



VERIFICATION REPORT FOR THE GREEN GOLD LORETO 1 PROJECT



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Summary:

This report describes the verification of the Green Gold Loreto 1 project (“the project”), an improved forest management project located in Peru, that was conducted by SCS. The purpose of the verification engagement was to conduct, in accordance with the VCS program rules, an ex-post independent assessment of the GHG emission reductions and removals that have occurred as a result of the project during the monitoring period from 01-August-2020 to 31-July-2022 (“the verification period”) and were claimed by Green Gold Forestry Peru S.A., the project proponent. The verification engagement was carried out through a combination of document review, interviews with relevant personnel, and on-site inspections. As part of the verification engagement 77 findings were raised: 20 Non-Conformity Reports, 53 New Information Requests, and 1 Observation. These findings are described in Appendix A of this report. The project complies with the verification criteria, and SCS holds no restrictions or uncertainties with respect to the compliance of the project with the verification criteria.

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1 INTRODUCTION

1.1 Objective

In accordance with Section 4.1 of the VCS Standard (see the below Section 1.2 for full reference), SCS carried out 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, conducted in accordance with the VCS Program rules. In accordance with Section 2.1.2 of the VCS Validation & Verification Manual, V3.2, the objectives of the verification engagement were to evaluate the monitoring report and assess

- The extent to which methods and procedures, including monitoring procedures, have been implemented in accordance with the validated project description (this included assessing conformance with the monitoring plan).
- The extent to which GHG emission reductions and removals reported in the monitoring report are materially accurate.

The other objective of the verification engagement was to assess the non-permanence risk analysis.

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 included

- The project and its activities.
- The carbon pools and/or greenhouse gases included in the project boundary.
- The verification period.

1.2.2 Criteria

In accordance with Section 4.1.10(2) of the VCS Standard (see below for full reference), the criteria for verification was the VCS Version 4, including the following documents:

- VCS Program Guide, V4.4
- VCS Standard, V4.5¹

¹ SCS began the audit engagement, the most up to date version of the standard was VCS v4.4. Therefore, some of the findings issued (Appendix A) reference this earlier version of the standard. When VCS v4.5 was released, it was immediately adopted. Note that adoption of the latest VCS templates is not required until March 2024.

- VCS Non-Permanence Risk Tool, V4.0
- VCS Methodology for Improved Forest Management: Conversion from Logged to Protected Forest (VM0010) V1.3

1.3 Level of Assurance

In accordance with Section 4.1.10(1) of the VCS Standard, the level of assurance was reasonable.

1.4 Summary Description of the Project

The project consists of the cessation of all planned commercial harvest activities from 183,455.54 hectares of the Green Gold Forestry Peru S.A. timber concessions located in the Peruvian Amazon of Loreto. The project entails conserving that forest land to support ecosystem services. In addition, the project involves regular patrolling by a team of forest custodians, enhanced demarcation of the concession area boundaries, monitoring of biomass and biodiversity, as well as community-based engagement activities such as implementation of sustainable alternative livelihoods, strengthening land tenure and governance, environmental education workshops, among others, in the neighboring communities outside of the concession areas.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification engagement was conducted through a combination of document review, interviews with relevant personnel and on-site inspections, as discussed in Sections 2.2 through 2.4 of this report. At all times, an assessment was made for conformance to the criteria described in Section 1.2.2 of this report. As discussed in Section 2.5 of this report, findings were issued to ensure conformance to all requirements.

The audit team created an Evidence Gathering Plan (EGP) following a proprietary EGP workbook developed by SCS. Per Section 4.4.3 of ISO 14064-3:2019, the audit team identified possible risks of errors, omissions and misrepresentations with respect to the validation criteria. For each identified risk, the audit team assessed the likelihood of the material discrepancy occurring, the likelihood of the material discrepancy not being prevented or detected by the controls of the project and the likelihood of the material discrepancy not being detected by the audit team.

This EGP serves as the sampling plan for both the desk review and the on-site review of the project. On-site and desk-based sampling and data testing activities were planned to address any risk where the likelihood of a material discrepancy not being detected by the audit team was judged to be unacceptably high. For example, as a result of the risk assessment, for the on-site component, the sampling plan included visiting and interviewing over half of the communities in the project area,

ensuring communities visited were both native and non-native, interviewees included a range of genders and ages, on-site observations included inventory resampling of a selection of plots, boundary checks, and reviews of monitoring documentation, as well as hiring an experienced local Peruvian to serve on the audit team. The audit team then created an audit plan that took the EGP into account.

2.2 Document Review

The monitoring report (GGL1 - VCS Monitoring Report 2022 - v4.2 v8 - July2024 VF.pdf; “MR”) and non-permanence risk reports (VCS-Non-Permanence-Risk-Report-Template-v4.0 - V9March24; “NPRR”) were carefully reviewed for conformance to the verification criteria. The following additional documentation, provided by project personnel in support of the aforementioned documents, was also reviewed by the audit team:

Document	File Name	Ref.
VCS Monitoring Report	GGL1 - VCS Monitoring Report 2022 - v4.2 v8 - July2024 VF.pdf	1
VCS MR Appendix 1 – Biomass Report	Appendix 1 - Green Gold Loreto 1 ER Calculation Spreadsheet V11 July2024.xlsx	2
Disturbance analysis spatial	disturbance_within_AOI.tif; tC_change.tif; AGB_Peru_change_2020_2022_5tClossPixels.tif	3
Supporting calculation workbooks & modeling files	[Various Files]	4
Inventory Data & Analysis	11082022_PPM_GGF_COMPILADO_GENERAL; GGFplots_processedPlotSummaries; GGFplots_processedStem; GGFplots_stemdata; Loubota_etal_2020_stemlevelData; plotAGB_clean_ModGGF.r, RAINFORmanual2009_EEMBlocated	5
Supporting Publications	Saatchia et al 2011 pnas; Saatchia et al 2011 pnas SI Feldpausch_Height-diameter allometry of tropical forest trees	6
VCS MR Appendix 2 - Non-permanence Risk Report	VCS-Non-Permanence-Risk-Report-Template-v4.0 - V9March24.pdf VCS-Risk-Report-Calculation-Tool-v4.0 - GGL1 - V9March2024.xlsx	7
VCS MR Appendix 2 - Participatory Rural Appraisal and supporting documentation	PRA RESULTS; DATA PRA GGL1 1stVerification.xlsx PRA_Poligono_ExtraccionMadera_CCNN.shp	8

Document	File Name	Ref.
VCS MR Appendix 4 – Evidence supporting Sustainable Development Goals	Bienes y Servicios 2020-2022.xlsx; Matriz_Capacitaciones_Talleres_Lista (1).xlsx	9
Disturbance and Ground Surveys (and supporting documentation)	loss_examples.pdf Appendix 6 - Disturbance analysis and ground surveys.pdf; 11. Disturbance Raster - Processing steps; Protocolo ADT_GGF_v1 disturbios_AOI_verificados_febrero2023.shp; ATD_Verificados_febrero2023.shp; buffer.shp; disturbance_within_AOI.shp	10
VCS Project Design Document	VCS PD Green Gold Loreto 1 v11 accuracy review December 2021 (2) clear	11
VCS Validation Report	VCS_GreenGold_Loreto1_ValidationReport_V1-6_121621_VerraReview_noTC (5)	12
Forest Inventory Monitoring Protocol	Field protocol Peru Draft - Spanish_11102021_updated.pdf; Field protocol Peru Draft - English_11102021_updated (1).pdf; RAINFOR_field_manual_EN; RAINFORmanual2009_EEMBlocated	13
Aboveground Biomass & Height Maps	rawDataProcessing.r GGF_AGB_2020_SpaceIntVersion22Feb2022; GGF_AGB_2022_SpaceIntVersion22Feb2022; GGF_Hgt_2020_SpaceIntVersion22Feb2022; GGF_Hgt_2022_SpaceIntVersion22Feb2022; GGF_Hgt_dif_2020_2022_SpaceIntVersion22Feb2022; heigh_diff; AGB_Peru_change_2020_2022_5tClossPixels	14
Project Area Maps	Napo and Mazán Map.jpg, Maraón Map.jpg, Map Legend.jpg	15
Spatial boundary files (shapefiles)	Area_Proyecto.shp; Division_Administrativa_ConsoMazan_Abril2021.shp; Division_Administrativa_ConsoTacsha_Abril2021.shp Division_Administrativa_SR_Abril2021.shp Concesiones_Forestales_ZonaProy.shp; Cuerpos_Agua.shp; Limite_UMF_GGF.shp; Puntos_Comunidades_Influencia.shp; Territorio_Comunidades_Tituladas.shp; Zona_proyecto.shp	16
Boundary Markers Photographs	Hito - Santa María de Loreto.png, Banner – Huiririma.jpg	17

Document	File Name	Ref.
Maps of concessions and management plan dates/document lists	A3_Mapa_AREAProyLore2_PO_Abril2023.jpg; Answer to finding 10.docx, Answer to finding #35.docx	18
Updated Concession documents (Management Plans, Operating Plans)	[Various files]	19
Loreto Regional Forestry and Wildlife Development Department – Legal Opinion	INFORME LEGAL N° 027 GOREL Actividades Complementarias Concesión GGF (1)	20
Response to finding #35	Answer to finding #35	21
Baker & McKenzie Legal Opinion on the exploitation of ecosystem services in timber concessions	GGF -Legal Opinion - Exploitation of Ecosystem Services in Timber Forest Concession	22
GGF Code of Conduct	CODIGO DE CONDUCTA	23
Summary of Human Resources laws	INFORME RRHH	24
GGF Anti-Discrimination Policy	Política de no discriminación	25
GGF Occupational Safety and Health Regulations	Reglamento Interno de SST GGF	26
GGF Internal Work Regulations	Reglamento Interno de Trabajo GGF - 2023	27
GGF Recruitment and Personnel Selection Policy	Política de Reclutamiento y Selección de Personal	28
Training Plan	Plan_capacitacion_2022	29
Training logs	Capacitación 050122 Bravo; Capacitación 100822 Bravo	30
Environmental Education Training Reports	[Various files]	31
Adult Training Reports	[Various files]	32

Document	File Name	Ref.
Estimation of Jobs	36. Full-time jobs - CCB estimation - Updated 23.05.23	33
Database of Community employees	Personal_comunidades_2021-Jul 2022.xlsx	34
GGF-USAID Reports	[Various files]	35
Report on identification of high conservation values in the project	AVC-CCB_2022	36
Meeting with FECONAMNCUA	Reunión Inicial con FECONAMNCUA - Nov 2020	37
Environmental Mitigation and Monitoring Plans for USAID	EMMP_Sustainable Management of Forest Concessions_Jun2021_Draft02Jun2	38
Complaints and Suggestions Manual	41. Manual_Quejas_Sugerencias_Abril 23	39
Complaints and Suggestion Book	Bahía 1.jpg, Bahía 2.jpg, Iquitos 1.jpg, Iquitos 2.jpg	40
Conflict Resolution Protocol	Protocolo para resolución de conflictos_GGF	41
Evidence of Complaint registry	1. Evidencia de registro de queja; 2. Acta de devolución de ollas	42
Debt Cancellation Reports	1. Carta_Comunidad; 2. Acta de reunión_01; 3. Respuesta_Logorsa; 4. Cancelación deuda	43
Denial requests for Solterito and Pampa Caño	[Various files]	44
Forest Custodian Reports	1 2802 INFORME DE VIAJE – FEB; 2 160622 INFORME DE VIAJE – MAR; 3 INFORME DE VIAJE – ABRIL; 4 INFORME DE ACTIVIDADES - JUL	45
Control & Surveillance Plan	310322 PLAN DE MONITOREO, VIGILANCIA Y CONTROL	46
Report on Social Baseline	Linea Base Marañoñ, Linea Base Napo	47

Document	File Name	Ref.
Rapid Participatory Diagnosis of project zone communities	DRP 16 comunidades GGF rev 04.10.22 ok	48
Community Relations Plan	29. Plan de Relaciones Comunitarias_GGF - Actualizado Abril 2023	49
Community Acts of Acceptance of the CCB project	[Various files]	50
Socialization Reports	Reporte de campo Socializacion CCB-Napo; Reporte de campo Socializacion CCB-Marañon	51
Socialization of Project (Evidence of general assembly meetings)	[Various files]	52
Community Action Plans	Plan de Acción-ODS_Marañon.docx, Plan de Acción-Marañon.xlsx, Plan de Acción-ODS_Napo.docx, Plan de Acción-ODS_Napo.xlsx	53
Gender Action Plan	GAP - Sustainable Management of Forest Concessions – GGF.pdf; Plan Acción Género GGF - Resumen Ejecutivo.pdf	54
Community Monitoring Plans	Plan de monitoreo comunidad	55
Biodiversity Diagnostic Report	0. INFORME RIAL	56
Threatened Species Report	Esp. Amenazadas_2021	57
Biodiversity bibliography	Biodiversity bibliography.docx	58
Study on High Conservation Value Forests	Estudio_BAVC_GGF_2021 - Versión final	59
Active Biodiversity Rules and Regulations	Reglamento y Normas Vigentes-GGF	60
Non-permanence Risk Report – Adaptive Management Plan	19. Adaptive Management Plan - V2 - May 2023	61

Document	File Name	Ref.
Non-permanence Risk Report – Cash Flow Analysis	21. 2023-03 GGF Peru Fin Mod v23.03.15 - SCS Audit	62
Non-permanence Risk Report – Curriculum Vitas of Project Team	[Various files]	63
Inventory plot shapefile	PPM_InstaladasVF.shp; Vertices_PPM_InstaladasVF.shp	64
Inventory report	Informe General - PPM GGF; Informe Gerenal -Instalación de PPMs-GGF_1y2Salida; Field Plot Data Analysis	65
Updated and approved operating plans	PO 01 - PC 12_Consolidado Tacsha; R.J.N° 292-2021-GRL-GGR-GRDFFS-ODPM; PO 1-PC 02-ConsolidadoMazan_2021; R.J.N° 273-2021-GRL-GGR-GRDFFS-ODPM; PO 08- PC 18 -San Regis; PO 08- PC 18 -San Regis	66
Community shapefiles	Puntos_Comunidades_Influencia_GGF_Oct22.shp; Territorios_Comunidades_Influencia_GGF_26Oct22.shp	67
Community activity list	Actividades comunitarias.xlsx	68
Harvest parcel shapefile	Division_Administrativa_ConsoTacsha_Abril2021; Division_Administrativa_ConsoMazan_Abril2021; Division_Administrativa_SR_Abril2021	69
Biomass change map uncertainty documentation	Space Intelligence - Responses to open findings 14Jul2023; Report Biomass Peru_GGF_v2.2_14Jul2023; regressions_and_uncertainties.ipynb; Uncertainty analysis_EM V5_10Jul2023; 18. Height AGB Uncertainty Spreadsheet; 01_regressions_model_diagnosis.ipynb; Feldpausch_Height-diameter allometry of tropical forest trees	70
Letter on callable funds	GGF SCS re finance commitments	71
USAID Technical approach	GGF Peru USAID Technical Approach FINAL(NIR19)	72
Biodiversity monitoring Plan	Plan Monitoreo Integral_2021	73
KML file of project area	Limite_AreaProyectoLore1_GGF_Abril2023.kml	74
Evidence of KML on Verra registry	Upload of KML file.png	75

Document	File Name	Ref.
Management Plans for GGF timber harvests outside of the project area	R.J.N° 051-2021-GRL-GGR-GRDFFS-ODPL-N R.J.N° 273-2021-GRL-GGR-GRDFFS-ODPM R.J.N° 292-2021-GRL-GGR-GRDFFS-ODPM	76
VCS MR Appendix 5 – Market Leakage Quantification	Appendix 5 - Leakage Analysis VCM Project 2345.xlsx demo_raw_data.xlsx	77
Evidence supporting a lack of activity shifting leakage (official government letters)	Extraction Balance GGF (historic).xlsx; Concesiones_GGF.kml CartaN° 027-2024_2018-010 CartaN° 028-2024_Conso2Mazan CartaN° 029-2024_2018-007 CartaN° 030-2024_Conso1Tacsha	78
Berlin Native community maps & Spatial files	Territorio_CCNN_Berlin.kml A3_Mapa_después; Mapa_antes Map - Borders with CCNN Berlin	79
Resolution with Berlin Native Community	DE-CARTA-GOREL-Resolution 158 Titulo Berlin- Rio Napo	80
Land title documentation	[Various files]	81
CCB PD	GGL 1 - CCB PDD - 170724	82

2.3 Interviews

2.3.1 Interviews with Project Personnel

The process used in interviewing project personnel was a process wherein the audit team elicited information from project personnel regarding (1) the work products provided to the audit team in support of the PD and NPRR; (2) actions undertaken to ensure conformance with various requirements and (3) planned project activities.

The following personnel associated with the project proponent and/or implementing partner were interviewed.

Individual	Affiliation	Role	Date(s) Interviewed
Gareth Hughes	Green Gold Forestry	CEO	Throughout audit
Stuart J. Clenaghan	Green Gold Forestry	Co-founder	Throughout audit
Raul Dancé	Green Gold Forestry	COO	Throughout audit
Tatiana Lapeyre	Green Gold Forestry	Consultant	Throughout audit
Jorge Gallardo Diaz	Green Gold Forestry	Chief Forester	Throughout audit
Cindy Ramos	Green Gold Forestry	Forestry Specialist	6 March – 10 March 2023
Paula Diaz	Green Gold Forestry	Chief of Community Relations	6 March – 10 March 2023
Adriana Morales	Green Gold Forestry	MERI Specialist	Throughout audit
Karla Pinedo	Green Gold Forestry	Community Relations Analyst	6 March – 10 March 2023
Nuria Tello	Green Gold Forestry	Chief of Administration	6 March 2023
Ida Baneo Pisco	Green Gold Forestry	Forestry Specialist	6 March – 10 March 2023
David Lazo Perez	Green Gold Forestry	Sub-manager Administration	6 March 2023
Fisher Ríos	Green Gold Forestry	Forest Custodian	10 March 2023
Dr. Ed Mitchard	Space Intelligence Ltd	Co-Founder & Chief Scientist	Throughout audit
Dr. Murray Collins	Space Intelligence Ltd	Co-founder, CEO	Throughout audit
Dr Paula Nieto Quintano	Space Intelligence Ltd	Head of Mapping & Carbon Science	Throughout audit
Dr. Thom Brad	Space Intelligence Ltd	Senior Mapping Scientist	Throughout audit
Nived Rajeev Saritha	Space Intelligence Ltd	Data Scientist	Throughout audit

Individual	Affiliation	Role	Date(s) Interviewed
Dr Magdalena Navarro Torres Arpi	Space Intelligence Ltd	Senior Mapping Scientist	Throughout audit
Dervin Torres	Green Gold Forestry	Forest Custodian	7 March 2023
James Cachique	Green Gold Forestry	Forest Custodian	7 March 2023
Maicelo Melendez	Green Gold Forestry; Huitotos de Fortaleza Native Community	Forest Custodian; Community member	7 March 2023
Mayreli Tamani	Green Gold Forestry	Forest Custodian	7 March 2023
Masha Conde	Green Gold Forestry	Cook at Campamento Bahia	7 March 2023
Lorena Ramirez	Green Gold Forestry	Nurse at Campamento Bahia	7 March 2023

2.3.2 Interviews of Other Individuals

The process used in interviewing individuals other than project personnel was a process wherein the audit team made inquiries to confirm the validity of the information provided to the audit team. The following personnel not associated with the project proponent and/or implementing partner were interviewed.

Individual	Affiliation	Role	Date(s) Interviewed
Henry Lagunas	Loreto Regional Forestry and Wildlife Development Department (GERFOR)	Advisor - Manager	6 March 2023
Warren Guerrero	Directorate of Legal Physical Reorganization of Agricultural Property of Loreto (DISAFILPA in Spanish)	Manager – Native Communities	6 March 2023

Individual	Affiliation	Role	Date(s) Interviewed
Adme Aspajo Chistama	Federation of Native Communities of Medio Napo, Curaray and Arabela (FECONAMNCUA)	President	6 March 2023
Julia Emilsa Jipa Huamán	FECONAMNCUA Chambira Native Community	Treasurer, Apu of Community	7 March 2023-9 March 2023
Rony Villanueva Fajardo	Centro para el Desarrollo del Indígena Amazónico – (CEDIA)	Forest Specialist	6 March 2023
Gustavo Ruiz	Berlin Native Community	Community leader (Apu)	7 March 2023
Orlando Canelo	Berlin Native Community	Community Member	7 March 2023
Sr. Juan	Berlin Native Community	Community Member	7 March 2023
Srta. Jackeline	Berlin Native Community	Community Member	7 March 2023
Ruth Yume	Santa Teresa Native Community	Community Member	8 March 2023
Johnny Coquinche	San Luis de Tacsha	Governor	8 March 2023
Marvin Souza	San Luis de Tacsha	Community Member	8 March 2023
Rafael Manchoa	San Luis de Tacsha	Community Member	8 March 2023
Elvis Manuyama	San Luis de Tacsha	Community Member	8 March 2023
Rosita Lopez	San Luis de Tacsha	Community Member	8 March 2023
Eleodoro Ahuanari	Santa Maria de Loreto	Community Leader (Apu)	8 March 2023

Individual	Affiliation	Role	Date(s) Interviewed
Melito Chavez	Bellevista Native Community	Community Leader (Apu)	8 March 2023
Manuel Chavez	Bellevista Native Community	Communal police	8 March 2023
Wilder Chavez	Bellevista Native Community	Community Member	8 March 2023
Nixon Noa	Bellevista Native Community	Community Member	8 March 2023
Alfredo Tello	Bellevista Native Community	Community Member	8 March 2023
Clever Java	Bellevista Native Community	Community Member	8 March 2023
Jorge Chavez Coquinche	San Felipe Native Community	Community Leader (Apu)	8 March 2023
Loyola Coquinche	San Felipe Native Community	Community health agent	8 March 2023
Saúl Dahua	Huiririma Native Community	Community Leader (Apu)	9 March 2023
Manuel Grandez	Huiririma Native Community	Community Leader (Vice Apu)	9 March 2023
Eiver Siquiwa	Huiririma Native Community	Community Member	9 March 2023
Teddy Carranza	Huiririma Native Community	Community Member	9 March 2023
Junior Dahua	Huiririma Native Community	Community Member	9 March 2023
Harrison Siquiwa	Huiririma Native Community	Community Member	9 March 2023
Lexter Melendez	Huiririma Native Community	Community Member	9 March 2023

Individual	Affiliation	Role	Date(s) Interviewed
Hilder Siquiwa	Huiririma Native Community	Community Member	9 March 2023
Nora Moreno	Huiririma Native Community	Community Member	9 March 2023
Madeleine Pelileo	Huiririma Native Community	Community Member	9 March 2023
Edelsa Pelileo	Huiririma Native Community	Community Member	9 March 2023
Exilda Capinoa	Huiririma Native Community	Community Member	9 March 2023

2.4 Site Visits

The objectives of the on-site inspections were as follows:

- Select samples of data and information from field observations in order to meet a reasonable level of assurance and to meet the materiality requirements of the project, as required by Section 4.1.2 of the VCS Standard
- Perform a risk-based review of the project area and project activities to ensure that the monitoring and quantification of GHG emission reductions and removals for the verification period conforms to the verification criteria
- Confirm the validity of information presented in the non-permanence risk report

In fulfilment of the above objectives, the audit team performed an on-site inspection of the project area on the dates 6 March 2023 through 10 March 2023. The main activities undertaken by the audit team were as follows:

- Interviewed project personnel (see Section 2.3.1 of this report) to gather information regarding the project activities, stakeholder engagement, and risks.
- Interviewed participant community members and leaders (known as the Apu) from several communities, including native communities (see section 2.3.2 above) which are engaged in project activities. The goal of the community interviews was to confirm the claims of the project proponents with respect to the extent of community engagement, feedback and grievances, dissemination of information about the project, as well as the community's relationship to the project area.
- Interviewed government representatives from several agencies and other stakeholders from non-profits engaged in the project activities (see Section 2.3.2 above), to confirm claims of the project proponent with regard to project activities, community engagement, disputes, land ownership, regulatory compliance, and risks.

- Carried out inspections using interviews and review of documentation of the project's measurement methodologies through the following activities:
 - Independent check on project area boundaries and demarcation of the project area through on-site observations.
 - Independent check on the project's field sampling scheme and monitoring including checks on biomass inventory plot measurements and disturbances.
 - Independent checks on monitoring approaches including observations of biomass and other field monitoring sheets (i.e., forest patrols) and data storage.
 - Independent check of current and historical land use in the project areas using imagery, site observations, and other available sources as necessary to verify the prior and current land uses and evidence of natural disturbances.

2.5 Resolution of Findings

Any potential or actual discrepancies identified during the audit process were resolved through the issuance of findings. The types of findings typically issued by SCS during this type of verification engagement are characterized as follows:

- **Non-Conformity Report (NCR):** An NCR signified a discrepancy with respect to a specific requirement. This type of finding could only be closed upon receipt by SCS of evidence indicating that the identified discrepancy had been corrected. Resolution of all open NCRs was a prerequisite for issuance of a verification statement. NCRs are equivalent to Corrective Action Requests (CARs).
- **New Information Request (NIR):** An NIR signified a need for supplementary information in order to determine whether a material discrepancy existed with respect to a specific requirement. Receipt of an NIR did not necessarily indicate that the project was not in compliance with a specific requirement. However, resolution of all open NIRs was a prerequisite for issuance of a verification statement. NIRs are equivalent to Clarification Requests (CLs).
- **Observation (OBS):** An OBS indicates an area where immaterial discrepancies exist between the observations, data testing results or professional judgment of the audit team and the information reported or utilized (or the methods used to acquire such information) within the GHG assertion. A root cause analysis and corrective action plan are not required, but highly recommended. Observations are considered by the audit team to be closed upon issuance, and a response to this type of finding is not necessary.

As part of the audit process, 20 NCRs, 53 NIRs and 1 OBS were issued. All findings issued by the audit team during the audit process have been closed. In accordance with Section 4.1.21 of the VCS Standard, all findings issued during the audit process, and the impetus for the closure of each such finding, are described in Appendix A of this report.

2.5.1 Forward Action Requests

The audit team has evaluated the following forward action requests (FAR) detailed in the Validation Report

Forward Action Request	Assessment of FAR
Updated Forest Management Plans	As required by the FAR issued in the Validation Report, the auditors have confirmed through both interviews with government officials (GERFOR) and through review of the updated forest management plans, operating plans, and supporting documentation /19/-/22/ that the approved plans include non-timber activities such as managing for ecosystem services (e.g., water, biodiversity), and extraction of non-timber forest products within the project area. The management plans include continued timber harvesting outside of the project area. Overall, through discussions with the GERFOR officials, it was made clear to the auditors that the project can legally forgo timber harvesting within the project area and instead opt for protecting ecosystem services. This FAR issued at validation has been adequately addressed.

The audit team has issued the following forward action requests (FAR) detailed in the table below.

Forward Action Request	Finding Number	Description of FAR
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Uncertainty in height and biomass mapping	NIR 49, 50, 67, 69 NCR 68,	Context: This Forward Action Requests pertains to the accounting of uncertainty of project scenario biomass maps that were intended to be used to account for ongoing sequestration in the project scenario. Due to several findings pertaining to the uncertainty and conclusion that the uncertainty of the maps was higher than anticipated, the project proponent implemented PD Deviation #5 to forgo accounting of ongoing sequestration during this monitoring period. However, the project has expressed the intention to carry out such monitoring and accounting in future monitoring periods. As a result, the auditors are issuing this Forward Action Request for the future VVBs and the Verra Registry to be aware of these unresolved issues which are both complex and could become material in the future. Requirement: Section 8.4.1.1 of the Methodology provides requirements for calculating the total project uncertainty. It states “Estimated greenhouse gas emissions and emission reductions from IFM activities have uncertainties associated with parameters and coefficients including estimates of area, carbon stocks, regrowth and expansion factors. It is assumed that the uncertainties associated with input data are available, either as default uncertainty values given in most recent IPCC guidelines, or as statistical estimates based on sampling. Uncertainty at all times is defined at the 95% confidence interval where the estimated variance exceeds +/- 15 percent from the mean.” Later it indicates “For both the baseline and the with-project case the total uncertainty is equal to the square root of the sum of the squares of each component uncertainty and is calculated at the time of reporting through propagating the error in the baseline stocks and the error in the project stocks.” And lastly, it requires “The project proponent must justify the selection of uncertainty propagation in the project documents.” Issues: Section 2.2 of Appendix 1 submitted by the project team states: “The data [a variety of satellite datasets] generally provides a strong relationship between tree height and biomass in tropical forests (Asner & Mascaro, 20146).” However, the data output from this process is a height map as indicated in the following paragraph: “to create a regional per-pixel forest canopy height estimate map”. Instead, Asner & Mascaro (2014) use georeferenced plots to both build and validate estimates of biomass from remotely sensed data, as do all the related papers cited in Appendix 1. GEDI itself requires geolocated ground measurements for both the calibration and validation of their biomass maps (https://gedi.umd.edu/science/calibration-validation/).
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		• The auditors would like to note that what Anser and Mascaro (2014) envisage for the future and what they recommend going forward based on their findings are not one in the same. From the auditor's perspective, Anser and Mascaro (2014) appear to be directly stating that georeferenced plots are still required moving forward (using the approach they present) based on the second quote provided from the paper in the last findings response: "...both of which can be acquired quickly in the field and/or via current published databases provided they are co-registered with LiDAR data." Co-registered means pixel overlap and implies that the plots are georeferenced to be able to align with LiDAR data in this context. Even under a different interpretation of 'co-registered,' Anser and Mascaro (2014) do not suggest using regionally-created allometries and applying them to LiDAR data to estimate biomass without validation with georeferenced biomass data. • Furthermore, section 'Plot-level biomass-height modelling' of Appendix 1 states, "We then created a model relating plot AGB to height of the 3 tallest trees in the plot. As expected, we found a strong and direct relationship between field measured AGB and the height of the tallest trees (Figure 4)." No metrics have been provided to support the assertion of a 'strong and direct relationship', and the auditors have disagreed with this qualitative assertion from the data provided for the first monitoring period. The auditors have found this relationship and its application to the height maps to contained uncertainty which is not accounted for in the uncertainty quantification (i.e., according to an r-squared metric, only 33% of the variation in log(AGB) is explained by log(height)) which was not accounted for). Forward Action Request: As described above, if the project opts to utilize the lidar-based biomass mapping approach for future monitoring periods, a competent VVB shall: (1) Ensure that the uncertainty approach includes georeferenced plot locations to build and validate the estimates of biomass from the remotely sensed data. (2) Ensure the approach applied accurately and adequately accounts for all of the uncertainty in the height and biomass relationship, based on accepted approaches from the best available science (e.g., peer-reviewed studies). (3) The best statistical practices for conservatively and accurately accounting for the uncertainty of the Lidar-based biomass are applied and presented in a transparent and replicable manner.
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2 – Land titling disputes	Verra PRR issue #2	- The auditors confirmed during this engagement through interviews with communities, the partner NGO CEDIA, and the government agency DISAFILPA that the dispute concerning overlapping boundaries of the Green Gold concession and Berlin Native Community had been resolved. However, during site visit the official resolution documentation was still in process and not released. During the Verra review of this validation audit, the official documentation became available, and the auditors reviewed the Regional Managerial Resolution No. 158-2024-GRL-GGR-GRDFFS (DE-CARTA-GOREL-Resolution 158.pdf) which explicitly indicates that the 557 ha of GGF land that was partially overlapping the Berlin community has been excluded from GGFs holdings. - The auditors also confirmed that all of the native communities bordering GGF concessions have been titled significantly reducing any risk associated with titling disputes or delays in release of official resolution documentation. - Nonetheless the audit team is issuing this FAR to highlight that future VVBs should conduct interviews regarding the status of the titling process with communities, CEDIA, and DISAFILPA and review any relevant documentation to evaluate potential governance issues.
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2.6 Eligibility for Validation Activities

This section is not applicable, as SCS holds accreditation for validation for the relevant sectoral scope (scope 14; AFOLU).

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

This section is not applicable, as the project is not, at this time, seeking registration under the VCS Program and an approved GHG program.

3.2 Methodology Deviations

The below table identifies each methodology deviation applied to the project that were validated as part of the verification engagement. The audit team concludes, in summary, that all such deviations are

valid. The identification number refers to the number listed in section 3.2.1 of the MR. All other previously validated methodology deviations are described below in section 4.1.2 of this report.

Identification of deviation	Assessment column 1*	Assessment column 2**
#5 – Averaged baseline emissions	Due to an error discovered in the quantification of the validated baseline, PD deviation #4 (described below) has been implemented to correct that quantification and more accurately apply the annual area harvested in the baseline Timber Harvest Plan. This ultimately resulted in a need to slightly deviate from section 8.1 of the methodology regarding the averaging of baseline emission across the crediting period. The auditors crosschecked the deviation across the criteria in section 3.20 of the VCS and confirmed that this deviation relates to the procedures related to data and parameters available at validation and the subsequent quantification utilizing those parameters.	The audit team found through independent recalculation of the corrected baseline that this deviation results in greater accuracy of the baseline for each year relative to the proposed approach in section 8.1 of the methodology. Further there is no impact on the total baseline emissions across the crediting period and it ultimately has no impact on the conservativeness of the baseline.

#6 – Market Leakage	The project has proposed a deviation to equation 40 of the methodology and the analysis of market leakage, justifying the deviation through a detailed analysis of annual wood product exports from Peru /77/. The analysis considers the actual wood products the project would have produced relative to the actual wood product produced and/or exported from Peru during the monitoring period. The approach uses year 2019, prior to the monitoring period, and when Green Gold was still operating as a timber company. For most product types, the data demonstrates that there has been a decline in production/export across the country, highlighting that other producers have not picked up the shortfall in supply resulting from the GGF project. For some products (e.g., kiln sticks, decking, deck tiles, other classes), the national-level data shows an increase in production during this monitoring period, which could be considered as leakage. For all domestic products, the project conservatively assumes 100% leakage. Thus, the project multiplies the leakage factor determined by following Box 2 of the methodology by the percentage of production that could have been taken up by other producers within Peru, but alters equation 40 to achieve a more accurate estimate of that percentage. The auditors have confirmed all values in their analysis through direct review of the source data and recalculation of the products and associated harvests that could be considered market leakage /77/. The auditors cross-checked the deviation against the requirements of the VCS	The auditors cross-checked the deviation against the requirements of VCS Section 3.20.2 and confirmed that this deviation “result in increased accuracy of such quantification.” The auditors agree with the assertion that the deviation results in increased accuracy in market leakage calculation as it considers real, verifiable timber harvest data, concession area data, log volumes, and revenues from product exports from Peru to determine the actual percentage of the GGF supply that could represent market leakage within Peru. Therefore, this deviation goes a step further than the methodology to determine whether there was a real increase in supply of products in Peru compensating for the loss of supply from the GGF project. The auditors conclude that the incorporation of this extra data-driven step results in increased accuracy.
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Identification of deviation	Assessment column 1*	Assessment column 2**
	Section 3.20.1 and confirmed that the deviation from “procedures relating to monitoring or measurement set out in the methodology” and therefore is a valid deviation.	

- *Assessment column 1 contains information regarding assessment of whether the deviation meets with the criteria and specifications for permitted methodology deviations.
- **Assessment column 2 contains information regarding assessment of whether the deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals (except where it results in increased accuracy)

3.3 Project Description Deviations

The below table identifies a project description deviation applied by the project that was validated as part of the verification engagement described in this report. The audit team concludes, in summary, that the deviation is valid.

Identification of deviation	Assessment column 1*	Assessment column 2**	Assessment column 3***
#1 – Data resolution for disturbance & illegal logging	The validated PD indicated that a biomass map of 30x30m resolution would be generated for the disturbance analysis. This deviation is to apply a 25x25m resolution which results in greater accuracy. The auditors cross-checked this deviation against section 3.21 of the VCS as well as the applicability conditions of the methodology and confirmed that the deviation does not impact the applicability of the methodology.	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the additionality of the project from the validated PD and confirmed that the deviation does not impact the project's additionality in any way.	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the baseline scenario described in the validated PD and confirmed that the deviation does not impact the project's the appropriateness of the baseline/without-project scenario.

Identification of deviation	Assessment column 1*	Assessment column 2**	Assessment column 3***
#2 – Detection of disturbance	The validated PD indicated that any loss within a 3x3 pixel viewing window of 10 tC/ha in the biomass map of the project (e.g., methodology deviation 3 described in section 3.2 above) would be flagged as a disturbance. This deviation is to flag any loss of 5 tC/ha as a disturbance, which is significantly more conservative resulting in more minor disturbance events being detected and emissions quantified. The auditors cross-checked this deviation against section 3.21 of the VCS as well as the applicability conditions of the methodology and confirmed that the deviation does not impact the applicability of the methodology.	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the additionality of the project from the validated PD and confirmed that the deviation does not impact the project's additionality in any way.	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the baseline scenario described in the validated PD and confirmed that the deviation does not impact the project's the appropriateness of the baseline/without-project scenario.

Identification of deviation	Assessment column 1*	Assessment column 2**	Assessment column 3***
#3 – Field plot locations	The validated PD indicated that for monitoring of ongoing sequestration from forest growth and for monitoring of disturbances/illegal logging, the biomass mapping model would be calibrated with 30 plots randomly located among height strata. However, the project has deviated to place plots among vegetation type strata. The auditors cross-checked this deviation against section 3.21 of the VCS as well as the applicability conditions of the methodology and confirmed that the deviation does not impact the applicability of the methodology.	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the additionality of the project from the validated PD and confirmed that the deviation does not impact the project's additionality in any way.	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the baseline scenario described in the validated PD and confirmed that the deviation does not impact the project's the appropriateness of the baseline/without-project scenario.

Identification of deviation	Assessment column 1*	Assessment column 2**	Assessment column 3***
#4 – Calculation Error	The validated PD originally applied a rounded down project area, which was corrected with this deviation. The validated PD originally applied equal annual areas harvested in the baseline quantification. However, this was an error as it was not in agreement with the Timber Management Plan which specified different annual harvest parcels. This deviation corrected the baseline calculation errors. As this is the first verification, there is no impact on previous crediting. The auditors cross-checked this deviation against section 3.21 of the VCS as well as the applicability conditions of the methodology and confirmed that the deviation does not impact the applicability of the methodology.	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the additionality of the project from the validated PD and confirmed that the deviation does not impact the project's additionality in any way.	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the baseline scenario described in the validated PD and confirmed that the deviation does not impact the project's the appropriateness of the baseline/without-project scenario.

Identification of deviation	Assessment column 1*	Assessment column 2**	Assessment column 3***
#5 – Ongoing sequestration in the project scenario	The validated PD proposed monitoring and accounting of removals due to sequestration from ongoing forest growth in the project scenario, which is an optional component of the VM0010 methodology. The project has opted to not include this accounting for this monitoring period which is conservative as it results in fewer removals. The auditors cross-checked this deviation against section 3.21 of the VCS as well as the applicability conditions of the methodology and confirmed that the deviation does not impact the applicability of the methodology as the account of ongoing forest growth is considered to be optional in the methodology (Section 8.21).	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the additionality of the project from the validated PD and confirmed that the deviation does not impact the project's additionality in any way.	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the baseline scenario described in the validated PD and confirmed that the deviation does not impact the project's the appropriateness of the baseline/without-project scenario.

Identification of deviation	Assessment column 1*	Assessment column 2**	Assessment column 3***
#6 – Parameters to be monitored	The validated PD did not include specific fossil fuel emissions parameters to be monitored as they fossil fuel emissions were found to be de minimis in the baseline. However, those parameters are relevant to illegal logging as well which is to be monitored during all monitoring periods. Thus, this deviation was to simply add those values, which were already reviewed and confirmed at validation. The auditors cross-checked this deviation against section 3.21 of the VCS as well as the applicability conditions of the methodology and confirmed that the deviation does not impact the applicability of the methodology, but simply results in listing these monitored parameters.	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the additionality of the project from the validated PD and confirmed that the deviation does not impact the project's additionality in any way.	The auditors cross-checked this deviation against section 3.21 of the VCS as well as the baseline scenario described in the validated PD and confirmed that the deviation does not impact the project's the appropriateness of the baseline/without-project scenario.

- *Assessment column 1 contains information regarding assessment of whether the proposed deviation impacts the applicability of the methodology.

- **Assessment column 2 contains information regarding assessment of whether the proposed deviation impacts additionality
- ***Assessment column 3 contains information regarding assessment of whether the proposed deviation impacts the appropriateness of the baseline/without-project scenario

The deviation identified above is appropriately described and justified and, in respect of each of the above deviations, the project remains in compliance with the VCS rules.

3.4 Grouped Project

This section is not applicable, the inclusion of new project areas and communities was not validated as part of the verification engagement described in this report.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

4.1.1 Implementation Status of the Project Activity(s)

The implementation status of the project activities can be identified as follows:

- During The steps taken by the audit team to assess each of the following items is specified below.

Item	Verification findings
Existence of any material discrepancies between project implementation and the project description	• Through site visit observations, interviews conducted with project personnel and project communities, and document assessment, the audit team confirmed no material discrepancies between project implementation and the project description.

The implementation status of the monitoring plan and the completeness of monitoring, including the suitability of the implemented monitoring system (i.e., process and schedule for obtaining, recording, compiling and analysing the monitored data and parameters)	• The audit team reviewed the monitoring system's appropriateness for assessing disturbances, illegal logging, and forest carbon accumulation and found that monitoring was conducted as outlined in the PD and is suitable for detecting such variables. It is important to note that several PD deviations were implemented pertaining to the monitoring of these parameters (see section 3.3). • The supporting documentation of these monitoring activities is thorough and consistent throughout various reports. The parameters are suitable for the project activities. • Interviews with project personnel determined that appropriate processes were in place for the recording, compiling, and analyzing of data. • The audit team compared reported disturbances and illegal logging with high resolution imagery and ancillary land use/land cover change products produced by the Peruvian government. • Audit team reviewed data processing procedures to determine that monitoring systems are consistent with described practices and result in accurate mapping.
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The existence of any material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology	• The audit team reviewed the MR and supporting documentation to determine whether there were any inconsistencies with the monitoring plan and applied methodology. While several PD deviations were noted (see Section 3.3, above) that relate to the monitoring of disturbances, illegal logging, and carbons sequestration from ongoing growth (not accounted for during this monitoring period), these deviations have been justified and deemed not to negatively impact the additionality or appropriateness of the baseline scenario. • Calculation worksheets /3/required by the methodological elements were reviewed and where there were non-conformances, they were addressed by project personnel.
Whether the GHG emission reductions or removals generated by the project have become included in an emissions trading program or any other mechanism that includes GHG allowance trading	• Through the application of professional judgment, the audit team is reasonably assured that the GHG emission reductions reported in the MR have not been included in an emissions trading program or any other mechanism that includes GHG allowance trading
Whether the project has received or sought any other form of environmental credit, or has become eligible to do so since validation or previous verification	• Through the application of professional judgment, the audit team is reasonably assured that project has not received or sought any other form of environmental credit, not has it become eligible to do so since the previous verification
Whether the project has participated or been rejected under any other GHG programs since validation or previous verification	• Through the application of professional judgment, the audit team is reasonably assured that the project has not participated or been rejected under any other GHG programs since the previous verification

Sustainable development contributions	Through review of section 1.11 of the MR, supporting information /9/ and well as Peru's National Sustainable Development goals (https://sustainabledevelopment.un.org/), the audit team determined that the project activities during this monitoring period have contributed to these national SDGs
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4.1.2 Previously Validated Methodology Deviations

Seven methodology deviations were validated in the Project Description /11/. Please note that not all methodology deviations are applicable to the current monitoring period as described below. The Identification number listed in the first column matches the Methodology Deviation number from the validated PD.

Identification of Deviation	Methodology Deviation
1 – Smalian's formula	This deviation pertains to the use of Smalian's formula instead of allometric equations to calculate volume from tree measurements for the baseline inventory. Because this deviation impacted baseline quantification, it is applicable to this monitoring period and all subsequent monitoring periods until baseline reassessment.
2 – Logging damage	This deviation pertains to the quantification of carbon loss in logging slash and residual damage and proposes the use of a Logging Damage Factor and Logging Infrastructure Factor applied to the baseline quantification. Because this deviation impacted baseline quantification, it is applicable to this monitoring period and all subsequent monitoring periods until baseline reassessment. This deviation is labelled as #2 of section 3.2.1 in the current Monitoring Report.
3 – Carbon sequestration in the project scenario	This deviation pertains to the application of remotely sensed and Lidar based techniques to monitor carbon accumulation due to tree growth in the project scenario. Due to PD deviation #5 described in section 3.3 above, the project proponent has opted not to account for ongoing sequestration in the project scenario during this monitoring period, therefore this deviation is not applicable to this monitoring period . As a result, this deviation is not listed in section 3.2.1 of the current Monitoring Report.
4 – Monitoring illegal logging	This deviation pertains to the techniques applied to monitor the carbon losses associated with illegal logging in the project scenario. However, the project conducted a Participatory Rural Appraisal which demonstrated that the risk of illegal logging in the project area was zero according to the methodology and therefore

Identification of Deviation	Methodology Deviation
	illegal logging emissions were not quantified during this monitoring period. Therefore, this deviation is not applicable to this monitoring period . As a result, this deviation is not listed in section 3.2.1 of the current Monitoring Report.
5 – Measurement of all trees for ongoing sequestration	This deviation pertains to the methodology requirement in section 8.2.1.2 of the methodology to only measure the individual trees that would have been harvested in the baseline scenario, for determination of the project scenario ongoing sequestration. Due to PD deviation #5 described in section 3.3 above, the project proponent has opted not to account for ongoing sequestration in the project scenario during this monitoring period, therefore this deviation is not applicable to this monitoring period . As a result, this deviation is not listed in section 3.2.1 of the current Monitoring Report.
6 – Wood product class fractions	This deviation pertains to the application of wood product class fractions generated from the project area instead of global defaults, for use of baseline wood product quantification. Because this deviation impacted baseline quantification, it is applicable to this monitoring period and all subsequent monitoring periods until baseline reassessment. This deviation is labelled as #3 in section 3.2.1 of the current Monitoring Report.
7 – Reference area	This deviation pertains to the selection of multiple reference areas of forest operations that practice similar logging techniques and business practices as the project proponent, for the development of the common practice baseline. Because this deviation impacted baseline quantification, it is applicable to this monitoring period and all subsequent monitoring periods until baseline reassessment. This deviation is labelled as #4 in section 3.2.1 of the current Monitoring Report.

- *Assessment column 1 contains information regarding assessment of whether the deviation meets with the criteria and specifications for permitted methodology deviations.
- **Assessment column 2 contains information regarding assessment of whether the deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals (except where it results in increased accuracy)

4.1.3 Previously Validated Project Design Deviations

As there exist no previously validated project design deviations, this section is not applicable.

4.1.4 Previously Validated Minor Changes to the Project Description

As there exist no previously validated minor changes to the project description, this section is not applicable.

4.1.5 Overall Conclusion

In summary, the audit team can confirm that the project has been implemented as described in the validated project description.

In summary, with the exception of the deviations to the project description as discussed above, the audit team can confirm that the project has been implemented as described in the validated project description.

4.2 Safeguards

4.2.1 No Net Harm

An assessment of potential negative environmental and socio-economic impacts has been performed in accordance with Section 3.18.1 of the VCS Standard and no such impacts have identified. The audit team performed the following actions to confirm the absence of potential impacts:

- Interviewed project personnel and other implementation partners such as CEDIA and FECONAMNCUA (Indigenous federation), and stakeholders (regional government bodies) regarding potential impacts described in the monitoring report.
- Interviewed a sample of community members from various groups (men, women, youth, community leaders) as well as individuals employed by the project (e.g., forest custodians, cooks, nurse, community liaison, etc), or individuals who were provided training as a result of the project, regarding the impacts of the project.
- Reviewed the project documentation such as reports on monitoring and control by forest custodians /45/, the project's code of conduct /23/ educational and training activities /9//25/-/24/, participatory rural appraisals /48/, and the project's socialization reports.
- Conducted a thorough review of the project's grievance and redress procedure as well as confirmed its accessibility on-site /39/-/41/. The auditors confirmed through interviews with a range of project stakeholders including community members, that stakeholders are aware of this grievance and redress procedure and that it is described in the MR.
- Applied expert judgement while conducting on-site observations of the project's impacts on the environment both in and outside the project area as well as the socio-economic situation in region.
- The auditors reviewed the section 2.1 of the MR and confirmed that it includes information regarding the project's impact on local stakeholders baseline access and use of forest resources. The project area exists outside of the community areas and it was conveyed during interviews that community members previously and currently only utilize resources found in their community forests and not in the project area. As described in the Participatory Rural Appraisal, a small number of community members have indicated they have historically and currently enter the project area for resources. Overall we found the project has had no impact on the access to these resources.

Through the evaluation detailed above, audit team concludes that the project has resulted in no net harm with regards to environmental and socio-economic impacts.

4.2.2 Local Stakeholder Consultation

In accordance with Section 3.18.3 of the VCS Standard, mechanisms for ongoing communication with local stakeholders have been established and maintained to allow stakeholders to raise concerns about potential negative impacts during project implementation. The stakeholder consultations can be summarized as follows:

- At the outset (2020) the project team worked with stakeholders FECONAMNCUA and CEDIA /37/, two organizations closely involved with the communities in this region to disseminate information about the project to the communities involved.
- The project then conducted local consultations (2021-2022) in which they met with individual communities and presented the project, provided information on the potential activities communities could adopt/implement, the benefits, risks, and opportunities of the project, they conducted surveys to gather information on socio-economic factors, and then presented results of the surveys and the developed action plan /51/-/53/.
- After the local consultations, the project team asked if communities wished to be involved in the project, demonstrated submission of signed letters of acceptance /50/.
- The project also hired forest custodians who serve both monitoring/patrolling functions and interact with the communities. These custodians directly introduced themselves to each of the communities and provided information on their roles and functions /53/-/54/.
- The project conducted an in depth participatory rural appraisals with the community members to develop “talking maps” to better understand the resources that communities have and extract from the area and what resources they desire /48/, as a means of ensuring their feedback regarding project activities to be implemented.
- The auditors confirmed during these interviews that the local stakeholder consultations included a presentation of the grievance and redress procedure /41/ and information on how stakeholders could present grievances regarding the project. The auditors confirmed that this is described in section 2.2 of the MR.
- The communities were also provided with information regarding the validation and verification body’s site visit in the form of letters sent to the communities that were approved of by the communities.

The stakeholder input received during ongoing communication with local stakeholders can be summarized, at a high level, as follows:

- Through interviews with community members and representatives, the audit team found that community members were well aware of the projects being implemented and of the Green Gold Forestry team, with strong relationships with the community liaison team.

- Through community interviews and review of the consultation reports /51/-/52/ and the PRAs /48/, the auditors confirmed that community members were given the opportunity to provide feedback and engage in the design and implementation of the project activities. This has had to varying project activities being implemented among the 16 involved communities (i.e., some communities focus on poultry and egg cultivation, others have opted for non-timber forest product harvesting, others have education and training goals, etc).
- The auditors observed that positive inputs have been received by the local communities, with community members directly impacting the project activities and implementation.
- During the site visit interviews, we confirmed with the community members that they were aware of the validation and verification site visit.

The audit team concludes, overall, that the project proponent has taken appropriate measures to communicate and consult with local stakeholders, through direct meetings and stakeholder engagement activities as described above, by conveying:

- The project design and implementation, including the results of monitoring.
- The risks, costs and benefits the project may bring to local stakeholders.
- All relevant laws and regulations covering workers' rights in the host country.
- The process of VCS Program validation and verification and the validation/verification body's site visit.

4.2.3 Public comments

The project received public comments outside of the public comment period. The comments as well as the actions taken by the project and the assessment conclusions by the auditors are described in the table below.

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
The forest concession harvested 0.13 M3 per hectare in the Forest concession Unit number 10, from which the inventory is considered to project the baseline scenario.	The project proponent has provided a response to the comment in the MR which details that the POA10 inventory, which was verified by government officials included 15 m3/ha of commercially-viable timber.	The auditors conducted the validation of this project and we had issued findings related to the 15m3/ha baseline harvest rate (NIR58). We confirmed that the project has employed a common practice baseline as the project did not meet the methodology requirements to comply with the historical baseline option which was confirmed during validation /11//12/ (Section 6.2 of the Methodology). The common practice baseline was supported with documentation regarding GGF's intended amplification of harvesting in their business plan as well as support for the common practice extraction level of 15 m3/ha. As described in section 3.3.6 of the Validation Report, the auditors confirmed this common practice baseline during interviews with government officials who indicated that the 15 m3/ha rate is considered to be regionally feasible. We also reviewed this baseline against regional harvest practices for companies with comparable business models as the project proponents (as described in their business plan).

The forest concession historically harvested 0.43 M3 per hectare (harvest years 2008-2009 to 2019-2020).	The project proponent included a response to this comment in the MR which confirms that GGF historically harvested a lower volume during this pre-project period.	See response to previous comment above.
The total volume of timber extracted in the Loreto Region is 136,366 M3 in 2022 and 249,164 M3 in 2021 (including forest concession and other forest producers). Using 15 M3 per hectare would mean that only the company's forest concessions will harvest 137,583 M3 per year. This is more than the 2022 harvested volume for the whole Loreto Region. The company has 183,445 hectares of forest concessions, which means around 6.6% of the total forest concessions area in the Loreto Region	The project proponent included a response to this comment in the MR which confirms that GGF historically harvested a lower volume during this pre-project period.	See response to previous comments.
The baseline scenario, based on the volume expected of 15 M3 per hectare, estimated annual timber sales of \$17,177,000. Searching at Custom numbers, the company has exports of \$401,000 in 2015, \$76,000 in 2016, \$267,000 in 2017, \$17,000 in 2018 and \$0 in 2019, the year previous to the project start. (PD page 27)	The project proponent included a response to this comment in the MR which confirms that GGF historically harvested a lower volume during this pre-project period.	See response to previous comments.

In terms of employment creation, the PD mentioned a goal of 1440 direct jobs, from which 500 were expected to be women employed. The data retrieved from August 2023 shows 30 jobs registered in the Peruvian authority. (PD page 6)	This comment pertains to the CCB PD and the CCB Validation and is therefore responded to in the CCB PD and the CCB Validation Report.	This comment pertains to the CCB PD and the CCB Validation and is therefore responded to in the CCB PD and the CCB Validation Report.
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4.3 AFOLU-Specific Safeguards

The audit team confirmed through discussions with the project team, interviews with local stakeholders including community members and community representatives, and interviews with the relevant government officials, and interviews with local NGOs involved in community engagement (indigenous rights, land tenure), that the project and the project activities do not pose risks to local stakeholders. The audit team verified the processes used by the project proponent to communicate and consult with local stakeholders during the monitoring period (see section 4.2.2 above).

The auditors found through review of the project activities implemented, interviews with local community members and stakeholders, on-site observations, and review of ownership documentation of the Green Gold Forestry concession that the project does not have an impact on the property rights (land tenure or customary use) of the local stakeholders/surrounding communities. Despite this, the project opted to acquire Free, Prior, and Informed Consent (FPIC) of the communities to give the communities the opportunity to participate in adopting various alternative livelihood practices and training/education programs. This FPIC was conducted in a culturally appropriate manner through community meetings, consent was provided through voting and approval by each community leader which is in line with the governance structures, and it was conducted prior to the initiation of any activities with the community members.

The auditors confirmed that section 2.3 of the MR contains a detailed description of the Grievance and Redress procedure that this description corresponds to the Protocol of Conflict Resolution /41/ provided to the auditors and found on-site. We also confirmed through interviews that community members were aware of these procedures. The audit team conducted a review of any disputes or conflicts that arose between the project proponent and the local stakeholders during the 2020-2022 monitoring period. Through interviews with local stakeholders, discussions with NGO representatives and local government officials, the auditors have found there were minor disputes related to overlapping boundaries as described in section 2.3 of the MR. However, we confirmed through interviews with DISAFILPA (government agency) and community members and through review of

documentation that the disputes referenced were either unfounded or completely resolved through resolutions and are accurately described in the MR /79//80//43//44/.

The project has supported the establishment of official land titles for all communities engaged with the project and this has been achieved across all communities /81/ thus preventing any such overlapping title disputes in the future. Furthermore, it is important to note that during this monitoring period, the project also began development of the Climate, Community and Biodiversity Standards component of their project. In this process, all communities agreed to participate in the project /50/and the auditors confirmed conformance with the CCB validation criteria /82/.

In order to prevent conflicts or creating any negative impacts, the auditors confirmed through interviews and review of documentation that the project has conducted numerous consultations with the communities to ensure they are informed about the project, the Green Gold Forestry company, and the socio-economic activities the project has to offer. The auditors also confirmed through on-site observations that the project also placed numerous signs demarcating the concession/project's legal boundary as to prevent conflicts.

Overall, through the above steps, the auditors conclude that the project proponent has taken the appropriate measures to ensure that the project has not created negative impacts on local stakeholders, or mitigated such impacts where necessary.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

4.4.1 Data and Parameters Available at Validation

The following table lists the parameters relevant to this project available at validation.

Data/Parameter	Steps taken by audit team to assess...		
	Accuracy of GHG emission reductions and removals	Whether methods/formulae set out in project description have been followed	Appropriateness of default values
$V_{ex,j,i} BSL$	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A (assessed at validation)
$VEX,INF,j,i BSL$	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A
$CEX,j,i BSL$	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A (assessed at validation)

	Steps taken by audit team to assess...		
Data/Parameter	Accuracy of GHG emission reductions and removals	Whether methods/formulae set out in project description have been followed	Appropriateness of default values
CFj	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A (assessed at validation)
Dj	N/A (assessed at validation)	Confirmed through the review of the PD that the validated value has been applied.	N/A (assessed at validation)
LDF	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A
LIF	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A
ACS _{0,i}	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A (assessed at validation)
OF, SLF, WW, PL	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A (assessed at validation)
RGR _i	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A (assessed at validation)
Ggi	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A (assessed at validation)
COMFi	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A (assessed at validation)
BCEFr	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A (assessed at validation)

	Steps taken by audit team to assess...		
Data/Parameter	Accuracy of GHG emission reductions and removals	Whether methods/formulae set out in project description have been followed	Appropriateness of default values
BCEF	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A (assessed at validation)
PML _{FT}	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A
FC (harvest, hauling, barging, processing)	N/A (assessed at validation)	Confirmed through review of the baseline calculation workbooks that the values set out at Validation have not changed. However, as indicated in PD /11/ deviation #6, these parameters were not listed in the original PD and have subsequently been added to this MR.	N/A (assessed at validation)
EF _{fuel}	N/A (assessed at validation)	Confirmed through review of the baseline calculation workbooks that this value set out at Validation have not changed. However, as indicated in PD /11/ deviation #6, this parameter was not listed in the original PD and have subsequently been added to this MR.	N/A (assessed at validation)

	Steps taken by audit team to assess...		
Data/Parameter	Accuracy of GHG emission reductions and removals	Whether methods/formulae set out in project description have been followed	Appropriateness of default values
A1,i,p	We confirmed the harvest areas through review of the Timber Harvest plan in the PD /11/, independent recalculation of the areas from the harvest area shapefiles /69/ and the calculation workbook /2/.	This relates to PD deviation #4 described in section 3.3 above. The auditors confirmed that the areas follow the Timber Harvest Plan description in the PD.	N/A
A2-10,i,p	We confirmed the harvest areas through review of the Timber Harvest plan in the PD /11/, independent recalculation of the areas from the harvest area shapefiles /69/ and the calculation workbook /2/.	This relates to PD deviation #4 described in section 3.3 above. The auditors confirmed that the areas follow the Timber Harvest Plan description in the PD.	N/A
A11-20,i,p	We confirmed the harvest areas through review of the Timber Harvest plan in the PD /11/, independent recalculation of the areas from the harvest area shapefiles /69/ and the calculation workbook /2/.	This relates to PD deviation #4 described in section 3.3 above. The auditors confirmed that the areas follow the Timber Harvest Plan description in the PD.	N/A

	Steps taken by audit team to assess...		
Data/Parameter	Accuracy of GHG emission reductions and removals	Whether methods/formulae set out in project description have been followed	Appropriateness of default values
At+	We confirmed the harvest areas through review of the Timber Harvest plan in the PD /11/, independent recalculation of the areas from the harvest area shapefiles /69/ and the calculation workbook /2/.	This relates to PD deviation #4 described in section 3.3 above. The auditors confirmed that the areas follow the Timber Harvest Plan description in the PD.	N/A
$BCEF_R$	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A (assessed at validation)
RGR_i	N/A (assessed at validation)	Confirmed through the review of the PD /11/ that the validated value has been applied /2/.	N/A

4.4.2 Data and Parameters Monitored

The following table lists the parameters relevant to this project and that have been monitored

	Steps taken by audit team to assess...		
Data/Parameter	Accuracy of GHG emission reductions and removals	Whether methods/formulae set out in project description have been followed	Appropriateness of default values
Illegal Logging PRA Results	Conducted an independent review of the PRA results /8/ and conducted interviews with community members who participated in the PRA. Confirmed that <10% of respondents interviewed indicated that illegal logging has occurred within the project area. Thus parameters $CDIST_{IL,i,t PRJ}$ & Result of Limited Illegal Logging Survey are not relevant to this monitoring period.	Confirmed through review of the PD /11/ and the methodology that the methods set out have been followed /8/.	N/A
$Aburn,i,t$	Conducted an independent review of remotely sensed imagery, government disturbance data, and the projects maps of biomass loss and disturbances /3/, as well as disturbance mapping processes /10/.	Confirmed through review of the PD /11/ and the methodology that the methods set out have been followed.	N/A
$Adist,i,t$	Conducted an independent review of remotely sensed imagery, government disturbance data, and the projects maps of biomass loss and disturbances /3/, as well as disturbance mapping processes /10/.	Confirmed through review of the PD /11/ and the methodology that the methods set out have been followed.	N/A

	Steps taken by audit team to assess...		
Data/Parameter	Accuracy of GHG emission reductions and removals	Whether methods/formulae set out in project description have been followed	Appropriateness of default values
<i>ADIST_IL,i</i>	Conducted an independent review of the spatial files delineating the potential area of illegal logging. Due to the results of the PRA/8/, this parameter was not applied during this monitoring period.	Confirmed through review of the PD /11/ and the methodology that the methods set out have been followed.	N/A
<i>A_{Plot}</i>	Conducted on-site observations and measurements of the plot areas, reviewed field monitoring protocol documentation /13/ as well as spatial checks using ArcGIS /64/.	Confirmed through review of the PD /11/ and the methodology that the methods set out /13/ have been followed.	N/A
DBH	Conducted on-site observations and independent remeasurement of DBHs /5/ to determine they were accurately measured following established protocols /13/.	Confirmed through review of the PD /11/ and the methodology that the methods set out /13/ have been followed.	N/A
<i>H_{Stem}</i>	Conducted on-site observations and independent remeasurement of stem heights /5/ to determine they were accurately measured following established protocols /13/.	Confirmed through review of the PD /11/ and the methodology that the methods set out /13/ have been followed.	N/A

	Steps taken by audit team to assess...		
Data/Parameter	Accuracy of GHG emission reductions and removals	Whether methods/formulae set out in project description have been followed	Appropriateness of default values
PMPi	Confirmed the client's calculation of total aboveground biomass within the project area via the use of 30 biomass plots. Confirmed the use of the merchantable biomass from the timber harvest plan. This value was independently recalculated /2/.	Confirmed through review of the methodology that the required monitoring methods have been followed. Note that this parameter relates to the Methodology Deviation #6 (see section 3.2 above).	N/A
Ai	Confirmed through independent review of spatial files /16/ in ArcGIS	Confirmed through review of the PD /11/ and the methodology that the methods set out have been followed.	N/A
$\Delta C_{AB,t PRJ-Gross}$	Confirmed through independent recalculation. This value was ultimately zero due to project description deviation #5.	Confirmed through review of the PD /11/ and the PD deviation #5 that this was ultimately not calculated.	N/A

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

4.5.1 Nature of Data and Information Supporting GHG Quantification

Certain data and information supporting the quantification of GHG emission reductions and/or removals were hypothetical, projected and/or historical in nature, as described in more detail below.

- Project emission reductions were derived using a baseline rate of harvesting which is based on the Timber Management Plan detailed in the PD. The audit team confirmed through review of the validated PD, that the baseline rate of harvesting, volume harvested, etc applied during this monitoring period is in agreement with the values reported in the validated PD (aside for PD Deviation #4 which relates to the annual harvest area described in section 3.3 above).

- The audit team confirmed through independent checks on the calculations /2/ and the spatial data /16/ that this baseline harvesting during this monitoring represents the planned harvests that would have occurred without the project.
- The auditors confirmed that there has been a lack of activity shifting leakage through a comparison of historical records showing harvest trends in the concessions outside the project area as compared to with-project time period trends /76//78/, thus the project is supported by data that is historical in nature.

Given that the harvest rates and areas were based on historical data and a projection into the future, thus the data supporting the quantification of GHG emission reductions and/or removals can be considered hypothetical, projected and/or historical in nature.

4.5.2 Quality and Quantity of Evidence Used to Determine GHG Quantification

The evidence used to determine the GHG reductions and removals for the verification period was of sufficient quantity and appropriate quality. An identification of the categories of evidence used to determine the GHG emission reductions and removals, and a description of the steps taken to assess the sufficiency of quantity, and appropriateness of quality, of each category of evidence, follows.

	Steps taken by audit team to assess...		
Category	Reliability of the evidence, and source and nature of evidence (external or internal, oral or documented) for determination of GHG emission reductions or removals	Information flow from data generation and aggregation, to recording, calculation and final transposition into the MR	Appropriateness of implemented calibration frequency of monitoring equipment
Calculation workbooks	Replication of calculations and parameters to verify that workbooks /2//77//78/ are free of material error and, thus, reasonably reliable	Tracing of information through workbooks to source data (/2/), replication of calculations to confirm correct parameters were utilized and the methodology equations were followed, and cross-checking calculation workbooks with the MR to ensure consistency between the calculations and monitoring results reported.	N/A

	Steps taken by audit team to assess...		
Category	Reliability of the evidence, and source and nature of evidence (external or internal, oral or documented) for determination of GHG emission reductions or removals	Information flow from data generation and aggregation, to recording, calculation and final transposition into the MR	Appropriateness of implemented calibration frequency of monitoring equipment
Analysis of spatial data and remotely sensed imagery	The auditors reviewed of procedures and independent review of satellite imagery and spatial data /3//14//16/. We confirmed that the spatial data is of high quality and accuracy and confirmed the boundaries, locations of communities and project areas are accurate. We crosse-checked the remotely sensed disturbance data against aerial imagery and other government products. Due to PD deviation #5 the use of remotely sensed imagery during this monitoring period was limited.	Through review of spatial analysis processes, audit team confirmed that data were appropriately transcribed into the calculation workbooks /2/ (see above). Again, due to uncertainties associated with the biomass maps /14//70/, PD deviation #5 was implemented during this monitoring period.	Audit team confirmed that source data for this analysis is a mix of NASA based datasets (e.g., Landsat, GEDI), which are official program of the United States government that can be assumed to have industry-standard calibration procedures in place to ensure high-quality data. However, the remote sensing modeling and processing was conducted by the project team. Again, due to uncertainties associated with the biomass maps /14//70/, PD deviation #5 was implemented during this monitoring period.

Quantification reporting in the Monitoring Report	Through independent review of the data and information provided /2//3//16//69//77//78/in the monitoring report, the auditors can confirm the information regarding the quantification of GHG emissions reductions as reported in the MR is accurate and complete.	The auditors confirmed that the details described in the MR (section 5.0 and Appendix D) are consistent with the calculation files /2/, spatial files /16//74/, and the supporting documentation (e.g., /76/) provided and that a sufficient level of detail has been included in the MR to enable an external reader to replicate the quantification. The auditors confirmed that the information presented regarding baseline emissions, project emissions, leakage emissions /77//78/, and net GHG emissions and removals is accurate and in conformance with the reporting requirements. The auditors confirmed that any methodology deviations applicable to this monitoring period have been followed and adhere to the requirements of deviations (e.g., more conservative unless results in	N/A
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	Steps taken by audit team to assess...		
Category	Reliability of the evidence, and source and nature of evidence (external or internal, oral or documented) for determination of GHG emission reductions or removals	Information flow from data generation and aggregation, to recording, calculation and final transposition into the MR	Appropriateness of implemented calibration frequency of monitoring equipment
		increased accuracy). See sections 3.2 and 4.1.2 above regarding deviations employed.	
Project area	The auditors reviewed the spatial files including the shapefiles /16/ and kml file /74/ of the IFM project area and through independent review and recalculation we ensure that the areas accurately represent the validated project areas both in total area and location. Through independent recalculation we confirmed that these areas were used throughout the quantification of emission reductions as well.	Through independent review against the MR requirements, the auditors confirmed that the information presented in section 1.7 of the Monitoring Report regarding the project area is clear and consistent with the shapefiles /16/, KML file /74/, and the areas used the quantification workbooks /2/. The auditors confirmed that this KML file has been uploaded to the Verra registry /75/.	N/A

Overall, the evidence used to determine the GHG reductions and removals for the verification period is of sufficient quantity (i.e., all necessary information has been provided to allow the audit team to trace and, as necessary, recalculate the quantification of GHG reductions and removals), and of appropriate quality (i.e., information presented is free of misstatements, whether material or immaterial) to allow the audit team to render a verification opinion.

4.6 Non-Permanence Risk Analysis

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

The audit team did not perform a re-assessment of the risk analysis from first principles, but did assess

- Whether any circumstances or conditions may have transpired since the previous risk analysis such that a previous determination having bearing on the risk rating is no longer valid.
- Whether items meant to address certain risks are in place and functioning as intended.

The audit team's conclusions regarding the risk analysis are two-fold. The audit team concludes that

- The assignment of risk scores to risk factors that did not change from the previous risk analysis remains appropriate and in conformance to the AFOLU Non-Permanence Risk Tool, to the extent that such assignment was appropriate and in conformance to the AFOLU Non-Permanence Risk Tool at the time of the prior risk analysis.
- The assignment of risk scores to risk factors that did change from the previous risk analysis is appropriate and in conformance to the AFOLU Non-Permanence Risk Tool.

A detailed review of the audit team's conclusions may be found below.

4.6.1 Internal Risk - Project Management

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	• N/A	• N/A	Risk rating is appropriate
(b)	• This is the first verification thus no credits were issued on previous carbon stocks. Nonetheless, the audit team confirmed via interviews with project personnel and stakeholders that illegal logging is a risk but not prevalent enough to threaten 50% of the stocks.	• N/A	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(c)	Audit team confirmed during interviews with project personnel, implementing partners and an independent review of the personnel's experience (Linkedin, peer-reviewed publications) that the management team includes individuals with significant experience to successfully undertake all project activities.	N/A	Risk rating is appropriate
(d)	Confirmed during interviews with project personnel that members of the management team live in Iquitos which is less than a day's travel from the project site.	N/A	Risk rating is appropriate
(e)	Audit team confirmed during interviews with project personnel and an independent review of the personnel's experience (Linkedin, peer-reviewed publications, internet searches) that the management team includes individuals with significant experience in AFOLU project design and implementation and carbon accounting and reporting, including forest carbon offset project development and finance.	N/A	Risk rating is appropriate
(f)	The audit team confirmed that an adaptive management plan /61/ is in place. The plan identifies risks and includes monitoring and mitigation actions for each risk.	Adaptive Management Plan /61/ is well written, clear, and meets all requirements of the tool.	Risk rating is appropriate

4.6.2 Internal Risk – Financial Viability

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	N/A	N/A	Risk rating is appropriate
(b)	N/A	N/A	Risk rating is appropriate
(c)	N/A	N/A	Risk rating is appropriate
(d)	- The audit team reviewed the project cash flow /62/ including the assumptions on carbon pricing and the costs and revenues related to the project. We confirmed that the project is less than 4 years from the breakeven point, as it has already secured adequate funding from USAID grants/35//38/, shareholder equity, and revenues from timber. - These baseline assumptions were confirmed at validation.	- Documentation on carbon pricing assumptions is from credible sources and are in published reports which are considered to be of high-quality. - Documentation on the USAID grant received /35//38/ is official and of high quality. - Costs and revenues associated with timber activities are demonstrated from actual receipts , which were confirmed at validation.	Risk rating is appropriate
(e)	N/A	N/A	Risk rating is appropriate
(f)	N/A	N/A	Risk rating is appropriate
(g)	N/A	N/A	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(h)	- The audit team reviewed the project cash flow /62/ including the assumptions on carbon pricing and the costs and revenues related to the project (confirmed at validation). - We confirmed that the project is less than 4 years from the breakeven point, as it has already secured adequate funding from USAID grants/35//38/, shareholder equity, and revenues from timber to confirm that the project has already reached break even and has therefore secured greater than 80% of the funding needed to cover the total cash out.	- Documentation on carbon pricing assumptions is from credible sources and are in published reports which are considered to be high-quality. - Documentation on the USAID grant received /35//38/ is official and of high quality. - Costs and revenues associated with timber activities are demonstrated from actual receipts at validation.	Risk rating is appropriate
(i)	Confirmed through the review of a signed letter /71/ from the Green Gold Forestry Board that the project has available callable financial resources that are not included in the secured funding. The letter was provided at validation and it's applicability moving forward has been confirmed.	Letter has been signed by the company executive board /71/ for which the audit team confirmed the members.	Risk rating is appropriate

4.6.3 Internal Risk – Opportunity Cost

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	N/A	N/A	Risk rating is appropriate
(b)	N/A	N/A	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(c)	N/A	N/A	Risk rating is appropriate
(d)	- The audit team confirmed that the most profitable alternative land use would be timber harvesting. We independently compared the NPV analysis for the project to the without project (baseline) scenario and found that the alternative land use NPV would be <20% more profitable than the project activity. - This was confirmed at validation and through interviews with government officials and expert knowledge, found to continue to be relevant.	- Documentation on carbon pricing assumptions is from credible sources and are in published reports which are considered to be high-quality, confirmed at validation - Documentation on the USAID grant received /72//35//38/ is official and of high quality. - Costs and revenues associated with timber activities are demonstrated from actual receipts.	Risk rating is appropriate
(e)	N/A	N/A	Risk rating is appropriate
(f)	N/A	N/A	Risk rating is appropriate
(g)	N/A	N/A	Risk rating is appropriate
(h)	N/A	N/A	Risk rating is appropriate
(i)	N/A	N/A	Risk rating is appropriate

4.6.4 Internal Risk – Project Longevity

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	- Confirmed during interviews with the project personnel and government officials that there is no legal agreement or requirement to continue the project activity management practice. Audit team also confirmed that the forest concession contract /19/duration is 40 years with the option to renew every 5 years, thus it can be renewed indefinitely. - Confirmed that the entire project longevity (40 years) is covered by management and financial plans as submitted to the USAID /72/, which is a financial institution in this context as it is a project funder.	- Concession contracts /19/ are official government documentation, up to date, and considered of high-quality. - Reviewed the technical approach document submitted to USAID /72/ and confirmed it is an official report submitted to project funder	Risk rating is appropriate
(b)	N/A	N/A	Appropriate

4.6.5 External Risk – Land Tenure and Resource Access/Impacts

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	N/A	N/A	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(b)	Through interviews with the Loreto regional forestry department (GERFOR) and review of the forest concession contracts /19/, the audit team confirmed that the project area remains under Peruvian government ownership while resource use is granted to the project proponent via the concession contracts.	Concession contracts /19/ are official government documentation and considered of high-quality.	Risk rating is appropriate
(c)	Through interviews with project personnel, the Loreto regional forestry department, and CEDIA, a non-profit dedicated to indigenous community land tenure, the audit team was able to confirm that although there were minor disputes regarding land tenure (e.g., see 2.3 of the MR), during this monitoring period, they did not constitute >5% of the project area as confirmed through review of maps of these areas (e.g., /79//80/). Furthermore, all disputes have been resolved.	N/A	Risk rating is appropriate
(d)	Through interviews with project personnel, the Loreto regional forestry department, and CEDIA, a non-profit dedicated to indigenous community land tenure, the audit team confirmed that no disputes over access/use rights (or overlapping rights) exist within the project area during this monitoring period.	N/A	Risk rating is appropriate
€	N/A	N/A	Risk rating is appropriate
(f)	N/A	N/A	Risk rating is appropriate
(g)	N/A	N/A	Risk rating is appropriate

4.6.6 External Risk – Community Engagement

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	Through interviews with project personnel, the Loreto regional forestry department, and CEDIA as well as review of aerial imagery and the Participatory Rural Appraisal /8/, that there are no households living within the project area.	N/A	Risk rating is appropriate
(b)	Through interviews with project personnel, the Loreto regional forestry department, and CEDIA as well as review of the Participatory Rural Appraisal /8/ that <20% of households living within 20 km of the project boundary are reliant on the project area.	N/A	Risk rating is appropriate
(c)	N/A	N/A	Risk rating is appropriate

4.6.7 External Risk – Political Risk

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(a)	N/A	N/A	Risk rating is appropriate
(b)	N/A	N/A	Risk rating is appropriate

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(c)	Audit team independently recalculated Peru's governance score through World Bank Institute's Worldwide Governance Indicators for the last 5 years (2017-2021), as downloaded from http://info.worldbank.org/governance/wgi/#home as -0.15	The Worldwide Governance Indicators are required for use by the AFOLU Non-Permanence Risk Tool and are thus considered to be of high quality.	Risk rating is appropriate
(d)	N/A	N/A	Risk rating is appropriate
(e)	N/A	N/A	Risk rating is appropriate
(f)	Audit team confirmed that Peru is also receiving REDD+ readiness funding from the World Bank Forest Carbon Partnership facility (https://www.forestcarbonpartnership.org/country/peru)	The Forest Carbon Partnership site is considered high quality.	Risk rating is appropriate

4.6.8 Natural Risk

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
Fire			

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
L	- Audit team reviewed fire map of the Loreto department (2002–2013) as well as FIRMS data and found that no fires have been reported in the project area over > 20 year period. - The audit team also confirmed during interviews with the Loreto regional forestry department that the risk and likelihood of fires in this region are very low. - Audit team reviewed fire map of the Loreto department (2002–2013) provided by the project team to confirmed that when fires do occur in Loreto, they typically concentrated around rivers and human settlements and are the likely result of clearing for community agriculture.	- The fire occurrence map was developed by Conservation International using NASA’s FIRMS data which are high quality satellite imagery. - The fire occurrence map was developed by Conservation International using NASA’s FIRMS data which are high quality satellite imagery.	Risk rating is appropriate
S	N/A	N/A	
M	N/A	N/A	
Pest and Disease Outbreaks			
L	The audit team confirmed during interviews with the Loreto regional forestry department and documentation provided in the Risk report (https://phys.org/news/2019-03-pests-defenses-diversity-tropical-rainforests.html) that the likelihood of insect and disease in such diverse tropical forests like those in the project area is very low.	Link provided references a peer-reviewed scientific study and thus is considered of high-quality.	Risk rating is appropriate
S	N/A	N/A	
M	N/A	N/A	
Extreme Weather			

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
L	- The audit team reviewed the hurricane/wind map Loreto and peer-reviewed literature on blow down events in the Amazonian region of Peru and confirmed that while wind events have occurred in the past 10 years and thus are not a likely risk. - The audit team also confirmed during interviews with the Loreto regional forestry department that the risk and likelihood of extreme weather events in this region are very low.	The wind monitoring maps were developed by the Proyecto de Monitoreo de los Andes Amazonicos (MAAP) which monitors using GLAD (Global Land Analysis and Discovery data) from the University of Maryland and is very reputable.	Risk rating is appropriate
S	N/A	N/A	
M	N/A	N/A	
Geological Risk			
L	Audit team confirmed during interviews with regional government and local nonprofit organizations that there is no likelihood of geologic risks.	N/A	Risk rating is appropriate
S	N/A	N/Ax	
M	N/A	N/A	
Other natural risk			
L	N/A	N/A	Risk rating is appropriate
S	N/A	N/A	
M	N/A	N/A	

5 VERIFICATION OPINION

The audit team asserts, with no qualifications or limitations, that:

- The project, implemented by Green Gold Forestry S.A., the project proponent, complies with the verification criteria for projects and their GHG emission reductions or removals set out in VCS Version 4.
- The project has been implemented in accordance with the validated project description and any subsequently validated variations, including any qualifications or modifications.

Furthermore, the audit team asserts, specifically in respect of those aspects of the project assessed as part of the validation activities described in Section 3 above, that the project complies with the validation criteria for projects set out in VCS Version 4.

Finally, the auditors assert that the GHG statement validation and verification activities and GHG claims described in this report were conducted in accordance with ISO 14064-3:2019.

Verification period: From 01-August-2020 to 31-December 2022

Verified GHG emission reductions and removals in the above verification period, broken down by vintage year:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)	Buffer pool allocation	VCUs eligible for issuance
2020	160,286	0	15,005	145,281	22,440	122,841
2021	419,631	0	39,283	380,348	58,748	321,600
2022	273,709	0	25,623	248,086	38,319	209,766
Total	853,626	0	79,911	773,715	119,508	654,207

The estimated ex-ante GHG emission reductions and removals and the achieved emission reductions and removals for this monitoring period (before buffer deductions):

Year	Ex-ante emissions reductions / removals	Achieved emissions reductions / removals	Percent difference	Justification for the difference

2020	153,201	145,281	-5.17%	The project did not include accounting of removals from sequestration associated with ongoing growth in the project scenario (see PD Deviation #5). Also, the baseline was corrected as a result of PD deviation #4.
2021	406,821	380,348	-6.51%	Same as above.
2022	269,561	248,086	-7.97%	Same as above.
Total	829,583	773,715	-6.73%	

APPENDIX A: FINDINGS LIST

Note that this audit engagement occurred simultaneously as the CCB Validation. Thus, the findings below include both CCB and VCS findings. The CCB findings are numbers 36-46, 54, and 58. Furthermore finding 89 is simply a continuation of Finding 81.

NCR 1 Dated 22 Feb 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: Section 1.1 of the MR Template states “Provide a summary description of the implementation status of the project, including the following (no more than one page):

- A summary description of the implementation status of the technologies/ measures (e.g., plant, equipment, process, or management or conservation measure) included in the project.
- The relevant implementation dates (e.g., dates of construction, commissioning, and continued operation periods).
- The total GHG emission reductions or removals generated in this monitoring period.”

While all this information is provided in section 1.1 (pages 4 and 5 of the MR), it is provided on two pages, which is not in conformance with the requirement of no more than one page.

Project Personnel Response: The length of Section 1.1 of the MR has been reduced to one page.

Auditor Response: Confirmed that the length of section 1.1 of the MR has been reduced to 1 page. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 2 Dated 22 Feb 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: On the title page of the Monitoring Report template, under the field “Contact”, it asks that a telephone number be provided. This information is missing from the Monitoring Report submitted thus represents a nonconformity with the template.

Project Personnel Response: The title page of the MR has been updated with the required information.

Auditor Response: Confirmed that a telephone number has been added to the title page. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 3 Dated 22 Feb 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final; VCS v4.4

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1; VCS PD Green Gold Loreto 1 v11 accuracy review December 2021

Finding: Section 1.4 of the MR template states “Provide contact information and roles/responsibilities for any other project participant(s). Copy and paste the table as needed.” In the MR, this section it states “No other entities are involved in the project.” However, in conducting our review of the quantification and monitoring, it appears that the company Space Intelligence has played a significant role in the project’s monitoring, carbon mapping, etc. In fact in section 4.3.4 of the MR, it states “Remote sensing and satellite imagery are the primary tools used to assess changes in forest carbon, and this was conducted primarily by Space Intelligence.” Please provide more information on the role of Space Intelligence and justification for why they are not listed in Section 1.4 as another entity involved in the project. If Space Intelligence is to be added as project entity, this would represent a PD deviation that must be described in section 3.2.2 of the MR and be in conformance with section 3.20 of the VCS.

Project Personnel Response: Space Intelligence plays an important role in supporting the project's objectives by providing services that focus on quantifying the accumulated biomass and mapping possible disturbances during the monitoring period. However, they are not considered as "other entity involved" because they have a contractual relationship that can be renewed and they do not hold any legal rights over the project or the VCUs generated by it.

Auditor Response: Thank you for this additional clarification. This NIR has been addressed and the finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): NA

NCR 4 Dated 22 Feb 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: Section 1.7 of the MR template requires the following “Indicate the project location and geographic boundaries (if applicable) including geodetic coordinates. For grouped and AFOLU projects, coordinates may be submitted separately as a KML file.” The submitted MR states “The locations of the project areas are shown in Figure 1. Individual maps of the project regions, including geodetic coordinates, are presented in “Section 3.3: Project Boundary” of GGF VCS Project Design (PD) document.” While, we understand that these coordinates are provided in the PD, as well as much of the required information in the MR, the template requires that these coordinates (i.e., centroid of each area of interest or complete boundary coordinates) be provided in this section as well.

Project Personnel Response: The geodetic coordinates were included in section 1.7 of the MR. Additionally, the file "Geodetic_GGL1".zip, that include the KML files was shared.

Auditor Response: Confirmed that section 1.7 of the MR has been updated with the geodetic coordinates of the project area. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 5 Dated 22 Feb 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: Section 1.11 of the MR Template states “Using Table 1 below, provide the project’s quantifiable contributions to specific targets and indicators of the Sustainable Development Goals (SDGs) for the monitoring period. Use the official list of SDG Targets and Indicators (available here) to identify the SDG Targets to which the project has contributed. Evidence for each contribution shall be identified in accordance with Section 1.11.” In rows 1 & 2 of table 1 of section 1.11 of the MR, it indicates in the Current Project Contributions field that “During the monitoring period, GGF generated more than 300 employment opportunities for the beneficiary communities and purchasing goods and services for more than US\$115,000.” The audit team requests evidence of the \$115,000+ in goods and services provides to the communities. We also request evidence supporting the 300+ jobs. Lastly, we request evidence for Row 5 in the table “266 children participated in these workshops” such as the workshop agendas, attendance sheets etc. The template also requires the following: “Evidence of the project’s SD contributions shall be provided as appendices to this report.” Only appendix 2 relates to the contributions to 13.0, but the other contributions are not included as appendices to the MR. Please provide this evidence supporting the SD contributions as an appendix to the report.

Project Personnel Response: The table was updated. See Appendix 5 for the supporting documentation (in addition to appendix 2)

Auditor Response: Thank you for your response and revised documentation. The auditors confirmed that the evidence supporting these values has been provided and included as Appendix 5. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 6 Dated 22 Feb 2023**Standard Reference:** vcs-monitoring-report-template-v4.2-final**Document Reference:** GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: Section 1.11 of the template requires “Document total project contributions since the project start date, previous SD contribution monitoring period, or VCS monitoring period in the “Current Project Contributions” column and the cumulative contributions over the project lifetime in the “Contributions Over the Project Lifetime” column in Table 1 below. The cumulative impact should be calculated by summing the current project contributions with all impacts included in previously approved VCS monitoring reports or Sustainable Development Contribution Reports.” In the MR submitted, it appears that column “Contributions Over the Project Lifetime” is not completed in conformance with these requirements. For instance, in row 1 it states “The project will increase the jobs generated in the communities to 1,440” and in row 6 it states “Prevent the release of 9,738,622 metric tons of CO₂e into the atmosphere.” These are just two examples. Since only 1 monitoring period has passed, the columns “current project contributions” and “Contributions over the project lifetime” must be identical as the template states “cumulative impact should be calculated by summing the current project contributions with all impacts included in previously approved VCS monitoring reports.” Thus the column “contributions over the project lifetime” is not in conformance with the template requirements.

Project Personnel Response: The table was updated – review after addressing NIR 5

Auditor Response: Thank you for the revised documentation. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 7 Dated 22 Feb 2023**Standard Reference:** vcs-monitoring-report-template-v4.2-final**Document Reference:** GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: In addition to describing the process of and outcomes of ongoing communication with local stakeholders, section 2.2 also requires the following: “For AFOLU projects, also demonstrate how the project has communicated the following with local stakeholders:

- The results of project implementation, including the results of monitoring.
- Any changes, where relevant, to risks, costs and benefits the project may bring to local stakeholders.
- Any changes, where relevant, to relevant laws and regulations covering workers’ right in the host country.
- The process of VCS Program verification and the validation/verification body’s site visit.” Currently section 2.2 of the MR does not provide any mention of how laws and regulations covering worker rights are communicated or how the process of the VVBs site visit is communicated. Without this information section 2.2 is not in conformance with the template requirements.

Project Personnel Response: Section 2.2 was updated in the MR with the information requested

Auditor Response: Confirmed that section 2.2 of the VCS Monitoring Report has been updated accordingly. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 8 Dated 22 Feb 2023**Standard Reference:** vcs-monitoring-report-template-v4.2-final**Document Reference:** GGL1 - VCS Monitoring Report 2022 - v4.2 v1; VCS PD Green Gold Loreto 1 v11 accuracy review December 2021**Finding:** Section 3.2.1 of the MR template requires the following: “Describe and justify any methodology deviations applied during this monitoring period. Include evidence to demonstrate the following:

- The deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals.

The deviations relate only to the criteria and procedures for monitoring or measurement, and do not relate to any other part of the methodology.” Section 3.2.1 of the MR states “Four deviations proposed in the PD were removed. Deviation #1 was removed because SI SOP for fieldwork was used in plots, including measurement of DBH and Height and application of allometric equation (Chave); and deviations 2, 6 and 7 were removed as they were no longer relevant to the calculation (they were used in validation).” However, it is unclear how these deviations are no longer relevant as they all impacted the baseline quantification, and that baseline is used to calculate the ex-post ERTs, making these baseline deviations relevant during this monitoring period. Please provide us with justification for removal of those deviations from the monitoring report.

Project Personnel Response: The deviations were reinserted in the MR.**Auditor Response:** Confirmed the the deviations pertaining to the baseline quantification have been added back into section 3.2.1 of the VCS Monitoring Report. This finding has been closed.**Bearing on Material Misstatement or Conformance (M/C/NA):** C

NIR 9 Dated 22 Feb 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: Section 4.2 of the MR template states “Complete the table below for all data and parameters monitored during the project crediting period (copy the table as necessary for each data unit/parameter). Data and parameters determined or available at validation are included in Section 4.1 (Data and Parameters Available at Validation) above.” These parameters must match those set out to be monitored in the PD, but for verification, the Value Monitored in these tables must be updated accordingly. Section 5.2 of the PD indicates that the parameters Adist,i,t Adist,il,I, and Aburn,i,t will be monitored. However, in section 4.2 of the MR, for these parameters, the value monitored states “Value applied at project validation is zero.” However, this is the verification and values for these parameters are required to be monitored. Please indicate the monitored values.

Project Personnel Response: Section 4.2 was updated with the monitored values.

Auditor Response: Confirmed that section 4.2 of the VCS Monitoring Report has been updated to include the value of these three monitored parameters. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 10 Dated 22 Feb 2023

Standard Reference: VM0010 v1.3

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1; VCS PD Green Gold Loreto 1 v11 accuracy review December 2021

Finding: Section 8.3.1 of the Methodology states “At each verification, documentation must be provided covering the other lands controlled by the project proponent where leakage could occur, including, at a minimum, their location(s), area and type of existing land use(s), and management plans.” In section 4.3.1 of the PD it states “No logging activities will be shifted from the project areas to other concession areas owned by GGF.” Section 5.3.1 of the MR states “As validated in the project’s PD, logging activities have not shifted from the project areas to other concession areas owned by GGF. Therefore, this type of leakage maintains 0. For more information, see Section 4.3.1 of Green Gold Loreto 1 VCS PD.”

While at the time of validation it was found that there was a lack of activity shifting leakage, this is a component that the methodology requires to be monitored and evaluated at each verification. The PD acknowledges this when it states, in section 4.3.1., “This will be demonstrated by comparing forest management plans prepared more than 24 months before the project start date with the log volumes from areas outside of the project area that will be harvested by GGF during the project time period.” Thus, the audit team requests demonstration of the lack of activity shifting leakage through the comparison of these forest management plans.

Project Personnel Response: The Forest and Wildlife Law No. 29763 is the primary legal framework governing the granting of forestry logging concessions in Peru. Under this law, concession holders are required to include in their General Forest Management Plan (GFMP) and Operating Plans (PO) any forestry and wildlife activities that are compatible with the corresponding zoning or management category. These plans must be approved by the regional government, which in this case is the GERFOR of Loreto (<http://gerfor.regionloreto.gob.pe/>).

The latest PGMFs submitted to GERFOR in November 2020 indicate that harvesting activities will continue within the approved operating plans that are outside the project area, including non-timber products. It is important to highlight that the levels of logging will no increase (i.e., no leakage has occurred).

For more detail, see file "Finding #10"

Auditor Response: The auditors reviewed the previous general forest management plan that indicated that harvesting would continue in areas outside of the project area. We reviewed the approved operating plans and confirmed that there was logging outside of the project area as was previously planned. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 11 Dated 22 Feb 2023

Standard Reference: VM0010 v1.3; VCS 4.4; vcs-monitoring-report-template-v4.2-final

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1; VCS PD Green Gold Loreto 1 v11 accuracy review December 2021

Finding: Section 5.3 of the PD sets out the monitoring plan for all future verifications. Section 5.3.7, step 4 states “Step 4. Within the parcels p that would have been harvested in the baseline scenario up until the monitoring date t, detect areas where the cumulative ΔC in any grid of 3x3 pixels is greater than -10 tC. These are areas where either a natural (fire, windfall) or an anthropogenic disturbance may have occurred (intense felling, conversion). In other words, they are areas where a significant reduction in carbon stocks (>10tC/ha) can be observed. To detect such areas, the 3x3 pixel moving grid is used (pixel size is 30x30m, so the grid covers 8100 m², nearly a hectare).” However, section 4.3 in the Monitoring Report describes the monitoring plan that was conducted during this monitoring period and for future monitoring periods. Section 4.3.4.5 (step 4) states “Step 4. Within the parcels p that would have been harvested in the baseline scenario up until the monitoring date t=2, areas where more than 6 25x25m pixels in any grid of 16x16 pixels have lost the equivalent of 5tC/ha or more were detected. These were areas where either a natural (fire, windfall) or an anthropogenic disturbance may have occurred (intense felling, conversion). In other words, they were areas where a significant reduction in carbon stocks (>5tC/ha) can be observed. To detect such areas, the 16x16 pixel moving grid was used (pixel size is 25x25m, so the grid covers 160.000 m²).” We also noted that Methodology Deviation #3 which relates to the disturbance monitoring states “First, to detect any areas of disturbance, i.e., significant reduction in carbon stocks (>10tC/ha), a grid of 3x3 pixels (less than one ha - pixel size is 30x30m, so the grid covers 8,100 m²) were moved over the biomass map in a Geographic Information System (GIS) and any grid with a cumulative ΔC exceeding 10tC may be an indication of natural or anthropogenic disturbances.” Thus the audit team has detected a difference in the grid of pixels (3x3 vs. 16x16), pixel size (30x30m vs. 25x25m), and the threshold of significant loss (5tC/ha vs. 10tC/ha). Please provide clarification on which approach was implemented during this monitoring period. Also please note that if a different approach was employed than what was set out in the PD, or if a statement in the PD was made in error, this constitutes a PD deviation and must be described in section 3.2.2 of the MR and be in conformance with section 3.20 of the VCS.

Project Personnel Response: To detect natural and anthropogenic disturbances, areas were determined using a 16 x 16 pixels filter and a change of carbon of 5 C. This differs from what it was stated in the PDD in the methodology deviation #3. The 3 x 3 window itself does not add any additional information over simply viewing the change map at the native resolution. Therefore, a project description deviation has been added to MR (Deviation 2)

To analyze the illegal logging impact, areas were determined using a 16 x 16 pixels filter and a change of carbon of 5 tC as it was stated in the PDD in the methodology deviation #4.

A 25 x 25 m land cover map has been used. This is different from what was indicated in the PD. This was done because the higher resolution was thought likely to reduce uncertainty (most likely), and at worst not increase uncertainty, and thus is a conservative change. This is now described in Section 3.2.2 of the MR. (deviation 1)

The precise steps taken for this analysis are described in the new document "11. Disturbance Raster - Processing steps"

Auditor Response: The audit team confirmed that project description deviations #1 and #2 now address the differences in the monitoring approach, which pertain to methodology deviations #3 and #4. We confirmed Methodology deviations #3 and #4 were also updated accordingly. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 12 Dated 22 Feb 2023

Standard Reference: VM0010 v1.3; T-SIG tool

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1; Appendix 1 - Report Biomass - Peru GGF; Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V1 2022

Finding: Section 8.2 of the Methodology states “Thus, net greenhouse gas emissions in the project scenario will be equal to carbon sequestration through ongoing forest growth minus any emissions resulting from forest disturbance (both illegal logging and natural disturbances).” Due to the validated methodology deviation #3, the project provides a procedure for detecting and quantifying disturbance events in the project scenario. Section 4 of the Appendix 1 report states “The C losses (in Mg C) from disturbance grids occurring within 1.25 km of an access point are then summed to give an estimate of the C losses to logging disturbance in the project areas. The summed losses for pixels in these areas amounted to 328 tAGB (164 tC).” However, it does not appear that this carbon loss value is used anywhere in the calculation workbook and there is no demonstration of the significance testing. Furthermore, in the Appendix 2 calculation workbook, sheet Inputs_Y1Y2_2022, there is a loss of carbon in the San Regis area and in cell J13 it states “It was identified that the loss of biomass was due to natural loss (strong winds). See report “Análisis de Deforestación”. Again, it does not appear that this loss of carbon attributed to disturbances is accounted for in the project scenario. For instance in the Appendix 2 calculation workbook, sheet Inputs project_Y1Y2_2022, cell B11, B12, and B13, it indicates that the emissions from fire disturbance, natural disturbances and illegal logging are zero under the project scenario. Please provide clarification regarding exactly how disturbances from fire or other natural disturbances were accounted for in accordance with the methodology/methodology deviation #3.

Project Personnel Response: See the updated section 4.2 of the MR, project description deviation #5 and the project's ER calculation spreadsheet.

Auditor Response: The auditors confirmed that a deviation #5 has been added to the MR. This deviation does not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, thus is eligible. However, with regards to reporting of the deviation, the VCS v4.4 (section 3.20) requires:

- "Where the deviation does not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in conformance with the applied methodology, the deviation shall be described and justified in the monitoring report. This shall include a description of when the changes occurred and the reasons for the changes. The deviation shall also be described in all subsequent monitoring reports."

The VCS Monitoring Report template v4.2 requires:

- "...and provide an explanation of the outcome"

The auditors have found the following key components of the deviation are not reported:

1. What methodology or methodology deviation this PD deviation is deviating from.
2. The reason for the change and when the changes occurred (e.g., date, monitoring period xx).
3. The outcome of the deviation.

Please provide this additional information in the MR.

Further, it is unclear if the deviation is actually implemented as such because it states "... are burned, the project proponent could use the ratio of natural to anthropogenic disturbance observed in the surveyed areas, and extrapolate that to estimate the level of disturbance in the unsurvey points." By using the word "could" it is unclear if this is the approach taken during this MP and/or will be taken in future MPs. Please clarify. This finding remains open.

Project Personnel Response 2: The project deviation #5 has been updated according to the VCS requirements. The following information was included:

1. Project Deviation #5 deviates from Section 5.3.7 of the PDD
2. The proposed change is based on historical data and literature, which clearly indicates that the likelihood of a natural fire occurring in the project area is virtually zero (for further explanation, please refer to Project Deviation #5 and the NPRR). Therefore, starting from this verification period onwards, the deviation will be implemented.
3. During the initial monitoring period, the disturbance map identified a total of 198 polygons (33.80 ha) with carbon losses exceeding 5 MgC. Out of these, the forest custodians conducted ground surveys on 37 polygons (4.94 ha). Among the surveyed areas, it was determined that only 2 polygons (0.75 ha) were caused by anthropogenic factors, while the remaining disturbances were of natural origin (4.19 ha). Consequently, the surveyed area affected by anthropogenic causes accounted for 15.19% of the total surveyed area. By extrapolating these findings, we can estimate that anthropogenic factors were responsible for 5.13 ha of the total disturbed area (33.80 ha * 15.19%). This equates to a mere 0.003% of the entire project area.

Auditor Response 2: The auditors confirmed that the deviation now lists the section of the PD it deviates from, the reason and date of the deviation, and the impact of the outcome of the deviation. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 13 Dated 22 Feb 2023

Standard Reference: VM0010 v1.3; VCS v4.4

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1; Appendix 1 - Report Biomass - Peru GGF; Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V1 2022

Finding: Section 8.2.2.1 of the Methodology states “It is a requirement that any greenhouse gas emissions from natural disturbance above de minimis that may occur in the project area are monitored. Estimation of emissions from natural disturbance must be calculated depending on the type of disturbance event. Disturbance due to fire is calculated following Option A, and all non-fire natural disturbance (eg, wind, disease, pest events) is calculated following Option B.” During a call with the project team on 8 February 2023, it was expressed that there was no separate monitoring of natural disturbances (fire or non-fire disturbances), separate from the analysis of the illegal logging disturbances. The project team (Space Intelligence) described the procedure for capturing potential anthropogenic disturbance events using a 16x16 pixel moving window and only identifying events within 1.25km of a road or river based on the PRA results. This differs from the approach as outlined in the PD and the MR which describes the process of distinguishing and monitoring natural disturbances from anthropogenic disturbances. For instance, section 5.3.7 of the PD states “Detect such areas that are further away than distance DDIST_IL,i from access routes. It is assumed these areas are affected by natural disturbances, unless field observations confirm they are anthropogenic. A ground survey will be required to distinguish between areas of assumed natural disturbance that have burned Aburn,i,t and that were affected by non-fire disturbance, e.g., windfall Adist,i,t. Areas that are not ground surveyed are conservatively classed as Aburn,i,t. This is conservative because of the added combustion-related emissions (calculated applying Equation 33 of VM0010).”

Please clarify exactly how natural disturbances have been monitored and quantified. If the approach applied constitutes a change from the validated PD approach, this will constitute a PD deviation which requires adherence to the requirements of section 3.20 of the VCS and reporting in section 3.2.2 of the Monitoring report.

Project Personnel Response: See the updated section 4.2 of the MR, project description deviation #5 and the project's ER calculation spreadsheet.

Auditor Response: The response to finding #11 above is relevant here. This finding remains open as well.

Project Personnel Response 2: The project deviation #5 has been updated according to the VCS requirements. See finding #12.

Auditor Response 2: The auditors confirmed that PD Deviation #5 addresses this finding. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 14 Dated 22 Feb 2023

Standard Reference: VM0010 v1.3; VCS v4.4

Document Reference: Area_EcuacionesVCS.shp; Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V1 2022; GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: The audit team has found discrepancies in the total area that would have been logged without the project. The validated baseline assumes that 9,172.25 ha of forest is harvested annually. This is shown in the Appendix 2 calculation workbook, tab Baseline emissions. Thus, for a two-year monitoring period, that would be $9,172.25 \times 2 \text{ years} = 18,344.5 \text{ ha}$. However, in the Inputs_Y1Y2_2022 tab, cell B14 shows that the annual area harvested, in which the change in biomass derived for is 18,088.35 ha. Likewise, the shapefile provided Area_EcuacionesVCS.shp also shows this total of 18,088.35 ha. Lastly, Table 4 in the Appendix 1 report, also shows that the projected harvest area is 18,088.35. However, Section 1.1 of the monitoring report states, “Using Space Intelligence’s (SI) established CarbonMapper™ product, the project mapped total of 18,008.35 ha, which is the area that would have been logged in a scenario without the project.” Thus, it appears the biomass values were derived for a smaller area than what was projected to be harvested. During a call with the project team on 8 February 2023, it was indicated that this project scenario harvest area was determined through the operational plan and what plots could be reached. The area validated for the baseline scenario must remain constant throughout the project scenario in order for there to be an accurate comparison between the baseline and the project scenario. Furthermore, it is unclear if the biomass maps generated for the 18,088 ha are applicable to the larger projected harvest area of 18,344.5 ha. Please provide a justification for the choice to map a smaller area and demonstrate how these maps for the 18,088 are statistically valid and applicable to the larger area that was projected to be harvested in the baseline scenario.

Project Personnel Response: The technical team reviewed the PDD, and the SI team reviewed the biomass map. With this correction in the results, the calculations were redone using the 18,344.5 hectares established in the baseline.

Auditor Response: The auditors confirmed that a total area of 9,172 ha of forest harvested annually is applied as the projected area to be harvested in the baseline, which is in-line with the validated PD. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NCR 15 Dated 22 Feb 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: Section 5.1. of the Monitoring Report requires the following: “Quantify the baseline emissions and/or removals, providing sufficient information to allow the reader to reproduce the calculation. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results.” While this section provides information regarding the methods applied and some of the key input parameter values, it does not provide any information on the calculated results of the baseline. Furthermore Section 5.1.6 of the MR states “Results are presented in Table XX, Section 4.4, but there is no section 4.4 in the MR. This section requires more information with actual baseline values calculated or transparent reference to these values “to allow the reader to reproduce the calculation.” Please note that Verra will request that all calculation files, with clear indication of the source of each value and calculations with active cell formulas be submitted to the registry.

Project Personnel Response: The text on Section 5.1.6 was corrected.

Auditor Response: The auditors confirmed that section 5.1 of the PD has been updated with a clear indication of the equations, parameter values, and source of the data. We also confirmed that section 5.1.6 of the Text has been updated to reference section 5.4 of the MR. Lastly we confirmed that the calculation workbook contains clear and detailed calculations with active cell formulas. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 16 Dated 22 Feb 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: Section 5.2 of the Monitoring Report states “Quantify project emissions and/or removals providing sufficient information to allow the reader to reproduce the calculation. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results.” This is referring to the project scenario emissions that have occurred during this monitoring period. While this section provides information on the methodology applied to quantify these emissions, it does not report on any of the project scenario emissions and removals. The only values it reports on are ex-ante, for instance, it states “For the purpose of an ex-ante estimation of project emissions/sequestration we assume that no such disturbances will take place. This is consistent with the discussion that natural disturbance risks are negligible in the project area, as presented in the VCS Non-Permanence Report. Therefore, $Aburn,i,t$ and $Adist,i,t$ in Equations 33 and 35 of VM0010 are zero and the outcomes of these equations is zero.” This section requires more information with actual values monitored during this monitoring period or transparent reference to these values and indication regarding the significance testing results “to allow the reader to reproduce the calculation.” Please note that Verra will request that all calculation files, with clear indication of the source of each value and calculations with active cell formulas be submitted to the registry.

Project Personnel Response: See the updated section 4.2 of the MR, project description deviation #5 and the project's ER calculation spreadsheet.

Auditor Response: The auditors reviewed the updated section 5.2 of the MR.

-It indicates that for change in $AB,t/PRJ...$ "For this monitoring period, the data was obtained from remote sensing, given an average change of 0.14 t C/ha/yr ." However, the calculation workbook shows the value is 0.46 t C/ha/yr . Thus the MR is not accurate.

-It also indicates that for the parameter 'Emissions from non fire disturbances since the previous' it states 'Note that for this monitoring period, there were no fire disturbances within the area. Therefore, this parameter is 0.' However, this is not accurate because this parameter refers to non-fire disturbances and then this statement references fire disturbances. Please clarify.

-This section continues to state "For the purpose of an ex ante estimation of project emissions/sequestration we assume that no such disturbances will take place. This is consistent with the discussion that natural disturbance

risks are negligible in the project area, as presented in the VCS Non Permanence Report." However this is confusing because ex-ante estimation of project emissions is ONLY relevant to the validation/PDD. Everything in the monitoring report is ex-post estimation. Please clarify.

This finding remains open due to the above inaccuracies.

Project Personnel Response 2: (1) That section was updated according to the information stated in the calculations workbook (0.46 tC/ha/yr)

(2) That section was updated to explain the results from emissions from non-fire disturbances.

(3) The text was updated to report the results from the monitoring period.

Auditor Response 2: The auditors confirmed that the change in C stocks has been updated such that there is consistency in the calculation workbook and the MR. We confirmed that the discussion of non-fire disturbances has been updated. Lastly, we confirmed that the text was updated to indicate the results from this monitoring period rather than ex-ante assumptions. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 17 Dated 22 Feb 2023**Standard Reference:** vcs-monitoring-report-template-v4.2-final**Document Reference:** GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: Section 5.4 requires the following: “Quantify the net GHG emission reductions and removals, summarizing the key results using the table below. Specify breakdown of GHG emission reductions and removals by calendar year. VCUs will be issued separately by calendar year in the Verra Registry.” It further states “For AFOLU projects, include quantification of the net change in carbon stocks. Also, state the non-permanence risk rating (as determined in the AFOLU non-permanence risk report) and calculate the total number of buffer credits that need to be deposited into the AFOLU pooled buffer account. Attach the non-permanence risk report as either an appendix or a separate document.” This section does not provide information regarding (1) the equations applied to quantify the net emission reductions/removals, (2) the uncertainty assessment or adjustment of VCUs due to uncertainty, and (3) the non-permanence risk rating and how the buffer credits were calculated. This section requires more information to be in conformance with the template requirements. Please note that Verra will request that all calculation files, with clear indication of the source of each value and calculations with active cell formulas be submitted to the registry.

Project Personnel Response: (1) Equations applied to quantify the net emissions reductions and removals were added to section 5.4 of MR

(2) The uncertainty assesment can be found in section 5.4. of the MR as well as an excel tab on the project's ER calculation spreadsheet

(3) The NPRR and its corresponding excel has been uploaded to the shared folder.

Auditor Response: Thank you for the revisions and additional documentation.

(1) We confirmed that the relevant equations have been added with sufficient level of information.

(2) In section 5.4 of the MR, the last line of the subsection 'B. Project Uncertainty' states that "Summing the above, the total Project Uncertainty is based solely on the Carbon Sequestration uncertainty, which is 11.6%." However, different values are provided in the workbook (i.e., 11.31) and in calculations shown above the referenced text in the MR (i.e., 11.3). Please provide additional information on these discrepancies. Also please note that 18, 47, 48, 49, and 50 relate to the content reported in section 5.4, and those findings remain open. Thus if changes are made to the uncertainty analysis as a result of those findings, section 5.4 will also need to be updated accordingly to ensure accurate reporting and conformance with the requirements.

(3) While the NPRR workbook and supporting information has been provided separately, and the risk rating is provided in the footnote, this section requires that you include exactly how the buffer credits were calculated (e.g., a statement or demonstration of the equation). Please provide this additional information.

Due to items 2 and 3 above, this finding remains open.

Project Personnel Response 2: (2) The document was reviewed and updated, following the changes in the uncertainty made from findings 49 and 50

(3) The workbook was completed according to the template. Additionally in the NPRR it was included a brief explanation on how the buffer credits were calculated.

Auditor Response 2: The auditors have reviewed the updates made to section 5.4 and we continue to find inconsistencies.

1. The validated baseline uncertainty listed in the PD 9.64%. However on page 75 of the MR it states the baseline uncertainty is 8.24%. Though on page 78, it shows the baseline uncertainty as 9.64%.

2. Also on page 78, it states "The total uncertainty is 14.85%" but then directly below this statement, it shows the outcome of equation 42 is 14.57%.

3. With regards to the buffer, please indicate exactly how the value of 103,221 tCO₂e was derived. For instance, what did you multiply that 14% risk by. This is the level of detail required in the MR with regard to the buffer pool allocation.

This finding remains open.

Project Personnel Response 3: RE: 1 & 2 The section were reviewed and updated with the information from findings #49 and #50. The tab "Uncertainty" from Appendix 2 was updated as well

RE:3. The number of the buffer pool was adjusted both in the MR and NPRR based on finding #59 and an explanation explaining how we got the final value was added to the MR

Auditor Response 3: The auditors confirmed that section 5.4 of the Monitoring Report has been updated to provide more accurate information and demonstration of the quantification procedures applied. This finding has been closed. However, the auditors note that several other open or new findings may impact section 5.4, thus this finding could be re-issued if updates to section 5.4 do not meet the requirements of this section.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 18 Dated 22 Feb 2023

Standard Reference: VM0010 v1.3; VCS v4.4

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1; Appendix 2 - Green Gold Loreto
1 ER Calculation Spreadsheet V1 2022

Finding: This finding relates to #17 above. Section 8.4.1.1 of the Methodology provides requirements for calculating the total project uncertainty. It states “Estimated greenhouse gas emissions and emission reductions from IFM activities have uncertainties associated with parameters and coefficients including estimates of area, carbon stocks, regrowth and expansion factors. It is assumed that the uncertainties associated with input data are available, either as default uncertainty values given in most recent IPCC guidelines, or as statistical estimates based on sampling. Uncertainty at all times is defined at the 95% confidence interval where the estimated variance exceeds +/- 15 percent from the mean.” Later it indicates “For both the baseline and the with-project case the total uncertainty is equal to the square root of the sum of the squares of each component uncertainty and is calculated at the time of reporting through propagating the error in the baseline stocks and the error in the project stocks.” And lastly, it requires “The project proponent must justify the selection of uncertainty propagation in the project documents.” The MR does not provide any detail about the quantification of uncertainty. Likewise, no information regarding the uncertainty calculation was provided in corresponding calculation workbooks. Section 4.4 of the PD details the uncertainty input parameters and procedure regarding uncertainty propagation in baseline and project. Furthermore, appendix 2 of the PD states “This extrapolated biomass map will be independently tested and validated using further field plots (already existing and remeasured), which are unlikely to be located under GEDI footprints but will provide validation of the extrapolated map. At least 50 such plots have already been identified in and around the project area (figure page 80) and more are known within the project site. This will allow an estimation of the 95% confidence interval around the AGB in each 30 m pixel.”

During a call with the project team on 8 February 2023, it was indicated that the uncertainty approach as outlined in appendix 2 of the PD involving the field plots was actually not conducted. The team proposed applying a new approach involving the JEDI Biomass product. Please note that any changes from what is outlined in the PD represents a PD deviation which must be described in section 3.2.2 of the MR and be in conformance with section 3.20 of the VCS.

The audit team requests the following:

- Detailed demonstration of the uncertainty analysis, considering all relevant parameters described in section 4.4 of the PD as well as all relevant monitoring parameters (e.g., uncertainty of allometric equations, uncertainty of JEDI data, uncertainty of the calibration of the JEDI data). Please present this in a transparent manner, referencing the location of any published values and enabling the audit team to replicate this approach.
- Please provide all model fit parameters (confidence intervals, goodness of fit, R value, etc) for the height model and for the height-biomass model.
- Please indicate whether this uncertainty approach represents a PD deviation and if so provide for adherence to the requirements of section 3.20 of the VCS.

Project Personnel Response: We are submitting a PD Deviation for the Uncertainty analysis. The PD contained an uncertainty analysis for the Baseline Scenario, but not a fully worked through analysis for the Project Scenario. This has now been fixed, and the updated version is included in the Monitoring Report (Deviation 3).

The updated uncertainty analysis includes a simulation of the impact of uncertainty on the Height-Biomass model on the biomass change reported in the Project Scenario, provided as Excel spreadsheet "18. Height AGB Uncertainty Spreadsheet.xlsx".

Height-biomass model fit is in the 'Field Plot Data Analysis V2' sheet, summarised here

Equation: $\ln(\text{AGB}) = a + b \cdot (\ln(H3))$ (Eq.3)

Model Mean Absolute Error: 58.98 Mg/ha

Model Root Mean Squared Error: 85.28

Coefficient 1 (a): mean [Standard Error]: 1.36 [0.055]

Coefficient 2 (b): mean [Standard Error]: 1.22 [0.015]

No r-squared can be given due to this being a non-linear fit.

The validation data against independent GEDI LiDAR shots from within the AOI, and comparisons to the distribution of AGB values in the field plots, remains in the Biomass Report.

Auditor Response: This finding surrounding a clear demonstration of the calculation of uncertainty is closed. However, it is important to note that several issues with components of this calculation have been included in Findings 17, 47, 48, 49, and 50, which remain open.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 19 Dated 22 Feb 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: Appendix 3 - VCS-Non-Permanence-Risk-Report VF2022 (Protegido)

Finding: Section 2.2.1 (5) of the Risk Tool states “Adaptive management plans are those that identify, assess and create a mitigation plan for potential risks to the project, including those identified in this document, and any other obstacles to project implementation.” Please demonstrate the adaptive management plan that is in place, provide evidence that it is active/current, and demonstrate that it is specific to the project implementation (rather than the baseline scenario).

Project Personnel Response: The NPRR was updated and a new version of the Adaptive Management Plan was uploaded.

Auditor Response: Confirmed that an Adaptive Management Plan has been provided and that the Justification of Risk Rating section in the NPRR has been updated. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 20 Dated 22 Feb 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: Appendix 3 - VCS-Non-Permanence-Risk-Report VF2022 (Protegido)

Finding: The NPRR submitted indicates that item c in the Project Management Risk table is not applicable and thus a score of zero is applied. (“Management team does not include individuals with significant experience in all skills necessary to successfully undertake all project activities (i.e., any area of required experience is not covered by at least one individual with at least 5 years’ experience in the area”). The submitted NPRR also indicates that the mitigation credit (item e) is applicable and thus a score of -2 is applied (“Management team includes individuals with significant experience in AFOLU project design and implementation, carbon accounting and reporting (e.g., individuals who have successfully managed projects through validation, verification and issuance of GHG credits) under the VCS Program or other approved GHG programs.”). As justification for these, the NPRR states “Management team includes individuals with significant experience in AFOLU project design and implementation, carbon accounting and reporting (e.g., individuals who have successfully managed projects through validation, verification and issuance of GHG credits) under the VCS Program or other approved GHG programs.” The audit team has noted that Jan Fehse has not been present during any project meetings or discussions. Please indicate if Mr. Fehse is still part of the project team and update the NPRR if needed.

Project Personnel Response: Jan Fashe is currently still part of the advisory team for the carbon project, but his level of involvement has decreased compared to that of the validation audit. Tatiana Laperyre has played a more active role in the project for the verification audit, bringing over 10 years of experience in carbon projects to the table. Although the NPRR has been updated, the scores have not been changed.

Auditor Response: Thank you for the explanation. The auditors confirmed on-site that Tatiana has played an important role on the project team and brings many years of experience from other carbon projects in Peru. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 21 Dated 22 Feb 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0;
VCS_Validation_Verification_Manual_v3.2.pdf

Document Reference: Appendix 3 - VCS-Non-Permanence-Risk-Report VF2022 (Protegido)

Finding: Section 2.2.2 (2) of the NPRR states that “The cash flow breakeven point is the year in which the cumulative cash flow is positive (i.e., cash flow in exceeds cash flow out) and stays positive. Breakeven should be calculated on a cash flow basis based on generally accepted accounting principles. Cash flow in may include commercial revenue streams associated with the project, secured revenue and conservatively projected revenues from the sale of GHG credits, other funding sources such as donor funds, upfront investments, or carbon prepayments, equity or loans. Cash flow out shall include, at a minimum, project implementation costs, costs associated with GHG credit generation (e.g., validation, verification and registration), and, where applicable, interest expenses, repayment of loans or forward purchase agreements and any required equity distributions. “ The VV Manual requires that “While risk is assessed over a 100-year period from the start of the current monitoring period, the analysis should be based on data and assumptions that accurately reflect current conditions, not past or future circumstances, when determining all risks, including the opportunity costs and financial viability.” The NPRR references GGF’s cash flow model provided during validation. However, that was an ex-ante cash flow with projected GHG revenues, projected project implementation costs, costs of verification, etc. it is likely that these costs/revenues have changed since the start of the monitoring period. For instance, the MR references a decrease in the actual project VCUs from the ex-ante VCUs. Please provide the updated version of the cash-flow analysis that accounts for any of these changes and includes actual verifiable costs and revenues for this current monitoring period forward.

Project Personnel Response: We have provided an updated cash flow. According to our projections, the project is expected to break even in 2023. We have made some updates to the wording of the NPRR, but the score has not been changed.

Auditor Response: The auditors reviewed the updated cash-flow analysis and found that it demonstrates a break even point of this current year. The cash flow contains up to date VCUs and costs/expenses. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 22 Dated 22 Feb 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: Appendix 3 - VCS-Non-Permanence-Risk-Report VF2022 (Protegido)

Finding: The NPR Tool states that “Callable financial resources are those not included in secured funding, but that are readily available to the project. The availability of such resources may be indicated through letters of credit, revolving credit lines or other financial backing, as evidenced by signed agreements and which demonstrate the project’s ability to access funding as needed.” The NPRR does not reference any documentation supporting the statement that “GGF’s shareholders have financed the business since 2009. They have the callable financial resources to make the project a success.” Please provide the required information. It is also important to note that the callable resources mitigation score is only applicable if the breakeven point has not been reached (“Project has available as callable financial resources at least 50% of total cash out before project reaches breakeven”). Please also indicate if the cash-flow breakeven point has been reached.

Project Personnel Response: Given that the breakpoint is 2023, the callable resources mitigation score is no longer applicable. The NPRR score for that item was changed. This does not change the overall score.

Auditor Response: The auditors confirmed that the NPRR shows that the callable resources mitigation score is not applied. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 23 Dated 22 Feb 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: Appendix 3 - VCS-Non-Permanence-Risk-Report VF2022 (Protegido)

Finding: Table 7 (Community Engagement) of the NPR Tool indicates that if item a is applicable, a score of 10 is applied and if item b is applicable a score of 5 is applied. When comparing 'Table 7: Community Engagement' of the NPR Tool to the 'Community Engagement' table in the NPRR, risk factors a) and b) do not align for the description or the allowable risk rating numbers. For instance, in the Risk Tool, item a states "Less than 50 percent of households living within the project area who are reliant on the project area, have been consulted." However, in the submitted NPRR, item a states "Less than 20 percent of households living within the project area who are reliant on the project area, have been consulted". Thus you can see that this text for item a differs from what is written in the Risk Tool. Item B also shows differences in text. Next, the NPRR shows a risk score of 2 for item a and a risk score of 3 for item b. These scores are not in conformance with the requirements of the risk tool as the Risk Tool scores are 10 and 5 if these items are applicable

Project Personnel Response: The score was updated according to the NPRR guidelines, downloaded from VERRA's website. While the rating for "community engagement" has changed, it does not the overall rating of the project.

Auditor Response: Confirmed that item a was updated to 0 as no households are living in the project area. This was confirmed on-site. We confirmed from reviewing the PRA that >20% of the households living within 20km of the project area who may have some reliance on the project area have been consulted. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 24 Dated 22 Feb 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: Appendix 3 - VCS-Non-Permanence-Risk-Report VF2022 (Protegido); PRA Report V1 - 2022

Finding: Section 2.3.2(1) of the NPR Tool states “Community engagement shall be assessed for projects where local populations, including those living within or surrounding the project area (given as within 20 km of the project boundary), are reliant on the project area, such as for essential food, fuel, fodder, medicines or building materials. Where local populations are not reliant on the project area, the risk is not relevant to the project and the risk rating for community engagement (CE) shall be zero. Evidence may include social assessments such as household surveys and participatory rural appraisals.”

In the NPRR submitted, values (non-zero) are provided for all three items (a, b, and c) of this table. However, the ‘Justification for risk rating’ in the NPRR for Community Engagement states “No local populations are living within or surrounding the project areas that are reliant on the project area.” If this is true, then the risk scores must be zero for all items in table 7 of the NPRR. However, it is unclear to the audit team whether communities living within or outside of the project area (within 20km) are reliant on the project area for food, fuel, fodder, medicines, and/or building materials. For instance, the MR indicates that “28.26% of interviewees [from PRA community surveys] answered that they harvest timber both inside and outside the GGF concession. After reviewing the results of the resource map, it was identified that the logging was for domestic use, not commercial.” The PRA provides additional reference to community reliance on the project area for building materials, hunting, etc, thus suggesting these communities are reliant on the project area in some way. Please provide additional information regarding the reliance of communities living within and outside of the project area, on the project area and update this Community Engagement of the NPRR accordingly.

Project Personnel Response: While the Participatory Rural Appraisal (PRA) indicates that 28% of the interviewees harvest timber from both inside and outside the GGF concession, this represents only 8.98% of the total families from the participating communities. Additionally, since these interviewees also harvest timber from outside the GGF concession, they are not solely dependent on the project area.

Auditor Response: We confirmed from reviewing the PRA that >20% of the households living within 20km of the project area who may have some reliance on the project area have been consulted. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 25 Dated 22 Feb 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: Appendix 3 - VCS-Non-Permanence-Risk-Report VF2022 (Protegido); PRA Report V1 - 2022

Finding: Section 2.3.2(3) of the Non-Permanence Risk Tool states “To achieve the mitigation credit, it shall be demonstrated that a current participatory assessment of the positive and negative impacts of the project activities on the local communities who derive livelihoods from the project area has been completed and demonstrates net positive benefits on the social and economic well-being of these communities. A participatory assessment is considered current where it is completed at least five years prior to the risk analysis. Certification against the Climate, Community & Biodiversity (CCB) Standards or SOCIALCARBON Standard may be used to demonstrate that a project satisfies this mitigation requirement.” In the Community Engagement table of the NPRR submitted, mitigation credit of -5 is being claimed. Please demonstrate how the project meets the requirements to receive mitigation credit. Please note that the current PRA submitted does not pertain to livelihood benefits and that the project has not completed the CCB certification (validation).

Project Personnel Response: The risk analysis score has been updated as a participatory assessment of the project activities' impacts on the local communities, who rely on the project area for their livelihoods, has not been conducted for at least five years before the risk analysis. However, this update does not impact the overall risk rating.

Auditor Response: Thank you for your response and revised documentation. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 26 Dated 22 Feb 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: Appendix 3 - VCS-Non-Permanence-Risk-Report VF2022 (Protegido); Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V1 2022.xlsx

Finding: Section 2.4.1(4) of the NPR tool outlines the reporting requirements for the Natural Disturbance Risk section of the NPR. For instance, 2.4.1(a) states

“All natural risk factors applicable to the project shall be assessed using Table 10. “And 4b states “Likelihood and significance (LS) and mitigation (M) (if any) shall be assessed for each risk factor identified as set out in the Likelihood and Significance and Mitigation tables below, and multiplied to determine the risk score for each natural risk applicable to the project (i.e., $LS \times M$).” It appears there may be a type-o in the Natural Risk (Extreme Weather) table, as for the ‘Significance’ it states “Over the 20-year crediting period the loss would be equivalent to 20x” and ‘Likelihood’ states, “0.004% = 0.08% As this is negligible, the significance is ‘no loss’.” Thus perhaps there is some mismatch or copy and paste error between these two risk reporting categories. Please provide additional information about this and correct this section of the report if needed.

Additionally, For Natural Risk, the NPR Tool states “Any significant natural risk (i.e., a risk affecting more than 5% of the project area) that has occurred over the past 100 years in the project area shall be considered applicable to the project. The frequency and significance of events shall be estimated based on historical records, probabilities, remote sensing data, peer-reviewed scientific literature and/or documented local knowledge, such as survey data in project areas, and may include projected climate change impacts.” Appendix 2 (calculation workbook) shows a negative Annual C sequestration (tC/ha/yr) value and states that “It was identified that the loss of biomass was due to natural loss (strong winds). See report “Análisis de Deforestación,” suggesting that there may have been significant extreme weather risks. However, the report on deforestation provided (7. Informe de análisis de pérdida de cobertura forestal en el área del “Proyecto Loreto 1”) does not show any deforestation in the San Regis area. Please provide more information regarding the significance and likelihood of extreme weather events and ensure reporting conformance with the tool.

Project Personnel Response: Based on the updated biomass report from SI, there has been no decrease in biomass in the San Regis area. This correction has been reflected in both the MR and the calculation Excel sheet. The natural risk section in the risk report has also been updated to reflect this information.

In terms of risk assessment, the risk report justifies that the risks posed by fire and hurricane winds are deemed insignificant.

Auditor Response: Thank you for your response and revised documentation. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NCR 27 Dated 22 Feb 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: AFOLU Non-Permanence Risk Tool v4.0 Template

Finding: The title page of the NPRR Template requires that the following Contact information be provided: Physical address, telephone, email, website. This information has not been included on the title page of the NPRR submitted and is therefore not in conformance.

Project Personnel Response: The title page of the NPRR is updated with the requested information.

Auditor Response: Thank you for the revised documentation. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 28 Dated 22 Feb 2023

Standard Reference: VM0010 v1.3

Document Reference: Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V1 2022.xlsx; GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: Section 8.2.1 of the Methodology states “This section calculates $\Delta CAB_{t|PRJ}$ annual carbon stock change in aboveground biomass of trees in the project scenario, in tCO₂e.” The subsections that follow then detail the steps for quantifying forest growth. Methodology deviation #3 “In Section 8.2.1: Ongoing forest growth in the project scenario, which calculates $\Delta CAB_{t|PRJ}$ annual aboveground carbon stock change in trees in the project scenario, Sections 8.2.1.1-8.2.1.3 will still be followed to provide estimates of aboveground tree carbon stock in sample plots based on field measurements (however, see Deviation #1 above). Sections 8.2.1.4 – 8.2.1.5 are now obsolete, as there is only a single project stratum and the measured aboveground tree carbon stock in sample plots is directly used as an input into the model that produces the above-mentioned carbon stock maps. The calculation of $\Delta CAB_{t|PRJ}$ in the modified Equation (32) of Section 8.2.1.6 is now done directly through the comparison of the biomass maps from two monitoring events.” In reviewing the calculation workbook, Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V1 2022.xlsx, sheet Inputs_Y1Y2_2022, the audit team found that the comparison of biomass maps from the two monitoring periods was conducted yielding an annual change in biomass (growth rate), summarized for each area of interest. These AOI-level C stock change values were simply averaged together, excluding the San Regis area of interest. In cell J13, it states “It was identified that the loss of biomass was due to natural loss (strong winds). See report “Análisis de Deforestación”. Therefore, this area is not included in the calculation of the “Annual C sequestration (tC/ha/yr).” However, the growth rate of -0.09 Mg C/ha/yr is the modelled growth rate for the San Regis area. Thus to ignore this value because it is negative and instead apply a much higher growth rate from other modelled areas is not accurate or conservative. Furthermore, it is unclear why a straight average of the C stock change for the AOIs was applied instead of an area weighted average, when the Consolidado 1 is 12,309.92 ha and consolidado 2 and San Regis are much smaller. Lastly, if this San Regis area truly did experience wind related mortality, it is unclear why the loss in carbon associated with the non-fire disturbance was not quantified and deducted following equation 35 in methodology deviation 3. Please provide justification for the approach utilized to calculate the annual C sequestration rate that was applied to the entire project area.

Project Personnel Response: After reviewing the calculations, a weighted average for the biomass growth calculation is now being used. See the updated Excel.

Auditor Response: The auditors confirmed that a weighted average has been applied. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 29 Dated 22 Feb 2023

Standard Reference: VCS v4.4

Document Reference: Plan de Relaciones Comunitarias_GGF

Finding: Section 4.4.4 of the Community Relations Plan states (translated to English) “In accordance with the design of the seismic program, there are lines that overlap communal territories that are used by a particular family and private properties. In these cases, the company will pay compensation to each owner based on a valuation that the company will make, taking as a reference the uses that the owner gives to the land and the benefits that the owner will cease to receive during the time that seismic activities last on his property.

In addition to the above, it is likely that during the development of the Project's activities there will be damages to communal or individual property, which must be duly recorded and investigated, using the appropriate criteria for this purpose. Once the damages have been determined, they will be assessed and negotiated so that an agreement can be reached, which must be recorded in a certificate of acceptance. The process concludes with the compensation itself, which must be accepted through a certificate of conformity.” The audit team requests additional information regarding this seismic activity, how it relates to the project activities, etc

Project Personnel Response: The term "seismic" has been removed from the text as it was mistakenly included. However, the compensation and indemnification program procedure remains unchanged. This procedure will be used if any community areas are affected as a result of the project activities. Please refer to Section 4.4.4 Actividad 3 del Plan de Relaciones Comunitarias_GGF - Actualizado Abril 2023.pdf for more information.

Auditor Response: Thank you for the clarification. The audit team has reviewed the updated plan and has no further questions. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): NA

NIR 30 Dated 22 Feb 2023

Standard Reference: VCS v4.4

Document Reference: PRA Report V1 - 2022

Finding: Section 2.2.1 of the VCS states “Disclose sufficient and appropriate GHG-related information to allow intended users to make decisions with reasonable confidence.” The PRA document provides a synopsis of each of the communities interviewed. In section 5.1 it shows community derived maps of activities and provides some information regarding whether these activities take place within the GGF concession areas. For instance, section 5.1.1 pertains to the Copal Urco community and states “En la C.N Copal Urco los comuneros se dedican a la pesca, caza, madera, recolección de fruto, aunque dichos recursos los obtienen fuera de su territorio comunal, incluso estos son aprovechados dentro de la concesión de Green Gold Forestry.” In reviewing section 5.1 of this report, it suggests that the following 7 communities conduct extractive activities within the GGF concessions: Copal Urco, Patria Nueva, Huiririma, Berlin, Santa Maria de Loreto, Santa Teresa, and San Felipe. However, in the conclusion section 6, it states “Sin embargo, solo el 28.26% respecto del total realiza el aprovechamiento de este recurso tanto dentro de la concesión de GGF como fuera de esta. Este porcentaje corresponde a 52 jefes de familia encuestados de 6 comunidades, las cuales son: Berlín, Santa Teresa, Vencedores de Vista Alegre, Bellavista, Santa Rosa y Chambira.” Thus, there are different communities identified in the conclusion than from within section 5.1. That audit team requests elaboration as to why there are differences in the report pertaining the communities that extract wood and/or other resources from the GGF concession area (section 5.1 vs. 6.0 of the PRA report). Also please clarify whether these communities conduct extractive activities within the actual project area or within GGF concession area that is outside the project area. This is unclear from the report provided.

Project Personnel Response: Corrections has been made to the PRA to resolve the discrepancies. Also, a table was added to show which communities take resources from the area of the project and which ones from outside the area of the project but within GGF concessions.

See "30.PRA_v2 - Updated April 2023.pdf"

Auditor Response: Thank you for this clarification. The audit team confirmed that the PRA has been updated and it is now much clearer regarding which communities extract resources from the project area versus other concessions, and what resources are extracted. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): NA

NIR 31 Dated 22 Feb 2023

Standard Reference: VCS v4.4

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1; VCS PD Green Gold Loreto 1 v11 accuracy review December 2021

Finding: Methodology deviation #4 described in the PD states that “Ground surveys will then confirm which of the pixels with flagged mortality events resulted from illegal logging.” Likewise, methodology deviation #4 of in the Monitoring Report indicates that “Satellite image analysis as well as ground surveys confirmed that the pixels with flagged mortality events did not result from illegal logging.” Furthermore section 5.3.7 of the PD states “A ground survey will be required to distinguish between areas of assumed natural disturbance that have burned Aburn,i,t and that were affected by non-fire disturbance, e.g., windfall Adist,i,t. Areas that are not ground surveyed are conservatively classed as Aburn,i,t.” Please provide more information about these ground surveys, such as where they were conducted, when, by whom, and the findings of these ground surveys. Please note that if these ground surveys were not conducted, this constitutes a PD deviation and must be described in section 3.2.2 of the MR and be in conformance with section 3.20 of the VCS.

Project Personnel Response: Please refer to "Appendix 6 - Disturbance analysis and ground surveys" for detailed information about the ground surveys conducted and the corresponding findings. Moreover, based on the survey results, the probability of fire due to natural causes is almost negligible. Therefore, the project proponent suggests a new Project Description Deviation (Deviation #5), which proposes to extrapolate the ratio of natural/anthropogenic causes of disturbance to the areas that have not been ground surveyed, instead of assuming that they have been burned.

Auditor Response: Thank you for this clarification. The auditors reviewed Appendix 6 which details the ground surveys conducted relative to the areas flagged as disturbances by the SI analysis. It demonstrates strong agreement between the early alert system and the SI analysis. Overall this NIR has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 32 Dated 22 Feb 2023

Standard Reference: VCS v4.4

Document Reference: Field protocol Peru GGF Loreto – English_11102021; VCS PD Green Gold Loreto 1 v11 accuracy review December 2021

Finding: Section 5.3.6 of the PD states that “Around 30 half-hectare permanent sample plots will be established and measured according to the RAINFOR/ForestPlot.net methodology (Phillips et al, 2018) as soon after project start as the COVID-19 situation allows. The number of 30 plots is recommended by Space Intelligence Ltd. As being sufficient to calibrate their model to produce carbon stock maps (see Section 5.3.7), considering the homogenous vegetation type covering the project area. Plot locations will be determined randomly within six strata: low, medium and high canopy height (e.g., 0-10, 10-20, 20+), each divided into ‘near’ and ‘far’ from roads and settlements (thresholds to be determined based on the data). 5 plots will be placed randomly in each, reducing the placement to exclude the least accessible 30% of the area (if it is possible to do so without introducing any obvious biases), in order to reduce travel time, danger to the field crew, and fuel use.” However, during a quantification and monitoring call with the project team, it was indicated that plots were placed in a semi-stratified sample in which the number of plots were stratified by the AOIs and that given the isolation of these areas, plots were placed in physically accessible locations. There was no mention of plots being placed according to canopy height or near and far from roads. Furthermore, the field Protocol document was provided indicating that “The potential locations for the plots in each forest concession have been chosen taking into consideration the land cover classes, the position of the GEDI LiDAR footprints and avoiding difficult access areas. Again, this description of the plot locations does not appear to be in alignment with the description in the PD. Please provide a clear demonstration regarding how these plots were located in the manner set out in the validated PD. If the plot locations were determined using a different approach, this constitutes a PD deviation and must be described in section 3.2.2 of the MR and be in conformance with section 3.20 of the VCS.

Project Personnel Response: At the time of choosing the locations of the field plots the height map had not been completed. An alternative vegetation map was therefore used to stratify the forest, provided to Space Intelligence by GGF. Details of the alternative method followed are described in a Project Description Deviation, in the Monitoring Report (Deviation 4).

Auditor Response: The audit team confirmed that a project description deviation #4 has been described in the PD. The outcome of the deviation is described and the audit team confirms it is in conformance with the deviation requirements. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 33 Dated 22 Feb 2023

Standard Reference: VCS v4.4

Document Reference: Field protocol Peru GGF Loreto – English_11102021; VCS PD Green Gold Loreto 1 v11 accuracy review December 2021; Field Plot Data Analysis_SpaceIntelligence

Finding: Section 5.3.6 of the PD states “Around 30 half-hectare permanent sample plots will be established and measured according to the RAINFOR/ForestPlot.net methodology (Phillips et al, 2018) as soon after project start as the COVID-19 situation allows.” Section N of the Phillips et al. 2018 document, indicates that “In addition, tree heights should be measured, to establish plot level diameter/height relationships for accurate modelling of tree-by-tree volumes for each plot, and test whether tree shape differs between stands in different environmental conditions.” However, in the Field protocol Peru GGF Loreto – English_11102021.pdf, there is no mention of height measurements. It is the understanding of the audit team that these biomass plots were primarily used for calculating biomass which was then used to develop a height-biomass relationship. Also, the Chave et al. 2014 equation to calculate biomass and described in the document Field Plot Data Analysis_SpaceIntelligence and the monitoring report, require the H (height) parameter. Thus it is unclear why the field protocol does not include any instruction for measuring tree heights. Please provide additional clarification on this matter.

Project Personnel Response: We believe something became confused between versions. Space Intelligence always intended the GGF team to collect tree height information, communicated that to the team, and the field team did collect tree height data in the field. This can be seen in the field sheets. We have corrected the field protocol to include height data, and this will be used for the next census. See updated 'Field Protocol Peru ... _updated' files.

We stress there is no PD Deviation here: tree heights were measured, and those data were used to both calculate biomass values for the trees in those plots, and to create the relationship between the tallest trees and biomass needed to create the biomass maps from the height data.

Auditor Response: Thank you for the explanation. The auditors confirmed that the updated Field protocol references the height measurements were intended. We also confirmed through on-site interviews that the field teams collected data on heights. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): NA

NIR 34 Dated 22 Feb 2023

Standard Reference: VM0010 v1.3

Document Reference: Field protocol Peru GGF Loreto – English_11102021; Appendix 1 - Report Biomass - Peru GGF;

Finding: Section 4 of the VM0010 methodology indicates “The baseline scenario, project scenario and project case cannot include wetland or Peatland.” Section 3 of the Field Protocol indicates that “There

is a possibility of peat in the areas of the cover map classified as floodplain according to the vegetation map: especially in the following plots: * Mazan Concession: Plot CM_2

* Tachsa Concession: Plots CT_1, CT_2, CT_4 and CT_20. In case it is suspected that the soil in the plots may contain peat, based on local experience and / or how humid the soil is (for peat to exist, the water level must be at the surface or above during most of the year. Take about 3 measurements in each plot.” Furthermore section 1 of the Appendix 1 - Report Biomass - Peru GGF.pdf, states “We were informed that there is no indication that any areas with peat soils are present in the project area, though the habitat map we have been provided with does include about 700 hectares of a class called ‘peatland’: we assume these will be excluded from the project area.” Please provide the following information:

(1) Whether the field sampling identified any peat and if any soil core samples were taken. Provide the soil core results if so.

(2) The habitat map showing the 700 ha of peatland.

(3) clear demonstration that the project area does not include any peatland

Project Personnel Response: There are wetlands, some of which contain peat, in the vicinity of the Project Area. However, these wetland areas were specifically excluded from the project areas, and we have no evidence (from remote sensing or from the field) that peat is anywhere in the final Project Area.

The Field Protocol was being thorough, as one landcover map suggested it was possible these areas contained peat; however field campaign did not find any peat in these areas.

The '700 hectares' comment was an error. The wider region contains peat, and these areas are included in the biomass map, which extends beyond the forest area. But the relevant landcover map does not contain any peat pixels in the Project Area: indeed, this map was specifically used to exclude the peat areas (it is the map used in the PD). Apologies for the confusion, the Biomass Report v 2.1 has been updated to reflect this.

A new map of peatlands of Peru was recently published, involving some of the Space Intelligence team involved in creating these maps, as well as many local scientists (Hastie et al 2022 <https://www.nature.com/articles/s41561-022-00923-4>). Map is provided in shared folder "Hastie_et al 2022_landcover_style.qml". This finds one very small region of 'open peatland' within the Project Area (<1 hectare), however, discussions with the first author and investigating with satellite data we conclude this is very unlikely to actually be peatland, and is likely an error in the map. This is discussed in the Biomass Report v 2.1

Auditor Response: The auditors confirmed through review of the documentation referenced that peatlands are unlikely to exist within the project area. We confirmed that a discussion of this is in the Biomass Report and that this is sufficient. The finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 35 Dated 22 Feb 2023

Standard Reference: VCS Validation Report template

Document Reference: VCS_GreenGold_Loreto1_ValidationReport_V1-6_121621

Finding: Section 2.5.1 of the Validation Report includes the following Forward Action Request, summarized here: "• During discussions with the project proponent, it was indicated that the PGMFs and POs will be updated and re-submitted to GERFOR once the project is validated, to remove timber harvesting from the planned activities. The project proponent does not want to preclude the possibility of continuing harvesting operations if the project were not to be validated.

- Therefore, at verification, the VVB shall confirm that the corresponding PGMFs and POs have been updated to indicate that timber harvesting activities will not occur within all 10 of the concessions in the project area, and that these plans have been approved by GERFOR." Please provide more information regarding the status of this forward action request with any supporting updated PGMFs and POs.

Project Personnel Response: The project area is made up of 10 forestry contracts, which were updated and presented to GERFOR. In 2021, the General Forest Management Plans (GFMP) were consolidated into three areas: Consolidated 1 - "Tacsha", Consolidated 2 - "Mazan", and Forestal San Regis, as shown in Table 2. These management documents were approved by the regional authority - GERFOR, which indicates that harvesting activities will continue within the approved operational plans that are outside the project area, including non-timber forest products.

Each GFMP has its corresponding Operational Plan (OP) for the harvest of timber forest products. This document describes the harvesting activities, such as location and product that will be carried out for this case of wood. See file "Answer to Finding 35" for more information regarding the coordinates of the approved and current OPs that show that they are not within the project area.

Auditor Response: The auditors confirmed that the GFMPs have been updated and consolidated into the 3 areas. We confirmed that the GFMPs acknowledge that extraction of timber and non-timber forest products will occur within each of the three areas and that the extraction of timber products is only to occur outside of the project area. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 36 Dated 28 Mar 2023

Standard Reference: CCB PD template

Document Reference: Gren Gold Loreto 1 - CCB Project Design Document V1

Finding: Section 1.2 of the CCB PD template requires the following: “For each metric, provide an estimate of the net benefit the project aims to achieve during the project lifetime. Insert “not applicable” where the metric does not apply and “data not available” where the metric does apply but there are no means of quantification. Estimations included below shall be substantiated in this document as denoted in the corresponding section reference.” In the project’s CCB PD for metric “Total number of people expected to be employed in project activities,5 expressed as number of full-time employees” it lists 1,440 people. For metric “Number of women expected to be employed as a result of project activities, expressed as number of full-time employees” the PD lists 500 people. Footnote number 6 of the template states “Full time equivalency is calculated as the total number of hours worked (by full-time, part-time, temporary and/or seasonal staff) divided by the average number of hours worked in full-time jobs within the country, region or economic territory (adapted from the UN System of National Accounts (1993) paragraphs 17.14[15.102];[17.28]).” During the validation site visit, the audit team found the most of the community jobs that were created thus far are temporary positions lasting in duration from a few days to a few months. Thus, the audit team requests further demonstration and justification of how the project will create 1,440 full-time jobs.

Project Personnel Response: The projection has been updated, and the new number has been calculated using the formula stated in the template. The assumptions made for the calculation include historical employment data and the maximum amount of hours legally workable. For more details, please refer to the file "36. Full-time jobs - CCB estimation.xlsx".

Auditor Response: The information requested regarding the number of full time jobs projected has been provided. The auditors confirmed that the number of full time jobs projected has been updated in the CCB PD. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): NA

NIR 37 Dated 28 Mar 2023

Standard Reference: CCB PD template

Document Reference: Gren Gold Loreto 1 - CCB Project Design Document V1

Finding: Section 2.1.4 of the CCB PD requires the following: “Provide a summary description of the basic social parameters of the project. These may include, but are not limited to, the following:

- Main settlements (towns, villages, or household clusters where communities reside).
- Land use and economic activities (farming and pastoral practices or culture, areas of use for collection, fishing or hunting, managed and conservation lands, etc.).
- Socio-cultural information (ethnicity, gender, age, household income, land ownership, education, health statistics, migration patterns, etc.).” Section 2.1.4 of the Project CCB PD states “There are 7 communities within the project zone that have property rights and land tenure. They are: Santa María de Loreto, Copal Urco, Huitotos de Fortaleza, Huiririma, Patria Nueva, Sargento Lores and Solterito. In addition, out of those 7, 6 have life plans. Conversely, 4 native communities do not have a title (Vencedores de Vistas Alegre, Chambira, Santa Rosa, Berlin) nor does 1 peasant community (Santa Teresa).” This section does not make mention of the titles of the Bellavista or San Felipe communities. Please provide more information regarding the status of titling for these two communities.

Project Personnel Response: Bellavista and San Felipe do not have the physical document of their land titles yet, as the responsible entity has not yet officially delivered them, presumably due to overlapping issues with concessions. Currently, GGF has the exclusion resolution (RESOLUCIÓN GERENCIAL REGIONAL N° 247-2022-GRL-GGR-GRDFFS), where the exclusion of the entire area of the forestry concession contract for timber purposes N° 16-LOR-MY/COM-MAD-2018-007 is deemed appropriate. The property titles N° 025-2019-GRL-DRA-L and 030-2019-GRL-DRA-L correspond to the aforementioned communities. Currently, we are supporting both communities in logistical arrangements to go to the corresponding entity to request the situational status and physical documents of their titles. In addition, the CCB PDD has been updated.

Auditor Response: Thank you for confirming that titling status of these two communities. We confirmed that section 2.1.4 of the PD has been updated to include explicit mention of these communities. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): NA

NIR 38 Dated 28 Mar 2023

Standard Reference: CCB PD template

Document Reference: Gren Gold Loreto 1 - CCB Project Design Document V1

Finding: Section 2.1.10 of the CCB PD template requires the following “Explain and justify any differences between the GHG emissions accounting, climate adaptive capacity and resilience, community, and/or biodiversity assessment periods.” Section 2.1.10 of the project CCB PD states “The evaluation periods for GHG emissions accounting, climate adaptative capacity and resilience, community and/or biodiversity assessments will not vary as they will be evaluated simultaneously.” However, the first VCS verification is occurring for the period 2020-2022, while the first CCB verification is not yet underway. Please provide more accurate information regarding the difference in assessment periods.

Project Personnel Response: This section has been updated. It now states that: The evaluation period for GHG accounting and climate adaptative differs from the community and biodiversity assessments as the project was validated in 2021 through VCS and is currently in verification for the first monitoring period (August 2020 and July 2022) whereas the project design document for CCB is to be yet validated during the first half of the 2023. In the following years, the verification for VCS will be done every 2 years whereas for CCB, the audit will take place every 4 years.

Auditor Response: Thank you for providing more information about the differences in the assessment periods. However, it is unclear in the text as to why the VCS verification will be done every 2 year and the CCB will be every 4 years. In an email exchanged, the GGF team indicated that a full 4 years is needed for the biodiversity monitoring in order to draw reasonable conclusions. Please provide justification for this approach. This finding remains open.

Project Personnel Response 2: The discrepancy in assessment between CCB and VCS arises from certain variables in the biodiversity section that are monitored every 3 - 5 years. This monitoring frequency allows for a better understanding of changes in flora and fauna, as they become more noticeable over longer evaluation periods. Therefore, presenting results every 2 years may not provide a comprehensive analysis compared to a 4-year evaluation, as it could be perceived as incomplete. Please note that although complete assessments for those variables are conducted every 3 - 5 years, continuous monitoring will be in place throughout each monitoring period.

A similar explication has been added to section 2.1.10 of the CCB PDD

Auditor Response 2: Confirmed that section 2.1.10 has been updated with additional justification for the difference in the assessment periods. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): NA

NIR 39 Dated 28 Mar 2023

Standard Reference: CCB PD template

Document Reference: Gren Gold Loreto 1 - CCB Project Design Document V1

Finding: Section 2.1.11 of the CCB PD Template requires the following: “Identify key dates and milestones in the project’s development and implementation, such as introductory meeting dates, start and end dates for each project activity, start and end dates for the GHG accounting period, monitoring schedule, verification schedule, etc.” Section 2.1.11 of the project CCB PD indicates that the CCB Validation audit has occurred in February 2022. However, the audit is on-going and has commenced in Feb/March 2023. Please provide more accurate dates in the PD.

Project Personnel Response: The date was corrected.

Auditor Response: Thank you for the revised documentation. The audit team notes that the implementation date for the commencement of the CCB audit has been revised to "Feb 2023Te".

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 40 Dated 28 Mar 2023

Standard Reference: CCB PD template

Document Reference: Gren Gold Loreto 1 - CCB Project Design Document V1

Finding: Section 2.1.14 of the CCB PD states “Demonstrate that financial mechanisms adopted provide an adequate actual and projected flow of funds for project implementation and to achieve the project’s climate, community and biodiversity benefits. Provide evidence of actual and/or projected revenues from GHG emissions reductions and/or removals and/or other sources.” While section 2.1.14 of the project CCB PD provides demonstration of the financial sustainability of the project, it does not provide any evidence of the actual and/or projected revenues from GHG emissions reductions and is therefore not in conformance with the template requirements.

Project Personnel Response: The cash flow (that is in the shared folder) is evidence that GGF has adopted financial mechanisms that provide an adequate actual and projected flow of funds for project implementation.

Auditor Response: Thank you for providing this evidence. This NIR has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 41 Dated 28 Mar 2023

Standard Reference: CCB PD template

Document Reference: Gren Gold Loreto 1 - CCB Project Design Document V1

Finding: Section 2.3.12 of the CCB PD Template requires “Document the project’s grievance redress procedure. Demonstrate that the procedure includes:

- A process for receiving, hearing, responding to and attempting to resolve grievances within a reasonable time period, which takes into account traditional conflict resolution methods.

- Three stages, each with reasonable time limits: attempt at resolution, mediation and arbitration or courts.” Section 2.3.12 of the Project CCB PD states that “To this end, GGF has a procedure manual for dealing with complaints and suggestions, as well as a protocol for conflict resolution, which aims to provide optimal care for complaints, suggestions and reports.” The PD also indicates that a Complaints and Suggestions Book is maintained. The audit team requests the following regarding the grievance and redress procedure:

(1) more information regarding the Complaints and Suggestions Book including the location of the Book(s) and who is responsible for it/them, as well evidence of this book and any complaints or suggestions documented.

(2) Please also provide the grievance and redress procedure manual.

(3) Please provide more information regarding how the different stakeholders can present grievances or suggestions (who they report these to).

Project Personnel Response: 1. The Complaintst and Suggestions Book is an online document that can be located in GGF website (<https://www.ggfgroup.pe/en/home/>) and on paper in the Iquitos office and Bahía Camp. See section 2.3.12 of the CCB PDD for more information

2. Both documents ("Manual de Quejas y Sugerencias" (The compainst and suggestion book) and "Protocolo de Resolución de Conflictos" (Protocol of conflict resolution) are uploaded to the shared folder.

3. Section 2.3.12 has been updated with the required information

Auditor Response: Thank you for your response and revised documentation. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 42 Dated 28 Mar 2023

Standard Reference: CCB PD template

Document Reference: Gren Gold Loreto 1 - CCB Project Design Document V1

Finding: Section 2.3.13 of the CCB PD requires “Describe how the feedback and grievance redress procedure is publicized and accessible, and how grievances and project responses are documented and made publicly available.” While the Project CCB PD indicates that GGF has a procedure to make public the process of receiving and resolving complaints, it does not state how the grievance and redress procedure itself has been publicized and made accessible to stakeholders, resulting in a nonconformity with the template requirements.

Project Personnel Response: An explanation has been added on how to publicly access the complaints and suggestions manual, as well as the conflict protocol in Section 2.3.13 of the CCB PD. Evidence of the latter can be found in folder "Answer to finding 43"

Auditor Response: Thank you for the revised CCB PD and supporting documentation. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 43 Dated 28 Mar 2023

Standard Reference: CCB PD template

Document Reference: Gren Gold Loreto 1 - CCB Project Design Document V1

Finding: Section 2.3.16 of the CCB PD template requires the following: “Describe measures needed and designed to inform workers about their rights” among other requirements. This section on the project CCB PD does not describe measures to inform workers about their rights, resulting in a nonconformity with the template requirements.

Project Personnel Response: Section 2.3.16 was updated with the required information. Evidence of an activity where the head of Human Resources inform community workers about their rights is located in file "Evidence to Finding #43". Also the "Reglamento Interno de Trabajo" was uploaded to the shared folder.

Auditor Response: Thank you for the revised CCB PD and supporting documentation. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 44 Dated 28 Mar 2023**Standard Reference:** CCB PD template**Document Reference:** Gren Gold Loreto 1 - CCB Project Design Document V1

Finding: Section 2.5.4 of the CCB PD Template requires the following “Demonstrate that all property rights are recognized, respected, and supported. If applicable, describe measures needed, designed, and implemented by the project to help to secure statutory rights.” This section in the project CCB PD contains information regarding which communities are titled, not titled, in process, or towns. All communities in the project zone are described except for San Felipe. Please provide more information regarding whether San Felipe is titled or not and indicate why it was excluded from mention in this section.

Project Personnel Response: The findings refers to section 2.5.2 of the CCB PDD, not 2.5.4. The section has been updated

Bellavista and San Felipe do not have the physical document of their land titles yet, as the responsible entity has not yet officially delivered them, presumably due to overlapping issues with concessions. Currently, GGF has the exclusion resolution (RESOLUCIÓN GERENCIAL REGIONAL N° 247-2022-GRL-GGR-GRDFFS), where the exclusion of the entire area of the forestry concession contract for timber purposes N° 16-LOR-MY/COM-MAD-2018-007 is deemed appropriate. The property titles N° 025-2019-GRL-DRA-L and 030-2019-GRL-DRA-L correspond to the aforementioned communities. Currently, we are supporting both communities in logistical arrangements to go to the corresponding entity to request the situational status and physical documents of their titles. In addition, the CCB PDD has been updated.

Auditor Response: Thank you for the revised documentation. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): NA

NCR 45 Dated 28 Mar 2023

Standard Reference: CCB PD template

Document Reference: Gren Gold Loreto 1 - CCB Project Design Document V1

Finding: The CCB Project Description Template instructions on page 1 states that “All instructions, including this introductory text, must be deleted from the final document.” Section 4.5.4 of the CCB PD contains the instructional text, resulting in a nonconformity.

Project Personnel Response: The instructional text has been deleted.

Auditor Response: Thank you for the revised documentation. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 46 Dated 28 Mar 2023

Standard Reference: CCB PD template

Document Reference: Gren Gold Loreto 1 - CCB Project Design Document V1

Finding: Section 4.5.5 of the CCB PD Template requires the following: “Demonstrate that the project will generate net positive impacts on the well-being of women and that women participate in or influence decision making.” Section 4.5.5 of the project CCB PD states “GGF Peru has carried out the Gender Action Plan, which arises from a participatory and reconstructive methodology, whose main objective was to identify actions to guarantee the incorporation of a gender approach in project activities, these recommendations are being implemented in the project.” While the project may implement a Gender Action Plan, this section of the PD does not explicitly demonstrate how the project will generate net positive impacts on the well-being of women and that women participate in or influence decision making. Thus this section is not in conformance with the template requirements.

Project Personnel Response: The section 4.5.5 of the CCB PDD has been updated.

Auditor Response: Thank you for the revised documentation. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 47 Dated 28 Mar 2023

Standard Reference: VM0010 v1.3; VCS PD Green Gold Loreto 1 v11 accuracy review December 2021; Field Plot Data Analysis_SpaceIntelligence

Document Reference: Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V1 2022.xlsx; GGL1 - VCS Monitoring Report 2022 - v4.2 v1

Finding: Section 8.4.1.1 of the Methodology requires the following: “For both the baseline and the with-project case the total uncertainty is equal to the square root of the sum of the squares of each component uncertainty and is calculated at the time of reporting through propagating the error in the baseline stocks and the error in the project stocks. Therefore, total uncertainty for LtPF project is calculated as:[Eqn 42].”

Section 4.4 of the validated PD indicates that the Baseline uncertainty is 9.64%. Finding NIR18 above requests demonstration of the project scenario uncertainty. This finding is to request a demonstration of the calculation of the Total Project Uncertainty using equation 42 of the methodology and if uncertainty is greater than 15% provide a demonstration of the uncertainty deduction using equation 43 of the methodology.

Project Personnel Response: See the new Uncertainty Analysis section of the Monitoring Report (Section 5.4).

In summary, we find total Project Uncertainty of 11.3%, and Baseline Uncertainty of 9.64%. Summed using the relevant equation (42) they become 14.85%, below the 15% where discounts would apply."

Auditor Response: Thank you for the additional information. It is important to note that while this finding on the demonstration of the calculation of total project uncertainty is being closed out, issues remaining with the uncertainty analysis are addressed in findings which remain opened: NCR 17, 48, 49, and 50.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NCR 48 Dated 28 Mar 2023

Standard Reference: VCS Validation & Verification Manual v3.2

Document Reference: Report Biomass Peru_GGF_v2.0_22January2023; Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V1 2022.xlsx

Finding: Section 1.5 of the VCS Validation & Verification Manual states "VCS principles form mandatory criteria that the VVBs must consider when validating or verifying projects, or conducting methodology assessments. For example, where a project does not use data and methods that enable meaningful comparisons of GHG related information, the VVB must note it as a non-conformance with the VCS principle of consistency."

As a result of several quantification calls between the audit team and the project team, including Space Intelligence, updates have been to the aboveground biomass mapping and quantification as demonstrated in the Space Intelligence Report Report Biomass Peru_GGF_v2.0_22January2023.docx. However, these updates have not been incorporated in the monitoring period calculation workbook (Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V1 2022.xlsx). As a result the calculation workbook and estimation of VCU (appendix 2) is not consistent with the biomass mapping and quantification procedures applied.

Project Personnel Response: Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V2 2022.xlsx has been uploaded to the shared folder.

Auditor Response: The auditors confirmed that the ER calculation workbook has been updated such that it is consistent with the biomass and mapping procedures demonstrated in the Biomass Report. It is important to note that the calculation of the component uncertainties for the project uncertainty require attention that is addressed in other findings (18, 49).

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 49 Dated 29 Mar 2023

Standard Reference: VM0010 v1.3, VCS Methodology Requirements v4.3

Document Reference: Error Propagation spreadsheet Mg ha⁻¹ units.xlsx, Saatchia et al 2011 pnas.pdf, Saatchia et al 2011 pnas SI.pdf, Field Plot Data Analysis_SpaceIntelligence.pdf, plotAGB_clean.R

Finding: Note: This finding relates to the clients email/meeting based responses pertaining to NIR18 above.

Section 8.4.1.1 of the Methodology provides requirements for calculating the total project uncertainty. It states “Estimated greenhouse gas emissions and emission reductions from IFM activities have uncertainties associated with parameters and coefficients including estimates of area, carbon stocks, regrowth and expansion factors. It is assumed that the uncertainties associated with input data are available, either as default uncertainty values given in most recent IPCC guidelines, or as statistical estimates based on sampling. Uncertainty at all times is defined at the 95% confidence interval where the estimated variance exceeds +/- 15 percent from the mean.” Later it indicates “For both the baseline and the with-project case the total uncertainty is equal to the square root of the sum of the squares of each component uncertainty and is calculated at the time of reporting through propagating the error in the baseline stocks and the error in the project stocks.” And lastly, it requires “The project proponent must justify the selection of uncertainty propagation in the project documents.”

The MR does not provide any detail about the quantification of uncertainty (noted in NCR 17 above). However, partial uncertainty calculations (Error Propagation spreadsheet Mg ha⁻¹ units.xlsx) along with a scientific paper and associated supporting information (Saatchi et al 2011 pnas) to justify the approach in the Error Propagation spreadsheet were provided via email pertaining to NIR18. Additionally, in the Field Plot Data Analysis report, the approach to 'Summarizing uncertainty in field plot biomass estimates' states "This simulation takes into account error in diameter measurement and standard deviation in wood density across species observations. As there were no explicit estimates of error on the tree height measurements from the field survey..." This implies there was an 'explicit estimate of error' for diameter that was not carried out for height, which is not reflected in the field protocol. After reviewing the uncertainty documents provided, the audit team has the following observations and/or requests:

- The uncertainty of the relationship between mean height of the tallest 3 trees in a plot and above ground biomass of a plot is absent from the error propagation spreadsheet. Please provide this along with an explanation.
- The uncertainty of the AGB estimate requires clarity. Please detail the source of the values in cells I4:I6 (Error Propagation, sheet 'percentage') and include justification for treating the error surrounding DBH and height differently via the use of a height-DBH model (namely, HDmodel1, which was not used to estimate AGB, height, or DBH) to estimate uncertainty in the calculation of AGB (in plotAGB_clean.R)).
- Our understanding is that the average value (e.g. H7) in the 'Error Propagation spreadsheet' incorporates the relevant pixels in the project area. If not, please explain this value. If so, then the relevant pixels are accounted for and there would be no need to 'scale' this value as the sample has not changed. The same applies to the AGB plot uncertainty shown.

- The equations S8 & S9 (Saatchi et al 2011 SI) were provided for justification of the uncertainty calculations and 'scaling' between columns B, C, D, and E of the error propagation workbook. If Eq. S9 is to reflect cell B8 of the error propagation workbook, that assumes the difference between the post-hoc calculated 95% CI bound and the mean (numerator in cell B8) is equivalent to the calculation of standard deviation in Eq. S8 of the paper. Please justify this assumption and identify how the scaling approach taken is justified by the paper.

Project Personnel Response: We stand by this analysis: however, the total biomass stocks it relates to do not have any impact on the project scenario, which relates to biomass change. Therefore we do not believe this analysis is relevant to the assessment of the uncertainty in the project. We have produced an alternative uncertainty analysis focusing on biomass change, see response to Finding 18 above.

Project Uncertainty

The project emission reductions are calculated from the following factors:

Annual loggable area: no variance

Annual Carbon sequestration (tC/ha/yr): The figure of 0.46 tC/ha/yr increase in biomass across the Project Area is the main output of the satellite biomass maps (the others being the emissions from illegal logging, see below). The uncertainty on this figure is hard to estimate, as it depends on many factors some of which impact the maps from 2020 and 2022 equally (and thus cancel out when change is considered), and some of which are errors that are random scatter, and average out when many pixels are considered; and some of which are errors that do not average out with difference or in space. These are considered independently here:

Satellite-based height maps: ~15,000 independent GEDI satellite LiDAR data not used to train the model, themselves unbiased estimates of height but with random error. The form of errors between the two maps (2020 and 2022) are largely indistinguishable, and the random scatter will cancel out over the large area of comparison of the two maps, making the difference observed (18 cm) likely robust. A small bias was found which will not necessarily cancel out with area. Conservatively summing bias in 2020 and 2022 maps gives a total bias of 14.9 Mg/ha, compared to the mean carbon stock of the area of 291.75 Mg/ha, this is a potential error of 5.1%.

Carbon storage in forest plots: A monte carlo analysis considering errors due to the allometric equations and different wood density of the trees in the field plots found an error of 3% in the average carbon of the combined 15 hectares of Green Gold field plots, used to develop the height:biomass equation. However, this error applies equally to the 2020 and 2022 map (as the fundamental shape and wood density of the forests will not have changed), and so has effectively no impact on the annual carbon sequestration figure.

Height to biomass equation. The slope of this modelled relationship impacts the amount of biomass that is added for a specific number of centimeters of observed height gain. A simulation study suggests uncertainty in this slope impacts the change number by plus or minus 10.1% at a 95% confidence level.

The relevant errors, 5.1% and 10.1%, are combined as the square root of the sum of the squares of the two parameters (see Equation 42 below, applied mutatis mutandis).

Carbon sequestration uncertainty is therefore: $UPRJ = \sqrt{0.051^2 + 0.101^2} = 0.113$ (11.3%)

Emissions from fire disturbance: no variance, as zero.

Emissions from non-fire natural disturbance: no variance, as negligible.

Emissions from illegal logging: no variance. Remote sensing analysis showed 601.3 Mg C lost in total, which is 0.0012% of the total carbon stock in 2022 of 26,759,769 Mg C. This is far below the de minimis 5% cut off, and would remain so even if the true number were orders of magnitude higher.

Summing the above, the total Project Uncertainty is based solely on the Carbon Sequestration uncertainty, which is 11.6%.

Total Uncertainty

The total uncertainty is calculated as the square root of the sum of the squares of the baseline and project uncertainty, through propagating the error in the baseline stocks and the error in the project stocks by applying Equation 42 of VM0010. The total uncertainty is $\text{SQRT}(0.113^2 + 0.0964^2) = 14.85\%$, that would fall within the 15% threshold, meaning that no uncertainty discount was applied to the calculation of VCUs.

Auditor Response: The new information requested in the original finding has not been provided. This finding will remain open until the specific requested information/justifications are provided (see the bold text in the Original finding).

With reference to the information in your finding response, SCS has the following responses--with additional requested information in bold:

RE: 'We stand by this analysis' - The approach of scaling uncertainty remains in the 'Appendix 1 - Report Biomass Peru_GGF_v2.1_14April2023.pdf' and is outlined in 'Error propagation.xlsx'. As found in the original finding issued: The equations S8 & S9 (Saatchi et al 2011 SI) were provided for justification of the uncertainty calculations and 'scaling' between columns B, C, D, and E of the error propagation workbook. If Eq. S9 is to reflect cell B8 of the error propagation workbook, that assumes the difference between the post-hoc calculated 95% CI bound and the mean (numerator in cell B8) is equivalent to the calculation of standard deviation in Eq. S8 of the paper. Please justify this assumption and identify how the scaling approach taken here is justified by the paper.

We find the approach of 'scaling uncertainty' to be mathematically flawed. First, percent uncertainty need not be scaled for an application to a larger or smaller area, as it is unitless and incorporates the sample size and/or variance used in its calculation. Second, the approach of dividing percent uncertainty by a subjectively chosen sample size, is not justifiable (i.e. each column of Table 9 of Appendix 1 - Report Biomass).

RE: 'Satellite-based height maps' - From Appendix 1, "Individual GEDI footprints have a Root Mean Squared Error (RMSE) of at best ± 3.4 m." However, the difference between the 2020 and 2022 maps used to calculate AGB and ER is 0.18 m. Together, this appears to provide very little confidence in the difference upon which ERs are based. To help clarify this, there are several requests for information regarding the height maps: The process for quantifying this error needs to be very clearly outlined. More information is required on the nature of the 'small bias' noted and how it was quantified. Statistically speaking, random error compounds between compared datasets (whether added or subtracted) and does not 'cancel out'. Please elaborate and provide evidence for how the random scatter observed 'cancels out' in the case of this dataset specifically, and not as a hypothetical scenario. It is understood that larger sample sizes result in reduced uncertainty, but this needs to be explicitly quantified to ensure a true and fair account of GHG-related information. Please provide the vertical accuracy of the datasets used in the creation of the height maps.

RE: 'Carbon storage in forest plots' - While there are many ways to quantify uncertainty, the VCS Standard names 'conservativeness' as one principle that is "fundamental in ensuring that GHG-related information is a true and fair account." The methodology section '8.4.1.1 Adjustment for uncertainty' states that "Estimated greenhouse gas emissions and emission reductions from IFM activities have uncertainties associated with parameters and coefficients including estimates of area, carbon stocks, regrowth and expansion factors. It is assumed that the uncertainties associated with input data are available, either as default uncertainty values given in most recent IPCC guidelines, or as statistical estimates based on sampling." Therefore, the uncertainty in the estimate

of carbon stocks needs to be accounted for, even when the emission reductions are based upon mathematical subtraction between two years. Please provide a simple statistical estimate of uncertainty based on the sampling plots as quantified via the variability of AGB between plots of the same strata (See a Forest Measurements textbook for clarification).

RE: Height to biomass equation' - It is important to note that issues with the height to biomass relationship are addressed in Finding 50, below.

After the addressing these issues, please ensure that the MR, Appendices, calculations and other material provided are updated, as needed.

Project Personnel Response 2: 1. Scaling Uncertainty: Percent uncertainty unitless and dividing %uncertainty by area not justifiable.

We understand your concerns about adjusting uncertainties through scaling in this way. We are not using this scaling approach or the 'Error propagation and scaling.xlsx' spreadsheet any more in estimating the errors. We therefore ask you to consider this aspect of the Finding closed: we are no longer using this spreadsheet in any calculations, nor referring to the Saatchi et al. 2011 paper.

Instead we are simply scaling the error using the normal equation for calculating the 95% Confidence Interval:

Confidence Interval Bounds = Mean $\pm$ [Standard Deviation / $\sqrt{N}$]

2. Outline process for quantifying error, provide evidence how the random scatter cancels out specifically in the dataset. Provide vertical accuracy in the datasets.

We believe it is possible to produce a map that gives an overall estimate of height change to a sufficient precision to detect a change of 0.18 m built up with millions of points each with an individual uncertainty far higher than this (e.g. the Root Mean Squared Error (RMSE) of 6.42m reported in Table 8 of the 'Report Biomass Peru_GGF_v2.1_14April2023 for the height estimates of the 2022 map compared to thousands of independent GEDI estimates of height not used to produce the maps).

The accuracy of the height maps were assessed using ~15,000 independent GEDI satellite LiDAR data not used to train the model, themselves unbiased estimates of height but with a random error. We found a strong and direct relationship between their height estimates and the satellite-derived height map, but with a clear scatter on the relationship.

A formal calculation was performed to assess how this error impacts the observed height change, based on the Root Mean Squared Error (RMSE) of 6.42m reported in Table 8 of the 'Report Biomass Peru_GGF_v2.1_14April2023 for the height estimates of the 2022 map compared to thousands of independent GEDI estimates of height not used to produce the maps. This value of 6.42m is conservatively used for subsequent calculations, its use is conservative as it is the higher of the two values available (the 2020 value is 6.23m, but we use the 2022 value of 6.42m for both), and because it includes uncertainty from the validation GEDI points, likely meaning the true value of the RMSE is considerably lower.

RMSE can be used as an estimate of the Standard Deviation of a mean when producing confidence intervals, as explained in detail in the Uncertainty Annex.

We used remote sensing to produce estimates of height for every pixel in the AOI. It is these that were tested to give the RMSE value of 6.42m (this was comparing pixel-wise estimates of height to an overlapping GEDI footprint not used in training). In total there are 2 935 120 pixels in the AOI, each with an RMSE of 6.42m. Using this number of samples gives a Standard Error for the mean height of 0.0018m. Again multiplying by 1.96 this gives a 95% confidence interval of 0.0037m, or

2% of the observed 0.18m change. Combining these for two time points using equation 42 from the Methodology (square root of the sum of squares) this gives $\pm 2.88\%$ of the 0.18 m height change observed between the two years.

3. 'observed small bias' in the relationship found between the produced height maps and independent GEDI footprint analysis.

Biases are never zero in this type of independent validation analysis, but the errors are included in the RMSE calculation above. RMSE specifically includes both biases and random errors, differing in that way from a Standard Deviation (see e.g. Holton, G.A. 2013. Value-at-Risk, Theory and Practice. 2nd Edition. <https://www.value-at-risk.net/> Section 4.3.6.) Further, due to the very large number of points, Central Limit Theorem applies and it is highly likely that the deviations can be considered to be drawn from a normal distribution, with mean centered on the population mean. We therefore believe despite the small biases reported, the analysis reported in point (2) above stands and the Standard Error on the mean, and thus the error on the change in heights due to uncertainty in the estimation of height at a pixel level, are as calculated in 2. above.

4. Uncertainty in the estimate of Carbon stocks from the field plots.

We agree with this point. We have added back in our estimated error from the BIOMASS R package (Réjou-Méchain et al. 2017) of 2.98%. This is based on a Monte Carlo analysis involving the uncertainties from the wood density and allometric equations in the field plot measurements. This is now included in the new version of the Uncertainty analysis.

Auditor Response 2: RE: 1. Scaling Uncertainty: Information on scaling uncertainty can be found in the Appendix 1 of the MR, therefore the aspect of this finding related to scaling uncertainty is not closed.

RE: 2&3. Please clarify what is meant by 'the Uncertainty Annex.' Otherwise, these components of the finding related to the uncertainty calculation of the height map are closed.

RE: 4. Uncertainty in carbon stocks from field plots. As identified in previous iterations of the findings, the IFM (VM0010) states that "Uncertainties arising from the measurement and monitoring of carbon pools and greenhouse gases must always be quantified" and that "It is assumed that the uncertainties associated with input data are available, either as default uncertainty values given in most recent IPCC guidelines, or as statistical estimates based on sampling." To further clarify that the best practice approach for estimating the uncertainty of field-based inventory data is the latter, the IPCC Good Practice Guidance for LULUCF, Chapter 5: Cross-Cutting Issues, section 5.3.6.3 QUANTIFYING ERRORS IN SAMPLE BASED SURVEYS states that "...it is good practice to assess the uncertainty of the estimates strictly according to the principles of sampling theory...The details of such calculations are provided in sampling textbooks such as the references that are introduced in Section 5.3.1." The section goes on with an example that is included here merely to highlight that estimating uncertainty in sample-based surveys relies on between-plot variability: "[such] errors will inflate the between-plot variability, which will lead to an increased uncertainty of the overall estimates." The statistical estimation of uncertainty based on the sample is used even when these inventory-based, plot-level carbon estimates are used for subsequent modeling as clarified in section 5.3.6 Uncertainties in Sample Based Surveys which states that "...when data from random sampling are used for purposes of greenhouse gas inventory reporting, it is good practice to base the assessment of uncertainties on sampling principles, rather than using default values or expert judgement. These uncertainties can then be combined with the uncertainties of other data or models used according to the guidance in Section 5.2 of this chapter." Therefore, while the uncertainties accounted for through the BIOMASS R package relate to wood density and allometric equations of the 35 inventory plots used, the 'statistical estimates based on sampling' are not accounted for 'according to the principles of sampling theory.'

Project Personnel Response 3: RE:1. Appendix 1 was updated and there is no longer mention on the scaling uncertainty.

RE: 2 & 3 Document "Uncertainty analysis_EM_V5_14Jul2023.docx" I included in the shared repository.

This is an updated version of the previously supplied "Uncertainty analysis_EM_V4_15Jun2023.docx"

RE: 4. We provide a detailed response to the approach taken by Space Intelligence and GGF to address the issue of sampling error in the document "Space Intelligence - Responses to open findings 14Jul2023.docx", included in the shared repository.

Auditor Response 3: Thank you for the additional information provided. The auditors have concluded that the information requested has been provided and this finding can be closed. However, a new NIR related to the uncertainty analysis has been issued below.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 50 Dated 29 Mar 2023

Standard Reference: VM0010 v1.3

Document Reference: rawDataProcessing.R, plotAGB_clean.R, GGFplots_stemdata.csv, GGFplots_processedStem.csv, Feldpausch_Height-diameter allometry of tropical forest trees.pdf, Field Plot Data Analysis_SpaceIntelligence.pdf

Finding: Note this finding relates to NIR18 and NIR49 above.

Section 8.4.1.1 of the Methodology provides requirements for calculating the total project uncertainty. It states “Estimated greenhouse gas emissions and emission reductions from IFM activities have uncertainties associated with parameters and coefficients including estimates of area, carbon stocks, regrowth and expansion factors. It is assumed that the uncertainties associated with input data are available, either as default uncertainty values given in most recent IPCC guidelines, or as statistical estimates based on sampling. Uncertainty at all times is defined at the 95% confidence interval where the estimated variance exceeds +/- 15 percent from the mean.” Later it indicates “For both the baseline and the with-project case the total uncertainty is equal to the square root of the sum of the squares of each component uncertainty and is calculated at the time of reporting through propagating the error in the baseline stocks and the error in the project stocks.” And lastly, it requires “The project proponent must justify the selection of uncertainty propagation in the project documents.”

The calculation of the error surrounding one component of the carbon stocks - the plot-level relationship between above-ground biomass and the height of the 3 tallest trees in a plot (AGB:Ht relationship) - are not provided. However, some of the supporting information was supplied via email pertaining to NIR18: The plot data were provided (GGFplots_stemdata.csv, GGFplots_processedStem.csv) along with the pre-processing (rawDataProcessing.R) and processing of the data for the AGB:Ht relationship including allometry and wood density publication links (plotAGB_clean.R). The processes (in plotAGB_clean.R) do not reveal the modeling of the AGB:Ht relationship used to connect the Ht map (derived from remote sensing data) to AGB for carbon calculations, and the audit team is not able to replicate this relationship (Eq. 2 in Field Plot Data Analysis_SpaceIntelligence.pdf) from the data you provided. Please demonstrate the AGB:Ht relationship and the associated statistics.

Project Personnel Response: The detailed description of the AGB : Hgt relationship is now provided in the Field Plot Data Analysis document. The details of the equation itself and its uncertainty are provided in response to Finding 18.

We also provide the python script used to perform the modelling.

(See file "50/52. Evidence to Finding #50/52")

Auditor Response: The formula used to generate the random values for the simulation provided in "18. Height AGB Uncertainty Spreadsheet.xlsx" uses standard error as opposed to standard deviation. When standard deviation is used (given 35 plots sampled), the uncertainty jumps to approximately 70%. Furthermore, it is unclear why the simulation approach was taken as you provide a clear demonstration of model uncertainty—the mean absolute error (i.e., $\text{error}/\text{mean} = (58.98 \text{ Mg/ha})/(291 \text{ Mg/ha}) = 21\%$ uncertainty). Please provide clear evidence that your approach (using SE) is statistically correct and conservative, or adjust the calculation accordingly and update the relevant documents.

Project Personnel Response 2: 1. The Mean Absolute Error of the relationship is not a fair measure of the uncertainty in this case because the same Height:AGB relationship is applied to both 2020 and 2022, and it is the uncertainty in the change in AGB resulting from the form of the non-linear equation relating height to AGB applied to both time points that we need.

If for example the slope of the line is slightly steeper than the 'truth', or the intercept is slightly wrong, that will impact 2020 and 2022 in the same way. There will still be some difference in total AGB change as a result, but this is considerably smaller than 21% (an estimate of the uncertainty of AGB from an individual estimate of height). A simulation approach is required to estimate the uncertainty of the carbon stock change related to the observed height change: we cannot use a simple equation or relationship to estimate it given the non-linear fits.

2. In the equation in the 'random generator' we used the Standard Error rather than the Standard Deviation of the equation parameters. This is because we are interested in how much these parameters would likely vary if a different set of AGB:height plots had been randomly selected: i.e. how the value of these parameters likely vary from a population mean of all possible values of these parameters from different sets of plots.

It can be seen from the way Standard Error is defined that it is the correct measure to use here. Standard Error decreases as the square root number of plots increase. This means that if we had 100 plots the Standard Error of these parameters would be smaller, and if we had 10 000 it would be much smaller still. Applying these new smaller Standard Error numbers into the 'Height AGB uncertainty' spreadsheet would result in much lower uncertainty values, as the parameters would vary less. This is correct, as we would indeed know these parameters with much more certainty due to the bigger sample.

If however we had used Standard Deviation, as we increased the sample size the Standard Deviation would not reduce - it is a measure of the scatter of the individual points from the best fit line. Even though we would have much more confidence in the shape of the AGB:Height line, and that it wouldn't change if we chose a different similarly large set of field plots to derive the line, if we used Standard Deviation we would report the same uncertainty numbers here.

We therefore strongly feel that the Standard Error of the parameters is the correct one to use for this simulation.

Auditor Response 2: Thank you for the clear information supporting the statistically correct and conservative calculation of uncertainty based on standard error (i.e., SE). We agree that the SEs of the model coefficients based on the 35 plots sampled best reflects 'the scatter of the individual points from the best fit line,' as you state. However, the SEs used in the simulation workbook presented (18. Height AGB Uncertainty Spreadsheet.xlsx) are much smaller than those based on the modeled data using the sampled plots. In fact, the intercept of the data as modeled is not statistically significant, which is reflected in a large SE value (i.e., intercept coefficient = 1.3553, SE = 1.0596). When the audit team applies the SE of the coefficients modeled using the measured data, the uncertainty exceeds 300% (using the simulation workbook). It is unclear where the smaller 'standard error' values come from that are used in the simulation. These values may be related to the bootstrapping approach applied in the python workbook (01_regression_model_diagnosis.ipynb, which calls functions that are not defined in the workbook provided). It is important to note that bootstrapping is sensitive to the number of bootstrap samples used, and if the number is too large, the bootstrapped SE may be too conservative (i.e., too small, a non-conservative assumption). Overall, bootstrapping SE will only be an accurate estimate of the true SE if the original dataset is large enough, which is unlikely in this case. Either way, the smaller SE values used in the simulation workbook are not conservative and do not reflect the measured data and 'the scatter of the individual points from the best fit line.' Furthermore, in Appendix 1 of the MR it is stated that, "The data generally provides a strong relationship between tree height and biomass in tropical rainforests (Asner and Mascaro, 2014)." In contrast to this statement, the referenced scientific article states that "LiDAR TCH [top canopy height] alone failed to explain cross-regional variation in tropical forest carbon estimates derived from detailed field inventory measurements." In a diverse tropical forest, the fit of the relationship between the tallest three trees in a plot and the above ground biomass of that plot will innately contain a great deal of variability (e.g., hypothetically, three plots with the same mean height of the tallest three trees would be very likely to have different plot AGB, and vice versa). The uncertainty in this modeled relationship is not accounted for in a statistically correct and conservative manner, reflecting 'the scatter of the [35] individual points from the best fit line.'

Project Personnel Response 3: Regarding the generations of SEs for the height to AGB model: We provide detailed response to the bootstrapping methodology used. This includes defence of the statistical rationale for taking this approach and analysis which demonstrates the impact of bootstrapping sample size on the carbon accumulation and resulting total project uncertainty. We use these examples to demonstrate how we aim to best balance statistical best practice with the principle of conservative calculations. We further refine our simulation approach to determining carbon accumulation uncertainty by undertaking this analysis in updated python analysis notebooks (as in next comment).

Regarding file "01_regression_model_diagnosis.ipynb":

1. This has been replaced by the file "regressions_and_uncertainties.ipynb"
2. We have added the file "utils.py" which should allow auditors to run the analysis.

Regarding auditor comments on the relationship between forest height and carbon (referencing Asner and Mascaro, 2014): We provide response regarding the use of this approach, stating that the use of forest plots to calibrate this relationship at less than regional scale is a robust approach, as Asner and Mascaro (2014) find in their research.

Auditor Response 3: Thank you for the additional information provided. The auditors have concluded that the information requested has been provided and this finding can be closed. However, an NCR related to the Ht:AGB relationship has been issued below.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 51 Dated 30 Mar 2023

Standard Reference: VCS v4.4

Document Reference: AGB_Peru_change_2020_2022_5tClossPixels.tif; Report Biomass Peru_GGF_v2.0_22January2023.pdf

Finding: Section 2.2.1 of the VCS states “Disclose sufficient and appropriate GHG-related information to allow intended users to make decisions with reasonable confidence.” During the site visit the GGF team indicated that they had recently implemented a procedure to utilize early-alert maps to check the accuracy of the disturbance/degradation maps produced by the Space Intelligence team. During a post-site visit follow-up call with Space Intelligence, the audit team learned that Space Intelligence also implemented a procedure to check the accuracy of the modeled areas of disturbance/degradation. The audit team requests an overview of these two procedures (implemented by GGF and by Space Intelligence) as well as a demonstration of the results of these accuracy checks.

Project Personnel Response: Space Intelligence performed an analysis by eye to confirm every detection of significant negative change observed in the Project Area was real, by comparing to Planet satellite data provided by the NICFI program. This 4.8 m resolution satellite data is provided monthly from 2020, and is sufficient for clearance of tree crowns to be visible. All areas were found to correspond to visible changes in tree crowns, though it was unclear in many cases if these were anthropogenic or natural in cause. Conservatively assuming all are anthropogenic is reasonable, and does not cause any deduction in GHG benefits of the projects given the de minimus level. In order to check for missed detections we decided to actively search the NICFI Planet data by eye over all the AOIs to look for change areas that were missed. None were found. An alternative method, or looking at random points in (according to the biomass maps) unchanged areas, to see if Planet data showed any canopy cover loss, was considered but rejected as given the rare nature of the forest loss events likely none would have been found, even if some missed detections did exist.

In the last quarter of 2022, GGF implemented the use of Early Deforestation Alerts (ATD), from the Integrated Alert System of the Global Forest Watch (GFW) platform, as part of their monitoring, control, and surveillance tools. The GFW system integrates GLAD, GLAD-S2, RADD, which is a single deforestation alert layer that uses Landsat Sentinel satellite images to detect disturbance events at a spatial resolution of 10 meters. This integration ensures that the alerts reach the user every time any of the alert systems are updated, and alerts can be obtained with inter-daily frequencies, and occasionally even daily. The alerts are provided through points, where each point represents the loss of coverage in a 10x10 meter pixel.

Auditor Response: Thank you for providing this additional information regarding the validation of the the disturbance/degradation maps. However, in the response to finding #31 and in the project description deviation #5, you indicate applying a ratio of natural disturbances to anthropogenic disturbances. But in this response you seem to indicate that you have assumed all instances of clearance of tree crowns are anthropogenic. Please provide clarification regarding the assumptions of disturbance/degradation mapping.

Project Personnel Response 2: The project will apply a ratio of natural disturbances to antropogenic disturbances when disturbance points are not monitoring, according to what is described in Project Deviation #5. This does not invalidate nor affect in any way any analysis made related to this finding.

Auditor Response 2: The Project Deviation #5 clarifies that the anthropogenic disturbance is insignificant. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 52 Dated 30 Mar 2023

Standard Reference: VCS v4.4

Document Reference: Schnitzer et al 2006.pdf, Field Plot Data Analysis_SpaceIntelligence.pdf, plotAGB_clean.R

Finding: Section 2.2.1 of the VCS highlights ISO principles including Transparency to “Disclose sufficient and appropriate GHG-related information to allow intended users to make decisions with reasonable confidence” and Consistency to "Enable meaningful comparisons in GHG-related information." In the Field Plot Data report, equation 2 does not correspond to the referenced source (Schnitzer et al. 2006). Specifically, the use of the mathematical function log (base 10), while Schnitzer uses natural log (abbreviated ln, base e) which would result in a different AGB calculation. The calculations appear to have been carried out correctly (i.e., plotAGB_clean.R uses a log base e function). Please clarify or correct the mathematical functions used (i.e., base 10 or e) as represented in the Field Plot Data Analysis report (e.g. Eqs. 2 and 3).

Project Personnel Response: This is a terminology confusion. We followed the mathematical convention of 'log' meaning 'base e log', rather than the 'ln' convention for base e. This was confusing, and we apologise. We have now replaced the equations with 'ln' in the new version of the report, Field Plot Data Analysis report V2. (See file "50/52. Evidence to Finding #50/52").

Auditor Response: The change has been made and the finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M

NCR 53 Dated 24 May 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: VCS-Non-Permanence-Risk-Report-V2 - Updated May 2023; VCS-Risk-Report-Calculation-Tool-v4.0 - GGL1 (1)

Finding: Table 6(g) in the Non-Permanence Risk Tool states "Mitigation: Where disputes over land tenure, ownership or access/use rights exist, documented evidence is provided that projects have implemented activities to resolve the disputes or clarify overlapping claims." Thus in order to claim mitigation credits for land tenure, there must be disputes existing over land tenure/ownership rights. For items c and d of this table, the project has indicated that there are not land tenure or ownership disputes existing. As a result, a mitigation score is not applicable.

Project Personnel Response: The score for Table 6(g) has been revised to 0. In light of the modifications made in the analysis sections titled "Opportunity Costs" and "Project Longevity" (findings #55 and #56), the mitigation score for item "f" has also been changed to 0. Consequently, the NPRR has been appropriately updated. These adjustments, combined with the changes made to address findings #55 and #56, have resulted in an increase in the risk rating. As a result, both the Monitoring Report and the project's calculations have been updated accordingly.

Auditor Response: The auditors confirmed that the land tenure table, item g has been updated to zero as no disputes have been identified. This finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 54 Dated 24 May 2023

Standard Reference: CCB Program Rules v3.1

Document Reference: 0. Gren Gold Loreto 1 - CCB Project Design Document V2

Finding: Section 2.4.2 of the CCB Program Rules states "The operating language of the CCB Program is English. CCB Program and guidance documents may be translated into other languages to facilitate local use. However, the English versions of CCB Program documents, and the interpretation of same, shall take precedence over any other language translations." One paragraph in section 2.5.6 of the CCB PD is in Spanish (the last bullet point under the header Boundaries with the Bellavista and San Felipe communities (Napo River Zone) 2018-2022). This is not in conformance with the requirements.

Project Personnel Response: The text in question was translated to English, thus meeting the language requirements of the CCB Standard.

Auditor Response: Confirmed that the text has been translated to English. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 55 Dated 30 May 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: VCS-Non-Permanence-Risk-Report-V2 - Updated May 2023

Finding: Section 2.2.4(1) of the NPRR states "Project longevity is the number of years beginning from the project start date that project activities will be maintained, which may be longer than the project crediting period where projects can demonstrate that activities that maintain carbon stocks on which GHG credits have previously been issued will continue beyond the project crediting period." In the GGF NPRR, the Project Longevity table indicates option B is selected "With legal agreement or requirement to continue the management practice." Section 2.2.4(5) of the NPRR states "Legal agreement or requirement to continue the management practice refers to any legally enforceable agreement or requirement, such as a conservation easement or protected area law that would require the continuation of the management practice that sequesters carbon or avoids emissions for the entire project longevity." It also states that "Any project with a legally binding agreement that covers at least a 100-year period from the project start date shall be assigned a score of zero for project longevity." The VCS Val/Ver Requirements section 3.2.12 provides some elaboration on this requirement when it states "The project longevity risk rating is determined by whether the project proponent has a legal agreement or requirement to continue the management practice. A legal agreement or requirement must be in place to continue the management practice. A legal agreement to protect land, such as national designation as a protected area, is insufficient to demonstrate that a management practice will continue for the length of the project." The justification provided in the NPRR supports that GGF will be able to maintain ownership over the project area for perpetuity as the concession contract can continue to renew indefinitely. GGF has provided justification for why it intends to continue management for the duration of the crediting period and/or beyond, citing the clear profitability of the project. However, this information alone is not sufficient to support the designation of item b in the project project longevity table. The auditors request the following:

--Please provide evidence of a legally enforceable agreement that requires the cessation of harvesting (the management practice) in the project area for the duration of the project longevity. For instance, if the project longevity is 40 years, then the legal agreement must cover that period or be able to new for that period. Further, an agreement that simply establishes that ownership can be maintained over the project longevity is not sufficient alone. Rather, the agreement must demonstrate that THE management activity that sequesters carbon or avoids emissions (for GGF, cessation of timber harvesting), is required by the agreement.

-- As stated in 2.2.4(5) - if that agreement requiring such management covers at least 100 years or can be renewed for at least 100 years, then a score of zero os required for the project longevity section.

Project Personnel Response: After a better understanding of the requirements of the section "Project Longevity", the score was updated to 16, based on the formula of the risk tool. The NPRR was updated as well. These adjustments, combined with the changes made to address findings #53 and #56, have resulted in an increase in the risk rating. As a result, both the Monitoring Report and the project's calculations have been updated accordingly.

Auditor Response: The auditors have confirmed that the project longevity score has been updated to 16, which was the previously validated project longevity value. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 56 Dated 30 May 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: VCS-Non-Permanence-Risk-Report-V2 - Updated May 2023

Finding: The project team has updated the Opportunity Cost table of the NPRR to indicate mitigation credit for h ("Project is protected by legally binding commitment to continue management practices that protect the credited carbon stock over the length of the project crediting period (see project longevity)") and for (i) ("Project is protected by legally binding commitment to continue management practices that protect the credited carbon stocks over at least 100 years (see project longevity)"). While the project team has demonstrated that GGF can maintain ownership of the project area indefinitely through renewal of the concession contracts, it has not been demonstrated that there is a legally binding agreement/commitment in place that explicitly requires the continuation of the management practice (cessation of harvesting) over the length of the crediting period OR 100 years. The auditors request demonstration of this legally binding agreement requiring such management, or please update the NPRR to remove such mitigation scores.

Project Personnel Response: After having a better understanding of the requirements to get a mitigation credit, the project has decided to change the score for items (h) and (i) in the Opportunity Cost table to 0. The NPRR was updated as well. These adjustments, combined with the changes made to address findings #53 and #565, have resulted in an increase in the risk rating. As a result, both the Monitoring Report and the project's calculations have been updated accordingly.

Auditor Response: The auditors confirmed that the Risk Mitigation scores in the Opportunity Cost table have been updated to zero, thus no further information is required. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

OBS 57 Dated 30 May 2023

Standard Reference: VM0010 v1.3

Document Reference: Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V2 2022

Finding: Section 8.4.1.1 of the Methodology states "For both the baseline and the with-project case the total uncertainty is equal to the square root of the sum of the squares of each component uncertainty and is calculated at the time of reporting through propagating the error in the baseline stocks and the error in the project stocks." In the 'Uncertainty_Y1Y2' tab of the Appendix 2 excel document, the summary in B9 is unnecessary as a summary occurs in B4 that should point to values in B8, B10, B11, and B12. Instead, the summary in B4 points to B8 and B9, which would unwarrantedly diminish the value in B4, as B9 already takes the sum of the squared errors, thus there is a double summing of squared errors in B4. However, in this case, because B8 is zero, the value derived in B4 does not change with the extra, unnecessary sum of squared errors calculation in B9. This is being issued as an observational finding that does not need to be addressed, as this is currently a nonmaterial error, but could become material in the future.

Project Personnel Response: To avoid any material error in the future, a change was made in the tab "Uncertainty_Y1Y2" to avoid a double summing of squared errors in B4

Auditor Response: Thank you for considering this observation.

Bearing on Material Misstatement or Conformance (M/C/NA):

NCR 58 Dated 22 Jun 2023

Standard Reference: CCB PD template

Document Reference: GGL 1 - CCB Project Design Document - Jun23

Finding: Sections 3.1 - 3.4 of the CCB PD state "This project was validated through VCS using the VM0010 Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, v1.3 on July 17, 2021. For more information, please review "VCS PD Green Gold Loreto 1 v11 DIC 2021". Therefore, it has demonstrated conformance with the CCB Standards Climate Section CL1.4." The auditors found several issues with these statements:

- (1) Each section of the CCB PD template references a different CCB Standards requirement (CL1.4, CL.3.2, CL.4.1, etc), and not all CL1.4 as is reported in the PD. Therefore the current statements under each of these Climate sections in the PD are not accurate and represents a nonconformity.
- (2) In each of these sections (3.1-3.4) of the CCB PD, you must indicate exactly what section of the VCS PD is relevant to that section of the CCB PD. This was recently conveyed to SCS from Verra.
- (3) Lastly, there is no relevant section in the VCS PD that corresponds to section 3.4.2 Dissemination of Monitoring Plan and Results of the CCB PD, so that section is not in conformance with the template requirements.

Project Personnel Response: RE1&2: The Climate Section of the report includes specific references to the relevant sections of the VCS PD that fulfills the CCB requirements.

RE3: This section has been updated to provide detailed information on the dissemination of the monitoring plan and results. It explains how these documents will be shared with stakeholders and interested parties.

Auditor Response: The auditors have confirmed that these sections of the CCB PD have been updated to reference the correct sections of the VCS PD. This finding has been closed

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 59 Dated 28 Jun 2023

Standard Reference: AFOLU_Non-Permanence_Risk-Tool_v4.0

Document Reference: Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V2 2022.xlsx

Finding: Section 2.5.4 of the Risk tool requires the following "To determine the number of buffer credits that shall be deposited in the AFOLU pooled buffer account, the overall risk rating shall be converted to a percentage (e.g., an overall risk rating of 35 converts to 35%). This percentage shall be multiplied by the net change in the project's carbon stocks (stated in the verification report), as set out in the VCS Program document Registration and Issuance Process." The net change in project's carbon stocks means the baseline minus the project scenario. However, in the calculation workbook, buffer pool determination, the project is also deducting leakage emissions, and calculating the buffer pool for net GHG emissions and not the net change in project emissions. This results in an underestimation of buffer pool allocation and is not in conformance with the VCS requirements.

Project Personnel Response: "Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V2 2022.xlsx" has been updated. The buffer pool is now calculated as the net change in the project's carbon stocks (baseline minus project scenario) multiplied by the risk rating converted to a percentage. Section 5.4 of the Monitoring Report has been updated accordingly.

Auditor Response: The "Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V3 Jul23.xlsx" file is updated aligning with the MR updates and the VCS requirements surrounding risk buffer calculation. Therefore, the finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 60 Dated 28 Jul 2023

Standard Reference: VCS v4.4

Document Reference: Appendix 1 – Report Biomass Peru_GGF_v2.2_14Jul2023.pdf

GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Jul2023.pdf

Finding: Section 2.2.1 of the VCS indicates that the principle of consistency is to “Enable meaningful comparisons in GHG-related information.” Section 3.21 of the MR Template requires the following: "Describe and justify any methodology deviations applied during this monitoring period. Include evidence to demonstrate the following:

- The deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals.
- The deviations relate only to the criteria and procedures for monitoring or measurement, and do not relate to any other part of the methodology."

In section 3.2.1 of the MR submitted, Deviation 3 states “Specifically, 6 permanent plots from Loubota Panzou et al. 2020 were used to compliment the information of the 30 installed plots.” Appendix 1 states “The data used to compliment the 30 plots was 6 permanent plots from Loubota Panzou et al. 2020.” However, only 5 additional plots from this source were used in calculations (GGFplots_processedPlotSummaries.xlsx), thus there is inconsistency between the deviation and the calculation files. Please provide information and/or updates to the documentation on these discrepancies.

Project Personnel Response: Both Appendix 1 and the Monitoring report have been updated to correct this discrepancy. 5 permanent plots from Loubota Panzou et al. 2020 were used to complement the information from the 30 installed plots.

Auditor Response: The changes have been made and so this findings is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 61 Dated 28 Jul 2023

Standard Reference: VCS v4.4

Document Reference: Appendix 1 – Report Biomass Peru_GGF_v2.2_14Jul2023.pdf; GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Jul2023.pdf

Finding: Section 2.2.1 of the VCS states “The application of principles is fundamental in ensuring that GHG-related information is a true and fair account. The principles below shall provide the basis for, and shall guide the application of, the VCS Program rules and requirements.” The principle of accuracy is to “Reduce bias and uncertainties as far as is practical”; that the principle of consistency is to “Enable meaningful comparisons in GHG-related information” and the principle of transparency is to “Disclose sufficient and appropriate GHG-related information to allow intended users to make decisions with reasonable confidence.” The audit team found that there are several issues pertaining to consistency, accuracy and transparency within the Appendix 1 document. We document some of these below but it is not an exhaustive list.

1. Papers referenced in shorthand do not have citations provided (e.g. Collins et al. 2015, Mitchard et al. 2012, Mitchard et al. 2014, Baccini et al. 2017, Xu et al. 2021). Please provide the citations to ensure transparency in the analysis.
2. The Executive Summary of Appendix 1 states, “The approach is similar to that taken by Baccini et al. (2017) and Xu et al. (2021) to map biomass change at a pantropical scale.” However, for this project geolocated field data is not used to train the biomass estimates of remote sensing data as is the approach for the two papers cited. Please clarify the parallel between the approach applied for this project and the citations provided and adjust the Appendix text accordingly to ensure greater transparency in the analysis.
3. The Executive Summary of Appendix 1 states that Space Intelligence’s trademarked CarbonMapper product is used “to produce wall-to-wall high-resolution maps of AGB.” However, that AGB map product is not mentioned later in the document, and the output maps are of height. Please clarify whether the CarbonMapper product was used, and if it was, how it was adjusted for application to this project.
4. The executive summary also contains a subheader titled “Validation” and states “The validation exercise showed that our predicted AGB distribution is compatible with that of the field plot data, as well as good correlation with independent GEDI LiDAR estimates of height. Furthermore, aggregating the AGB values at coarser scales further reduces the errors to an estimate of $\pm 2.9\%$ at 1 hectare.” However, there has not been a validation procedure applied (no plots were used to validate model results), thus the term validation is misleading. Further, the response to finding 49 indicates that scaling approach has been excluded from the analysis, thus this description of aggregation is not consistent with the current uncertainty approach.
5. The ‘Plot-Level Biomass-Height Modelling’ section of the Executive Summary of Appendix 1 states “As expected, we found a strong and direct relationship between field-measured AGB and the height of the tallest trees (Figure 4).” However, this relationship does not appear strong and direct to the auditors and no metrics of fit are provided here for the model to back this statement. As the estimation of biomass for the entire project area hinges on the relationship developed in Eq. 3, please provide details surrounding the fit and uncertainty of this model in Appendix 1.

6. Section 2.2 of Appendix 1 states: “Finally, we applied the model (Eq. 2) relating forest height to AGB to the wall-to-wall height map to produce wall-to-wall, per-pixel estimates of AGB.” Please explain how Equation 2 relates forest height to AGB, or if equation 3 is the intended reference.

7. In reference to “30 forest plots of 0.5 hectares each”, Section 2 of the Appendix 1 states: “The purpose of the carbon inventory was to estimate the aboveground biomass (AGB) of all different vegetation classes in the project area in order to establish a baseline for the AFOLU project.” However, the baseline was established in the PD without the use of these 30 plots. Please clarify the purpose of the 30 carbon inventory plots and ensure there is consistency throughout project documentation.

Overall, this list above provides some examples of the discrepancies, inconsistencies, and areas lacking transparency in Appendix 1. It does not appear that executive summary actually aligns with the procedures applied. The auditors find that Appendix 1 violates the principles of consistency, accuracy, and transparency.

Project Personnel Response: 1. Missing citations have been added

2. "The approaches are fundamentally similar in that they each rely on establishing a relationship between estimates of vegetation height obtained from spaceborne LiDAR, and field measurements of AGB. The main difference between CarbonMapper and the approach used in the cited papers is the stage at which this conversion is applied.

In the case of Xu et al, and Baccini et al, AGB is estimated as as first step from spaceborne LiDAR using field plots located in proximity to the LiDAR footprints. The combination of sparse lidar footprints, and geolocation errors with the plot data mean these comparions are done a coarse resolution, c. 10 km. These gridded AGB estimates then used to train a combination of optical, and radar remote sensing datasets to generate wall-to-wall maps of AGB. With CarbonMapper, spaceborne LiDAR in the form of GEDI is first used to train a machine learning algorithm based on other optical and radar remote-sensing layers to generate a wall-to-wall map of vegetation height (not AGB). The conversion to AGB is done as a secondary step with field plots used to to convert these height maps in to estimates of AGB. To be precise, this matches the approach taken in Asner & Mascaro (2014) with airborne LiDAR, as cited elsewhere. We have edited the Executive Summary and other places to make it clearer how our method relates to these published papers."

3. The Executive Summary has been rewritten and a paragraph has been added explaining how CarbonMapper converts wall-to-wall height maps to AGB maps. It is also relevant to note that all the numbers, as well as tables and maps presented in "Section 3. Results" correspond to the AGB maps, not the height maps.

4. No formal final validation procedure using plot data was used for our model, so this section has been removed from the Executive Summary

5. The 'Plot-Level Biomass-Height Modelling' section has been rewritten to include more details about the fit as well as metrics providing a quantitative assessment of it.

6. The text does refer to Equation 3 instead of Equation 2. This has been corrected

7. The text should have said the carbon inventory was used to establish a project scenario for the AFOLU project, not a baseline. This has been corrected

The Executive Summary has been rewritten to align better with the procedures applied

Auditor Response: Due to PD Deviation # 9, this finding is no longer relevant, and has therefore been closed. See finding 74.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 62 Dated 28 Jul 2023

Standard Reference: VCS v4.4

Document Reference: Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V3 Jul23.xlsx; GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Jul2023.pdf

Finding: Section 2.2.1 of the VCS indicates that the principle of consistency is to “Enable meaningful comparisons in GHG-related information.” The validated project area as indicated the PD and the validation reports is 183,445 ha. However, the areas reported in section 1.7 of the MR add to 183,446 ha. This is due discrepancies in Consolidado 1. It is reported as 125,558 ha in the MR but in the calculation workbook and Appendix 1, it is listed as 125,557 ha. Further, section 1.12 of the PD contains this reporting of Consolidado 1’s area at 125,558 ha. Ultimately the auditors found an inconsistency with the areas reported, which may be due to rounding but is an inconsistency, nonetheless. Please provide additional information about this inconsistency and correction if needed.

Project Personnel Response: The project area has been updated in the Appendix 1 and in the calculation workbook to match the rest of the report.

Auditor Response: Thank you for confirming that the area is 183,445.54 ha (which rounds up to 183,446 ha). The auditors have confirmed that this area is listed in Appendix 1, and throughout the calculation workbook, and the Monitoring report. We have confirmed that a PD deviation (#6) explains this deviation. However, the deviation states "The calculations presented in section 4 of the PD for the baseline were conducted utilizing a total area of 184,445.00 ha, as opposed to the precise project total area of 184,445.54 ha." Again, in PD deviation #8 it references the area of 184,445.54. This appears to be a type-o as it says 184, versus 183,.. Likewise Table 1 of the MR still shows 183,445 ha. Please update these items that are not consistent.

Project Personnel Response 2: There was a typo on the 3 sections pointed out by the auditors. This has been corrected, stating in each section that the total area of the project is 183,445.54.

Auditor Response 2: The auditors confirmed that the MR and calculation workbooks all consistently use the area of 183,445.54. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 63 Dated 28 Jul 2023

Standard Reference: VM0010 v1.3

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Jul2023; Appendix 2 - Green Gold Loreto 1 ER Calculation Spreadsheet V3 Jul23.xlsx; VCS PD Green Gold Loreto 1 v11 accuracy review December 2021 (2) clear

Finding: This finding relates to the previous finding #14 which was issued, addressed, and closed. Upon further review of the validated approach outlined in the PD, the auditors found the justification for the deviation #3 and #5 (which updated equation 32) was to enhance accuracy of quantifying the biomass change by including only the change in biomass for the area that was harvested. Upon further review of the validated PD and associated deviations, the auditors concluded the need to re-open & expand upon finding NIR14, as we continue to request additional information similar to the requests made previously in NIR 14. Please note that NIR14 was originally addressed by accounting for biomass change across the entire project area and not just the harvest parcels, which negates the justification for deviations #3 and #5 of increased accuracy in equation 32 (see related finding below).

The annual cutting parcels outlined in the PD. Box 1 of VM0010 requires the Timber Harvest Plan "Divide the harvestable forest into annual operating areas (referred to throughout this methodology as land parcels) using common practice. This Timber Harvest Plan is provided in the Validated PD and reference maps of cutting parcels (PCs) in section 3.3. The PC-1 to PC-20 shown in section 3.3 of the PD do not align with the harvest parcels for the first Monitoring Period, initially submitted in Area_EcuacionesVCS.shp (sums to 18,088 ha). Further, neither the Timber Harvest Plan or the parcels in align Area_EcuacionesVCS.shp with the 9,172 ha/year harvested as defined in the baseline scenario. Through conversations with the project team, we understand that these harvest parcels were specified for the purpose of this project, but the following are unclear: (1) why the harvest parcels have changed from the validated PD (section 3.3, particularly Consolidado 1) to those submitted for the first monitoring period (Area_EcuacionesVCS.shp), and (2) why the harvest parcels do not align with the 9,172 ha/yr. Please provide more information on these two points. Also note that if the project intends to deviate from the validated PD, a PD deviation is required.

Project Personnel Response: The calculations were corrected using the parcels that would have been logged, as specified in section 3.3 of the PDD. Therefore, during the monitoring period only the biomass from parcels PC01 and PC02 were accounted for (following what is stated in section 3.4.4 of the PDD, that "the 20 land parcels in each project area are scheduled to be harvested according to their number").

The baseline emissions reductions/removals was recalculated using the area of the parcels from section 3.3 of the PDD because the areas of the parcels are similar in size but not equal. Project description deviations #6, #7 and #8 were added to the MR in order to justify and explain the recalculation.

Auditor Response: The auditors have confirmed that the project is now utilizing the validated baseline harvest parcels for the area harvested in the baseline quantification. We have confirmed that PD deviations have been added to explain and justify the recalculation. Please see findings below pertaining to the PD deviations. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 64 Dated 28 Jul 2023**Standard Reference:** VCS v4.4; VM0010 v1.3**Document Reference:** GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Jul2023;**Finding:** This finding relates to the finding above on harvested area.

Section 3.19.2 of the VCS requires the following: “Methodology deviations shall not negatively impact the conservativeness of the quantification of GHG emission reductions or removals, except where they result in increased accuracy of such quantification. Deviations relating to any other part of the methodology shall not be permitted.”

In the MR, Eq. 32 is modified from the methodology twice via methodology deviations. The first iteration accounts for carbon change in the pixels that would have been harvested (Methodology Deviation #3), citing that this results in more accurate estimation as it results in pixel level estimates of biomass in only the harvest area rather than extrapolation from plots across the entire project area. The auditors confirmed this deviation at validation and continue to agree with that assessment. However, as a result of previously issued finding NIR14, the project is now accounting for carbon stock changes in pixels across the entire project area and not just the harvested area. Therefore, the parameters Basepix in this modified Eqn 32 of the Monitoring Report is not accurately described as it states “1, 2, 3 ... M pixels within the area of any land parcel harvested in the baseline scenario since the start of the project activity.”

The second iteration of equation 32, then considers carbon gain over the entire project area (Methodology Deviation #5), replacing that basepix parameter with pix, which appears to be all pixels in the project area. This later version of the equation is implemented and a value for carbon growth of the entire project area is applied to the number of acres that were to be harvested in the first two years of the project scenario, but the location of those harvest pixels is not specified.

Ultimately justification for this deviation #5 that includes an assessment of conservativeness or accuracy is not included. Likewise, deviation #5 now calls into question the justification for deviation #3 as being more accurate, because all pixels in the project area are considered and not just those harvested in the baseline. Please provide clear justification for these two deviations in line with section 3.19.2 of the VCS.

Project Personnel Response: The equation of methodology deviation #5 was corrected according to section 4.2 "Project emissions" of the PDD and deviation #3. Also calculations were corrected to accurately portray the methodology. This means that project only considered the emissions reductions/removals from PC01 and PC02, which are the parcels that would have been logged in a without-project scenario (see the answer to finding #63).

Deviation #5 enhances accuracy by considering that, for each unlogged parcel, any carbon sequestration would have naturally occurred in the baseline scenario until the point of anticipated logging. Beyond this point, the particular land parcel cannot sustain the same sequestration rate as seen in the project scenario. Consequently, only the carbon sequestration in parcel PC1 should be included in the Year 1 calculation, followed by the inclusion of sequestration in parcels PC1 and PC2 in Year 2, and so forth. Moreover, this approach implies that any natural disturbances that occurred would have taken place even in the absence of the project. Consequently, these events have already been factored into the baseline estimations.

Auditor Response: This finding is no longer relevant as the project has implemented PD deviation #9 which foregoes the optional quantification of carbon sequestration in the project scenario. This finding is therefore closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 65 Dated 28 Jul 2023

Standard Reference: VCS v4.4; VM0010 v1.3

Document Reference: Appendix 1 – Report Biomass Peru_GGF_v2.2_14Jul2023.pdf

GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Jul2023.pdf

Finding: Section 2.2.1 of the VCS indicates that the principle of consistency is to “Enable meaningful comparisons in GHG-related information.” The MR, Deviation 3 states “Machine learning approaches are used to find the best fit model of a combination of the remote sensing datasets with calibrated LiDAR biomass measurements. This allows for extrapolation of measured forest properties across the landscape at a 30m spatial resolution, deriving a per pixel biomass estimation. These maps are then compared to the field plots (which are not directly used for model extrapolation, just for forest property assessment) to provide a quantified error and bias for the maps.” The first sentence above conflicts with the approach outlined in Appendix 1, Section 2.2: “We then used a variety of satellite datasets, including thousands of LiDAR footprints from NASA’s GEDI, to create a canopy height map across the AOI for 2020 and 2022... to create a regional per-pixel forest canopy height estimate map with pixels of 25 m x 25 m... Finally, we applied the model (Eq. 2) relating forest height to AGB to the wall-to-wall height map to produce wall-to-wall, per-pixel estimates of AGB.” In contrast to the third sentence of the MR Deviation 3 quoted above, Appendix 1, page 8, paragraph labeled ‘ForestPlots.net data’ indicates that the field plots are being used as the basis of biomass estimation (i.e., the relationship between forest height and AGB) and therefore are directly used for biomass estimation. Please provide more information on the discrepancies between the MR Deviation 3 and implementation as in Appendix 1.

Project Personnel Response: Deviation #3 and appendix 1 were updated and this discrepancies were corrected.

Auditor Response: This finding is no longer relevant as the project has implemented PD deviation #9 which foregoes the optional quantification of carbon sequestration in the project scenario. However, please see finding #71 below related to methodology deviation #3. This finding is therefore closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 66 Dated 28 Jul 2023

Standard Reference: VCS v4.4

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Jul2023.pdf

Finding: Section 2.2.1 of the VCS indicates that the principle of consistency is to “Enable meaningful comparisons in GHG-related information” and the principle of transparency is to “ Disclose sufficient and appropriate GHG-related information to allow intended users to make decisions with reasonable confidence. Section 5.4 of the MR pertaining to project uncertainty states, “We found a strong and direct relationship between their height estimates and the satellite-derived height map (Figure 11 of 'Appendix 1: Report Biomass Peru_GGF_v2.2_14July2023'), but with a clear scatter on the relationship.” The cited figure displays the relationship between AGB and not height, despite the caption reading, “Figure 11. Height observations compared to height predictions for independent measurements in the AOI.” Please provide more information regarding which is the intended figure to be referenced here.

Project Personnel Response: Given the inclusion of project description deviation #9, this quote is no longer in the main document but in Appendix 7. The correction was made as it was intended to reference figure 8 of the new biomass report.

Auditor Response: This finding is no longer relevant as the project has implemented PD deviation #9 which foregoes the optional quantification of carbon sequestration in the project scenario. However, please see finding #84 below related to appendix 7. This finding is therefore closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 67 Dated 28 Jul 2023

Standard Reference: VCS v4.4

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Jul2023.pdf

Finding: Section 2.2.1 of the VCS states “The application of principles is fundamental in ensuring that GHG-related information is a true and fair account. The principles below shall provide the basis for, and shall guide the application of, the VCS Program rules and requirements.” The principle of transparency is to “Disclose sufficient and appropriate GHG-related information to allow intended users to make decisions with reasonable confidence.” In section 5.4 of the MR, under the project scenario calculation of uncertainty for ‘Satellite-based height maps’ equation 1 does not align with the cited equation (i.e. $\sqrt{x^2+y^2}$ does not equal $x+y$). More explanation is required to achieve equation 2 from the citation and equation 1. Finally, in the paragraphs following these equations, the approach is not fully described and justified. Specifically, “...dividing the Standard Deviation of an estimate by the square root of N to obtain the Standard Error, and then multiplying that by 1.96 to obtain the Confidence Interval.” The latter step of multiplying by 1.96 is absent from equation 2 and the calculation of uncertainty as presented. The sample size (N) should reflect the number of pixels actually used to obtain the value around which uncertainty is being estimated (i.e. “the observed 0.18m change” from the MR), used in subsequent project carbon calculations.

Project Personnel Response: The formulation of Equation 1 has been rewritten since it wasn't clear originally that this equality is only true for unbiased models. The 1.96 factor has been added to Equation 2.

Auditor Response: Of note, these edits are in Appendix 7 of the MR and not the MR itself. Additionally, in the context of the newly created Appendix 7 document, Eq. 1 is now called Eq. 2 (and contains clarification on the basis of the relationship in the paragraph prior to the equations), and Eq. 2 is now called Eq. 3 (and contains the necessary edit to include 1.96).

Please note that due to PD deviation #9, this finding is no longer relevant. Also please see finding #84 below regarding appendix 7.

This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NCR 68 Dated 28 Jul 2023

Standard Reference: VCS v4.4

Document Reference: Appendix 1 - Report Biomass Peru_GGF_v2.2_14Jul2023; Asner & Mascaro 2014; GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Jul2023.pdf

Finding: The principle of accuracy is to “Reduce bias and uncertainties as far as is practical”; the principle of transparency is to “Disclose sufficient and appropriate GHG-related information to allow intended users to make decisions with reasonable confidence” and the principle of “Use conservative assumptions, values, and procedures to ensure that net GHG emission reductions or removals are not overestimated.” Furthermore, Section 3.4.4 Models of the Validation and Verification Manual states, “VVBs must also ensure that sufficient empirical testing has been conducted to calibrate the model accurately for the project. For example, where a forest growth and yield model is used to estimate change in carbon stocks, the model may need to be calibrated and/or validated through field measurements and compared against inventory data to ensure the appropriateness of the model for the project.”

Section 2.2 of Appendix 1 states: “The data [a variety of satellite datasets] generally provides a strong relationship between tree height and biomass in tropical forests (Asner & Mascaro, 20146).” However, the data output from this process is a height map as indicated in the following paragraph: “to create a regional per-pixel forest canopy height estimate map”. Instead, Asner & Mascaro (2014) use georeferenced plots to both build and validate estimates of biomass from remotely sensed data, as do all the related papers cited in Appendix 1. GEDI itself requires geolocated ground measurements for both the calibration and validation of their biomass maps (<https://gedi.umd.edu/science/calibration-validation/>). Furthermore, section ‘Plot-level biomass-height modelling’ of Appendix 1 states, “We then created a model relating plot AGB to height of the 3 tallest trees in the plot. As expected, we found a strong and direct relationship between field-measured AGB and the height of the tallest trees (Figure 4).” No metrics are provided to support the assertion of a ‘strong and direct relationship’, and the auditors disagree with this qualitative assertion. The auditors have found this relationship and its application to the height maps to contain considerable uncertainty which is not accounted for in the uncertainty quantification (i.e., Only 33% of the variation in log(AGB) is explained by log(height)). Together, the presentation and application of the height to biomass equation violates the VCS principles of accuracy, transparency, and conservativeness.

Project Personnel Response: 1. It is true that Anser & Mascaro (2014) use field plots located under LiDAR footprints in order to develop relationships between Lidar-based canopy height and aboveground biomass. However they did so precisely to allow other scientists not to have to create well-geolocated field plots in their study area, but instead to use LiDAR data directly to produce maps of AGB. They suggest that authors can either use the equations they provide in the paper for different types of forest, or develop their own relationships between tree top height and biomass based on field plots, with tree top height measured from the ground not necessarily by LiDAR.

The point of the Anser & Mascaro paper was to determine if a single metric, 'top of canopy height', could be used in different tropical environments to map biomass without additional remote sensing input. They found it could, provided local plots were used to give information on basal area and wood density, through a locally derived plot level biomass:height relationship. For example see this sentence from the abstract: ""Using a network of 804 field inventory plots distributed across a wide range of tropical vegetation types, climates and successional states, we present a general conceptual and technical approach for linking tropical forest EACDfield to LiDAR top-of-canopy height (TCH) using regional-scale inputs of basal area and wood density."" (EACDfield is aboveground biomass as estimated from field plots). They do not envisage for ever-more having to have well geolocated plots in order to use LiDAR data to estimate AGB, instead they envisage much simpler plot-based survey purely to give wood density and basal area information. See this quote from the Discussion:

""The approach we presented here may facilitate improved or easier LiDAR-assisted tropical forest carbon monitoring by allowing for inputs of simple stocking and wood density information, both of which can be acquired quickly in the field and/or via current published databases provided they are co-registered with LiDAR data. Strong evidence for this rests in results shown in Fig. 7. We left out of the general calibration fifty plots comprising 48.4 ha of forest. We then tested the method on these validation plots to derive a RMSE of 13 Mg C ha⁻¹, which is slightly greater than 10% uncertainty from the calibration phase. By re-examining these field plot data in different configurations, we found that uncertainties decline toward 10% at 1-ha resolution (Fig. 8).""

We exceed the requirements they give here of such simple plots, by actually estimating tree height in the field we were able to develop a local height:biomass equation.

We have adapted the text in the Appendix to reflect this and clear up any misunderstanding.

This was not the case in Saatchi et al. (2011), where relationships between a field-measured estimate of canopy height and field-measured biomass was developed in a set of hundreds of plots not located under ICESAT GLAS (satellite LiDAR) footprints. This relationship was then applied to the ICESAT GLAS height estimates in order to estimate biomass, in a way directly analogous to the method we have used here with a different satellite LiDAR (GEDI).

2. The 'Plot-Level Biomass-Height Modelling' section has been rewritten to include more details about the fit as well as metrics providing a quantitative assessment of it.

Auditor Response: Due to PD Deviation # 9, this finding is no longer relevant, and has therefore been closed.

However, the auditors would like to note that what Anser and Mascaro (2014) envisage for the future and what they recommend going forward based on their findings are not one in the same. From the auditor's perspective, Anser and Mascaro (2014) appear to be directly stating that georeferenced plots are still required moving forward (using the approach they present) based on the second quote provided from the paper in the last findings response: "...both of which can be acquired quickly in the field and/or via current published databases provided they are co-registered with LiDAR data." Co-registered means pixel overlap and implies that the plots are georeferenced to be able to align with LiDAR data in this context. Even under a different interpretation of 'co-registered,' Anser and Mascaro (2014) do not suggest using regionally-created allometries and applying them to LiDAR data to estimate biomass without validation with georeferenced biomass data.

Given that the project has voiced intentions of using the lidar based approach to monitor and quantification sequestration due to ongoing growth in the project scenario, the auditors intend to issue a FAR regarding this point.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 69 Dated 28 Jul 2023

Standard Reference: VCS v4.4

Document Reference: GGF_Hgt_Dif_2022minus2020_spacesIntVersionCalc28Jul2023

Finding: Section 2.2.1 of the VCS indicates that the principle of transparency is to “Disclose sufficient and appropriate GHG-related information to allow intended users to make decisions with reasonable confidence” Section 5.4 of the MR indicates the following: "We used satellite data to produce estimates of height for every pixel in the AOI. It is these pixels that were tested to give the RMSE value of 6.42m (this was comparing pixel-wise estimates of height to an overlapping GEDI footprint not used in training). In total there are 183 445 ha in the PA, and 16 pixels (each 25m x 25m) in each hectare, giving 2 935 120 pixels in total. Using this number of samples, applied in Equation 2, gives a 95% confidence interval of $\pm 0.0037\text{m}$, or 2% of the observed 0.18m change. Combining these for two time points using equation 42 from the Methodology (square root of the sum of squares) this gives $\pm 2.88\%$ of the 0.18 m height change observed between the two years." The project team has provided the auditors with the height difference map used to derive these estimates (GGF_Hgt_Dif_2022minus2020_spacesIntVersionCalc28Jul2023). However, it is unclear if the 0.18 meters of change in height between the two years represents the average of height pixels across the project area or exactly how this value was derived from this map. Please provide additional information and clarification regarding how the 0.18m difference was determined.

Project Personnel Response: The 0.18 m of change represents the average of height pixels across the project area. This was obtained this by calculating the average height in the AOI for both 2020 and 2022 and subtracting them. We have now updated this number to consider only PC 01 and 02 and the number is now 0.1788 m (which comes from an increase of 17.94cm in PC 01 and if 17.83cm in PC 02).

Auditor Response: Due to PD Deviation # 9, this finding is no longer relevant, and has therefore been closed. However, there remains a lack of transparency and uncertainty surrounding these calculations. Given that the project has voiced intentions of using the lidar based approach to monitor and quantification sequestration due to ongoing growth in the project scenario and the subsequent uncertainty of such measurements, the auditors intend to issue a FAR regarding this point.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 70 Dated 16 Aug 2023**Standard Reference:** vcs-monitoring-report-template-v4.2-final**Document Reference:** 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023

Finding: Section 2.2.1 of the VCS indicates that the principle of transparency is "Disclose sufficient and appropriate GHG-related information to allow intended users to make decisions with reasonable confidence." Section 3.2.2 of the MR Template requires the following: "Describe any project description deviations applied during this monitoring period and explain the reasons for the deviation. Identify whether the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario and provide an explanation of the outcome.

Describe and report on any project description deviations applied in previous monitoring reports."

The current MR lists 9 PD deviations, but not all deviations include an explicit description of whether the PD deviations impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, nor do they all include an explanation of the outcome of the deviation.

Second, for clarity and transparency, it is critical that each deviation indicate exactly which sections of the PD are being deviated from. For instance, PD deviation #9 does not indicate what section of the PD is deviated against, nor does it reference the applicability of the methodology. PD deviation #7 does not mention the impact on applicability of the methodology, additionality, or the appropriateness of the baseline, nor does it show the outcome of the deviation (baseline quantification), nor does it indicate what section of the PDD is affected by this deviation. PD Deviation #2 does not state the impacts on additionality, the applicability of the methodology, and the relevance of the baseline, nor does it indicate the outcome of the deviation and the section of the PD deviated against. The above are just a few examples. Please provide additional information in section 3.2.2 of the MR to ensure transparency in each PD deviation.

Project Personnel Response: Regarding the updates of PD deviations:

PD deviations 1 and 2 were modified to specifically mention what sections of the PDD they were deviating from and an explicit description on whether or not the PD deviations impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario

Former PD deviation 3 was removed as is no longer relevant

Former PD deviation 4 (now PD deviation 3) was modified. See the response to finding #75.

Former PD deviation 5 (now PD deviation 4) was modified. See the response to finding #83.

For clarity and to avoid duplication of information, former PD deviations 6 and 7 were combined to explain the recalculation of baseline. This is now PD deviation 5. See also the answer to finding #76

Former PD deviation 8 was removed. See the response to finding #72

Former PD deviation 9 (now PD deviation 6) was modified to specifically mention what sections of the PDD they were deviating from and an explicit description on whether or not the PD deviations impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario.

Auditor Response: The auditors confirmed that the PD deviations contain the relevant information. Note there are several other open findings related to the deviations that must be addressed. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 71 Dated 21 Aug 2023**Standard Reference:** VCS v4.4; vcs-monitoring-report-template-v4.2-final**Document Reference:** 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023**Finding:** Section 3.2.1 of the MR Template requires the following: "Describe and justify any methodology deviations applied during this monitoring period. Include evidence to demonstrate the following:

- The deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals.
- The deviations relate only to the criteria and procedures for monitoring or measurement, and do not relate to any other part of the methodology." Therefore, only methodology deviations applied during this monitoring period must be listed. Due to PD Deviation #9, in which the project opts to refrain from the optional monitoring of ongoing forest growth in the project scenario (section 8.2.1 of the Methodology) for this monitoring period, methodology deviation #5 and part of methodology deviation #3 no longer appear to be relevant to this monitoring period as they pertain to section 8.2.1 of the Methodology. For example, they relate to equation #32 (section 8.2.1) in the methodology which is not quantified during this monitoring period. Furthermore, the alteration of equation #38 as shown in Meth deviation #3 is also no longer appears relevant as a result of PD deviation #9, and the equation replacing 38 (M1) was not correct anyway as it excludes illegal logging. The auditors request justification regarding how these methodology deviations are relevant and if no longer relevant please update accordingly.

Project Personnel Response: Deviation #3 and deviation #5 were removed as they are considered not longer relevant by the inclusion of project deviations #4 and #6.**Auditor Response:** The auditors confirmed that deviations number #3 and #5 have been removed.**Bearing on Material Misstatement or Conformance (M/C/NA):** C

NCR 72 Dated 21 Aug 2023

Standard Reference: VCS v4.4; vcs-monitoring-report-template-v4.2-final

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023

Finding: Section 3.19 of the VCS states "Projects may deviate from the procedures set out in methodologies in certain cases, where alternative methods may be more efficient for project-specific circumstances, and where the deviation will achieve the same level of accuracy or is more conservative than what is set out in the methodology."

Section 3.20 of the VCS states "Projects may deviate from the validated project description in certain cases in order to accommodate changing circumstances post-validation. Such deviations must be described and assessed by a validation/verification body during the next project verification."

The auditors have noted that the latest version of the MR includes a PD Deviation #8. The first part of the deviation "Firstly, the baseline emissions were calculated based on..." appears to be the same/similar to deviation #7 thus does not appear to be a unique deviation.

The next part "Secondly, the cumulative sum of the baseline emissions was divided by the project's crediting period (20 years) and the total project area (184,445.54 hectares). This division resulted in the average baseline emissions per hectare. This approach deviated from the methodology specified in Section 8.1, which calls for the annual emissions to be averaged across the project crediting period and then multiplied by "t*," the time elapsed since the initiation of project activity..." does not appear to be a PD deviation, but rather it proposes deviating against methodology section 8.1, thus it is not in conformance to include this deviation in section 3.2.2 of the MR and not in section 3.2.1. Such a deviation must conform to the requirements of section 3.2.1 of the MR Template. Please also note that as is this deviation is not clearly explained or justified and the auditors are having a difficult time understanding its relevance.

Project Personnel Response: The project description deviation that is being referenced was removed. Instead, methodology deviation #6 was introduced.

Auditor Response: The auditors confirmed that methodology deviation #6 was added instead. However for methodology deviations, the template states "Section 3.2.1 of the MR Template requires the following: "Describe and justify any methodology deviations applied during this monitoring period. Include evidence to demonstrate the following:

- The deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals.
- The deviations relate only to the criteria and procedures for monitoring or measurement, and do not relate to any other part of the methodology."

Methodology deviation #6 is described and justified, but there is no information about the impact on the conservativeness of the GHG emission reductions and removals or regarding its relationship to criteria and procedures for monitoring and measurement. Please ensure that all required reporting components of the methodology deviation are described.

Second, Methodology Deviation #6 states "The project recalculated its baseline emissions (see PD Deviation #BA)." We are unsure what '#BA' signifies. Please clarify or correct.

Project Personnel Response 2: (1) An explanation was included in methodology deviation #6
(2) The typo was corrected.

Auditor Response 2: The auditors confirmed that the deviation was corrected and now incorporates all deviation requirements. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 73 Dated 21 Aug 2023

Standard Reference: VCS v4.4; vcs-monitoring-report-template-v4.2-final

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023

Finding: Section 3.2.2 of the MR Template requires the following: "Describe any project description deviations applied during this monitoring period and explain the reasons for the deviation. Identify whether the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario and provide an explanation of the outcome."

Describe and report on any project description deviations applied in previous monitoring reports." Only deviations implemented during this monitoring period are to be included in this section of the MR. PD Deviation #3 references the uncertainty approach that has been updated and included in appendix 6. Due to PD deviation #9 which now excludes the quantification of on-going growth in the project scenario, it is unclear how PD deviation #3 is still relevant to this current monitoring period. Please provide more information or update accordingly.

Project Personnel Response: Given that the project has decided to no longer account for the optional sequestration due to ongoing growth in the project scenario, this project description deviation is no longer relevant for the current monitoring period. Therefore, this deviation was removed.

Auditor Response: The auditors confirmed that the previous PD deviation #3 has been removed. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 74 Dated 21 Aug 2023

Standard Reference: VCS v4.4

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023

Finding: Section 2.2.1 of the VCS States that the principle of consistency is to "Enable meaningful comparisons in GHG-related information." The MR includes an Appendix 1. Much of this appendix describes the process of quantifying ongoing growth of forests under the project scenario, which is an optional component of the methodology (Section 8.2.1 of method). However, due to PD deviation #9, the project deviates against the PD in that it opts to not conduct monitoring of ongoing growth in the project scenario. In this Appendix 1, it appears to continue to contain information relevant to section 8.2.1 of the methodology and the related project scenario uncertainty, which is not longer completely relevant. The auditors understand that this approach of utilizing the biomass mapping was implemented for the disturbance mapping as well, as described in section 5 of Appendix 1. However the following issues/discrepancies have been identified in Appendix 1:

(1) Some sections of Appendix 1 appear to be no longer relevant to this monitoring period or the relevance is unclear (e.g., uncertainty section).

(2) Section 5 of appendix 1 appears to be missing information. It shows examples of how disturbances occur outside of the 1.25km buffer, but does not indicate if these disturbances their emissions are accounted for. Please note, that VM0010 requires that fire, non-fire, and illegal logging disturbances are accounted for. Illegal logging disturbances include accounting of fossil fuel emissions as well.

(3) Section 5 indicates that "The summed losses for pixels in these areas amounted to 233 tC". Similarly section 4.2 states for parameter ADist_IL,i 'Remote sensing analysis showed 233 tC lost in total.' However, section 4.2 of the MR states for the parameter Illegal Logging PRA Results "Using the information of remote sensing, the summed value for carbon losses in those areas is 601.3 Mg C lost in total, which is 0.0012% of the total carbon stock in 2022 of 26,759,769 Mg C." Furthermore, in the quantification workbook, sheet Inputs project Y1Y2, it states "601.3 Mg C lost in total, which is 0.0012% of the total carbon stock in 2022 of 26,759,769 Mg C. This is far below the de minimis 5% cut off and would remain so even if the true number were orders of magnitude higher." It is unclear what the disturbance emissions actually are as there are discrepancies between several reporting documentation. Please clarify.

(4) Section 5 states "We also investigated the changes in carbon storage that occurred within reach of access points involving the whole map, i.e. covering the whole AOI not just the PC01 and PC02 of the carbon change calculations." However, according to the methodology requirements, "it is assumed that a disturbance event in the project scenario would also have occurred in the baseline scenario. Project emissions are therefore equal to the non-fire natural disturbance to biomass absent in the baseline scenario (harvested and removed) but present in the project scenario." This notion of only monitoring the disturbances that occurred in biomass that would have been absent in the baseline scenario, is also described in section 4.3.4.5 of the MR and ultimately means tht the AOI would be PCs #1 and #2. Please confirm whether the disturbance monitoring and quantification was carried out over the entire AOI.

Please provide more information on the above points or update accordingly.

Project Personnel Response: Appendix 1 was modified to include only the relevant information given the inclusion of project deviation #6. It is important to note that while the project is not accounting for the optional sequestration due to ongoing growth in the project scenario during this monitoring period, the methodology and the results from the biomass maps are considered to be important to properly explain the results of the disturbance analysis.

(1) Appendix 1 has been edited to include only the sections relevant to this monitoring period

(2) Former section 5 of appendix 1 (now section 3) has been expanded to include the quantification of emissions due to disturbances within and outside the 1.25 Km buffer, as well as in the whole area. This section is only use to explain the loss of biomass due to disturbances in general. The analysis to account for illegal logging, fire and non-fire disturbances is explicit in appendix 2 as well as in project deviation #4 in the MR.

(3) First of all it its important to note that in appendix 1 is only stated the loss of biomass due to disturbances (note that MgC is the same as tC). In the MR the disturbance analysis is completed. In all sections in the MR indicated by the auditors now state that, using the information of remote sensing and the application of methodology deviation #3 and project deviation #4, the emissions form illegal logging was 1,094 tCO₂e, which is 0.14% of the project's net GHG emission reductions or removals (tCO₂e) during the monitoring period. This is below the de minimis 5% cut off. Therefore, for the purpose of the calculation, emissions from illegal logging is 0.

(4) The disturbance monitoing and quantification was carried out over the entire project area, not only PC1 and PC2. This is done because the monitoring activities are conducted all over the project area and to ensure transparency for the project. Conservatively all disturbances are considered to be due to illegal logging (see project description devaition #4).

Auditor Response: The auditors have found that Appendix 1 is not clear. For instance, there is no description of the purpose of the document and the biomass analysis being solely for the identification and quantification of disturbance/illegal logging impacts. This information is not detailed in the Background, the Key Findings, or the Executive Summary. The concept of using the biomass mapping for disturbance assessment is only introduced in Section 3 of Appendix 1 and presented as an additional component ("We also investigated the changes in C stocks caused by potential logging events..." rather than the chief purpose of this document.

Furthermore, in section 3 it states "All disturbance grids that occur more than 1.25 km from a road or river are eliminated" which suggests that they are not quantified and are rather ignored. This does not appear to be accurate as the disturbances that occurred outside 1.25km of roads and rivers are quantified.

Please update to ensure this document is clear and accurate and in alignment with the approach outlined in the Monitoring Report.

Project Personnel Response 2: The SI report is no longer included in the MR as an appendix. The information regarding the disturbance maps are reported in the project's calculation spreadsheet and the explication of the methodology is stated in methodology deviation #3 as well as in section 4.3.4.5 and 5.2 of the MR.

Auditor Response 2: The auditors have confirmed that Appendix 1 (SI report) is no longer considered an appendix to the monitoring report. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 75 Dated 21 Aug 2023

Standard Reference: VCS v4.4; vcs-monitoring-report-template-v4.2-final

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023

Finding: Section 3.2.2 of the MR Template requires the following: "Describe any project description deviations applied during this monitoring period and explain the reasons for the deviation. Identify whether the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario and provide an explanation of the outcome."

Describe and report on any project description deviations applied in previous monitoring reports." Only deviations implemented during this monitoring period are to be included in this section of the MR. This deviation references the approach to stratifying plots for the biomass monitoring. Given PD deviation #9 in which the ongoing growth in the project scenario is no longer monitored during this monitoring period, it is unclear if this PD deviation is fully applicable anymore or if only parts of the deviation are applicable. The auditors understand that the plot measurements and biomass mapping is relevant to the monitoring of disturbance which is required by the methodology, but it remains unclear in the current description of PD Deviation #4, exactly what part of the PD deviated against and for what purpose. Please provide additional information regarding the relevance of this PD deviation to the monitoring during this monitoring period.

Project Personnel Response: Former PD Deviation #4 (now PD deviation #3) has been modified to explicitly state that while the field plots are not used any more for the growth component, they were installed during this monitoring period as stated in section 4.3.4.4 of the PDD and are indirectly being used for the disturbance analysis and they will be use for biodiversity monitoring for CCB.

Auditor Response: Confirmed that the purpose of these plots has been clarified. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 76 Dated 21 Aug 2023

Standard Reference: VCS v4.4; vcs-monitoring-report-template-v4.2-final

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023

Finding: Section 3.2.2 of the MR Template requires the following: "Describe any project description deviations applied during this monitoring period and explain the reasons for the deviation. Identify whether the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario and provide an explanation of the outcome."

Describe and report on any project description deviations applied in previous monitoring reports." This PD deviation references two methodology deviations that are no longer fully relevant (see finding #71 above). While the PDD does mandate the use of parcels that would have been logged for the baseline scenario quantification, it is actually the Methodology that requires this as Box 1 states "The description of harvesting in the form of a timber harvest plan forms the basis of the baseline scenario for greenhouse gas accounting." Thus indicating that the PD deviation is only a result of the PDD or methodology deviations (that are no longer applicable) does not provide a clear picture of why this PDD deviation is necessary. The auditors request the following:

- (1) Please provide more information and correct information that justifies the need for the PD deviation, and
- (2) Please reference the exact sections of the PD that are altered as a result of this deviation (e.g., is it the baseline section, is the leakage section impacted, etc).
- (3) Please provide a clear explanation or demonstration of the outcome of this deviation (e.g., altered baseline and/or leakage quantification, altered tables from the PD, etc). Currently there is no demonstration in the MR (either in section 3.2.2 or section 5.1) showing the results of this adjustment through the crediting period.

Project Personnel Response: Former PD deviation #7 was combined with former PD deviation #6 to better explain the recalculation of the baseline. This is now PD deviation #5. See also response to finding #70.

(1) - (2): The deviation is needed to adjust properly the estimated baseline emissions according to the areas specified in section 3.3 of the PDD. The sections from the PDD that are being altered are 3.6, 4.2.1, 4.4 and 5.2 and 5.3.7.

(3): The demonstration of this deviation is stated in section 3.2.2 of the MR, within the explanation of the deviation. Also the graph of section 5.1 of the MR was updated accordingly.

Auditor Response: The auditors confirmed that this deviation is well explained and contains all components. However, the deviation also includes an update of the ex-ante/ex-post leakage emissions, but there is no description of this in the deviation text. Also there is no mention of the updated market leakage values within section 5.3 of this MR. Please ensure the deviation is complete and details all impacts of the deviation. Also ensure that section 5.3 shows/references the results of this deviation. Also note, that as a result of the finding #79 below, this table in the deviation will need to be updated.

Project Personnel Response 2: A clarification regarding leakage emissions was incorporated in the text of the deviation. Regarding section 5.3, some sections were rephrased to emphasize that 1) no activity leakage has taken place within the monitoring period and 2) the parameters for the calculation of the market leakage factor haven't changed as they are based in literature and historic information.

Auditor Response 2: The auditors confirmed that the deviation now mentions the impact on leakage. We confirmed that greater explanation on the approach to quantifying market leakage has been added to section 5.3. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 77 Dated 21 Aug 2023

Standard Reference: VCS v4.4

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023; Appendix 7 - Uncertainty analysis_EM V6_3Aug2023

Finding: Section 2.2.1 of the VCS States that the principle of consistency is to "Enable meaningful comparisons in GHG-related information." Furthermore, the principle of transparency is to "Disclose sufficient and appropriate GHG-related information to allow intended users to make decisions with reasonable confidence." The auditors found the following issues:

As a result of PD deviation #9, the uncertainty analysis described in Appendix 7, and the entire appendix in general are no longer relevant and contains conflicting information to what is described in the MR. Please note that appendix 7 is referenced in section 5.4 of the MR, included in the table of contents, and included in the MR attachments. Please provide more information regarding how Appendix 7 and the uncertainty analysis described are relevant to this monitoring period.

Project Personnel Response: Appendix 7 and any related references were removed from the MR.

Auditor Response: The auditors confirmed that Appendix 7 has been removed. This finding is closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 78 Dated 13 Sep 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023

Finding: Section 4.3 of the MR Template states "Describe the process and schedule followed for monitoring the data and parameters, set out in Section 4.2 (Data and Parameters Monitored) above, during this monitoring period, include details on the following:

- The organizational structure, responsibilities and competencies of the personnel that carried out the monitoring activities.
- The methods used for generating/measuring, recording, storing, aggregating, collating and reporting the data on monitored parameters.
- The procedures used for handling any internal auditing performed and any non-conformities identified.
- The implementation of sampling approaches, including target precision levels, sample sizes, sample site locations, stratification, frequency of measurement and QA/QC procedures. Where applicable, demonstrate whether the required confidence level or precision has been met.

Where appropriate, include line diagrams to display the GHG data collection and management system." It is important to note that the Monitoring Plan is only intended to provide information for this current monitoring period. The auditors have noted that some outdated monitoring information remains in this section. For instance, Step 3 appears to pertain to section 8.2.1 of the methodology which is no longer relevant due to deviation #9. Please justify how the above components in section 4.3 of the MR are relevant to this monitoring period.

Project Personnel Response: Section 4.3.4.5 was modified to only explicitly state the steps used for the disturbance analysis.

Auditor Response: The auditors confirmed that section 4.3.4.5 of the Monitoring Report no longer contained text related to the quantification of biomass change due to sequestration. Please note that during a call with the project team on 13/9/2023, it was indicated that additional details on the monitoring of fire and non-fire disturbances may be supplied in this section. However, currently this finding has been addressed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 79 Dated 21 Aug 2023

Standard Reference: VCS 4.4

Document Reference: Appendix 2 - GGL1 Calculation Spreadsheet V5 AUG23.xlsx1

Finding: PD Deviation #7 describes an error discovered in the baseline quantification and the subsequent adjustment of the baseline emissions to utilize the harvest areas from the validated PD Timber Harvest Plan. In reviewing the updated the baseline quantification in Appendix 2, the auditors found a calculation error. In Appendix 2, sheet Baseline emissions_Cor23, the summary in row 369 seems to be adding up the incorrect values, because of errors in cells D330, E331, F332, etc.

For Year 2, cell D17 shows the net emissions are 13,885 (due to logging that happened in year 1) and then cell D35 shows the emissions are 41,821 (for logging that happened in year 2). But then down at the bottom in Cell D330, it does not show that same value of 41,821, but rather shows the logging emissions from year 1. This trend continues for the rest of the years in that the year 1 logging emissions of 33,935 (associated with an area logged of 9333 ha) are applied each year. This results in an inaccurate quantification of the baseline and a subsequent nonconformity.

Project Personnel Response: The excel was corrected accordingly.

Auditor Response: The auditors continue to find errors in the baseline re-quantification. In the Appendix 2 workbook, the emissions from Long lived wood products for each year are always referencing year 1, rather than the previous year. For instance, for year 2... cells E29, F29, G29, etc references cell C13 rather than cell C29. And for year 3, Cells F45, G45, H45... so on reference cell C13, rather than E45. This continues to result in a nonconformity.

Project Personnel Response 2: The excel was corrected accordingly.

Auditor Response 2: The auditors confirmed that the updated baseline quantification is no free of material errors. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 80 Dated 21 Aug 2023**Standard Reference:** vcs-monitoring-report-template-v4.2-final**Document Reference:** 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023

Finding: Section 5.1. of the Monitoring Report requires the following: "Quantify the baseline emissions and/or removals, providing sufficient information to allow the reader to reproduce the calculation. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results." This finding is related to finding #76 and #15 above. Given PD deviation #7, the entire baseline quantification has been altered from the PD. However, the results of the updated baseline during the entire crediting period are not provided anywhere in the Monitoring Report. While section 5.1 references section 5.4 for the baseline emissions, it only shows the two years of the reporting period. Overall, section 5.1 is not in conformance because it does not provide a complete quantification of the baseline emissions and/or removals throughout the crediting period.

Project Personnel Response: The results from the updated baseline and estimated projections of project emissions for the whole crediting period are shown in what is now PD deviation #5.

Auditor Response: The auditors confirmed that reference to the Baseline calculations and results are now included. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 81 Dated 21 Aug 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023

Finding: Section 5.2 of the Monitoring Report Requires the following: "Quantify project emissions and/or removals providing sufficient information to allow the reader to reproduce the calculation. Attach electronic spreadsheets as an appendix or separate file to facilitate the verification of the results." This finding relates to findings #77 and #16 above. Due to finding #9, the project scenario quantification now excludes accounting of ongoing forest growth in the parcels that would have been harvested. As a result, several statements in section 5.2 are no longer relevant. For instance, section 5.2 continues to include a description of 'Project sequestration in ongoing forest growth' with a description of equation 32 which is no longer applied. Likewise Step 7 references an altered formula M1 and Methodology Deviation #3, which no longer appear to be relevant. As a result section 5.2 does not contain accurate information regarding the project scenario quantification during this monitoring period. Also, several of the deviations referenced in this section may be re-numbered or altered due to the above findings. Please ensure Section 5.2 contains accurate information on project scenario accounting for this monitoring period in conformance with the template requirement.

Project Personnel Response: Section 5.2 was modified to provide sufficient information given the implication of PD Deviation #6 (former PD Deviation #9)

Auditor Response: The auditors are leaving this finding open as the section does not supply sufficient detail on how the fire, non-fire, and illegal logging disturbances have been quantified as well as the results of that quantification. Please ensure there is sufficient detail in this section (e.g., maps, tables, explanation) to allow readers to reproduce the calculations and see the actual results. Please note that due to several other findings, there are inaccuracies in this section (e.g., only accounting for fuel emissions from illegal logging, incorrect application of T-SIG tool, etc). This finding remains open.

Project Personnel Response 2: For the disturbance analysis, the project is following the procedure stated in section 5.3.7 of the PDD and the methodology (considering the methodology deviations #3 and project descriptions deviations #1, #2 and #3). In section 5.2, the analysis for disturbance is explained in detail. Additionally, the disturbance maps will be sent as supporting documentation.

Auditor Response 2: This finding will remain open due in part to finding number 83 remaining open below. The description of how illegal logging disturbances were monitored and quantified does not appear to follow the Monitoring Plan described in the PD or the MR as it is not considering illegal logging across the entire project area within the risk buffer informed by the PRA. Section 5.2 indicates that "The C losses (in tC) from disturbance grids occurring within 1.25 km of an access point are then summed to give an estimate of the C losses to logging disturbance in the project areas." However in reviewing the calculation workbook as well as the disturbances grids supplied to the audit team, only a portion of those disturbances are being included, not all of them across the project area. Please ensure that this section of the MR provides a clear description of the exactly how illegal logging disturbances were quantified.

Project Personnel Response 3: The project decided to rerun the analysis made in the PRA. In this new analysis, the project shows that even though 26 out of 184 (14%) of people interviewed said that they use timber from within the forest concessions (3 communities), only 1 community actually uses timber from inside the project area (the other 2 do it within GGF concession but outside project area). Therefore, from the surveys, only 3.8% of interviewed people use timber from the project area. According to the table of the parameter "Illegal Logging PRA Results" in section 9.2 of the methodology, if "≥10% of those interviewed / surveyed believe that illegal logging may be occurring within the project boundary then the limited on-the-ground illegal logging survey must be triggered". As the percentage of those interviewed that actually use timber from inside the project area is only 3.8%, then the PRA concludes that no potential pressure for these activities then illegal logging ($\Delta CDIST_{IL,i,t|PRJ}$) can be assumed to be zero and no monitoring is needed.

Auditor Response 3: Thank you for this information. However, none of these results are described in section 5.2 of the Monitoring Report. Please ensure that this section of the monitoring report provides a clear description of the project scenario emissions (i.e., the description provided in your response) to ensure conformance with the template requirements. This finding remains open and is now listed below as finding 89 to provide space for a response.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 82 Dated 21 Aug 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final, VCS v4.4

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023

Finding: Section 2.2.1 of the VCS States that the principle of consistency is to "Enable meaningful comparisons in GHG-related information."

(1) Section 5.4 of the MR is for the quantification of Net GHG Emissions. The auditors found several inaccuracies in this section. For instance in section 5.4 it states "During this monitoring period, the project emissions/removals are not accounted for in the calculations (see project deviation #9)" which, is not an accurate statement as project emissions are accounted for, but the ongoing sequestration in the project scenario (section 8.2.1 is not). Second, under the Project Uncertainty, reference to the NPRR is made regarding fire and non-fire disturbance. However, the NPRR does not contain the results of the monitoring during this monitoring period, but rather general information about disturbance risks. Thus references to the NPRR are not relevant to these emission sources. Please ensure that section 5.4 contains accurate descriptions of the accounting.

(2) Section 5.4 of the MR requires the following "For all projects, state the estimated ex-ante GHG emission reductions and removals and the achieved emission reductions and removals for this monitoring period. Report the percentage difference and justify the difference. The quantities of GHG emission reductions and removals are the total quantities before any deductions for buffer credits." In table 5 of the Monitoring Report, the project states that there is a -5.25% difference in achieved emissions reductions/removals citing "The current monitoring period does not consider into its calculations the project emissions reduction/removals. For more, see project deviation #9." However, this statement is not accurate as several components have changed resulting in differences including the (1) adjustment of the baseline emissions and (2) the lack of accounting of project sequestration in ongoing forest growth. Furthermore, stating that the project is not accounting for project emissions and removals is not accurate as there is monitoring and accounting of disturbances and illegal logging during this MR which are project emissions.

Overall, the auditors found that section 5.4 contains inconsistencies and inaccuracies as described above.

Project Personnel Response: (1) The statement has been changed to state that the project is no longer accounting for the optional sequestration due to ongoing growth in the project scenario. Reference to the fire and non-fire disturbances were removed from the refereced sections. Results from the analysis on disturbance is found in section 5.2 of the MR, methodology deviation #3 and appendix 2

(2) The explication in section 5.4 was updated stating that the difference between estimated ex-ante GFG emission reductions and removals and achieved emission reductions and removals was due the project no longer accounting for sequestration due to ongoing growth in the project scenario and a recalculation of the baseline (project description deviations #5 and #6).

Auditor Response: The auditors confirmed that these updates have been made.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 83 Dated 21 Aug 2023

Standard Reference: VM0010 v1.3

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023;
AGB_Peru_change_2020_2022_5tClossPixels.tif; Appendix 1 - Report Biomass
Peru_GGF_v3.0_4August2023

Finding: Section 8.2.2 of the VM0010 Methodology "calculates $\Delta CDIST_{FR,t|PRJ}$, carbon stock change due to fire disturbance in the project scenario; tCO_2e , $\Delta CDIST_{t|PRJ}$, carbon stock change due to non-fire natural disturbance in the project scenario; tCO_2e ." It indicates that fire and non-fire disturbances are equal to the biomass loss and/or damage "absent in the baseline scenario (harvested and removed) but present in the project scenario." PD Deviation #5 has been implemented to "utilize the ratio of natural to anthropogenic disturbances observed in the surveyed areas and extrapolate it to estimate the causes of disturbance in the unsurveyed points."

Section 8.2.2.2 provides methods for quantifying greenhouse gas emissions from illegal logging that occur in the project area. The auditors acknowledge that Methodology Deviation #4 was implemented for the quantification of emissions due to illegal logging.

The auditors have found that Appendix 1, section 5 provides some information about the quantification of disturbance/illegal logging emissions but this appears to be incomplete and contain discrepancies.

The auditors request a clear demonstration of the quantification of emissions due to fire, non-fire, and illegal logging in accordance with the VM0010 Methodology and its equations. We request that any methodology or PD deviations related to such project scenario emissions be clearly identified and reflect the procedures applied during this monitoring period. Please ensure that section 5.4 of the MR details such quantification in a transparent manner in accordance with template requirements.

Also, related to disturbance -- for the parameter $A_{burn,i,t}$ a 10tC reduction in biomass is referenced (section 4.2 of MR), but elsewhere in the MR, a 5tC reduction appears to be referenced (e.g., PD deviation #2).

Project Personnel Response: (1) The quantification of the estimation of emissions are detailed in PD Deviation #4, methodology deviation #3, section 4.3.5 and section 5.2. of the MR as well as Appendix 2. Specifically, the project is conservatively assuming that all the disturbance were due to illegal logging (see project deviation #4 (former PD Deviation #5)). It is highly unlikely that illegal logging would occur outside of the buffer zones delimited by D_(DIST_IL,i), as they would need to be in close proximity to riverine access routes to transport the logs. Therefore, disturbances further than 1.25km from an access point are highly likely to be caused by non-fire natural causes like strong winds. However, we conservatively assume that all the areas that were flagged as potentially being disturbed by the biomass maps were due to illegal logging, rather than natural events. We consider that this is a very conservative assumption. In fact, evidence from the ground surveys conducted during the monitoring period showed that, from the surveyed area, only 15% was due to illegal logging..

(2) The description of the parameter Aburn was corrected.

Auditor Response: Thank you for providing this quantification.

(1) The auditors have found errors in Methodology Deviation #4 particularly in the alteration of equation 37. The equation seems to now exclude all quantification of emissions associated with the loss in aboveground biomass associated with illegal logging and only considers the fossil fuel emissions associated with the illegal logging. Thus it appears that the first half of equation 37 is missing (which was only relevant when the biomass change across the project area was considered), while the alterations to the second half only address a single parameter (CFuel) in the original equation 37. As a result this deviation is not valid and the quantification of illegal logging is not accurate. Please demonstrate how the original equation 37 from the methodology is being applied.

(2) The consideration that all disturbances flagged in the space intelligence analysis are illegal logging may not be conservative and is not in like with the methodology. Please demonstrate how you have monitored and quantified emissions from all fire and non-fire disturbances as well as the illegal logging (point #1 above).

(3) In reviewing the Rivers, roads, and community data used to determine which areas are of risk of illegal logging (the 1.25km buffer), we found the high risk tributary waterways that go into the project area were not considered. Please demonstrate that the most accurate illegal logging risk data has been utilized.

(4) Finally, it is claimed that these emissions are non-significant, below de minimis and thus do not need to be quantified. However, no step by step demonstration of the significance testing with the accurate values associated with the illegal logging has been provided. Please note that the significance testing considers only the emissions associated with project scenario and leakage emissions and not net emissions reductions.

(5) Lastly there is uncertainty associated with the illegal logging and disturbance analysis that must be accounted for. Please note that VM0010 indicates that "Errors in each pool must be weighted by the size of the pool" but does not explicitly demonstrate an equation here. Please ensure that uncertainty associated with the disturbances/illegal logging is included and is in conformance with the VM0010 requirements.

The auditors request the following:

- Correction, modification, or removal of MR deviation #3 to accurately reflect the complete accounting for emissions associated with illegal logging (biomass loss + fossil fuel emisisions).
- A clear description (in the MR) regarding how non-fire and fire disturbances were monitored (section 4.3) and quantified (section 5.2)
- If methodology deviation #3 is maintained, please demonstrate that the MR Deviation #3 is more conservative than the methodology's approach of accounting for fire and non-fires disturbances (this will require complete quantification of both approaches)

- Demonstration of the significance testing, following step by step the T-SIG tool (leakage and project scenario emissions only).
- demonstration of the project scenario uncertainty associated with the illegal logging and disturbances.

Project Personnel Response 2: (1) The comments seems to be refering to methodology #3 of the MR instead of #4. The auditors are correct in stating that, as the project is no accounting for the optimal sequestration of carbon during this monitoring period, the loss in aboveground biomass associated with illegal logging must be accounted for. Therefore, a new modification fo equation 37 was used.

(2) For the disturbance analysis, the project is following the procedure stated in section 5.3.7 of the PDD and the methodology (considering the methodology deviations #3 and project descriptions deviations #1, #2 and #3). Therefore project description deviation #4 was deleted. For the results see section 5.2 of the MR.

(3) The buffer area was recalculated as data regarding high risk tributary waterways was considered.

(4) See cell B32 on Tab "Disturbances"

(5) Emissions from disturbances are below the 5% minimum (application of the CDM Tool for testing significance of GHG emissions in A/R CDM project activities, v.1). Therefore, there is no need to demonstrate the uncertainty associated with the disturbances

Auditor Response 2: (1) Modified equation #37 is still not correct. It appears to only be considering the fossil fuel emissions associated with illegal logging as the equation is solving for the parameter $C_{fuel,IL,t}$ (Fossil fuel emissions resulting from illegal logging at time). The original equation 37 of the methodology considers the carbon losses in the aboveground biomass as well as the fossil fuel emissions due to the illegal harvest operations. Likewise, in reviewing the calculation workbook, sheet "disturbances" it appears that the project team is accounting for the C stock losses from aboveground biomass, plus the fossil fuel losses. Therefore the modified equation 37 in the MR does not reflect the actual quantification.

(2) The project does not appear to be following the procedure outlined in section 5.3.7 of the PD and the MR. The PD, MR indicate that ALL potential illegal logging occurring within the 1.25km buffer are considered in the illegal logging calculation. There is no indication that that only some areas within this 1.25km buffer are at risk areas. The auditors reviewed the PRA again and confirm that it supports that only the far eastern side of the project area near the communities appears to be at risk for illegal logging, however, any decisions around limiting the buffer to this area is not described in the MR. Ultimately, the auditors found that this total area of illegal logging in the project area sums to 349.93 ha. However, the project appears to be excluding some of these flagged illegal logging areas within the 1.25km buffer, as you are only showing 34.07 ha. It is unclear how this approach conforms to the requirements of the Methodology as well as the approach outlined in the PD/MR. Please provide more information and justification for this approach and clearly demonstrate how it has been informed by the PRA results.

(3) The auditors confirmed that the buffer was recalculated and now includes all tributary waterways.

(4) The auditors confirmed that significance testing has been demonstrated. However, given item #2 above in this finding, this calculation may change.

(5) The auditors confirmed that significance testing has been demonstrated. However, given item #2 above in this finding, this calculation may change.

This finding remains open due to items number 1 and number 2 above.

Project Personnel Response 3: (1) The equation is no longer relevant as the PRA concludes that there is no potential for illegal logging. See answer to finding #81

(2) The project decided to rerun the analysis made in the PRA. In this new analysis, the project show that even though 26 out of 184 (14%) of people interviewed said that they use timber from within the forest concessions (3 communities), only 1 community actually use timber from inside the project area (the other 2 do it within GGF concession but outside project area). Therefore, from the surveys, only 3.8% of interviewed people use timber from the project area. According to the table of the parameter "Illegal Logging PRA Results" in section 9.2 of the methodology, if "≥10% of those interviewed / surveyed believe that illegal logging may be occurring within the project boundary then the limited on-the-ground illegal logging survey must be triggered". As the percentage of those interviewed that actually use timber from inside the project area is only 3.8%, then the PRA concludes that no potential pressure for these activities then illegal logging (ΔCDIST_IL,i,t|PRJ) can be assumed to be zero and no monitoring is needed.

Auditor Response 3: See finding 88 below which is simply a continuation of this finding to provide space for responses.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 84 Dated 21 Aug 2023

Standard Reference: AFOLU Non-Permanence Risk Tool v4.0

Document Reference: VCS-Non-Permanence-Risk-Report-Template-v4.0 - V5Aug23

Finding: Section 4.2 of the NPRR requires that the calculation of Total VCUs be demonstrated. The auditors have noted that the values in the table in section 4.2 do not match the values in the equations above the table leading to confusion. Please confirm the correct calculation of the total VCUs.

Project Personnel Response: We have corrected the calculation of the total VCUs to ensure accuracy and alignment.

Auditor Response: The auditors confirmed this is consistency between the NPRR and the monitoring report. However, due to some of the remaining findings, such values will likely be updated in the process. This finding is currently closed but if alignment issues remain in the subsequent update, the finding could be reopened.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 85 Dated 13 Sep 2023

Standard Reference: VM0010 v1.3; vcs-monitoring-report-template-v4.2-final

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v2 - Set2023; Appendix 2 - GGL1 Calculation Spreadsheet V6 SET23.xlsx

Finding: (1) This finding relates to #83 above for illegal logging quantification. Section 8.2.2.2 of the Methodology states "Fuel emissions from illegal logging operations are determined by using the specific fuel emissions of the baseline scenario (i.e., total fuel emissions are divided by the total carbon stock changes due to baseline logging operations) which are then multiplied by the illegal logging volume. As it is unlikely that illegal logging would involve the deployment of large, fuel intensive machinery (ie, equaling the baseline scenario), this is considered conservative. The calculation of emissions from illegal logging therefore requires use of both parameters available at validation (Section 9.1) and parameters monitored (section 9.2)." In reviewing the quantification of illegal logging emissions, the auditors found that the baseline fuel emission factors and values (Cfuel) that were previously validated are supplied for these calculations (e.g., Ehauling, Etransport, etc). However, these values have not been declared in the Parameters Available at Validation section of the PD or MR. Section 3.2.2 of the MR Template requires the following: "Describe any project description deviations applied during this monitoring period and explain the reasons for the deviation. Identify whether the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario and provide an explanation of the outcome. Describe and report on any project description deviations applied in previous monitoring reports."

- Thus because these parameters were not described in the PD but are monitored represents a PD deviation that must be described accordingly in section 3.2.2 of the MR.

- These CFuel related parameters are required to be included in section 4.1 of the MR as well.

- Any other illegal logging parameters from section 9.1 or 9.2 of the methodology must be included in sections 4.1 and 4.2, respectively.

(2) The auditors have also found that the parameter PMPi is also missing from section 4.2 of the MR. This parameter is related to leakage and must be considered in the monitoring section.

Project Personnel Response: (1) Project deviation #6 was introduced and related paramters were added to section 4.1

(2) The parameter was included

Auditor Response: (1) Confirmed that the deviation was introduced. Also, Confirmed that the parameters were included. However we found several inconsistencies described in finding #87 below.

- FCharvest shows a value of 9.4 L/m³ in the MR, but in the calculation workbook a value of 7 was applied (sheet Fossil fuel emissions, cell B2). Please note that the value of 7 was used at validation (in the validation workbook Fuel Consumption extraction in 250k ha (003).xlsx)

- EFFuel shows a value of 2660.56 gCO₂e/l. However, in the calculation workbook a value of 2640 was applied (sheet fossil fuel emissions cell B14). Please demonstrate the calculation of the EFFuel parameter with active cell formulas in excel and reference to all assumptions and parameters (note that Appendix 2 of the methodology provides guidances on this).

- P

(2) Confirmed the parameter was added to the MR.

This finding remains open due to item # 1 above.

Project Personnel Response 2: (1.1) The value of FCharvest of the MR was changed to a value of 7.0 L/m³, the value validated

(1.2) The value of Efuel in the calculation workbook was change to 2660.56 gCO₂e/l. This value comes from the IPCC guidelines, as required by the methodology (see section 8.1.5.1, step 3 and appendix 2)

Auditor Response 2: Thank you for this information. The auditors confirmed they have been updated accordingly and this finding is now closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 86 Dated 23 Oct 2023

Standard Reference: VCS v4.5, vcs-monitoring-report-template-v4.2-final, AFOLU Non-Permanence Risk Tool v4.0

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v2 - Set2023; Appendix 2 - GGL1 Calculation Spreadsheet V6 SET23.xlsx1; VCS-Non-Permanence-Risk-Report-Template-v4.0 - V7Set23

Finding: Section 2.2.1 of the VCS States that the principle of consistency is to "Enable meaningful comparisons in GHG-related information." The auditors have found the following inconsistencies related to the reported baseline, project, buffer, leakage, and VCU values:

(1) Section 5.4 of the MR is for the quantification and reporting of Net GHG Emissions, which must be reported in the table shown in section 5.4 of the template. The auditors found that the values reported in the table in section 5.4 differ from the values reported in the calculation workbook. For example, Table 4 in Section 5.4 of the MR shows Year 1 VCUs of 298,034 tCO₂e. However, the calculation workbook sheet Net GHG Emission red_Y1Y2, cell L14 shows Year 1 VCUs of 298,259 tCO₂e. This is just one example. The auditors found that all values reported in Table 4 of the MR are inconsistent with the final calculated values in the calculation workbook sheet Net GHG Emission red_Y1Y2.

(2) In the NPRR, Section 4.1 requires reporting the buffer credit calculation along with the VCUs. We found that the values reported in the Table in the NPRR match the values in the calculation workbook. However, the values ABOVE the table which demonstrate the calculation of buffer credits are not consistent with those in the table or the calculation workbook.

Please confirm which are the correct values to be reported in the MR and the NPRR and ensure consistency with all reported values.

Project Personnel Response: (1)-(2) The information was corrected according to the calculation workbook

Auditor Response: Confirmed the final VCU values in each of these documents are consistent. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 87 Dated 23 Oct 2023

Standard Reference: VM0010 v1.3

Document Reference: Appendix 2 - GGL1 Calculation Spreadsheet V6 SET23.xlsx

Finding: This finding relates to number 85 above. Section 8.2.2.2 of the Methodology states "Fuel emissions from illegal logging operations are determined by using the specific fuel emissions of the baseline scenario (i.e., total fuel emissions are divided by the total carbon stock changes due to baseline logging operations) which are then multiplied by the illegal logging volume. As it is unlikely that illegal logging would involve the deployment of large, fuel intensive machinery (ie, equaling the baseline scenario), this is considered conservative. The calculation of emissions from illegal logging therefore requires use of both parameters available at validation (Section 9.1) and parameters monitored (section 9.2)." The auditors request demonstration/clarification regarding the following:

(1) FCharvest shows a value of 9.4 L/m³ in the MR, but in the calculation workbook a value of 7 was applied (sheet Fossil fuel emissions, cell B2). Please note that the value of 7 was used at validation (in the validation workbook Fuel Consumption extraction in 250k ha (003).xlsx)

(2) EFFuel shows a value of 2660.56 gCO₂e/l. However, in the calculation workbook a value of 2640 was applied (sheet fossil fuel emissions cell B14). Please demonstrate the calculation of the EFFuel parameter with active cell formulas in excel and reference to all assumptions and parameters (note that Appendix 2 of the methodology provides guidances on this).

(3) Equation 37 includes the parameter CFuel (equation 13) which is derived from other equations in the methodology (Equations 14-22) and incorporate CO₂ and non-CO₂ gases. While the calculation workbook, sheet Fossil fuel emissions shows some aggregation of these equations, they appear to only show the CO₂ emissions and they do not clearly demonstrate how they fulfil the equations in the methodology. The auditors request a clear demonstration of all fossil fuel emissions associated with illegal logging including reference to the specific equations, and any assumptions, conversions, and parameters included.

Project Personnel Response: (1) - (2): See response to finding #85

(3): See response to findings #81 and #83

Auditor Response: Thank you for your response. We have confirmed that the PRA shows no illegal logging and therefore this finding is no longer relevant.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C

NIR 88 Dated 21 Aug 2023

Standard Reference: VM0010 v1.3

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023;
AGB_Peru_change_2020_2022_5tClossPixels.tif; Appendix 1 - Report Biomass
Peru_GGF_v3.0_4August2023

Finding: This is a response to finding #83 above and it is being included on a separate line simply to provide additional space for responses:

(1) Thank you for this explanation. However, we have been unable to verify this 3.8% value from the information provided. For instance, we have reviewed the PRA_2022.pdf and the workbook DATA_Encuestas Uso Recursos_PRA_2023.xlsx, but it is not clear where the 3.8% came from. Please demonstrate the exact quantification and analysis of the PRA. Second, Section 4.3.4.5 of the Monitoring Section makes no mention of the use of the PRA in the monitoring procedures. Please provide more information regarding if the PRA is part of the monitoring approach for illegal logging and if so, please ensure that details about the PRA, how it is conducted, the frequency of it, how it is analyzed, etc, is detailed in the Monitoring Section (4.3.4.5) of the MR.

(2) Thank you for clarifying that the PRA results show that illegal logging emissions can be considered zero. The auditors see that this description is included in section 4.2 of the MR, but there is not description of these PRA results in section 5.2 of the MR. Please update accordingly. This is also indicated in finding number 81 above.

This finding remains open.

Project Personnel Response: (1a) In the spreadsheet titled "DATA PRA GGL1 1st Verification," we present the analysis that has been conducted. In the "Surveys (Full)" section, you'll find the complete dataset from the surveys. In "Survey (PRA Questions)," only the questions related to timber are included. As indicated in column I, out of the 184 individuals surveyed, 160 reported engaging in wood extraction from various locations.

Moving on to the "Results Resources Mapping" section, we provide a list of communities involved in timber extraction within the concessions. The data is further detailed, specifying whether the extraction occurs inside or outside the GGL1 project area.

In "PRA Results (Data)," we consolidate the findings from both tools – surveys and resource mapping. Finally, in the "PRA Results" section, we present a pivot table displaying the ultimate results. This table highlights that a mere 3.8% of the surveyed individuals involved in timber extraction do so within the project's designated area.

(1b) A more indepth description of the PRA was added to section 4.3.4.5 .

(2) A more indepth description of the PRA was added to section 5.2

Auditor Response: Thank you. The auditors confirmed that the PRA analysis and determination of 3.8% of respondents potentially utilizing wood from the project area has been demonstrated. We also confirmed that a clear description of the PRA process and how it is used in monitoring was added to the MR. Lastly the results of the PRA are more clearly described in section 5.2 of the MR. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NCR 89 (NCR 81 continued) Dated 21 Aug 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final

Document Reference: 0.GGL1 - VCS Monitoring Report 2022 - v4.2 v1 - Aug2023

Finding: This is a response to finding #81 above and it is being included on a separate line simply to provide additional space for responses: Thank you for this information. However, none of these results are described in section 5.2 of the Monitoring Report. Please ensure that this section of the monitoring report provides a clear description of the project scenario emissions (i.e., the description provided in your response) to ensure conformance with the template requirements. This finding remains open and is now listed below as finding 89 to provide space for a response.

Project Personnel Response: Response to finding #81: A more indepth description of the PRA was added to section 5.2

Auditor Response: The auditors confirmed that the results of the PRA are more clearly described in section 5.2 of the MR. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 90 Dated 30 Nov 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v4 - Nov201123

Finding: Section 2.2.1 of the VCS highlights ISO principles Consistency to "Enable meaningful comparisons in GHG-related information."

Section 4.2 of the MR template states "Complete the table below for all data and parameters monitored during the project crediting period (copy the table as necessary for each data unit/parameter). Data and parameters determined or available at validation are included in Section 4.1 (Data and Parameters Available at Validation) above."

Section 4.2 of the MR states for the 'Illegal Logging PRA Results' parameter table in Comments: "The PRA is not relevant anymore for the calculation of project emissions, as these are directly observed in the ΔC from comparing carbon stock maps." However, this statement is inconsistency with other information in the illegal logging PRA results table, which suggest that the PRA was highly relevant in the monitoring of illegal logging. Please provide clarification and update the monitoring report as needed to ensure consistency.

Project Personnel Response: The comment was deleted. The PRA holds significant relevance in assessing the impact of illegal logging within the project area, aiding in the strategic prioritization of work zones for forest custodians.

Auditor Response: The auditors confirmed that the parameter has been updated. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): NA

NCR 91 Dated 30 Nov 2023

Standard Reference: vcs-monitoring-report-template-v4.2-final; VM0010

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v4 - Nov201123

Finding: Section 9.2 of the Methodology indicates that the parameter PMPi is considered a "Parameter to be monitored." Section 4.2 of the MR template states "Complete the table below for all data and parameters monitored during the project crediting period (copy the table as necessary for each data unit/parameter). Data and parameters determined or available at validation are included in Section 4.1 (Data and Parameters Available at Validation) above."

Currently the MR lists the parameter PMPi in section 4.2 but uses the table format from section 4.1. For instance, the tables in section 4.2 must include information on frequency of monitoring, monitoring equipment, value applied, QA/QC procedures, etc. Currently the table for parameter PMPi is not in conformance with the monitoring report requirements. Furthermore, there is no description in section 4.3 of the MR (Monitoring Plan) of how this parameter has been monitored and will continue to be monitored. As a result sections 4.2 and 4.3 are not in conformance.

Project Personnel Response: (1) The table for the paramter "PMPi" has been updated according to the template.

(2) Section 4.3.4.6 was added to comply with the requeriments

Auditor Response: (1) The auditors confirmed that the PMPi parameter table has been updated accordingly.

(2) The auditors confirmed that section 4.3.4.6 has been updated to include information regarding the monitoring of the PMPi parameter.

This finding is closed. However, please note that the resolution of finding 92 may impact this parameter and thus may result in the need to update these components again.

Bearing on Material Misstatement or Conformance (M/C/NA): C

NIR 92 Dated 30 Nov 2023

Standard Reference: VM0010

Document Reference: GGL1 - VCS Monitoring Report 2022 - v4.2 v4 - Nov201123

Finding: For the calculation of the leakage deduction factor, Box 2 of the methodology states "Therefore, each project must calculate within each stratum the ratio of merchantable biomass to total biomass (PMPi). This shall then be compared to the ratio of merchantable biomass to total biomass for each forest type (PMLFT)." The parameter PMPi (merchantable biomass as a proportion of total aboveground tree biomass for stratum i within the project boundaries,) iAt validation, a value of 280 t/ha was applied based on Asner et al (2014). However, this parameter is required to be monitored at least within every 5 years (according to section 9.2 and 9.3 of the Methodology). The auditors request the following:

- (1) Please indicate how this parameter was monitored during this monitoring period.
- (2) Demonstrate how the monitored value was utilized to calculate the leakage deduction factor.
- (3) Utilizing the leakage deduction factor, demonstrate the calculation of ex-post leakage (eq. 40).

Project Personnel Response: (1) As mandated by Peruvian law, the Plan of Operations (POA) for GGF forest concessions was updated during the monitoring period. Censuses were conducted in areas outside the project area that are part of GGF concessions and share the same forest type. The data collected from these censuses were utilized to update the value of merchantable biomass. In terms of total aboveground biomass, the project uses results from biomass maps when accounting for sequestration due to ongoing growth in the project scenario. If not, literature values are used. For this monitoring period, since the project is not accounting for sequestration due to ongoing growth, the value from Asner et al., 2014 will be used.

(2) The value of PMPi during the monitoring period is 0.037 (see the table for the parameter in section 4.2 of the MR) is compared to the value of PMtf (see table for the parameter in section 4.1 of the MR) as requested in box 2 of the methodology. They differ in 12%, which is within the +-15% threshold. Therefore the deduction factor is 0.4 (VM0010, Box 2). The Leakage Factor LFME to be applied to the portion of GGF's production that would have been sold into the national market (20%) is thus $0.2 \times 0.4 = 0.08$. This is described in section 5.3.2 of the MR

(3) In Appendix 1, the results from using the leakage deduction factor are shown in sheet "Net GHG Emission red_Y1Y2". Results are also shown in section 5.4 of the MR.

Auditor Response: The use of the Asner study for the PMP is not in conformance with the requirements because it includes area outside of the project area. This has been conveyed to the client outside the cover of this workbook.

Project Personnel Response 2: [client has addressed this finding outside the cover of this workbook]

Auditor Response 2: The client has updated the leakage assessment by utilizing biomass plot data from within the project area collected during the monitoring period. For the merchantable biomass, the client utilized the 15 m³/ha which is from the timber management plan. The auditors confirmed the biomass plot data and that the number of plots used is sufficient. We confirmed the calculation of PMPi. This finding has been closed.

Bearing on Material Misstatement or Conformance (M/C/NA): M/C