



**Verified Carbon
Standard**

VALIDATION REPORT FOR THE GREEN GOLD LORETO 1 PROJECT



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Project Title	Green Gold Loreto 1
Version	1-0
Report ID	1-0
Report Title	Validation Report for the Green Gold Loreto 1 Project
Client	Green Gold Forestry Peru SA
Date of Issue	16-December-2021 this version of the validation report was issued
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Summary:

This report describes the validation of the Green Gold Loreto 1 project (“the project”), an Improved Forest Management project located in Department of Loreto, Peru, that was conducted by SCS. The purpose of the validation engagement was to conduct an independent assessment of the project to determine whether the project complies with the VCS Program rules. The validation engagement was carried out through a combination of document review, interviews with relevant personnel and remote site-inspections. As part of the validation engagement 72 findings were raised: 32 Non-Conformity Reports, 40 New Information Requests and 0 Observations. These findings are described in Appendix A of this report. The project complies with the validation criteria, and SCS holds no restrictions or uncertainties with respect to the compliance of the project with the validation 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 conducted an independent assessment of the project to determine whether the project complies with the VCS Program rules. In accordance with Section 2.1.1 of the VCS Validation & Verification Manual, V3.2, the objectives of the validation engagement were to assess

- The project's conformance to the VCS rules.
- The project's conformance to the applied methodology, including the procedure for the demonstration of additionality specified in the methodology.
- The likelihood that the methods and procedures set out in the project description will generate verifiable GHG data and information when implemented.

The other objective of the validation 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 14064-3:2006, the scope included

- The project and its activities.
- The baseline scenario(s) applicable to the project.
- The carbon pools and/or greenhouse gases included in the project boundary.
- The crediting period.

1.2.2 Criteria

In accordance with Section 4.1.8(2) of the VCS Standard (see below for full reference), the criteria for validation was the VCS Version 4, including the following documents:

- VCS Program Guide, V4.0
- VCS Standard, V4.0
- VCS Non-Permanence Risk Tool, V4.0
- VCS-approved Methodology for Improved Forest Management: Conversation from Logged to Protected Forest, VM0010, V1.3

1.3 Level of Assurance

In accordance with Section 4.1.8(1) of the VCS Standard, the level of assurance was reasonable.

1.4 Summary Description of the Project

The project is located in the Loreto district of Peru and is aimed at reducing emissions from logging by ceasing logging operations and associated logging infrastructure establishment and maintenance within a majority of the project area, and instead managing to support ecosystem services. The project also entails working with surrounding communities to develop conservation projects and support sustainable economic opportunities with the communities.

2 VALIDATION PROCESS

2.1 Method and Criteria

The validation 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 a sampling plan following a proprietary sampling plan template developed by SCS. The audit team identified areas of “residual risk”—those areas where there existed risk of a material discrepancy (either in terms of non-conformance to the validation criteria or in terms of errors, omissions and misrepresentations that, in aggregate, exceeded the materiality threshold established for the project as a percentage of the total reported GHG emission reductions and/or removals) that was not prevented or detected by the controls of the project. Sampling and data testing activities were planned to address areas of residual risk. The audit team then created a validation plan that took the sampling plan into account. This approach is justified as it has been designed in accordance with Section 4.4.3 of ISO 14064-3:2006 and the guidance provided in Annex A.2.4.6 of the same document.

2.2 Document Review

The project description (version 11 dated 16 December 2021; “PD”) and non-permanence risk report (document: VCS-Non-Permanence-Risk-Report-Template-v4.0 GGL1, v2; “NPRR”) were carefully reviewed for conformance to the validation 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.
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Document	File Name	Ref.
Forest concession contracts	Tacsha01.pdf–Tacsha09.pdf, San Regis.pdf, TRANSFERENCIA ACCIONES FEM-GGF I.pdf, TRANSFERENCIA ACCIONES FEM-GGF II.pdf, TRANSFERENCIA DE ACCIONES SAN REGIS – GGF.pdf; RED_155_2011_UA79_16IQUC-; J-217-04; RED_157_2011_UA80_16IQUC-J-243-04; CONTRATO COMPRA Y VENTA DE ACCIONES FEM A GGF 2016; CONTRATO CONSORCIO	/1/
Maps of the project area showing the corresponding concessions	A0_Mapa_Concesiones_Tacsha_Nov2020_2pdf; A0_Mapa_SANRegis_Nov2020_2; A0_Mapa_SanRegis_ZonaExcluida_Dic2020; A0_Mapa_Conso01_ZonaExcluida_Dic2020 (1); A0_Mapa_Consolidado2_ZonaExcluida_Dic2020	/2/
Maps showing the management units in project area concessions	A0_Mapa_UA_Tacsha01_General; A0_Mapa_UA_Tacsha01_Napo(170); A0_Mapa_UA_Tacsha01_RioTigre(243-217); A0_Mapa_UA_Tacsha02_General; ; A0_Mapa_UA_Tacsha02_RioTigre; A0_Mapa_UA_Tacsha02_RioNapo; A2_Mapa_UA_Tacsha01_Actual_Napo	/3/
Approved forest management plans for the project area	R.J.264-2019-GRL-GGR-GRDFFS-ODPM.pdf, R.J-004-2020-GRL-GGR-GRDFFS-ODPM.pdf, R.J-005-2020-GRL-GGR-GRDFFS-ODPM.pdf, R.J-262-2019-GRL-GGR-GRDFFS-ODPM.pdf, R.J-262-2019-GRL-GGR-GRDFFS-ODPM RJ-349-2011-GRL-GGR-PRMRFFS-DER-SDPM.pdf, PGMF_GGF_2018_009; 1.1ResolucionAprovacion_Reformulado_PO10-Tacsha01, 1.Resolucion_137-2018_PGMF_REFORMULADO_000080; ResolucionAprovacion_PGMF	/4/
Project area spatial files	CobVegetal_Conso1_Marz2021.shp, CobVegetal_Conso2_Marz2021.shp, CobVegetal_Sanregis_Marz2021.shp	/5/
Forest stratification spatial file	CobVeg_180615_GGFGrup_2020.pdf	/6/
Project proponent's business plans	GGF Peru Business Plan 2018 v3.0.pdf, GGF Peru IM 1.11 DRAFT.pdf	/7/

Document	File Name	Ref.
Financial model for additionality	Green Gold Carbon Financial Model v4 no timber no VCU volume.xlsx Green Gold Carbon Financial Model v4 no timber no VCU volume double fruit income.xlsx Green Gold Carbon Financial Model v4 no timber no VCU volume double fruit income \$100,000 ecotourism.xlsx	/8/
Financial model for Non-permanence Risk Report	Green Gold Carbon Financial Model 2020 v4 (002).xlsx; GGF margin analysis including kiln sticks.xlsx; GGF Kiln Sticks analysis.xlsx	/9/
Evidence of logging costs and revenue	SCS Ana Caspi Decking Invoices.pdf, SCS proof of drying costs Jan 2021.pdf, SCS proof of ownership Caterpillars Jan 2021.pdf, SCS proof of sawing costs Jan 2021.pdf, LOGORSA presentation.ppt GGF POA 9 2016-17.xlsx, Contract GGF CIF Feb 2018.docx	/10/
Evidence supporting discount rate assumptions	KPMGs-Timberland-Investor-Sentiment-Survey-2011-copy.pdf; TIR_A-Primer-2012-06-11-02.odf	/11/
Carbon pricing assumptions documentation	Berenberg ESG Carbon Offset Report May 2020.pdf Ecosystem Marketplace 2020 review 2.pdf GS SUSTAIN_ Carbon offsets_ Tools for the low carbon transition.pdf, OPIS Global Carbon Offsets Dec 2020.pdf; Viridios overview.pdf; NIR 22 and NCR 57.docx	/12/
Letter from GGF project board and main funders	GGF SCS re finance commitments.pdf	/13/
Evidence of disturbance risks	Amazonian blowdowns Espirito-Santo_2010_GRL; MAAP huracanados; Forest fire map Departamento_Loreto_Peru_2002-2013	/14/
Forest inventory data	GGF POA 10 invent volumes_Densidad.xlsx; Censo_Poa10_Tacsha01	/15/
Emissions calculations workbook	Green Gold Loreto 1 ER Calculation Spreadsheet, v5.xlsx	/16/
Government resolution on the minimum cutting diameter	RJ N° 458-2002-INRENA(Dímetros mínimo de corta)	/17/

Document	File Name	Ref.
Government resolutions regarding harvest requirements and COVID19	Resolución Gerencial Regiona N° 108-2020-GRL-GGR-GRDFFS.pdf Resolución Gerencial Regional N° 0091-2020-GRL-GGR-GRDFFG.pdf	/18/
Reference on tree carbon stock recovery in Amazonia forests	Rutishauser et al 2015, tree carbon stock recovery after logging	/19/
Reference on carbon sinks in the Amazon	sumideros carbono peru iiap 2018	/20/
Reference on carbon emissions caused by logging	Pearson-et-al-2014-Logging	/21/
Workbook showing the fuel consumption for various harvest activities	Fuel Consumption extraction in 250k ha (003).xlsx	/22/
Community social diagnosis	Diagnostico Social_GGFGroup2020.pdf	/23/
Manual on complaints and feedback	Manual_Quejas_Sugerencias_GGFGroup2020	/24/
Meeting minutes from community stakeholder meeting	Acta_reunión inicial-GGF	/25/
Community relations plan	Plan de Relaciones Comunitarias GGF2020	/26/
Protection and monitoring plan	Plan de Protección y Vigilancia GGF2020	/27/
Conflict resolution protocol	Protocolo para Resolución de Conflictos GGF2020.docx	/28/

Document	File Name	Ref.
Spatial data of the roads, paths, camps, ports, etc, in the project area	CaminoForestales__Consoli01_Marz2021.shp; Campamentos__Consoli01_Marz2021.shp; PatiosAcopios__Consoli01_Marz2021.shp; Puertos__Consoli01_Marz2021.shp; CaminoForestales__Consoli02_Marz2021.shp; Campamentos__Consoli02_Marz2021.shp; PatiosAcopios__Consoli02_Marz2021.shp; Puertos__Consoli02_Marz2021.shp; CaminoForestales_SanReguis_Marz2021.shp; Campamentos_SanRegis_Marz2021.shp; PatiosAcopios_SanRegis_Marz2021.shp	/29/
Gantt Chart for project implementation	GGF Peru Gantt chart.xlsx	/30/
Adaptive Management Plan	GGF Adaptive plan(NIR9)	/31/
Funding from USAID	GGF Peru USAID Technical Approach FINAL(NIR19)	/32/
FSC Certification	FSC Public Search_GGF	/33/
Map of forest types in the project area	A0_Mapa_SanRegis_Vegetacion_Agosto2020_Enero2021_Ok; A0_Mapa_Consolidado2_Vegetacion-Agosto2020_Enero2021_Ok; A0_Mapa_Conso01_Vegetacion_Agosto2020_Enero2021_Ok	/34/
Reference pertaining to recovery rate	malhi_gcb_2004_productivity_104_forests.pdf	/35/
Updated management plans pending approval	PGMF_Consolidado_Conso1_FEMSAC-GGF-GGFGroup.pdf, PGMF_Consolidado02_GGFGroup_Nov2020.pdf, PGMF_SanRegis_Dic2020/pdf	/36/
Report of the Directors and Unaudited Consolidated Financial Statements for the Year Ended 31 December 2011 For Green Gold Forestry Limited	GGF accounts 2011 (Group) filed. pdf	/37/

2.3 Interviews

2.3.1 Interviews of 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
Paula Diaz	Green Gold Forestry	Community Liaison Officer	11 December 2020
Stuart Clenaghan	Green Gold Forestry	Owner	Throughout audit
Gareth Hughes	Green Gold Forestry	General Manager	Throughout audit
Jan Fehse	Value for Nature Ltd	Managing Director	Throughout audit
Jorge Gallardo	Green Gold Forestry	Forest Engineer	14 December 2020
Ed Mitchard	Space Intelligence	Chief Technical Officer and Co-Founder	29 March 2021

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
Dani Rivera	Centro para el Desarrollo del Indígena Amazónico (CEDIA)	Project manager	12 January 2021

Individual	Affiliation	Role	Date(s) Interviewed
Lelis Rivera	Centro para el Desarrollo del Indígena Amazónico (CEDIA)	Executive Director	12 January 2021
Charles Llerena	La Gerencia Regional de Desarrollo Forestal y de Fauna Silvestre del Gobierno Regional de Loreto (GERFOR Loreto)	Forest Specialist	17 February 2021
Hilda Maria Morales Peña	La Gerencia Regional de Desarrollo Forestal y de Fauna Silvestre del Gobierno Regional de Loreto (GERFOR Loreto)	Forest Engineer	17 February 2021
Henry Vilcas Laguna	La Gerencia Regional de Desarrollo Forestal y de Fauna Silvestre del Gobierno Regional de Loreto (GERFOR Loreto)	Forest Specialist	20 May 2021

2.4 Site Inspections

The validation has taken place during a global pandemic (COVID19); thus, the audit team was not able to conduct an in-person site visit. Instead we relied on remote auditing techniques with the use of Information and Communication Technology (i.e., remote sensing imagery, video-conferencing, photographic evidence), based on guidance in the ANSI National Accreditation Board's Heads Up #1, dated 23 March 2020, to fulfil the following objectives:

- Select samples of data and information from remote 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 project conforms to the validation criteria

- Confirm the validity of information presented in the non-permanence risk report

In fulfilment of the above objectives, the audit team performed a remote inspection of the project throughout the audit. The main activities undertaken by the audit team were as follows:

- Interviewed project personnel, including the project's community liaison officer and head of forestry (see Section 2.3 of this report) using video conferencing, to gather information regarding the project implementation and monitoring procedures.
- Interviewed members of CEDIA, a nonprofit organization who represents and protects the rights of communities located in the immediate vicinity of the project area, to confirm the claims of the project proponents with respect to the extent of community engagement
- Interviewed three representatives from the la Gerencia Regional de Desarrollo Forestal y de Fauna Silvestre del Gobierno Regional de Loreto (GERFOR Loreto), to confirm the concession contracts and ownership, the legality of project activities, and potential risks to the project.
- Interviewed scientists from the company Space Intelligence, a project partner, to verify the monitoring of carbon stock changes using satellite imagery and Airborne Lidar technology which represents a methodology deviation (see section 3.3.7).
- Carried out remote inspections of the project's measurement and/or monitoring methodologies through the following activities:
 - Independent check the forest concession contracts and legal status, FSC certification status, provincial boundaries, and disturbance risk using publicly available information.
 - Independent check of reported harvest costs and revenues by tracing information in the financial models /8/ /9/ to invoices and reports /10//11/ 12/.

The primary forms of Information and Communication Technology used in conduct of the remote assessments were videoconferencing software packages such as Skype and Zoom. The framework set out in the Heads Up #1 document was used to confirm that the required level of assurance could be reached (see Section 1.3, above) and that any potential impacts to confidentiality and the integrity of the validation engagement could be mitigated. In the end, Information and Communication Technology was found to be highly effective as a tool to replace on-the-ground inspections and in-person meetings. This is due to the generally good quality of internet connection available in Peru which contributed to a highly efficient audit process. Additional information is contained in SCS' proprietary sampling plan document (see Section 2.1, above, for more details).

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 validation statement.

- **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 validation statement.
- **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, 32 NCRs, 40 NIRs and 0 OBS were issued. All findings issued by the audit team during the audit process have been closed. In accordance with Section 4.1.13 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 issued the following forward action requests (FAR) detailed in the table below

Forward Action Request	Finding Number	Description of FAR
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Updated Forest Management Plans	NIR 12 NIR 29	• The main legal framework governing timber forest concession agreements in Peru is the Ley Forestal y de Fauna Silvestre N° 29763 (referred to here as the “Forestry Law”), requires that holders of forest concessions include, in their General Forest Management Plans (PGMF) and the Operating Plans (PO), the carrying out of any forest and wildlife activity compatible with the corresponding zoning or management category. The PGMF and PO 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 concessions in the project area, in addition to other project activities including non-timber products and ecosystem services /36/. • 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.
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Stakeholder engagement	NIR 10	- The development and validation of this project took place during the global COVID19 pandemic. The project proponent had planned to conduct in-person community stakeholder consultations in 2020 and early 2021 but was unable to do so safely due to the pandemic and unable to conduct remote consultations due to limited internet access. As a result, the project proponent conducted stakeholder consultation in November 2020 in Iquitos with two organizations that represent the communities involved in the project, CEDIA (Center of Development for the Amazon's Indigenous People) and FECONAMNCUA (Federation of Native Communities of the Middle Napo Curaray and Arabela) /25/. - The audit team interviewed representatives from CEDIA (see section 2.3.2) who attended the stakeholder consultation. We confirmed the topics discussed and that CEDIA and FECONAMNCUA had consulted with and communicated the meeting matters with the local communities. We also confirmed during an interview with the project's Community Liaison Officer that informal consultations were conducted with the communities regarding the project (see section 2.3.1). The audit team reached a reasonable level of assurance regarding the stakeholder consultation requirements of the standard. - At verification the VVB should conduct further interviews with a representative sample of community stakeholders to reach a higher level of assurance on section 3.16.17 of the Standard.
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3 VALIDATION FINDINGS

3.1 Project Details

The audit team can confirm, as further justified below, that the description in the project description is accurate, complete, and provides an understanding of the nature of the project.

3.1.1 Project Type, Technologies/Measures to Be Implemented by the Project and Eligibility of the Project

The audit team has the following conclusions regarding the project type and technologies and measures that constitute the project activities:

- The project falls under sectoral scope 14 (AFOLU)

- The project falls under the category of Improved Forest Management (IFM), as described
- Discussion regarding the project's eligibility under the VM0010 methodology (and, thus, as an IFM project under the VCS Program, as the VM0010 methodology is a methodology for such projects) can be found in Section 3.2.1 below.
- The technologies and measures implemented, as described in Section 3 of the PD, are likewise eligible under the VCS Program.

The audit team finds that the project meets the eligibility requirements of the VCS Program because it meets the additionality test (as discussed in Section 3.4.5 below) and complies with all applicability conditions of the selected methodology (as discussed in Section 3.4.2 below).

3.1.2 Project design, Including Eligibility Criteria for Grouped Projects

Not applicable, as the project is not a grouped project.

3.1.3 Project Proponent and Other Entities Involved in the Project

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

- The project proponent is Green Gold Forestry Peru SA (GGF) which has been identified in section 1.5 of the project description.
- The audit team agrees with the identification of GGF as the project proponent as GGF is the entity that has been granted control and rights of the forest concessions within the project area. GGF is tasked with management and oversight of these forest concessions in which the project is located, and has overall control and responsibility for the project.
- The audit team confirmed during interviews with the project team the active engagement of GGF in the project.

3.1.4 Ownership

The audit team concludes that the PD has been accompanied by one or more of the following types of evidence establishing project ownership accorded to the project proponent(s); the audit team's specific conclusions regarding evidence of project ownership are provided specific to each type of evidence.

Conclusions regarding evidence of...	
Project ownership arising or granted under statute, regulation or decree by a competent authority	• N/A
Project ownership arising under law	• N/A

Project ownership arising by virtue of a statutory, property or contractual right in the plant, equipment or process that generates GHG emission reductions and/or removals (where the project proponent has not been divested of such project ownership)	• N/A
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Project ownership arising by virtue of a statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions and/or removals (where the project proponent has not been divested of such project ownership)	• The audit team confirmed that the project proponent, Green Gold Forestry Peru SAC, holds notarized official contracts with the Peruvian state for each of the forest concessions with the project area /1//2/, and has the right to control and operate project activities in the project area and project zone. • The audit team compared the concession contract documentation provided /1/ against government records of concession areas and monitoring of activities in the concessions, to confirm their authenticity. We also verified the project area boundaries against geospatial government records of the contracts to confirm that the boundaries have been accurately represented. • We confirmed that the contracts, which were signed or transferred to the project proponent between 2010 and 2019 are active for a period of 40 years. The 40-year period is renewable every five years thus there is a potential for extension in perpetuity. The concession contracts represent contractual right in the land, vegetation, conservation or management processes that generate GHG emissions reductions and/or removals. The project proponent has clear legal rights to access to the forest resources on the concessions. • We also reviewed that law that grants forest concessions (Law 29763, the Forests and Wildlife Law). The law codifies the process by which the project proponent was awarded the contract, noting that forest concessions must abide by corresponding management plans approved by the regional forestry wildlife authority. Therefore, the audit team also verified that forest management plans have been approved by the government via review of the plan registrations /3/ and interviews with the regional forestry authority (see section 2.3.2).
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An enforceable and irrevocable agreement with the holder of the statutory, property or contractual right in the plant, equipment or process that generates GHG emission reductions and/or removals which vests project ownership in the project proponent	N/A
An enforceable and irrevocable agreement with the holder of the statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions or removals which vests project ownership in the project proponent	N/A
Project ownership arising from the implementation or enforcement of laws, statutes or regulatory frameworks that require activities be undertaken or incentivize activities that generate GHG emission reductions or removals	N/A

3.1.5 Project Start Date

The project start date is 1 August 2020. The audit team has the following conclusions regarding the conformance of the project start date to the validation criteria:

- This is the date by which logging operations in the project would have resumed and begun for the 2020 harvest season under the baseline scenario, thus it effectively represents the date on which the project began generating GHG emission reductions or removals.
- The audit team confirmed this date during interviews with the head of forest management for GGF and with the Loreto regional management authority. During this interview we found that the date coincides with the beginning of the dry season and therefore may vary from year to year due to weather, but on average it is early August.
- The project implementation has occurred during the COVID19 pandemic which resulted in nationwide quarantines in Peru, which disrupted and delayed numerous industries including forestry. The audit team confirmed that despite the pandemic, harvest operations could have commenced on 1 August 2020 because the government issued a delay /18/ of the on-site verification of forest management plans, which would have allowed harvest operations to commence without the on-site inventory, thus making this 1 August 2020 start date feasible despite the pandemic.
- The audit team agrees that the project start date complies fully with the VCS rules.

3.1.6 Project Crediting Period

- The audit team confirmed that section 1.9 of the project description includes the required information for the crediting period. The crediting period is 20 years from 1 August 2020 to 31 July 2040.
- The audit team agrees that the project crediting period complies fully with the VCS rules.

3.1.7 Project Scale and Estimated GHG Emission Reductions or Removals

The estimated average annual GHG emission reductions or removals, during the period 1 August 2020 and 31 July 2040, have been calculated 486,931 tonnes of CO₂e per year, as reported in the table in section 1.10 of the project description document. Therefore, the audit team agrees that the project is a correctly classed as a large project, per Section 3.9.1 of the VCS Standard.

3.1.8 Project location

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

- The project location is described in section 1.12 of the project description, which includes maps of the project areas.
- The project is located within 10 forest concessions in the Department of Loreto in Peru.
- Through review of project area maps /2/ /3/, forest concession contract documentation /1/, and spatial files /5/ of the project boundaries using GIS and Google Earth software, the audit team can confirm that the depiction given in section 1.1.12 of the PD and shown in Figures 1-4 are accurate.

3.1.9 Conditions Prior to Project Initiation

The audit team has the following conclusions regarding the conditions existing prior to project initiation:

- The conditions prior to project initiation are documented in section 1.13 of the project description.
- The information presented in the PD regarding the logging operations within the project area and the concessions areas outside the project areas is generally consistent with the knowledge gained by the audit team during interviews with the project team and the other project stakeholders (see section 2.3). We confirmed that the project area concessions have not been historically harvested by GGF, but that GGF's other timber concessions holdings in the area (outside the project area) have been harvested since 2011.
- The historical forest management plans and inventories which have been approved by the Peruvian government indicate the plans for harvesting and infrastructure establishment to occur throughout the project area's 20 land parcels. The latest approved inventory and management plan showed a target volume per ha of 15 m³ /4/ /15/.

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

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

- The project activities, as described in section 1.11 of the project description do not violate any applicable laws.
- Through a review of section 1.14 of the PD, a review forest certification documentation (FSC)/33/, review of the Peruvian Forestry and Wildlife Resources Oversight Agency (OSINFOR) records, and interviews with regional government officials (see section 2.3.2), the audit team can confirm that the project is in compliance with applicable laws, statutes, and other regulatory frameworks.
- The audit team confirmed by interviewing several forest specialists from the regional government of Loreto (GERFOR-Loreto) (see section 2.3.2 above) that the project activities are in compliance with the forestry laws that govern forest concession contracts in Peru. The project activities entail the cessation of all timber harvest activities in the project area and the implementation of management of ecosystem services (carbon), harvesting of non-timber forest products (fruit trees), and ecotourism. Sr. Lagunas of GERFOR-Loreto confirmed that as long as the accompanying forest management plans (PGMFs) correspond to the activities implemented, that these activities are all in conformance with the regulations. See section 2.5.1 regarding the update of forest management plans.
- While Peru has a national REDD+ policy that initially indicated that all projects must be part of a jurisdictional REDD+ program in 2021, This project is not a REDD project, but rather an Improved Forest Management Project, thus does not operate under a baseline reference-level of deforestation. We confirmed through discussions with the project proponent and the in-country technical expert on the audit team, as well as independent research by the audit team that there is no IFM national baseline. Furthermore, during interviews with government officials regarding the regulatory compliance of the project, it was confirmed that the project was within full regulatory compliance of the regional and national policies in the country. Thus, the audit team reached a reasonable level of assurance that the project meets the regulatory requirements of the national REDD+ policy.

3.1.11 Participation Under Other GHG programs

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

- Through discussions with project personnel and review of section 1.15.1 of the PD, and investigation into Peruvian forest carbon projects, the audit team confirmed that project is not currently registered or seeking registration under another GHG program.

The audit team concludes that the project has not been rejected by any other GHG program, as confirmed through the following steps:

- Through discussions with project personnel, and review of section 1.15.2 professional knowledge on the part of the audit team of the alternative GHG programs to VCS, the audit team has confirmed that the project has not been rejected by any of these.

3.1.12 Other Forms of Credit

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

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

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

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

3.1.13 Leakage Management

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

- No such leakage management strategy was identified by the audit team, either in review of PD or in interviews with project personnel.
- The methodology indicates that there may be no leakage due to activity shifting.
- The audit team agrees with the statement in section 1.17 of the PD that "The project cannot manage market leakage, which instead is accounted for."

3.1.14 Overall Conclusion

In conclusion, the description in the PD is accurate, complete, and provides an understanding of the nature of the project.

3.2 Safeguards

3.2.1 No Net Harm

An assessment of potential negative environmental and socio-economic impacts has been performed in accordance with Section 3.16.1 of the VCS Standard and no such impacts have identified. The audit team performed the following actions to confirm the absence of potential impacts:

- The audit team interviewed members of CEDIA, a community advocacy organization, who confirmed that there have been no negative environmental and socio-economics impacts of the project and that they do not foresee negative impacts.
- The audit team reviewed the GGF social diagnosis assessment /23/ and confirmed that an assessment of the potential environmental and socio-economic impacts has been conducted and is thorough, conducted with numerous local stakeholders and cultural environmental authorities and is therefore sufficient to conclude no potential negative impacts.

3.2.2 Local Stakeholder Consultation

In accordance with Section 3.16.2 of the VCS Standard, a local stakeholder consultation was performed prior to validation. The stakeholder input can be summarized, at a high level, as follows:

- The audit team confirmed that the project proponents conducted stakeholder engagement activities by meeting with representatives from CEDIA and FECONOMAMNUCA, two

organizations that represent the cultural and territorial rights of native communities in the region, and USAID representatives were also in attendance.

- The audit team interviewed representatives from CEDIA to confirm the subject matter and topics of the stakeholder engagement meeting. The audit team confirmed that at this meeting, stakeholders were provided with information about the project design, mechanisms for continued communication with communities and other stakeholders, and the stakeholders were given the opportunity to provide input and feedback regarding the project design.
- The audit team also confirmed during interviews with CEDIA that both CEDIA and FECONOMANUCA have served as intermediaries with the community stakeholders, serving to provide information to the communities regarding the project as well as opportunities to provide feedback.
- The audit team also interviewed the projects community liaison who is tasked with coordinating and working with communities involved in the project as well as maintaining strong community relationships. The liaison has already established links with the communities through CEDIA.
- See section 2.5.1 regarding a Forward Action Request issued with regard to stakeholder engagement.

The audit team concludes, overall, that the local stakeholder consultations were conducted in conformance with the VCS standard. A detailed assessment of the project proponent's response to all and any input is provided in Appendix B.

The audit team concludes, overall, that the project proponent has taken all appropriate measures to communicate and consult with local stakeholders in an ongoing process for the life of the project, including communication regarding the following:

- 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 the validation/verification body's site visit

The audit team's conclusion that all appropriate measures have been undertaken to communicate the above is justified as follows:

- The project proponent held a virtual meeting with local stakeholders on 12 November 2020 to discuss and present the project design and implementation as well as the role of communities and local stakeholders in this process.
- The audit team confirmed via interviews with representatives at the meeting (see section 2.3.2) that all relevant topics were covered including the project design and implementation, the potential risk, costs and benefits to local stakeholders, the legality of the project, and the process of validation and verification.
- The audit team also reviewed the project implementation timeline /30/ which indicates that continued community consultations will take place quarterly for the life of the project.

3.2.3 Environmental Impact

Not applicable; no environmental impact assessments have been conducted with respect to the project.

3.2.4 Public Comments

A 30-day public comment period was conducted in accordance with Sections 3.16.5-3.16.8 of the VCS Standard (Appendix C).

The audit team confirmed by reviewing the Verra Registry website that no public comments were received during the consultation.

3.2.5 AFOLU-Specific Safeguards

The steps taken to assess against the requirements of Sections 3.16.11-3.16.18 of the VCS Standard are as follows.

Element	Steps taken by the audit team to assess the element
The local stakeholder identification process and the description of results	- The audit team reviewed the social diagnosis report /23/ to confirm that sound processes have been implemented to identify local stakeholders in the zone of influence of the project and that the results of the social diagnosis have been clearly presented. - We further confirmed the social diagnosis procedures and findings via interviews with the community liaison officer and other relevant stakeholders (e.g., CEDIA) involved in the development of the diagnosis (section 2.3 above) - The audit team also confirmed by reviewing the project description that the required information regarding the local stakeholders has been included in section 2.2 of the project description

Risks to local stakeholders due to project implementation and how the project will mitigate such risks	• The audit team confirmed via interviews with the NGO CEDIA who serves as a representative of communities in the project and an intermediary between the project proponent and community federation that the potential impacts including risks to local stakeholders have been introduced at the initial stakeholder meeting /23/ and will continue to be discussed at quarterly community meetings. • The audit team confirmed that the project includes the establishment of a fund to support the communities for emergency needs such as transportation for medical services if needed. • Audit team also confirmed that the adaptive management plan /31/ has identified a risk of social license to conduct the project and corresponding mitigation plans.
Risks to local stakeholder resources due to project implementation and how the project will mitigate such risks, including plans to ensure the project will not impact local stakeholders' property rights without the free, prior and informed consent	• During interviews with the project proponent, the audit team confirmed that the risks to local stakeholder resources are negligible as the project will not impact resources outside of the project area in any way. The stakeholders do not depend on the project area for resources but will be given the opportunity to utilize the project area land for sustainable productive projects if they choose. • The audit team confirmed during interviews with local stakeholders that they have been made aware the project will not impact stakeholder resources or property rights (see section 2.3 above)

Processes to ensure ongoing communication and consultation, including a grievance redress procedure to resolve any conflicts that may arise between the project proponent and local stakeholders	- The audit team confirmed that a grievance and redress procedure has been established a manual for receiving feedback and complaints /24/ as well a protocol for conflict resolution /28/ that are specific to the VCS project activities and implementation. - The audit team also confirmed during interviews with CEDIA representatives that they along with the community stakeholders have been made aware of these procedures. They also have explained that a process is in place for individuals to provide feedback and complaints through their community federation who directly communities with CEDIA who relays information to the project proponent. This communication structure has been in place for many years.
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The audit team concludes, overall, that the project has been designed and, as appropriate, is implementing, plans and processes to ensure the project will not create any negative impacts on local stakeholders or mitigates such impacts where necessary. This conclusion is justified as follows:

- The project has implemented the following: adaptive management plan /31/, a manual for feedback and complaints, and a protocol for conflict resolution which are evidence that the project has methods to handle and mitigate impacts where necessary.
- The audit team confirmed via interviews that the project has established strong communication networks with local community stakeholders and representative NGOs to work together with communities and ensure negative impacts are not prevented.
- Through review of project documentation, the audit team concludes that the project will not create negative impacts on local stakeholders as it will not impact their livelihoods, their resources, their access to resources, etc, but will rather provide sustainable productive livelihoods if stakeholders decide to participate.

3.3 Application of Methodology

3.3.1 Title and Reference

The title and reference of the methodology applied by the project (referred to hereafter as “the methodology”) and any tools applied by the project are identified in the table below. The audit team affirms that the methodology and any applied tools, and the specific versions of them applied by the project, were valid at the time of issuance of this validation report.

Type*	VCS ID**	Title	Version	Notes regarding validity
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M	VM0010	Methodology for Improved Forest Management: Conversion from Logged to Protected Forest	1.3	Current version
T	N/A	AFOLU Non-Permanence Risk Tool	4.0	Current version
T	VT0001	Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities	4.0	Current version
T	T-SIG	CDM Tool for testing significance of GHG emissions in A/R CDM project activities	1.0	Current Version

- *M=methodology; T=tool
- **This is the identifier as assigned under the VCS Program or other GHG program

3.3.2 Applicability

The steps taken to assess compliance of the project with each of the relevant applicability conditions of the methodology are described below.

Applicability condition	Steps taken by the audit team to assess compliance	Conclusion regarding applicability condition
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Legal Right to Harvest	• The audit team reviewed the PD and project documentation including concession contracts /1/ and forest management plans /3/ which demonstrate that the project proponent holds active concession contracts and that the contracts along with the management plans grant the right to harvest. • We compared the areas and locations of the concessions with the project area to confirm that the right to harvest exists for the entire project area. • We also reviewed that law that grants forest concessions (Law 29763, the Forests and Wildlife Law). The law codifies the process by which the project proponent was awarded the contract, noting that forest concessions must abide by corresponding management plans approved by the regional forestry wildlife authority, which we confirmed through review of the signatures and approval dates of the management plans /3/ • Interviews were conducted with project personnel and regional forest authority to confirm the dates of management plans, approval of the management plans, the legal activities within the concession areas, and the overall validity of the documentation provided.	• The audit team confirmed that the project proponent demonstrated through approved concession contracts and management plans issued by the government and that contain information on the legal volumes for cutting, that their legal right to harvest the project area existed prior to the start of the project. • The audit team verified that the statements made in the PD are supported.
Intent to Harvest	• The audit team reviewed the government-approved timber management plans for harvesting the project area /3/ and evidence indicating the pursuit of carbon financing /4/. • We also conducted interviews with regional forest authority to confirm that the project proponent has been harvesting within the project area since 2011 as indicated in section 3.2 of the PD.	• The management plans which indicate the intent and plan to harvest within the project area are clear evidence that the intent to harvest within the project area existed prior to the intent to pursue carbon financing.

The steps taken to assess compliance of the project with each of the relevant applicability conditions of the Additionality tool (VT0001 v3) are described below.

Applicability condition	Steps taken by the audit team to assess compliance	Conclusion regarding applicability condition
AFOLU activities the same or similar to the proposed project activity on the land within the proposed project boundary performed with or without being registered as the VCS AFOLU project shall not lead to violation of any applicable law even if the law is not enforced	- The audit team evaluated whether the AFOLU activities proposed as alternatives within the project area were in regulatory compliance with the applicable laws. This is described in section 3.1.10 above, and summarized here. - The audit team reviewed the forest certification documentation (FSC)/33/, the Peruvian Forestry and Wildlife Resources Oversight Agency (OSINFOR) records, and interviewed regional government officials (see section 2.3.2), and was able to confirm that the AFOLU activities similar/same as the proposed project activities (cessation of harvesting, implementation of management of ecosystem services (carbon), harvesting of non-timber forest products (fruit trees), and ecotourism) are in compliance with applicable laws, statutes, and other regulatory frameworks that govern forest concessions in Peru. - The audit team confirmed that section 3.2 of the PD addresses this applicability condition.	- The audit team confirmed that the project proponent demonstrated that the AFOLU project activities on the land within the project boundary do not violate applicable laws. - Applicability condition has been met.

The use of this tool to determine additionality requires the baseline methodology to provide for a stepwise approach justifying the determination of the most plausible baseline scenario. Project proponent(s) proposing new baseline methodologies shall ensure consistency between the determination of a baseline scenario and the determination of additionality of a project activity.	- The audit team reviewed the VM0010 methodology and confirmed that section 6.1 requires that the project proponent utilize the VT0001 tool to assess the baseline alternatives. Later section 7 of the methodology requires that the project proponent demonstrate additionality using the VT0001 tool. - The audit team confirmed that section 3.2 of the PD addresses this applicability condition. - We confirmed that the baseline scenario and the additionality were determined using this tool.	The audit team confirmed that this applicability condition has been met.
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The steps taken to assess compliance of the project with each of the relevant applicability conditions of the Significance tool (T-SIG v1.0) are described below.

Applicability condition	Steps taken by the audit team to assess compliance	Conclusion regarding applicability condition
No applicability conditions specified by tool.	Confirmed that section 3.2 of the PD addresses the lack of applicability conditions of the T-SIG tool.	No applicability conditions specified by tool.

In conclusion, the project meets all applicability conditions of the methodology and any tools or modules selected by the project proponent.

3.3.3 Project Boundary

The audit team concludes, overall, that the project boundary is appropriately specified, and the selected sources, sinks and reservoirs appropriately justified for the project, as described in detail below.

3.3.3.1 Spatial Boundaries

The audit team evaluated the spatial boundaries of the project area based on the procedures outlined in section 5.1 of the methodology. The audit team confirmed that the project area as described by the shapefiles /5/ and section 3.3 of project description document including the maps in figures 5, 6, and 7, as discussed in detail below.

Requirement	Step(s) taken to assess compliance
The IFM project activity may contain more than one discrete area of land.	Confirmed by reviewing the PD and the project area shapefile /5/ that the project activity occurs within 3 discrete areas of land. These are Consolidado #1, Consolidado #2, and San Regis.
When describing physical project boundaries, the following information must be provided per discrete area: - Name of the project area (including compartment number, allotment number, local name) - Unique identifier for each discrete land parcel used in the timber harvest plan - Map(s) of the area (preferably in digital format) - Geographic coordinates of each polygon vertex (preferably obtained from a geodetic coordinate or from a geo-referenced digital map) - Total land area - Details of forest land rights holder and user rights	- Confirmed by reviewing the PD, associated maps /2//3/, and project area shapefile /5/ that the name of each discrete area within the project, the unique identifier (PC or 'Parcela de Corta' number), concession number, and management unit (UA or 'unidad de aprovechamiento') which are used in the timber management plans have been provided for each discrete land parcel in the project area. - Confirmed that maps of the project area have been provided in section 3.3 the PD and as separate files /2//3/ have been provided. - Using GIS, the audit team confirmed that the geographic coordinate of each polygon vertex have been included in the project area shapefile /5/. This information is also provided in several of the forest concession contracts /1/ - Confirmed that section 3.3. of the PD along with the project shapefile /5/ contains the total land area in the project area. - By reviewing the concession contracts/1/, the audit team confirmed that the forest land rights holder is the project proponent and the user rights for each forest concession are included in the contract documentation.
The geographic boundaries of an IFM project are fixed and thus do not change over the project	Confirmed during interviews with the project

crediting period.	proponent that there is no intention to change the geographic boundaries of the project.
The geographic boundaries for leakage from market effects are those of the country in which the project area is located.	Confirmed by reviewing sections 3.3 and 4.3 of the PD that “the geographical boundary for leakage from market effects is the national boundary of Peru.”

3.3.3.2 Temporal Boundaries

The project complies with all requirements of section 5.2 of the methodology regarding temporal boundaries, as discussed below.

Requirement	Step(s) taken to assess compliance
The temporal boundaries are defined by the project start date and length of the project crediting period.	Confirmed by reviewing sections 1.8 and 1.9 of the PD that the project start date is 1 August 2020, the project crediting period is 20 years, and therefore the end of the crediting period is 21 July 2040.
The minimum duration of a monitoring period is one year, and the maximum duration is 10 years.	Confirmed during interviews with project personnel the intention to have 1- or 2-year monitoring periods.

3.3.3.3 Carbon Pools (i.e., Greenhouse Gas Reservoirs)

The steps taken to assess whether each carbon pool has been selected (or not selected) correctly in accordance with the methodology are described below.

Carbon Pools	Included/Excluded	Steps(s) Taken to Assess Compliance
Above Ground	Tree: Included	Checked against Table 1 in methodology to confirm that inclusion above ground tree biomass is mandatory. All calculations of GHG emissions reductions /16/ include above ground live tree biomass.
	Non-tree: Excluded	Checked against Table 1 in methodology to confirm that exclusion is mandatory as it is always conservative when forests remain as forests. All forests in the project area will remain as forests through the project duration. All calculations of GHG emissions reductions /16/ exclude

		above ground live tree biomass.
Below Ground	Excluded	Checked against Table 1 in methodology to confirm this pool is to be excluded. All calculations of GHG emissions reductions /16/ exclude below ground live tree biomass.
Deadwood (logging slash)	Included	Checked against Table 1 in methodology to confirm this pool is to be included in the baseline. All calculations of GHG emissions in the baseline /16/ include deadwood from logging slash.
Deadwood (naturally accumulated)	Excluded	Checked against Table 1 in methodology to confirm this pool is to be excluded. All calculations of GHG emissions in the /16/ exclude naturally accumulated deadwood.
Harvested Wood Products	Included	Checked against Table 1 in methodology to confirm this pool is to be included. All calculations of GHG emissions reductions /16/ include harvested wood products
Litter	Excluded	Checked against Table 1 in methodology to confirm this pool is to be excluded. All calculations of GHG emissions reductions /16/ exclude litter.
Soil Organic Carbon	Excluded	Checked against Table 1 in methodology to confirm this pool is to be excluded. All calculations of GHG emissions reductions /16/ exclude soil organic carbon.

3.3.3.4 Greenhouse Gas (GHG) Sources and Sinks

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

	Gas	Source	Included?	Steps(s) Taken to Assess Compliance
Baseline	CO2	Combustion of fossil fuels (in vehicles, machinery and equipment)	Excluded	Checked against Table 2 in the methodology. Confirmed by reviewing the PD and calculations workbook /16/ that this source was excluded because the application of the T-SIG tool confirmed they were less than 5% of the total project GHG benefits.
		Removal of herbaceous vegetation	Excluded	Checked against Table 2 in the methodology. Confirmed by reviewing the PD and calculations workbook /16/ that this source was excluded.

Project	CH4	Combustion of fossil fuels (in vehicles, machinery and equipment)	Excluded	Checked against Table 2 in the methodology. Confirmed that emissions are considered insignificant
		Burning of Biomass	Excluded	Checked against Table 2 in the methodology. Confirmed no burning of biomass from timber operations in the baseline.
	N2O	Combustion of fossil fuels (in vehicles, machinery and equipment)	Excluded	Checked against Table 2 in the methodology. Confirmed that emissions are considered insignificant
		Nitrogen-based fertilizer	Excluded	Checked against Table 2 in the methodology. Confirmed by reviewing the PD and calculations workbook /16/ that this source was excluded.
		Burning of Biomass	Excluded	Checked against Table 2 in the methodology. Confirmed by reviewing the PD and calculations workbook /16/ that this source was excluded.
	CO2	Combustion of fossil fuels (in vehicles, machinery and equipment)	Included	Checked against Table 2 in the methodology. Confirmed by reviewing the PD and monitoring plan that this source will be included in the project scenario (per section 8.2.2.2 of the methodology. Although there will be no commercial harvesting under the project scenario, there is the potential for illegal harvest operations which would result in fossil fuel emissions. Illegal logging will be monitored.
		Removal of herbaceous vegetation	Excluded	Checked against Table 2 in the methodology. Confirmed it will be monitored as stock changes in aboveground biomass
	CH4	Combustion of fossil Fuels (in vehicles, machinery and equipment)	Excluded	Checked against Table 2 in the methodology. Confirmed that emissions are considered insignificant.
		Burning of Biomass	Included	Checked against Table 2 in the methodology. Included as CO2 equivalent emission due to natural disturbance per section 8.2.2.1 of the methodology.

	N2O	Combustion of fossil fuels (in vehicles, machinery and equipment)	Excluded	Checked against Table 2 in the methodology. Confirmed that emissions are considered insignificant.
		Nitrogen-based fertilizer	Excluded	Checked against Table 2 in the methodology. Potential emissions are negligible.
		Burning of Biomass	Excluded	Checked against Table 2 in the methodology. Potential emissions are negligible

3.3.4 Baseline Scenario

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

Item assessed	Step(s) taken to assess item
Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable	- Confirmed during interviews with the regional forestry authority in Loreto that the common practice baseline determined from reference areas represents a reasonable baseline. - The audit team compared the Green Gold Forestry business plan /7/ and historical harvest inventory data /15/ to documentation for the common practice baseline reference areas (see section 3.3.7, methodology deviation #7) and confirmed that the company's practice similar forest management in that they are FSC certified, practice low-impact logging, and harvest lesser-known or lower value species, which results in similar annual harvest volumes. - The audit team confirmed that the common practice baseline harvest intensity applied is representative of the management by the baseline agent (which is the project proponent).

Item assessed	Step(s) taken to assess item
Documentary evidence used in determining the baseline scenario is relevant, and correctly quoted and interpreted in the project description	Confirmed that the documentary evidence is relevant and interpreted correctly in the PD. All PD reporting requirements pertaining baseline scenario have been included.
Relevant national and/or sectoral policies and circumstances have been considered and are listed in the project description	Confirmed during interviews and independent review of concession contracts /1/and Peruvian forestry laws that the baseline harvest scenario is in conformance with applicable regulatory requirements.
The procedures for identifying the baseline scenario have been correctly followed and the identified scenario reasonably represents what would have occurred in the absence of the project	- As discussed in the table below and section 3.3.4 on additionality, all procedures for identifying the baseline scenario have been correctly followed. - The Audit team agrees that baseline scenario reasonably represents what would have occurred in absence of project.

The specific steps taken to validate the baseline scenario against each applicable requirement of the methodology are described below.

Section(s)	Step(s) taken to assess compliance
6.1 Selection of baseline	The audit team confirmed that the project proponent used the most recent version of the VT0001 Tool for Demonstration and Assessment of Additionality in AFOLU Project Activities to demonstrate a credible baseline scenario of planned timber harvest. The audit team's assessment of additionality is described in section 3.3.5 below.

Section(s)	Step(s) taken to assess compliance
6.2 Modeling the baseline scenario	• The audit team confirmed that it was not possible to apply a historical baseline scenario as the project proponent does not have historical records indicating historical management surpasses financial barriers by providing above average financial returns. In reviewing the project proponents cash flows, the audit team confirmed that the project proponent has not achieved profitability. Thus, a common practice baseline was demonstrated in lieu of a historical baseline. • The audit team confirmed that the common practice baseline was derived from a combination of several reference areas in the Amazon region, though some of which are outside of Peru (see Methodology Deviation #7 in section 3.3.7). We confirmed that the companies managing these reference areas have implemented similar historical harvest intensities and forest management practices (low impact harvesting, harvesting of lesser-known species), as would have been practiced by the Green Gold Forestry (the baseline agent) if the project had not been implemented. The audit team also confirmed during interviews with the Loreto Regional Forestry authority (GERFOR) that the baseline harvest plan represents a feasible common practice in the region, when considering the inclusion of lesser-known and lower volume species. • By reviewing section 3.4.4 of the PD, the audit team confirmed that all requirements stated in Box 1 of the methodology of the baseline Timber Harvest Plan have been applied and reported in the PD.
6.3 Stratification	• The audit team compared the forest type maps used by the project proponent /2/ /6/ to forest type maps from the Peruvian government. We confirmed that the project area is all in two forest type: Bosque de Colina Baja and Bosque de Terraza Alta which have been combined into a single stratum due to similar species assemblages, climate, soil types, etc, which the audit team confirmed to be logical. In other official government products (e.g., Peru's FREL), these forest types are combined in a single stratum. Areas classified as wetland or with a protected status have been excluded from the project area. • We confirmed the datasets utilized and the mapping procedures during interviews with the project team. • The audit team then independently replicated the mapping and stratification by acquiring the maps and comparing to the project stratification /2/. • The project proponent submitted as part of the project documents a detailed description of the stratification adopted for the project area.

3.3.5 Additionality

Overall, additionality is justified for the project. In accordance with the methodology, and as well-documented within Section 4.6 of the PD, the tool Version 3.0 (the most recent version) of the VCS-approved “Tool for the Demonstration and Assessment of Additionality in VCS AFOLU Project Activities” has been used to demonstrate additionality.

A high-level summary of steps taken to assess additionality is provided below.

Steps taken to assess...	
Adherence to regulatory surplus requirements.	The audit team confirmed during interview with the regional forestry authority and review of forestry laws in Peru that there is no regulatory requirement to conduct the project activity.
The appropriateness of data and parameters used in financial calculations and sensitivity analyses, including those taken from feasibility study reports.	- The project applies a 10% discount rate which has been utilized by the company for investment analyses for timber operations in Peru /13/. The audit team confirmed the suitability of the benchmark by reviewing published benchmarks applied by other timber operators /11/. - The sensitivity analysis involved the variation of volumes and revenues from several project activities including fruit production and ecotourism. The audit team concludes that the parameters in the sensitivity analysis are considered feasible depending on the intensification of the project activity (hectares) and variability in the prices of fruit and tourism.
The suitability of the benchmark used for investment analysis.	Step 2b-Option III: Benchmark analysis was not applied. Instead, the investment comparison analysis was applied for Step 2 of the Additionality Tool. The audit team confirmed that the NPV and appropriate parameters were applied for the with project scenario and the alternative land use scenarios.

The credibility of each barrier identified in the barrier analysis.	Step 3 (Barrier analysis) was not required by the additionality tool as the barrier analysis was not elected.
The appropriateness of the geographical region used in the common practice analysis.	The common practice analysis was conducted for the entire Loreto province which is the province that encompasses the project area and thus is considered to be suitable.
Information regarding similar projects identified in the common practice analysis, including essential distinctions between similar projects and the proposed project.	The common practice analysis was conducted for similar project types which involve the development of a forest conservation project along with community development in forest concessions in Loreto. It was confirmed by the Regional Forestry Authority, who the audit team has interviewed, that no similar projects exist in the Loreto province.
The reasonableness of assumptions made in the demonstration of additionality.	Overall, the audit team confirmed that the assumptions regarding additionality are reasonable. The alternative land use (continued harvesting) has been exhibited by the company for over a decade and is the common practice in similar land ownerships (concessions) in the region.

3.3.5.1 Sub-step 1a

The identified land use scenarios identified in Section 2.5 of the project description include those scenarios required by VT0001. The audit team's findings regarding the identified alternative scenarios are as follows:

Alternative	Audit Findings on identification of alternative land use scenarios
I. Project activity without being registered	One identified scenario is the implementation of the project activity without being registered as a VCS AFOLU project.
II. Continuation of pre-project land use	This scenario would also entail the continuation of sustainable forest management as a FSC certified concession contract. Through the review of timber sale documentation, approved forest management plans, FSC certification and audit, and interviews with the project proponent, the audit team confirmed that timber harvesting is a credible pre-project land

Alternative	Audit Findings on identification of alternative land use scenarios
	use that existed in the project area prior to the project implementation.

3.3.5.2 Sub-step 1b-c

Alternative	Audit Findings on consistency of land use scenarios with laws and regulations
I. Project activity without being registered	The audit team confirmed during an interview with a representative from the Loreto regional forestry department, that forest concessions may be utilized for a variety of management purposes including for ecosystem services and non-timber resources such as fruit production, and do not need to be used for timber harvesting, which are all proposed project activities.
II. Continuation of pre-project land use	- The Forestry and Wildlife Law No. 27308 is the main law that regulates forest concessions. This law indicates that forest concessions must abide by the corresponding management plan that is approved by the regional forestry and wildlife authority. The audit team reviewed forest concession contracts /1/ and past approved forest management plans /2/ and confirmed that timber harvesting in the project area is in line with applicable laws and regulations in Peru. Also, the forest concession contracts for the project area indicate that area is designated as Permanent Production Forest, which according to Article 29 of the Forestry Law indicates is for the purpose of permanent production of wood and other forest products other than wood, as well as wildlife and the provision of ecosystem services. - During an interview with a representative from the Loreto regional forestry department (GERFOR), we confirmed that harvesting at the baseline levels is a legally permissible land use scenario. - The audit team confirmed that the selection alternative II as the baseline scenario is the most plausible baseline scenario as it is the land use that has been in place for the last 10 years, is the most profitable, and has the greatest ease of implementation.

3.3.5.3 Sub-step 2a

Confirmed through the review of financial information /8/ that the VCS AFOLU project generates financial or economic benefits other than VCS related income, including sale of produce from fruit trees, as well as potential ecotourism revenue, which have associated economic benefits. We confirmed that the investment comparison analysis (option II) was selected which is in agreement with the tool.

3.3.5.4 Sub-step 2b-c

The audit team reviewed the cash flow analyses /8/ and confirmed that the net present value (NPV), has been selected as the financial indicator. We confirmed that the NPV was calculated for the proposed

project without the financial benefits from the VCS, and for the baseline scenario (continuation of the pre-project land use). For the project scenario, the relevant costs including operating costs (forest patrols, monitoring, concession fees, forest survey, machinery) and overheads (insurance, travel, project staff, etc), as well as the relevant revenues from non-timber forest product sales, were included in the NPV analysis. For the baseline scenario, the audit team confirmed the relevant costs (timber extraction, transport, and processing, staff, surveys, and certification, etc) as well as the relevant timber product sales were included in this analysis. We confirmed these baseline costs and revenues by reviewing historical documentation such as sales receipts from past harvesting in the project area /10/.

The investment analysis was presented in a transparent manner and relevant assumptions such as the application of a 10% discount rate used for the NPV were justified /11/ and clearly presented in section 3.3.5 of the PD. During interviews with the project personnel, it was also indicated that Green Gold Forestry (GGF) has historically utilized this 10% discount rate as a company benchmark for forestry operations as it is considered an industry standard. The audit team reviewed documentation provided supporting this assertion including a letter from the GGF board, and financial reports from similar forestry operators that have also applied this discount rate.

3.3.5.5 Sub-step 2d

The audit team confirmed that a sensitivity analysis was conducted for the investment analysis to demonstrate the robustness of the financial attractiveness assumptions/8/ by increasing the potential revenues associated with project activities, resulting in three cash flow scenarios. For instance, the first scenario is the projected revenue from fruit tree production. For the second scenario, estimated revenue from fruit trees was doubled and in the third scenario the fruit tree revenues were doubled and additional revenue from ecotourism was included. Under all three scenarios, the NPV remains negative and is significantly lower than the baseline scenario of continuation of timber harvesting within the project area. As a result, the audit team has confirmed that the proposed project activity, even if activities are profitable, will not be financially most attractive.

3.3.5.6 Step 3

Step 2 was not required by the additionality tool, as barrier analysis was not elected, and was not completed.

3.3.5.7 Step 4

We confirmed that a common practice analysis was undertaken by reviewing an email from Hilda Morales Peña of the Loreto Regional Forestry Authority (GERFOR) to the project team. The email indicated that no similar activities involving forest conservation within a timber concession have occurred within the Loreto province. This assertion supports the audit team's independent investigations into whether similar activities have been carried out in the region. We have found no evidence of such projects. We found that the timber concessions in the Loreto region and more broadly across Peru are used for timber harvesting.

3.3.6 Quantification of GHG Emission Reductions and Removals

Overall, the methodology and any referenced tools have been applied correctly to calculate baseline emissions, project emissions, leakage and net GHG emission reductions and removals for the baseline period. The quantification of such is described in greater detail below.

3.3.6.1 Quantification of Baseline Emissions

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

- Calculate carbon stocks in commercial timber volumes (section 8.1.1 of methodology). Commercial timber volumes are derived from the timber harvest plan.
- Calculation of deadwood (logging slash) generated in the process of timber harvest and establishment of forestry infrastructure (section 8.1.2 of methodology)
- Calculation of the emissions resulting production and subsequent retirement of wood products derived from timber harvesting (including timber harvesting from the establishment of forestry infrastructure (8.1.3 of methodology)
- Calculation of the rates of forest regrowth post-timber harvest (Section 8.1.6)

Several methodology deviations as described in section 3.3.7 of this report and section 3.2.7 of the PD have been applied within the general methods. The specific steps taken to assess the calculation of baseline emissions for the baseline period against each relevant methodology requirement and section are listed below.

Section	Step(s) taken to assess compliance
8.1.1	• We independently calculated the total loggable area which is the project area, from the spatial dataset /5/ provided by the project team. From this total area divided by the 20-year rotation length we calculated the annual loggable area. • Through the review of historical inventory data /15/ approved by the regional government and interviews with the regional government officials, we confirmed the merchantable volume of timber per unit area is reasonable and accurate. • We reviewed methodology deviation #1 for the application of Smalian's formula in place of allometric equations and confirmed that it results in a conservative estimate of baseline carbon stocks.
8.1.2	• The audit team reviewed methodology deviation #2 which applies a Logging Damage Factor and Logging Infrastructure factor from peer-reviewed literature instead of the Residual Stand Damage Factor and found this approach to be more accurate given data availability in the region. • We independently checked and verified all parameters and assumptions originating from ancillary sources, such as wood densities by species (Research Institute of the Peruvian Amazon), recovery rate of logged forests /19/

Section	Step(s) taken to assess compliance
	Rutishauser et al (2015), logging damage factor /21/ and logging infrastructure factor from Pearson et al (2014). We independently calculated the areas of roads, decks, camps and ports in the project area from the spatial dataset /29/ provided by the project team.
8.1.3	- The audit team reviewed methodology deviation #6 for assigning percentages to the wood product classes and confirmed that given the project proponent has species specific wood product classes data for the project area, this deviation results in a more accurate quantification of carbon stored in harvested wood products. - The audit team reviewed the assumptions related to the wood product carbon stocks including the fraction of harvested wood classified as wood waste (WW), short lived products (SLF), and long lived products (PL). We independently confirmed the annual oxidation factor applied from Winjum et al. 1998 was 0.86 which is relevant to tropical forests, like the project area. - We confirmed the assumptions and classification of inventoried species in density and value classes (high or low) used to calculation the fraction of harvested wood in the different product classes /15/ - We independently applied the modified equations 8, 9, and 10 to replicate the methodology deviation and confirm the quantification of carbon stored in wood products and carbon oxidized from wood waste and decay /16/. - Through the recalculation of equations 11 and 12, we confirmed that wood products that are retired between 3 and 100 years after harvest (i.e., the Additional Oxidized Fraction, OF), have been accounted for according to a 20-year linear decay function
8.1.4	- The audit team reviewed literature from Rutishauser et al. (2015) /19/ and confirmed that the recovery rate of logged forests (including direct logging and infrastructure) has been calculated in line with relevant and high-quality peer-reviewed literature. - Replicated equation 12 from the methodology to confirm it has been applied correctly in the calculation workbook.
8.1.5	- The audit team independently reviewed emissions from the combustion of fossil fuels in forestry and wood processing machinery from historic timber operations by the project proponent /22/. - We applied the T-SIG tool and determined that the GHG emissions from fossil fuel combustion are not significant and that they have been omitted from the baseline, which is conservative.
8.1.6	The audit team confirmed through assessment and replication of equations 23-28 /16/ in section 8.1.6 of the methodology, that the annual and total carbon stock changes in the baseline scenario have been accurately calculated in conformance

Section	Step(s) taken to assess compliance
	with the methodology. We confirmed that the annualized calculations of carbon emissions were quantified based on the years since harvesting, over the baseline period and crediting period.

A description of steps taken to validate the data and parameters used in the PD follows.

Parameter	Value	Step(s) taken to validate the value
$V_{j,i BSL}$	15 m ³ /ha	- Audit team reviewed the government approved forest inventory from which this merchantable volume of timber per unit area was derived. The inventory was from 2018. - The volume utilized is actually slightly lower than the inventoried merchantable volume (16.3 m³/ha) and is therefore conservative. - We also confirmed during interviews with the regional government that this inventory and merchantable volume reported in it were approved. Confirmed with the regional government forest engineer that the volume is considered feasible for the region. - We reviewed merchantable volumes extracted from similar forest operators (listed in section 3.4.2 of the PD) that have comparable business models as the project proponent /7/ and found that this volume represents a conservative common practice. - We confirmed that this volume has been specified in the timber harvest plan presented in section 3.4.4 of the PD.
$C_{EX,j,i BSL}$	Varies annually	Confirmed that equation 4 of the methodology was accurately applied in the calculation workbook /16/ and derived using the relevant CF, Dj, and mean volume to be extracted
CF	0.5 tC·td.m. ⁻¹	- Confirmed this is the default carbon fraction specified in section 9.1 of the methodology and the IPCC default value. - Reviewed calculations workbooks and PD to confirm that the carbon fraction was applied consistently.

Parameter	Value	Step(s) taken to validate the value
Dj	0.614t/m ³	Reviewed the literature and confirmed the wood densities applied to each species and used to derive this volume weighted wood density /15/ to be accurate and originating from published references (e.g., https://www.peruforestal.org/, http://www.iiap.org.pe/upload/Publicacion/CDinvestigacion/inia/inia-p4/iniap4.htm#TopOfPage)
LDF	1.134 tC/m ³	- The Logging Damage Factor is the result of the methodology deviation #2 (see section 3.3.7) and is applied to extracted volume to determine the carbon in logging slash and residual stand damage. - The audit team confirmed that this value is derived from a credible source (Pearson et al. 2014) /21/ and applied in the calculation workbook accurately /16/
LIF	0.465 tC/m ³	- The Logging Infrastructure Factor is the result of the methodology deviation #2 (see section 3.3.7) and describes the dead Wood remaining in the forest from infrastructure establishment. - The audit team confirmed that this value is derived from a credible source (Pearson et al. 2014) /21/ and applied in the calculation workbook accurately /16/.
ACS _{0,i}	140 tC/ha	Parameter describes the aboveground carbon stock in undisturbed forest and is the result of methodology deviation #2 (see section 3.3.7). The audit team reviewed documentation on the carbon stock density for similar forest types in Peru (Asner et al. 2014) and found this to be reasonable and conservative when applied with the LDF to determine carbon stocks in dead wood.
OF, SLF, WW, PL	WW + SLF 46.7% PL 45.9 OF 0.86	- Methodology deviation #9 which relates to the quantification of these values has been validated (see section 3.3.7) - Audit team reviewed the project proponents historical wood processing data /15/as required by the methodology to confirm that the wood product fractions for waste wood (WW), short lived products (SLF), and long-lived products (PL) applied are free of material errors and in conformance with section 8.1.3 of the methodology. - Audit team confirmed that the OF (oxidation fraction) was correctly applied from Winjum et al. (1998), which is 86% of the PL.

Parameter	Value	Step(s) taken to validate the value
<i>RGRi</i>	1.02 tC ha-1 yr-1	- The audit team reviewed literature from Rutishauser et al (2015) /21/ and confirmed that the recovery rate of logged forests (including direct logging and infrastructure) has been calculated in line with relevant and high-quality peer-reviewed literature. - Audit team re-calculated the recovery rate from the procedure described in Rutishauser et. al (2015). - Reviewed Mahli et al. 2004 and confirmed that the default IPCC value for this parameter is not applicable as it does not subtract out losses associated with tree mortality /35/ thus does not represent net biomass growth in natural

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

Assessment of whether...	
All relevant assumptions and data are listed in the PD, including their references and sources.	The audit team confirms that all relevant assumptions and data as well as their references and relevant sources are documented clearly in the PD.
All data and parameter values used in the PD are considered reasonable in the context of the project.	The audit team has concluded that the values presented in the PD are reasonable in the context of the project. This was concluded after review of the data and parameter values presented in the PD, as well as independent review of documentation and interviews with regional government officials.
All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PD.	The audit team has been able to replicate all estimates of baseline emissions using the data, parameters, and processes described in the PD.

3.3.6.2 Quantification of Project Emissions

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

- As required by section 8.2 of the methodology, the net GHG 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) and must be accounted for

- Through review of the risk of natural disturbances as documented in the non-permanence risk report, and confirmed during interviews with regional government forest engineers and ancillary information, natural disturbance emissions are de minimis and not accounted for (ex-ante), although disturbances and subsequent emissions will be monitored.
- The audit team confirmed that clear policies and hiring has been put in place to prevent illegal logging, evidenced by the project's Gantt chart which indicates hiring of forest patrollers occurring in the first quarter of 2021. This was confirmed during interviews with the project team in Peru. Thus, ex-ante illegal logging has been set to zero in accordance with section 8.2 of the methodology.
- As a result of the above two points Thus, the only emissions deemed relevant for the ex-ante project scenario quantification is sequestration related to ongoing forest growth. The ex-ante annual carbon stock change in aboveground biomass as a result of forest growth was estimated from literature from similar forest types in Peru. The audit team reviewed the literature, confirmed it is relevant, and independently quantified the carbon sequestration from ongoing growth using the rates indicated in the literature.
- The ex-post carbon stock change will be monitored and quantified using remote sensing data and ground plot measurements as described in Section 3.6 of the PD (Methodology Deviation #3), section 5.3.7, as well as appendices 1 and 2. See sections 3.3.7 and 3.3.8 of this report for more detail on the validation of the ex-post project emissions quantification.

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

- Reviewed the literature referenced in section 4.2.1 of the PD which describes the net biomass accumulation in undisturbed Amazonia forests.
- Reviewed Vicuña Miñano et al. (2018) to confirm that the annual accumulation of 0.4 tC/ha/yr which was applied for the ex-ante quantification is relevant to project area and has been applied correctly.
- Validated methodology deviations #3 and #5 (see section 3.3.7 below), which includes the modification of equation 32 from the methodology. Independently applied the modification equation using the annual carbon accumulations, annual area logged, and years since start date.

A description of steps taken to validate the data and parameters used in the PD follows.

Parameter	Value	Step(s) taken to validate the value
$A_{p,t1-t}$	9,172 ha	• Independently quantified the annual area that would have been logged if the project had not been implemented, by dividing the total loggable area (equivalent to the project area) by the harvest rotation of 20 years. • Following methodology deviations #3 and #5, we confirmed that this area was applied such that in year 1 only the sequestration from parcel 1 (9,172 ha) that would have been harvested in year 1 accounted for. In year 2, the sequestration in parcels 1 and 2 are accounted for.

Parameter	Value	Step(s) taken to validate the value
Annual carbon accumulation	0.4 tC/ha/yr	- Reviewed Vicuña Miñano et al. (2018) to confirm that the annual accumulation of 0.4 tC/ha/yr which was applied for the ex-ante quantification is relevant to project area and has been applied correctly. - Independently quantified ex-ante annual carbon accumulation for the project scenario by multiplying the rate the area that would have been harvested and converted to tCO₂e by multiplying by the molecular weights of carbon dioxide.

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

Assessment of whether...	
All relevant assumptions and data are listed in the PD, including their references and sources.	Confirmed that the equations and the modification to the equations, including the parameters, parameter values and references are adequately described such that the quantification was replicable by the audit team.
All data and parameter values used in the PD are considered reasonable in the context of the project.	Confirmed through the review of reference that the parameter values in the PD originate from high quality sources and are relevant to the project area.

3.3.6.3 Quantification of Leakage

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

- Market leakage will be quantified as the net emissions from harvest activities in the baseline scenario multiplied by a leakage factor, for the volume of wood harvested and sold in national markets.
- The leakage factor was calculated using Box 2 in section 8.3.2 of the methodology, which is based on the ratio of merchantable biomass to total biomass (PMPi) compared to the ratio of merchantable biomass to total biomass for each forest type (PML_{FT}).

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

- Confirmed through review of concession contracts and independent review of government databases of concessions that the project proponent does control multiple parcels of land within the country. During interviews with project proponent and review of the PD, the audit team confirmed that the company will continue to harvest in concessions outside the project area, but at a reduced intensity, thus activity shifting leakage will be zero.

- Confirmed through review of business plan /7/, purchase invoices /10/, and historical financial reports /37 that the vast majority (greater than 80%) of the harvested wood is exported and sold on the international market, thus confirmed a market leakage of zero for this portion of wood.
- Through a review of the PD and interviews with the project proponent, the audit team confirmed that the ratio of merchantable biomass to total biomass for each forest type and the subsequent leakage deduction factors applied.

A description of steps taken to validate the data and parameters used in the PD follows.

Parameter	Value	Step(s) taken to validate the value
aboveground tree biomass	280 t/ha	• Confirmed the value of aboveground tree biomass from the carbon density map for the forests in Loreto from Asner et al. 2014.
merchantable biomass	9.2 t/ha	• Confirmed the value of the merchantable biomass from the project area from the forest inventory and by verifying the wood densities for species in the inventory /4/ /15/.
PML _{FT}	3.3%	• Independently calculated the mean merchantable biomass as a proportion of total aboveground tree biomass for each forest type.
PMP _i	3.33	• Independently calculated the merchantable biomass as a proportion of total aboveground tree biomass for stratum I within the project boundaries
LF _{ME}	0.4	• Confirmed through review of the PD and the calculation workbook that the leakage deduction factor for market-effects applied corresponds to PMP_i being equal to PML_{FT}.

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

Assessment of whether...	
All relevant assumptions and data are listed in the PD, including their references and sources.	• The audit team confirmed that the ratio of merchantable biomass to total biomass in the project area and the department of Loreto, as well as the leakage deduction factor have been listed in section 4.3.2 of the PD and again in section 5.1.
All data and parameter values used in the PD are considered reasonable in the context of the project.	• The audit team independently verified through review of regional data on merchantable biomass in Loreto that the data and parameters are reasonable.

3.3.6.4 Summary of Net GHG Emission Reductions or Removals

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

- Calculation of the net GHG emission reductions follows equation 41 in section 8.4 of the methodology. This includes the net GHG emissions from the baseline scenario, which include the project emission due to harvest removals, minus the net GHG emissions associated with the project scenario, which are due to carbon sequestration in areas that would have been harvested, and minus the net GHG emissions due to leakage, which includes market effects leakage.

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

- Independently calculate the net GHG emissions (equation 41 of methodology) using the audit team's independent quantification of ex-ante baseline emissions, project emissions, and leakage emissions.
- Confirm that all parameters and datasets used for the net GHG emission reduction calculation in the workbook /16/ are accurate and reasonable and are in agreement with those reported in the PD.
- Trace the project team's calculations through the emissions reduction workbook /16/ and confirm that they were carried out per equation 41 in the methodology.

3.3.6.5 Uncertainties Associated With the Calculation of Emissions

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

- As required per section 8.4.1.1 of the methodology, the estimated GHG emissions and emission reductions have uncertainties associated with the parameters, coefficients, and input that must be accounted for using equations 42 and 43 in the methodology.
- The project proponent quantified the total uncertainty for the baseline scenario and the total uncertainty for the IFM project scenario which were used in equation 42.
- The uncertainty propagation was identified and justified in the project documents.

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

- The audit team reviewed section 4.4 of PD to confirm that the required uncertainty parameters were reported and justified, such as the uncertainty propagation value.
- We reviewed all references used to derive the methodology for monitoring carbon stock change overtime, to deduce the reported uncertainties for these methodologies.
- Traced the client's calculation of uncertainty in the calculation workbook to confirm it was free of errors.
- Independently quantified the total uncertainty following the methodology and compared to the client's calculation.

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

- The ex-ante estimation of project scenario carbon sequestration due to ongoing growth through during the crediting period was projected using historical referenced growth rates from the Amazon region referenced in the literature. To ensure a conservative estimation, the project team selected a slightly lower rate of carbon sequestration of 0.4 t C/ha/year. The actual carbon accumulation will be measured through the use of the approach documented in Methodology Deviation #3 described in section 3.6 of the PD.
- Ex-ante estimation of emission due to natural disturbances through the crediting period were assumed to be zero. This is due to a lack of historical natural disturbance events affecting forest carbon stocks as documented in the Risk Report. Actual emission due to natural disturbances events will be monitored and quantified ex-post.
- Ex-ante emission due to illegal logging through the crediting period were assumed to be zero, following the methodology stipulation that if clear infrastructure, hiring and policies are in place to prevent illegal logging. Actual emission due to illegal logging will be monitored and measured ex-post following Methodology Deviation #4 described in section 3.6 of the PD.
- The baseline harvest volume (15 m³/ha) was based on historical harvest volumes in the reference region, considered to be representative of the local common practice for timber harvesting, following the Common Practice Baseline scenario as described in section 6.2 of the methodology.
- The fractions of harvested wood stored in wood products and/or emitted to the atmosphere was based on the project proponents historical wood processing data.
- The market effects leakage rate (LK_{me}) was based on the assumption that the majority of baseline scenario harvested wood would be exported internationally. This is based on the historic practices of the baseline agent (the project proponent) as well as the company's business plan /7/, historical financial statements /37/, and sales receipts indicating that the majority, if not all, harvested timber is sold on the international market including the U.S. and European Union.
- The baseline emissions due to fossil fuel use was derived from the project proponent's historical fuel consumption data in the project area. It was ultimately found using the T-SIG tool that the fossil fuel emissions were not significant and thus were not included.

3.3.6.6 Overall Conclusion

In conclusion, the methodology and any referenced tools have been applied correctly to calculate baseline emissions, project emissions, leakage and net GHG emission reductions and removals during the project crediting period.

3.3.7 Methodology Deviations

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

Identification of deviation	Assessment column 1*	Assessment column 2**
1	- This deviation pertains to the use of Smalian's formula instead of allometric equations to calculate volume from tree measurements. - The deviation was justified as this is the approach used by the Peruvian government and thus concession holders are required to submit volume estimates in their management plans using this approach. This deviation enables consistency between volumes reported in forest management plans and operational plans, and the project. - Reviewed methodology to confirm that deviation impacts only criteria and procedures for measurement of the merchantable volume of individual trees from field inventory measurements, used for the baseline scenario.	- The project proponent demonstrated the conservativeness of this methodology deviation by comparing the volume estimates from applying the Smalian's formula (the proposed deviation) to volume estimates from applying allometric equations derived from the Amazonia region. - The audit team first confirmed through review of literature that the allometric equations that were used as a basis of comparison were relevant to the project area. - The audit team then confirmed that the deviation results in a lower commercial harvest volume in the baseline scenario and is therefore more conservative /15/.

Identification of deviation	Assessment column 1*	Assessment column 2**
2	- 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 derived from scientific literature that are more applicable to the project area logging operations as no species-specific biomass expansion factors (BCEFs) exist for the Peruvian Amazon. - Reviewed the methodology deviation and confirmed that the deviation only impacts the procedures for measurement of carbon stocks changes in logging slash, residual stand damage, and damage from infrastructure. The deviation does not impact any other component of the methodology	- The audit team confirmed that this deviation is likely more accurate as it entails using locally derived logging damage and logging infrastructure factors from the Amazon region /21/ - We confirmed that species-specific biomass expansion factors are not available for the Peruvian Amazon, nor is there a residual stand damage factor available for the Amazon region (as shown in section 9.1 of the Methodology), thus this methodology deviation is considered to be justified and to result in the more accurate estimation of logging damage for the project area.

Identification of deviation	Assessment column 1*	Assessment column 2**
3	- This deviation pertains to the techniques applied to monitor carbon accumulation due to tree growth in the project scenario. - The audit team reviewed the methodology and the deviation and confirmed that the deviation only impacts the procedures for the monitoring and measurement of project scenario carbon stock changes as a result of ongoing growth forest growth. Rather than relying on field plot data to measure individual trees which would have been harvested, the methodology deviation will monitor carbon stock changes through the use of LiDAR satellite sensors, calibrated with periodic field inventory data.	- Through review of documentation on the approach and interviews with the scientists from that have developed the approach (see section 2.3.2), as well as the application of professional judgement, the audit team concluded that this deviation is likely to result in a more accurate quantification of carbon stock changes in the project scenario, as it enables tracking biomass change across every pixel in the project area rather than extrapolation from a limited set of field sampling plots, or using such field sampling data to give all forests a single biomass value. - We confirmed that the approach proposed to monitor annual carbon stock changes in the project scenario is technically sound as it has been employed in similar forest types and has been able to accurately measure carbon stock changes in aboveground biomass. The project team demonstrated that a sufficient number of field-based training data points and calibration points are available and will be utilized to both develop and calibrate relationship between height and biomass and to test the accuracy of the modeled biomass. Likewise, the model of the height to biomass relationship will be continually re-calibrated every four years, to capture changes in this relationship as the forests mature.

Identification of deviation	Assessment column 1*	Assessment column 2**
4	- This deviation pertains to the techniques applied to monitor the carbon losses associated with illegal logging in the project scenario. - The audit team reviewed methodology to confirm that deviation only impacts procedures for measurement and monitoring of illegal logging emissions and does not impact any other part of the methodology.	- The audit team reviewed the documentation on the approach and interviewed the scientists from Space Intelligence who have developed the approach (see section 2.3.2). - We confirmed that the approach proposed to monitor illegal logging is sound as it has been employed in similar forest types and has been able to successfully detect and measure low impact selective logging. - Through the review of documentation, interviews, and the application of professional judgement, the audit team concluded that this deviation will result in more accurate quantification of GHG emission reductions as it will enable monitoring and quantification of emissions due to illegal logging across the entire project area and at multiple points in time throughout the monitoring period.

Identification of deviation	Assessment column 1*	Assessment column 2**
5	- This deviation pertains to the methodology requirement in section 8.2.1.2 to only measure the individual trees that would have been harvested in the baseline scenario, for determination of the project scenario emissions reductions. This deviation is necessary due to deviation #3 which detects all trees in the forest, and not just those trees that would have been harvested, thus the audit team confirmed that this deviation has been justified. - The audit team reviewed methodology to confirm that deviation only impacts procedures for measurement and monitoring of project scenario emissions reductions and does not impact any other part of the methodology.	- The audit team confirmed that methodology deviation #3 results in a more accurate estimation of carbon stock change under the project scenario. This deviation to evaluate those carbon stock changes across all trees in the parcels from the moment when the baseline logging would have taken place was confirmed to be necessary given deviation #3. - Furthermore, during interviews with the project team and review of documentation, the audit team found that this approach results in a more direct comparison of the baseline and project scenario parameter and thus increases the accuracy.

Identification of deviation	Assessment column 1*	Assessment column 2**
6	- This methodology deviation was justified in the PD, as it results in the use of wood product class fractions from data from the project proponent for this project area rather than using global default values. - The audit team reviewed the deviation and independently applied the modified equations 8, 9, and 10 and all other methodology components from section 8.1.2 and confirmed that this deviation only impacts the quantification of sequestration and emissions from wood products that would have been harvested in the baseline scenario.	- Through interviews with the project proponent and the review of documentation and calculation workbooks pertaining to wood product classes, the audit team confirmed that because data specific to the wood products generated from the project proponents' lands including the project area exists, it is more accurate to use this data than global defaults, thus this deviation results in increased accuracy of the quantification of GHG emissions. - The audit team independently calculated the proportions of the wood product classes from the client's forest inventory data and the emissions from wood products using the new equation 8 and following all other methodology requirements in section 8.1.2 and confirmed that deviation was applied correctly and result in an accurate quantification of emissions.

Identification of deviation	Assessment column 1*	Assessment column 2**
7	- This deviation pertains to the selection of the reference area for the development of the common practice baseline. The VM0010 methodology indicates that the reference area must come from the region of the project area, or multiple reference areas may be selected to a cover a country. This suggests that the reference areas must be located within the country of the project. - It was deemed necessary to locate multiple reference areas of forest operations that practice similar logging techniques and business practices, such as the harvesting of low-value species. The project proponent selected 3 reference areas to derive the common practice, all are located in the Amazon region which is the same as the project area. However, one reference area is from Brazil. - We confirmed that the methodology deviation does not impact other areas of the project quantification.	- The audit team reviewed the client's business plan /7/ and inventory /4//15/ which indicates that low-value species are included and harvested. - We also confirmed that the project proponent is the only certified FSC operator in Loreto. We confirmed that the timber operators for the selected reference areas are FSC certified as well. - We compared the inventory and business plan to those of other timber operators in Loreto, found on the GERFOR website, and confirmed that the business model and corresponding timber inventory in the project contrasts that of other timber concessions which only harvest high-value species which results in a lower harvest volume overall. - We compared the inventory and business plan of the project proponent to the timber companies that manage the reference areas (as cited in section 3.4.2 the PD), both in Peru and Brazil and confirmed that the harvest practices and business plans are similar in terms of the volume cut and the harvesting of low-value wood, which results in greater accuracy of the baseline scenario. The harvest volumes of these similar companies are higher than that of Green Gold Forestry, indicating that the baseline harvest volume of 15 m3/ha is conservative in comparison.

- *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)

3.3.8 Monitoring Plan

The parameters to be monitored are as follows:

- $\Delta C_{AB,t|PRJ-Gross}$
- Illegal Logging PRA Results
- $D_{DIST_IL,I}$
- $A_{burn,i,t}$
- $A_{dist,i,t}$
- $A_{DIST_IL,I}$
- A_{Plot}
- DBH
- H_{Stem}
- PMP_i
- A_i

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

- The audit team confirmed during interviews and review of ancillary information (e.g., peer-reviewed publications) that the project team and implementing partners (e.g., Space Intelligence Ltd) have an appropriate level of skill and ability to carry out the monitoring tasks as described.
- Through review of the Monitoring Plan in the PD, the audit team can confirm that monitoring procedures are described with an appropriate degree of certainty, but with some flexibility to allow for decisions to be made according to situations that may arise in the future. All monitoring procedures are appropriate to the stated task.
- The audit team confirmed that the scope, description, and general requirements of the monitoring plan are in conformance with the methodology (sections 9.3.1-9.33).
- The audit team confirmed through review of ancillary sources and interviews with the project team that the remote sensing technology that the project proposes for monitoring of carbon stock changes is currently available and will continue to be available through the crediting period.
- We confirmed by reviewing available plot information on the RAINFOR platform and interviewing the project team that the field data the project team intends to use for calibrating the machine learning model are available, of high quality, and in locations near by the project area.

- During interviews with the project team, we confirmed that a plan is in place to hire experienced field staff to conduct field sampling of the additional 30 accuracy testing plots proposed in the monitoring plan.
- Through review of the PD and interviews with the project proponent we confirmed that a robust QA/QC plan is in place to ensure quality data is used for monitoring parameters relevant to the project.

In conclusion, the monitoring plan adheres to the requirements of the applied methodology and any referenced tools.

3.4 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 performed a complete review of the risk analysis against the requirements of the AFOLU Non-Permanent Risk Tool. The audit team concludes that the assignment of risk scores 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.

3.4.1 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)	• 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
(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

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(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 /31/ is in place. The plan identifies risks and includes monitoring and mitigation actions for each risk.	Adaptive Management Plan /31/ is well written, clear, and meets all requirements of the tool.	Risk rating is appropriate

3.4.2 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

Risk	Assessment of rationale, assumptions and justification	Assessment of quality of documentation and data provided	Conclusion regarding appropriateness of risk rating
(d)	The audit team reviewed the project cash flow /9/ including the assumptions on carbon pricing /12/ and the costs /10/ and revenues related to the project. We confirmed that the project is less than 4 years from the break even point, as it has already secured adequate funding from USAID grants/32/, shareholder equity, and revenues from timber.	- Documentation on carbon pricing assumptions is from credible sources and are in published reports /12/ which are considered to be of high-quality. - Documentation on the USAID grant received /32/ is official and of high quality. - Costs and revenues associated with timber activities are demonstrated from actual receipts /10/	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)	The audit team reviewed the project cash flow /9/ including the assumptions on carbon pricing /12/ and the costs /10/ 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/32/, 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 /12/ which are considered to be high-quality - Documentation on the USAID grant received /32/ is official and of high quality. - Costs and revenues associated with timber activities are demonstrated from actual receipts /10/	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
(i)	Confirmed through the review of a signed letter /13/ from the Green Gold Forestry Board that the project has available callable financial resources that are not included in the secured funding	Letter has been signed by the company executive board /13/ for which the audit team confirmed the members.	Risk rating is appropriate

3.4.3 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
(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.	- Documentation on carbon pricing assumptions is from credible sources and are in published reports /12/ which are considered to be high-quality - Documentation on the USAID grant received /32/ is official and of high quality. - Costs and revenues associated with timber activities are demonstrated from actual receipts /10/	Risk rating is appropriate
(e)	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
(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

3.4.4 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 /1/ 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 /32/, which is a financial institution in this context as it is a project funder.	- Concession contracts /1/ are official government documentation and considered of high-quality - Reviewed the technical approach document submitted to USAID /32/ and confirmed it is an official report submitted to project funder	Risk rating is appropriate
(b)	N/A	N/A	Appropriate

3.4.5 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
(b)	Through interviews with the Loreto regional forestry department (GERFOR) and review of the forest concession contracts /1/, 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 /1/ 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 there have not been any disputes in the project area.	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.	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

3.4.6 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 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 that there are no households who are reliant on the project area. The project area is under effective control by the project proponent and there has been no evidence of land use by populations in the area.	N/A	Risk rating is appropriate
(c)	N/A	N/A	Risk rating is appropriate

3.4.7 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 2015-2019, as downloaded from http://info.worldbank.org/governance/wgi/#home as -0.1086.	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

3.4.8 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) provided by the project team /14/to confirm that the likelihood of fire in the project area is very low, as no fires burned in the project area over this 11-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 audit team also independently reviewed government data from INDECI on forest fires from 2017 and 2018 (https://www.indeci.gob.pe/informe/resumen-incendios-forestales/) and confirmed that no fires were registered in Loreto.	- The fire occurrence map /14/ 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. - INDECI is a government agency and their records are considered of high quality.	Risk rating is appropriate
S	N/A	N/A	
M	N/A	N/A	
Pest and Disease Outbreaks			

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 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			
L	- The audit team reviewed the hurricane/wind map Loreto and peer-reviewed literature on blow down events in the Amazonian region of Peru /14/ 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 considered to be 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	

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

4 VALIDATION CONCLUSION

The audit team asserts, with no qualifications or limitations, that the project complies with the validation criteria for projects and their GHG emission reductions or removals set out in VCS Version 4.

The audit team concludes that the project is likely to achieve the estimated GHG emission reductions or removals, for the following reasons:

- The project team has long-standing and strong relationships with the project stakeholders including the community-based NGOs in the region and the regional government making project implementation and cooperation more likely.
- The risks to the project are relatively minimal.
- The project has strong financial backing and access to funding to support project implementation.
- The project team has demonstrated it has the technical and operational skillsets to implement, manage and monitor a carbon offset project.

APPENDIX A: LIST OF FINDINGS

Please see the above Section 2.5 for a description of the findings issuance process and the categories of findings issued. It should be noted that all language under “Project Personnel Response” is a verbatim transcription of responses provided to the findings by project personnel.

NIR 1 Dated 20 Nov 2020

Standard Reference: VCS version 4.0

Document Reference: Tacsha01.pdf; Tacsha02.pdf; A0_Mapa_Concesiones_Tacsha_Nov2020_2pdf; AreaBonosCarbono_Concesiones_GGF_Ok.shp

Finding: This finding is in documents as a finding the email the audit team sent on 19 November 2020.

Section 3.6.1 of the VCS Standard states "The project description shall be accompanied by one or more of the following types of evidence establishing project ownership accorded to the project proponent(s), or program ownership accorded to the jurisdictional proponent(s), as the case may be (see the VCS Program document Program Definitions for definitions of project ownership and program ownership). To aid the readability of this section, the term project ownership is used below, but should be substituted by the term program ownership, as appropriate:" [see finding #2 for list]

The map A0_Mapa_Concesiones_Tacsha_Nov2020_2pdf indicates that the Tacsha01 area of the project area consists of 3 concessions: 16-IQU/C-J-170-04, 16-IQU/C-J-217-04, and 16-IQY/C-J-243. The Tacsha01.pdf includes documentation and coordinates for the boundary of concession 16-IQU/C-J-170-04, which we were able to confirm matches with the area labeled as Tacsha01 on the map. However, Tacsha01.pdf does not provide coordinates or any indication of the location of the other two contracts (16-IQU/C-J-217-04, 16-IQY/C-J-243). Tasha02.pdf indicates there were 5 contracts including 243 and 217 that were consolidated under control of Green Gold Forestry, but again there is no information on the coordinates associated with those contracts. As a result, the audit team has been unable to confirm that the area south of the 16-IQU/C-J-170-04 concession and north of 16-LOR-MAY/CON-MAD-2018-006 concession and east of the 16-IQU/C-J-171-04 concession is effectively under ownership by Green Gold Forestry Peru SAC. This area is shown with the blue arrows in the image included in the 19 November 2020 email.

The audit team requests evidence that the entire area shown in Tascha 01 on the map A0_Mapa_Concesiones_Tacsha_Nov2020_2pdf is effectively under ownership (according to the VCS requirements in section 3.6.1) by Green Gold Forestry Peru SAC.

Project Personnel Response: See email and attachments. The following actions were carried out:

1. The map A0_Mapa_Concesiones_Tacsha_Nov2020_2 was updated, (adding the number of Utilization Units for each Contract 16-IQU / C-J-170,217, and 243-04 that is established in the descriptive reports)
2. In the same map, in the part of the tacsha 01 area, the descriptions of the contracts were added

according to the assigned units, responding to the following: "However, Tacsha01.pdf does not provide coordinates or any indication of the location of the other two contracts (16-IQU / CJ-217-04, 16-IQY / CJ-243 "

3. Regarding Tasha02. The document (Addendum) is attached where it indicates the numbers of utilization units acquired during the exclusion and compensation of said consolidated contract 16-IQU / D-C-001-12, and the descriptive memory itself that indicates the coordinates of said consolidated units.

4. Likewise, the map with the arrows indicating the U.A and the contracts of the complete forest concessions and descriptive reports is attached, since initially the first page of the forest contract was sent scanned, which did not have complete information. This in turn helps clarify the following: "As a result, the audit team has not been able to confirm that the area south of concession 16-IQU / CJ-170-04 and north of concession 16-LOR-MAY / CON-MAD-2018-006 and east of 16 -The concession IQU / CJ-171-04 is effectively owned by Green Gold Forestry Peru SAC. This area is shown with the red arrows in the image included in the mail email from November 19, 2020 "

Auditor Response: The audit team reviewed the provided maps and documentation (e.g., AO_Mapas_Concesiones_Tacsha_Nov2020_2_Enero2021.pdf), which now much more clearly shows which concession contracts are associated with each Tacsha area. The client also provided documentation indicating that there was a swapping and transfer of concession areas. The audit team was able to confirm that UA79 and UA80 (which were the units in question) are under ownership by Green Gold Forestry. This finding has been closed.

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

NCR 2 Dated 20 Nov 2020

Standard Reference: VCS version 4.0; VCS Project Description Template v4.0

Document Reference: Project Description.pdf

Finding: Section 3.6.1 of the VCS Standard states "The project description shall be accompanied by one or more of the following types of evidence establishing project ownership accorded to the project proponent(s), or program ownership accorded to the jurisdictional proponent(s), as the case may be (see the VCS Program document Program Definitions for definitions of project ownership and program ownership). To aid the readability of this section, the term project ownership is used below, but should be substituted by the term program ownership, as appropriate:

- 1) Project ownership arising or granted under statute, regulation or decree by a competent authority.
- 2) Project ownership arising under law.
- 3) Project ownership arising by virtue of a statutory, property or contractual right in the plant, equipment or process that generates GHG emission reductions and/or removals (where the project proponent has not been divested of such project ownership).
- 4) Project ownership arising by virtue of a statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions and/or removals (where the project proponent has not been divested of such project ownership).
- 5) An enforceable and irrevocable agreement with the holder of the statutory, property or contractual right in the plant, equipment or process that generates GHG emission reductions and/or removals which vests project ownership in the project proponent.
- 6) An enforceable and irrevocable agreement with the holder of the statutory, property or contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions or removals which vests project ownership in the project proponent.
- 7) Project ownership arising from the implementation or enforcement of laws, statutes or regulatory frameworks that require activities be undertaken or incentivize activities that generate GHG emission reductions or removals."

Section 1.7 of the PD Template states "Provide evidence of project ownership, in accordance with the VCS Program specifications on project ownership."

Section 1.7 of the PD states "The project is 100% owned by Green Gold Forestry Peru SA , which also owns the forest concession licenses referred to herein . The proponent will provide original concession license documents upon project validation."

However, in reviewing the concession contract documentation as well as Peruvian Law(Law of Forestry and Wildlife - Law N° 27308) granting the contracts, it is clear that the Peruvian government owns the land, but that the concession contract holder (i.e. Green Gold Forestry Peru SAC) rather has a contractual right in the land, vegetation or conservational or management process that generates GHG emission reductions or removals which vests project ownership in the project proponent, as a result of the enforceable and irrevocable agreement with the Peruvian state.

Therefore, the following issues exist:

(1) the statement in section 1.7 of the PD that "the project is 100% owned by Green Gold Forestry Peru SA"

(2) Section 1.7 of the PD does not provide sufficient explanation or evidence of the project ownership

Project Personnel Response: 1.7 is amended as follows: The project is 100% owned by Green Gold Forestry Peru SA (GGF), which owns the forest concession licenses referred to herein. Through these concession licenses GGF has a contractual right in the land, vegetation and conservational or management process that generates GHG emission reductions or removals. These vest with the project proponent, as a result of the enforceable and irrevocable agreement with the Peruvian state (Law of Forestry and Wildlife - Law N° 27308). GGF has provided copies of the concession licenses to SCS

Auditor Response: The audit team confirmed that V7 of the updated PD contains additional description regarding how the project proponent has ownership of the project area via the concession contracts. This finding has been closed.

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

NIR 3 Dated 20 Nov 2020

Standard Reference: VCS version 4.0

Document Reference: Project Description.pdf; AreaBonosCarbono_Concesiones_GGF_Ok.shp; Green Gold Loreto 1 ER Calculation Spreadsheet, v2

Finding: Section 3.10.2 of the VCS Standard states "The project location for AFOLU projects shall be specified in the project description in terms of its project area. The spatial extent of the project shall be clearly specified to facilitate accurate monitoring, reporting and verification of GHG emission reductions and removals and to demonstrate that the project meets the eligibility criteria of the relevant project category. The description of the project location shall include the following information:

- 1) Name of the project area (e.g., compartment number, allotment number and local name).
- 2) Maps of the project area.
- 3) Geodetic polygons that delineate the geographic area of each AFOLU project activity, provided in a KML file.
- 4) Total size of the project area.
- 5) Details of ownership.
- 6) Where the project area is comprised of multiple polygons (parcels), the project location details of each polygon/parcel shall be included in the project description."

Section 1.12 of the PD states: "The project areas have been divided by GGF into three project regions, each comprising one or more discreet parcels of forest land. The three regions are:

1. Consolidado#1–Total area 144,713 ha
2. Consolidado#2–Total area 34,560 ha
3. San Regis–Total area 26,748 ha

The location of the project areas is shown in Figure 1. Individual maps of the project regions, including geodetic coordinates, are presented in Section 3.3: Project Boundary."

Later in section 3.3 of the PD, it states "The project area consists of a total of 206,020.7 hectares (Table 1)."

The audit team independently checked the project areas in the shapefile provided. We found that the areas in the shapefile differ from those reported in the PD and the calculations workbook for each of the three regions specified. The audit team requests clarification regarding the actual area included within the project.

Project Personnel Response: The following actions were performed:

1. Update the map of the consolidated area project 01, removing a certain area, which was counted at the beginning of the project and at the end it was decided to remove, likewise the table of the sums of surfaces was modified.
2. Update the map of Consolidated 02, the project areas were recalculated and the table of the sums of surfaces was modified.
3. Update the map of consolidation 02, the project areas were recalculated and the table of the sums of surfaces modified. With this action carried out, the maps of the project (Consolidated 01, 02 and San Regis) will have agreement regarding the Surfaces (ha), in relation to the Shapefile provided to the project, which they make to a total of 206 015,303 ha.
4. The Shapefile of the carbon credits areas is also attached.

Auditor Response: The audit team confirmed that the Consolidado 01 and Consolidado 02 maps provided (AO_Mapas_Conso01_Vegetacion_Agosto2020_Enero2021_Ok.pdf, AO_Mapas_Consolidado2_Vegetacion-Agosto2020_Enero2021_Ok), report areas that match the areas in the shapefile AreaBonosCarbono_Concesiones_GGF_Ok.shp. However, the San Regis pdf map (AO_Mapas_SanRegis_Vegetacion_Agosto2020_Enero2021_Ok.pdf) shows an area of 26746.809 while the shapefile shows an area of 26,747.38 for this San Regis area.

Further, this finding relates to the project area as reported in the PD versus the shapefile. The PD has not been updated, therefore this finding remains open.

Project Personnel Response 2: The PD has been updated

Auditor Response 2: The audit team reviewed section 1.12 of the PD. It indicates that: "The three regions are:

1. Consolidado#1 – Total area 125,558 ha
2. Consolidado#2 – Total area 30,620 ha
3. San Regis – Total area 27,268 ha"

The shapefile provided (AreaBonosCarbono_Concesiones_GGF_Ok.shp) indicates the following:

1. Consolidado #1: 144,689.767
2. Consolidad #2: 34,578.16 ha
3. San Regis - 26,747.38 ha

Thus the "Geodetic polygons that delineate the geographic area of each AFOLU project activity, provided in a KML file [or shapefile]" does not reflect the project area. The audit team requests that the spatial file (shapefile, kml) that delineates the project area be provided. This finding remains open.

Project Personnel Response 3: NIR discussed and resolved on call 23 Mar 2021

Auditor Response 3: On 18 March 2021, the project team provided updated shapefiles for the project area:

CobVegetal_Conso1_Marz2021, CobVegetal_Conso1_Marz2021, and CobVegetal_SanRegis_Marz2021. The audit team confirmed that the areas under the forest types Colina Baja and Terraza Alta match the project area areas reported in the PD and the in the calculations workbook. This finding has been closed.

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

NIR 4 Dated 20 Nov 2020

Standard Reference: VCS version 4.0; VCS Project Description Template v4.0

Document Reference: Project Description.pdf

Finding: Throughout the project description, the project proponents FSC certification is indicated to demonstrate stakeholder consultation (section 2.2), stakeholder safeguards (section 2.5), legal compliance (section 1.1.4), and common practice (3.4.2). The audit team requests evidence of this FSC certification and more information regarding whether the entire project area and/or all company owned lands in Peru have FSC certifications.

Project Personnel Response: The areas that are certified are Tacsha areas 1 and 4, which correspond to 56,946.88 ha.

By informing FSC we can extend our certified area at any time and the new areas will be included in the subsequent audit to confirm conformance with the standard.

We have limited our area in the past for economic reasons and have only had cover in the areas in which we have been working. Extending the coverage would incur extra costs in terms of preparation work, socialising with the communities, audit fees and the cost of logistics to perform the audit.

GGF certification can be verified at: <https://info.fsc.org/>

Auditor Response: Clarification has been provided that 56,946.88 ha are FSC certified and that the only FSC certified areas in the project area from Tacsha 01. Evidence from the FSC database was provided showing that they are in fact certified. This finding has been closed.

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

NCR 5 Dated 20 Nov 2020

Standard Reference: VCS version 4.0; VCS-Non-Permanence-Risk-Report-Template-Short-Form-v4.0

Document Reference: Non permanence risk scoring tables.xlsx; Green Gold Loreto 1 non-permanence risk report.docx

Finding: Section 3.2.9 of the VCS standard states "Projects shall prepare a non-permanence risk report in accordance with the VCS Program document AFOLU Non-Permanence Risk Tool at both validation and verification. In the case of projects that are not validated and verified simultaneously, having their initial risk assessments validated at the time of VCS project validation will assist VCU buyers and sellers by providing a more accurate early indication of the number of VCUs projects are expected to generate. The non-permanence risk report shall be prepared using the VCS Non-Permanence Risk Report Template, which may be included as an annex to the project description or monitoring report, as applicable, or provided as a stand-alone document."

Two documents were submitted related to NPRR: Green Gold Loreto 1, Non permanence risk scoring tables.xlsx and Green Gold Loreto 1 non-permanence risk report.docx. However, neither of these documents use the VCS Non-Permanence Risk Report Template that is available on the Verra website.

This is not in conformance with the requirements of the standard.

Project Personnel Response: updated VCS Non-Permanence Risk Report sent, with the calculation of buffer credits and estimated VCU issuances included.

Auditor Response: Confirmed that Version 4.0 of the Non-Permanence Risk Report Template has been utilized. This finding is closed.

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

NIR 6 Dated 20 Nov 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf

Finding: Section 4.1. of the Methodology requires the following: "Intent to Harvest: The project proponent must demonstrate intent to harvest through the following forms of evidence originating prior to the date of all evidence in pursuit of carbon finance/consideration of IFM.

Projects must provide either:

- Documented evidence demonstrating that:
 - The project site is representative of other forestlands harvested in the country within the past two years; and,
 - The project site is within commercially viable distance to existing transport networks and a port for timber export or a mill for timber processing; or,
- A valid and verifiable government-approved timber management plan for harvesting the project area."

This finding documents the audit teams request made via email on 17 November 2020 for resolutions indicating approval of the management plans for the concessions 16-IQU/D-C-001-12 and 16-IQU/C-J-171-04.

The audit team continues to request this documentation.

Project Personnel Response: Gareth Hughes replied by emails and we understand this issue is now resolved

Auditor Response: The audit team confirms that the documentation showing that forest management plans have been approved by the government were provided via email (1.Resolucion_137-2018_PGMF_REFORMULADO_000080.pdf and ResolucionAprovacion_PGMF.pdf). This finding has been closed.

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

NIR 7 Dated 20 Nov 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf; Tacsha01.pdf-Tacsha09.pdf; "San Regis.pdf; TRANSFERENCIA ACCIONES FEM-GGF I; TRANSFERENCIA ACCIONES FEM-GGF II; TRANSFERENCIA DE ACCIONES SAN REGIS - GGF

Finding: Section 4.1 of the methodology requires that "The project proponent must demonstrate intent to harvest through the following forms of evidence originating prior to the date of all evidence in pursuit of carbon finance/consideration of IFM."

Section 3.2 of the PD states that "GGF has been issued legal harvesting rights in the form of ten production concession licences that cover 100% of the project area. These licences have been issued since 2008, and last renewed in 2018, by the Forest Department of Loreto on the basis of its approval of GGF's 5 yearly plans for forest management that includes a definition of the spatial extent of each concession, the volume of the timber resource to be extracted and a description of harvesting practices."

This section of the PD later states that "GGF has carried out logging operations in the project area since 2009."

The audit team has reviewed the concession contract documentation provided (Tacsha01.pdf-Tacsha09.pdf, San Regis.pdf). However, the earliest date for which GGF has been issued control of the concession licenses appears to be in 2010. The audit team requests additional information demonstrating that:

- (1) these concession contracts were issued to GGF since 2008, and
- (2) that GGF has been harvesting in the project area since 2009.

Project Personnel Response: Gareth Hughes sent two emails with evidence of harvest operations in 2011, also proof of the purchase of a majority shareholding in the company Forestal Ecologico del Mazan SAC by Green Gold Forestry Peru SAC and proof of me becoming the general manager and legal representative of the company.

You will see that Green Gold bought a majority shareholding of 51% On 26/08/2010.

Green Gold increased its shareholding to 70% on 20/05/2011 and completed the purchase of the remaining 30% on 24/05/2016.

Auditor Response: The audit team confirmed that the PD (v8) has been updated to indicate that harvest operations by GGF have been ongoing since 2011. This also matches the documentation provided (e.g., FEM ACTA DE JUNTA GENERAL COMPRA DE ACCIONES 20052011) that GGF has been a majority shareholder of the forests for which harvesting has taken place since before 2011. This finding is closed.

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

NIR 8 Dated 1 Dec 2020

Standard Reference: VCS version 4.0; AFOLU Non-Permanence

Risk Tool v4.0; VCS-Non-Permanence-Risk-Report-Template-Short-Form-v4.0

Document Reference: Non permanence risk scoring tables.xlsx; Green Gold Loreto 1 non-permanence risk report.docx

Finding: Section 2.4.1(1) of the Non-Permanence Risk Tool states "Natural risk is based on likelihood (i.e., the historical average number of times the event has occurred in the project area over the last 100 years) and significance (i.e., the average significance of each event). 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. Where data are available for at least 20 years, but less than 100 years, projects shall conservatively extrapolate using available data. Where such data are not available for the project area, likelihood and significance shall be determined based on conservative estimates (i.e., not underestimating the possible frequency or severity) of historical events in the region in which the project is located."

Table 9 of the Non-Permanence Risk Report indicates that the only risk is extreme weather (tornados), while the risks of fire, pests and disease, geological, or other natural risks do not occur in the project area. The audit team requests more information regarding how this analysis of risks was conducted, specifically demonstrating that it was "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" as required by the tool.

Project Personnel Response: The VCS Non-Permanence Risk Report now includes a discussion of how natural risks were determined, including references to scientific literature.

Auditor Response: The audit team confirmed that the project proponent has demonstrated that the risk of fire, insect/disease, and severe weather in the project area are insignificant. The audit team was able to further confirm this during interviews with the regional government. This finding is closed.

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

NIR 9 Dated 1 Dec 2020

Standard Reference: VCS version 4.0; AFOLU Non-Permanence

Risk Tool v4.0; VCS-Non-Permanence-Risk-Report-Template-Short-Form-v4.0

Document Reference: Non permanence risk scoring tables.xlsx; Green Gold Loreto 1 non-permanence risk report.docx

Finding: Section 2.2.1(5) of the Non-permanence 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. They include a process for monitoring progress and documenting lessons learned or corrections that may be needed, and incorporating them into project decision-making in future monitoring periods. The onus is on the project proponent to demonstrate that such plans are in place, that such plans have considered the realm of potential risks and obstacles to the project, and that a system is in place for adapting to changing circumstances."

In Table 1 of the Risk Report, mitigation deductions are claimed for having an adaptive management plan in place. In the comments section, it indicates "The management team have written a business plan for the project that highlights the risks and how these can be addressed."

The audit team reviewed the business plan and noted that section 8 includes information on Risks and Mitigation. However, it does not include specific information regarding the adaptive management of the project. For instance, the "monitoring progress and documenting lessons learned or corrections that may be needed, and incorporating them into project decision-making in future monitoring periods" is not included. Likewise, during interviews the project personnel additional risks such as the risk of community members not engaging in the project activities have been described.

The audit team requests additional demonstration that an adaptive management plan meeting the requirements of section 2.2.1.(5) of the Risk Tool is in place.

Project Personnel Response: See email with Adaptive Management Plan

Auditor Response: The audit team reviewed the adaptive management plan, GGF Adaptive plan.docx and have confirmed that it is in conformance with the non-permanence risk tool. This finding has been closed.

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

NIR 10 Dated 1 Dec 2020

Standard Reference: VCS version 4.0

Document Reference: Project Description.pdf;

Finding: Section 3.16.4 of the standard states "The project proponent shall take due account of all and any input received during the local stakeholder consultation and through ongoing communications, which means it will need to either update the project design or justify why updates are not appropriate. The project proponent shall demonstrate to the validation/verification body what action it has taken in respect of the local stakeholder consultation as part of validation, and in respect of ongoing communications as part of each subsequent verification."

Section 2.2 of the PD indicates "Due to the COVID 19 crisis it has not been possible to conduct a local stakeholder consultation. However, the proponent's FSC certification requires stakeholder consultations very much along similar principles as the VCS: to ensure there are no negative impacts on communities and thus risks to the forest. Such consultations have been carried out for years and are well documented. The proponent employs two community outreach officers who regularly interact with the surrounding communities and outreach officers who regularly interact with the surrounding communities and address any issues or grievances." address any issues or grievances."

The audit team requests additional information regarding how the stakeholder consultations pertaining to the FSC certification meet the requirements of the VCS standard. Specifically, the audit team requests additional information regarding how, if any, input was received, how the project design was updated accordingly, and the actions the project proponent will take in respect of ongoing communications as part of subsequent verifications.

Project Personnel Response: Measures dictated by the Government of Peru in response to the COVID 19 pandemic (DECREE OF URGENCY 035-2020) establish the mandatory isolation and social immobilization provided in the declaration of a national state of emergency.

As a result, it has not been possible to consult directly with the communities. However, an initial meeting was held with the president of the Federation of Native Communities of the Middle Napo Curaray and Arabela (FECONAMNCUA) and with the North Regional Director of the Center for Amazon Development (CEDIA) where the project was described in detail, including opportunities for the participation of communities in the sustainable development of economic activities through non-timber products.

Subject to COVID restrictions, GGF is preparing a series of meetings with communities in Q1 2020, to socialize the project through informational meetings and local consultations as established in GGF's

Community Relations Plan. Feedback and other contributions received from these community consultations will be integrated into the overall plan in order to safeguard against any potential negative impacts.

Attached:

Minutes of FECONAMNCUA Meeting

GGF Community Relations Plan

Auditor Response: The audit team has reviewed documentation from the FECONAMNCUA Meeting and the GGF Community Relations Plan and have confirmed that a stakeholder consultations have been conducted (although limited due to the quarantine) and that there are plans to continue direct consultations with communities in the coming months.

This NIR has been closed. However see finding NCR 55 related to the PD requirements.

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

NIR 11 Dated 24 Dec 2020

Standard Reference: VT0001:TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY IN VCS AGRICULTURE, FORESTRY AND OTHER LAND USE (AFOLU) PROJECT ACTIVITIES, Version 3.0; VM0010 - Methodology for Improved Forest Management:Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf;

Finding: Section 6.1 of the Methodology states “The project proponent must use the most recent version of the VCS tool, VT0001 Tool for the Demonstration and Assessment of Additionality in AFOLU Project Activities to assess which of the baseline alternatives must be excluded from further consideration.”

Section 2.1.1 of the Additionality Tool states “

a) Identify realistic and credible land-use scenarios that would have occurred on the land within the proposed project boundary in the absence of the AFOLU project activity under the VCS4. The scenarios should be feasible for the project area taking into account relevant national and/or sectoral policies⁵ and circumstances, such as historical land uses, practices and economic trends. The identified land use scenarios shall at least include:

- i) Continuation of the pre-project land use;
- ii) Project activity on the land within the project boundary performed without being registered as the VCS AFOLU project;
- iii) If applicable, activities similar to the proposed project activity on at least part of the land within the project boundary of the proposed VCS AFOLU project at a rate resulting from⁶:
 - Legal requirements; or
 - Extrapolation of observed similar activities in the geographical area with similar socio-economic and ecological conditions to the proposed VCS AFOLU project activity occurring in the period beginning ten years prior to the project start date.

b) All identified land use scenarios must be credible. All land-uses within the boundary of the proposed VCS AFOLU project that are currently existing or that existed at some time in the period beginning ten years prior to the project start date but no longer exist, may be deemed realistic and credible. For all other land use scenarios, credibility shall be justified. The justification shall include elements of spatial planning information (if applicable) or legal requirements and may include assessment of economic feasibility of the proposed land use scenario. “

The PD does not contain any identification of the credible alternative land use scenarios to the

proposed VCS AFOLU project activity. Section 3.4.1 of the PD states “The application of VT0001 for the selection of the baseline land use is thus superfluous as the baseline land use has already been demonstrated in Section 3.2 of this PD: planned timber harvest according to the government-approved management plan, and in Section 4.1 of VM0010: Eligibility.”

While the audit team understands that the baseline land use scenario has been identified, the additionality tool requires that a step-wise approach be taken, such that it can be demonstrated how the baseline determination was reached. During meetings with the project team, it was indicated that there were two scenarios: (1) continuation of harvesting in the project area and (2) reduction and cessation of harvesting in the project area. However a description of these alternatives have not been provided in the PD.

The audit team requests that all realistic and credible land-use scenarios that would have occurred in the project area in the absence of the AFOLU project be identified as required by section 2.1.1 of the additionality tool.

Project Personnel Response: Section 3.4.1 of the PD now includes a step-wise identification of credible alternative land use scenarios applying VT0001

Auditor Response: The audit team confirmed that section 3.5 of the PD contains a list of the credible alternative land use scenarios to the proposed VCS project activity. This includes two scenarios: The baseline continued harvest and the project activity (cessation of harvesting) without VCS. This finding has been closed.

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

NIR 12 Dated 24 Dec 2020

Standard Reference: VT0001:TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY IN VCS AGRICULTURE, FORESTRY AND OTHER LAND USE (AFOLU) PROJECT ACTIVITIES, Version 3.0; VM0010 - Methodology for Improved Forest Management:Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf;

Finding: Section 6.1 of the Methodology states “The project proponent must use the most recent version of the VCS tool, VT0001 Tool for the Demonstration and Assessment of Additionality in AFOLU Project Activities to assess which of the baseline alternatives must be excluded from further consideration.”

This finding is related to finding number 11 above, which pertains to the identification of all credible land use scenarios.

Section 2.1.2 of the Additionality Tool requires the following:

"a) Apply the following procedure:

- i) Demonstrate that all land use scenarios identified in the sub-step 1a: are in compliance with all mandatory applicable legal and regulatory requirements;
 - ii) If an alternative does not comply with all mandatory applicable legislation and regulations then show that, based on an examination of current practice in the region in which the mandatory law or regulation applies, those applicable mandatory legal or regulatory requirements are systematically not enforced and that non-compliance with those requirements is widespread, i.e., prevalent on at least 30% of the area of the smallest administrative unit that encompasses the project area;
 - iii) Remove from the land use scenarios identified in the sub-step 1a, any land use scenarios which are not in compliance with applicable mandatory laws and regulations unless it can be shown these land use scenarios result from systematic lack of enforcement of applicable laws and regulations.
- b) Outcome of Sub-step 1b: List of plausible alternative land use scenarios to the VCS AFOLU project activity that are in compliance with mandatory legislation and regulations taking into account their enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations."

Given that credible land use scenarios were not identified, it has also not been demonstrated that all the land use scenarios are in compliance with mandatory legal and regulatory requirements. The audit team requests that this demonstration along with relevant evidence supporting the legality of

these alternatives be provided.

Project Personnel Response: We have provided a legal opinion from Estudio Ehecopar (Baker McKenzie) that sets out legal rights and obligations under Peru law for forest concession holders. It comprehensively analyses the relevant laws and draws conclusions that support the legality of GGF's proposed activities and alternative land-use scenarios. Section 3.4.1 of the PD now includes a discussion of the compliance with mandatory legal and regulatory requirements of the credible alternative land use scenarios.

Auditor Response: The audit team confirmed that the PD now includes an explanation of sub-step 1b in that it describes how the two credible land use scenarios are in legal compliance. The audit team was able to confirm that scenario #1 (continuation of harvest operations) is in legal compliance with the forestry laws governing timber concessions. The document provided (Baker McKenzie) further supports that timber harvesting in the forest concessions is required by law. With regard to land use scenario 2, the PD states "Land use scenario 2 is also fully compliant with applicable laws and regulations, because GGF is maintaining a logging operation on part of its concession areas, alongside fruit harvesting within the project area. This serves the purpose of legal compliance with the concession contracts." However, this contradicts the Baker McKenzie analysis which in section 7.8 concludes that "According to the Timber Forest Concession Agreement, GGF can conduct other activities in the timber forest concession, in addition to the use and harvesting of timber, under responsibility, as long as it is approved in the PMGF and PO. Therefore, GGF can exploit ecosystem services within the area of the concession, but it cannot avoid the forestry harvesting activities nor eliminate them." We also reviewed the latest PGMFs that were prepared on 20 November 2020 for the three project areas which make up two consolidated concessions and one stand alone concessions (e.g.,PGMF_Consolidado_Conso1_ FEMSAC-GGF-GGFGGroup). These documents indicate that ecosystem services and other project activities such as non-timber product use, and management for ecosystem services and conservation has been included in the PGMFs and thus are in legal compliance with this component of the forestry law. However, the PGMFs also indicate that timber harvesting will occur, which is not in line with land use scenario two and contradicts the requirements of the methodology that "Under the project scenario, forest use must be limited to activities that do not result in commercial timber harvest or forest degradation." As a result, it has not been demonstrated "that all land use scenarios identified in the sub-step 1a: are in compliance with all mandatory applicable legal and regulatory requirements." This finding remains open. Also see related finding #29 below.

Project Personnel Response 2: [Response provided outside the cover of this workbook.]

Auditor Response 2: Responses to this finding were provided outside the cover of this findings workbook in the email on 30 April 2021. The project team provided the following documents (1) Loreto (GERFOR) INFORME LEGAL N027, and (2) CartaN°049_Opinion legal copy.pdf. The first is the legal opinion from GERFOR (the regional forestry authority in Loreto) and the second document contains the letter GGF wrote to the regional government as well as the response and legal opinion the regional government provided to GGF.

The Letter sent to the regional government from GGF (S/N Reg, N7807), only appears to ask whether complementary activities such as carbon sequestration and extraction of non-timber products may be carried out in the concessions within the project area. The audit team never had concerns about whether these additional activities were permitted or not. Rather the question was whether the complete cessation of harvesting activities is permitted within each individual concession.

Clause 4.1 of the legal opinion from GERFOR states “Se debe tener presente que el objeto principal de los títulos habilitantes detallados en la carta S/N Reg, N7807, es el manejo forestal, enmarcados en contratos de concesiones forestales, por lo tanto la actividad forestal no puede ser desnaturalizado para que se pueda realizar otras actividades de ecoturismo, y aprovechamiento de los servicios de los ecosistemas forestales, y otros ecosistemas de vegetación silvestre, es decir que las actividades conexas pueden realizarse siempre y cuando se siga desarrollando la actividad forestal, para ello el concesionario debe adecuar los planes complementarios a los lineamientos establecidos.” This statement indicates that additional activities (ecosystem services, ecotourism, carbon, nontimber products) can be carried out on timber concessions as long as the forestry activity continues to be developed. This legal opinion also agrees with the legal analysis previously provided by Baker-McKenzie (GGF Peru Echeconpar concessions legal status Baker McKenzie.pdf) which in section 7.8 concludes that "According to the Timber Forest Concession Agreement, GGF can conduct other activities in the timber forest concession, in addition to the use and harvesting of timber, under responsibility, as long as it is approved in the PMGF and PO. Therefore, GGF can exploit ecosystem services within the area of the concession, but it cannot avoid the forestry harvesting activities nor eliminate them." The audit team understands that GGF will continue to develop forestry activities in concessions outside of the project area, but the question remains regarding the individual forest concessions within the project area, and not about the entirety of the GGF concession holdings. In our initial interview with Hilda Moreles from the GERFOR (the regional government forest authority), Hilda indicated that each concession contract is a stand-alone legal agreement and that an individual contract could become denaturalized if the contract's intension (timber harvesting) is not conducted, even if a number of contracts are consolidated for the purpose of submitting a single management plan. Given the response from GERFOR in the legal opinion as well as the legal analysis from Baker-McKenzie, it appears that the concession contract would be denaturalized if all timber operations were to cease. However, the audit team would like to conduct a further interview with a legal analyst from GERFOR and potentially from SERFOR (the national forestry authority) for more clarity on this issue. As a result, it has not been demonstrated "that all land use scenarios identified in the sub-step 1a: are in compliance with all mandatory applicable legal and regulatory requirements." This finding remains open. Also see related finding #29 below.

Project Personnel Response 3: [Finding addressed outside the cover of this workbook]

Auditor Response 3: The audit team conducted an interview with a legal specialist from the regional forestry agency (GERFOR), Sr. Lagunas. He explained that it is within the legal uses of the forest concession to cease harvest operations or not conduct harvest operations, as long as the approved forest management plan (PGMF) and operating plan (OP) corresponds to the forest management (or

lack thereof) being conducted in the concession land. GGF has indicated that they are in the process of updating the management plans to correspond to the lack of harvesting and indicate that they will be using the land for ecosystem services (carbon), ecotourism, and nontimber products, exclusively. The audit team will issue a forward action request in the validation report to signal to the verification team to confirm that the PGMFs and PO are in place have been approved. This finding has been closed.

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

NIR 13 Dated 24 Dec 2020

Standard Reference: VT0001:TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY IN VCS AGRICULTURE, FORESTRY AND OTHER LAND USE (AFOLU) PROJECT ACTIVITIES, Version 3.0; VM0010 - Methodology for Improved Forest Management:Conversion from Logged to Protected Forest

Document Reference: GGF SCS re finance commitments.pdf; Project Description.pdf;

Finding: Section 6.1 of the Methodology states “The project proponent must use the most recent version of the VCS tool, VT0001 Tool for the Demonstration and Assessment of Additionality in AFOLU Project Activities to assess which of the baseline alternatives must be excluded from further consideration.”

Section 2.2.4 of the Additionality Tool requires the following:

"Identify the financial indicator, such as IRR, NPV, payback period, cost benefit ratio, or other (e.g. required rate of return (RRR) related to investments in agriculture or forestry, bank deposit interest rate corrected for risk inherent to the project or the opportunity costs of land, such as any expected income from land speculation) most suitable for the project type and decision context. Identify the relevant benchmark value, such as the required rate of return (RRR) on equity. The benchmark is to represent standard returns in the market, considering the specific risk of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Benchmarks can be derived from:

- a) Government bond rates, increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert;
- b) Estimates of the cost of financing and required return on capital (e.g., commercial lending rates and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects;
- c) A company internal benchmark (weighted average capital cost of the company) if there is only one potential project developer (e.g., when the proposed project land is owned or otherwise controlled by a single entity, physical person or a company, who is also the project developer). The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e., that project activities under similar conditions developed by the same company used the same benchmark."

During a meeting with the project team on 30 November 2020, it was indicated that the project team intended to use a company internal benchmark and would provide evidence of this. The project team submitted the document GGF SCS re finance commitments.pdf, which states "We also confirm that

we have applied a minimum target of 10% annual IRR for investment purposes and that this has been applied to investment decisions by GGF in the past." This letter has been written and signed by the project investors.

The audit team requests either (1) additional evidence that this 10% benchmark " has been consistently used in the past, i.e., that project activities under similar conditions developed by the same company used the same benchmark" OR (2) demonstration of the benchmark following the other two options (a or b) provided in section 2.2.4 of the Additionality tool.

Project Personnel Response: GGF utilises a benchmark of 10% annual IRR for investment purposes. This rate is agreed by the company's main funders and is consistent with benchmarks utilised by other investors in forestry-related projects.

To illustrate this, in conformation with Section 2.2.4 of the Additionality Tool, we provide evidence of Peru's government bond rates and premiums to this rate that are typically used for investment purposes:

1. Peru borrowed \$4billion through the issuance of three international bonds on 20th November 2020. The 12-year tranche was priced at 100 basis points (one percent) over US Treasury bonds, which gave a yield on Peru's bonds of a little under 2%.

- Peru's 100-Year Bond Sale Shows Markets Can Defy Political Chaos - Bloomberg
- 10 Year Treasury Rate - 54 Year Historical Chart | MacroTrends

2. Timberland Investment Resources published a primer on investing in timberland in 2012. A table of premiums to the risk-free treasury rate is provided on page 24 – Peru falls within 'near established' criterion and therefore discount rates would price within the range of 8 to 11%.

3. A survey by KPMG in 2011 collaborates this range, with the majority of respondents utilising a discount rate 6 to 8%

We accept that the TIR and KPMG papers are a little dated. However, interest rates have fallen since these papers were published (the yield on 10-year US Treasuries has dropped from 3.5% to less than 1% in this period) and discount rates will have fallen too. We believe that GGF's 10% discount rate is therefore conservative and realistic.

Attached:

- Timberland Investments – a Primer, Chung-Hong Fu, Timberland investment Resources June 2012
- KPMG's Timberland Investor Survey, Fall 2011

Auditor Response: The audit reviewed the provided documentation in support of GGFs company IRR of 10%. The documentation from the Timberland Investment Resources and the KPMG show that the discount rate of 10% is well supported for similar forestry activities. However the Additionality tool requires the following: "the project developers shall demonstrate that this benchmark has been consistently used in the past, i.e., that project activities under similar conditions developed by the same company used the same benchmark."

The audit team requests evidence that the project developer has utilized this company benchmark consistently in the past under similar conditions. Such a demonstration may entail previous cost analyses (e.g., workbooks with cost analyses for years preceding the carbon financing, company reports, business plans, emails, etc that may document that this 10% benchmark has been previously used).

This finding remains open.

Project Personnel Response 2: [Addressed outside of findings workbook]

Auditor Response 2: During discussions with the project team (23 February 2021) it was indicated that the intention was to use an investment comparison analysis (option II) and not a benchmark analysis. Therefore this finding is no longer relevant and has been rescinded.

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

NIR 14 Dated 24 Dec 2020

Standard Reference: VT0001:TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY IN VCS AGRICULTURE, FORESTRY AND OTHER LAND USE (AFOLU) PROJECT ACTIVITIES, Version 3.0; VM0010 - Methodology for Improved Forest Management:Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf; Green Gold Carbon Financial Model 2020 v4 (002)

Finding: Section 6.1 of the Methodology states “The project proponent must use the most recent version of the VCS tool, VT0001 Tool for the Demonstration and Assessment of Additionality in AFOLU Project Activities to assess which of the baseline alternatives must be excluded from further consideration.”

Section 2.2.5(a) of the Additionality Tool states “Calculate the suitable financial indicator for the proposed VCS AFOLU project without the financial benefits from the VCS and, in the case of Option II above, for the other land use scenarios. Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding GHG credit revenues, but including subsidies/fiscal incentives where applicable), and, as appropriate, non-market cost and benefits in the case of public investors.”

Row 113 of the Cash Flow spreadsheet shows that the benchmark with the financial benefits from VCS is 16.5%. Section 3.5 of the PD states “With revenues from sales of VCU at \$6.30/tonne to 2026 and \$8/tonne thereafter, the project returns an IRR of 16%. The project has a negative IRR without VCU sales and would therefore not be financially viable. Input assumptions in the financial model will be made available on project validation.” However, the cash flow without the sale of VCUs has not explicitly been demonstrated.

However, the audit team requests demonstration of the benchmark calculation for the proposed VCS AFOLU project without the financial benefits from the VCS credits.

Project Personnel Response: We have attached a financial model illustrates the project returns without the benefit of VCS credit sales. As can be seen, Net Income (line 112) and EBITDA (line 101) are negative throughout. Excel is unable to calculate negative IRRs in these circumstances and so the IRR calculation (D113) shows #NUM! (for an explanation see IRR formula error: #NUM! - Microsoft Community)

Auditor Response: The audit team reviewed the updated financial model (Green Gold Carbon Financial Model 2020 v4 no VCUs.xlsx) and confirmed that the IRR has been calculated without the inclusion of revenue associated with the sale of carbon credits. The IRR becomes negative as the

project proponent indicates. This finding has been closed.

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

NIR 15 Dated 24 Dec 2020

Standard Reference: VT0001:TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY IN VCS AGRICULTURE, FORESTRY AND OTHER LAND USE (AFOLU) PROJECT ACTIVITIES, Version 3.0; VM0010 - Methodology for Improved Forest Management:Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf; Green Gold Carbon Financial Model 2020 v4 (002)

Finding: Section 6.1 of the Methodology states “The project proponent must use the most recent version of the VCS tool, VT0001 Tool for the Demonstration and Assessment of Additionality in AFOLU Project Activities to assess which of the baseline alternatives must be excluded from further consideration.”

Section 2.2.5(a) of the Additionality Tool states “Calculate the suitable financial indicator for the proposed VCS AFOLU project without the financial benefits from the VCS and, in the case of Option II above, for the other land use scenarios. Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding GHG credit revenues, but including subsidies/fiscal incentives where applicable), and, as appropriate, non-market cost and benefits in the case of public investors.”

Section 4 of the methodology states that an applicability condition is that “Under the project scenario, forest use must be limited to activities that do not result in commercial timber harvest or forest degradation.

Section 1.11 of the PD indicates all the project activities which include ecotourism, local enterprise development, community development fund, patrolling, etc. However, timber harvesting outside of the project area is not considered to be a project activity. In the cost analysis workbook, revenue from community logging and sawing activity outside the project area are included.

Thus, the inclusion of costs and revenues associated with timber harvest is not in conformance with the methodology or the additionality tool.

Project Personnel Response: We have amended the financial model to comply with the requirements of NIR15 – i.e. removal of revenues and expenses from logging outside of the project area (note that values in the model for logging have been set to zero and logging related cells are hidden)

Auditor Response: The audit team reviewed the updated financial model (Green Gold Carbon Financial Model 2020 v4 no timber, no VCUs.xlsx) and confirmed that the IRR has been calculated

for only the project activities included within the project area. This finding has been closed.

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

NIR 16 Dated 24 Dec 2020

Standard Reference: VT0001:TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY IN VCS AGRICULTURE, FORESTRY AND OTHER LAND USE (AFOLU) PROJECT ACTIVITIES, Version 3.0; VM0010 - Methodology for Improved Forest Management:Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf;

Finding: Section 6.1 of the Methodology states “The project proponent must use the most recent version of the VCS tool, VT0001 Tool for the Demonstration and Assessment of Additionality in AFOLU Project Activities to assess which of the baseline alternatives must be excluded from further consideration.”

Section 2.2.5(b) of the Additionality Tool States "Present the investment analysis in a transparent manner and provide all the relevant assumptions in the VCS AFOLU project description, so that a reader can reproduce the analysis and obtain the same results. Clearly present critical economic parameters and assumptions (such as capital costs, lifetimes, and discount rate or cost of capital). Justify and/or cite assumptions in a manner that can be validated. In calculating the financial indicator, the project's risks can be included through the cash flow pattern, subject to project-specific expectations and assumptions (e.g. insurance premiums can be used in the calculation to reflect specific risk equivalents)."

Section 3.5 (substep 2b) of the PD states "With revenues from sales of VCUs at \$6.30/tonne to 2026 and \$8/tonne thereafter, the project returns an IRR of 16 %. The project has a negative IRR without VCU sales and would therefore not be financially viable. Input assumptions in the financial model will be made available on project validation."

The audit team requests that additional information on the relevant assumptions, and critical data and parameters of this investment analysis be provided in the PD “so that a reader can reproduce the analysis and obtain the same results.”

Project Personnel Response: The critical assumptions and data inputs into the financial model are as follows: • Project time horizon – 20 years

- Discount rate – 10%
- Operating costs – forest rangers, consumables, monitoring, forest concession fees, forest surveys, verification and issuance levy fees, etc. – \$730,000 annually
- Overheads – accounting, audit, legal, insurance, communications, travel, consumables and project

staff – \$956,000 annually

- Non-timber forest product sales – \$200,000 annually
- Infrastructure and machinery cost – \$60,000 (2021)
- Community employment – \$278,000 annually
- Development fund – \$100,000 annually
- One-off set-up costs – \$130,000 in 2021
- VCU sales – biannual from 2023
- VCU price – \$6.30/t rising to \$8.00/t from 2026
- Taxation rate – 29.5%

Auditor Response: This finding pertains to the PD requirements. An updated version of the PD was not provided thus the audit team was unable to assess if these assumptions are presented in the PD, thus this finding remains open.

Also the audit team noted that in the list of assumptions in the finding response, the VCU sales and VCU price are being reported. These VCU assumptions are not relevant to the additionality assessment as the section 2.2.5(a) of the Additionality tool states "Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding GHG credit revenues, but including subsidies/fiscal incentives where applicable), and, as appropriate, non-market cost and benefits in the case of public investors."

Project Personnel Response 2: PD is updated (v.8)

Auditor Response 2: The audit team confirmed that a description of the investment comparison analysis as well as details on the assumptions used in such analysis have been included in section 3.5 of the PD (v.8).

Under scenario 2 it lists "verification and issuance levy fees" as well as "forest concession fees" under the operating costs. The audit team requests clarification on these two items. For instance, it is unclear why forest concession fees were not also included under land-use scenario 1. Also it is unclear why verification and issuance levy fees are included in land use scenario 2 which assumes that the project is not a registered VCS AFOLU project. This finding remains open.

Project Personnel Response 3: We have amended the PD so as to correct the description of the cost

assumptions under scenarios 1 and 2. Specifically:

In scenario 1 (continuation of planned timber harvest), forest concession fees are included in the overall operating costs (fees are calculated on the basis of log volumes and form part of the total cost of extraction)

In scenario 2, we have corrected the description of the operating costs by removing 'monitoring' and 'verification and issuance levy fees' (these were already excluded from the \$730,000 annual cost estimate). Forest concession fees still apply (and would be based upon a fixed per hectare fee in the event that no logging is undertaken)

Section 3.5, sub-step 2.c. of the PD has been edited accordingly.

Auditor Response 3: Sufficient clarification has been provided regarding the two scenarios. The audit team confirmed that Section 3.5 of the PD (v9) has been updated such that the costs of monitoring and verification have been excluded from scenario 2. This finding has been closed.

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

NIR 17 Dated 24 Dec 2020

Standard Reference: VT0001:TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY IN VCS AGRICULTURE, FORESTRY AND OTHER LAND USE (AFOLU) PROJECT ACTIVITIES, Version 3.0; VM0010 - Methodology for Improved Forest Management:Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf;

Finding: Section 6.1 of the Methodology states “The project proponent must use the most recent version of the VCS tool, VT0001 Tool for the Demonstration and Assessment of Additionality in AFOLU Project Activities to assess which of the baseline alternatives must be excluded from further consideration.”

Section 2.4.2 of the Additionality tool states “Provide an analysis to which extent similar activities to the one proposed as the VCS AFOLU project activity have been implemented previously or are currently underway. Similar activities are defined as that which are of similar scale, take place in a comparable environment, inter alia, with respect to the regulatory framework and are undertaken in the relevant geographical area, subject to further guidance by the underlying methodology. Other registered VCS AFOLU project activities shall not be included in this analysis. Provide documented evidence and, where relevant, quantitative information. Considerations shall be limited to the period beginning 10 years prior to the project start date.”

Section 3.5 of the PD (Step 4) states "To our knowledge there is no documented evidence that other logging concession holders in Peru have converted (any part of) their logging operations into active forest conservation projects or are in the process of doing so."

The audit team requests evidence of the analysis of common practice.

Project Personnel Response:

Auditor Response: Finding not addressed. Remains open.

Project Personnel Response 2: See email correspondence from Hilda Morales Pena (sent 7 April 2021)

Auditor Response 2: The audit team confirmed that a common practice analysis was conducted by consulting with the regional forest management agency (GERFOR) to determine the extent to which similar projects exist across similar ownerships in the region. In an email from Hilda Morales Pena from 31 March 2021, it was indicated that no other projects implementing conservation and

community development in logging concessions was found in the region. The email from Hilda was forwarded to the audit team on 7 April 2021. We have determined that this common practice analysis is in conformance with the additionality tool (VT001). This finding has been closed.

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

NIR 18 Dated 24 Dec 2020

Standard Reference: VT0001:TOOL FOR THE DEMONSTRATION AND ASSESSMENT OF ADDITIONALITY IN VCS AGRICULTURE, FORESTRY AND OTHER LAND USE (AFOLU) PROJECT ACTIVITIES, Version 3.0; VM0010 - Methodology for Improved Forest Management:Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf;

Finding: Section 6.1 of the Methodology states “The project proponent must use the most recent version of the VCS tool, VT0001 Tool for the Demonstration and Assessment of Additionality in AFOLU Project Activities to assess which of the baseline alternatives must be excluded from further consideration.”

Substep 2d of the additionality tool states “Include a sensitivity analysis that shows whether the conclusion regarding the financial attractiveness is robust to reasonable variations in the critical assumptions. The investment analysis provides a valid argument in favor of additionality only if it consistently supports (for a realistic range of assumptions) the conclusion that the proposed VCS AFOLU project without the financial benefits from the VCS is unlikely to be financially attractive.

a) If after the sensitivity analysis it is concluded that the proposed VCS AFOLU project without the financial benefits from the VCS is unlikely to be financially most attractive (Option II and Option III), then proceed directly to Step 4 (Common practice analysis).

b) If after the sensitivity analysis it is concluded that the proposed VCS AFOLU project is likely to be financially most attractive (Option II and Option III), then the project activity cannot be considered additional by means of financial analysis. Optionally proceed to Step 3 (Barrier analysis) to prove that the proposed project activity faces barriers that do not prevent the baseline land use scenario(s) from occurring. If the Step 3 (Barrier analysis) is not employed then the project activity cannot be considered additional.”

The audit team requests that the sensitivity analysis in accordance with substep 2d of the additionality tool be provided.

Project Personnel Response: Sensitivity analysis

Sub-step 2d

Attached are business models that demonstrate the financial performance of the Green Gold Loreto (1) project under various scenarios:

Assumption IRR

With VCS benefits 16.5%

No VCS benefits negative

plus 2x fruit revenues negative

plus Additional \$100,000 ecotourism negative

It is therefore concluded that the project is not financially attractive without the financial benefits from VCS.

Auditor Response: The audit team reviewed the three financial models provided (Green Gold Carbon Financial Model v4 no timber no VCU volume double fruit income, \$100,000 ecotourism.xlsx, Green Gold Carbon Financial Model v4 no timber no VCU volume double fruit income.xlsx, and Green Gold Carbon Financial Model v4 no timber no VCU volume), which together constitute a sensitivity analysis. We confirmed that with varying levels of income associated with the different project activities, the IRR for the VCS AFOLU project remains below zero, thus supporting the conclusion that the proposed VCS AFOLU project without the financial benefits from the VCS is unlikely to be financially attractive. This finding has been closed.

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

NIR 19 Dated 24 Dec 2020

Standard Reference: VCS version 4.0; AFOLU Non-Permanence

Risk Tool v4.0;

Document Reference: Non permanence risk scoring tables.xlsx; Green Gold Loreto 1 non-permanence risk report.docx

Finding: Section 2.2.4 of the Non-permanence Risk tool requires “For all AFOLU project types, the entire project longevity shall be covered by management and financial plans as submitted to local government or financial institutions, or otherwise made public, in which the intention to continue management practices is stated and planned for, and may include external evidence such as municipal land-use plans, institutional structures, or tools such as ecological-economic zoning.”

The risk report provided indicates that the project longevity is 40 years. The audit team requests that evidence that the entire project longevity is covered by management and financial plans as submitted to local government or financial institutions, or otherwise made public, in which the intention to continue management practices is stated and planned for.

Project Personnel Response: See attached project plan as submitted to USAID - note at bottom of p.5 reference to project lifetime

Auditor Response: The audit team reviewed the document submitted to USAID which is a financial institution in this context as it has been a project funder. The document indicates that that GGF has the goal of protecting the forests in perpetuity, at least for the duration of the concession contract agreement which is 40 years but renews every 5 years. This constitutes evidence that the entire project longevity (40 years) is covered by management and financial plans as submitted to local government or financial institutions. This finding has been closed.

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

NIR 20 Dated 24 Dec 2020

Standard Reference: VCS version 4.0; AFOLU Non-Permanence

Risk Tool v4.0;

Document Reference: Non permanence risk scoring tables.xlsx; Green Gold Loreto 1 non-permanence risk report.docx; GGF margin analysis.xlsx; Green Gold Carbon Financial Model 2020 v4 (002).xlsx; GGF Kiln Sticks analysis.xlsx

Finding: Section 2.2.3(1) of the Risk tool states “Opportunity cost analysis shall be undertaken based on the alternative land uses identified in the project’s additionality assessment (except where (1) applies). The onus is on the project proponent to demonstrate and substantiate what constitutes credible alternative land use scenarios within this area, and shall at a minimum include the activities identified in the baseline scenario. The opportunity cost analysis shall include a net present value (NPV) analysis, covering the project crediting period, of such alternatives as compared to the project, taking into consideration a conservative estimate of revenue from GHG credit sales and other project revenue streams, and potential price fluctuations of commodities impacted by the project. The financial discount rates used shall be based on published sources and represent the appropriate risk for the relevant land use scenario. Estimates of prices for GHG credit sales shall be based on published sources such as market intelligence reports. The analysis shall be undertaken in a transparent manner and shall provide all relevant assumptions, parameters, and data sources such that a reader may reproduce the analysis and determine the same results.”

Table 3 of the Risk report provided indicates that “NPV from the most profitable alternative land use activity is expected to be between 20% more than and up to 20% less than from project activities” and gives a score of zero. In the comments it states “ logging is the only legal alternative land use. This is only profitable if done at scale and with sufficient capital to optimize operations. Even then it will be only marginally more profitable than the project activity, if at all. Reference is made to Green Gold’s cash flow models.”

The audit team reviewed the cash flow models and confirmed that the NPV for the project scenario has been quantified (cell F114 and F115) and the IRR calculated as 16.5% (cell D113). The audit team also reviewed the margin analysis (GGF margin analysis.xlsx) and found that a IRR was calculated as 15.63%. The audit team reviewed the GGF kiln sticks analysis.xlsx also provided, which does not include an NPV analysis.

However, the risk tool requires that the NPV be utilized in this opportunity cost assessment, not IRR. The tool also requires that at a minimum the alternative land use scenarios include the activities identified in the baseline scenario. But the Kiln sticks costs and revenue were not included in the

opportunity cost analysis. Thus the audit team requests evidence supporting the assertion that “NPV from the most profitable alternative land use activity is expected to be between 20% more than and up to 20% less than from project activities.”

Project Personnel Response: We have integrated the kiln stick analysis within the GGF margin analysis doc so as to provide an integrated business model.

The attached spreadsheet (GGF margin analysis including kiln sticks) has the additional kiln stick analysis highlighted in yellow in the first tab. The second tab includes the NPV and IRR calculations.

Note:

- GGF kiln sticks analysis spreadsheet is termed ‘KS’
- GGF margin analysis without kiln sticks is termed ‘MA’

The following notes explain the analysis in the Excel sheet: ‘GGF margin analysis including kiln sticks’:

- i. Harvest rates are increased from 11.38m³/ha to 15m³, with the additional 3.62m³/ha of lesser-known species utilised for kiln stick production
- ii. Expected revenues from kiln stick sales are calculated from ‘KS’ cell F21 multiplied by a factor of 20423/9817 (being the ratio of log volumes in the ‘MA’ compared with ‘KS’)
- iii. Pre-operational costs are zero (these are fixed regardless of log volumes in ‘MA’)
- iv. Extraction costs are costed on the same basis at ‘MA’
- v. Transformation costs are calculated from cells J17, J18 and J19 in ‘KS’ and multiplied by a factor of 20423/9817 (being the ratio of volumes in ‘MA’ to ‘KS’). These are quoted on Peru Soles and (consistent with ‘MA’) an exchange rate of 3.26 to 1.00 USD is used (i.e., the prevailing rate in 2017 when the analysis was done)
- vi. Fluvial and transport costs are \$16/m³ delivered to the sawmill – this is lower overall than ‘MA’ as kiln sticks are sold FOB Iquitos
- vii. General (indirect) expenses are allocated on a pro rata basis by log volume

It should be noted that this analysis is based on GGF’s actual historical costs. In order to calculate the NPV for the Green Gold Loreto (1) project area (206,000ha) it is necessary to introduce a factor that accounts for the logging capacity of the 206,000ha. To do this:

- i. Project area is 206,000ha
- ii. Of this 179,345ha can be logged (i.e. in line with the carbon model)
- iii. The calculations in ‘GGF margin analysis including kiln sticks’ are based upon log volumes totalling 102,169m³ (i.e. the original 81,716m³ plus an additional 20453m³ for kiln sticks)

- iv. At 15m³/ha extraction rate, this volume would come from 6,811 ha (i.e. 102,169/15)
- v. On a 20-year rotation this utilises 136,255ha (i.e. 20*6,811)
- vi. Therefor in order to calculate the project NPV, a factor of 1.32 is utilised (being the ratio 179,345/136,255)

The NPV is \$10,210,157 which is 6.5% more than the NPV of the VCS project (\$9.591million) and therefore within the +/- 20% range.

Auditor Response: The audit team reviewed the updated margin analysis which now integrates kiln sticks costs and revenues. We confirmed that the assumptions and data inputs used in this analysis are accurate and reasonable, based on a review of requested documentation. We confirmed that the NPV was calculated and that the NPV from the most profitable alternative land use activity is timber harvesting under the baseline scenario is approximately 8.4% greater than NPV under the project scenario with the GHG revenue. Thus the opportunity cost score in the Risk Report is accurate. This finding is closed.

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

NIR 21 Dated 24 Dec 2020

Standard Reference: VCS version 4.0; AFOLU Non-Permanence

Risk Tool v4.0;

Document Reference: Non permanence risk scoring tables.xlsx; Green Gold Loreto 1 non-permanence risk report.docx

Finding: Section 2.2.3(1) of the Risk Tool states “Opportunity cost analysis shall be undertaken based on the alternative land uses identified in the project’s additionality assessment (except where (1) applies). The onus is on the project proponent to demonstrate and substantiate what constitutes credible alternative land use scenarios within this area, and shall at a minimum include the activities identified in the baseline scenario.”

In the GGF Margin Analysis.xlsx provided, the most profitable alternative scenario is assumed to be one in which 60k-80k m3 is harvested annually, with 8.17 m3/ha from Tacsha 1 and 11.38 m3/ha from Tacsha 2. A financial analysis of the kiln sticks was also provided. In an email on 9 December 2020, the project team stated “Note that timber volumes for this analysis were based on 11.38m3/hectare – as you know, we planned to increase volumes to 15m3/ha from POA 10. The additional extracted logs would have been destined for kiln stick manufacture. I attach a unit cost analysis for kiln sticks (‘GGF Kiln Sticks’)”

However, in section 4.1.1 of the PD, states “Based on POA10, its most complete forest inventory in terms of species included, which applies its internal minimum DBH list, GGF could take out a volume of 16.3m3/ha. In its business plan and investment memorandum (both will be available at validation) for the expansion and optimisation of its logging business in its ambition to make it profitable while maintaining sustainability the company aimed for an average extraction rate of 15 m3/ha, which is what will be used for baseline modelling. Note this is a conservative extraction rate relative to the legally allowed extraction volume.”

It remains unclear how the kiln stick analysis accounts for the additional volume to be harvested such that this analysis of NPV represents the baseline. It also remains unclear whether the costs and revenues from the kiln sticks have been included in the analysis of opportunity costs as required by the Risk tool. The audit team requests additional information regarding how this analysis of most profitable alternative land use alternative evaluated in the opportunity cost analysis of the Risk Tool represents the baseline scenario presented in the PD.

Project Personnel Response: See NIR 20

Auditor Response: The audit team reviewed the updated margin analysis which now integrates kiln

sticks costs and revenues, such that the volume extracted in the most profitable alternative in the opportunity cost analysis now matches the baseline volume assertion. This finding has been closed.

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

NIR 22 Dated 24 Dec 2020

Standard Reference: VCS version 4.0; AFOLU Non-Permanence

Risk Tool v4.0;

Document Reference: Non permanence risk scoring tables.xlsx; Green Gold Loreto 1 non-permanence risk report.docx

Finding: Section 2.2.3(1) of the Risk Tool states “The opportunity cost analysis shall include a net present value (NPV) analysis, covering the project crediting period, of such alternatives as compared to the project, taking into consideration a conservative estimate of revenue from GHG credit sales and other project revenue streams, and potential price fluctuations of commodities impacted by the project.”

The cash flow workbook shows that the price of VCU grows from \$6.1 in 2021 to \$8 by 2026, where this \$8 is then maintained. The audit team requests evidence that this VCU price represents a conservative estimate of revenue from GHG credit sales.

Project Personnel Response: GGF has factored a VCU sales price of \$6.10/t in 2021 rising at 5% annually and capped at \$8/t from 2026.

This price range is based upon observed transaction prices in the market (provided by GGF’s adviser, Respira International) and supplemented by published data and market reports.

The December 2020 OPIS Global Carbon Offsets Report, published by IHS Markit, confirms a price range of between \$5.50/t and \$7.25/t and a volume-weighted average price of \$6.33/t – i.e., already above GGF’s \$6.10 price point for 2021. (See page 2 of attached report)

There is a clear upward trend in carbon offset prices, with a strong buyer preference for forestry projects and recent vintages. This is illustrated by comparing the OPIS report with Ecosystem Marketplace’s most recent Voluntary Carbon Market review. This is published each December and summarises the market in the previous year (i.e., the 2020 report covers 2019). The 2020 publication shows an average price of \$4.30/t for forestry and land-use credits in 2019 (see page 1). Comparing this with the OPIS report shows a \$2/t price increase between 2019 and 2020 – a 46% gain.

There have been several research reports published in the last twelve months that clearly support the rising price dynamic in the market. We have attached examples from Goldman Sachs and Berenberg.

Given these data and supporting analyses, GGF believes that its pricing projections are conservative.

Auditor Response: The audit team reviewed the documentation provided and we have the following conclusions regarding the assumptions about the price of carbon:

(a) Ecosystem Marketplace (Ecosystem Marketplace 2020 review 2.pdf): Shows the prices for forestry and land use offsets were \$3.4 in 2017, \$3.2 in 2018, and \$4.3 in 2019 (on average). These values are much lower than those included in the financial analysis. Looking more specifically at forestry projects in 2019, the report shows that REDD projects are generally higher priced (average of \$4.21 and \$3.65 in 2019) than the other forestry and land use projects (average of \$2.5). This Loreto 1 project falls under the other forestry and land use projects as it is an IFM project. Looking specifically at regions, the average price per tCO₂e in Peru was about \$3.52, which is much lower than the \$6+ included in the financial analysis.

(b) Berenberg ESG - Page 22 of this report shows the offset price graph which indicates that in 2018 offset prices have actually fallen to above \$3 per tCO₂e which is well below the \$6 included in the financial analysis.

(c) OPIS Report - Page 2 generally shows that the price of offsets have increased, but this report only shows the price for REDD projects, not other forestry projects like IFM. Given the information from the Ecosystem Marketplace Report indicating that other forestry projects have lower average prices than REDD projects, the audit team concludes that these prices are not a conservative estimate of prices of IFM carbon credits.

(d) GS Sustain - The annex shows a brief history of the voluntary carbon markets. It does describe an upswing in the price of carbon but does not specify by project type or location. As indicated in the Ecosystem Marketplace report, these two factors play a big role in the price. Thus it is unclear from this report what a conservative price may be.

Given the above analysis of provided documentation, the audit team concludes that the carbon prices included in the financial analysis for the risk report (Green Gold Carbon Financial Model 2020 v4 (002).xlsx, Row 17) do not represent conservatively projected revenues from the sale of GHG credits. This NIR finding has been closed but see NCR #57.

Project Personnel Response 2: Additional data points provided by email

Auditor Response 2: The audit team clarifies that this finding should have been set to closed as indicated in the findings response.

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

NCR 23 Dated 24 Dec 2020

Standard Reference: VCS version 4.0; AFOLU Non-Permanence

Risk Tool v4.0;

Document Reference: Non permanence risk scoring tables.xlsx; Green Gold Loreto 1 non-permanence risk report.docx

Finding: Section 2.3.2 of the Risk 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. “

Table 6 in the risk report provided gives a community “Less than 50 percent of households living within 20 km of the project boundary outside the project area, and who are reliant on the project area, have been consulted” and applies a risk score of 5. In the comments section it states “conservatively assumes the project won’t be able to consult with 50% of the people.”

However, during a meeting with the project team 1 December 2020, it was indicated that there are no local populations living within or surrounding the project area that are reliant on the project area, thus a community engagement score of 5 is not applicable to the project.

Project Personnel Response: See updated Non-Permanence Risk Report

Auditor Response: The audit team reviewed the updated risk report (VCS-Non-Permanence-Risk-Report-Template-v4.0 GGL1). The community engagement risk has been updated to zero. This finding has been closed. However see finding #59 regarding Risk Report template requirements.

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

NCR 24 Dated 24 Dec 2020

Standard Reference: VCS version 4.0; AFOLU Non-Permanence

Risk Tool v4.0;

Document Reference: Non permanence risk scoring tables.xlsx; Green Gold Loreto 1 non-permanence risk report.docx

Finding: Section 2.3.2 of the Risk 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.”

However, during a meeting with the project team 1 December 2020, it was indicated that there are no local populations living within or surrounding the project area that are reliant on the project area, thus a community engagement mitigation score is not applicable.

Project Personnel Response: See updated Non-Permanence Risk Report

Auditor Response: The audit team reviewed the updated risk report (VCS-Non-Permanence-Risk-Report-Template-v4.0 GGL1). The community engagement risk has been updated to zero. This finding has been closed. However see finding #59 regarding Risk Report template requirements.

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

NCR 25 Dated 24 Dec 2020

Standard Reference: VCS version 4.0

Document Reference: Project Description.pdf;

Finding: Section 3.16.11 of the VCS standard states “The project proponent shall conduct a thorough assessment of the local stakeholders that will

be impacted by the project. The project description shall include information on local stakeholders at the start of the project, including:

- 1) The process(es) used to identify local stakeholders likely impacted by the project and a list of such stakeholders;
- 2) Identification of any legal or customary tenure/access rights to territories and resources, including collective and/or conflicting rights, held by local stakeholders;
- 3) A description of the social, economic and cultural diversity within local stakeholder groups and the differences and interactions between the stakeholder groups;
- 4) Any significant changes in the makeup of local stakeholders over time;
- 5) The expected changes in well-being and other stakeholder characteristics under the baseline scenario, including changes to ecosystem services identified as important to local stakeholders;
- 6) The location of communities, local stakeholders and areas outside the project area that are predicted to be impacted by the project; and
- 7) The location of territories and resources which local stakeholders own or to which they have customary access.”

The PD does not contain any of the required information from section 3.16.11 and thus is not in conformance with the requirements.

Project Personnel Response: Draft text sent by email

Auditor Response: This finding pertains to the PD requirements. An updated version of the PD was not provided thus this finding remains open. Please note that the audit team will be evaluating that each of the 7 components listed in section 3.16.11 are included in the PD. In the draft response provided via email "5. The expected changes in well-being and other stakeholder characteristics

under the baseline scenario, including changes to ecosystem services identified as important to local stakeholders;" are not addressed.

Project Personnel Response 2: See revised PD

Auditor Response 2: The audit team confirmed that a description of the local stakeholder assessment has been provided in section 1.13 of the PD and meets the requirements of sections 3.16.11 of the VCS standard. This finding has been closed.

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

NIR 26 Dated 24 Dec 2020

Standard Reference: VCS version 4.0

Document Reference: Protocolo para Resolución de Conflictos GGF2020.docx

Finding: Section 3.16.18 of the VCS Standard states “The project proponent shall develop a grievance redress procedure to address disputes with local stakeholders that may arise during project planning and implementation, including with regard to benefit sharing. The procedure shall include processes for receiving, hearing, responding and attempting to resolve grievances within a reasonable time period, taking into

account culturally-appropriate conflict resolution methods. The procedure and documentation of disputes resolved through the procedure shall be made publicly available.”

The document Protocolo para Resolución de Conflictos GGF2020.pdf has been provided to the audit team. The protocol lays out a complete plan for receiving, hearing, responding and attempting to resolve grievances through negotiation, mediation and finally arbitration if necessary. However, this procedure is more geared toward the previous operations of the company, related to forestry, and it is not specifically related to this carbon project and the project activities. For instance, there is no indication of how a procedure to address disputes with local stakeholders that may arise during project planning and implementation, including with regard to benefit sharing. The audit team requests additional information regarding the specific procedures for addressing grievances related to the carbon project activities and implementation, including the notion of benefit sharing among the project beneficiaries.

Project Personnel Response: Procedure emailed to SCS team

Auditor Response: The audit team reviewed the document Manual_Quejas_Sugerencias_GGFGroup2020.docx and confirms that it outlines procedures for grievances and redress as related to the carbon project implementation and planning. This finding has been closed.

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

NIR 27 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf;

Finding: The methodology requires the following regarding assumptions around carbon stock change due to illegal extraction in the project scenario: "If the belief is that zero illegal logging will occur within the project boundaries then ex-ante this parameter may be set to zero if clear infrastructure, hiring and policies are in place to prevent illegal logging." Zero emissions are assumed and it is stated in cell B28 of the "Project sequestration" worksheet of the "Green Gold Loreto 1 ER Calculation Spreadsheet, v4" workbook that "No emissions from disturbances and illegal logging are modeled here at this stage." We had a long discussion about this at the end of our 20201211 mtg. Likewise during a discussion with the project team on 18 December 2020, it was indicated that hiring for forest ranger position and patrolling positions would be happening soon. The GGF Peru Gantt Chart.xlsx document indicates that "Commission patrol boats" will also be occurring during Q1 or 2021. Thus it has been indicated that these mechanism will be in place to prevent illegal logging, but the requirements still need to be met at this validation in order to assume zero emissions. The audit team requests additional evidence that "clear infrastructure, hiring and policies to prevent illegal logging are in place or will be in place during this validation."

Project Personnel Response:

Auditor Response: Although this finding was not responded to within the workbook documentation and an explanation in support of this finding were provided including the Plan de Proteccion y Vigilancia GGF 2021.pdf which describes the procedures and policies in place to prevent address the threat of illegal logging. The audit team was also able to confirm during interviews with the project personnel and project stakeholders that forest rangers are in the process of being hired during the first quarter of 2021. This finding has been closed outside the cover of this workbook.

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

NIR 28 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf;

Finding: Section 6.3 of the methodology states “If the proposed project area contains different forest types or forests with different carbon density, stratification must be carried out in order to improve the accuracy and precision of carbon stock estimates.

For estimation of base year carbon stocks, strata must be defined on the basis of parameters that are key variables in any method used to estimate changes in managed forest carbon stocks. Strata will include either forest type, vegetation type and/or target timber species. Based on the availability of data regarding the nature and composition of forest stocks in the project area, stratification will be developed on the basis of either:

- a) Existing vegetation mapping or stratification, where these are documented in the legal right to harvest; or,
- b) Estimates developed from sampling the project area using standard forest assessment protocols specific to the forest region where the project area is located. Baseline stratification is developed ex ante. The project proponent must submit as part of the project documents a detailed description of the stratification adopted for the project area.”

The PD states “The project areas consist of a single relevant stratum for emission reduction calculations: the forest class ‘Bosque de Colina Baja’, according to the Peruvian National Vegetation Map by the Ministry of the Environment (MINAM, 2015). This can be considered a relatively homogenous forest type in the project region, since changes in soil types, topography and climate are minimal.” Also, it was indicated that the loggable area is 179,345 ha (as indicated in cell B7, worksheet “Inputs Baseline” of the “Green Gold Loreto 1 ER Calculation Spreadsheet, v4” workbook). The audit team acquired the Peruvian National Vegetation Map by the Ministry of the Environment (MINAM, 2015) in order to verify the stratification and the loggable area within the forest. However the area of Bosque de Colina Baja within the project area does not appear to match the area of bosque colina baja in the project maps included on pages 21-23 of the PD

The audit team requests the following:

- (1) additional information regarding the process for determining this forest stratification map including whether additional criteria of forest types were used derive the maps
- (2) the spatial file (shapefile, raster) of the stratification layer.

Project Personnel Response:

The following action was performed:

1. Update the maps (Point 02): To prepare and update these maps of forest types of the carbon project of consolidated 01, 02 and San Regis, information from the National Vegetation Map of Peru (MINAM 2015) was used. The information was provided by the Regional Government of Loreto, and is the same as that used by the auditors, with the difference that it was attempted to standardize the smaller areas.
2. Also attached is the Shapefile of the types of forest used for the carbon project of the GGF Group concessions

Auditor Response: The audit team reviewed the shapefile provided (CobVeg_180615_GGFGrup_2020.shp). However, it still remains unclear which Forest types have been included in the project area and which have been excluded. The PD states “The project areas consist of a single relevant stratum for emission reduction calculations: the forest class ‘Bosque de Colina Baja’, according to the Peruvian National Vegetation Map by the Ministry of the Environment (MINAM, 2015). The audit team summed the area classified as Bosque de Colina Baja from the stratification shapefile provided (CobVeg_180615_GGFGrup_2020.shp), and got a value of 173,203 ha. This differs from the 179,345 ha, which is the loggable area (project area) as indicated in cell B7, worksheet “Inputs Baseline” of the “Green Gold Loreto 1 ER Calculation Spreadsheet, v4” workbook. The audit team also summed all the areas labeled as Bosque de terraza alta and Bosque de Colina baja together and got a value of 182,816 ha, which again differs from the loggable project area.

It continues to be unclear exactly how the project team derived the project area from the government maps (MINAM 2015). Thus the audit team requests additional information about the process to develop the stratification map used in this project, for instance what steps were taken or additional data used to "standardize the smaller areas". The audit team also requests the actual stratification shapefile used to create maps. This finding remains open.

Project Personnel Response 2:

Auditor Response 2: No response provided. This finding remains open.

Project Personnel Response 3: Updated maps provided in PD in v9i

Auditor Response 3: The audit team confirmed that that stratification of the project area to include forests in bosque colina baja and bosque alta terraza matches the government forest type stratification (Peruvian National Vegetation Map by the Ministry of the Environment (MINAM, 2015)) as described in section 3.4.3 of the PD. This stratification was used to designate the forest land included in the project area, which the audit team confirmed is in agreement with the maps shown

in section 1.12 of the PD and the project area shapefiles provided (CobVegetal_Conso1_Marz2021.shp, CobVegetal_Conso2_Marz2021.shp, CobVegetal_SanRegis_Marz2021.shp. This finding has been closed.

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

NIR 29 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest

Document Reference: Project Description.pdf; section 1.14

Finding: Section 1.14 of the PD template requires “Identify and demonstrate compliance of the project with all and any relevant local, regional and national laws, statutes and regulatory frameworks.” Section 1.14 of the PD states “Green Gold Forestry is fully compliant with all the relevant regulations. This is demonstrated by the fact that there are no outstanding issues with the Government regulators (OSINFOR). The company’s FSC certification is further evidence that it is fully compliant.”

The audit team reviewed relevant Peruvian law along with the concession contracts (e.g. Tacsha 01, Tacsha 02.pdf) and approved PGMFs (e.g., R.J-004-2020-GRL-GGR-GRDFFS-ODPM), provided to the audit team. The Forestry and Wildlife Law No.29763 (Article 52) states “The holders of forest concessions include, in their management plans or in complementary plans, the carrying out of any forest and wildlife activity compatible with the corresponding zoning or management category.” Additionally, Article 42(e) of this law states that the holders of titles to forest concessions have the right to “Sell or give in guarantee the fruits, products or subproducts, present or future, that are in the approved management plan.”

Section 2.2. of the PGMF (PGMF_GGF_2018_009.pdf) provided for the concession N° 16-LOR-MAY/CON-MAD-2018-009 indicates that this concession has been approved for 3 specific objectives (indicated by X’s next to each objective): (1) Use of wood for processing outside the UMF, (2) Use of waste product of the transformation in the UMF (firewood, coal, broomstick, among others), (3) Use of residues from harvesting (branches, fins, stumps, among others). There are several other potential approval categories that were not checked, including the use of nontimber products, management for conservation purposes, management for ecotourism purposes, ecosystem services, etc. As a result, it appears that the management plan corresponding to this concession contract does not permit the use of the concession for project activities (non-timber products, conservation, ecotourism).

The audit team understands that this PGMF precedes the start of the project, however, it remains unclear whether the implementation of project activities will be in legal compliance. The audit team intends to discuss this topic in greater detail with the appropriate regional officials (Loreto Gore) and/or national officials (SERFOR). However, we would also like to request additional evidence or justification from the project team supporting that the implementation of project activities is in compliance with these requirements of the Peruvian Forestry and Wildlife Law No.29763.

Project Personnel Response: We are in the process of adapting the plan for the Carbon Project. The main difference will be that we will additionally employ Forest Rangers who will have a continual presence in the whole area of the project. They will not act as "policemen" but will have the responsibility of continuous interaction with the communities gathering information and informing about the project. They will install and maintain the physical notices we have around the project and be part of a permanent interaction with the local communities and stakeholders. If there are signs of illegal intensions or activity the Rangers will report back according to our protocol and action will be taken.

Auditor Response: The response to this finding does not seem to totally relate to the finding. The finding pertains to whether the project is in compliance with the Peruvian Forestry law. Forestry and Wildlife Law No.29763 (Article 52) requires that "The holders of forest concessions include, in their management plans or in complementary plans, the carrying out of any forest and wildlife activity compatible with the corresponding zoning or management category." This finding has been responded to through email correspondence: on 25 February 2021, the project team sent 4 PGMFs, 3 of which are recent updates to previous approved plans. These three plans now show that ecosystem services and nontimber forest products are included in the management objectives. However the plans still indicate that there will be harvesting in the project areas, which is not in conformance with the methodology. However, the project team has indicated that there is no intention to carry out harvesting (according to email on 1 March 2021). Thus, the management plans do not correspond to the management that is taking place under the project activities, which is not in compliance with legal Timber forest Concession agreements.

In an email dated 3 March 2021, the project team stated "We did not want to eliminate the logging intention whilst we are validating for the simple reason that if we do not achieve validation we need the option to go back to logging." And we certainly understand not wanting to get locked into an agreement to cease harvesting, if the validation would not be successful.

At the time of validation we, the audit team, must be able to confirm that the project activities will be compliance with Peruvian laws. The issue at hand is that we have not been able to confirm that even if and when the project proponent updates the PGMFs to indicate there will be no harvesting in the concessions in the project area, that these management plans will be approved by SERFOR and/or the regional government and be in compliance with the legal requirements of timber concession contracts. At this time, we have received no indication that SERFOR or GERFOR would even approve such alterations to the management plans to cease harvesting. By ceasing logging operations, the essence of those concession contracts is changed, and the contracts could be potentially denaturalized and returned back to the state. This is a point that was made by the GERFOR representatives we spoke to (Hilda). GGF's own legal analysis conducted by Baker & McKenzie (section 7.8 of GGF Peru Echeconpar concessions legal status Baker McKenzie.pdf) confirms that

“GGF can exploit ecosystem services within the area of the concession, but it cannot avoid the forestry harvesting activities nor eliminate them.” Section 7.9 further indicates the need to have SERFOR and GERFOR, the governing bodies of the concession contracts, to be in agreement with these changes.

Thus in order for us to move forward, the audit team requests:

- (1) Written documentation by the relevant governing bodies that ceasing all timber harvest operations within individual concessions is possible, that such amendments to management plans or the concession agreements themselves would be approved. As your legal analysis states “Indeed, SERFOR is the governing authority in forestry matters; hence, it’s support is key to the approach the Regional Government of Loreto.”
- (2) It has become apparent that this could have implications on the start date of the project, thus we request evidence that such approval (mentioned in item 1 above) could be applied retroactively to the start of the project. As it currently stands the approved PGMFs and corresponding POAs indicate that timber harvesting will occur in the project area both on and after the start date of the project.

Project Personnel Response 2: [Response provided outside the cover of this workbook.]

Auditor Response 2: Responses to this finding were provided outside the cover of this findings workbook in the email on 30 April 2021. The project team provided the following documents (1) Loreto (GERFOR) INFORME LEGAL N027, and (2) Carta N° 049_Opinion legal copy.pdf. The first is the legal opinion from GERFOR (the regional forestry authority in Loreto) and the second document contains the letter GGF wrote to the regional government as well as the response and legal opinion the regional government provided to GGF.

The Letter sent to the regional government from GGF (S/N Reg, N7807), only appears to ask whether complementary activities such as carbon sequestration and extraction of non-timber products may be carried out in the concessions within the project area. The audit team never had concerns about whether these additional activities were permitted or not. Rather the question was whether the complete cessation of harvesting activities is permitted within each individual concession.

Clause 4.1 of the legal opinion from GERFOR states “Se debe tener presente que el objeto principal de los títulos habilitantes detallados en la carta S/N Reg, N7807, es el manejo forestal, enmarcados en contratos de concesiones forestales, por lo tanto la actividad forestal no puede ser desnaturalizado para que se pueda realizar otras actividades de ecoturismo, y aprovechamiento de los servicios de los ecosistemas forestales, y otros ecosistemas de vegetación silvestre, es decir que las actividades conexas pueden realizarse siempre y cuando se siga desarrollando la actividad forestal, para ello el concesionario debe adecuar los planes complementarios a los lineamientos establecidos.” This statement indicates that additional activities (ecosystem services, ecotourism, carbon, nontimber products) can be carried out on timber concessions as long as the forestry activity

continues to be developed. This legal opinion also agrees with the legal analysis previously provided by Baker-McKenzie (GGF Peru Echeopar concessions legal status Baker McKenzie.pdf) which in section 7.8 concludes that "According to the Timber Forest Concession Agreement, GGF can conduct other activities in the timber forest concession, in addition to the use and harvesting of timber, under responsibility, as long as it is approved in the PMGF and PO. Therefore, GGF can exploit ecosystem services within the area of the concession, but it cannot avoid the forestry harvesting activities nor eliminate them." The audit team understands that GGF will continue to develop forestry activities in concessions outside of the project area, but the question remains regarding the individual forest concessions within the project area, and not about the entirety of the GGF concession holdings. In our initial interview with Hilda Moreles from the GERFOR (the regional government forest authority), Hilda indicated that each concession contract is a stand-alone legal agreement and that an individual contract could become denaturalized if the contract's intension (timber harvesting) is not conducted, even if a number of contracts are consolidated for the purpose of submitting a single management plan. Given the response from GERFOR in the legal opinion as well as the legal analysis from Baker-McKenzie, it appears that the concession contract would be denaturalized if all timber operations were to cease. However, the audit team would like to conduct a further interview with a legal analyst from GERFOR and potentially from SERFOR (the national forestry authority) for more clarity on this issue. This finding remains open.

Project Personnel Response 3: [Finding addressed outside the cover of this workbook]

Auditor Response 3: The audit team conducted an interview with a legal specialist from the regional forestry agency (GERFOR), Sr. Lagunas. He explained that it is within the legal uses of the forest concession to cease harvest operations or not conduct harvest operations, as long as the approved forest management plan (PGMF) and operating plan (OP) corresponds to the forest management (or lack thereof) being conducted in the concession land. GGF has indicated that they are in the process of updating the management plans to correspond to the lack of harvesting and indicate that they will be using the land for ecosystem services (carbon), ecotourism, and nontimber products, exclusively. The audit team will issue a forward action request in the validation report to signal to the verification team to confirm that the PGMFs and PO are in place have been approved. This finding has been closed.

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

NCR 30 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Sections 6.2 and 8.1; VCS version 4.0, Section 3.17

Document Reference: Project Description.pdf, Section 3.4

Finding: The procedures for determining the baseline scenario in the methodology require that the “historical baseline scenario” approach must be selected if a certain three criteria can be met, and that the “common practice baseline scenario” approach must be selected in all other cases.

The PD states in Section 3.4.2 that “Historical records that indicate that the historical management surpasses financial barriers by providing above average financial returns... do not exist, as GGF has not yet achieved overall profitability”. Given this assertion, the PD correctly states that “the Common Practice data pathway must be applied”. However, the PD goes on to state the following: “In the case of this project it is not possible to use a reference area, as the parameters to be applied to GGF’s Timber Harvest Plan and Timber Harvesting Schedule cannot be derived from other logging companies. Sharing information on their commercial practices is certainly not common practice between logging companies in Loreto! In addition, GGF is the only FSC-certified operator in Loreto and is striving for sustainable forestry practices. It is highly unlikely that any operators in Loreto will be applying comparable forest management practices. GGF’s Timber Harvest Plan and Timber Harvesting Schedule will therefore be compiled from a mixture of legal requirements for forest management and practices that are in line with GGF’s company values. This results in a more realistic baseline scenario than using a reference area, even if common practice information could be extracted from it.”

The requirements in Section 6 of the methodology pertain to the determination of the baseline scenario and, therefore, are not among the criteria and procedures that can be deviated from, in accordance with Section 3.17 of the VCS Standard. Therefore, these procedures must be complied with in full. Regarding concerns about information availability, the audit team notes that the methodology states in Section 8.1 that “Where data is not readily identifiable as reflecting common practice, the responsible forest department, or another equivalent institution, must confirm that the value in question is considered as being common practice in the region”.

The audit team finds that the requirements for the common practice baseline scenario, as set out in Section 6.2.2 of the methodology, have not been fulfilled. Project personnel have opted to establish the baseline (and, more specifically, the mean volume of merchantable timber to be extracted in each entry under the baseline scenario) following an approach that does not reflect the requirements for either the historical baseline scenario approach or the common practice baseline scenario. As set out in Table 2 of the PD, it is assumed that 15 cubic meters per hectare would be harvested in each entry under the baseline scenario. The preponderance of available evidence, based on interviews and review of Section 2 of Green Gold Forestry Peru SA’s business plan, suggests that a yield of 15 cubic meters per hectare has not been consistently achieved in the past (and, therefore, would not have been selected under the historical baseline scenario approach) and that this yield has also not

been achieved in one or more reference areas that would be selected under the common practice baseline scenario approach.

Project Personnel Response: Green Gold Forestry Peru's historical records of forest management extend back to 2010 and demonstrate that the company has complied with all local and national forest legislation. GGF is unique as the only Forest Stewardship Certified company in Loreto, Peru's largest department covering one third of its territory.

GGF's fully-costed business plan is based upon proven extractable log resources of at least 15m³ per hectare per year and utilises GGF's actual price and market data from its past operations. The financial return is conservatively projected at 17.2%, comfortably exceeding GGF's hurdle rate of 10%.

GGF's business model is aligned with the common practice of other leading FSC-certified companies in the western Amazon region. The recommended best practice is to maximise yields by extracting lesser-known species alongside better-known woods and, by doing so, reduce over-exploitation of selected species thereby preserving the natural balance of diversity of the forest as well as improving business economics. (for example, see: About LKTS (lesserknowntimberspecies.com), Tropical Timber - STTC (europeansttc.com), and Guide to Lesser Known Tropical Timber Species | WWF (panda.org))

We have managed to source public data from three FSC-certified companies in the region that operate similar business models to GGF and in similar forest types:

☐ Agrocorrex is in Acre, Brazil, which borders Loreto. According to its website, Agrocorrex Madeiras do Acre (AMA) extracts 150,000m³ logs annually from 5,860 plots (25.6m³/ha)

<http://www.agrocorrex.com/>

☐ Consorcio Forestal Amazonico, based in Ucayali, operated 160,650 ha production concessions. These concessions are lowland and dissected by rivers (like GGF's). A 30-year harvest cycle is used, indicating 5,355ha each year. http://fsc.org.pe/blog/wp-content/uploads/2011/11/RESUMEN_DE_PLAN_DE_MANEJO_CFA.pdf . We have managed to find published data on harvest volumes in 2006, that indicate total commercial volumes of 78,165m³ on a 4,100ha plot (19m³/ha) <https://es.slideshare.net/BioModus/plan-operativo-anual-2004-consorcio-forestal-amazonico>

☐ Precious Woods is located near Manaus (it also has an operation in Gabon) and harvests a maximum of 15-20m³/ha (Precious Woods > biodiversity-forest-management). Like GGF, Precious Woods harvests both well-known and lesser-known species as a sustainability strategy and there is considerable overlap of harvested woods with GGF A181179_01_PHW_Datenblaetter_EN_Cs6.indd (preciouswoods.com). According to its most recent annual report (see p.20 Annual Report_PdfWeb EN_2019.pdf (preciouswoods.com)) Precious Woods Brazil harvested 156,100m³ in 2019 from its 370,000ha (out of total holdings of 472,576ha), which is harvested on a 35-year cycle (14.7m³/ha).

GGF is unique in Loreto for its FSC certification and is alone in its approach to utilising lesser-known tree species. There is considerable evidence of illegal logging practices in the vast majority of other forest concessions in Loreto (for example, see <https://www.nature.com/articles/srep04719>), and most focus on a limited number of high-value (and often CITES-listed) species. Indeed, this is the business model, legal or not, of most other concessionaires in Peru.

The management practices of companies in the region, like those referenced above, are representative of the model of forest management in GGF's business plan, and these provide the common practice for GGF to be compared with.

Auditor Response: The audit team has reviewed the response provided and confirms that a good faith effort has been made to model baseline harvest based on common practice. It appears that option 2 in section 6.2.2. of the methodology has been selected to develop the common practice. This NCR has been closed, but see NIR #56 below.

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

NCR 31 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 5.4

Document Reference: Green Gold Loreto 1 ER Calculation Spreadsheet, v4

Finding: The methodology states the following: “The project proponent may choose to exclude to account for GHG emissions related to the combustion of fossil fuels (please refer to Section 8.1.5), which is conservative. If the project proponent decides to include accounting for GHG emissions related to fossil fuel combustion, then the specific GHGs must be tested for significance, using the most recent version of the CDM Tool for testing significance of GHG emissions in A/R CDM project activities”. The CDM “Tool for testing significance of GHG emissions in A/R CDM project activities” is intended to be used in a different context, and so some subjective interpretation of the tool is required in order to adapt it to the use specified by the methodology. Nonetheless, the audit team believes that, under any circumstances, the analysis is to be carried out in respect of the entire crediting period (based on interpretation of the statement “Recalculate all GHG emissions...” on page 2 of the tool), not simply on a year-by-year basis, and any conclusions regarding significance must hold for the entire crediting period.

In row 373 of the “Baseline emissions” worksheet in the “Green Gold Loreto 1 ER Calculation Spreadsheet, v4” workbook, the test of significance is carried out in respect of specific years, but not in respect of the entire crediting period. While the results show that GHG emissions related to fossil fuel combustion are significant in the first two years of the project, such emissions are insignificant when the entire crediting period is considered. When calculating the relative contribution of this source for the entire crediting period, using the Excel formula =SUM(C372:V372)/SUM(C374:V374) in the “Baseline emissions” worksheet, the audit team obtained a result of 2%. Therefore, the significance test has not been undertaken in accordance with the CDM “Tool for testing significance of GHG emissions in A/R CDM project activities”, and an incorrect outcome has resulted.

Project Personnel Response: Green Gold Loreto 1 response to NCR 31:

There is no underlying requirement in the VCS Standard v.4.0 or in the VCS Methodology Requirements v 4.0 that below de minimis baseline emission sources must be excluded. The general approach to below de minimis exclusion is that this may be done, strongly suggesting that this is a provision designed to help project developers avoid impractical or excessively expensive data collection to quantify a non-significant emission source. This is exactly what the ‘CDM Tool for testing significance of GHG emissions in A/R CDM project activities’ was designed to do, but with regards to project emissions, not baseline emissions. Why the methodology developer has included a requirement that fossil fuel baseline emission sources may only be included if above de minimis is beyond our understanding, other than that this, as stated, will be conservative. However, conservatism is designed to avoid over-estimation of GHG benefits, not to deliberately underestimate. In our view, here the methodology acts against the spirit of the use of de minimis, and it prohibits the inclusion of an emission source that a project developer might like to include, because

the data are there and in absolute figures this results in a significant number of emission reductions.

We point out that the 'CDM Tool for testing significance of GHG emissions in A/R CDM project activities' provides no guidance on determining de minimis over a time period in which changes may occur to the relative portions of emissions sources in the baseline. Again, this is not what it was designed to do. The Tool is therefore open to interpretation on whether this determination should be done, and if so, how.

The audit team's interpretation is based on the wording "Recalculate all GHG emissions...". This is followed by "... into CO2 equivalents using the GWP impact factors as decided by COP3 or as amended later." These are instructions for the conversion of emissions into CO2-equivalents. Whether the word 'all' refers to all kinds of non-CO2 GHG emissions or to all emissions across the project crediting period is not specified and open to interpretation.

We believe that there is nothing in the Tool that favours one interpretation over the other. Both interpretations could plausibly be applied. However, considering the above discussion, we strongly believe that our interpretation is in the spirit of how de minimis is meant to be used in the VCS, and how it has been used historically in the VCS and the CDM, while still adhering to the letter of the methodology. We also believe that the audit team's interpretation is not in this spirit.

Auditor Response: The audit team understands the interpretation that one objective for the CDM tool is to avoid impractical data collection of every single potential emission source. However, another purpose of the tool is to achieve the VCS principle of conservativeness as listed in section 2.2.1 of the standard which states "Use conservative assumptions, values and procedures to ensure that net GHG emission reductions or removals are not overestimated. Note – Accuracy should be pursued as far as possible, but the hypothetical nature of baselines, the high cost of monitoring of some types of GHG emissions and removals, and other limitations make accuracy difficult to attain in many cases. In these cases, conservativeness may serve as a moderator to accuracy in order to maintain the credibility of project and program GHG quantification." By including fossil fuel emissions from harvest operations in the baseline scenario, the emissions will be greater than thus less conservative. As previously mentioned, section 5.4 of the methodology states "The project proponent may choose to exclude to account for GHG emissions related to the combustion of fossil fuels (please refer to Section 8.1.5), which is conservative. If the project proponent decides to include accounting for GHG emissions related to fossil fuel combustion, then the specific GHGs must be tested for significance, using the most recent version of the CDM Tool for testing significance of GHG emissions in A/R CDM project activities. If the application of the tool leads to the conclusion that the emission source is insignificant², then this GHG must be neglected."

As the original finding stated, some subjective interpretation of the tool is required in order to adapt it to the use specified by the methodology. While you indicate that "there is nothing in the Tool that favours one interpretation over the other. Both interpretations could plausibly be applied", the audit team reverts back to the principle of conservativeness in such matters of interpretation, especially in

this situation where the methodology references the need to maintain conservativeness regarding the inclusion or exclusion of fossil fuel emissions in the baseline. As a result, the audit team upholds our initial finding that the analysis is to be carried out in respect of the entire crediting period (based on interpretation of the statement “Recalculate all GHG emissions...” on page 2 of the tool), not simply on a year-by-year basis, and any conclusions regarding significance must hold for the entire crediting period. When calculating the relative contribution of this source for the entire crediting period, using the Excel formula $\text{=SUM(C372:V372)/SUM(C374:V374)}$ in the “Baseline emissions” worksheet, the audit team obtained a result of 2.91%, indicating that fossil fuel emissions must be excluded from the baseline as it is below the 5% threshold of the total project GHG benefits. This finding remains open.

Project Personnel Response 2: Emission reductions from baseline fossil fuel combustion are now excluded. All relevant inputs and calculations on this emissions source have been deleted from the ER calculation workbook (v6). Relevant edits have been made to the PD (v9), including removal of Methodology Deviation #8 and reference to monitoring of fuel consumption in the monitoring plan.

Auditor Response 2: The audit team confirmed that the emissions from baseline fossil fuel combustion are now excluded from the calculations of baseline emissions (Green Gold Loreto 1 ER Calculation Spreadsheet, v6.xlsx) which is now in conformance with the methodology and the significance testing. We also confirmed that most references to fossil fuel emissions such as Methodology Deviation #8 and monitoring of fuel consumption have been removed from the PD. However, Section 4.1(8) indicates that “baseline emissions calculated in this PD include...8. Emissions from fossil fuels burned in baseline harvesting practices.” Due to this remaining reference to the inclusion of emissions of fossil fuel emission sources in the baseline, this finding remains open.

Project Personnel Response 3: Point 8 has now been removed from Section 4.1

Auditor Response 3: Confirmed that any discussion of the inclusion of fossil fuel emissions in the baseline have been removed from the PD. This finding has been closed.

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

NCR 32 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 8.1.3

Document Reference: Green Gold Loreto 1 ER Calculation Spreadsheet, v4

Finding: The methodology requires that the change in carbon stock of extracted wood products, once summed across species in Equation 8, is allocated to “anticipated end use of the extracted timber”. The methodology clarifies that “It is acceptable practice to assign gross percentages of volume extracted to wood product classes on the basis of local expert knowledge of harvest activities and markets.” Equations 9-11 are then implemented to calculate the carbon stored in wood products that are assumed to be retired between 3 - 100 years after harvest based on the factors for the parameters WW(k), SLF(k) and OF(k) as provided in the methodology.

The corresponding calculations, as implemented in the workbook “Green Gold Loreto 1 ER Calculation Spreadsheet, v4”, do not follow this procedure. Rather, the calculation approach in “Green Gold Loreto 1 ER Calculation Spreadsheet, v4” involves determining that a certain percentage of harvested volume is “Waste and short-lived fraction” and a certain percentage is “Long-lived products”, as indicated in cells B46 and B47 of the “Inputs Baseline” worksheet, and directly calculating emissions in cells B49 and B50 of the same worksheet. The calculation process undertaken is not in conformance with the methodology.

In reviewing the calculation process, it has been unclear to the audit team whether the non-conformance to the methodology described above is, in fact, a methodology deviation (i.e., it has been unclear whether the methodology has been intentionally deviated from or simply not followed). If a methodology deviation has been intentionally selected, this finding will be closed. However, please note that the requirements in the VCS rules pertaining to methodology deviations (e.g., as set out in Section 3.17 of the VCS Standard) will then apply.

Project Personnel Response: Deviation #9 has been added to Section 3.6 to deal with the deviated method of calculation, using the more accurate historical data on wood products and their recovery rates from GGF's sawmill.

Auditor Response: The project team indicated that this portion of the methodology was intentionally deviated from. As a result, this finding has been closed and Deviation #9 will be reviewed against section 3.17 of the VCS standard.

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

NCR 33 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 8.1.6

Document Reference: Green Gold Loreto 1 ER Calculation Spreadsheet, v4

Finding: Equation 26 of the methodology requires that the per-hectare factor for “Carbon sequestration resulting from forest regrowth after timber harvest in stratum i in land parcel p” be multiplied by the “Cumulative area harvested until time t*”. However, in the worksheet “Baseline emissions” of the workbook “Green Gold Loreto 1 ER Calculation Spreadsheet, v4”, the factor for “Carbon sequestration resulting from forest regrowth after timber harvest in stratum i in land parcel p” is multiplied by only that portion of the area harvested that excludes areas of roads and log decks (e.g., as calculated in row 14 for year 1). This is not in conformance with the requirements of the methodology.

Project Personnel Response: See revised calculation: Regrowth is now also calculated on the areas of infrastructure (roads, log decks, etc)

Auditor Response: The audit team reviewed the revised workbook and it still appears that the regrowth is only calculated on the logged areas and not the infrastructure (roads + Decks (log landings). For example, cell C14 (forest regrowth in year 1) in the sheet Baseline emissions is the product of "areas to be logged"(cell F3) and the recovery rate from Rutishauser et al. 2015. This finding remains open.

Project Personnel Response 2: On the call on Friday 19 March we clarified that regrowth is now also calculated on areas of infrastructure. We demonstrated this to be the case in the ER calculation workbook.

Auditor Response 2: The audit team confirms that during a call on 19 March 2021, the project team demonstrated that the regrowth was actually also being calculated on the areas of infrastructure as the infrasture area was already included in the total area. This finding has been closed.

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

NCR 34 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 8.1.6

Document Reference: Green Gold Loreto 1 ER Calculation Spreadsheet, v4

Finding: The methodology requires that Equation 24 be used to calculate “The net change in carbon stock... [for] the years 2 – 10 since harvest in the baseline” and that Equation 25 be used to calculate “The net change in carbon stock [for] the years 11 – 20 since harvest in the baseline”. In the “Baseline emissions” worksheet in the “Green Gold Loreto 1 ER Calculation Spreadsheet, v4” workbook, Equation 24 is implemented for the years 2-11 since harvest in the baseline (i.e., it is implemented for a full 10 years after harvest, instead of the nine years since harvest as required by the methodology).

Project Personnel Response: the ER calculations have been adjusted and are now in conformance with the equations in VM0010

Auditor Response: The audit team confirmed that equation 24 of the methodology has now been correctly implemented in the calculations workbook (v5 updated). This finding is closed.

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

NIR 35 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 9.1; VCS version 4.0, Sections 2.2.1 and 3.1.1

Document Reference: Project Description.pdf, Section 5.1

Finding: Section 3.1.1 of the VCS Standard states that “Projects shall be guided by the principles set out in Section 2.2.1”. The principle of “conservativeness”, as set out in Section 2.2.1 of the VCS Standard, requires the following: “Use conservative assumptions, values and procedures to ensure that net GHG emission reductions or removals are not overestimated.”

The methodology states, regarding data and parameters available at validation, that “In choosing key parameters or making important assumptions based on information that is not specific to project circumstances, such as in use of existing published data, the project proponent must follow a conservative approach. That is, if different values for a parameter are equally plausible, a value that does not lead to over-estimation of net anthropogenic GHG removals by sinks must be selected.”

In the parameter table for the parameter RGR(i), it is indicated that “Regrowth rate must be calculated from either data generated in a reference area using measurements of timber volume in a chronosequence of replicated sample plots; or published data on forest growth after timber harvest of the same forest type within the same region as the project; or the IPCC default values for aboveground net biomass growth in natural forests”, followed by a footnote referring to “IPCC Guidelines for National Greenhouse Gas Inventories(2006),Table4.9”.

In Section 5.1 of the PD, it is indicated that a value of 0.86 is used for this parameter and that the “source of data” is Rutishauser et al (2015), with the following justification: “Rutishauser et al (2015) give the best (and only, to our knowledge) data on post-harvest tree carbon stock recovery for managed Amazonian forests.” However, it is important to point out that Rutishauser et al. never presented information that could be directly used to calculate the post-harvest recovery rate. Rather, they presented information that could be used to predict the number of years from the time of harvest to the complete recovery of pre-harvest carbon stocks, and this information has been used by project personnel to estimate the post-harvest recovery rate as a function of the estimated carbon stock loss. While the estimation procedure appears professionally responsible, it must be acknowledged that such estimation procedures goes outside the scope of anything discussed or recommended in the publication by Rutishauser et al. Furthermore, the calculation of baseline emissions is very sensitive to the variation in the output of the calculation of this parameter, and so this parameter is of critical importance in the quantification of GHG emission reductions.

The values for parameter RGR(i) in Table 4.9 of Volume 4, Chapter 4 of the IPCC Guidelines for National Greenhouse Gas Inventories (2006) indicate a value of 3.1 tons of dry matter per hectare (1.55 tC/ha) for tropical rainforest of over 20 years of age in South America. While the values from the IPCC Guidelines are, admittedly, global default values, it is somewhat eyebrow-raising to see that the value provided in Table 4.9 is almost twice as high as the value calculated by project personnel

from Rutishauser et al.

Since the value used by project personnel is so much lower than the IPCC default value and given the requirement of the methodology that “if different values for a parameter are equally plausible, a value that does not lead to over-estimation of net anthropogenic GHG removals by sinks must be selected”, please provide further evidence to support the soundness of the calculated value of 0.86 tC/ha, including specific evidence to support the assertion that this value is more plausible than the default value provided in Table 4.9 of Volume 4, Chapter 4 of the IPCC Guidelines for National Greenhouse Gas Inventories (2006).

Finally, please provide additional justification for why the calculation of this value excludes the 4.31 tC/ha emissions from roads and log decks (as calculated in cell F18 of the worksheet “Inputs Baseline” of the workbook “Green Gold Loreto 1 ER Calculation Spreadsheet, v4”). In an email received by the audit team on 14 December, project personnel stated that “The calculation correctly only considers carbon stock loss that has the potential to regrow, i.e. not the permanent loss from the establishment of infrastructure in cell F18.” However, in the experience of the audit team, biomass regrowth on forest roads and log decks can occur quickly following logging in the region in which the project is located, and it seems that, with entries only taking place every 20 years, there would be significant potential for regrowth on roads and log decks. (Please also keep in mind that “Emissions through subsequent forest re-entry” are conservatively excluded from the baseline modeling, per Table 3 of the methodology.) Therefore, it is questionable whether the decision to exclude roads and log decks from the calculation adheres to the principle of “conservativeness”, as defined above.

Project Personnel Response: Why does the calculation of the Regrowth Rate value exclude the 4.31 tC/ha emissions from roads and log decks in Cell F18 of the ER calculation spreadsheet?

This was done because we researched possible regrowth on these completely cleared, compacted and graded surfaces. We found the following passage in Hawthorne et al (2011) – attached to this response:

“Loading bays and roads are completely cleared of vegetation, and the soil often becomes very degraded through compaction, and they show poor regeneration. However, because they are reused each cycle, and one or two will suffice for a large logging compartment, their impact is perhaps more minimal than that of the skid trails and felled tree gaps (Hawthorne, 2003). Skid trails are therefore the focus of ‘regeneratable’ damage (FAO, 1977, 1980, 1983; Hawthorne, 1993; Heinrich, 1978) and the regeneration of skid trails in particular is covered e.g. by Bonnell et al., 2011; Dickinson et al., 2000; Guariguata & Dupuy, 1997; Pancel, 1993.” (page 1)

This implies that roads and loading bays (or log decks) are not considered ‘regeneratable damage’. This makes sense, because they start from zero biomass, whereas regrowth in forest with logging damage (including skid trails) starts from 83% of original biomass.

Please note that we do not include skid trails in our area calculation for roads.

However, the above also implies that the audit team is correct that some regeneration on fully denuded areas evidently does take place after abandonment. In the interest of conservativeness we will therefore include de biomass loss on roads and log decks (cell F18) in the calculation of the Regrowth Rate in cell B15. This increases the calculated Regrowth Rate to 1.02 tC/ha/yr.

Why is the application of the recovery time after logging as a function of carbon loss from logging, derived from Rutishauser et al (2015) more plausible and more accurate to calculate forest regrowth rate after logging than the application of the IPCC default factor for Neotropical forest growth as given in Table 4.9 of the IPCC guidelines (2006)?

1. The IPCC factor references Malhi et al (2004), which we attach to this response. The highlighted text in the Methods section of the paper clarifies that this paper only calculates coarse wood productivity, not net biomass accumulation. In other words, it seeks to establish how much of net primary productivity ends up in coarse wood biomass growth, without subtracting losses from mortality. The use of this figure for the purpose of calculating regrowth after logging, or even, for that matter, carbon sequestration in unlogged forests in the project scenario, is therefore erroneous. The figure we quote from literature for the latter purpose is 0.52 tC/ha/yr, which is one third of the IPCC default value given. We interviewed Prof. Malhi when we researched the rate of carbon sequestration in unlogged forests to apply in the project scenario and he confirmed that 0.5 tC/ha/yr is a correct value to apply.

2. We should expect some increased carbon accumulation in forests after logging, as gaps provide light and space for remaining trees to grow faster. Since our model indicates that only some 17% of carbon stocks are lost from the forest as a result of logging, an doubling from 0.5 tC/ha/yr to 1.02 tC/ha/yr after logging (which also includes road areas, as discussed above) therefore seems more plausible than an increase to 1.55 tC/ha/yr (which was not measured in logged forests, does not include losses from mortality, and does not include road areas).

The audit team commented in their finding: “However, it is important to point out that Rutishauser et al. (2015) never presented information that could be directly used to calculate the post-harvest recovery rate. Rather, they presented information that could be used to predict the number of years from the time of harvest to the complete recovery of pre-harvest carbon stocks, and this information has been used by project personnel to estimate the post-harvest recovery rate as a function of the estimated carbon stock loss. While the estimation procedure appears professionally responsible, it must be acknowledged that such estimation procedures goes outside the scope of anything discussed or recommended in the publication by Rutishauser et al.”

Indeed, the Rutishauser paper does not discuss or recommend our particular use of its results. But why is this relevant? The paper by Malhi et al (2004) that is the source for the IPCC default value also does not discuss or recommend the use of its result to quantify post-logging biomass recovery. In the Rutishauser paper we have a published source that provides applicable and specific information on the recovery time of Amazonian managed forests after logging. It clearly concludes that the best

predictor of recovery time is carbon loss, regardless of location, climate, soil type, etc. In other words, it applies to our situation. It thus falls in the category ‘published data on forest growth after timber harvest of the same forest type within the same region as the project’. And it gives us a “professionally responsible” way to calculate the recovery rate from carbon loss. (By the way, in their supplemental information Rutishauser et al do spell out the obvious relationship between recovery rate, recovery time and carbon loss, which is the same we applied: recovery time equals carbon loss divided by recovery rate. We can send this if required).

In contrast, methodology developers allow the use of IPCC default values to offer a last resort to project developers who cannot find more accurate data. However, the flip side to a widely applicable default value is that it is often more inaccurate in a specific context. The use of context-specific data is therefore inherently more accurate if it can be shown that the data is applicable to the context. If so, it is then also inherently more plausible than the IPCC default. Therefore, even though the IPCC default is more conservative it should not be used, because it is less accurate and less plausible. As we argue in our response to NCR31, conservativeness is a tool, not a goal in itself.

In summary, we argue that the use of the Rutishauser function to calculate the post-harvest regrowth rate is more context-specific, more plausible and more accurate than the IPCC default value, and that it is the best way we have available to determine this key parameter. In addition, the use of the IPCC default value would in fact be incorrect for this specific use.

Auditor Response: The audit team appreciates this indepth explanation. We have reviewed the updated calculation of regrowth rate (workbook v5 updated) which now includes regrowth on areas cleared for infrastructure and therefore the value has increased substantially to 1.02 tC/ha/yr from the previous iteration of the workbook. We also reviewed the Methods section of the Malhi et al. 2004 paper which explains that the quantification of regrowth rate in that paper does not consider loss from mortality. The methodology requires that the regrowth rate be for the "aboveground net biomass growth in natural forests" thus by not subtracting out any losses of tree mortality, the values in Malhi et al. 2004 are gross regrowth rates, not net. Likewise, we reviewed the Rutishauser supplemental information which provides details on how to use the information in the paper to calculate post-harvest recovery rate. We determined that the calculation applied by the project team is sound and in line with procedures outlined in the supplement. As a result, the audit has determined that the calculation of regrowth rate with the inclusion of roads and log decks is now in conformance with the methodology. This finding has been closed.

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

NIR 36 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 6.2.2

Document Reference: Project Description.pdf, Section 5.1

Finding: It is stated in Box 1 that “The planned timber harvesting schedule will be submitted by the project proponent as part of the project documents.” There are seven items listed in Box 1 that must be part of the timber harvesting schedule. It appears that the timber harvesting schedule was intended to be included under the heading of “Timber Harvesting Schedule” in Section 3.4.4 of the PD. In many cases, the required information has been provided. However, the following information is either not provided or is incompletely provided in the PD:

- Regarding item (4), which requires “The maximum and minimum diameters at breast height (DBH), at stump and at top for tree harvesting”: An attempt was made to provide information responsive to this requirement is provided in Table 3 of the PD. However, the information provided does not clearly specify the “maximum and minimum diameters at breast height (DBH), at stump and at top for tree harvesting” in English. This is partly due to the Spanish-language headers for the table, partly due to the fact that only information pertaining to minimum DBH is provided (as opposed to the other requested information) and partly due to the fact that, as disclosed by project personnel, some of the information provided in the table is erroneous (e.g., the table suggests that the minimum allowable DBH used by the project proponent is lower than the minimum allowable DBH required by Peruvian law for species #26).

- Regarding item (6), which requires “The fraction of merchantable timber volume from clearing of forest roads, skidtrails and log landings that is to be processed into wood products”: The required fraction is not directly provided.

- Regarding item (7), which requires “The total volumes or fractions to be harvested, broken down by categories of wood products defined as sawnwood, wood-based panels, other industrial roundwood, paper and paper board, and other”: The total volumes or fractions to be harvested, broken down by categories of wood products defined by the methodology, have not been directly provided.

Project Personnel Response: - Regarding item (4): Peruvian forestry regulations only stipulate a minimum DBH for tree harvesting, not a maximum DBH, nor a minimum or maximum diameter at stump or at tree top. Therefore, these parameters have not been included in Table 3.

- Regarding item (6): The text in item (6) of the Timber Harvesting Schedule now includes: “the fraction is therefore 1, or 100%”

- Regarding item (7): see methodology deviation #9, Section 3.6

Auditor Response: Regarding item (3): The audit team confirmed that there is no maximum cutting diameter or minimum or maximum diameter at stump or tree top. However, for clarity and to meet the requirements of the methodology, this must be stipulated in the PD. The audit team confirmed that

items 6 and 7 have been addressed in section 3.4.4 of the PD. This finding remains open, though only for item (3).

Project Personnel Response 2: Section 3.4.4 point #4 has been edited to include text on the required diameters not being prescribed by Peruvian forestry regulations.

Auditor Response 2: Confirmed that section 3.4.4(#4) of the PD (v9) was updated to clarify that there are no required maximum cutting diameters in Peru. This finding has been closed.

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

NIR 37 Dated 24 Dec 2020

Standard Reference: VCS version 4.0

Document Reference: Project Description.pdf, Section 3.6

Finding: Section 3.17.2 of the VCS Standard requires that “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”.

It is unclear to the audit team whether or not methodology deviation 1, in Section 3.6 of the PD, will negatively impact the conservativeness of the quantification of GHG emission reductions or removals or, if the deviation may negatively impact the conservativeness of the quantification of such quantification, whether it results in increased accuracy.

Had volume been directly calculated with Smalian’s formula using measurements of merchantable top diameter as directly measured in the field, it could be clearly stated that this results in increased accuracy of quantification, relative to the estimation of volume from DBH and total height. However, from reviewing the PD, it seems that Smalian’s formula has been used to calculate the volume of a given tree assuming it is perfectly cylindrical in form, and the result is multiplied by a form factor of 0.65 to estimate the actual volume of a tree. The accuracy of the volume estimate, then, depends in large part on how accurately the form factor is able to take into account the taper of individual trees.

Given the above, please provide evidence that methodology deviation 1 does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals, except where they result in increased accuracy of such quantification.

Project Personnel Response: Text has been added to Section 3.6 Deviation #1 to demonstrate that this deviation leads to a conservative estimation of baseline emissions compared to VM0010.

Auditor Response: The audit team reviewed the updated text for Methodology deviation #1 in the PD (v8). The deviation now states "Applying Benitez Romero’s best fit equation (Model MV2) to calculate the commercial volume of each tree in POA10 results in a consistently higher volume (59,085 m3 in 3,000 ha) than estimated using the proposed deviation (47,606 m3)." The project team then provided Data_Censo_POA10_Tacsha1.xlsx which contains the calculated volumes of POA10 using the Benitez Romero best fit equation (, as well as the workbook GGF POA 10 invent volumes_Densidad.xlsx which shows the volumes calculated using the Smalian formula with form factor of 0.65. However, has been made clear that an analysis of the volume calculated using allometric equations has been carried out to determine if the use of the Smalian's formula was more conservative than the use of the allometric equations. This finding has been closed.

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

NIR 38 Dated 24 Dec 2020

Standard Reference: VCS version 4.0

Document Reference: Project Description.pdf, Section 3.6

Finding: Section 3.17.2 of the VCS Standard requires that “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”.

In order to allow the audit team to assess whether or not methodology deviation 3, in Section 3.6 of the PD, will result in increased accuracy of the quantification of GHG emission reductions, please provide the following information:

1. Since LiDAR data typically is well-positioned to provide information regarding tree height but does not directly provide information regarding volume or biomass, please provide detailed information regarding how biomass is to be estimated from LiDAR data.
2. Please clarify whether the approximately 30 “field plots”, as mentioned in the PD, will be used to calibrate the biomass prediction process or to estimate its uncertainty.
3. Please provide more information regarding how uncertainty will be quantified, as required by Section 8.4.1.1 of the methodology.

Project Personnel Response: Text of Section 3.6 deviation #3 has been updated to show how the deviation affects equations in Section 8.2.

Text in Section 5.3.7 has been updated.

Appendix 2 has been added to respond to this NIR.

Auditor Response: The audit team reviewed Section 3.6 and Appendix 2 and while much of the requested information has been provided, it has resulted in additional questions regarding the approach. For instance, Appendix 1 states "Next, these LiDAR height estimates will be converted to aboveground biomass (AGB) using forest inventory data from field plots of a similar size (or larger, e.g. 1 ha field plots, cut up into sections with similar area to the LiDAR footprints). During the project, once allowed by COVID-19 related restrictions, we will collect new field plots within the project area, specifically designed for calibrating and validating our carbon stock models. " Later in appendix 2 it states "And once fieldwork is possible, a set of 30 new field plots (as described on page 36). These field plots will be 0.5 hectare in size, and located under GEDI footprints already collected within the last 6 months, such that a direct relationship can be built between the AGB in these footprints and GEDI-estimated tree height. "

Thus two different sizes of field plots are specified. The audit team notes that both a 0.5-ha or 1-ha

field plot are quite large and may be extremely time intensive. We request additional information regarding why this size of field plot is to be used, and what will ultimately determine the size of the field plot. It is unclear what data would be collected in this size field plot. The audit team continues to request additional information on this approach.

Project Personnel Response 2: See email response dated 19 April from Ed Mitchard of Space Intelligence

Auditor Response 2: In an email from 19 April 2021, Dr. Ed Mitchard from Space Intelligence provided additional requested information regarding this methodology deviation. All questions have been answered such that the needed clarification to understand and verify this methodology deviation has been achieved. This finding is closed.

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

NIR 39 Dated 24 Dec 2020

Standard Reference: VCS version 4.0

Document Reference: Project Description.pdf, Section 3.6

Finding: Section 3.17.2 of the VCS Standard requires that “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”.

In order to allow the audit team to assess whether or not methodology deviation 4, in Section 3.6 of the PD, will result in increased accuracy of the quantification of GHG emission reductions, please provide a detailed justification as to the ability of the proposed LiDAR technology to detect impacts of illegal logging, supported with literature references as relevant. While the field of LiDAR-assisted remote sensing is quickly evolving, the conventional wisdom is that remote sensing approaches lack the precision necessary to detect biomass loss due to degradation. A limitation of most remote sensing technologies, which is shared by LiDAR to some extent, is the limited ability to detect biomass loss in the understory. Please justify why LiDAR technology is capable of providing the required levels of precision and accuracy. Please also provide a detailed justification for the specific proposed methodology (e.g., the use of “a square grid of 16x16 pixels”). Finally, please clarify exactly how the equations in the methodology would be modified in order to implement the methodology deviation.

Project Personnel Response: Text of Section 3.6 deviation #4 has been updated to show how the deviation affects equations in Section 8.2. .

Auditor Response: The audit team reviewed section 3.6 as well as appendix 2 of the PD in regards to this finding. We confirmed that clarification has been provided with regard to how the equations in section 8.2.1 of the methodology will be applied as a result of this deviation. With regard to providing a justification of the ability to detect degradation, Appendix 2 provides numerous examples from peer-reviewed literature of how this approach to utilized a range of satellite imagery datasets can provide accuracy estimations of the area affected by logging and degradation. The audit team requests additional information regarding the following items:

(1) Appendix 2 states "Others have found similar results in terms of the ability of simple optical satellite data being able to detect forest degradation using machine learning, including Hethcoat et al. (2019, Remote Sensing of Environment." This study by Heathcoat states that "Satellite imagery acquired closest in time to logging events provided best detection" suggesting that the frequency and timing of the satellite imagery relative to the degradation event can determine the accuracy in detection of degradation. Hethcoat et al. 2019 later states "A further marked difference between the predictions is that, in general, far more pixels were labelled as logged in the early data than in the late" suggesting that the timing of the observation relative to the event has an impact on the conservativeness. Earlier in appendix 2 of the PD, it states that "every pixel across the whole area can be observed if needed multiple times per year, enabling degradation not just to be monitored,

but to be quickly stopped in its tracks." The audit team requests more information regarding the frequency of observations using airborne LiDAR and satellite imagery that will be taken for monitoring of degradation.

(2) Appendix 2 also clarifies that for this methodology the project team proposes "using satellite LiDAR, where only a subset of pixels will be directly imaged by the LiDAR. Therefore most of the area where we hope to detect change will be extrapolated using a range of other satellite datasets, including active sensors (e.g. Sentinel-1 and ALOS-2 PALSAR-2 synthetic aperture radars), and passive sensors (Landsat 8/9 and Sentinel-2)." In reviewing the various studies providing in the appendix, it is clear that a range of accuracies may be achieved using different active and passive sensors as well as combinations of scenarios. The audit team requests additional information regarding the procedure for selecting which sensor or combination of sensors to employ and whether there is any hierarchy or ranking of sensors.

(3) The methodology deviation states that "a square grid of 16x16 pixels will be moved over the biomass map. Any square of 256 30x30 m pixels covers approximately 23 ha. If within any grid more than 6 pixels show a ΔC above 5 tC (equivalent to the aboveground biomass of a large tree plus collateral damage), and it is within striking distance of an access point (DDIST_IL,i) this may be an indication of tree mortality that exceeds the natural level." However, in section 5.2, for the parameter ADist_IL,i, in the description it states "To detect illegal selective logging a square grid of 16x16 pixels will be moved over the Δ carbon stock map. Any square of 256 30x30 m pixels covers approximately 23 ha. If within any grid more than 10 pixels show a ΔC above 3 tC (equivalent to the aboveground biomass of a large tree), and it is within striking distance of an access point (DDIST_IL,i) this may be an indication of tree mortality that exceeds the natural level, i.e. illegal logging." It is unclear which of the thresholds will be used (10 pixels and 3tC or 6 pixels and 5tC) and why. The audit team continues to request additional information on this.

This finding remains open.

Project Personnel Response 2: Regarding (3): The correct numbers are 16 x 16 pixels wherein 6 or more pixels are detected with a change greater than 5 tC/ha. This is now consistent between Deviation #4, the data table in Section 5.2 and the text in Section 5.3.7 step 8.

Auditor Response 2: Responses to #1 and #2 were provided during an interview with Ed Mitchard of Space Intelligence on 29 March 2021 as well as a follow up email on 19 April 2021.

(1) It was indicated that they will run 12 individual months of imager4y combined into an annual composite. The audit team concludes that this does confirm that the imagery can be observed multiple times a year if necessary. No further questions here.

(2) Confirmed the procedure for selecting imagery will be highest resolution with the lowest cloud cover, and will only use landsat.

(3) Confirmed that section 5.3.7(8) was updated so that it is consistent with Deviation #4.

All requested information has been provided and this finding has been closed.

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

NCR 40 Dated 24 Dec 2020

Standard Reference: VCS version 4.0

Document Reference: Project Description.pdf, Section 3.6

Finding: Section 3.17.2 of the VCS Standard requires that “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”.

The PD justifies methodology deviation 5 by stating that “the growth of all trees (above minimum diameter) in the forest (apart from those killed in harvesting) is also used to determine forest regrowth after harvest in the baseline scenario”. While the audit team agrees that this is the case, the audit team does not agree that it provides adequate justification for the proposed methodology deviation. From a conceptual standpoint, the methodology essentially assumes zero carbon stock change, in the baseline scenario, in areas and trees that have not been subject to timber harvest. The proposed deviation would make sense if the following conditions had been met, in terms of how the methodology quantifies baseline emissions:

1. In the baseline scenario, carbon stock growth in the area harvested in year 20 (see row 347 of the “Baseline emissions” worksheet of the “Green Gold Loreto 1 ER Calculation Spreadsheet, v4” workbook) was accounted for in years 1-19.
2. The “regrowth rate” parameter, RGR(i), took into account growth of trees that were not subject to timber harvest in addition to regrowth of the forest to replace trees that were harvested.

However, since the methodology only quantifies regrowth in harvested areas in the baseline and does not more generally quantify growth carbon stock increment in the baseline scenario, the proposed methodology deviation would significantly impact the conservativeness of the quantification of GHG emission reductions or removals without providing an increase in the accuracy of such quantification.

Project Personnel Response: Text in Section 3.6 Deviation #5 has been updated.

Auditor Response: The audit team reviewed the updates to methodology deviation #5 in the PD (version 8). In response to this finding the deviation now states that “the amended approach compares the carbon stock changes and fire-related emissions of the full aboveground biomass, i.e. of all trees above minimum diameter in the forest from the moment that baseline logging would have taken place on a parcel. Before that moment, the forest behaves identical in both scenarios (except for illegal logging in the project scenario).” It is now clear that the project scenario is only including the regrowth in areas that would have been harvested in the baseline scenario, rather than in all areas and trees that have or have not been subject to timber harvest. The audit team concludes that the methodology deviation is now explained and justified, and in conformance with the methodology. This finding has been closed.

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

NCR 41 Dated 24 Dec 2020

Standard Reference: VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: Project Description.pdf

Finding: Section 3.4.1 of the VCS Standard requires the following: “The project proponent shall use the VCS Project Description Template... The project proponent shall adhere to all instructional text within the template.” The VCS Project Description Template requires the following under Section 3.1: “Provide the title, reference and version number of the methodology or methodologies applied to the project. Include also the title and version number of any tools applied by the project.”

The title and version number of the methodology applied to the project has been included in Section 3.1 of the PD. However, the title and version number of any tools applied by the project (e.g., VT0001, the VCS Non-Permanence Risk Tool and the CDM “Tool for testing significance of GHG emissions in A/R CDM project activities”) have not been specified.

Project Personnel Response: The relevant tools are now referenced in Section 3.1 of the PD

Auditor Response: The audit team confirmed that section 3.1 of the PD (version 8) has been updated to list all relevant tools utilized. This finding has been closed.

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

NCR 42 Dated 24 Dec 2020

Standard Reference: VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: Project Description.pdf

Finding: Section 3.4.1 of the VCS Standard requires the following: “The project proponent shall use the VCS Project Description Template... The project proponent shall adhere to all instructional text within the template.” The VCS Project Description Template requires the following under Section 3.3: “Define the project boundary and identify the relevant GHG sources, sinks and reservoirs for the project and baseline scenarios (including leakage if applicable).” It is implicitly clear from the text that the table directly below must be used to define the project boundary. The required table has not been included.

Project Personnel Response: Tables for the inclusion/exclusion of carbon pools and the inclusion/exclusion of emissions sources have now been included in Section 3.3 of the PD

Auditor Response: The audit team confirmed that section 3.3. of the PD (version 8) has been updated to include the required table from the PD template. This finding has been closed.

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

NCR 43 Dated 24 Dec 2020

Standard Reference: VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: Project Description.pdf

Finding: Section 3.4.1 of the VCS Standard requires the following: “The project proponent shall use the VCS Project Description Template... The project proponent shall adhere to all instructional text within the template.” The VCS Project Description Template requires the following under Section 3.6:

“Describe and justify any methodology deviations. Include evidence to demonstrate the following:

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

The following gaps have been identified between the level of documentation required by the methodology template:

1. Regarding methodology deviation 1: the deviation is not fully explained. From discussion with project personnel, the audit team understands that the calculation process involves calculation of volume using Smalian’s formula assuming the merchantable portion of the bole cylindrical in form (utilizing measurements of DBH and merchantable height) and that the result is multiplied by 0.65 to account for taper. However, this is not clearly explained in the PD.
2. Also regarding methodology deviation 1: The evidence required by Section 3.6 of the VCS Project Description Template has not been provided. (Note that “demonstrate”, as defined by Merriam-Webster, means “to show clearly” or “to prove or make clear by reasoning or evidence”.)
3. Regarding methodology deviation 3: The evidence required by Section 3.6 of the VCS Project Description Template has not been provided.
4. Regarding methodology deviation 4: The evidence required by Section 3.6 of the VCS Project Description Template has not been provided.
4. Regarding methodology deviation 5: The evidence required by Section 3.6 of the VCS Project Description Template has not been provided.

Project Personnel Response: 1. Smalian’s formula and the form factor have now been better explained in Deviation #1

2. We now demonstrate in Deviation #1 that this is conservative relative to the use of a reasonably applicable allometric equation.

3. The text in Deviation #3 now includes a reasoning why the proposed deviation increases accuracy of the monitoring results. Reference is made to Appendix 2 of the PD, where this is explained in more

detail.

4. The text in Deviation #4 now includes a reasoning why the proposed deviation increases accuracy of the monitoring results. Reference is made to Appendix 2 of the PD, where this is explained in more detail.

5. The text in Deviation #5 now includes a reasoning why the proposed deviation increases accuracy of the monitoring results. Reference is made to Appendix 2 of the PD, where this is explained in more detail.

Auditor Response: The audit team confirmed that methodology deviations listed in the finding have been described and justified. This finding has been closed.

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

NCR 44 Dated 24 Dec 2020

Standard Reference: VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: Project Description.pdf

Finding: Section 3.4.1 of the VCS Standard requires the following: “The project proponent shall use the VCS Project Description Template... The project proponent shall adhere to all instructional text within the template.” The VCS Project Description Template requires the following under Section 3.6:

“Describe and justify any methodology deviations. Include evidence to demonstrate the following:

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

The following methodology deviations have not been described in Section 3.6 of the PD:

1. As described in Section 4.2.1 of the PD, there has been a deviation to Equation 32 of the methodology (“This accounting approach is much more conservative than the one given in VM0010...”).
2. There has been a deviation to the requirements of Sections 8.1.5.1-8.1.5.3 of the methodology, each of which contain procedures to indirectly estimate fuel usage based on factors such as the number of trucks used, kilometers of road involved, etc. The calculations in the workbook “Green Gold Loreto 1 ER Calculation Spreadsheet, v4” more directly calculate emissions using historical data on fuel usage. In addition, each of Sections 8.1.5.1-8.1.5.3 requires that emission factors be sourced from the various IPCC sources cited in the respective sections. The audit team understands that the emission factors are not sourced from the required IPCC references in all cases.
3. The procedures for quantification of emissions due to timber processing in the baseline scenario have been completely deviated from. As with the other procedures for calculating emissions from fossil fuel combustion in the baseline, the project approach has involved direct determination of fuel use, whereas the procedures in Section 8.1.5.4 of the methodology involve indirect estimation of fuel use.
4. As described in Section 4.2.4 of the PD, the project proponent plans to account for fossil fuel combustion emissions in the project scenario. The methodology does not contain any procedures for this purpose.

Project Personnel Response: 1. Deviation #3 in Section 3.6 now incorporates a modified Equation 32

2. The use of direct fuel consumption information for transportation has now been added to Section 3.6 as Deviation #6. The ER Calculation Worksheet now uses the IPCC default emission factors.

3. The use of direct fuel consumption information for electricity generation in the sawmill has now been added to Section 3.6 as Deviation #7. The ER Calculation Worksheet now uses the IPCC default emission factors.

4. Accounting for fossil fuel emissions in the project scenario has now been added to Section 3.6 as Deviation #8.

Auditor Response: 1. The audit team confirmed that the modification of equation 32 has now been described in Deviation #3.

2. We confirmed that Deviation #6 has been added and now describes the use of real fuel consumption information for transportation from Green Gold Forestry operations.

3. We confirmed that Deviation #7 has been added and now describes the use of real fuel consumption information for electricity generation in the sawmill from Green Gold Forestry operations.

4. The audit team confirmed that Deviation #8 has been added to account for fossil fuel emissions in the project scenario which is without question conservative.

This finding has been closed.

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

NIR 45 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, p. 63

Document Reference: Project Description.pdf

Finding: The methodology requires that wood densities “Must be chosen with priority from higher to lower preference as follows:

National species-specific or group of species-specific values (eg, from National GHG inventory);
Species-specific or group of species-specific values from neighboring countries with similar conditions. When species-specific data from neighboring countries is of higher quality, being more representative of the species in the project scenario, it may be preferable to use these values than lower quality national data; Global species-specific or group of species-specific (eg, IPCC 2006 AFOLU Chapter 4 Tables 4.13 and 4.14).”

To permit the audit team to check against the above requirements, please provide information regarding the source of each of the wood densities included in the POA 10 inventory (as used to calculate the weighted average wood density of 0.607), as the source of the wood density values is not always clear to the audit team.

Project Personnel Response:

Auditor Response: The project team provided two links to sources of wood densities:

<https://www.peruforestal.org/> and

<http://www.iiap.org.pe/upload/Publicacion/CDinvestigacion/inia/inia-p4/inia-p4-02.htm#TopOfPage>. The audit team sought to confirm a sample of the species in the POA and found

some discrepancies. For instance for the species Ana Caspi, both sources show a 0.70g/cm³ but the workbook GGF POA 10 invent volumes_Densidad.xlsx shows a value of 0.8 g/cm³. The basic density of Tauari is 0.92 g/cm³ according to both sources, but the workbook shows a value of 0.94 g/cm³. The basic density of Cumula is 0.45 g/cm³ according to both sources, but the workbook shows a value of 0.47 g/cm³. For Capirona, the sources indicate a density of 0.76, but the workbook shows a value of 0.72 g/cm³. Given these discrepancies, the audit team requests additional information regarding how these two sources were used to derive the wood densities. Note that the differences in wood densities are large enough likely be material given the 1% materiality threshold. This finding remains open.

Project Personnel Response 2: See revised workbook with wood densities and wood product category percentages, (GGF POA 10 invent volumes_densidad,v2). The discrepancies originate from the fact that three people worked on this independently using different sources, without coordinating effectively, so different sources were quoted in the PD. In the end to ensure consistency the list was compiled by one person, using one source: the Global Wood Density Database (<https://scholar.google.es/citations?user=H2fDZJOAAAAJ&hl=es&oi=sra>). Where no densities were available for particular species an estimate has been made based on other species in the genus.

Some discrepancies were found and corrected, resulting in lower wood densities for most species corrected. The exception with greatest impact is Quillosa (*Vochysia vismiifolia*), for which a WD was estimated at 0.38 previously, but which is quoted in the IIAP database as having a WD of 0.59. Since this is an abundant species with high volume in the inventory this increased the weighted average WD from 0.607 to 0.614

The Tauari on Peruforestal.org and the IIAP website is not the same species: *Tabebuia serrata*, instead of *Tabebuia incana* that occurs in the project area and for which we have species-specific WD.

The Cumala on these sites is resp. *Virola* spp. and *Virola sebifera*, not *Virola calophylla* that occurs in the project area and for which we have species-specific WD.

We have checked all species against all three sources and have now used the lowest WD value for the species available in two or more sources. In addition, we have found one more source for one of the species that was in none of the three mentioned sources: *Allantoma decandra* (Source: <http://madexo.pe/madera-cachimbo/>).

Auditor Response 2: The audit team reviewed the workbook GGF POA 10 invent volumes_Densidad,v2.xlsx (Sheet Table spVolDens) which includes the updated wood densities as described. The workbook also now included detailed information regarding the source of each wood density value. The requested information has been provided. This finding has been closed.

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

NIR 46 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 8.1.1

Document Reference: Project Description.pdf

Finding: Section 8.1.1 of the methodology contains procedures for quantification of harvest volume by species. In tracing this calculation through the project worksheets in the “GGF POA 10 invent volumes_Densidad” workbook, the audit team has found there are species for which volume is reported in the “Hoja1” worksheet but not in the “Table spVolDens” worksheet within which the weighted average wood density of 0.607 is calculated. For example, in row 27 of the “Hoja1” worksheet, it is indicated that there is approximately 650.5 cubic meters of Lupuna species in POA 10. However, in the “Table spVolDens” worksheet in the same workbook, Lupuna is not among the included species. Please explain the reasons for this perceived discrepancy.

Project Personnel Response: [The following response was provided in an email on 23 February 2021 "The POA10 inventoried an average volume of 15.9 m3/ha. We limited the extraction volume to 15 m3/ha so a number of low density, low value species from the bottom of the species list (ordered by wood density) were taken off until the species list reached a total extraction volume of 15 m3/ha. That meant almost 3000 m3 of inventoried volume was taken off. Lupuna was one of the species removed from the list.]

Auditor Response: The audit team confirmed that several low density, low value species have been excluded. This finding has been closed.

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

NCR 47 Dated 24 Dec 2020

Standard Reference: VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: Project Description.pdf

Finding: Section 3.4.1 of the VCS Standard requires the following: “The project proponent shall use the VCS Project Description Template... The project proponent shall adhere to all instructional text within the template.”

The VCS Project Description Template requires, in Sections 4.1 through 4.3, that the “procedure for quantification of [project, baseline or leakage] emissions and/or removals in accordance with the applied methodology” be documented.”

While the audit team appreciates that some information responsive to these requirements has been provided in the PD, the requirements of the VCS Project Description Template have not been fully adhered to. A non-exhaustive list of examples of gaps between the requirements of the VCS Project Description Template and the level of documentation in the PD is as follows:

1. The PD does not “include all relevant equations” (e.g., it does not indicate how each relevant equation has been implemented).
2. All relevant methodological choices relating to the ex-ante quantification of project emissions not included.

Project Personnel Response: Our interpretation of ‘include’ includes making reference to that which needs to be included. So, if an equation from VM0010 needs to be included to describe the procedure for quantification of baseline emissions it is just as valid to make reference to said equation in VM0010 than to paste the equation into the section. VM0010 is publicly available on the Verra website. Nevertheless, we have pasted most equations into Sections 4.1-4.3 the PD where this was relevant.

Our interpretation of ‘explain and justify’ includes making reference to said explanations and justifications in other parts of the PD, namely in the data tables.

Auditor Response: The audit team reviewed section 4 of the updated PD (version 8) and confirmed that much more detail has been provided regarding the application of equations in the methodology. However, the following issues remain:

(1) There are numerous methodology deviations related to the quantification but there is little or no reference made to these deviations in section 4.1-4.3 of the PD. For instance, there is no reference to deviation #1 or #4. While it is not required to repeat every methodology deviation in these quantification sections, they do constitute relevant methodological choices related to the quantification of emissions and thus the PD template requires some reference to them.

(2) Likewise section 4.2.3 states that "Project emissions from illegal logging will be monitored", but provides no additional information of how these emissions will be quantified or monitored, nor is

there any reference to the participatory rural appraisal (PRA).

This finding remains open

Project Personnel Response 2: Regarding (1): reference has now been made in the PD v9 Section 4.1.1 to Deviation #1 (footnote 3), in Section 4.2.2 to Deviation #3, as well as to Section 5: Monitoring, and in Section 4.2.3 to Deviation #3, as well as to Section 5: Monitoring.

(It is questionable whether the omission of these references in these sections constituted a non-conformance. After all, it is clearly stated that these parameters will be monitored and there is an entire section on monitoring in the PD, where reference is made to these deviations!)

Reference has also been made to Deviation# #7 in Section 3.4.2.

Regarding (2): The PRA is a monitoring issue and is irrelevant for the ex-ante calculation. The PRA is therefore discussed in Section 5, not in Section 4.2.3. Nevertheless, we have added the sentence "No Participatory Rural Appraisal (PRA) has been carried out for this ex-ante estimation. This will be done as part of project monitoring, as described in Section 5." to Section 4.2.3

Auditor Response 2: We confirmed that the PD (v9) was updated with references to the deviations in Sections 4.1 through 4.3, such that the "procedure for quantification of [project, baseline or leakage] emissions and/or removals in accordance with the applied methodology" and the "relevant methodological choices relating to the ex-ante quantification of project emissions" have now been documented. This finding has been closed.

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

NCR 48 Dated 24 Dec 2020

Standard Reference: VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: Project Description.pdf

Finding: Section 3.4.1 of the VCS Standard requires the following: “The project proponent shall use the VCS Project Description Template... The project proponent shall adhere to all instructional text within the template.”

The VCS Project Description Template requires the following in Section 4.4:

“Describe the procedure for quantification of net GHG emission reductions and removals. Include all relevant equations. For AFOLU projects, include equations for the quantification of net change in carbon stocks... Document how each equation is applied, in a manner that enables the reader to reproduce the calculation. Provide example calculations for all key equations, to allow the reader to reproduce the calculation of estimated net GHG emission reductions or removals.”

The audit team finds that the information required by the VCS Project Description Template has not been provided in Section 4.4 of the PD.

The VCS Project Description Template requires, in Section 4.4 that the “procedure for quantification of [project, baseline or leakage] emissions and/or removals in accordance with the applied methodology” be documented.”

While the audit team appreciates that some information responsive to these requirements has been provided in the PD, the requirements of the VCS Project Description Template have not been fully adhered to. A non-exhaustive list of examples of gaps between the requirements of the VCS Project Description Template and the level of documentation in the PD is as follows:

1. The PD does not “include all relevant equations” (e.g., it does not indicate how each relevant equation has been implemented).
2. All relevant methodological choices relating to the ex-ante quantification of project emissions (e.g., justification of uncertainty propagation in project, indication of buffer pool percentage from AFOLU Non-Permanence Risk Tool) are not included.

Project Personnel Response: Equation 41 has now been included in Section 4.4.

Auditor Response: The audit team confirmed that section 4.4 now contains a description of how equation 41 was applied to calculate net GHG emission reductions and removals. This finding is closed.

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

NIR 49 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 8.1.1

Document Reference: Project Description.pdf

Finding: Section 8.3.1 of the methodology requires the following:

“Where the project proponent controls multiple parcels of land within the country the project proponent must demonstrate that the management plans and/or land-use designations of other lands they control have not materially changed as a result of the planned project (designating new lands as timber concessions or increasing harvest rates in lands already managed for timber) because such changes could lead to reductions in carbon stocks or increases in GHG emissions.

This must be demonstrated through:

- Historical records showing trends in harvest volumes paired with records from the withproject time period showing no deviation from historical trends;
- Forest management plans prepared ≥ 24 months prior to the start of the project showing harvest plans on all owned/managed lands paired with records from the with-project time period showing no deviation from management plans.”

Please provide the required demonstration. While the information provided in Section 4.3 of the PD is useful, it does not directly address the requirements of the methodology.

Project Personnel Response: Relevant text has been added to Section 4.3.1 in the PD

Auditor Response: Section 4.3.1 of the PD (version 8) now indicates that "GGF does not hold contracts to any other concession areas in the country, apart from those mentioned above and those that comprise the project (incl. those that are part of the concession but not part of the project area, i.e. conservation areas and swamp forests)." However, the project team provided evidence that Green Gold Forestry holds the following contracts outside of the project areas:

- 16-LOR-MAY/CON-MAD-2018-010 (Tacsha 04.pdf)
- 16-LOR-MAY/CON-MAD-2018-007 (Tacsha 05.pdf)

Thus it appears that the information added to the PD is not accurate. Moreover because the project proponent "Controls multiple parcels of land within the country the project proponent must demonstrate that the management plans and/or land-use designations of other lands they control

have not materially changed as a result of the planned project." The required demonstration has not been provided. This finding remains open.

Project Personnel Response 2: The paragraph stating that GGF does not hold other logging concessions contracts in the country has been deleted from Section 4.3.1.

Auditor Response 2: The audit team confirmed that PD (v9) was updated such that the inaccurate information has been removed. However, the methodology states "Where the project proponent controls multiple parcels of land within the country the project proponent must demonstrate that the management plans and/or land-use designations of other lands they control have not materially changed as a result of the planned project (designating new lands as timber concessions or increasing harvest rates in lands already managed for timber) because such changes could lead to reductions in carbon stocks or increases in GHG emissions. This must be demonstrated through:

- Historical records showing trends in harvest volumes paired with records from the withproject time period showing no deviation from historical trends;
- Forest management plans prepared ≥ 24 months prior to the start of the project showing harvest plans on all owned/managed lands paired with records from the with-project time period showing no deviation from management plans."

This demonstration of a lack of activity shifting leakage has still not been provided. This finding remains open.

Project Personnel Response 3: The text in Section 4.3.1 has been updated. Since the future logging management in GGF's concession areas outside of the project boundary is still to be presented in a PGMF and approved by GERFOR, and thus the required demonstration cannot be carried out at this point, we suggest that a Forward Action Request is issued that the demonstration is carried out upon Verification, when an approved management plan and records from the with-project time period are available.

Auditor Response 3: The audit team reviewed the methodology again and section 8.3.1 indicates that "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." Thus the demonstration of the lack of the activity shifting leakage since the project start can be provided at verification rather than validation. This finding has been closed.

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

NCR 50 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 8.3.2

Document Reference: Project Description.pdf

Finding: The procedure for determining market effects leakage in Box 2 of the methodology requires that, where “...no new concessions are being assigned AND annual extracted volumes cannot be increased within existing national concessions AND illegal logging is absent (or de minimis) in the host country”, market leakage is assumed to be zero. In all other circumstances, market leakage is calculated by determining “where in the country’s forest estate harvesting would likely be displaced” and assigning the appropriate factor. The methodology does not allow for the calculation of a weighted average “Leakage factor for market-effects calculations” in consideration that some of volume that is withheld from the market due to project activities would have been sold on the international market, as has been described in Section 4.3 of the PD.

Project Personnel Response: The VCS Methodology Requirements v4.0 Section 3.7.15 clarifies in Table 2 that, where leakage is out of country, a 0% market leakage discount factor should be applied. This requirement also applied at the time VM0010 was formulated (see VCS AFOLU Requirements v3, Section 4.6.5).

Therefore, when VM0010 speaks of quantifying market leakage this only refers to market leakage internal to the country where the project is located. The fact that VM0010 “does not allow for the calculation of a weighted average “Leakage factor for market-effects calculations” in consideration that some of volume that is withheld from the market due to project activities would have been sold on the international market” does not override the abovementioned methodology requirement. The omission of such a provision in the methodology does not make the location of market leakage by default within the country, or binary – either 100% national or 100% out of country.

By implication, the logical way to account for market leakage in a situation where it is partially out of country is to apply the market leakage discount factor (as per Table 2 in the VCS Methodology Requirements v4.0 Section 3.7.15 and Box 2 of VM0010) only to that portion that is within the country.

Auditor Response: The audit team has reviewed the project teams response. While we understand that in reality, the majority of exports from the project area are to the international market and not the domestic market, thus considering this would make sense, the methodology does not allow for the calculation of a weighted average “Leakage factor for market-effects calculations” in consideration that some of volume that is withheld from the market due to project activities would have been sold on the international market, as has been described in Section 4.3 of the PD. Also the Methodology Requirements V4.0 are not applicable for interpretation of this methodology, rather those requirements are applicable to the development of methodologies. As section 1 of the Methodology Requirements states "This document provides the requirements for methodologies

developed under the VCS Program. The purpose of this document is to assist methodology developers and validation/verification bodies in developing and assessing methodologies." Likewise the AFOLU requirements v3 are not relevant as these requirements have been replaced by and are now encompassed with V4.0 of the VCS Standard. This validation engagement is therefore based on the criteria as set out in the project proposal (dated XXXX). The Methodology Requirements version 4.0 and the AFOLU Requirements version 3.0 are not relevant criteria for this validation assessment. Therefore given that the VCS standard and the VM0010 methodology do not allow for the calculation of a weighted average of the "leakage factor for market-effects calculations," by doing so would represent a methodology deviation. If a methodology deviation is intended for the accounting of market leakage, the requirements of section 3.17 of the VCS Standard v4.0 and the PD template (section 3.6) must be met. This finding remains open.

Project Personnel Response 2: The weighted average calculation of the market leakage factor has been removed from the text in Section 4.3.2.

Auditor Response 2: This finding was discussed with the project team during a meeting on 19 March 2021. The team indicated that they would remove the weighted average calculation and instead follow the methodology by considering only the activity shifting leakage within the country. The audit team confirmed that the market leakage quantification is now in conformance with the methodology. This finding has been closed.

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

NIR 51 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 8.3.2

Document Reference: Project Description.pdf

Finding: The procedure for determining market effects leakage in Box 2 of the methodology requires that "...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)". Guidance for the calculation of these parameters is provided in Section 9.2 of the methodology. Please provide evidence that these parameters were calculated according to the requirements of the methodology, and that the "Leakage factor for market-effects calculations" was determined accordingly.

Project Personnel Response: The PD clearly states that the sales that occur within the country are all low-quality off-cuts that are sold locally for fuel wood. Locally means near the sawmill in Iquitos. Since the wood processed in Iquitos overwhelmingly comes from the same forest types in northern Loreto (i.e. Bosque de Colina Baja and Bosque de Terraza Alta – note that these were previously lumped as Bosque de Alto in our project maps) it can be safely assumed that the ratio of merchantable biomass to total biomass (PMPi) is equal to within plus or minus 15%. Therefore, LFME = 0.4 for this fraction of the product sales. Having come to this conclusion, it is no longer necessary to calculate the ratio of merchantable biomass to total biomass, as this is the same for these forest types in northern Loreto.

Auditor Response: The audit team understands that these assumptions have been made regarding the ratio of merchantable biomass to total biomass, however, the methodology requires the following: "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)." Thus the audit team continues to request evidence that these parameters were calculated according to the requirements of the methodology, and that the "Leakage factor for market-effects calculations" was determined accordingly. This finding remains open.

Project Personnel Response 2: Section 4.3.2 has been edited to include a demonstration that project forest and displacement forest are of the same forest type and that their ratios of merchantable over total biomass are equal.

Auditor Response 2: The values for PMPi and PMLFT have both been calculated and demonstrated in section 4.3.2 of the PD (v9). We confirmed the value of the total biomass of 280 t/ha from Asner et al. 2014. However, we have been unable to confirm the value of mean merchantable biomass of 18.2 t/ha. Section 5.1. indicates the the source of this value is the "project forest inventory." However we have been unable to locate this value in from the POA10. Rather the biomass extracted as indicated from POA10 and in the workbook Green Gold Loreto 1 ER Calculation Spreadsheet, v6.xlsx is 9.2 t/ha. In an email on 7 May 2021, the project team indicated that "The merchantable biomass

was calculated as the 15 m³ extraction volume multiplied by the previous weighted average wood density of 0.608 = 9.1 t/ha. I then mistook the biomass to be carbon and so erroneously multiplied by two to get biomass. However, WD has now changed to 0.614, so the correct figure for merchantable biomass is now 9.4 t/ha. The ratio merchantable/total biomass then becomes 0.035. I have updated this in the PD text and data tables. The changed numbers bear no implication for any further calculations." That explanation was mostly confirmed, however, the merchantable biomass value in the worksheet is calculated as 9.2 t/ha and not 9.4 t/ha, thus there is some inconsistency. Further this finding remains open as the audit team will need to confirm the PD text and data tables are updated.

Project Personnel Response 3: This error has now been corrected in the PD in both Section 4.3.2 and in the data tables in Section 5.1

Auditor Response 3: The audit team confirmed that the calculation of merchantable biomass as a proportion of aboveground tree biomass both within the project boundaries and the broader region have been corrected and correspond to the values reported in the calculation workbook. This finding has been closed.

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

NCR 52 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 8.2

Document Reference: Green Gold Loreto 1 ER Calculation Spreadsheet, v4

Finding: Regarding the ex ante estimation of project emissions, the methodology requires that “Ex ante estimations of areas burned and naturally disturbed shall be based on historic incidence of fire and natural disturbance in the Project region.” It is stated in cell B28 of the “Project sequestration” worksheet in the “Green Gold Loreto 1 ER Calculation Spreadsheet, v4” workbook that “No emissions from disturbances and illegal logging are modeled here at this stage.”

From conversations with project personnel, the audit team is aware that tornadoes have impacted the project area in the past. Therefore, please provide a justification for how the ex ante estimations of areas burned and naturally disturbed have been based on historic incidence of fire and natural disturbance in the Project region.

Project Personnel Response: Section 4.2.2 of the PD and the ER calculation spreadsheet now make reference to the discussion of natural disturbance risks in the VCS Non-Permanence Risk Report.

Auditor Response: The audit team confirmed that the VCS Non-Permanence Risk Report provided now indicates that there is no risk of natural disturbances including fires. We have verified the documentary evidence provided and confirmed with local authorities that natural risks are unlikely and insignificant. We also confirmed that section 4.2.2 of the PD more clearly reflects this. This finding is closed.

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

NIR 53 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest; VCS version 4.0

Document Reference: Project Description.pdf; Resolución Gerencial RegionaI N° 108-2020-GRL-GGR-GRDFFS,

Finding: Section 3.7 of the VCS standard states “The project start date of an AFOLU project is the date on which

activities that led to the generation of GHG emission reductions or removals are implemented (e.g., preparing land for seeding, planting, changing agricultural or forestry practices, rewetting, restoring hydrological functions, or implementing management or protection plans).”

Furthermore, section 4.1 of the methodology states “ The project proponent must demonstrate intent to harvest through the following forms of evidence originating prior to the date of all evidence in pursuit of carbon finance/consideration of IFM.”

Section 1.8 of the PD states “The project start date is the 1st of August 2020. This is the date on which it is assumed that logging operations would have resumed in the project area in the baseline scenario, whereas the project activity of conservation is effectively being implemented. It marks the beginning of the dry season when logging operations are feasible again after the rainy season.”

During a call with the project team on 30 November 2020, it was indicated that the process for harvesting involves 30 days of field work for the inventory, 30 days of desk work to synthesize the inventory results, and prepare the harvest plan, and 30 days for approval by the regional government.

As a result of the pandemic, the country of Peru went into a lockdown in March and April 2020. The audit team learned during an interview with Jorge Vallardo of GGF that the field operations to conduct the inventory would have been disrupted due to the lockdown. Likewise, it was explained that it would not have been possible to begin normal harvest operations by August 1st, 2020 as a result.

The audit team also received the evidence of a Regional Government resolution (Resolución Gerencial RegionaI N° 108-2020-GRL-GGR-GRDFFS) effective 10 May 2020 through 31 December

2020, exempting the requirement of ocular inspection prior to the approval of any Forest Management Plan at the High and Medium Planning levels, thus making it possible to have conducted the harvesting without the approval of the inventory and harvest plan.

It is unclear that even given this exemption of the regional government approval, there would have been sufficient time to conduct the field inventory and desk work to begin harvest operations by August 1st 2020. The audit team requests additional information and justification that this start date of timber operations would have been feasible and therefore represents the “the date on which activities that led to the generation of GHG emission reductions or removals are implemented” as required by the standard. Note that this is a topic the audit team also plans to discuss with the regional government representative.

Project Personnel Response: GGF has provided evidence of historical start dates showing that extraction operations can start at anytime between early June and early September depending on the climate or beginning of the dry season. The company is normally ready to begin operations at anytime from mid-June. There is no set date for the beginning of the dry season.

August 1st was chosen because it is a conservative date by when it could be predicted that operations would normally begin. We could have chosen a date as early as June but it was felt that August was more than reasonable.

Last year (2020) all activity was disrupted by the pandemic. However, the authorities provided a Resolution aimed at re-activating the forestry sector on May 10th (documentation already provided) which meant that it was only necessary to do an inventory prior to beginning extraction operations. Inspection and approval were to be undertaken whilst companies were already working in the forest. The inventory would have taken 30 days. The preparation of the PO documents would have followed and the approval would have been automatic as the Resolution from the authority states that certified companies would not require inspection.

Therefore, it is perfectly feasible that we could have done an inventory and extraction planning (45 days work) in the time between May 10th (the date of the resolution) and August 1st (81 days).

Auditor Response: The audit team confirmed that the August 1st start date was reasonable given the government resolutions aimed at re-activating the forestry sector (e.g., Resolución Gerencial Regional N° 0091-2020-GRL-GGR-GRDFFG.pdf). We further confirmed the feasibility of the start date with the regional forest authority. However, section 1.8 of the PD now states the following "The project start date is the 1st of September 2020. This is the date on which it is assumed that logging operations would have resumed in the project area in the baseline scenario, whereas the project activity of

conservation is effectively being implemented. It marks the beginning of the dry season when logging operations are feasible again after the rainy season." It is unclear why the date was changed from 1 August 2020 to 1 September 2020. The audit team requests additional information about this change. This finding remains open.

Project Personnel Response 2: The start date in the PD has been corrected to August 1st 2020

Auditor Response 2: The start date in the PD still lists "the 1st of September 2020" in section 1.8. Section 1.9 indicates that the project crediting period is "commencing on the 1st of August 2020." This finding remains open.

Project Personnel Response 3: Section 1.8 has now been corrected to 1st of August 2020

Auditor Response 3: Confirmed that the project start date in section 1.8 is listed as August 1, 2020. This finding has been closed.

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

NCR 54 Dated 24 Dec 2020

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest;

Document Reference: Project Description.pdf; AreaBonosCarbono_Concesiones_GGF_Ok.shp

Finding: Section 4 of the Methodology states "The baseline scenario, project scenario and project case cannot include wetland or peatland."

Section 3.2 of the PD states "All wetland areas within GGF's logging concessions have been excluded from the project area. There is no indication that any areas with peat soils are present in the There is no indication that any areas with peat soils are present in the

project area." However, the maps of the project area which are included in the PD on pages 21-23 appear to show that wetland areas are included in the project area (bosque de bajo and bosque de proteccion). The PD states "The project area consists of a total of 206,020.7 hectares (Table 1)." Table 1 includes areas of bosque de bajo and bosque de proteccion." Furthermore, the KML file provided of the project area also shows all areas bosque alto, bosque de bajo, and bosque de proteccion are included in the project area.

Given this information, wetlands are included in the project area resulting in a nonconformity with the methodology.

Project Personnel Response: All areas that would not have been harvested in the baseline scenario were never part of the project area (apart from conservation management), but have now also been excluded from the maps.

Auditor Response: The audit team reviewed the PD (v8) and confirmed that the Figures 6-8 show the exclusion of wetland areas from the project area. Likewise, table 8 now indicates that the project area excluded the bosque de proteccion and wetland area, thus reducing the project area to 183,445 ha. However, the shapefile provided by the project team still shows that these wetland areas are included in the project area. This finding remains open.

Project Personnel Response 2: Updated shapefiles provided to the auditor

Auditor Response 2: As referenced in the audit teams response to finding 3, On 18 March 2021, the project team provided updated shapefiles for the project area: CobVegetal_Conso1_Marz2021, CobVegetal_Conso1_Marz2021, and CobVegetal_SanRegis_Marz2021. The audit team confirmed that the areas under the forest types Colina Baja and Terraza Alta match the project area areas reported in the PD and the in the calculations workbook. We also confirmed that all areas designated at wetland are excluded from the project area. This finding has been closed.

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

NCR 55 Dated 19 Jan 2021

Standard Reference: VCS Project Description Template, section 2.2

Document Reference: Project Description.pdf; Plan de Relaciones Comunitarias GGF copy

Finding: Section 2.2. of the PD template requires the following: "Describe the process for, and the outcomes from, the local stakeholder consultation conducted prior to validation. Include details on the following:

- The procedures or methods used for engaging local stakeholders (e.g., dates of announcements or meetings, periods during which input was sought).
- The procedures or methods used for documenting the outcomes of the local stakeholder consultation.
- The mechanism for on-going communication with local stakeholders.
- How due account of all and any input received during the consultation has been taken. Include details on any updates to the project design or justify why updates are not appropriate."

In the response to NIR #10, it was indicated that stakeholder consultations were in fact conducted in November 2020 with two organizations and that additional stakeholder consultations are planned for 2021. Also a detailed plan of community relations was provided (Plan de Relaciones Comunitarias copy.pdf). However, the PD indicates that "Due to the COVID 19 crisis it has not been possible to conduct a local stakeholder consultation" which is not entirely accurate, given the response to finding #10. Furthermore, this section does not provide information on: (1) The procedures used to engage local stakeholders, including frequency of meetings, proposed meeting dates, meeting methods (skype/zoom, in-person etc), (2) The procedures to document outcomes of the stakeholder consultations, (3) Mechanisms for on-going communication with the stakeholders, and (4) how any input received during consultations has been taken into account or addressed. Therefore section 2.2 of the PD is not in conformance with the template requirements.

Project Personnel Response: PD is updated

Auditor Response: The audit team reviewed the updated section 2.2. of the PD (v8). Despite the challenges that COVID19 has presented with regards to the stakeholder consultation process, it is clear that the project team has attempted to at least begin the consultation process through the meetings with FECONAMNCUA and CEDIA. However, this section of the PD still requires that the following information be provided:

"(1) The procedures used to engage local stakeholders, including frequency of meetings, proposed meeting dates, meeting methods (skype/zoom, in-person etc), (2) The procedures to document outcomes of the stakeholder consultations, (3) Mechanisms for on-going communication with the stakeholders, and (4) how any input received during consultations has been taken into account or

addressed." While the complete stakeholder consultation process has not yet been fully implemented due to COVID, the procedures that will be put into place to engage stakeholders, document communications, and continue communications, and account for input received can still be described in the PD in a forward looking manner. This finding remains open.

Project Personnel Response 2: Section 2.2 of the PD v9 has been updated

Auditor Response 2: The audit team confirmed that section 2.2 of the PD has been updated and now contains the required information regarding the stakeholder consultations. This finding has been closed.

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

NIR 56 Dated 19 Jan 2021

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 6.2.2

Document Reference: Finding 30 response; Project Description.pdf;

Finding: Based on the response to finding NCR 30 above, the project team appears to be employing a common practice baseline scenario. Section 6.2.2 of the methodology states that "Common practice is defined as timber harvest under the legal requirements for forest management and will be determined from a timber harvest plan (see Box 1 below) developed from:

1) The project area through scenario modeling as though the legal requirements were implemented in the project area; and

2) A reference area(or multiple reference areas) already under timber harvest management

that complies with legal requirements for forest management and selected to be representative of local common practice for timber harvest."

Footnote 3 on page 13 of the Methodology requires that "Reference areas must be in the same region as the project area and must match the project area in terms of forest types, climate and elevation (identical mix of forest types $\pm 20\%$; identical annual precipitation $\pm 20\%$; elevation classes (500 m classes) in the reference region shall be in the same proportion as in the project area (+/- 20%)). For forest types, a de minimis rule may be applied if not suitable reference area can be found. Forest types that cover less than 1% of the project area may be excluded for the purpose of finding a suitable reference area. However, in total, no more than 5% of the project area forest cover may be excluded in this way."Section 6.2.2 also states "Where there is limited capacity to generate the baseline scenario using a reference site in the region of the project area, multiple reference areas may be selected to cover a country so long as the reference area criteria regarding forest types, climate and elevation are met."

Given the response to finding NCR 30, it appears that the project is using reference area(s) already under timber harvest management to develop the common practice baseline scenario. The audit team requests that the following be demonstrated:

(1) Reference areas are in same region as the project area

(2) Reference areas match the project area in terms of forest types, climate and elevation (identical mix of forest types $\pm 20\%$; identical annual precipitation $\pm 20\%$; elevation classes (500 m classes) in the reference region shall be in the same proportion as in the project area (+/-20%))

Project Personnel Response: See email correspondence

Auditor Response: The document NIR 56.docx was submitted, which shows comparisons of average rainfall, elevation, and forest types, between the project area and the reference areas. The audit team verified the values presented within the document with the sources provided and others. Given that the Agro cortex concessions do not have identical annual precipitation $\pm 20\%$ to the project area concessions, this reference area does not meet the requirements of the methodology and its inclusions represents a nonconformity. As a result, this NIR has been closed, but elevated to an NCR (see finding 64).

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

NCR 57 Dated 19 Jan 2021

Standard Reference: VCS version 4.0; AFOLU Non-Permanence

Risk Tool v4.0;

Document Reference: Green Gold Carbon Financial Model 2020 v4 (002).xlsx

Finding: This finding relates to NIR #22. Section 2.2.2(2) of the Non-permanence Risk Tool requires the following: "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 financial model provided (Green Gold Carbon Financial Model 2020 v4 (002).xlsx) shows a price of \$6.0 per ton in 2020 which then increases to \$8 per ton by 2024. In NIR 22 the audit team requested evidence supporting that these GHG price assumptions are represent conservatively projected revenues from the sale of GHG credits. The audit team reviewed the documentation provided and we have the following conclusions regarding the assumptions about the price of carbon:

(a) Ecosystem Marketplace (Ecosystem Marketplace 2020 review 2.pdf): Shows the prices for forestry and land use offsets were \$3.4 in 2017, \$3.2 in 2018, and \$4.3 in 2019 (on average). These values are much lower than those included in the financial analysis. Looking more specifically at forestry projects in 2019, the report shows that REDD projects are generally higher priced (average of \$4.21 and \$3.65 in 2019) than the other forestry and land use projects (average of \$2.5). This Loreto 1 project falls under the other forestry and land use projects as it is an IFM project. Looking specifically at regions, the average price per tCO₂e in Peru was about \$3.52, which is much lower than the \$6+ included in the financial analysis.

(b) Berenberg ESG - Page 22 of this report shows the offset price graph which indicates that in 2018 offset prices have actually fallen to above \$3 per tCO₂e which is well below the \$6 included in the financial analysis.

(c) OPIS Report - Page 2 generally shows that the price of offsets have increased, but this report only shows the price for REDD projects, not other forestry projects like IFM. Given the information from the Ecosystem Marketplace Report indicating that other forestry projects have lower average prices than REDD projects, the audit team concludes that these prices are not a conservative estimate of prices of IFM carbon credits.

(d) GS Sustain - The annex shows a brief history of the voluntary carbon markets. It does describe an upswing in the price of carbon but does not specify by project type or location. As indicated in the

Ecosystem Marketplace report, these two factors play a big role in the price. Thus it is unclear from this report what a conservative price may be.

Given the above analysis of provided documentation, the audit team concludes that the carbon prices included in the financial analysis do not represent conservatively projected revenues from the sale of GHG credits. This is not in conformance with the Tool.

Project Personnel Response: See email correspondence

Auditor Response: The project team provided the document NIR 22 and NCR 57.docx in response to this finding. The audit team reviewed the Viridios valuation tool results and conclude this represents valid evidence of the GHG price assumptions made in the Cash flow analysis. Given this new evidence, the audit team concludes that the cash flow analysis is in conformance with the Risk Tool. This NCR has been closed/rescinded.

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

NIR 58 Dated 19 Jan 2021

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 6.2.2

Document Reference: Finding 30 response; Project Description.pdf;

Finding: The finding relates to finding #30 and #56. Based on the response to finding NCR 30 above, the project team appears to be employing a common practice baseline scenario. Section 6.2.2 of the methodology states that "Common practice is defined as timber harvest under the legal requirements for forest management and will be determined from a timber harvest plan (see Box 1 below) developed from:

1) The project area through scenario modeling as though the legal requirements were implemented in the project area; and

2) A reference area(or multiple reference areas) already under timber harvest management

that complies with legal requirements for forest management and selected to be representative of local common practice for timber harvest."

In the response to finding 30, it states "We have managed to source public data from three FSC-certified companies in the region that operate similar business models to GGF and in similar forest types." However, it is unclear which reference regions indicated in the response to NCR 30 were utilized to determine the baseline scenario, particularly since one reference area has a harvest cycle of 35 years and another a harvest cycle of 30 years. None of the reference areas described have a harvest cycle of 20 years and a volume of 15m³/ha. The closest to the 15m³/ha is the Precious Woods reference (<https://www.preciouswoods.com/sustainability/biodiversity>), and the reference states "With a harvest cycle of 35 years, Precious Woods in Brazil currently harvests a maximum of 15 to 20 cubic metres of logs per hectare. In Gabon, with a harvest cycle of 25 years, the harvest is even less than 15 cubic metres." In forestry, longer cutting cycles entail greater cut volume, while shorter cycles entail lower cut volumes. Thus shortening the harvest cycle for the Precious Woods in Brazil would then then reduce the harvest to less than 15 m³/ha. It is unclear how these reference areas are relevant to the baseline scenario for the project area. More information regarding how these reference areas (or any used for the baseline common practice determination) support the 15m³/ha in conformance with the procedures in the methodology (section 6.2.2) is requested.

Project Personnel Response: See email correspondence

Auditor Response: The document NIR 58 final.docx was provided by the project team in response to this finding. The document indicates "GGF's reference companies, including Precious Woods, have widened their range of target species and are hence taking out more volume than other companies practicing legal selective logging. For example, Goodman et al (2019) found extracted volumes between 3-8 m³/ha in 9 logging concessions (both FSC certified and non-certified) in Madre de Dios,

Peru, whereas Consorcio Forestal Amazonico, in Ucayali, not far from Madre de Dios, took out 19 m³/ha. This difference is not a result of different forest conditions, but of a different business model." Thus the audit team concludes that the additional information requested with regard the the harvest cycle has been provided and this finding can be closed out. However see finding NIR 65.

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

NCR 59 Dated 5 Mar 2021

Standard Reference: VCS-Non-Permanence-Risk-Report-Template-v4.0

Document Reference: VCS-Non-Permanence-Risk-Report-Template-v4.0 GGL1

Finding: Section 1 and section 2 of the Non-permanence risk report template states "Document and substantiate the risk and/or mitigation for each risk factor applicable to the project. Include any relevant documentary evidence. Where a risk or mitigation is not relevant to the project, please write "Not applicable". While the template was utilized, no documentation or substantiation of the applicable risk factors was included. For instance, under community engagement, a Total score of zero is simply applied but no indication of why that score is relevant has been included. Other examples are the financial viability table and opportunity cost table, where no substantiation of the risk scores applied have been provided and thus is not in conformance with the template requirements.

Project Personnel Response: V2 of the Non-Permanence Risk report includes text substantiating risk factors

Auditor Response: Confirmed that V2 of the Non-Permanence Risk report includes substantiation of the risk and/or mitigation for each risk factor. Relevant documentary evidence has been included. This finding has been closed.

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

NIR 60 Dated 5 Mar 2021

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, Section 8.1.3

Document Reference: Green Gold Loreto 1 ER Calculation Spreadsheet, v5 updated.xlsx; VCS PD Green Gold Loreto 1 v8.docx

Finding: Methodology Deviation #9 specifies that "Therefore, for each species the extracted carbon in logs can be divided into the fraction that is immediately emitted (longevity 0 years), the fraction that is emitted between years 1 and 20 (86% of the products with longevity 3-100 years – see data table p. 69 of VM0010), and the fraction that remains in wood products forever (14% of the products with longevity 3-100 years). This renders Equation 8 obsolete. The project proponent proposes to replace it with:

$$OF_j = 1 - (WW_j + SLF_j)$$

Later Section 3.4 of the PD states "8. The total volumes or fractions to be harvested, broken down by categories of wood products defined as sawnwood, wood-based panels, other industrial roundwood, paper and paper board, and other

Long-lived (3-100 yr) products: 57.3 % of extracted log carbon stocks.

Short-lived products and waste (0 yr): 42.7 % of extracted log carbon stocks." These add to 100% of the wood products and appear to correspond to the equation proposed in Methodology Deviation #9. However, the sheet "Inputs Baseline" cells B46 and B47 list the Waste and short-lived fraction (%) as 46.7% and the Long-lived products (%) as 45.7%, which only add to 92.7%. Later in section 5.1, it indicates that the values for the following parameters

"OF: 45.7%

PF: 7.6% (14% of OF – Winjum et al (1998))

SLF: 0%

WW: 46.7%" which considering the permanent fraction adds to 100%. However, the audit team requests more information regarding why there is a discrepancy between these percentages in the PD (section 3.4) and the calculation workbook and section 5.1 of the PD.

Project Personnel Response: A (slight) calculation error was detected in the workbook GGF POA10 invent_volumes_densidad, v2.

The correct percentages have now been included in the ER calculation workbook, in Section 3.4 (point 8) and in the relevant data table in Section 5.1 of the PD.

Auditor Response: The audit team confirmed that the values were updated such that the calculations

workbook, Section 3.4.4(#8) of the PD and 5.1 of the PD (version 9) contain corresponding percentages for the carbon stock in wood product pool classes. However, it appears that section 4.1.3 of the PD (Equation 10) still contain the slightly different values (e.g., Long lived wood is shown as 45.7% and not 45.9%). This finding remains open.

Project Personnel Response 2: All percentages in the PD and in the calculation workbook should now be consistent.

Auditor Response 2: Confirmed that the percentage of wood products are consistent in the PD and the calculation workbook. This finding has been closed.

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

NIR 61 Dated 5 Mar 2021

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest

Document Reference: Green Gold Loreto 1 ER Calculation Spreadsheet, v5 updated.xlsx; VCS PD Green Gold Loreto 1 v8.docx

Finding: Methodology Deviation #10 specifies that "Equation 10 is modified to:

$$CWP_{20,i,t}|BSL = \sum_k CEX_{i,j,t}|BSL * OF_j * 0.86 \quad (10)$$

Where:

$CWP_{20,i,t}|BSL$ = Carbon stock of extracted timber from stratum i at time t that is assumed to be emitted between years 1 and 20, in tC_{ha}-1;

$CEX_{i,j,k}|BSL$ = Carbon stock of extracted timber from species j in stratum i at time t, in tC_{ha}-1;

OF_j = Fraction of biomass carbon from the 'oxidised fraction' that is assumed to be emitted to the atmosphere from wood products between years 3-100 after harvest for species j, dimensionless; ". In reviewing the calculations workbook's "Baseline emissions" sheet, cells C12-V12, which shows the emissions due to "Long-lived wood products (tC)", it is unclear if and how this modified equation has been applied. For instance, cell C12 is the product of the Area harvested in Year 1 (cell F3) and the carbon in Long-lived per hectare (tC/ha), cell B50 of the "inputs Baseline" sheet. Next cells D12 through V12 are the product of cell C12 by the 0.05 (the decay function over 20 years). At no point are the emissions multiplied by 0.86 as indicated by equation 10 in the methodology deviation.

Project Personnel Response: The multiplication with 0.86 is done in Cell B47, Baseline Inputs tab, to calculate the fraction of long-lived wood products in extracted carbon. This feeds into Cell B50, which in turn feeds into cells D12-V12.

To clarify that OF is actually ($OF * 0.86$) this has been made explicit in Section 3.4 point 8, in Section 5.1 and in the ER calculation workbook.

Auditor Response: Clarification on this calculation has been provided in both the calculations workbook and in section 3.4.4 of the PD (v9). This finding has been closed.

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

NIR 62 Dated 5 Mar 2021

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, section 8.4.1.1

Document Reference: VCS PD Green Gold Loreto 1 v8.docx

Finding: Section 8.4.1.1 of the methodology requires "Uncertainties arising from the measurement and monitoring of carbon pools and greenhouse gases must always be quantified. Errors in each pool must be weighted by the size of the pool so that projects may reasonably target a lower precision level in pools that only form a small proportion of the total stock. 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 [EQ42] Where:

U_{total} | LtPF Total uncertainty for LtPF Project, dimensionless;

U | PRJ Total uncertainty for the improved forest management activities in the project scenario, dimensionless; and

U | BSL Total uncertainty for the baseline scenario, dimensionless.

The project proponent must justify the selection of uncertainty propagation in the project documents."

Appendix 2 of the PD states that "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. We expect this error to be low, around or less than $\pm 15\%$, and consistent across the biomass range, but this can only be assessed with the field data. Given many of these errors are random, when summed within a polygon of the field data the extrapolated errors in the LiDAR map are likely to be $\pm 5\%$, with this high accuracy justifying the use of this method over more traditional field inventory alone." However, this procedure does not address how baseline uncertainty will be calculated, nor provide a justification for the selection of uncertainty propagation in the project documents. The audit team requests additional information regarding how the requirements of section 8.4.1.1 (e.g., related to the parameters in equation 42 and the justification for uncertainty propagation) will be carried out

Project Personnel Response: Section 4.5 has been added to the PD to describe uncertainty propagation in the baseline scenario.

Auditor Response: The audit team confirmed the estimation of uncertainty propagation has been included in the PD (version 9). We have verified the sources and estimates of uncertainty that are presented in section 4.5 of the PD. This finding is closed. However, see finding 69 below regarding the inclusion of a new PD section.

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

NIR 63 Dated 5 Mar 2021

Standard Reference: VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: VCS PD Green Gold Loreto 1 v8.docx

Finding: Section 3.4.1 of the VCS Standard requires the following: “The project proponent shall use the VCS Project Description Template... The project proponent shall adhere to all instructional text within the template.”

The VCS Project Description Template requires, in Section 4.2, that the “procedure for quantification of project emissions and/or removals in accordance with the applied methodology” be documented.”

Section 3.6 of the PD states that "Equation (38) in Section 8.2.3 is replaced by Equation (M1)." However, section 4.2 of the PD states that "Calculation of project emissions is done in the GGF Loreto 1 baseline and project emissions calculation spreadsheet, applying Equation 38 of VM0010." There is no reference to the methodology deviation. The audit team requests clarification regarding this discrepancy.

Project Personnel Response: Section 4.2 of the PD now states that Equation M1 will be applied, which replaces Equation 38 of VM0010, see Methodology Deviation #3, Section 3.6.

Auditor Response: Confirmed that section 4.2 of the PD indicates that Equation M1 will be applied instead of equation 38 as a result of the methodology deviation #3. This provides the clarification needed to track the project emissions. This finding has been closed.

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

NCR 64 Dated 5 Mar 2021

Standard Reference: VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: VCS PD Green Gold Loreto 1 v8.docx

Finding: Section 3.4.1 of the VCS Standard requires the following: "The project proponent shall use the VCS Project Description Template... The project proponent shall adhere to all instructional text within the template." The PD template instructions state "Unless applying a merited deviation, please complete all sections using Arial or Franklin Gothic Book 10.5 point, black, regular (non-italic) font." The font used in the PD is Century Gothic which is not in conformance with the template requirements.

Project Personnel Response: The font has been changed to Franklin Gothic Book 10.5 throughout the document.

Auditor Response: The audit team confirmed that the font has been updated and is now in conformance with the PD template requirements. This finding has been closed.

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

NCR 65 Dated 5 Mar 2021

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, section 6.2.2; VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: VCS PD Green Gold Loreto 1 v8.docx

Finding: Section 6.2 of the methodology states that “Once the baseline scenario of planned timber harvest is demonstrated, the project proponent must determine how to model the baseline management scenario. A Historical Baseline Scenario (Section 6.2.1) must be used where data is available, otherwise a Common Practice Baseline Scenario (Section 6.2.2) must be used.” It further states that “In principle, under the historical baseline scenario, historical records of timber harvesting from the baseline agent are used to determine the values of many of the parameters available at validation, whereas under the common practice scenario other sources (eg, data from other forestry companies in the region, regional default values, legal requirements, etc.) must be used.”

The PD (v.8) indicates that a common practice baseline scenario. Section 6.2.2 pertaining to the common practice baseline scenario indicates that “Common practice is defined as timber harvest under the legal requirements for forest management and will be determined from a timber harvest plan (see Box 1 below) developed from:

- 1) The project area through scenario modeling as though the legal requirements were implemented in the project area; and
- 2) A reference area (or multiple reference areas) already under timber harvest management that complies with legal requirements for forest management and selected to be representative of local common practice for timber harvest.

Common practice cannot contradict management of the baseline agent except where common practice represents a lower harvest intensity (in m³/ha) than management by the baseline agent.”

As indicated in the business plan and conveyed to the audit team, the forest management of the baseline agent (GGF) may be characterized by “Reduced Impact Logging techniques to achieve sustainable log yields of up to 15m³ per hectare in every 20-year harvest cycle.”

Section 3.4.2 of the PD indicates that “GGF’s planned timber extraction rate of 15m³/ha is commercially viable (i.e., this volume of timber is available, marketable and profitable) and is

consistent with the forest management of other companies in the region that follow best practice guidelines in harvesting and processing lesser-known species alongside better-known woods.” The PD then states that this common practice harvest intensity was derived from 3 companies operating in the Amazon: Agrocortex in Brazil which “extracts 150,000m³ logs annually from 5,860 plots (25.6m³/ha)”, Precious Woods in Brazil which “harvested 156,100m³ in 2019 from its 370,000ha (out of total holdings of 472,576ha), which is harvested on a 35-year cycle (14.7m³/ha)”, and Consorcio Forestal Amonico in Ucayali, Peru which “published data on harvest volumes in 2006, that indicate total commercial volumes of 78,165m³ on a 4,100ha plot (19m³/ha).”

However section 6.2.2 of the methodology states “Where there is limited capacity to generate the baseline scenario using a reference site in the region of the project area, multiple reference areas may be selected to cover a country so long as the reference area criteria regarding forest types, climate and elevation are met.” This implies that the reference sites must be from the same country of the project area and if that is not possible, then multiple sites that cover the country for which the project is in, may be used. Thus, if it is the intention to derive the common practice baseline from reference areas outside of the region the project (Loreto) is within, it would represent a deviation from the language in the methodology.

Section 3.17 of the VCS standard states that “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 3.17.1 states that “Deviations from the applied methodology are permitted under the following circumstances where they represent a deviation from the criteria and procedures relating to monitoring or measurement set out in the methodology (i.e., deviations are permitted where they relate to data and parameters available at validation, data and parameters monitored, or the monitoring plan). Section 3.17.2 of the standard states that “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.”

If a methodology deviation pertaining to the common practice baseline reference regions is intended to be applied the audit team requests that a clear demonstration be provided that it will either achieve the same level of accuracy or is more conservative than what is set out in the methodology and that the deviation represents a deviation from the criteria and procedures relating to monitoring or measurement set out in the methodology (i.e., deviations are permitted where they relate to data and parameters available at validation, data and parameters monitored, or the monitoring plan) (i.e., “using a reference site in the region of the project area”).

Project Personnel Response: [Response provided in an email dated 1 March 2021 and in the attachment "Methodology deviation #10 SC.docx"]

Auditor Response: The audit team reviewed the proposed methodology deviation ("Methodology deviation #10 SC.docx"). We have been able to verify that the companies listed have similar business models as GGF in that they also are FSC-certified, practice reduced impact logging techniques, and harvest a wide range of species including lower-value species. The audit team has determined that the use of reference areas outside of the country as proposed by this methodology deviation has been justified and is in conformance with the VCS standard. However, see finding #65 related to the deviation. Also the VCS Project Description Template requires the following under Section 3.6:

“Describe and justify any methodology deviations. Include evidence to demonstrate the following:

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

There is no mention of this methodology deviation in the PD, thus this finding remains open.

Project Personnel Response 2: This deviation is now included in the PD as Deviation #7. Reference to it is made in Section 3.4.2.

Auditor Response 2: The audit team confirmed that this methodology deviation (#7) has been included in section 3.6 of the methodology and that it is referenced in section 3.4.2. This finding has been closed.

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

NCR 66 Dated 5 Mar 2021

Standard Reference: VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: VCS PD Green Gold Loreto 1 v8.docx

Finding: Section 3.4.1 of the VCS Standard requires the following: “The project proponent shall use the VCS Project Description Template... The project proponent shall adhere to all instructional text within the template.” Section 1.14 of the PD template requires “Identify and demonstrate compliance of the project with all and any relevant local, regional and national laws, statutes and regulatory frameworks.” Section 1.14 of the PD states “Green Gold Forestry is fully compliant with all the relevant regulations. This is demonstrated by the fact that there are no outstanding issues with the Government regulators (OSINFOR). The company’s FSC certification is further evidence that it is fully compliant.” However there has been no identification of the relevant local, regional and national laws, statutes and regulatory frameworks and no corresponding explanation or demonstration of compliance of the project with said laws.

Project Personnel Response: Section 1.14 of the PD has been updated

Auditor Response: The audit team confirmed that the relevant local, regional and national laws that the project complies with have been listed in section 1.1.4 of the PD. This finding has been closed.

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

NCR 67 Dated 5 Mar 2021

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest

Document Reference: VCS PD Green Gold Loreto 1 v8.docx; Green Gold Loreto 1 ER Calculation Spreadsheet, v5 updated.xlsx

Finding: In section 8.2.1.5 of the methodology, the annual carbon stock change in aboveground biomass of trees is calculated using equation 32. The audit team understands that for the ex-ante projections of CO₂ sequestration an annual sequestration assumption is utilized for calculating annual carbon stock change in aboveground biomass of trees. However, the modified equation 32 (and all equations in the methodology) use a ratio of molecular weight of carbon to carbon dioxide of 44/12. In cell B9 in the calculations workbook, sheet Inputs Project, a ratio of molecular weights of 3.67 is applied. This is not in conformance with the methodology.

Project Personnel Response: Cell B9 of calculations workbook 'Inputs Project' tab is amended to 44/12

Auditor Response: We confirmed that cell B7 of the calculations workbook (version 9) has been updated to use the ratio 44/12. This finding has been closed.

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

NCR 68 Dated 5 Mar 2021

Standard Reference: VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: VCS PD Green Gold Loreto 1 v8.docx

Finding: Section 4.4 of the PD template requires the following: "Describe the procedure for quantification of net GHG emission reductions and removals. Include all relevant equations. For AFOLU projects, include equations for the quantification of net change in carbon stocks.

Provide the ex-ante calculation (estimate) of baseline emissions/removals, project emissions/removals, leakage emissions and net GHG emission reductions and removals in the table below.

For data and parameters monitored, use estimates. Document how each equation is applied, in a manner that enables the reader to reproduce the calculation. Provide example calculations for all key equations, to allow the reader to reproduce the calculation of estimated net GHG emission reductions or removals." It then shows a table with columns "estimated baseline emissions or removals, estimated project emissions or removal, estimated leakage emissions, and estimated net GHG emission reductions or removals. The table presented in section 4.4 contains additional columns and is therefore not in conformance with the PD template.

Project Personnel Response: PD is updated (Section 4.4)

Auditor Response: The audit team confirmed that the table in section 4.4. of the PD (version 9) matches the table in the PD template. This finding has been closed.

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

NCR 69 Dated 7 May 2021

Standard Reference: VCS version 4.0, Section 3.4.1; VCS Project Description Template

Document Reference: VCS PD Green Gold Loreto 1 v9.i.docx

Finding: The title page of the VCS Project Description Template states "PROJECT DESCRIPTION: Instructions for completing the project description template are under the section headings in this template. Adhere to all instructions, as set out in the VCS Standard. Instructions relate back to the rules and requirements set out in the VCS Standard and accompanying VCS Program documents. The preparer will need to refer to these documents in order to complete the template. " The PD submitted contains a section 4.5 titled "Calculation of project Verified Carbon Units – Adjustment for uncertainty." This is not a section that exists in the PD template and its inclusion is therefore not in conformance with the PD template. The information and equations included in this new section 4.5 relate to the quantification of net GHG emission reductions and removals which is section 4.4 of the template.

Project Personnel Response: The heading for Section 4.5 has been removed.

Auditor Response: Confirmed that the added section 4.5 has been removed and the uncertainty information is now included in section 4.4 of the PD. This finding has been closed.

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

NCR 70 Dated 7 May 2021

Standard Reference: VCS version 4.0, section 3.17

Document Reference: VCS PD Green Gold Loreto 1 v9.i.docx

Finding: Section 3.17 of the VCS Standard 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." In Section 3.6 of the PD, methodology deviations #3 and #5 are justified as resulting in higher monitoring accuracy. It is also indicated that the deviations require the modification of equation 32 of the methodology. While the audit team has concluded that the general approach results in higher monitoring accuracy and thus the methodology deviations are valid, we found errors in the modified equation 32. The equation is double counting the area in that it first sums the carbon stock change across every pixel. Each pixel has an associated area. And then it multiplies that summed carbon stock change by the area that would have been harvested in the baseline scenario, resulting in the area being accounted for twice and thus an overestimation of the annual change in carbon stock. Given this, the methodology deviation #3 would not result in increased accuracy of such quantification.

Project Personnel Response: Equation 32 has been adjusted throughout the PD as suggested in the email sent 7 May.

Auditor Response: The audit team confirmed that equation 32 in section 3.6 of the PD has been adjusted so that the area is no longer double counted. However, in section 4.2.1 the equation has not been modified resulting in inconsistency between the sections. This finding remains open.

Project Personnel Response 2: [This finding was addressed outside the cover of this workbook]

Auditor Response 2: The audit team confirmed that in the PD (version 10.2) equation 32 has been updated in all sections such that it is consistent across the entire PD. This finding has been closed.

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

NCR 71 Dated 7 May 2021

Standard Reference: VCS version 4.0, section 3.17

Document Reference: VCS PD Green Gold Loreto 1 v9.i.docx

Finding: Section 3.17 of the VCS Standard 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." In Section 3.6 of the PD, methodology deviation #3 is justified as resulting in higher monitoring accuracy. It is also indicated that the deviation requires the modification of equation 35 of the methodology. While the audit team has concluded that the general approach results in higher monitoring accuracy and thus the methodology deviations are valid, we found errors in the modified equation 35. The PD states that "Equation 35 calculates project emissions from non-fire disturbance as the area affected multiplied by the total carbon stock in aboveground biomass." However, this equation results in the total aboveground biomass affected but not the GHG emissions in tCO₂e as it is missing conversions to carbon and CO₂. Given this, the methodology deviation #3 would not result in increased accuracy of such quantification.

Project Personnel Response: Equation 35 has been adjusted to include conversions to carbon and CO₂.

Auditor Response: The audit team confirmed that equation 35 in section 3.6 of the PD has been adjusted so that it accounts for the conversion of biomass to carbon and then CO₂. This finding has been closed.

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

NCR 72 Dated 27 May 2021

Standard Reference: VM0010 - Methodology for Improved Forest Management: Conversion from Logged to Protected Forest, sections 9.2 and 9.3

Document Reference: VCS PD Green Gold Loreto 1 v10.docx

Finding: Sections 9.2 and 9.3 of the methodology both indicate that parameters PMPi (Merchantable biomass as a proportion of total aboveground tree biomass for stratum i within the project boundaries) and Ai (Area covered by stratum I must be monitored in this methodology as these parameters will be required at each verification. However, section 5.2 of the PD does not list either parameter as being monitored.

Project Personnel Response: [This finding was addressed outside the cover of this workbook]

Auditor Response: The audit team confirmed that the parameters PMPi and Ai have been added to section 5.2 of the PD (version 10.2) indicating these parameters will be monitored. This finding has been closed.

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

APPENDIX B: STAKEHOLDER INPUT AND PROJECT PROPONENT RESPONSES

No input from stakeholders was received.

APPENDIX C: PUBLIC COMMENTS AND PROJECT PROPONENT RESPONSES

No public comments were received.