confirmed that operational forestlands included in the project area do not include wetlands. Meetings with foresters from Westphalen, on site visits to confirm site conditions, and a review of inventory data showing land cover type were used to verify that wetlands were not included in the project area.	The project meets the applicability condition
7. There will be no activity shifting to other lands owned or managed by project proponents outside the project boundary at the beginning of the project	The audit team conducted interviews with stakeholders and the project proponent and has conducted site inspections and review of supporting forest management documentation which indicates that no activity shifting leakage will be occurring. The audit team validated the planned and actual historical harvest volumes produced for the forest management plans including the harvest increase related to calamity harvesting that must be legally completed. Harvest levels are not expected to shift to areas outside of the project activity instance.	The project meets the applicability condition
8. The project does not include non-de minimis application of fertilizer in the project scenario	The audit team confirmed that fertilizer treatments are not included in the project area through interviews with stakeholders, the project proponent, review of the PD, and onsite inspections.	The project meets the applicability condition
AFOLU Non-Permanence Risk Tool: VCS Version 4 (Procedural Document, 19 September 2019)		
n/a	The project is an AFOLU project (IFM-LtPF), therefore the tool is applicable. No additional application conditions are required through the use of this tool.	The project meets the applicability condition
VT0001 – Tool for the Demonstration and Assessment of Additionality in VCS Agriculture, Forestry, and Other Land Use (AFOLU) Project Activities – Version 3.0, Sectoral Scope 14.		
AFOLU Activities are the same or similar to the proposed project activity on the land within the proposed project boundary performed with or without being	The project activities do not violate the law.	The project meets the applicability condition

Applicability Condition	Compliance Assessment	Conclusion
registered as the VCS AFOLU project shall not lead to violation of any applicable law even if the law is not enforced.		
The use of this tool to determine additionality requires the baseline methodology to provide for a stepwise approach justifying the determination of the most plausible baseline scenario. Project proponent(s) proposing new baseline methodologies shall ensure consistency between the determination of a baseline scenario and the determination of additionality of a project activity.	VM0012 utilizes a step-wise approach to justify the most plausible baseline scenario. See section 3.5 of the PD/MR for details	The project meets the applicability condition.
n/a		

3.4.3 Project Boundary

The audit team concludes that the project boundary is appropriately specified, and the selected sources, sinks, and reservoirs are appropriately justified for the project. Further detail is provided below.

Spatial Boundaries

The audit team evaluated the spatial boundaries of the project area based on procedures outlined in the methodology. The audit team confirmed that the project activity instance, and spatial boundaries of the project area are included in Germany within the states of Schleswig-Holstein, Thuringia, North Rhine-Westphalia, and Lower Saxony and are accurately depicted in the shapefiles provided by the project proponent and maps included in the PD. The audit team confirmed through independent calculation that the areas in the shapefiles provided match the areas of the forest analysis units presented in the PD.

Carbon Pools

Steps to assess if each of the selected carbon pools have been identified correctly in accordance with the methodology are described below:

Carbon Pools	Included/Excluded	Audit Team Assessment
Aboveground biomass	Included	Checked against Table 1 in methodology to confirm that inclusion of above ground tree biomass is mandatory. All calculations of GHG emission reductions include aboveground live tree biomass.
Belowground Biomass	Included	Checked against Table 1 in methodology to confirm this pool is mandatory and has been included in PD. All calculations of GHG emission include belowground biomass.
Deadwood	Included	Checked against Table 1 in methodology to confirm this pool is mandatory and has been included in the PD. All calculations of GHG emissions include deadwood
Litter	Excluded	Checked against Table 1 in methodology to confirm this pool is excluded by VCS for AFOLU projects. It is conservative to omit
Soil	Excluded	Checked against Table 1 in methodology to confirm this pool is excluded by VCS for AFOLU projects. It is conservative to omit
Wood Products	Included	Checked against Table 1 in methodology to confirm this pool is mandatory and has been included in the PD. All calculations of GHG emissions include wood products
Vehicle Transport Emissions	Included	Checked against Table 2 in methodology to confirm this pool is optional and has been included in the PD. All calculations of GHG emissions include vehicle transport emissions.

Greenhouse Gas Sources and Sinks

The following show the steps taken to assess whether each GHG emission source or sink has been selected (or not selected) correctly in accordance with the methodology are described below:

- The audit team confirmed through the review of the methodology (Tables 1 and 2) that CO_2 emissions are accounted for through the accounting of carbon stock changes in the aboveground and belowground biomass, which are included (see above)
- The audit team confirmed through the review of Table 2 of the methodology that CO_2 emissions from the use of fertilizers and the burning of biomass area are not included.
- The audit team confirmed through review of Table 2 of the methodology that CH_4 and N_2O emission are not included.

3.4.4 Baseline Scenario

The identified baseline scenario is justified. The audit team's high-level assessment of the baseline scenario is justified in the table below:

Item Assessed	Assessment Process
Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence can be deemed reasonable	• The audit team conducted interviews with stakeholders, including staff and other community members. • The land use history has been established as timber harvest, which is still occurring in the areas surrounding the project area.
Documentary evidence used in determining the baseline scenario as relevant, and correctly quoted and interpreted in the project description	• Confirmed that the documentary evidence is relevant and interpreted correctly in the PD. All PD reporting requirements pertaining baseline scenario have been included
Relevant national and/or sectoral policies and circumstances have been considered and are listed in the project description	• Confirmed during interviews with local government agency (Paderborn district administration and Wunneberg district, Hochstift Regional Forestry Office) and an independent review of relevant laws in Germany, that the baseline scenario of continuation of the pre-project activities (timber harvesting) are in-line with relevant national and sectorial policies.
The procedures for identifying the baseline scenario have been correctly followed and the identified scenario reasonably represents what would have occurred in the absence of the project	• All procedures for identifying the baseline scenario have been correctly followed. • The audit team agrees that the procedures were appropriate and the baseline scenario reasonably represents forest management practices which would occur in the absence of the project.

Specific steps taken to validate the baseline scenario against each applicable requirement of the methodology are described in further detail below:

Sections	Compliance Assessment
Step 1: "Identify plausible alternative baseline scenario to the VCS project activity	• The audit team confirmed that the project identified the baseline and demonstrated that the project activity is additional by applying the VCS "Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities • The audit team conducted interviews on site with stakeholders to determine land use history and likely scenarios without the project activity. • The audit team confirmed that the historical practice of the project area was for timber harvesting.
Step 2: "Selection of a single baseline scenario for the project"	• The audit team assessed the plausible baseline scenarios identified by the project proponent and has found that the selection of the "Historical Baseline Scenario" is appropriate to this project, as the project proponent has at least 5-years of historical harvest level data history (reviewed historic Forest Management Plans), as required by the methodology. Additionally, Management Plans were reviewed to ensure that they cover all PAI's'

3.4.5 Additionality

RINA has confirmed that additionality is justified for the project. A description of steps taken to assess additionality is provided below.

Item Assessed	Assessment Process
Adherence to regulatory surplus requirements	• The historical practice, common practice, land acquisition for conversion to real estate development, or acquisition for conversion to conservation lands are all legal project scenario alternatives. The audit team confirmed that the project activity goes above and beyond the alternative scenarios with respect to CO_2 sequestration. • Project activities are not mandated by any law, statute, or other regulatory framework. The audit confirmed through interviews with the stakeholders, the PD review, supporting documentation, and on-site visit that all plausible baseline scenarios are in compliance with relevant legislation governing private forest land management. In Germany, the legal owner of a territory/ tract has the right to manage this area (in compliance with the existing laws) or to exercise the associated rights. This principle is regulated in the German Constitution (Grundgesetz) and in the

Item Assessed	Assessment Process
	German Civil Code (Bürgerliches Gesetzbuch). Additionally, the project adheres to the German Basic Law, the Federal Forest Act, and additional legislation identified in table 9 of the PD/MR. These laws form the basis of forest planning in Germany. The main goals of management planning are to plan and evaluate the sustainable use of forest resources, to control felling activities and to comply with sustainability. The baseline therefore met the legal test requirements of privately managed forest lands in Germany. The project has demonstrated regulatory surplus at validation and verification. • Reviewed protected areas pertaining to different IUCN categories as follows: Category Ia – strict nature reserve, Category Ib – wilderness area, Category II – national park, Category III – natural monument or feature, Category IV – habitat or species management area, Category V – protected landscape or seascape, Category VI – protected area with sustainable use of natural resources. • Review of the FMP for harvest authority and legal overlaps of the PAIs. Site review included the following site: https://www.protectedplanet.net/country/DEU. • Although Natura 2000 (IUCN Cat IV and V) areas overlap with the PAI the management plans created for forest lands are considered binding guidelines, not legal obligations. These sites are not a system of strict nature reserves from which human activities would be excluded. Current FMPs have been developed in consideration of Natura 2000 and IUCN category. Overlap does not prevent regulatory surplus.
The appropriateness of data and parameters used in financial calculations and sensitivity analyses, including those taken from feasibility study reports	• The audit team confirmed data and analysis presented in the NPV project cash flow analysis regarding the prevalence of forestry operations being much more profitable.
The suitability of the benchmark used for investment analysis	• The audit team confirmed the data and analysis presented in the project investment analysis.

Item Assessed	Assessment Process
The credibility of each barrier identified in the barrier analysis	• Interviews with project personnel and in-country experts confirmed that the proposed barriers are appropriate.
The appropriateness of the geographical region used in the common practice analysis	• The audit team confirms the appropriateness of the geographic region used in the common practice analysis.
Information regarding similar projects identified in the common practice analysis, including essential distinctions between similar projects and the proposed project	• The audit team accepts the data used as appropriate regarding the higher profitability and greater financial attractiveness of forestry operations with shorter payment periods to investors, as demonstrated in the NPV analysis
The reasonableness of assumptions made in the demonstration of additionality	• Interviews with project personnel, stakeholders, and the on-site visit confirmed the assumptions underlying the demonstration of additionality.

3.4.6 Quantification of GHG Emission Reductions and Removals

Quantification of Baseline Emissions

The quantification methods used for the calculation of baseline emissions during the project crediting period are as follows:

- Establishment of a valid starting inventory
- Establishment of baseline scenario area stratification
- Model selection and use

The following validation steps have been taken to validate the quantification methods described above:

- Independently verify the assumptions and data supporting the assertion that the project meets the conditions in Sections 8.1 and 8.1.1 of the methodology.

Steps taken to validate the data and parameters of the PD are as follows:

Parameter/Data	Value	Validation Steps
Forest Inventory	N/A	• The audit team confirmed through on-site remeasurement of inventory plots, interviews with the project team, review of the SOP of GHG monitoring, and supporting documentation that the forest inventory 1) covers the entire area; 2) was created <10 years ago; and, 3) the documents of methodology used to create, update and validate the starting inventory are available and based on sound scientific data.
APRJ,i	772 ha	• Confirmed the area of baseline strata as well as the total area of the analysis units reported in the PD in Section 4.1.2 through the independent recalculation of areas in ArcGIS from the spatial datasets provided that this area is accurately reported and utilized in the quantification of emissions reductions. • The audit team confirmed through interviews with the project team, the site visit, and the review of satellite imagery that the areas selected meet the methodology criteria and are: 1) defined as forest areas (vs non forest areas) 2) considered merchantable and economically feasible to harvest; and 3) they are not located within a legally restricted or protected area.
Model Selection	CBM-CFS3 Carbon Budget	The audit team confirmed through interviews with the project team and documentation review and modeling replication that the selection and use of the CBM-CFS3 meets the methodology requirements: 1. Is well established,

Parameter/Data	Value	Validation Steps
	Model of the Canadian Forest Sector	2. Generates values on an annual basis, 3. Includes a reasonable representation of mortality from stand-self thinning and natural disturbance agents that are regionally appropriate, 4. Outputs are expressed in carbon units (tC/ha), 5. Is well documented and expert reviewed, and 6. Parameterized, calibrated, and tested for the specific conditions of the Westphalen project.

The audit team concludes the following with respect to the PD:

- All relevant assumptions and data are listed in the PD, including their references and sources.
    - The audit team confirms that all relevant assumptions and data as well as their references and relevant sources are documented clearly in the PD.
    - The audit team confirms that all the pools described in section 3.3 of the joint PD/MR have been considered and appropriately modeled.
    - The audit team confirmed that a conservative and low-risk baseline has been considered for the project based on existing/ approved Forest Management Plan(s).
- All data and parameter values used in the PD are considered reasonable in the context of the project.
    - The audit team has concluded that the values presented in the PD are reasonable in the context of the project. This was concluded after review of the data and parameter values presented in the PD, as well as independent review of documentation and interviews with local officials, participants, and the project team.
- All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PD.
    - Outputs from the model have been assessed to ensure that the equations of the methodology were appropriately applied. Specifically, CBM modelling manages the carbon pools addressed in VM0012 equations 1 through to 17b. Confirmation was completed by comparing methodology requirements and the CBM-CSF3 User's Manual.
    - The audit team was able to confirm the data and parameter assumptions used in the estimates of baseline emissions, and confirms that the baseline emissions can be replicated using the input data provided for validation with the parameters, and processes described in the PD.

Quantification of Project Emissions

The quantification methods that were used for calculation of project emissions during the project crediting period are summarized as follows:

- Estimation of ex-ante carbon stock in tree biomass using the CBM-CFS3 with a series of stand attributes, model assumptions and growth curves developed for each analysis unit to estimate carbon ecosystem dynamics by carbon pool over time.
- Estimation of annual change in carbon stocks in living tree biomass, dead wood, and harvested wood products across the project activity area.
- Plot biomass measurements
- The application of the uncertainty discount factor for ex-ante estimation of carbon stocks in the carbon pools

A description of steps taken to validate the data and parameters used in the PD are as follows:

Data/Parameter	Value	Validation Steps
APRJ,i	772 ha	Confirmed the area of baseline strata and the total area of the analysis units reported in the PD in Section 4.1.2 through the independent recalculation of areas in ArcGIS from the spatial datasets provided that this area is accurately reported and utilized in the quantification of emissions reductions.
APSP,i	400 m^2	The audit team confirmed on-site the area of the permanent sampling plots is 400 m^2.
CF	0.5	The audit team confirmed that the carbon fraction used meets the methodology requirements set in Section 9.1 “Carbon Fraction IPCC default value = 0.5, if more relevant values are not available”.
BEF	Unitless	The audit team confirmed the biomass expansion factor is a parameter modeled in the CBM-CFS3 used for conversion of volume to biomass as a function of jurisdiction, ecozone and tree species.
Ri	Unitless	The audit team confirmed the root to shoot ratio is a modeling parameter in the CBM-CFS3 used to calculate belowground biomass as a function of tree species and tree size.
fBSL,NATURAL,i,t, **fPRJ,NATURAL,i,t**	(0 < fBSL,NATURALi, fPRJ,NATURAL,i,t< 1)	The audit team confirmed that the proportion of biomass that dies from natural

Data/Parameter	Value	Validation Steps
		mortality in the polygon, is a modeling parameter in the default settings of the CBM-CFS3.
fBSL,DAMAGE,i,t, fPRJ,DAMAGE,i,t	(0 < fBSL,DAMAGEi,t fPRJ,DAMAGE,i,t < 1)	The audit team confirmed that the proportion of additional biomass removed for road and landing construction in the polygon is applied as described in the management plan for road development.
fBSL,BLOWDOWN,i,t, fPRJ,BLOWDOWN,i,t	(0 < fBSL,BLOWDOWNi,t, fPRJ,BLOWDOWN,i,t< 1)	The audit team confirmed that the proportion of aboveground tree biomass subject to blowdown in the polygon, is modeled within the natural mortality factors calculated in the CBM-CFS3.
fBSL,BRANCH,i,t, fPRJ,BRANCH,i,t	(0 < fBSL,BRANCHi,t, fPRJ,BRANCH,i,t< 1)	The audit team confirmed that the proportion of aboveground tree biomass comprised of branches > 2 in diameter in the polygon, is modeled by the CBMCFS3.
fBSL,BUCKINGLOSS,i,t, fPRJ,BUCKINGLOSS,i,t	(0 < fBSL,BUCKINGLOSSi,t fPRJ,BUCKINGLOSS,i,t < 1)	The audit team confirmed the proportion of the log bole biomass left on site after assessing and/or merchandizing the log bole for quality in the polygon, is a modeling parameter in the default values of the CBM-CFS3.
fBSL,SNAGFALLDOWN,i,t, fPRJ,SNAGFALLDOWN,i,t	(0 < fBSL,SNAGFALLDOWNi, tfPRJ,SNAGFALLDOWN,i,t< 1)	The audit team confirmed that the proportion of snag biomass in the polygon that falls over, is modeled by the CBM-CFS3 depending on the species, dbh and age class.
fBSL,LWDECAY,i,t, fPRJ,LWDECAY,i,t	(0 < fBSL,LWDECAYi,t fPRJ,LWDECAY,i,t< 1)	The audit team confirmed that the annual proportion of loss of lying dead biomass due to decay, is modeled by the CBM-CFS3 using default values for Germany.
fBSL,SWDECAY,i,t, fPRJ,SWDECAY,i,t	(0 < fBSL,SWDECAYi,t fPRJ,SWDECAY,i,t< 1)	The audit team confirmed that the proportion of loss of snag biomass due to decay, is modeled by the CBM-CFS3 using default values for Germany.

Data/Parameter	Value	Validation Steps
fBSL,DBGDECAY,i,t, fPRJ,DBGDECAY,i,t	(0 < fBSL,DGBDECAYi,t fPRJ,DBGDECAY,i,t< 1)	The audit team confirmed that the proportion of loss of dead belowground biomass due to decay, is modeled by the CBM-CFS3 using default values for Germany
EM	-0.26%	The audit team independently recalculated and confirmed the calculation of the mean model error for the project in the calculation workbook provided.
EI	0.21%	The audit team independently recalculated and confirmed the calculation of the inventory error for the project in the calculation workbook provided.
EP	-0.05%	The audit team independently recalculated and confirmed the calculation of the estimated project error in the calculation workbook provided.
ERy,ERR,	1.5%	The audit team independently recalculated and confirmed the calculation of the uncertainty factor in the calculation workbook provided.
MLFy	20%	The audit team confirmed the market leakage factor was adequately determined. Further detail of the review is provided in section 3.1.14 above.

The audit team concludes the following with respect to the PD:

- All relevant assumptions and data are listed in the PD, including their references and sources.
    - The audit team confirms this through the recalculation, issuance/closer of findings, and other independent checks that the assumptions and data are appropriate.
- All data and parameter values used in the PD are considered reasonable in the context of the project.
    - The audit team confirms the data and parameter values are reasonable in context of the project.
    - The audit team confirms that all the pools described in section 3.3 of the joint PD/MR have been considered and appropriately modeled.

Quantification of Leakage

The quantification methods that will be used for calculation of leakage emissions during the project crediting period are summarized as follows:

- The audit team followed guidelines from the VM0012 LtPF methodology to confirm that no activity shifting leakage has occurred within the project proponent operating areas, and the management plans and/or land-use designations of all other lands operated by the project proponent have not materially changed because of the project activity. This was confirmed through a series of interviews with the project proponent personnel, the forest management plan review, on-sit visit inspections, as well as demonstration of trends in harvest volumes produced from forest management plan timber harvest reports of actual harvest volumes showing no deviation from historical trends. It must be acknowledged that the apparent increase in harvest levels presented in the PD/MR Section 7.4.1 is strictly related to legally required harvest of damaged timber and not correlated to project implementation.
- The audit team reviewed the leakage calculation process, as documented in Appendix 11 of the PD/MR with the project proponent and has determined that the conclusions of the leakage calculation are accurate. The rationale for the deviation is adequately supported by appropriate references and utilizes the combined analysis of several important market aspects.
- The review included an assessment of the cited data sources and analysis inputs. All data used in the individual assessments are based on publicly available and verifiable data from creditable sources.
- In conclusion the increased accuracy of the methodology deviation is confirmed.
- Through interviews with the project proponent, local stakeholders, web search, and the on-site visit evidence gathered, the audit team confirmed the identification of commodities and services: the assumption that the harvested logs are linked to the local log market. Moreover, it was confirmed that the project proponent does not own any manufacturing facilities and verified that there are no residents that reside directly within the project area.

In conclusion, the audit team confirms that the that the assumption of 20% leakage is reasonably assured.

The following steps have been taken to validate the quantification methods described above:

- All relevant assumptions and data are listed in the PD, Section 5.3.2, including their references and sources.
    - Relevant assumptions and the data and sources underlying them are listed in the PD.
- All data and parameter values used in the PD are considered reasonable in the context of the project.
    - The data and parameter values are considered reasonable.

Summary of Net GHG Emission Reductions or Removals

The quantification methods used for calculation of net GHG emission reductions or removals during the project crediting period are summarized as follows:

- Calculation of the net GHG emission reductions follow the required equations in the methodology and supporting modules.

The following steps were taken to validate the quantification methods described above:

- Independently calculate the net GHG emissions using the audit team's independent quantification of ex-ante baseline emissions and project emissions.
- Confirm that all parameters and datasets used for the net GHG emission reduction calculation in the workbooks are accurate and reasonable and align with those reported in the PD.
- Trace the project team's calculations through the GHG emissions reduction workbook and confirm that they were carried out per the methodology and modules.

Uncertainties Associated with the Calculation of Emissions

The quantification methods used for calculation of uncertainty during the project crediting period are summarized as follows:

- Assess the uncertainty factor (ERY,ERR) of the project scenario emissions according to the methodology requirements established in Section 8.5.3 to apply an uncertainty deduction. The project team calculated the uncertainty factor error following the equations 60a – 60f of the methodology.

The following steps have been taken to validate the quantification methods described above.

- Independently recalculate the inventory error (EI), and the mean model error (EM), to determine the average area-weighted difference between measured values in monitored plot observations and model-predicted values.
- Independently recalculate the total error for the project (EP).
- Traced the client's calculation of the uncertainty factor in the calculation workbook to confirm it was free of errors.

Documentation Used as the Basis for Assumptions and Sources of Data

Data and information supporting the ex-ante estimation of GHG emission reductions and/or removals for the crediting period were hypothetical, projected and/or historical in nature, as described below:

- The baseline land use and subsequent emissions were based on projected conditions using the CBM-CFS3 that simulate carbon forest ecosystem dynamics and merchantable timber volume, based on a series of stand attributes the characterize each analysis unit. Results were simulated with the use of a "MAKELIST" software tool that is used to format the inventory data for input into the CBM-CFS3 to initialize the dead organic matter pools.
- Ex-ante project scenario emissions for harvested wood products were based on forest management plan forecasted harvest volumes, that are then converted to Merchantable Carbon/ Wood Products pool using species specific wood densities.

Overall Conclusion:

The methodology and any referenced tools have been applied correctly to calculate baseline emissions, project emissions, leakage and ex-ante GHG emission reductions and removals (ERR) during the project crediting period.

Summary of Ex-ante net GHG Emissions

Year	Estimated baseline emissions or removals (tCO_2e)	Estimated project emissions or removals (tCO_2e)	Estimated leakage emissions (tCO_2e)	Estimated net GHG emission reductions or removals (tCO_2e)
01-January-2018 - 31-December-2018	-4,058	-978	0	3,080
01-January-2019 - 31-December-2019	-4,255	-4,000	0	255
01-January-2020 - 31-December-2020	-4,555	-1,909	0	2,646
01-January-2021 - 31-December-2021	-4,770	5,363	0	10,133
01-January-2022 - 31-December-2022	-5,028	-12,322	0	-7,294
01-January-2023 - 31-December-2023	-5,395	2,758	0	8,154
01-January-2024 - 31-December-2024	-5,902	3,137	0	9,039
01-January-2025 - 31-December-2025	-6,003	3,395	0	9,397
01-January-2026 - 31-December-2026	-6,177	7,294	0	13,471
01-January-2027 - 31-December-2027	-5,815	2,307	0	8,122
01-January-2028 - 31-December-2028	-5,924	2,393	0	8,318
01-January-2029 - 31-December-2029	-5,760	2,465	0	8,225
01-January-2030 - 31-December-2030	-5,626	2,482	0	8,108
01-January-2031 - 31-December-2031	-5,595	2,527	0	8,122
01-January-2032 - 31-December-2032	-5,091	2,520	0	7,611
01-January-2033 - 31-December-2033	-5,766	2,546	0	8,312
01-January-2034 - 31-December-2034	-5,636	2,539	0	8,174
01-January-2035 - 31-December-2035	-5,651	2,541	0	8,192
01-January-2036 - 31-December-2036	-5,939	2,549	0	8,488
01-January-2037 - 31-December-2037	-4,140	2,526	0	6,666
01-January-2038 - 31-December-2038	-5,743	2,467	0	8,209
01-January-2039 - 31-December-2039	-5,342	2,449	0	7,790
01-January-2040 - 31-December-2040	-4,882	2,414	0	7,296
01-January-2041 - 31-December-2041	-5,101	2,373	0	7,474
01-January-2042 - 31-December-2042	-3,900	2,250	0	6,150
01-January-2043 - 31-December-2043	-5,337	2,258	0	7,594
01-January-2044 - 31-December-2044	-2,792	2,228	0	5,021
01-January-2045 - 31-December-2045	-5,962	2,206	0	8,167

01-January-2046 - 31-December-2046	-6,194	2,219	0	8,413
01-January-2047 - 31-December-2047	-5,962	2,189	0	8,150
Total	-158,298	53,185	0	211,484

3.4.7 Methodology Deviations

A methodology deviation has been applied to the calculations for Market Leakage.

This alternative calculation method utilizing MARketz Tool is intended to achieve a higher level of accuracy as it relates to project details (scope and scale) for market leakage quantification compared to the options within the VM0012 methodology and meets the suitability criteria as set out in section 3.19 of the VCS-Standard-v4.4.

Further detail and steps taken in review of the deviation are outlined in VVR section 3.1.14 Leakage Management for AFOLU Projects. The deviation meets with the criteria and specifications for permitted methodology deviations.

The deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals and results in increased accuracy via the multi-aspect approach taken that is thoroughly supported by publicly available and creditable references.

As a conclusion the methodology deviations applied to the project are valid.

No other deviations were required in the implementation of the VM0012 methodology.

3.4.8 Monitoring Plan

The following parameters were included in the monitoring procedures:

Parameter	Unit	Description
APRJ,i	Hectares (ha)	Area of forest land in polygon, i
APSP,i	Hectares (ha)	Area of permanent sample plot (PSP) in polygon, i
DBHi,t	Centimeters (cm)	Diameter at breast height measured for each tree in the sample plot at time, t (cm)
Height i,t	Meters (m)	Tree height measured for each tree in the sample plots at time, t (m)
BAG i,t	t d.m. ha-1(d.m. = dry matter)	Aboveground live tree biomass in polygon, i, year, t, in the project case.
BTOTAL i,t	t d.m. ha-1(d.m. = dry matter)	Average total above and below ground live biomass in polygon, i, for year, t.

Parameter	Unit	Description
CLBi,t	t d.m. ha-1(d.m. = dry matter)	Total carbon storage in live tree biomass in polygon, i, year, t, tC in the project case.
CDOMi,t	t d.m. ha-1(d.m. = dry matter)	Total carbon storage in dead organic matter in polygon, i, year, t,
fPRJ,NATURAL,i,t	unitless (0 <fPRJ,NATURAL,i,t<1)	The proportion of biomass that dies from natural mortality in polygon, i, year, t, in the project case.
fPRJ,HARVEST,i,t	unitless (0 <fPRJ,HARVEST,i,t<1)	The proportion of biomass removed by harvesting from polygon, i, in year, t, in the project case.
fPRJ,DAMAGE,i,t	unitless (0 < fPRJ,DAMAGE,i,t < 1)	The proportion of biomass removed for road and landing construction in polygon, i, year, t, in the project case.
DOMSNAG,i,t	t d.m.ha-1(d.m. =dry matter)	Total mass of dead organic matter contained in standing dead wood in polygon, i, year, t in the project case.
DOMLDW,i,t	t d.m.ha-1(d.m. =dry matter)	Total mass of dead organic matter contained in lying dead wood in polygon, i, year, t in the project case.
VLDW,i,t	m3 ha-1	Total volume of dead organic matter contained in lying dead wood in polygon, i, year, t in the project case.
Li,t	Meters (m)	Calculation of lying dead wood: Length of the transect used to determine volume of lying dead wood in the sample plot, at time, t (25m). Completed by Project Developer.
Dn,i,t	Centimeters (cm)	Diameter of each piece n of dead wood along the transects in the sample plot at time, t). Used in calculation of lying dead wood.
N,t	Unitless	Calculation of dead organic material. Diameter of each piece n of dead wood along the transects in the sample plot at time, t)
EM Mean model project error	Percentage (%)	An estimate of the mean model error for the project

Parameter	Unit	Description
EI Inventory project Error	Percentage (%)	An estimate of the inventory sampling error for the project.
EP Estimated project error	Percentage (%)	An estimate of total project error calculated as the sum of the model and inventory error terms.
ERy,ERR Uncertainty Factor	Percentage (%)	The uncertainty factor calculated for year 'y'.
MLFy	Unitless	The market leakage factor determined for year 'y'.

A monitoring plan, consistent with the requirements of the methodology, is provided in Section 5.3 of the PD. The audit team completed the following to validate the suitability of the implemented monitoring system:

- The audit team confirmed during interviews that the project team has an appropriate level of skill and ability to carry out the monitoring tasks as described.
- Through review of the adaptive management plan and supporting documentation and section 5.3 of the PD, the audit team can confirm that monitoring procedures are described with an appropriate degree of certainty, but with some flexibility to allow for decisions to be made according to situations that may arise in the future. All monitoring procedures are appropriate to the stated task.
- The audit team confirmed that the scope, description, and general requirements of the monitoring plan are in conformance with the methodology and relevant monitoring modules.
- The audit team confirmed through interviews with the project team that the datasets, field survey, and data management approaches that the project proposes for monitoring of carbon stock changes are currently available and feasible and will continue to be available through the crediting period.
- Confirmed the ownership through the review of documentation and land title agreements that are in place between the project proponent and the German government and confirmed that the project proponent has the right to continue to implement, monitor and manage project activities.
- Through review of the PD and interviews with the project proponent the audit team confirmed that a robust QA/QC plan is in place to ensure quality data is used for monitoring parameters relevant to the project.

The audit team has concluded that the monitoring plan adheres to the requirements of the applied methodology and any referenced tools.

3.5 Non-Permanence Risk Analysis

The reported value for the overall risk rating, as determined based on analysis documented in the NPRR is 14%.

The audit team has reviewed the risk analysis against the requirements of the AFOLU Non-Permanence Risk Tool. The audit team concludes that the assignment of risk scores is appropriate and has been completed in conformance to the AFOLU Non-Permanence Risk Tool.

The non-permanence risk is assessed for one geographic area specified in the project description. All internal and external risks are similar throughout the 9 administrative districts and the 8 forest ecosystem types described in section 1.12 and 1.13 respectively.

A detailed review of the audit team's conclusions is as follows:

Risk	Assessment of Rationale, Assumptions and Justification	Conclusion Regarding Appropriateness of Risk Rating
(a)	Confirmed during interviews with project personnel that the species in the project area are 100% native to Germany, using locally sourced seed stock in reforestation and following typical forest regeneration practices in Germany.	Risk rating is appropriate
(b)	Confirmed during on-sit visit and interviews with project participants that the project area has controlled access with locked gates on road access points, and enforcement to prevent encroachment by outside actors is not necessary.	Risk rating is appropriate
(c)	The audit team interviewed key project personnel to confirm that the management team includes individuals with significant experience in all skills necessary to successfully undertake all project activities.	Risk rating is appropriate
(d)	Confirmed during interviews with the management team that most members of the management team reside within Germany.	Risk rating is appropriate
(e)	The audit team confirmed that the Implementation Partner and Project Developer, Zimmfor Management Services Ltd. has significant experience in project design and implementation, managing carbon projects through validation, verification, and issuance of GHG credits.	Risk rating is appropriate
(f)	The audit team reviewed Westphalen's forest management plan to confirm that it meets the requirements of the risk tool. The audit team also conducted interviews and found that the adaptive forest	Risk rating is appropriate

Risk	Assessment of Rationale, Assumptions and Justification	Conclusion Regarding Appropriateness of Risk Rating
	management plan has been utilized to improve the project expansion and implementation.	

3.5.1 Internal Risk – Financial Viability

Risk	Assessment of Rationale, Assumptions, and Justification	Conclusion Regarding Appropriateness of Risk Rating
(a-d)	The audit team confirmed through interviews with the project team, additional evidence shown about forest management plan timber harvest rates, and the review of the NPV cash flow analysis demonstrating the cash inflow and outflow of the Westphalen project and verified that the projected breakeven point is adequately assessed by the project proponent.	Risk rating is appropriate
(e-h)	The audit team confirmed through interviews with the project team, review of the NPV cash flow analysis and additional evidence shown on-site that they have secured about 80% of funding needed to cover total cash out before the project reaches its breakeven point.	Risk rating is appropriate
(i)	The audit team confirmed through interviews with the project team, review of the NPV cash flow analysis and additional evidence shown that project has available financial resources of at least 50% of the total cash out before the project reaches breakeven.	Risk rating is appropriate

3.5.2 Internal Risk – Opportunity Cost

Risk	Assessment of Rationale, Assumptions, and Justification	Conclusion Regarding Appropriateness of Risk Rating
(a-f)	NPV analysis of the most profitable alternative was conducted for timber harvesting activities, the pre-project land use. The analysis includes relevant costs and returns using data from timber harvest models used by Westphalen. The NPV analysis of the Westphalen project activities include implementation costs, project revenues from harvesting, and costs and revenues associated with the generation and sale of carbon credits using conservative carbon pricing assumptions. The audit team has confirmed that the NPV analysis shows that the project activity is more profitable than the project scenario	Risk rating is appropriate

Risk	Assessment of Rationale, Assumptions, and Justification	Conclusion Regarding Appropriateness of Risk Rating
(g-i)	The project does not meet any of the mitigation eligibility criteria.	Risk rating is appropriate

3.5.3 Internal Risk – Project Longevity

Risk	Assessment of Rationale, Assumptions, and Justification	Conclusion Regarding Appropriateness of Risk Rating
(a)	The audit team confirmed through interviews with the project personnel that the project proponent does not have a legal agreement or requirement to protect the area to continue the management practice and that the project period is set for a 30-year duration.	Risk rating is appropriate

3.5.4 External Risk – Land Tenure and Resource Access/Impacts

Risk	Assessment of Rationale, Assumptions, and Justification	Conclusion Regarding Appropriateness of Risk Rating
(a)	The audit team verified the project's ownership by reviewing the land title agreements granted by the German government. The audit team completed a risk-based sample approach and selected a sample of each of the polygons of the project area and compared the listed parcel ID to those reported within ownership documents and the PD. The audit team confirmed that the sample polygons are owned by the project proponent.	Risk rating is appropriate
(b-g)	N/A	Risk rating is appropriate

3.5.5 External Risk – Community Engagement

Risk	Assessment of Rationale, Assumptions, and Justification	Conclusion Regarding Appropriateness of Risk Rating
(a)	Interviews with the project personnel, local stakeholders, and the site visit confirmed that local households are not reliant on the project area.	Risk rating is appropriate
(b-g)	N/A	Risk rating is appropriate

3.5.6 External Risk – Political Risk

Risk	Assessment of Rationale, Assumptions, and Justification	Conclusion Regarding Appropriateness of Risk Rating
(a)	The audit team downloaded data from the World Bank Governance Indicators and Confirmed the project's 5 year average score, is higher than 0.82.	Risk rating is appropriate
(f)	Germany has an established national FSC of PEFC standards body. The project meets the mitigation eligibility criteria.	Risk rating is appropriate

3.5.7 Natural Risk

Risk	Assessment of Rationale, Assumptions, and Justification	Conclusion Regarding Appropriateness of Risk Rating
Fire		
(a)	The audit team confirmed through interviews with the project personnel, local stakeholders, the site visit, and supporting documentation in the forest management plan and supporting documentation that wildfires do not play a significant role in the natural disturbance. Germany and that Westphalen has efficient fire prevention and response measures in place. Assessing the risk as a single geographic area is reasonable.	Risk rating is appropriate
Pest and Disease Outbreak		
(b)	The audit team confirmed through interviews with the project personnel, local stakeholders, the site visit, and supporting documentation in the forest management plan and supporting documentation that the risk of	Risk rating is appropriate

Risk	Assessment of Rationale, Assumptions, and Justification	Conclusion Regarding Appropriateness of Risk Rating
	insect & disease hazard is low. Much of the risk is mitigated via project design (PAI selection criteria) in retaining more resilient, stable stands. The audit team confirmed that Westphalen has prevention measures in place for this risk and that the project proponent has proven history of effectively containing this risk. Assessing the risk as a single geographic area is reasonable.	
Extreme Weather		
(c)	The audit team confirmed through interviews with the project personnel, local stakeholders, the site visit, and supporting documentation in the adaptive management plan and supporting documentation that the risk of extreme weather is not significant.	Risk rating is appropriate
Geological Risk		
(d)	The audit team confirmed through interviews with the project personnel, local stakeholders, and the site visit that the risk due to geological factors is insignificant.	Risk rating is appropriate
(e-g)	N/A	Risk rating is appropriate

4 VERIFICATION FINDINGS

4.1 Accuracy of GHG Emission Reduction and Removal Calculations

The GHG emission reductions and/or removals for the verification period have been quantified in accordance with the project description and with the applied methodology VM0012.

The table below identifies the data and parameters used to calculate the GHG emission reductions and/or removals for this verification period and provides a description of the steps taken to assess each of them.

Parameter	Assessment of Accuracy of GHG Emission Reduction/Removals	Assessment of Methods/Formulae as per Project Description	Conclusion of Appropriateness
APRJ,i	The audit team independently recalculated project area in ArcGIS from spatial datasets provided and confirmed the total project area and total area of each analysis unit reported in the PD.	Methods have been followed adequately	The values are appropriate
APSP,i,	The audit team confirmed the area of the permanent sampling plots is 400 m2 during onsite visits.	Methods have been followed adequately	The values are appropriate
DBHi,t	The audit team confirmed on-site the measures of diameter at breast height (DBH) taken on the permanent plots.	Methods have been followed adequately	The values are appropriate
Height, i,t	The audit team confirmed on-site the tree height measurements taken on the permanent plots	Methods have been followed adequately	The values are appropriate
BAG i,t	The audit team confirmed the estimates of aboveground live	Methods have been followed adequately	The values are appropriate

Parameter	Assessment of Accuracy of GHG Emission Reduction/Removals	Assessment of Methods/Formulae as per Project Description	Conclusion of Appropriateness
	tree biomass are consistent with the VM0012 methodology.		
BBG i,t	The audit team confirmed the estimates of belowground live tree biomass are consistent with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate
BTOTAL i,t	The audit team confirmed this is a parameter modeled in the CBMCFS3.	Methods have been followed adequately	The values are appropriate
CLBi,t	The audit team independently recalculated and confirmed the carbon storage in live tree biomass estimated in the calculation workbooks provided.	Methods have been followed adequately	The values are appropriate
CDOMi,t	The audit team independently recalculated and confirmed the carbon storage in dead organic matter estimated in the calculation workbooks provided.	Methods have been followed adequately	The values are appropriate

Parameter	Assessment of Accuracy of GHG Emission Reduction/Removals	Assessment of Methods/Formulae as per Project Description	Conclusion of Appropriateness
PRJ,NATURAL,i,t	The audit team confirmed the estimates of the proportion of biomass that dies from natural mortality, following a methodology consistent with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate
fPRJ,HARVEST,i,t	The audit team confirmed that the proportion of biomass removed by harvesting from polygon is modeled in the CBM-CFS3.	Methods have been followed adequately	The values are appropriate
fPRJ,DAMAGE,i,t	The audit team confirmed that estimates of the proportion of biomass removed for road and landing construction have not changed as this is the first monitoring period.	Methods have been followed adequately	The values are appropriate
DOMSNAG,i,t	The audit team confirmed that estimates of dead organic matter in standing dead wood, followed a methodology well	Methods have been followed adequately	The values are appropriate

Parameter	Assessment of Accuracy of GHG Emission Reduction/Removals	Assessment of Methods/Formulae as per Project Description	Conclusion of Appropriateness
	consistent with the VM0012 methodology.		
DOMLDW,i,t	The audit team confirmed that estimates of total carbon in dead organic matter contained in lying dead wood, followed a methodology consistent with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate
VLDW,i,t	The audit team confirmed that estimates of total volume of dead organic matter contained in lying dead wood, followed a methodology consistent with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate
Li,t	The audit team confirmed on-site that the transect length used to determine volume of lying dead wood in the sample plot totals 100m	Methods have been followed adequately	The values are appropriate
Dn,i,t	The audit team confirmed on-site	Methods have been followed adequately	The values are appropriate

Parameter	Assessment of Accuracy of GHG Emission Reduction/Removals	Assessment of Methods/Formulae as per Project Description	Conclusion of Appropriateness	
	the measurements of the diameter of each piece of dead wood along the transects in the sample plot.			
N,t	The audit team confirmed that the calculation of dead organic material, followed a methodology consistent with the VM0012 methodology.	Methods have been followed adequately	The values are appropriate	
$\Delta C_{HWP,t}$	The audit team confirmed that the calculation of annual change in harvested carbon that remains in storage after conversion to wood products and annual change in fossil fuel emissions from harvesting (logging and log transport) and processing of the various wood products		Methods have been followed adequately	The values are appropriate
EM/ Mean model error for the project	The audit team independently recalculated and confirmed the calculation of the mean model error for the project in the calculation workbook provided.	Methods have been followed adequately	The values are appropriate	
EI/ Inventory error for the project	The audit team independently recalculated and confirmed the	Methods have been followed adequately	The values are appropriate	

Parameter	Assessment of Accuracy of GHG Emission Reduction/Removals	Assessment of Methods/Formulae as per Project Description	Conclusion of Appropriateness
	calculation of the inventory error for the project in the calculation workbook provided.		
EP/ Estimated project error	The audit team independently recalculated and confirmed the calculation of the estimated project error in the calculation workbook provided.	Methods have been followed adequately	The values are appropriate
ERy,ERR/Uncertainty factor	The audit team independently recalculated and confirmed the calculation of the uncertainty factor in the calculation workbook provided.	Methods have been followed adequately	The values are appropriate
MLFy	The audit team confirmed the market leakage factor was adequately determined.	A methodology deviation was utilized and meets the suitability criteria as set out in section 3.19 of the VCS-Standard-v4. 4	The values are appropriate
VCUy (Eq 59)	The audit team independently recalculated and confirmed the calculations associated with	Methods have been followed adequately	The values are appropriate

Parameter	Assessment of Accuracy of GHG Emission Reduction/Removals	Assessment of Methods/Formulae as per Project Description	Conclusion of Appropriateness
	Equation 59 through the confirmation of the above parameters and the GHG Estimate spreadsheet (ref 8)		

No transposition errors between data sets were noted during the verification. All calculation spreadsheets were checked for data discrepancies, and none were noted (i.e., input data sources cross referenced with origin model data).

The audit team has determined that the estimates of the GHG emission reductions and removals have been quantified correctly in accordance to the monitoring plan and applied methodology for this verification period.

4.2 Quality of Evidence to Determine GHG Emission Reductions and Removals

Based on the review of the PD, standard operating procedures, calculation workbooks, supporting documentation, on-site visit, and interviews with the project personnel and local stakeholders, the audit team has determined that the evidence used to determine the GHG reductions and removals for the verification period was of sufficient quantity and appropriate quality. The table below identifies the evidence used to determine the GHG emission reductions and removals, and describes the steps taken to assess the sufficiency of quantity, and appropriateness of quality:

Category	Reliability of Evidence Used for GHG Emission Reductions or Removals	Auditor Description of Data Generation and Aggregation
Calculation Workbooks	The main workbook originated from Project Personnel and was determined to be of high quality and reliability; quantity of workbooks provided to audit team was sufficient	The audit team traced, recalculated and confirmed the data contained in the monitoring report from the emission reductions calculation workbook back to their respective sources.
Field Protocols	The field protocols were reviewed by the audit team, who confirmed that they are based on sound scientific data using best practices and are capable	The audit team reviewed the field protocols and confirmed that the QA/QC procedures

Category	Reliability of Evidence Used for GHG Emission Reductions or Removals	Auditor Description of Data Generation and Aggregation
	of capturing changes in carbon stock in conformance with the methodology.	provide checks and balances to ensure high quality data collection during the site visit.
Geospatial Data	All stratification information in workbooks and other spatial data was provided to the audit team, who confirmed that the data contained all the necessary information to recreate the processes employed by the project and found the calculations consistent with values stated in the project description, monitoring report, and applied calculations.	The audit team recalculated and confirmed the total project area, as well as the total area of each individual stratum level analysis unit reported in the workbooks.

5 VALIDATION AND VERIFICATION CONCLUSION

Based on the review of the PD/MR, Standard Operating Procedures, calculation workbooks, supporting documentation, on-site visit, and interviews with the project personnel and local stakeholders, RINA concludes, with no qualifications or limitations, that the Westphalen Forest Carbon Project complies with the VCS validation and verification criteria for projects and their GHG emission reductions or removals set out in VCS Version 4.4 and the selected methodology (VM0012, v1.2).

Verification period: From 01-January-2018 to 31-December-2021

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

Year	Baseline emissions or removals (tCO_2e)	Project emissions or removals (tCO_2e)	Leakage emissions (tCO_2e)	Net GHG emission reductions / removals (tCO_2e)	Buffer pool allocation	VCUs eligible for issuance
January 1, 2018 – December 31, 2018	-4,058	-978	616	3,080	345	2,082
January 1, 2019 – December 31, 2019	-4,255	-4,000	51	255	29	173
January 1, 2020 – December 31, 2020	-4,555	-1,909	529	2,646	296	1,789
January 1, 2021 – December 31, 2021	-4,770	5,363	2,027	10,133	1,135	6,850
Total	-17,638	-1,524	3,223	16,114	1,805	10,893

Net change in carbon stocks: 16,114 tCO_2e Non-permanence risk rating: 14%.

Total number of buffer credits to be deposited into the AFOLU pooled buffer account: 1,805 credits.

The audit team concludes that assumptions, limitations, and methods that support the claim about the outcome of future activities are reasonable. The project is likely to achieve estimated quantity of GHG emission reduction or removals, however, the actual results may vary since the estimates are based on

assumptions that are subject to change. At this time, there is no percentage difference or justification for the difference.

In concluding this validation and verification there is a level of assurance on the quantity of GHG emission reductions or removals in tCO2e have been achieved during the verification period.

The audit team hereby declares that the validation and/or verification of the GHG statement has been conducted in accordance with ISO standard 14064-3:2019 'Specification with guidance for the verification and validation of greenhouse gas statements'.

APPENDIX A: ABBREVIATIONS

Abbreviations	Full text
AU	*Analysing Units*
AIDB	*Archive Index Database*
AFOLU	*Agriculture, Forest and Other Land Use*
BE	*Baseline Emission*
CAR	*Corrective Action Requests*
CBM	*Carbon Budget Model*
CDM	*Clean Development Mechanism*
CERs	*Carbon Emission Reductions*
CFS	*Canadian Forest Sector*
CO_2	*Carbon Dioxide*
DOE	*Designated Operational Entity*
DOM	*Dead Organic Matter*
EB	*Executive Body*
ER	*Emission Reduction*
FAO	*Food Agriculture Organization*
FAR	*Forward Action Request*
GHG	*Greenhouse Gases*
GIS	*Geographical Information System*
IFM	*Improved Forest Management*
IPCC	*Intergovernmental Panel for Climate Change*
IRR	*Internal Rate of Return*
LLF	*Long lived Products*
LULUCF	*Land Use, Land Use Change and Forestry*
LtPF	*Logged to Protect Forest*

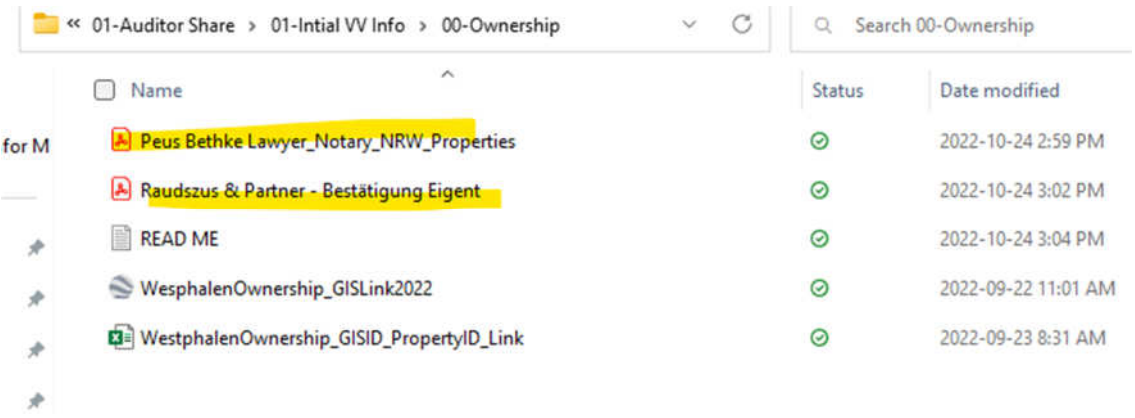
Abbreviations	Full text
MLF	*Medium Lived Products*
MR	*Monitoring Report*
NFI	*National Forest Inventories*
NPV	*Net Present Value*
PAI	*Product Activity Instances*
PD	*Project Description*
PE	*Project Emission*
PP	*Project Proponent*
PSP	*Permanent Sampling Plots*
SLF	*Small Lived Products*
SS	*Sectoral Scope*
TA	*Technical Area*
UNECE	*United Nations Economic Commission for Europe*
UTM	*Universal Transverse Mercator*
WRC	*Wetlands Restoration Conservation*

APPENDIX B: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUEST

Table 1. Remaining Forward Action Request (FAR) from validation and/or previous verification

FAR ID	01	Section no.	5	Date: 20/02/2023
Description of FAR				
PP is requested to provide the details of leakage management and any harvesting activity details in the next verification as applicable.				
Project participant response				Date: DD/MM/YYYY
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY

Table 2. CL (Clarifications) from this verification

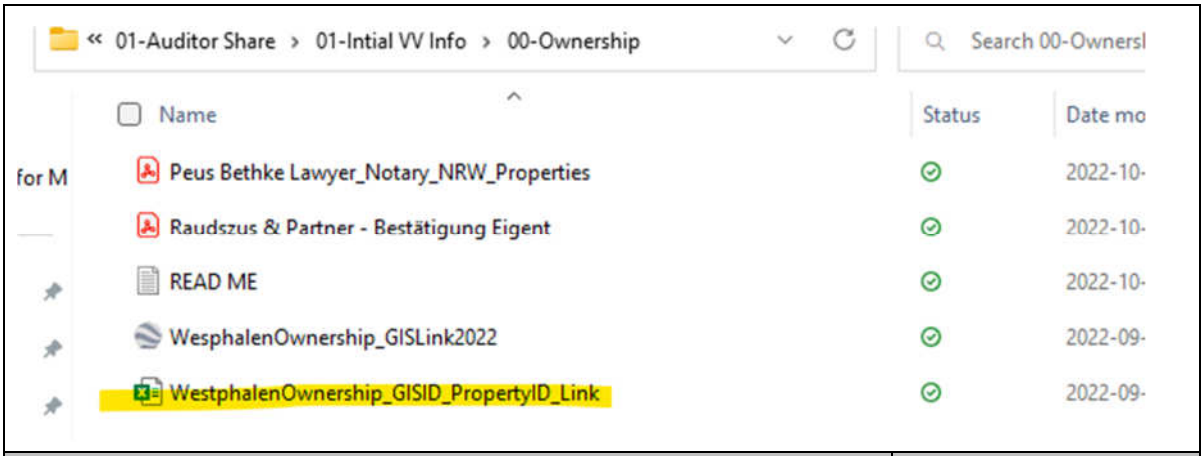
CL ID	01	Section no.	1.7	Date: 19/12/2022
Description of CR				
PP is requested to provide the notarized Land Charge Registry document for validation purpose.				
Project participant response				Date: 30/01/2023
PP has provided notarized documents to the VVB. Refer to the 01-Auditor Share MS SharePoint location.				
Documentation provided by project participant				
Document provided below by PP:  				
DOE assessment				Date: 10/02/2023
PP has provided the Notarized Land Charge Registry document and the same is found to be correct. Hence the CL is closed.				

CL ID	02	Section no.	1.8	Date: 19/12/2022
Description of CR				
PP is requested to clarify and elaborate the project start date in section 1.8 of the Joint PD & MR as per section 3.7 of the VCS Standard v4.2. and provide supporting evidences for the same.				
Project participant response				Date: 30/01/2023
PP references copy of Forest Management Plan and Inventory, July 1, 2015, showing project activities were approved prior to start date of project. Project start date specifically is Jan. 1, 2018. PP also provided documentation of all activities that have taken place since start date (and				

validated/verified by the VVB during the on-site visit). The VVB validated/verified that harvesting has been curtailed in the project area as of January 1, 2018.
Documentation provided by project participant
The approved Forest Management Plan (July 2015). Refer to the 01-Auditor Share MS SharePoint location. Westphalen Activity Shifting supporting data MS Excel spreadsheet. Refer to the 01-Auditor Share MS SharePoint location. PD/MR v 2.1, section 1.8 has been revised to include reference to the Forest Management Plan and the legal entitlement to harvest.

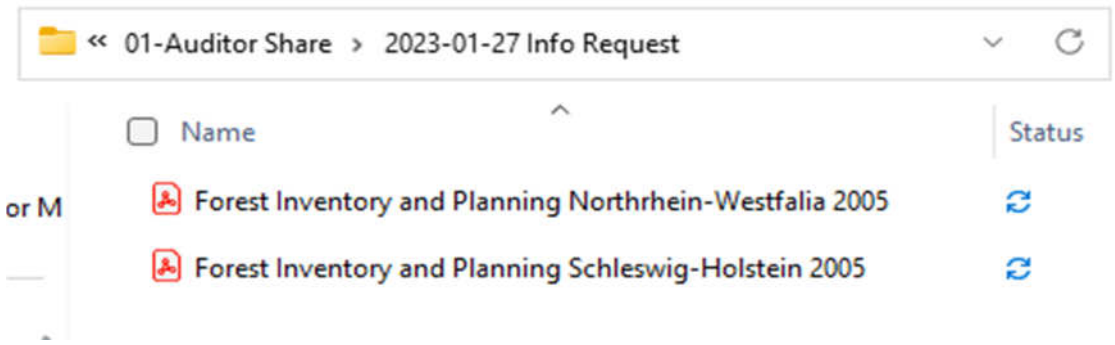
DOE assessment	**Date:** 10/02/2023
PP has provided the Forest Management Plan since July 2015 and same is found to be appropriate. Also, the project activities defined in the VCS PD found to be correct and the same was verified during the on-site assessment. The project start date is found to be appropriate and is in accordance with as per section 3.7 of the VCS Standard v4.2. Hence this CL is closed.	

CL ID	03	**Section no.**	1.12	**Date:** 14/12/2022
Description of CR				
PP is requested to mention the geographical co-ordinates of blocks in the project activity in section 1.12 of the VCS PD. Also, the references of the maps/excel spreadsheet as annexes.				
Project participant response				**Date:** 01/02/2023
PD/MR v2.1, section 1.12, table 6 notes the geodetic coordinates of project area, refences maps (section 3.5) and refers to the provided KML (as required in VCS Standard 4.2, section 3.10.1. To support validation/verification GIS coordinates were provided to the VVB and verified/validated during the on-site visit.				
Documentation provided by project participant				
Reference to Table #3 as example and list specific document included in server and in PDD Section 1.12				



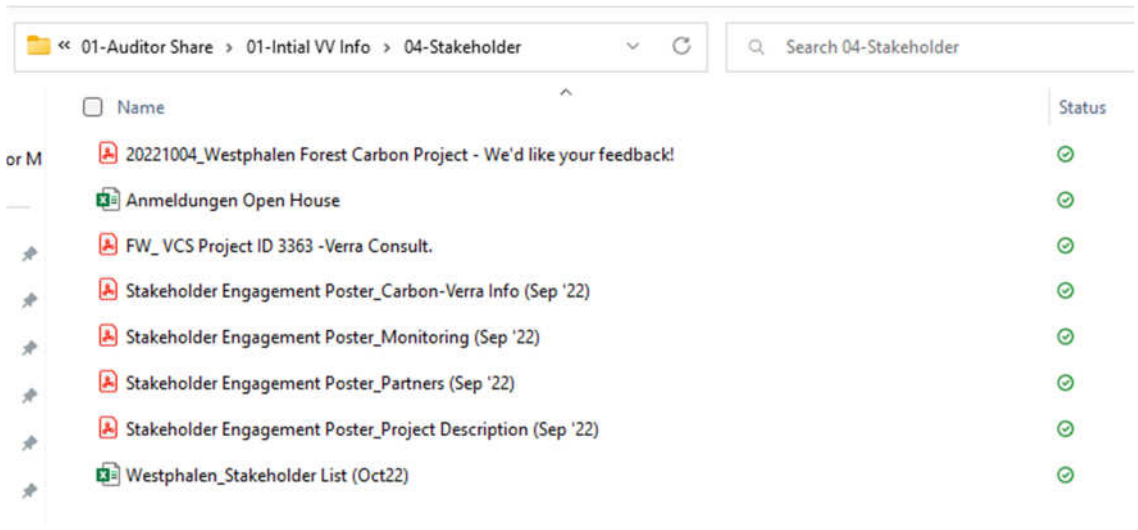
DOE assessment	Date: 10/02/2023
PP has provided the geographical co-ordinates section 1.12 of the VCS PD and also the detailed co-ordinates list in excel spreadsheet. The co-ordinates were verified during the on-site assessment with the GPS instrument and it was found to be correct. Also, the KML file has been provided by the PP for the geographical boundary of the project activity. Hence the CL is closed.	

CL ID	04	Section no.	1.13	Date: 14/01/2023
Description of CR				
PP is requested to confirm that land within the project area has not been cleared of native ecosystems within 10-years of the project start date and provide the substantial evidence for the same.				
Project participant response				Date: 01/02/2023
As confirmed during field validation/verification the activity instance contains only mature forests (+10 years); as demonstrated within prior Forest Management Plan documentation (including the supporting inventory) forest management activities are prescribed.				
Documentation provided by project participant				
Evidence of the previously approved Forest Management Plan and inventory (dated July 1, 2005) has been provided. Refer to the 01-Auditor Share MS SharePoint location.				



DOE assessment	Date: 10/02/2023
PP has provided the management plan of the forest and inventory since July 2005, and this was verified and assessed during the on-site assessment and found to be correct. Hence the CL is closed.	

CL ID	05	Section no.	2.2	Date: 14/01/2023
Description of CR				
PP is requested to provide the documented evidence for the local stakeholder consultation:- - *Electronic documents delivered by emails* - *Documents delivered in person (scanned copy)* - *Attendance and file record as per the description in section 2.2 of the VCS PD*				
Project participant response				**Date:** 01/02/2023
Email sent to the stakeholder list on October 4, 2022, with comments to be submitted to https://www.zimmfor.com/carbon.html Email and attendance list for the open houses along with written comments received as part of the consultation process provided to VVB. Refer to the 01-Auditor Share MS SharePoint location.				
Documentation provided by project participant				
• Westphalen_Stakeholder List (Oct22).xls (project specific list of potential stakeholder groups) • Anmeldungen Open House.xls (attendance list for the open house along with names and dates) • 20221004_Westphalen Project – We'd like your feedback!.pdf (original email request made to stakeholders)				



DOE assessment	Date: 10/02/2023
PP has provided the stakeholders consultation details (emails, documents delivered in person and attendance of the stakeholder's meeting. The same is as per the details mentioned in the VCS PD. Hence the CL is closed.	

CL ID	06	Section no.	2.3	Date: 14/01/2023
Description of CR				
PP is requested to clarify and elaborate why the Environmental Impact Assessment was not required in section 2.3 of the PD.				
Project participant response				**Date:** 30/01/2023
Project proponents shall identify potential negative environmental and socio-economic impacts and shall take steps to mitigate them. Refer to the Zimmfor GHG – Stakeholder Consultation + Engagement SOP for details relating to the process used to determine the need for an Environmental Impact Assessment. The SOP is intended to direct processes that will fulfil requirements listed under Section 3.17 – Safeguards of the VCS Standard (v4.4). Specifics are detailed within the section entitled 'Risks to Local Stakeholders' (pg. 7). In conclusion all low risks, no mitigation measures will be developed.				
Documentation provided by project participant				
• SOP - Zimmfor Stakeholder Consultation + Engagement (Oct '22); Refer to folder 01 Auditor Share/2023-01-17 Info Request				
DOE assessment				**Date:** 10/02/2023

PP has done the assessment as per VCS guidelines and same is found to be appropriate. There are no negative environmental impacts as such there is conservation of forests. Also during the on-site audit, it was assessed that there is no environmental and socio-economic impacts. Hence the CL is closed.

CL ID	07	Section no.	1.18	Date: 14/01/2023

Description of CR

PP is requested to clarify and provide the documented evidence that no compensatory harvesting has been initiated to account for lost timber volumes incurred during the carbon project.

Project participant response — **Date:** 30/01/2023

Refer to leakage monitoring plan provided within PDD Section 5.3.1 and the explanation of leakage in PDD Section 6.4

The PP holds Management Plans for 6815ha of which 772ha are allocated to the carbon project. During the verification period, Germany and European forests in general experienced significant calamity events in the form of beetle and insect attack on spruce leading stands.

It is acknowledged that during the verification period harvest levels across all PP lands may have exceeded levels indicated in the Management Plan, however this harvest was due to calamity events (forest health) that were associated with Spruce leading stands and were legally required to be harvested. This additional volume is not considered leakage.

Activity Shifting leakage is further addressed by focusing on species/ product groups. As denoted by the Analysis Unit breakdown in Table 14 greater than 95% of the project is attributed to hardwood stands. During the validation period harvest volume decreased for hardwoods (beech, oak types).

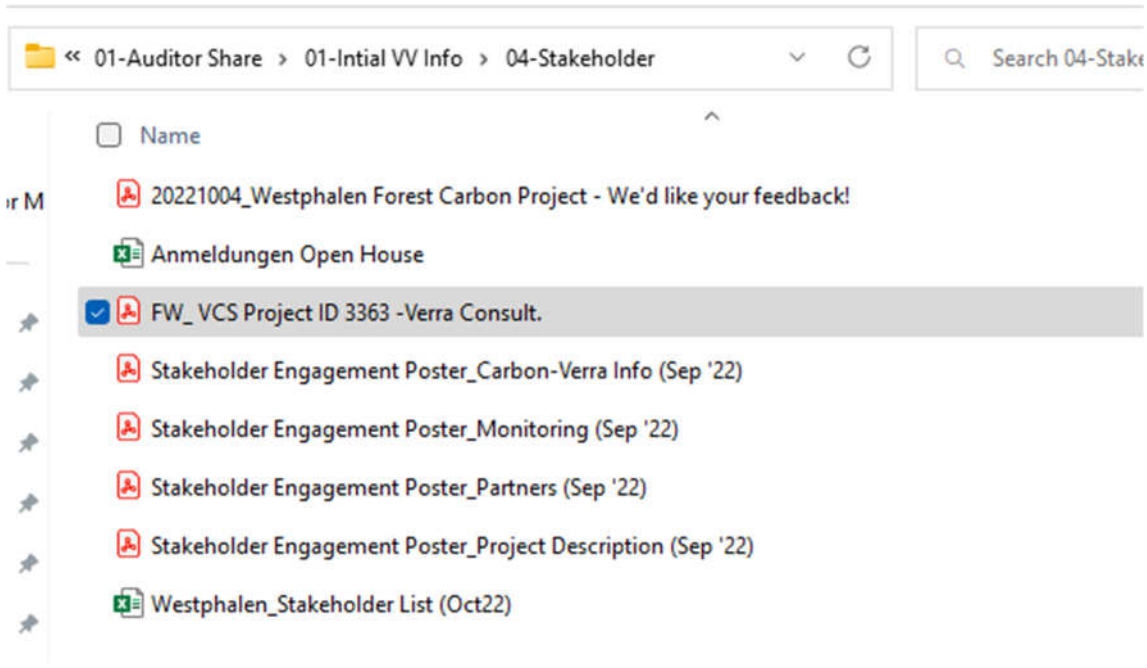
Year	Harvest Volume
2016/17	41,259
2017/18	30,890
2018/19	28,903
2019/20	19,896
2020/21	20,821
2021/22	353
Grand Total	**142,123**

Documentation provided by project participant

Westphalen Activity Leakage (Dec'22)-RINA.xls (shows details of all harvest across all species group for the last 5 years).

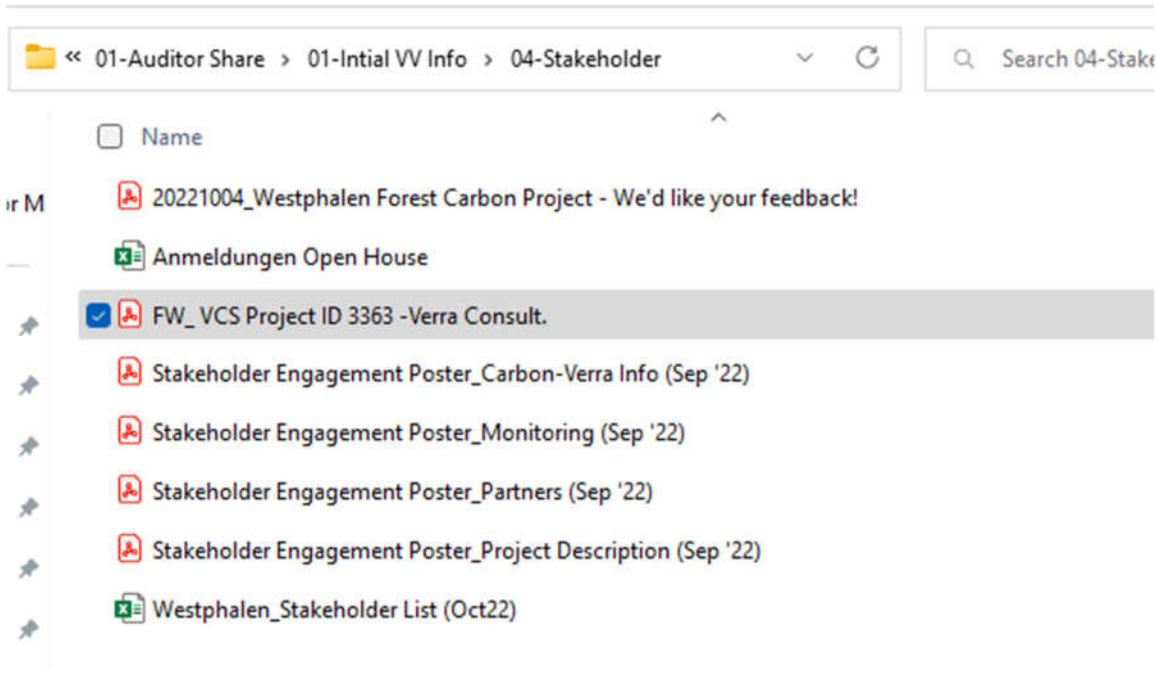
All-time high of timber logged in 2021 - German Federal Statistical Office (destatis.de) – reference to historic cuts as result of beetle damaged timber
DOE assessment | **Date:** 10/02/2023
PP has provided the harvest volume of all species for the last five years data of timber logged in 2021 by German Federal Statistical office. This was verified during on-site assessment and same is found to be correct. Hence this CL is closed.

CL ID	08	**Section no.**	2.2	**Date:** 27/01/2023
Description of CR				
PP is requested to clarify about the public comment during the global stakeholder consultation period 28 July 2022 to 27 August 2022: Stakeholder 1: How was the area used before the project started? Was it an area that was subject to intensive forest management before? What happens to the area after the end of the crediting period of 30 years, is it guaranteed that the area remains declared as a conservation area? Since which year has the area been taken out of use? When was the last harvest, timber extraction?				
Project participant response				**Date:** 30/01/2023
PP has taken due account of the comment had has determined the significance/relevance of the comment to the project design by way of the August 30, 2022 email.				
Documentation provided by project participant				
Refer to August 30, 2022 email. Refer to the 01-Auditor Share MS SharePoint location.				



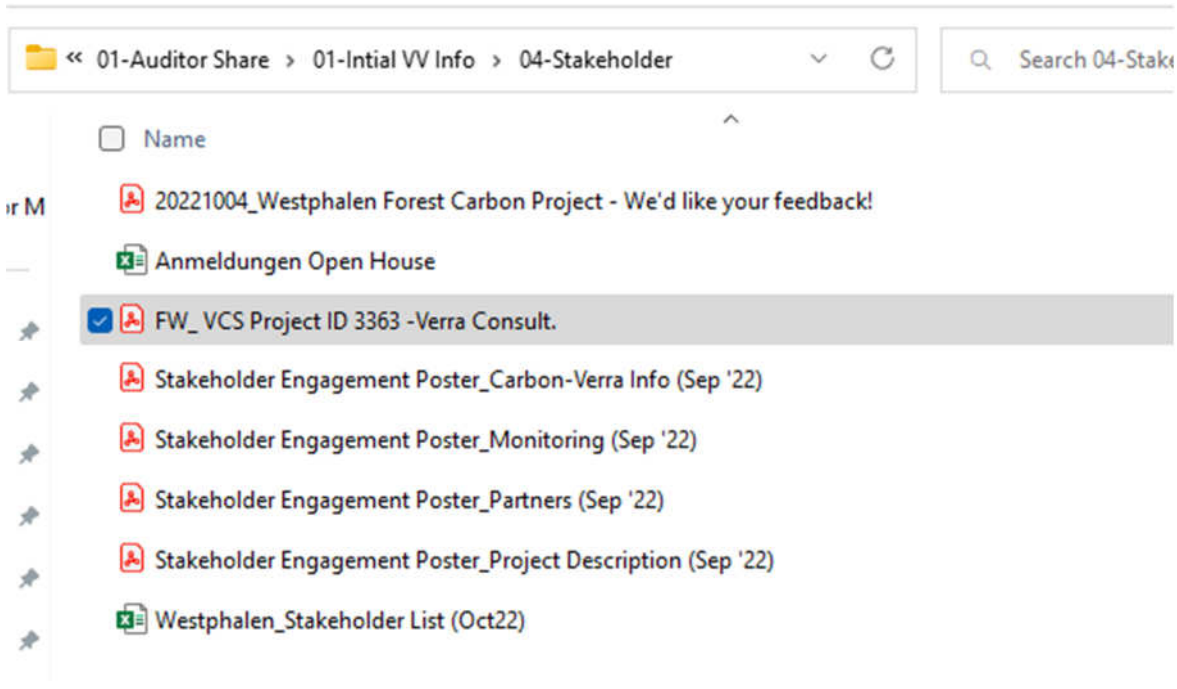
DOE assessment	Date: 10/02/2023
PP has provided the summary and response to comments raised during global stakeholders consultation period of 30 days. The same was discussed with client and found the responses to be satisfactory. Hence the CL is closed.	

CL ID	09	Section no.	2.2	Date: 27/01/2023
Description of CR				
PP is requested to clarify about the public comment during the global stakeholder consultation period 28 July 2022 to 27 August 2022: Stakeholder 2: It should be shown and ensured by the project developer that it is not an area that was previously subject to intensive forestry management, which receives interim financing for 30 years through the voluntary CO2 market, and then returns to its original forestry use through the designation as a conservation area and after the end of the crediting period.				
Project participant response				**Date:** 30/01/2023
PP has taken due account of the comment had has determined the significance/relevance of the comment to the project design by way of the August 30, 2022 email.				
Documentation provided by project participant				
Refer to August 30, 2022 email. Refer to the 01-Auditor Share MS SharePoint location.				



DOE assessment	Date: 10/02/2023
PP has provided the summary and response to comments raised during global stakeholders consultation period of 30 days. The same was discussed with client and found the responses to be satisfactory. Hence the CL is closed.	

CL ID	10	Section no.	2.2	Date: 27/01/2023
Description of CR				
PP is requested to clarify about the public comment during the global stakeholder consultation period 28 July 2022 to 27 August 2022: Stakeholder 3: The project developer refers to carbon emission offsets in 1.1 Summary Description of the Project. It is of public interest to understand VERRA's position regarding offset claims in Germany?				
Project participant response				**Date:** 30/01/2023
PP has taken due account of the comment had has determined the significance/relevance of the comment to the project design by way of the August 30, 2022 email.				
Documentation provided by project participant				
Refer to August 30, 2022, email. Refer to the 01-Auditor Share MS SharePoint location.				

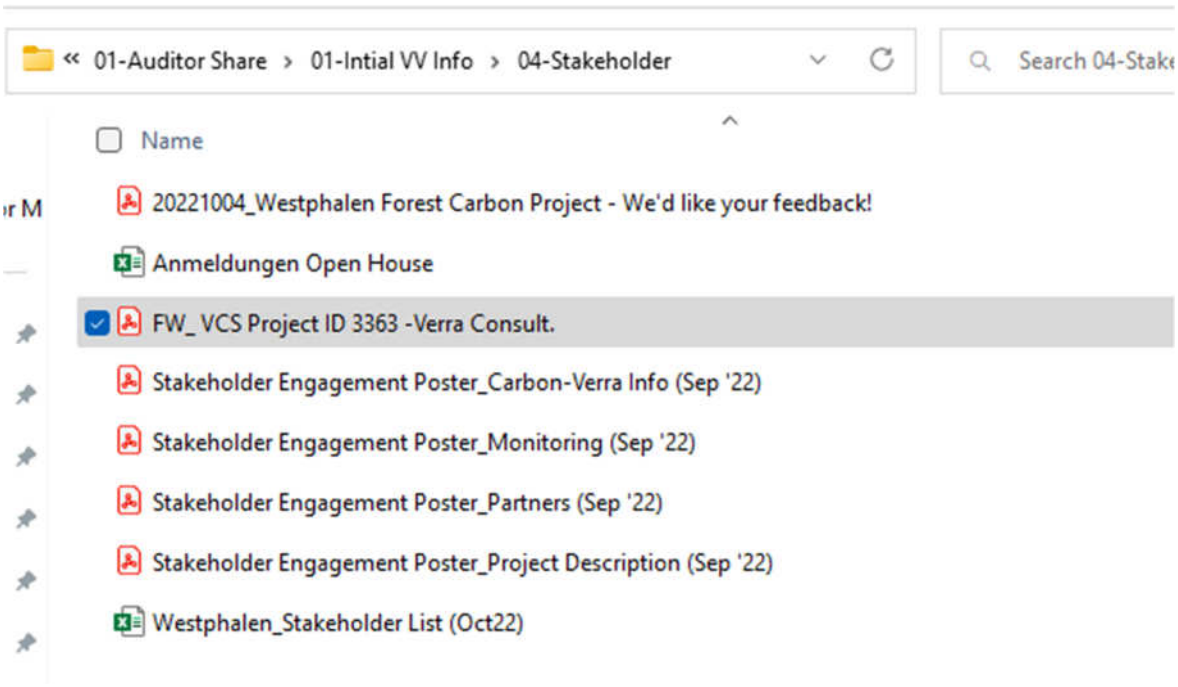


DOE assessment	Date: 10/02/2023
PP has provided the summary and response to comments raised during global stakeholders consultation period of 30 days. The same was discussed with client and found the responses to be satisfactory. Hence the CL is closed.	

CL ID	11	Section no.	2.2	Date: 27/01/2023
Description of CR				
PP is requested to clarify about the public comment during the global stakeholder consultation period 28 July 2022 to 27 August 2022: Stakeholder 4: In Germany, clearcutting is generally prohibited by law or allowed only in certain cases. Can you explain this in more detail? Why did you choose to model the baseline scenario with clearcutting as one of the main commercial activities, even though this is not necessarily the standard approach in this jurisdiction?				
Project participant response				Date: 30/01/2023
PP has taken due account of the comment had has determined the significance/relevance of the comment to the project design by way of the August 30, 2022 email. In summary, the comments were considered relevant but significant to project design. The PD/MR document was updated (term “clearcut” replaced with “final felling”).				
Documentation provided by project participant				

Refer to August 30, 2022 email. Refer to the 01-Auditor Share MS SharePoint location.

Refer to PD/MR v2.1 (throughout).



DOE assessment	Date: 10/02/2023
PP has provided the summary and response to comments raised during global stakeholders consultation period of 30 days. Westphalen forest management activities are conducted consistent with the relevant legislation referenced in Table 6 of the PDD. The same was discussed with the client and found the responses to be satisfactory. Hence the CL is closed.	

CL ID	12	Section no.	3.2	Date: 27/01/2023
Description of CR				
PP is requested to provide the documented evidence for proof of right and right to use, and that the Westphalen carbon project has no illegal or unplanned harvesting and de-minimis fuelwood removals.				
Project participant response				Date: 01/02/2023
PP has provided notarized documents to the VVB. Refer to the 01-Auditor Share MS SharePoint location. VVB confirmation of no illegal or unplanned harvesting confirmed via interviews with Mr. Joachim Fischer of Wald und Holz NRW (i.e., representative of the forestry state agency).				

Documentation provided by project participant
PP has provided notarized land registry documents as well as the current and past approved forest management plans to the VVB. Refer to the 01-Auditor Share MS SharePoint location.

peus
bethke

Lawyers Peus · Bethke · Tiny place 4 · 59872 Meschede, 59872

Lawyers
Specialist
Lawyers
Notaries

Heinz Peus - German
Lawyer and notary
(1957 to 2011)

Jens-Uwe Bethke
Lawyer
Specialist Lawyer for Traffic Law Specialist Lawyer for Employment Law

Katrin Peus -
Lawyer and Notary
Specialist Lawyer for Family Law

Ulrike Peus - Her
Lawyer and Notary Specialist Lawyer for Inheritance Law
Specialist Lawyer for Administrative Law

Date: 01.09.2021 MÜ
Our sign: v. Westphalen/Eigentumsnachw. 790/21 KP20
Clerk: Notary K. Peus

Notarial certificate of inspection of land registers

In my capacity as a notary, I confirm in accordance with the order - on the basis of electronic inspection of the land registers listed below from 01.09.2021 that

Matthias Graf von Westphalen, born on 19.08.1960,

is registered as the sole owner of the land also listed below in the respective land registers:

Kanzleianschrift:
Tiny place 4
59872 Meschede, 59872

Phone: 0291/54060
Notary area: 0291/540623
Fax: 0291/54063
0

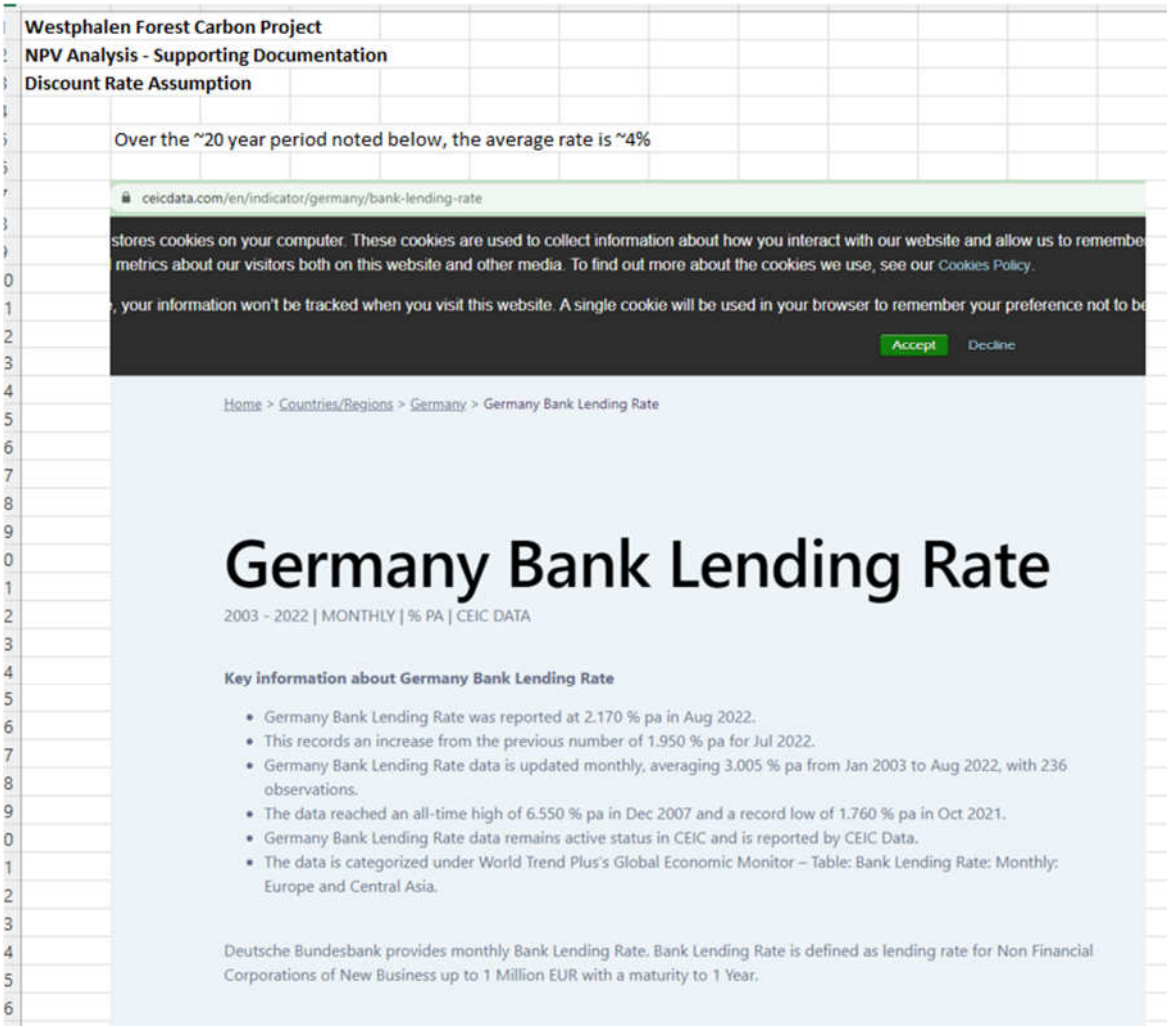
info@anwaelte-peus.de
www.anwaelte-peus.de

Information on data protection can be found on our homepage

Sparkasse Mitten im Sauerland 1586 (464 510 12)
IBAN: DE33 4645 1012 0000 0015 86
BIC: WELADED1MES

DOE assessment	Date: 10/02/2023
PP has provided the summary and response to comments raised during global stakeholders consultation period of 30 days. Also, the PP has provided the notarized land registry documents. The same was discussed with client and found the responses to be satisfactory. Hence the CL is closed.	

CL ID	13	Section no.	3.5	Date: 27/01/2023
Description of CR				
PP is requested to provide the reference source for discount rate of 4% used in the NPV analysis and clarify/elaborate that the NPV of project scenario is less than baseline scenario without VCUs.				
Project participant response				Date: 30/01/2023
Refer to NPV Analysis for Non-Permanence Risk Report, worksheet titled “Disc Rate”. Refer to the Investment Analysis for Additionality Assessment, MS Excel spreadsheet.				
Documentation provided by project participant				



DOE assessment	Date: 10/02/2023
PP has provided the source of reference to the NPV and Investment analysis for Additionality assessment. The same is found to be correct. Hence the CL is closed.	

CAR ID	01	Section no.	1.7, 1.8, 1.10, 1.13, 3.3, 3.2, 3.4 and 3.5	Date: 27/01/2023

Description of CAR

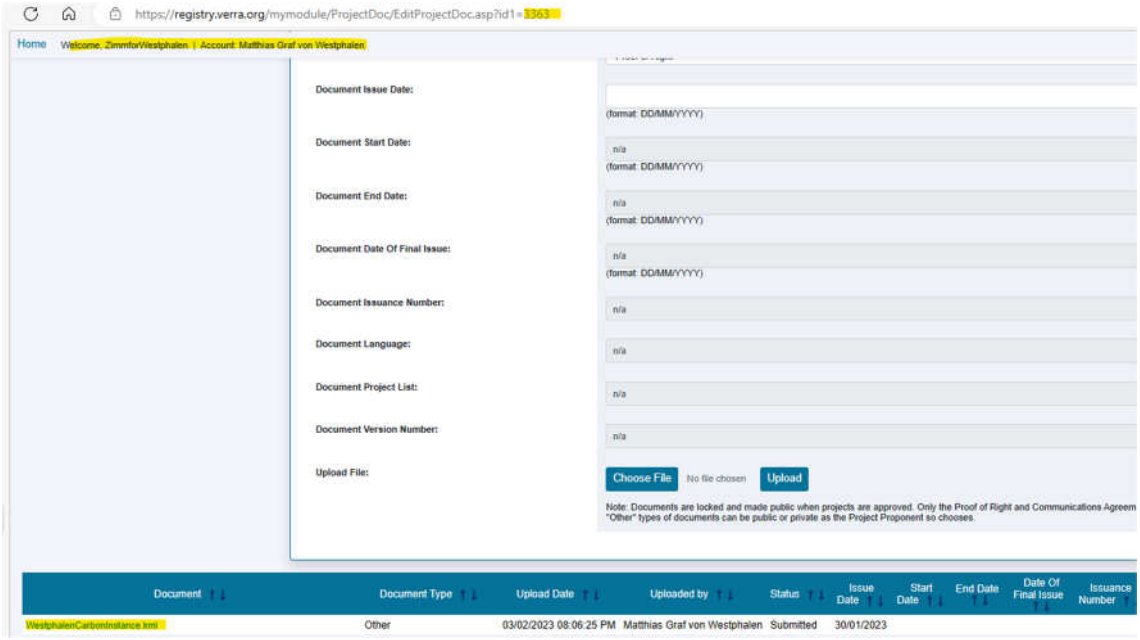
PP is requested to clarify, elaborate and justify on the VERRA Comment received on 29th July 2022 with substantial evidence:

1. The project proponent must explain how the project is eligible under the AFOLU-specific eligibility criteria in Appendix A1.4 of the VCS Standard v4.2.
2. Section 1.8 of the project description does not have a justification for the project start date. The project proponent must explain what activities are being implemented on the project start date and how the project start date meets section 3.7 of the VCS Standard v4.2.
3. Complete sections 1.10, 3.3, 3.4 and 3.5 of the PD.
4. The KML file provided is the whole country of Germany; it does not show the specific project areas. The project proponent must submit a KML file that only contains the project area.
5. The project proponent must provide information regarding the conditions prior to project initiation in section 1.13 of the project description.
6. The project proponent must provide a demonstration of how the project activities meet each of the applicability conditions of the tools and modules that are applied by the project in section 3.2 of the project description.
7. The project proponent is requested to explain how the ownership of the project complies with one of the ownership requirements in section 3.6.1 of the VCS Standard v4.2 and explain who has the rights to the carbon credits generated from this project in section 1.7 of the project description.

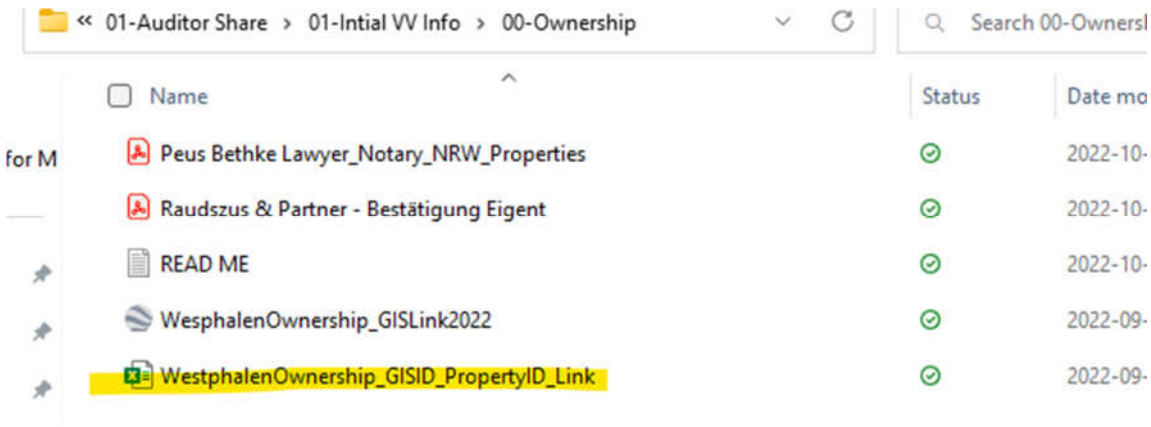
Project participant response	Date: 01/02/2023

All comments have been addressed in the post PD/MR and summarized below:

1. Clarity provided in sections 1.3 and 1.4.1 that PAI meets eligibility requirements
2. Clarity provided in section 1.8 reference the legal right to harvest prior to the start of the project.
3. The identified sections have been completed in the PD/MR.

4. Additional KML file uploaded to Verra Registry illustrating only current PAI. Uploaded as "Other" as only one KML can be updated and once approved by Verra, can not be removed. 5. Clarity provided in Section 1.13 to make specific reference to PAIs being comprised of multiple polygons/parcels and that the condition of forest is immaterially different from the current forest (as illustrated in the forest inventories and approved forest management plan). 6. Clarity provided in section 3.1 noting the no addition applicability condition are required. 7. Clarity provided in section 1.7 noting Westphalen has the rights to the carbon credits generated from this project.
Documentation provided by project participant
PD/MR v2.1 
DOE assessment — **Date:** 10/02/2023
PP has provided the clarifications to all the seven points that was raised by VERRA. Also, PP has provided the revised VCS PD/MR and substantial documents. The same is found to be correct. Hence the CAR is closed.

CAR ID	02	**Section no.**	1.12	**Date:** 27/01/2023
Description of CAR				
PP is requested to mention the geographical co-ordinates of all the blocks in the project activity in section 1.12 of the VCS PD.				
Project participant response				**Date:** 01/02/2023

PD/MR v2.1, section 1.12, table 6 notes the geodetic coordinates of project area, refences maps (section 3.5) and makes reference to the provided KML (as required in VCS Standard 4.2, section 3.10.1. To support validation/verification GIS coordinates were provided to the VVB and verified/validated during the on-site visit.
Documentation provided by project participant
Reference to Table #3 as example and list specific document included in server and in PDD Section 1.12 

DOE assessment	**Date: dd/mm/yyyy**
PP has provided the detailed geographical co-ordinates in separate excel sheet (Westphalen Ownership_GISID_PropertyID_Link) and revised PD/MR. The same was verified during the on-site audit and found to be correct. Hence the CAR is closed.	

CAR ID	03	**Section no.**	3.4	**Date:** 27/01/2023
Description of CAR				
PP is requested to elaborate the baseline scenario covering all the points as per the applicable methodology version.				
Project participant response				**Date:** 01/02/2023
Clarity provided in PD/MR section 3.4.1 indicating which scenarios meet the criterion and for further clarity it is noted that scenarios 1, 2 and 4 are the only scenarios where the forests remain forests.				
Documentation provided by project participant				

3.4 → Baseline Scenario¶

3.4.1 → Step 1 – Identify Plausible Alternative Baseline Scenarios to the VCS Activity¶

The Westphalen Forest Carbon Project identified four potential baseline scenarios which were evaluated in the baseline selection process.¶

1. → Historical Practice¶
   The VCS standard and VM0012 methodology require that the project proponent assess historical practice as a baseline scenario in Step 2a. The most recent harvesting plan created for the Westphalen forested areas was developed for a ten-year period from 2015 – 2025. Each area has a formulated objective yearly possibility of use volume associated with it. The total planned timber harvest for this period is approximately 54,173 m³, of which 33,035 m³ is sourced from commercial thinning, and 21,138 m³ is for final fellings. The current harvest plan created for the project area is further described in Step 2a.¶

2. → Common Practices¶
   The common practice and applicable scenario is to maximize the allowable timber harvest from the forest management plan. German forest management plans must be completed every 10 years, where the common practice is to harvest the annual volume objectives as detailed in the forest management plan. This common practice follows guidelines outlined in the German Civil Code and was corroborated by members of Westphalen (2021).¶

3. → Land acquisition for conversion to real estate development¶
   An alternative baseline scenario could be to sell the lands within the project area to gain financial returns from the development and sale of these properties. Many portions of the project area are adjacent to residential areas, making them available for primary and secondary residences or industrial developments. This scenario emphasizes marketing real estate opportunities within these areas. These areas include shorelines along lakes and rivers, and properties adjacent to villages, towns, and cities.¶

4. → Acquisition for conversion to conservation lands¶
   The last potential baseline scenario is the acquisition of the forest for conservation purposes. This scenario is representative of or comparable to, the project scenario without carbon crediting benefits. There is no credible market-based business model for this baseline scenario to provide financial returns for private investment capital as there are no material revenue returns from conservation activities like the project scenario. The inclusion of this scenario meets element 2.1.1.a), item ii) in the VCS Additionality Tool VT0001.¶

The italicized text below indicates VM0012 methodology or VCS requirements in the baseline scenario selection. Each prospective baseline scenario meets the following selection scenario eligibility criteria, except where noted and excluded:¶

1. → *Including activities and areas where forests remaining as forests* – this criterion eliminated the potential Baseline Scenario 3 "Acquisition for conversion to real estate development lands". For clarity, Scenarios 1,2 and 4 include only areas and activities where the forests remain forests.¶
2. → *Comply with legal requirements for forest management and land use in the area* – all remaining baseline scenarios would meet the minimum practice requirements of either the German Federal Forest Act or the general rural residential policies, laws, and requirements.¶

DOE assessment	**Date:** 10/02/2023

PP has elaborated the baseline scenario as per the methodology in the revised PD/MR. The same is found to be correct. Hence this CAR is closed.

CAR ID	04	Section no.	3.4	Date: 27/01/2023

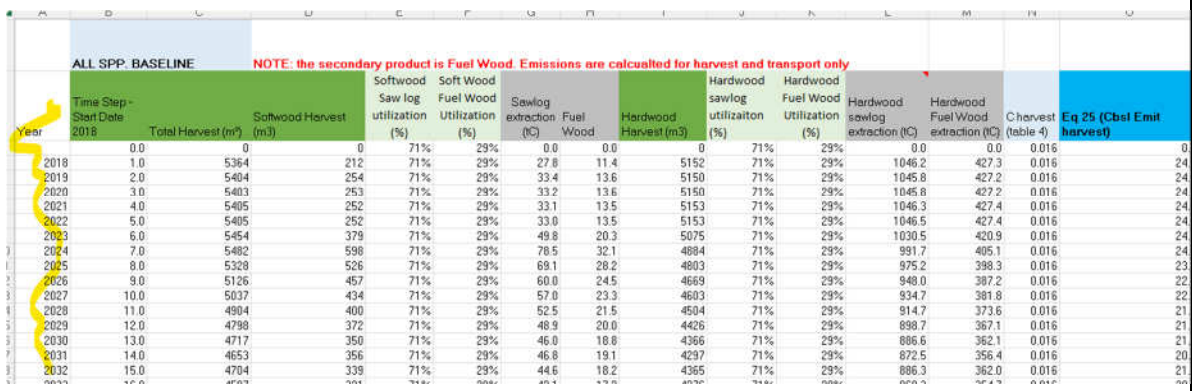
Description of CAR

PP is requested to elaborate and provide documented evidence for the valid starting inventory (<10 years ago), as per section 8.1 of the methodology and mention the years in ER spreadsheet

Project participant response	Date01/02/2023

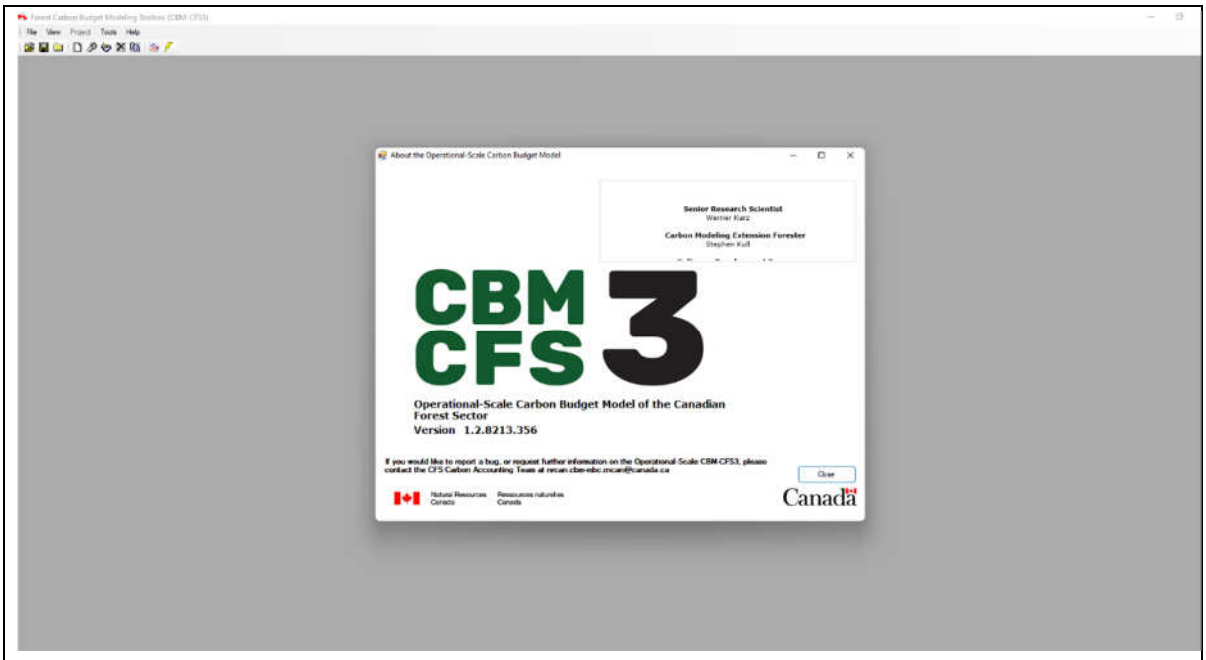
Current and previously approved Forest Management Plans and Forest Inventory provided (from July 2005 onwards). Reference made in PD/MR section 4.1.1.
ER spreadsheets have been revised to include specific reference to year. Refer to MS Excel spreadsheets titled Emissions_BSL_Estimate and Emissions_PRJ_Estimate dated Dec '22 v2 and v3.
The Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3) is referenced throughout the PD/MR. Screenshots provided below.

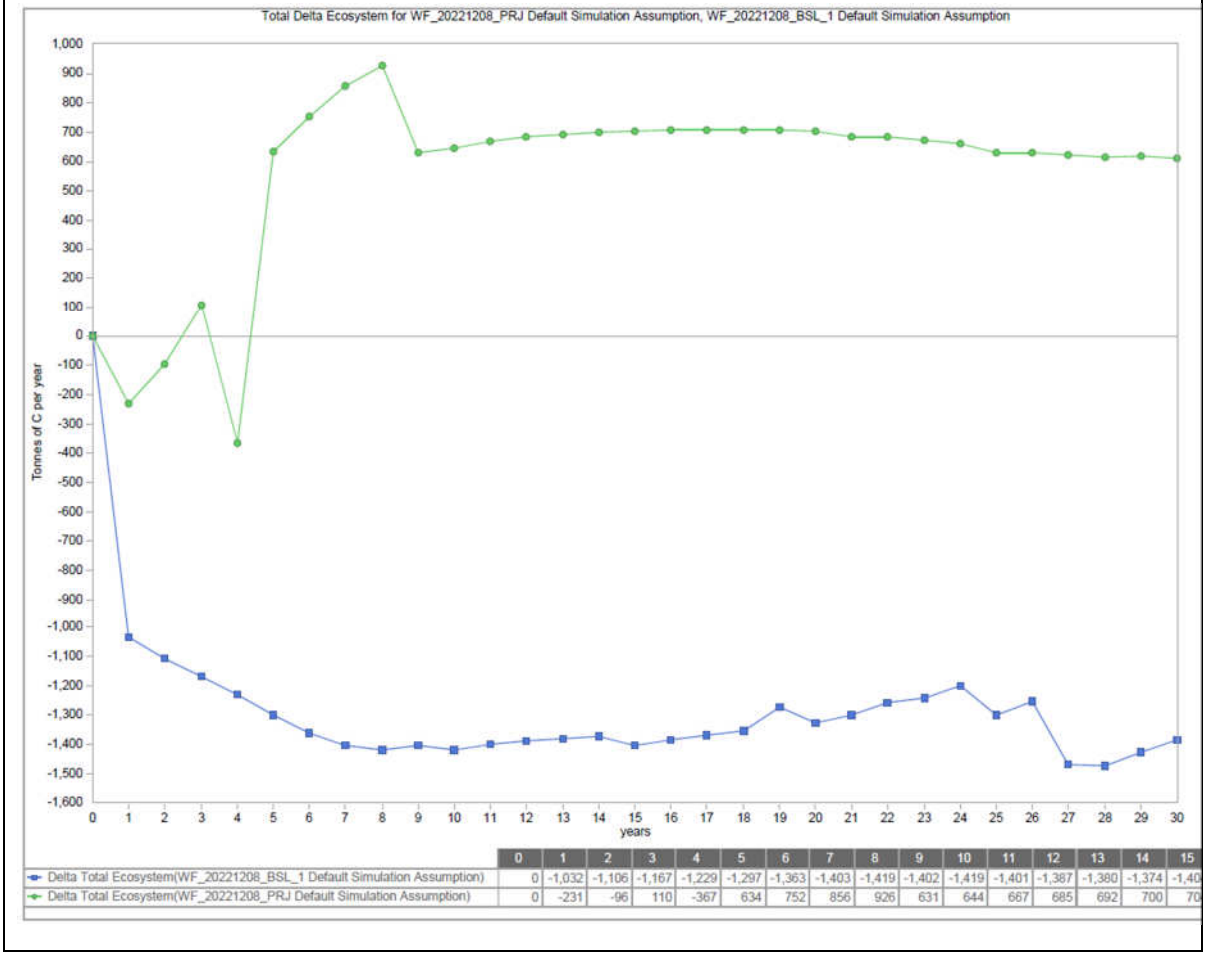
Documentation provided by project participant

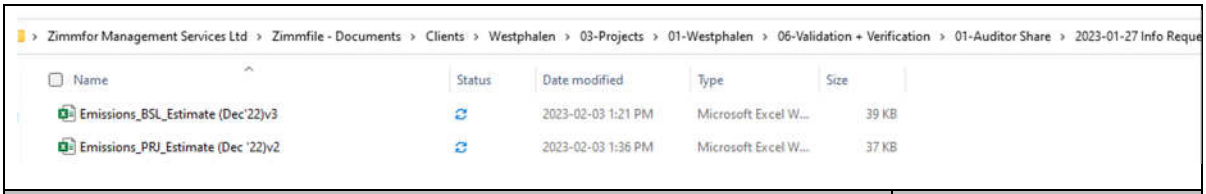


ALL SPP: BASELINE — NOTE: the secondary product is Fuel Wood. Emissions are calcualted for harvest and transport only

Year	Time Step - Start Date 2018	Total Harvest (m³)	Softwood Harvest (m3)	Softwood Saw log utilization (%)	Soft Wood Fuel Wood Utilization (%)	Sawlog extraction (tC)	Fuel Wood	Hardwood Harvest (m3)	Hardwood sawlog utilizaiton (%)	Hardwood Fuel Wood Utilization (%)	Hardwood sawlog extraction (tC)	Hardwood Fuel Wood extraction (tC)	Charvest (table 4)	Eq 25 (Cbsl Emit harvest)
	0.0	0	0	71%	29%	0.0	0.0	0	71%	29%	0.0	0.0	0.016	0
2018	1.0	5364	212	71%	29%	27.8	11.4	5152	71%	29%	1046.2	427.3	0.016	24
2019	2.0	5404	254	71%	29%	33.4	13.6	5150	71%	29%	1045.8	427.2	0.016	24
2020	3.0	5403	253	71%	29%	33.2	13.6	5150	71%	29%	1045.8	427.2	0.016	24
2021	4.0	5405	252	71%	29%	33.1	13.5	5153	71%	29%	1046.3	427.4	0.016	24
2022	5.0	5405	252	71%	29%	33.0	13.5	5153	71%	29%	1046.5	427.4	0.016	24
2023	6.0	5454	379	71%	29%	49.8	20.3	5075	71%	29%	1030.5	420.9	0.016	24
2024	7.0	5482	598	71%	29%	78.5	32.1	4884	71%	29%	991.7	405.1	0.016	24
2025	8.0	5328	526	71%	29%	69.1	28.2	4803	71%	29%	975.2	398.3	0.016	23
2026	9.0	5126	457	71%	29%	60.0	24.5	4669	71%	29%	948.0	387.2	0.016	22
2027	10.0	5037	434	71%	29%	57.0	23.3	4603	71%	29%	934.7	381.8	0.016	22
2028	11.0	4904	400	71%	29%	52.5	21.5	4504	71%	29%	914.7	373.6	0.016	21
2029	12.0	4798	372	71%	29%	48.9	20.0	4426	71%	29%	898.7	367.1	0.016	21
2030	13.0	4717	350	71%	29%	46.0	18.8	4366	71%	29%	886.6	362.1	0.016	21
2031	14.0	4653	356	71%	29%	46.8	19.1	4297	71%	29%	872.5	356.4	0.016	20
2032	15.0	4704	339	71%	29%	44.6	18.2	4365	71%	29%	886.3	362.0	0.016	21


About the Operational-Scale Carbon Budget Model
Senior Research Scientist
Werner Kurz
Carbon Modeling Extension Forester
Stephen Kull
CBM CFS 3
Operational-Scale Carbon Budget Model of the Canadian Forest Sector
Version 1.2.8213.356
Close
Canada


Total Delta Ecosystem for WF_20221208_PRJ Default Simulation Assumption, WF_20221208_BSL_1 Default Simulation Assumption
Tonnes of C per year
years
Delta Total Ecosystem(WF_20221208_BSL_1 Default Simulation Assumption)
Delta Total Ecosystem(WF_20221208_PRJ Default Simulation Assumption)



DOE assessment	Date: 10/02/2023
PP has provided the Forest Management Plans and Forest Inventory from June 2005 onwards. Also, PP has provided the revised ER spreadsheet detailing about the years and reference to the application of Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3) in the project activity. Hence this CAR is closed.	