



THE JAGUAR AMAZON REDD+ PROJECT VERIFICATION REPORT



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Summary:

AENOR has carried out the verification of the “The Jaguar Amazon REDD+ Project”. The Jaguar Amazon REDD+ Project is a project whose proposed activity is to avoid unplanned deforestation of forests that are managed sustainably by the certified timber concessions "Inversiones Forestales Chullachaqui SAC" and "Forestal Otorongo SAC" in the province of Tahuamanu, department of Madre de Dios, in south-eastern Peru, covering a total of 183,015 hectares. The Project Area located 17 km from the Interoceanic Highway (IOH), the main communication route between Peru and Brazil.

The Jaguar Amazon REDD+ project is composed by two forest concessions (Chullachaqui and Otorongo) and its area is 100% certified by FSC for its sustainable forest management. Both Chullachaqui and Otorongo, have signed a permanent production forestry concession contract with the Peruvian government for a 40-year renewable period beginning between 2002 and 2003, for an area of 183,015 hectares (81,238 hectares for Otorongo and 101,777 hectares for Chullachaqui). This contract grants legal rights over the forest land for both forest use and environmental services.

The general objective of the project is to manage the forest extension granted by the Peruvian State, improving the production of forest goods and services in a continuous and sustainable manner with an adequate long-term strategy for its implementation. The presence of wildlife in forest ecosystems is important because of its positive influence on natural regeneration processes, which are key to forest sustainability. The biodiversity of the tropical forest ecosystem is the basis for the richness of its natural resources and its use must be sustainable, without compromising its benefits for future generations.

The purpose of the verification audit was to verify the emissions reductions and/or removals of the project The Jaguar Amazon REDD+, against the VCS Standard, the identified methodology and the validated PD throughout the monitoring period from 1st of January 2018 to 31st of December 2020.

The scope was defined as follows:

- The project area
- The eligibility, baseline scenario and additionality
- The physical infrastructure of the project
- The GHG sources, sinks and/or reservoirs that are applicable to the project according to the used methodology and the validated PD
- The types of GHGs that are applicable to the project according to the used methodology and the validated PD.
- The project monitoring period.
- The GHG emission reductions/removals assertions and claims.
- The local stakeholder consultation processes.
- The AFOLU safeguards.
- The quantification of the carbon pools and greenhouse gases emissions due to they were not validated

The verification was performed through a combination of document review and interviews with relevant personnel at an onsite visit. At all times, the project was assessed for conformance to the described criteria and findings were issued to ensure that the project was in full conformance to all requirements.

The main uncertainties were associated with the accuracy of GHG Emission Reduction and Removal Calculations, but the available data is consistent with the VCS documentation, methodologies and associated tools, and the PD.

The project started on January 1st, 2018, and the validation process was completed under the Verified Carbon Standard (VCS) on March 12th, 2021. The monitoring Period is from 01 of January 2018 until 31 of December 2020. Up to 2020, the accumulated avoided emissions have been 3,343,035.56 tCO₂-e. The VCUs obtained for the Monitoring period are 3,002,761.48VCUs, considering a buffer pool allocation of 340,274.08. The crediting period for the project is 24 years, established between 01/01/2018 and 31/12/2041.

During the verification 18 CLs and 12 CARs were raised. All these issues were appropriately closed by means of corrections, more clear explanations, and additional supporting documents.

In the opinion of AENOR, The Jaguar Amazon REDD+ Project is in compliance with the Verified Carbon Standard version 4.3 without qualifications or limitations. The project has been implemented in accordance with the validated Project Description and its validated deviations and complies with the validation and verification criteria for projects set out in VCS Version 4, without any qualification or limitation.

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1 INTRODUCTION

1.1 Objective

The objective of the verification audit was to conduct an independent assessment of the project to determine:

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

1.2 Scope and Criteria

The scope of the verification audit was to verify the emissions reductions and/or removals of the project The Jaguar Amazon REDD+, against the VCS Standard, the identified methodology and the validated PD throughout the monitoring period from 1st of January 2018 to 31st of December 2020.

The scope was defined as follows:

- The project area
- The eligibility, baseline scenario and additionality
- The physical infrastructure of the project
- The GHG sources, sinks and/or reservoirs that area applicable to the project according to the used methodology and the validated PD
- The types of GHGs that are applicable to the project according to the used methodology and the validated PD.
- The project monitoring period.
- The GHG emission reductions/removals assertions and claims.
- The local stakeholder consultation processes.
- The AFOLU safeguards.
- The quantification of the carbon pools and greenhouse gases emissions due to they were not validated

This audit included a verification of the project's calculated reductions and/or removals /10-11/ /13-14/ , the Monitoring Report /12/ and the Non-permanence Risk Assessment Report /1-2/ with the Verified Carbon Standard requirements and any additional requirements of VCS AFOLU projects. In addition, the audit assessed the project with respect to the validated baseline scenarios and the eligibility criteria presented in the PD.

In accordance with Section 4.1.8 of the VCS Standard v4.3, the criterion for validation and verification was the VCS Version 4, including the following documents:

- VCS Standard v4.3
- VCS Program Guide v4.2
- VCS AFOLU Non-Permanence Risk Tool v 4.0

Unless otherwise indicated, the assessment was performed against the most recent version of the relevant VCS guidance document.

1.3 Level of Assurance

The assessment was conducted to provide a reasonable level of assurance of conformance against the defined audit criteria and materiality thresholds within the audit scope. Based on the audit findings, a positive evaluation statement reasonably assures that the project GHG assertions are materially correct and is a fair representation of the GHG data and information.

All the versions of the verification report were subjected to an independent internal technical review before being submitted to the client to confirm that all verification activities had been completed according to the pertinent AENOR instructions required. The technical review was performed by technical reviewer(s) qualified in accordance with AENOR's qualification scheme for VCS validation and verification.

Name	Role in the team
Juan Carlos Gómez	Lead Auditor (until July 2022)
Javier Cócera	Lead Auditor (since July 2022)
Richard Gonzales	Auditor
José Luis Fuentes	Technical reviewer

The threshold for materiality with respect to the aggregate of errors, omissions, and misrepresentations relative to the total reported GHG emission reductions/removals was one percent (1%), as established for large projects by the VCS Standard.

1.4 Summary Description of the Project

The Jaguar Amazon REDD+ Project is a project whose proposed activity is to avoid unplanned deforestation of forests that are managed sustainably by the certified timber concessions "Inversiones Forestales Chullachaqui SAC" and "Forestal Otorongo SAC" in the province of Tahuamanu, department of Madre de Dios, in south-eastern Peru.

The project is specifically located in the province of Tahuamanu (districts of Iñapari, Iberia and Tahuamanu). The project area (PA) comprises the consolidated areas of Otorongo and Chullachaqui covering a total of 183,015 hectares.

Both Chullachaqui and Otorongo, have signed a permanent production forestry concession contract with the Peruvian government for a 40-year renewable period beginning between 2002 and 2003, for an area of 183,015 hectares (81,238 hectares for Otorongo and 101,777 hectares for Chullachaqui). This contract grants legal rights over the forest land for both forest use and environmental services.

There are no native indigenous population within the project area. In the neighbouring towns of Alerta, Portillo, San Francisco and Carachamayoc there are settlers dedicated to collecting Brazil nuts and eventually rubber. One hundred percent of the people that collect Brazil nuts, through a contract harvesting service with the project, live in the town of Alerta. Peruvian legislation allows for a combination of timber and non-timber product harvesting activities. As a result, a complementary Brazil nut management plan has been elaborated to develop the use of Brazil nuts in a compatible way with timber extraction, minimizing impacts. The project holds meetings with Brazil nut harvesters and exchanges mutually beneficial proposals (minutes of these meetings are kept).

The general objective of the project is to manage the forest extension granted by the Peruvian State, improving the production of forest goods and services in a continuous and sustainable manner with an adequate long-term strategy for its implementation.

The project started on January 1st, 2018, and the validation process was completed under the Verified Carbon Standard (VCS) on March 12th, 2021. The project will be operational until 31st December 2041. However, the Project Proponent has calculated the ex-ante estimations for the period 2018-2027, that is for a period of 10 years, what is the period in which, according to section 3.2.7 of the VCS Standard V.4.3, For all IFM, REDD, WRC and ACoGS project types, the project proponent shall, for the duration of the project, reassess the baseline every 10 years and have this validated at the same time as the subsequent verification. The estimated emissions reductions for the 10 first years is 17.953.944,43 tCO₂e, with an average of 1.795.394,44 tCO₂e/year. The emissions reduction for the current MP (01/01/2018 to 31/12/2020) is 3,343,035.56 tCO₂e.

2 VERIFICATION PROCESS

2.1 Method and Criteria

The verification was performed through a combination of document review and interviews with relevant personnel, as discussed in Sections 2.2 through 2.4 of this report. At all times, the project was assessed for conformance to the criteria described in Section 1.2 of this report. As discussed in Section 2.5, findings were issued to ensure that the project was in full conformance to all requirements.

A project specific Verification and Sampling Plan was developed to guide the verification auditing process to ensure efficiency and effectiveness. The purpose of the Verification and Sampling Plan was to present a risk assessment for determining the nature and extent of verification procedures necessary to ensure the risk of auditing error was reduced to a reasonable level. The Verification & Sampling Plan methodology was derived from all items in our verification process stated above. Specifically, the sampling plan utilized the VCS guidance documents, ISO 14064-3 and the Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities Version 03.0. Random samplings were carried out considering a confidence interval of 95% and error of 10%. Any modifications applied to the Verification and Sampling plan were made based upon the conditions observed for monitoring in order to detect the processes with highest risk of material discrepancy. The verification sampling plan includes a section specific for the field visit or the onsite audit. In this case, as described in section 2.4 below, the onsite visit was performed in June 2022. The VVB sends previous to the field visit, once the process of review starts, the audit plan, which is synonym of the verification and sampling plan. In such document, all the criteria and method followed is described. One of the main important sections of such plan is the enumeration of aspects, topics, activities, and stakeholders that the VVB wants to verify during its onsite audit. There is only one document which involves the desk review plan and the onsite visit plan. Please see section 2.4 below for further information about the onsite visit.

The verification activities in which risks were assessed were the evaluations of the monitoring system (data flow, data control procedures, etc.) but mainly the quality of raw data as well as sources and the calculation spreadsheets. AENOR reproduced and verified 100% of spreadsheets /10-11/ /13-14/ for the monitoring period from January 1st, 2018, to December 31st, 2020 for the project area. The project boundary and the project area for the monitoring period were 100% checked using the GIS database /17-24/.

The carbon stock changes, and the land used classes in the project area were also 100% verified /19/ and crosschecked with validated values in the PD.

AENOR carried out a deep and meticulous review of the spreadsheets /10-11//13-14/ to verify the correct application of the methodology (formulae, equations.) and checked that data required for calculating the GHG removals were appropriately provided. Based on the assessment carried out, AENOR confirms with a reasonable level of assurance that the claimed emission reductions and removals are free from material errors, omissions, or misstatements.

AENOR confirms that sufficient evidence was presented for the reported net anthropogenic GHG emission reductions and removals and that there is a clear audit trail that contains the evidence and records that validate the stated figure in this verification report since:

- Sufficient evidence available: The project participant has provided the 100% of data used in the calculations to achieve the final amount of GHG emission reductions and removals reported.
- Nature of evidence: The raw data were collected from reliable sources. They are detailed in the project documents and have been provided to the verification team and were checked during the interviews.
- Cross-checked evidence: AENOR cross-checked the collected information through interviews with stakeholders and reproducing calculations.

Hence, AENOR confirms that the stated figures in the monitoring report are correct and confirms that is able to certify the ex-post net anthropogenic GHG reductions and removals based on verifiable and reliable evidence.

2.2 Document Review

A detailed review of all project documentation was conducted to ensure consistency with, and identify any deviation from VCS program requirements, the methodology (VM0006. Methodology for Carbon Accounting for Mosaic and Landscape-scale REDD Projects. Version 2.2), and the validated PD. Initial review focused on the MR and included an examination of the project details, implementation status and internal reports, data and parameters, and quantification of GHG emission reductions and removals. Documents reviewed included data from monitoring, management plans /50-51/, maps and satellite images, /38-43/, monitoring and grievance SOPs /57-75/, carbon calculation spreadsheets /10-11//13-14/, and responses to Corrective Action Requests (CARs) and Clarifications (CLs) (Appendix 2).

The verification included a review of the validated PD and the MR as well as topics which were not validated such as the GHG calculations, information relative to the field conditions, and interviews with project management staff and stakeholders. Modifications to the Verification and Sampling plan were made based upon the conditions observed for monitoring in order to detect the processes with highest risk of material discrepancy.

The VCS AFOLU Non-Permanence Risk Tool v 4.0 was used by the Project Proponent (PP) to assess overall project risk. AENOR reviewed the Non-Permanence Risk Report /1-2/ provided with the verification support documentation and confirmed that the project adheres to the requirements set out in the VCS AFOLU Non-Permanence Risk Tool. Each risk factor was thoroughly assessed for conformance. The final score was calculated to be 10%.

For a listing of all documents received from the client and assessed for this verification, see Appendix 1. Numerical references to evidence are provided throughout this report, following the numeration provided in Appendix 1.

2.3 Interviews

Interviews were performed as part of the validation process in order to confirm and verify the information provided in the documents (see Appendix 1). The interviews were carried on during the field visit in Peru, developed in June 2022 by AENOR. The AENOR audit team met with individuals with various roles in the project. This included a series of interviews with in-country staff that support the mission of the project. In addition, interviews discussions were conducted with project members, leaders of the local communities and other project-related stakeholders. The following table summarizes the interviews carried out during the process.

The AENOR verification team conducted interviews to confirm selected information and to resolve issues identified in the document review. The list of the interviewed people is below detailed.

Stakeholder group	Name/role	Date
Carlos Salazar Carihuanche	CARFFS	09/06/2022
Benjamín Valencia Castillo	OSINFOR	09/06/2022
Edgar Cusi Avia	IIAP	09/06/2022
Arnaldo Yunibato Yunie	Vigilance	08/06/2022
Walter Tenorio	Vigilance	08/06/2022
Alejandro Pinedo Mozombite	Vigilance	08/06/2022
Marlin Chujutalli Chujutalli	Vigilance	08/06/2022
Wey Caritimari Ojaicuro	Vigilance	08/06/2022
Favio Mestanza Villarreal	UGFFSTAH	08/06/2022
Elmo Luque Quino	UGFFSTAH	08/06/2022
Jose Gabril Conterras Pacay	Agricultural	08/06/2022
Fernando Pillaca Ortiz	Agricultural	08/06/2022
Angel Cifuentes Danchez	Agricultural	08/06/2022
Juan Carlos Gómez Díaz	AATM	08/06/2022
Gaston Zapata Alvarado	PEMOD	08/06/2022
Federico Rios Torres	Forestry Corporation	08/06/2022
P.Yunti Picchotita	Lawyer	08/06/2022
Puri Chalco	Nut producer	08/06/2022

Erik Lee Pardave Valderrama	Responsible	07/06/2022
Danika Garay Dinis	Responsible	07/06/2022
Hueto Hiber Mondragon Diaz	Operator	07/06/2022
Miguel Angel Flores Oncebay	Operator	07/06/2022
Francisco J. Linares Valsquez	Sanitary	07/06/2022
Sixto Lima Cahuscanco	Chainsaw operator	07/06/2022
Demetrio Caymachi Rios	Staff	07/06/2022
Tony Guevara	Staff	07/06/2022
Fernando Moali Huerta	Staff	07/06/2022
Marlon Pizarro Chapiama	Productor San Francisco	07/06/2022
Jorge Torres Padilla	Consultant	06/06/2022
Julio Jeanpierre Adriano Reyes	Consultant	06/06/2022
Pedro Ruiz Navarro	GIS technician	06/06/2022
Elialdo Motta Machicaró	Responsible	06/06/2022
Antonio Flores Luzon	Responsible	06/06/2022
Vittorio DeGea Peña	Manager	06/06/2022
Ivo Bozovich Noriega	Manager	06/06/2022
Dr.Hugo Dueñas Linares	Universidad Nacional amazónica De Madre De Dios	08/06/2022
Ing.Gustavo Mamani Ticona	Municipalidad Distrit Iberia	08/06/2022
Ing.Gaston A. Zapata Alvarado	Special Project Madre De Dios	08/06/2022
Ing.Junior Orrego Rodrigo	GRFFS-Gerencia Regional Forestal Y De Fauna Silvestre	08/06/2022
Ing.Benjamin Valencia C.	SERFOR	08/06/2022
Ing.Ronald Corvera Gomeringe	IIAP- Instituto De investigación De La Amazonia Peruana	08/06/2022
Ing.Cesar Huisa Lopez	GRFFS-Sede Iberia	08/06/2022
Tnte. Pnp. Juan C. Mendoza	Comisaria PNP Iberia	08/06/2022

Ing. Juan C. Gomez Diaz	Agraral Agence Tahuamanu	08/06/2022
Mag. Josue A. Villegas Cubas	UGEL Tahuamanu	08/06/2022
Leslie Celedonio Dulanto Chapiama	Agrarian sector San Francisco	08/06/2022
Fernando Pillaca Ortiz	Agrarian sector Portillo	08/06/2022
Angel Beckmn Sifuentes Sanchez	Agrarian sector Carachamayoc	08/06/2022
Freddy Huisa	Agrarian sector Monte Sion	08/06/2022

Complementary to these interviews, the audit team has maintained a constant communication with the project proponent, having several interviews and calls for solving all the necessary issues as well as the proper understanding of the calculations and crosschecking with AENOR workbook calculations.

2.4 Site Inspections

Site inspections were conducted between 06 and 09 of June 2022. The objectives of the site visit were to assess the accuracy of the PDD including the assessment whether project activities are being implemented according to the project description, and to assess the quality of field data collection techniques.

The schedule that the audit team followed during the visit was similar to the following:

	Location	Date	Duration
Initial meeting - Presentation of validation team - Confirmation of activities during site visit	Project site	2022-06-06	15:00 – 15:30
Comments and opinions about the project - Introduction about the project - Presentation of the area and the stakeholders - Rights and benefits of the project - Status of project activities	Project site	2022-06-06	15:30 – 16:30
Characteristics of the project - Physical parameters of the project - Communities involved with the project - Biodiversity within the project area	Project site	2022-06-06	16:30 – 18:00

Stakeholder consultation • Staff trainings • Conditions prior to the project implementation • Stakeholder consultation process • Satisfaction and perception of the project • Local employment. Men/women. insurance • Educational improvement • Water quality improvement • Deforestation activities • Internal conflicts • Documentation access • Antidiscrimination and grievance policies • Opinion from different stakeholders: ○ Rural Producers ○ Local municipalities ○ Religious community ○ SERFOR ○ Regional Government ○ Forest Concessions ○ Ministry of environment ○ OSINFOR ○ IIAP • Communities: Carachamayoc, Portillo and San Francisco	Project´s stakeholders location	2022-06-07	09:00 – 10:00
Biodiversity • Biodiversity trainings • Fauna inventories • Trap camera results • Illegal activity mitigation plans • Biodiversity Gold Level Criteria	Project site	2022-06-07	10:00 – 18:00
Monitoring • Forest management; forest conservation activities • Biodiversity monitoring • Road measurement and road planning • Wildlife monitoring. Forestal Otorongo • Sampling plots assessment Patrolling activities	Project site	2022-06-08	09:00 – 16:00
Final meeting • Closure of the visit	Project´s Stakeholders location	2022-06-09	09:00 – 12:00

2.5 Resolution of Findings

All documentation provided by the PP was assessed against the applicable version of the relevant VCS guidance document. Several clarification requests (CL) and corrective action requests (CAR) were raised and submitted to the PP, which addressed them either by providing to the audit team the requested information or by making the appropriate corrections. Updated versions of the documentation were submitted by the PP and the audit team reassessed them against the guidance documentation. This process was repeated iteratively until all CLs and CARs were fully closed. Specifically, 18 CLs and 12 CARs were raised.

All findings issued by the AENOR audit team during the verification process have been closed. In accordance with Section 4.1.13 of the VCS Standard, all findings issued during the verification process and the inputs for their closure are described in Appendix 2 of this report.

According to the validation report for the Jaguar Amazon REDD+ Project v.1-0, with date of 24 December 2020, the validation audit team issued the following Forward Action Request (FAR) that must be assessed at verification:

- Due to the methodology deviation No. 3 described in section 3.3.7 below, all quantification pertaining to the GHG emissions reductions must be assessed at verification rather than validation. During this validation, the project was assessed against the quantification requirements in Sections 8.1.1 and 8.3.2.2 of the methodology, and the monitoring plan was assessed against the requirements in Section 9 of the methodology. Assessment of conformance to any and all other requirements of the methodology pertaining to the quantification of GHG emission reductions must be conducted, as a validation activity, during the first verification. As a result, the project proponent must follow the procedures outlined in the remaining sections of the methodology to quantify the baseline emissions, project emissions, leakage emissions, and overall GHG emission reductions at the first verification.

AENOR, as verification team, has assessed the pending issue of the calculations validation and they are going to be described as following:

The audit team has been crosschecking the information provided in the validated PDD with the most updated document called “Climate Section Updated” /16/, which corresponds to the part of calculations which was not validated and it has been properly updated at the same time than the verification. This is a deep document which is supported by the spreadsheet of ex-ante calculations /10-11/. AENOR has reviewed all the documentation necessary to understand the ex-ante calculations and deems that they are corrected and well documented.

The project area is the sum of Otorongo and Chulachaqui forest concessions, and AENOR has assessed such information with some evidence such as the FSC certificates /76-77/, the land cadastral titles /78-79/ and the GIS or KML files /17-24/ among others, and deems that the location is correct.

The sections of Reference Region, Leakage Belts and carbon pools among others were already validated on the validation report which has also been reviewed by AENOR.

The PP in the table 70 of the climate section update document /16/ has classified the Land Use Classes according to the Peruvian Government information (MINAM) as well as the definitions from FAO among others. AENOR has reviewed the classification of each forest strata and their definition according to the evidence provided and the formal registries and deems that the classification has been properly.

The Audit team has reviewed the methodology VM0006 v.2.2, and according to the methodology, section 8.1.2.5, a forest benchmark map was generated to show forest cover status in the project and leakage areas. The final LULC map in the historic series can be used as the forest benchmark map, however missing values within the project and leakage areas due to cloud and cloud shadow must be filled with RS data acquired within three years before the start of the crediting period to be eligible. Geographic areas for which no cloud-free or cloud-shadow-free imagery is available within three years of the project start must be excluded from the project area. AENOR has reviewed the benchmark and the GIS file /38-43/ that support the information of such Benchmark and deems that it is correct. The forest benchmark map was generated to show forest cover status in the project and leakage area.

The step 7 of the climate section updated document /16/ shows the map accuracy assessment and discounting factor determination, and it has been reviewed and assessed by the audit team comparing the satellite imagery provided by the PP as well as the support of technical meetings with the PP team.

The deforestation rates have been obtained from *Geobosques* and such evidence has been reviewed by AENOR. The deforestation rates have been modelled through the beta regression has stated in the methodology. AENOR has reviewed the document of the Beta Regression analysis /80-81/ and crosschecked with the spreadsheet /10-11/ and the climate section update document /16/. The years of such modelling are from 20017 to 2027 as explained in table 82 of the document. To calculate the deforestation rate for the project area in the baseline scenario, the project uses the equation 37:

$$D_{projectArea,baselineScenario,DF}(t) = BetaReg_{DF}(t) \cdot \frac{Size_{projectArea}}{Size_{referenceForest}} \quad [EQ37]$$

The size of the project area and the size of the reference area has been provided by the PP in the spreadsheet and crosschecked by AENOR with the GIS files /17-24/. After that, according to the deforestation rate in the baseline scenario, emissions are estimated, by multiplying the deforestation rate obtained before with the emission factor.

According to the methodology, the next step is to analyse the calculations of deforestation with the change of land use from forest to pasture. Also, the organic matter is considered for both stratum as per methodology. The difference of organic matter is the annual loss of carbon by conversion of forest lands in pastures L(1) and finally the annual loss is obtained through the multiplication of $0.47 \cdot deforestation_rate \cdot OM_difference$. AENOR has assessed those calculations and crosschecked with the methodology and the spreadsheet and deems that the information provided in the document is reliable and correct.

To convert in forest area converted from forest to pasture, the deforestation rate is multiplied by 3.15%. AENOR has reviewed the source of this value, which comes from the table 101 of the Climate section

document /16/. AENOR has reviewed the cancellation factor calculation and deems that the procedure is correct. For this period, only the *Arca Pacahuara* community has been considered to calculate the rate. The leakage cancellation rate to avoid deforestation caused by conversion of forest lands in pastures was obtained from EQ85.

$$\text{leakage}_{\text{constrained}}(\text{cropland conversion by participating communities}) = \frac{\Delta \text{area}_{\text{cropLand,project}} - \Delta \text{area}_{\text{cropLand,allowed}}}{\Delta \text{area}_{\text{cropLand,baseline}} - \Delta \text{area}_{\text{cropLand,allowed}}} \quad [\text{EQ85}]$$

Subsequently, AENOR has assessed the relative contribution of deforestation driver. According to the methodology in section 8.1.3.2: The relative contribution of each of the drivers of deforestation to the total historical deforestation and forest degradation is estimated in two steps: (1) estimating the absolute annual carbon loss per driver, and (2) estimate the relative contribution of each driver to the total carbon loss from deforestation and degradation. Table 8 of the methodology explains the formulae, but in this case as there is only one driver, the contribution is 100%=1.

Once the deforestation rate in the baseline scenario is calculated, AENOR has reproduced the calculations of deforestation rate in the leakage belt. The area of the leakage is 232,114.34 ha, and AENOR has crosschecked with the GIS evidence /20/.

According to the methodology, AENOR has analysed the allowed area to be converted to pasture. In this case the area is 0 ha/year, that is, there is not an area to be converted in pastures, but according to the calculations there is a prevention rate of 3.15 as explained before.

For the calculation of the leakage cancellation rate, AENOR has reviewed the calculations and crosschecked with the equation 85, which makes the following division:

$$\text{leakage}_{\text{constrained}}(\text{cropland conversion by participating communities}) = \frac{\Delta \text{area}_{\text{cropLand,project}} - \Delta \text{area}_{\text{cropLand,allowed}}}{\Delta \text{area}_{\text{cropLand,baseline}} - \Delta \text{area}_{\text{cropLand,allowed}}}$$

As there is only one driver, through equation 64 the PP has calculated the relative impact of such driver and consequently, the relative impact is multiplied by the cancellation rate of leakage as per equation 81

$$\Delta D_{LK,DF}(t) = \text{RelativeLeakageImpact}_{DF}(t) \cdot D_{\text{projectArea,baselineScenario},DF}(t) \quad [\text{EQ81}]$$

AENOR has reviewed previous calculations and crosschecked the PDD /16/ the spreadsheet /10-11/ and the methodology and deems that the information has been calculated properly and it is reliable.

Once the PP has gathered the deforestation rate within the project area in the baseline scenario, the relative impact of the activities, the deforestation rate and the leakage induced, it is obtained the

deforestation rate for the leakage area within the baseline scenario, by multiplying the parameters as per equation 95.

$$D_{leakageArea,baselineScenario,DF}(t) = D_{projectArea,baselineScenario,DF}(t) \frac{size_{leakageArea}}{size_{projectArea}} \quad [EQ95]$$

AENOR has followed those calculations together with the methodology, the GIS /17-24/ and the spreadsheet /10-11/ and deems that the information provided is reliable and correct.

After that, to calculate the values for the project scenario, the way that the PP has proceeded was summing the baseline rate of deforestation within the leakage area at time “t”, and the leakage induced increase in deforestation rates during year “t” according to the equation 97.

$$D_{leakageArea,projectScenario,DF}(t) = \Delta D_{LK,DF}(t) + D_{leakageArea,baselineScenario,DF}(t) \quad [EQ97]$$

Finally, the emissions within the leakage belt are obtained by multiplying the deforestation rate by the emission factors. AENOR has reproduced the calculations and followed the emissions factors and their source, identified in the tabs “EF1” and “EF2” of the spreadsheet, and deems that the calculations have been done correctly according to the methodology. The obtaining of the emission factors has been assessed by the VVB according to the statistical explanations of the spreadsheet /10-11/. The basis for the emissions factor’s calculation is the FREL (NREF) of Peru for 2021 table 22. AENOR has compared the basis from such table and the final calculation in the ex-ante spreadsheet and considers that the information has been used properly and the source is reliable.

The next step is the ex-ante NERs calculation. the PP has provided a deep calculation of NERS according to the equation 105 within the spreadsheet and the climate section document.

Net Emission Reductions(NERs)	=
ΔGHG from avoided deforestation excluding ANR and harvest areas	01 +
+ ΔGHG from deforestation due to leakage	02 +
+ ΔGHG from avoided degradation	03 +
+ ΔGHG from degradation due to leakage	04 +
+ΔGHG from leakage by unconstrained geographic drivers	05 +

+ ΔGHG from assisted natural regeneration	06 +
+ ΔGHG from changes in long-lived wood products	07 +
+ ΔGHG from improved cook stoves	08 +
+ ΔGHG from other and secondary sources	09 +
+ΔGHG from avoided deforestation from areas under harvest	10

The only parameters considered in this equation are for the Jaguar Project in the ex-ante calculation has been the numbers 1,2,7 and 10.

For all the parameters, AENOR has reviewed the calculation methods and the figures such as $U_{transition}$ or $U_{classification}$, and crosschecked with the spreadsheet document.

$$\textcircled{1} = \sum_{i=1}^{nrFNFtransitions} \sum_{tt=1}^t u_{classification} \cdot u_{transition}(i) \cdot \left(\begin{array}{l} +\Delta area_{projectAreaEAH,projectScenario}(t,i) \\ -\Delta area_{projectAreaEAH,baselineScenario}(t,i) \end{array} \right) \cdot (EF_{AGL}(i) + EF_{AGD}(i, t - tt) + EF_{BG}(i, t - tt) + EF_{SOM}(i, t - tt)) \quad [EQ107]$$

ΔGHG from deforestation due to leakage:

$$\textcircled{2} = \sum_{i=1}^{nrFNFtransitions} \sum_{tt=1}^t u_{classification} \cdot u_{transition}(i) \cdot \left(\begin{array}{l} +\Delta area_{leakageArea,projectScenario}(t,i) \\ -\Delta area_{leakageArea,baselineScenario}(t,i) \end{array} \right) \cdot (EF_{AGL}(i) + EF_{AGD}(i, t - tt) + EF_{BG}(i, t - tt) + EF_{SOM}(i, t - tt)) \quad [EQ108]$$

For the number 7, the volume of wood is obtained from the MINAM. In this source, the calculation has been done comparing the Tahuamanu forest and the Project Area. Also, the species and densities as well as all the sources have been assessed by AENOR and deems that the values are correct and reliable, also, the figures from the sources are well obtained.

Finally, the parameter is obtained as per equation 113:

ΔGHG from changes in long-lived wood products:

$$\textcircled{3} = \frac{44}{12} \cdot (C_{LWP,project}(t) - C_{LWP,baseline}(t)) \quad [EQ113]$$

The number 10 considers the accreditation period, which is 40 years, and the uncertainty, which is 1. The density of carbon for the harvesting area is obtained with the emission factors by multiplying the

carbon fraction and the parameter 44/12. Finally, the equation 117 is used. Table 107 of the PDD shows the carbon content in harvested wood products within the project area. AENOR has reviewed the table and confirms that the values are correct. The same for the table 11, about the carbon density in harvest zones in stratum “I” in year “t”.

In case the inequality above does not hold, (10) must be:

$$10 = \Delta C_{areaWithHarvest}(t)$$

[EQ117]

Finally, table 112 shows equation 105, which corresponds to the sums of parameters 1,2,7 and 10. The final values for the net GHG emissions reductions (tCO₂e) is the following:

Year	Net Emission Reductions (NERs)	1	2	7	10
2018	947,866.59	877,858.32	-16,941.21	2,876.60	84,072.88
2019	1,113,283.10	998,910.21	-19,793.17	3,276.21	130,889.86
2020	1,281,885.87	1,148,595.89	-22,970.85	2,886.81	153,374.00
2021	1,455,653.66	1,320,440.07	-26,482.55	3,013.21	158,682.94
2022	1,652,236.99	1,499,360.74	-30,321.56	3,013.21	180,184.60
2023	1,861,325.68	1,689,714.25	-34,461.96	3,013.21	203,060.19
2024	2,079,743.18	1,888,619.99	-38,853.56	3,013.21	226,963.55
2025	2,302,804.39	2,091,823.78	-43,416.01	3,013.21	251,383.42
2026	2,524,063.94	2,293,467.52	-48,032.59	3,013.21	275,615.81
2027	2,735,081.03	2,485,873.60	-52,543.86	3,013.21	298,738.07

Complementary, the table of the baseline emissions or removals, project emissions or removals, and leakage is the following:

Year	Estimated baseline emissions or removals (tCO ₂ e)	Estimated project emissions or removals (tCO ₂ e)	Estimated leakage emissions (tCO ₂ e)	Estimated net GHG emission reductions or removals (tCO ₂ e)
2018	-84,072.88	1,048,880.68	-16,941.21	947,866.59
2019	-1,008,748.18	2,141,824.46	-19,793.17	1,113,283.10
2020	-1,152,284.21	2,457,140.92	-22,970.85	1,281,885.87
2021	-1,307,278.83	2,789,415.04	-26,482.55	1,455,653.66
2022	-1,500,624.66	3,183,183.21	-30,321.56	1,652,236.99
2023	-1,702,420.93	3,598,208.58	-34,461.96	1,861,325.68
2024	-1,916,677.79	4,035,274.54	-38,853.56	2,079,743.18
2025	-2,140,003.41	4,486,223.81	-43,416.01	2,302,804.39
2026	-2,367,439.59	4,939,536.12	-48,032.59	2,524,063.94
2027	-2,592,205.59	5,379,830.47	-52,543.86	2,735,081.03
Total	-15,771,756.07	34,059,517.82	-333,817.32	17,953,944.43

AENOR has reviewed the totality of the calculations provided in the spreadsheet /10-11/ and cross checked with the methodology. Also, the sources have been reviewed to compare the values used and their effectiveness. Technical meetings have been performed between the technical team and the VVB as well as several findings were raised. Then AENOR can confirm that the ex-ante calculations have been calculated properly.

2.5.1 Forward Action Requests

During the current verification, none FAR has been raised.

2.6 Eligibility for Validation Activities

AENOR holds accreditation for validation and verification for the relevant sectorial scope 14 under which this project activity is classified.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project is not registered, nor is seeking registration under any other GHG programs. It is not discarded that in the future, this will be evaluated as an alternative. The project expects to be registered in the Peruvian National GHG Registry.

The project has been validated under VCS and therefore, is eligible to participate under the VCS program.

3.2 Methodology Deviations

The following methodology deviations were applied for the validation process:

- 1- Leakage/deforestation agents: This methodology deviation pertains to the use of ancillary data on the extra time an agent of deforestation is willing to move their activities outside of the project area, in lieu of using social assessments. During validation, the audit team reviewed the methodology deviation to confirm that it only impacts the criteria and procedures for delineation of the leakage belt (used for the measurement of ex-post monitoring of leakage emissions).
- 2-Leakage/distance from markets: The deviation results in the leakage belt being delineated around the areas that have historically experienced the highest rates of deforestation given their proximity to markets, roads, other previous agriculture land uses, and human settlements. By demarcating the leakage belt around these high deforestation areas, the audit team concludes that this is a conservative approach as it is likely to result in higher leakage values than areas that may have been closer to the project area. During the validation, the audit team reviewed the methodology deviation and confirm that it only impacts the criteria and procedures for delineation of the leakage belt (used for the measurement of ex-post monitoring of leakage emissions).
- 3-FAR/calculations: The project has implemented a methodology deviation to defer the quantification of the ex-ante baseline, project, leakage, and net emissions to the time of verification. The audit team reviewed the methodology deviation and confirmed that it only impacts the criteria and procedures relating to the monitoring and measurement of quantification of net greenhouse gas emission removals thus this deviation is permitted by the VCS standard. The audit team issued a related forward action request.

The audit team has reviewed the validated deviations and confirms that they were assessed and validated in the validation although. AENOR deems that the information provided in the PDD matches with the information of the MR /12/ and the complementary section of climate /16/.

Also, for the current Monitoring Period some methodology deviations have been described by the PP and analysed by the audit team:

- Spatial Modelling of Deforestation:** The methodology states in section 8.1.5.3 that calibrate a statistical model to predict the LULC class of the new land use on cells selected for deforestation. In case that there are more than two potential new LULC classes, use multinomial logit model, which predicts a multilevel categorical variable bases on the spatial driver variables. Given that there was only one land-use transition identified for the project, based on the existing forest strata (Selva Baja) and the predominant and most conservative post-deforestation land use (Pastures), it was not possible to develop the spatial model. Plus, the suitability for deforestation of each pixel is of no consequence as each of them would have the exact same value of emission factor. In addition, as the rate of deforestation is defined independently from its spatialization, it was considered that the use of the land-use matrix presented above in conjunction with the emission factor, produce a realistic and conservative estimate of emissions expected in the baseline and project scenarios. AENOR has reviewed the information provided and several findings were provided according to this deviation. Finally, through a rough assessment, and several modifications deems that the deviation does not negatively impact the conservativeness of the quantification of GHG emissions reductions or removals.
- Scarcity factor:** the methodology VM0006 in section 8.1.5.4 states that the land-use change model incorporates the forest scarcity principle, the notion that deforestation rates decrease upon the gradual depletion of the native forest resources. Without forest scarcity, it is assumed that deforestation occurs linearly until all forest is gone, which will be incorrect in most circumstances and lead to an overestimate of net emission reductions. The PP has provided a methodology deviation for this issue, due to A methodology deviation is required for not using the scarcity factor equations as no geographical modelling of location of deforestation was required. Through several findings and final conclusions within the Monitoring report, the PP got the conclusion that the value adopted for the scarcity factor is 1. AENOR has reviewed the methodology deviation and the scarcity factor formula as well as the literature that supports this statement and deems that this methodological deviation does not have a negative impact on the conservativeness of the quantification of GHG emission reductions or removals). As described in the methodology, scarcity factor appears when remnant forests are around than 50%, which in this case is very far in the short term. AENOR has reviewed the information provided and several findings were provided according to this deviation. Finally, through a rough assessment, and several modifications deems that the deviation does not negatively impact the conservativeness of the quantification of GHG emissions reductions or removals.
- LULUC Classes:** This deviation is related to the measurement criteria and procedures established in the methodology. To define the LULC classes, the PP has implemented the official stratification used by the Government of Peru, which are the ecozones. In this case, in the project area and in the reference region, the entire area corresponds to the "Selva Baja" ecozone, so there is only one forest stratum. For LULC classes, there are 6 classes proposed by the Peruvian State, to be consistent with Chapter 2 of the IPCC Guidelines on LULC 2003. The six classes are forest lands, croplands, grazing lands, wetlands, settlements, and other lands in the LULC definitions. The change in land use that occurs in Madre de Dios is mainly due to self-consumption agriculture (9.1%) and pastures (90.1%), according to the AIDER document (2015) "Motors, agents and

causes of deforestation in the Peruvian Amazon"; conservatively, only a change of use from the forest stratum (Selva ecozone) to the pasture stratum (more conservative land use due to the higher carbon content, see the following table) will be used. This deviation does not negatively affect the conservative nature of the quantification of GHG emission reductions or eliminations, since the most representative change in use is employed (close to 100%) and at the same time the most conservative, since it has almost double of carbon content. As a result, no modelling is required as the modelling is not going to change the value of net emissions. Modelling process determines where the deforestation is expected to occur within the project area but, as there is only one forest stratum, nevertheless where the deforestation is expected to occur, it will always emit the same volume of tons (as in the whole project area, there is always the same amount of carbon content). For this reason, not modelling does not impact in the net emissions. AENOR has reviewed the information provided such as the literature that demonstrates these LULUC changes and transitions, and several findings were developed according to this deviation. Finally, through a rough assessment, and several modifications deems that the deviation does not negatively impact the conservativeness of the quantification of GHG emissions reductions or removals.

- **Leakage:** To determine the additional or extra time that the deforestation agents will be willing to displace themselves to continue doing its activities, the project has opted for not obtaining that information by applying a social assessment but instead of that, has obtained that information by analysing real historical pattern of those agents in the past, i.e., how far they have deforested in the past and this value is multiplied times 1.5, as indicated by the methodology. The alternative method (reviewing their historical behaviour) is a more realistic approach as it is a proof, not of what they think they would do, but of what they have demonstrated that they did. In addition, the methodology requires to build the leakage belt as the area where the potential deforestation will be displaced in the project scenario, and it considers that the approach is the maximum willingness to displace their activities from the project area. AENOR has reviewed the information provided and several findings were provided according to this deviation. Finally, through a rough assessment, and several modifications deems that the deviation does not negatively impact the conservativeness of the quantification of GHG emissions reductions or removals.
- **Carbon stock measurement:** the carbon content in the project area is higher than in the Selva Baja stratum, according to the INF data, which is absolutely logical because the project area has a higher degree of protection of forest biodiversity than the rest of the Peruvian Amazon, where the level of logging (legal and illegal) and management techniques are not as responsible as within the project area, one of the oldest FSC certified forest area in Peru. The average carbon emissions based on data from the INF is 622 tCO₂/ha, which is a conservative value compared with the data of the own inventory developed by the project proponent. Said inventory was only carried out for commercial timber purposes and therefore only measured a minor part of the carbon stocks. AENOR has reviewed the estimation of accumulated carbon in a permanent plot of Andean Forest in the Francisco Vivar Castro university Park, Loja, Ecuador; in which the woody elements bigger or same than 5cm of DBH have been considered for the estimation, and the

results have been represented in the deviation. Other literature, the one of the Uyacali University which corresponds to a forestry Thesis of the 2020 year, estimates that the aerial biomass of the whole trunk represents an average of 65%, which is the same value than the previous reference. It is also stated in the MR that the INF measured other carbon pools as litter, dead wood and others (logically those carbon pools were not taken into account in the company's commercial inventory). Those represent 24% approximately of total forest biomass in Peru. Therefore, company's commercial inventory, being done only for commercial timber purposes, logically only measured the tree trunk up to the first bifurcation of the tree (which means that a part of the trunk, the branches and the tree top are not included in said inventory) and commercial inventory only inventoried 223 species, while the INF inventoried more than 1900. Thus, the conservativeness principle is even more evident. Then, AENOR considers that, with all the explanations of the MR, and the several review of the supports referenced in the document considers that the methodology is properly documented and coherent, so the deviation does not negatively impact the conservativeness of the quantification of GHG emissions reductions or removals.

- Transition from non-forest to forest: Transitions from non-forest to forest are not evaluated because there is no official information from the government, however, according to the IPCC (2006), the annual net biomass growth in table 4.9 of the Forest Lands chapter is 3.1 t biomass, 5.68 tCO₂eq, this growth represents the transition from non-forest to forest which is not significant (<0.001), so it is excluded. The PP has reviewed a contiguous project called REDD+ Amazon Guardians, and in such project, it can be observed that the rate of natural regeneration in the case of forest to Cropland is only 0.28% and in the higher case of forest to Mining it is 0.98%, being non-significant, they are conservatively excluded. Then, AENOR deems that the assumption is right, and the exclusion is properly done. Therefore, the deviation does not negatively impact the conservativeness of the quantification of GHG emissions reductions or removals.

Hence, AENOR through the review of the methodology deviations and its crosschecking with the PDD and further literature or spreadsheet calculations, deems that the methodology deviations are valid and does not affect the conservativeness of the project. Therefore, all the methodology deviations are valid.

3.3 Project Description Deviations

Two project description deviations from the PDD have been applied in the current monitoring report:

- Community indicator: the indicator *Productivity* has replaced the *Family incomes* since the last one, which was validated on the PD, could suffer variations due to prices variation. Therefore, the change has been updated in the current MP and it has been assessed by AENOR. The audit team has reviewed the new information provided by the PP for the new indicator and the comparison with the previous one. The project description deviation does not affect the applicability of the methodology, the additionality nor the appropriateness of the baseline scenario. Therefore, the deviation is properly justified and AENOR deems it is correct.

- Project team: there was a change in the team, since Mr. Antonio López is not working as one of the project proponents, and his position was replaced by Ms. Fiorella Pumarrumi Sinarahua. The project description deviation does not affect the applicability of the methodology, the additionality nor the appropriateness of the baseline scenario. Therefore, the deviation is properly justified and AENOR deems it is correct.

Therefore, through the rough analysis of AENOR of all the evidence provided by the PP, together with the MR explanations and further information gathered from the onsite visit performed in June, deems that the information is right and AENOR does not have evidence to demonstrate that the information provided does not correspond to the reality of the project. The deviations are then appropriately described and justified, and whether the project remains in compliance with the VCS rules. Thus, the deviations are valid.

3.4 Grouped Project

This is not a grouped project

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

During this verification process, AENOR has not detected project changes in regards of the project title, its purposes, and objectives. AENOR crosschecked the PD with the MR and assessed all the possible mistakes that could suppose material discrepancies. AENOR did not find any serious error between PD and MR.

Through the review of PD, project planification and management documents /50-51/ and interviews with key staff and project stakeholders, the auditor's team ratified the main objectives of the project activity and checked the actual implementation of the project activities.

After the review of the MR /3/, spreadsheet calculations /12-14/ and the other documents to support calculations such as GIS information /17-24/, and complementary , AENOR deems that project status is in compliance with applicable methodologies and implementation is in support of the VCS principles of Conservativeness and Accuracy.

Related to the compliance with the Monitoring Plan, section 4.3 of the MR provides information about the MP and actions carried out for the current Monitoring period. AENOR checked the monitoring plan contained in the validated PD and compared it with the MR to verify whether there was any difference that would cause an increase in estimates of the GHG emission reductions or removals in the current monitoring period. AENOR has confirmed that there are no material discrepancies between the actual monitoring system and the monitoring plan set out in the PD and the applied methodologies.

Also, the PP effectively monitors the required parameters to determine the project's reductions as required by the monitoring plan and the applicable methodologies.

The parameters reported, including source, frequency and review criteria as indicated in the monitoring plan were verified to be correct and in line with the monitoring plan of the validated PD.

According to leakage emissions, the VVB has reviewed the calculations /12-14/ and confirms that the information of the MR is correct.

All the activities performed by the PP will impact positively on the reduction and removal of GHG emissions. In addition, the activities have positive indirect effect on the population that will help to achieve the removal objectives. The project has described in its section 3.1 the activities executed by the Jaguar REDD+ project as a consequence of the project implementation, and are the following:

- Identification of productive projects in the surrounding communities: in 2018, the PP had the first meeting with the authorities for the proper analysis of the situation of the sector and start with the plan for activities implementation. AENOR has reviewed the minutes of the meeting which was performed in the days 8 and 9 of March 2018. In such meeting, many topics were discussed as well as future improvement options.
- Capacities strengthening to stakeholders 'organizations: several workshops were performed in 2018 with technical support such as the IIAP, the AAE or the Peruvian Amazon Research Institute among others. For this workshop, a field visit to plots were also performed. During the year 2019, 17 workshops were carried out, and this was demonstrated with the attendance list and the reports of each course together with the attendants. Another course was performed in 2019 for cocoa cultivation and also was assessed by the audit team. Finally, some speeches were carried out in July 2019 as assessed by AENOR. /60/
- Promotion of sustainable productive projects: principally Brazil nut harvesting is a really important activity, and is promoted by the PP within its own forest areas. Many families are hired every year to collect the nuts. AENOR has reviewed the list of hired people and deems that the 33 people stated on the MR are reliable and correct.
- Implementation of research projects: Otorongo and Chullachaqui concessions have signed agreements with some institutions with the purpose to reduce the productive weaknesses in the forest management and timber transformation, ensuring the national legislation and the economic, social and environmental sustainability. These partnerships may be renewed annually. In addition, during the current verification period, two students from Forest Engineering and Environment School from the Public Amazonian University of Madre de Dios are developing their thesis and a third one was accepted to do their pre-professional practices in the company facilities. AENOR has reviewed such agreements with the IST Iberia. There are two agreements, each one corresponding to each concession. Complementary, AENOR has reviewed the agreement with the Madre de Dios University for two students cooperation. AENOR deems that this statement is reliable and correct./61-63/

- Design of a protection plan for the project area: for both concessions, security protocol for illegal and hazardous activities has been developed. AENOR has reviewed both plans and deem that the information provided is deemed correct.
- Improvement in surveillance infrastructure: it is stated that the internet connection is being established in the main surveillance and control sites. Therefore, the forest guards are better equipped. AENOR has asked about the internet connection through the direct interviews carried out during the audit, and the information obtained is deemed correct according to the MR information.
- Periodical patrolling: it is stated on the MR that the patrolling activities have been carrying out during the project implementation. AENOR has reviewed the notification from Forestal Otorongo which states that the activities have been performed during the MP, and there are explanations of the different places of work. An invoice of the delimitation beacon has also been provided to demonstrate that the routes are created. /73/
- Forest fire prevention patrolling: several activities have been developed to prevent forest fires, such as workshops, training, patrolling and so on. AENOR has reviewed the invitation and minutes of the workshops as well as the attendant list of the preventive controlled burning course and with the evidence provided, the VVB deems that the information provided is deemed reliable and correct./68/
- Land demarcation, border maintenance and signalling: During 2018, Sector Portillo PV2, Vertex 23-24 and 5 km to V1 were cleaned and restored and during 2019, seven signboards were settled in the Northern Boundaries of the project area. AENOR among other evidence has reviewed the informs 011-2018 and 021-2019 which confirms the activities performed for delimitating and demarcation as explained in the MR and deems that the information provided is deemed correct./71/
- Socialization of the REDD+ Project: In 2020, a meeting was carried out to spread and inform about the REDD+ project, with participation of communal authorities from Portillo and San Francisco. AENOR has reviewed the attendant list of the meeting carried out on October 8th of 2020, where also, the names of the attendants are included within the document as well as the main purpose of the meeting. AENOR deems that the information provided is deemed correct. Mainly, the evidence reviewed were /31-37//67/.
- Dialogues about environmental crimes and legal framework: A workshop about environmental crimes was carried out in 2019 with 7 participants. A brochure was also designed and shared between participants. It included information on penalties established by the Peruvian laws for each type of crimes, such as: Flora and wildlife depredation; Illicit traffic of flora and fauna; Environmental Affectation; Illicit traffic of forest products; Other crimes against forest heritage. AENOR has reviewed the brochure of illegal activities, environmental crimes, as well as the attendant list of the meetings of this topic. The date of the meeting was August 4th 2019. /67/.

In summary, all these activities mentioned have been reviewed by analysing the evidence detailed between slashes, the information of the MR, the PDD when applicable and crosschecking the information with testimonies from the onsite audit.

The SDGs are described in one of the annexes provided by the PP /72/. The PP has provided the list of all the SDG related with the project and the way in which these goals are achieved. AENOR has reviewed the annex provided and reviewed when needed with evidence such as carbon calculations, improvement of livelihoods and job employment, or agreements with the Government. AENOR considers that these SDGs are well reported and there is no evidence to demonstrate that they are wrong reported and the information is wrong.

Regarding other GHG programs, the project is not registered, nor is seeking registration under any other GHG programs. It is not discarded that in the future, this will be evaluated as an alternative. The project expects to be registered in the Peruvian National GHG Registry. The project has been validated under VCS and therefore, is eligible to participate under the VCS program. AENOR has reviewed the webpage of Verra Registry as well as other standards to confirm that the PP is not participating in other programs. The VVB by onsite interviews also asked to the PP and other stakeholders who participated in the onsite audit about their knowledge of other forms of environmental credit. None of the interviewees declared that other sources of credit were provided to the project. AENOR also used external sources to inquire about these credits 'forms.

Therefore, through the rough analysis of AENOR of all the evidence provided by the PP, together with the MR explanations and further information gathered from the onsite visit performed in June, deems that the information is right and AENOR does not have evidence to demonstrate that the information provided does not correspond to the reality of the project. AENOR considers that the project has been implemented as described in the MR.

4.2 Safeguards

4.2.1 No Net Harm

No potential negative environmental and socio-economic impacts are expected to happen with the project implementation. In the baseline scenario, there is a risk that illegal agrarian frontier expansion will occur as a strategy to obtain subsistence incomes for migrant rural neighboring families. To mitigate this impact, the project has planned to implement a different set of actions as: Organize the sustainable collection of Brazil nut fruits, a non-timber forest product existing within the concession and promote sustainable agrarian crops.

AENOR verified records of jobs generated and the contracts with local people. In addition, other benefits are reported such training, safety measures, etc. Especially, for the Brazil Nuts harvesting, AENOR has reviewed the contracts of the people and the amount of nut production. Complementary, AENOR has performed interviews with local people during the visit, and contrasted the information of the MR.

The project generates net positive impacts on the social and economic well-being of the local communities who derive livelihoods from the project area.

4.2.2 Local Stakeholder Consultation

Several information is stated in the monitoring report regarding the LSC. Among this information, outstanding information is the following:

- All meetings are informed at least with three days of anticipation, and within this information, there is the agenda, date and hour of the meeting.
- There are different channels for communication such as Whatsapp, facebook or text messages.
- During the meeting, a summary is prepared and sent.

For the continue of communication the necessary information about the project, the PP performed meetings, also out of the monitoring period, in august 2021, to explain how the project is going on and to provided information about the results of the project implementation, the results of climate community and biodiversity monitoring and the coming validation and verification body´s site visit.

It is also stated on the MR that the PP has a Grievance and Redress Mechanism (GRM). The audit team has reviewed the minutes of the meetings and the attendant list /31-37/ /57/ as well as the several forms gathered during the period 2018-2020.

Through reviewed documentation and consultation to community members during the visit, AENOR considers that community members demonstrated awareness and consent of the project activities and verified that inputs from communities are considered when those activities are implemented. AENOR verified during visit that the PP has continuous communication with the whole stakeholders' group and their inputs are taken into consideration. The stakeholders interviewed were aware of the current status of the project implementation, were informed of the audit process and the grievances occurred, project activities, next steps, etc.

4.3 AFOLU-Specific Safeguards

The PP states that no relevant changes on legal framework referred to land use rights since December 2020, when the project was validated. In that sense, the project implementation does not impact negatively on indigenous special rights as no indigenous people are settled in the surrounding areas of the project.

Regarding risks associated with the project over local stakeholders, there were four risks identified:

1. Insufficient prevention of migrants' impact and engagement
2. Internal conflicts in settlements
3. Forest fires
4. Change in land use pattern caused by productive practices

Also, the project has developed specific procedures for stakeholders' engagement in an official policy document called "Social Monitoring Handbook" which has been reviewed by AENOR remotely and onsite /82/.

The project proponent has an operational a Grievance and Redress Mechanism.

During 2018, 16 forms were sent through this mechanism (from workers of the company, neighbours and anonymous). During 2019, 5 forms were received related to labour conditions and procedures, whose complaints were favourably solved. Finally, in 2020, one form was received, associated with a request for more medical and psychological campaigns in the framework of the stress caused by the pandemic crisis. The response of the company was to schedule three medical and psychological campaigns with 17 attendants. In each case, the social responsibility manager submits a letter of response in the next day after the filled form was received indicating that the final response will be communicated within the next 30 days.

In summary, most cases, especially those complaints submitted by the workers of the company, are positively answered and solved. In the cases of needs from surrounding communities, the responses depends on the financial situation of the company.

During the audit process, which was performed onsite in 2022, AENOR interviewed local community stakeholders and verified that the Project has a net positive impact from both the environmental and social side. AENOR deems that the PP has taken successfully reasonable steps to mitigate potential negative impacts. Therefore, AENOR deems that the PP has taken the appropriate measures to ensure that the project has not created negative impacts on local stakeholders and the information provided does match with the evidence and it is correct.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

The verification team performed an intensive review of all input data, parameters, formulas, calculations, conversions, statistics and resulting uncertainties and output data to ensure consistency with the VCS documentation, methodologies and associated tools, and the PD. Further, the verification team reproduced calculations for selected samples to ensure accuracy of the results. Conversion factors, formulas, and calculations were provided by PP in spreadsheet format to ensure all formulas were accessible for review /13-14/. The verification team recalculated subsets of the analysis to confirm correctness. PP also provided a step-by-step overview of select calculations to ensure the verification team understood the approach and could confirm its consistency with the methodologies and PD. Where applicable, references for analysis methods or default values were checked against relevant scientific literature for best practice. The audit team had several technical meetings for the complementary assessment of the data. In those meetings, the technical team of Greenox provided explanations and assistance to the reproduction of the calculations when necessary. The audit team found several findings related to the calculations (appendix 2), which were solved by the PP previous to the closure of the final round of findings. All the sources of the values were provided and assessed by the VVB.

Procedures for quantifying emission reductions and removals were conducted in accordance with the VM0006 v.2.2 March 2017-Methodology for Carbon Accounting for Mosaic and Landscape-scale REDD Projects.

Baseline Emissions

Section 5.1 of the MR and the calculation spreadsheet submitted to AENOR provide information related to the baseline emissions calculations.

The way to calculate the ex-post emissions was done in a very similar way than the ex-ante estimations due to the methodology followed was the same, and part of the calculations was complementary. The methodology followed was VM0006 v.2.2 March 2017 Methodology for Carbon Accounting for Mosaic and Landscape-scale REDD Projects.

To start with the baseline emissions, the PP proceed with the calculation of the equation 35 of the methodology, where it is explained that the total future deforestation and degradation rates are interpolated from past trends. Then in this case, similar than in the ex-ante calculations, the method used is the Beta Regression /80-81/ as per methodology.

The statistical program free R has been employed for this purpose. This program allows to implement the Beta regression model, where the dependent variable will be the deforestation rate and the independent variable the number of years. The deforestation rates obtained through the statistical program have been assessed by AENOR through technical meetings onsite and remotely, and consequently crosschecked with the MR /12/ and the spreadsheets /13-14/. The deforestation rates can be observed in table 21 of the MR. further explanations about the Beta Regression in complementary documentation /16/.

Table 22 of the MR shows the Beta Regression and deforestation in the project area:

Year	Beta regression describes the relationship between time and deforestation rate in reference region during reference historical period [ha/year]	Project area [ha]	Reference forest [ha]	Deforestation in project area in baseline scenario [ha/year]
2007	614.76	183,015.29	424223.28	265.22
2008	781.81			337.28
2009	989.50			426.88
2010	1245.87			537.49
2011	1559.07			672.60
2012	1935.23			834.88
2013	2374.39			1,024.34
2014	2866.50			1,236.64
2015	3397.49			1,465.72
2016	3963.36			1,709.84

2017	4570.12			1,971.61
2018	5224.81			2,254.05
2019	5931.44			2,558.90
2020	6690.42			2,886.33
2021	7498.45			3,234.93
2022	8348.24			3,601.54
2023	9227.92			3,981.04
2024	10120.37			4,366.06
2025	11002.50			4,746.62
2026	11844.62			5,109.92
2027	12609.92			5,440.08

These parameters above have been assessed with the formula of the methodology and crosschecked with the spreadsheet /13-14/ and further documentation such as the MR or the Beta regression /80-81/. The values of the area were assessed through GIS evidence /17-24/ and further demonstrated with meetings performed onsite and remotely. AENOR deems that these figures and calculations have been done properly and the way in which they have been calculated is reliable and correct.

Afterward, to obtain the deforestation rate within the baseline in the project scenario, equation 37 is used, where the value of each year of the Beta regression is multiplied by the division of the project area with the reference area as per equation 37:

$$D_{projectArea,baselineScenario,DF}(t) = BetaReg_{DF}(t) \cdot \frac{Size_{projectArea}}{Size_{referenceForest}} \quad [EQ37]$$

Finally, deforestation rate is multiplied by the emission factor to get the baseline emissions within the project area for the current MP.

Year	$D_{projectArea,baselineScenario,DF}(t)$ [ha/year]	Emission factor [Mg.CO2e/ha]	[Mg.CO2/year]
2018	2254.05	-426.63	-961,642.63
2019	2558.90	-435.66	-1,114,822.56

2020	2886.33	-444.70	-1,283,554.25
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AENOR has reviewed the baseline calculations and compared with the spreadsheet /13-14/, Betaregression /80-81/, MR /12/ and equations and requirements from methodology. AENOR through a deep and exhausted analysis of the source of the data through an internal review and further meetings with the technical team of the PP, deems that the calculations of baseline for the MP have been done properly. Therefore, AENOR has checked the calculations provided and confirmed that this amount of baseline emissions is in conformance and have followed the methodology.

Project emissions

For the project emissions calculations, the PP has used as well the methodology VM0006, Methodology for Carbon Accounting for Mosaic and Landscape-scale REDD Projects” – version 2.2.

Project ex-post emissions for this verification period were calculated using emissions from deforestation observed during this monitoring period. Project deforestation emissions were calculated following the guidelines in section 9.3.2 of the VM0006 methodology. These guidelines require that an annual rate of change, $\Delta area_{project} Area_{EAH}(t,i)$, be calculated for each transition.

The PP stated that there was not deforestation. Deforestation monitoring indicates that there are only a few clearings and small roads resulting from sustainable harvesting operations, these areas are not significant, for the same reason that this type of harvesting guarantees the sustainability of the forest and each year it is covered with its own recovery of the forest, even resulting in greater benefits for the flora and fauna of the project area; that is why the monitored deforestation is 0 ha, within the project area. No transition from forest land to grassland was identified in the project area during the MP.

During the MP, firebreaks were created, but since they are less than 5% of the project, they are considered insignificant.

Therefore, AENOR deems that the estimation is right, and through spreadsheet analysis and the audit performed in June 2022. AENOR considers that the source of estimation is right, and the values are reliable and correct.

For the AGL and BG, the PP has correctly calculated the parameters within the MR, attaching the corresponding tables which provide from the spreadsheet /13-14/. AENOR has reviewed all the sources used by the PP to obtain some parameters, as well as the FREL Peru 2021 or the IPCC (2006) for the AGL and BG estimation. AENOR deems that the usage of those sources is reliable and correct, and therefore, the way in which the calculations have been performed is correct.

AENOR has also reviewed the steps followed in the monitoring of Long-Term Average Carbon Stock in Harvest Areas and compared with the spreadsheet /13-14/.

According to the PP, the recorded forest loss is the result of the project's management of the forest. This loss is considered insignificant since it is recovered each year and the measures for sustainable forest management with reduced-impact use are complied with. Therefore, there is zero deforestation within the project area.

AENOR deems that the assumption is correct according to the calculations, the MR and the methodology.

Leakage

According to the PP, Leakage of the project was calculated following the guidelines of section 9.3.3 of the VM0006 methodology - version 2.2. These guidelines require that an annual rate of change, $\Delta arealeakagearea,projectScenario(t,i)$, be calculated for each transition. This rate is then used in the final NET calculations. The map of transition from Forest Lands to Pastures (respecting the methodological deviation of PD 3.1.6) for this monitoring period has been used to generate the results of this rate of change for the transition throughout the monitoring period.

The PP has provided the leakage belt map, which has been assessed by AENOR and contrasted with the GIS evidence /20/ which were reviewed by AENOR crosschecking the right calculation.

According to the methodology, once the leakage area is delimited, the rates of deforestation within the leakage belt are calculated using the equation 95:

$$D_{leakageArea,baselineScenario,DF}(t) = D_{projectArea,baselineScenario,DF}(t) \frac{size_{leakageArea}}{size_{projectArea}} \quad [EQ95]$$

For the deforestation rate, the PP got the following values, further detailed in the MR spreadsheet:

Year	Absolute rate of deforestation in leakage (ha/year)
2018	2900.04
2019	3292.62
2020	3714.37

The "Market leakage assessment" was not carried out, as they only need to be included when illegal logging activities that supply timber to national or international markets are an identified driver, according to 8.3.1 of the methodology and the only driver that is being evaluated conservatively is the change of use of forest lands to pastures. In addition, this project has only identified geographically constrained drivers.

The leakage are the net emissions outside the limits of the project, but which are attributable to the project, i.e., is what is displaced from the project area to the leakage belt. Therefore, even in the case that emissions in the leakage belt in the project scenario are higher than the emissions in the project area in the baseline scenario (as has occurred during the current monitoring period), not all these emissions may be attributed to the project leakage because the most that may be displaced is what would have been occurred in the PA in the BL scenario. The rest should be attributed to other causes.

Hence, the calculations have attributed to leakage emissions only the maximum that could have been displaced.

AENOR has reviewed such values of the leakage area for each year, as well as the calculation as per each methodology equation and crosschecked with the MR spreadsheet /13-14/ and deems that the calculation has been done properly. AENOR has checked the calculations provided and confirmed that this amount of leakage emissions is in conformance and have followed the methodology in the validated PD. Also, AENOR has reviewed methodology deviations in the PDD related to leakage and considers that the information of the MR does match with the requirements and is properly justified.

Net GHG Emissions Reductions and Removals

According to the methodology VM0006. The PP used Equation [EQ105] to estimate the ex-ante NERs and only used the significant GHG sources. After NERs were calculated, the PP used Equation [EQ106] to calculate the VCU.

All calculations related to equation 105 and 106 are deeply explained in the spreadsheet monitoring report – Net Carbon and VCU´s Jaguar /13-14/. AENOR has reproduced those calculations and deems that the values are correct and the sources reliable.

Net Emission Reductions(NERs)	=
ΔGHG from avoided deforestation excluding ANR and harvest areas	01 +
+ ΔGHG from deforestation due to leakage	02 +
+ ΔGHG from avoided degradation	03 +
+ ΔGHG from degradation due to leakage	04 +
+ΔGHG from leakage by unconstrained geographic drivers	05 +
+ ΔGHG from assisted natural regeneration	06 +
+ ΔGHG from changes in long-lived wood products	07 +

+ ΔGHG from improved cook stoves	08 +
+ ΔGHG from other and secondary sources	09 +
+ΔGHG from avoided deforestation from areas under harvest	10

In the following tables are shown the values for the different parameters 1-2-7-10, which are the used by the PP to calculate the NERs.

In the MR and the spreadhseet, in each of the tabs to each parameters, is explained highly detailed the final calculation of each parameter for the corresponding year within the MP. AENOR through a exhaust and deep review of the calculations deems that the calculations have been done correctly, that the used formulae matched with those detailed on the methodology, that the assumptions were right and the final values match with the final table of the MR.

The following tables show the values for each parameter used for the NERS calculation as per equation 105:

Year	1	Hectares in transition within project zone, excluding RNA and harvest areas, under project scenario during year t	Hectares in transition within project zone, excluding RNA and harvest areas, under baseline scenario during year t
2018	877,858.32	0.00	2138.94
2019	998,910.21	0.00	2383.41
2020	1,148,595.89	0.00	2684.87

Year	2	$\Delta \text{area}_{\text{leakageArea,projectScenario,DF}(t)}$	$\Delta \text{area}_{\text{leakageArea,baselineScenario,DF}(t)}$
2018	-16,941.21	2900.04	2858.76
2019	-19,793.17	3292.62	3245.40
2020	-22,970.85	3714.37	3660.67

Year	7
2018	2876.60
2019	3276.21
2020	2886.81

Year	10: [tCO ₂ ha ⁻¹]
2018	84,072.88
2019	130,889.86
2020	153,374.00

Year	Net Emission Reductions (NERs)	1	2	7	10
2018	947,866.59	877,858.32	-16,941.21	2,876.60	84,072.88
2019	1,113,283.10	998,910.21	-19,793.17	3,276.21	130,889.86
2020	1,281,885.87	1,148,595.89	-22,970.85	2,886.81	153,374.00

The tables above show the final values for each parameter used in the NERS calculation. After that, according the NPRR /1-2/ the non permanence risk is considered as 10%, and consequently, a 10% of buffer has been applied to discount the total emissions and obtaining the VCUs as shown in the following table and required as per equation 106.

$$\text{Verified Carbon Units} = \text{NERs} - \text{buffer} \cdot (1 + 2 + 3 + 7 + 10) \quad [\text{EQ106}]$$

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ eq)	Net GHG emission reductions or removals (tCO ₂ e)	Buffer pool allocation	VCUs eligible for issuance
2018	-84,072.88	1,048,880.68	-16,941.21	947,866.59	96,480.78	851,385.81
2019	-1,008,748.18	2,141,824.46	-19,793.17	1,113,283.10	113,307.63	999,975.47
2020	-1,152,284.21	2,457,140.92	-22,970.85	1,281,885.87	130,485.67	1,151,400.19
Total	-2,245,105.27	5,647,846.06	-59,705.23	3,343,035.56	340,274.08	3,002,761.48

The net anthropogenic GHG reductions due to the project activity for the monitoring period (from 01 of January 2018 until 31 of December 2020) were 3,343,035.56 tCO_{2e}. The total number of buffer credits that need to be deposited into the AFOLU pooled buffer account are 340,274.08 and the VCUs eligible for issuance are 3,002,761.48 VCUs.

AENOR reproduced the calculations to achieve the same results and deems they are depicted clearly and correctly in the provided sheets. AENOR verification team was able to trace calculations directly from the data sources. Formulae used are in compliance with MR, validated PD and methodology, like the default values used to determine the parameters, are appropriate. Thus, the net amount of VCUs to be issued is accurate and realistic.

AENOR verified for the parameters available at validation, the values reported or the references to the documents where they are used or explained by reviewing, reproducing, and crosschecking the evidence provided by the PP. AENOR checked the values of these parameters to be appropriate and correctly used in equations.

Regarding the accuracy of spreadsheet /13-14/, formulae, conversions and aggregations and consistent use of data and parameters, the PP elaborated a complete procedure to assure the accuracy and appropriateness of data. During the verification process, AENOR not only verified the spreadsheet calculation, data and parameters but also, the AENOR team could verify that the PP conducted a rigorous QC/QA procedure of its field measurements and an assessment of uncertainty. Thus, AENOR deems the PP performed good practices in this assessment and concludes that GHG reductions were quantified correctly in accordance with the project description and applied methodology.

AENOR verified the consistency and accuracy of each parameter detailed in it Section 4 of the MR by crosschecking the information in the MR with the information in PD as well as checking values and reproducing the calculations in the spreadsheet calculation package and did not find inconsistencies. Therefore, AENOR deems that values reported for the parameters are accurate and consistent.

The following tables summarize the data and parameters used by the PP to calculate the GHG emission reductions, their verified values and the assessment procedures implemented by AENOR and their results.

Data/Parameter available at validation	Value	Assessment procedure and result
CF Carbon Fraction of Dry Matter in Wood	0.47	Value is consistent with validated PD. Correctly inputted in the calculation spreadsheets /11/.
Sc1 First shape factor for the forest scarcity equation; steepness of the decrease in	Not applicable as the % of remnant forest cover is more than 50% of original forest cover, as has been explained in the methodological deviation (section 3.1.6 of the PD).	Value is consistent with validated PD.

Data/Parameter available at validation	Value	Assessment procedure and result																
deforestation rate (greater is steeper).																		
Sc2 Second shape factor for the forest scarcity equation; relative deforested area at which the deforestation rate will be 50% of the initial deforestation rate.	Not applicable as the % of remnant forest cover is more than 50% of original forest cover, as has been explained in the methodological deviation (section 3.1.6 of the PD).	Value is consistent with validated PD.																
Wwf(ty) Fraction of carbon in harvested wood products that are emitted immediately because of mill inefficiency for wood class <i>ssee</i> . This can be estimated by multiplying the applicable fraction to the total amount of carbon in different harvested wood product category.	24%	Value is consistent with validated PD. The source has been checked. Correctly inputted in the calculation spreadsheets /11/.																
Slp(ty) Proportion of short-lived products	0.2	Value is consistent with validated PD. The source has been checked. Correctly inputted in the calculation spreadsheets /11/.																
Fo(ty) Fraction of carbon that will be emitted to the atmosphere between 5 and 100 years of harvest for wood class <i>ssee</i> .	0.85	Value is consistent with validated PD. The source has been checked. Correctly inputted in the calculation spreadsheets /11/.																
Pwood,j Average basic wood density of species or species group <i>RR</i>	<table><tr><td>Apuleia leiocarpa (Vogel) J.F. Macbr.</td><td>0.7</td></tr><tr><td>Hymenaea oblongifolia Huber</td><td>0.8</td></tr><tr><td>Cedrela odorata L.</td><td>0.42</td></tr><tr><td>Myroxylon balsamum (L.) Harms</td><td>0.78</td></tr><tr><td>Amburana cearensis (Allemão) A.C. Sm.</td><td>0.43</td></tr><tr><td>Clarisia racemosa Ruiz & Pav.</td><td>0.59</td></tr><tr><td>Couratari macrosperma A.C. Sm.</td><td>0.54</td></tr><tr><td>Aspidosperma macrocarpon Mart.</td><td>0.67</td></tr></table>	Apuleia leiocarpa (Vogel) J.F. Macbr.	0.7	Hymenaea oblongifolia Huber	0.8	Cedrela odorata L.	0.42	Myroxylon balsamum (L.) Harms	0.78	Amburana cearensis (Allemão) A.C. Sm.	0.43	Clarisia racemosa Ruiz & Pav.	0.59	Couratari macrosperma A.C. Sm.	0.54	Aspidosperma macrocarpon Mart.	0.67	Value is consistent with validated PD. The source has been checked. Correctly inputted in the calculation spreadsheets /11/.
Apuleia leiocarpa (Vogel) J.F. Macbr.	0.7																	
Hymenaea oblongifolia Huber	0.8																	
Cedrela odorata L.	0.42																	
Myroxylon balsamum (L.) Harms	0.78																	
Amburana cearensis (Allemão) A.C. Sm.	0.43																	
Clarisia racemosa Ruiz & Pav.	0.59																	
Couratari macrosperma A.C. Sm.	0.54																	
Aspidosperma macrocarpon Mart.	0.67																	

Data/Parameter available at validation	Value		Assessment procedure and result
	Manilkara bidentata (A. DC.) A. Chev.	0.87	
	Dipteryx odorata (Aubl.) Willd.	0.91	
	Handroanthus serratifolius (Vahl) S.O. Grose	0.92	
	Cedrelinga cateniformis (Ducke) Ducke	0.45	

Data/Parameter monitored	Value				Assessment procedure and result
SizeprojectArea, SizeleakageArea, SizeReferenceRegion, SizeReferenceForest Size of project area, leakage area, reference region.	SizeprojectArea	SizeleakageArea	SizeReferenceRegion	SizeReferenceForest	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/ and the GIS evidence /17-24/
	183,015.29	232114.34	516554.22	424223.28	
Δ areaprojectAreaEAH, projectScenario(t, i) Hectares undergoing transition <i>ii</i> within the project area, excluding ANR and harvest areas, under the project scenario during year <i>ss</i> . [ha yr-1]. Section 8.2.3	$((183015.29- 9346.01)/183015.29 * D_{\text{projectAreaprojectScenario.DF}}^{(t)})$				The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
	$((183015.29- 12551.16) /183015.29 * D_{\text{projectAreaprojectScenario.DF}}^{(t)})$				
	$((183015.29- 12773.83) /183015.29 * D_{\text{projectAreaprojectScenario.DF}}^{(t)})$				
	Year		Δ areaprojectAreaEAH,projectScenario(t, i)		
	2018		0		
	2019		0		
2020		0			

Data/Parameter monitored	Value	Assessment procedure and result								
$\Delta \text{areaprojectAreaEAH, BaselineScenario}(t, i)$ Hectares undergoing transition ii within the project area, excluding the ANR area, and harvest areas, under the baseline scenario for year ss .	$((183015.29- 9346.001) / 183015.29 * D_{\text{projectAreabaselineScenario.DF}}^{(t)})$ $((183015.29- 12551.16) / 183015.29 * D_{\text{projectAreabaselineScenario.DF}}^{(t)})$ $((183015.29- 12773.83) / 183015.29 * D_{\text{projectAreabaselineScenario.DF}}^{(t)})$ <table><tr><th>Year</th><th>$\Delta \text{areaprojectAreaEAH, BaselineScenario}(t, i)$</th></tr><tr><td>2018</td><td>2138.94</td></tr><tr><td>2019</td><td>2383.41</td></tr><tr><td>2020</td><td>2684.87</td></tr></table>	Year	$\Delta \text{areaprojectAreaEAH, BaselineScenario}(t, i)$	2018	2138.94	2019	2383.41	2020	2684.87	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
Year	$\Delta \text{areaprojectAreaEAH, BaselineScenario}(t, i)$									
2018	2138.94									
2019	2383.41									
2020	2684.87									
$\Delta \text{areaprojectAreawithANR, BaselineScenario}(t, i)$ Hectares undergoing transition i within the leakage area under the project scenario for year t	N/A because ANR not included in project activity	-								
$\Delta \text{arealeakageArea, projectScenario}(t, i)$ Hectares undergoing transition ii within the leakage area under the project scenario for year ss	<table><tr><th>Year</th><th>$\Delta \text{arealeakageArea, projectScenario}(t, i)$</th></tr><tr><td>2018</td><td>2900.04</td></tr><tr><td>2019</td><td>3292.62</td></tr><tr><td>2020</td><td>3714.37</td></tr></table>	Year	$\Delta \text{arealeakageArea, projectScenario}(t, i)$	2018	2900.04	2019	3292.62	2020	3714.37	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
Year	$\Delta \text{arealeakageArea, projectScenario}(t, i)$									
2018	2900.04									
2019	3292.62									
2020	3714.37									
$\Delta \text{arealeakageArea, baselineScenario}(t, i)$ Hectares undergoing transition ii within the leakage area under the baseline scenario during year ss	<table><tr><th>Year</th><th>$\Delta \text{arealeakageArea, baselineScenario}(t, i)$</th></tr><tr><td>2018</td><td>2858.76</td></tr><tr><td>2019</td><td>3245.40</td></tr><tr><td>2020</td><td>3660.67</td></tr></table>	Year	$\Delta \text{arealeakageArea, baselineScenario}(t, i)$	2018	2858.76	2019	3245.40	2020	3660.67	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
Year	$\Delta \text{arealeakageArea, baselineScenario}(t, i)$									
2018	2858.76									
2019	3245.40									
2020	3660.67									
$\Delta \text{areahistorical} (CS1 \rightarrow CS2, t1 \rightarrow t2)$	N/A	-								

Data/Parameter monitored	Value		Assessment procedure and result								
Area of transition from LULC class or forest stratum 1 to 2 from time 1 to 2 during the historical reference period											
areahistorical (CS1, t1) Total area of LULC class or forest stratum 1 at time 1	N/A		-								
Areabiomassloss(i) Total annual area of LULC class that was cleared for creating firebreaks	<table><tr><th>Year</th><th>Area_{biomassloss}(i)</th></tr><tr><td>2018</td><td>0.00</td></tr><tr><td>2019</td><td>5.85</td></tr><tr><td>2020</td><td>0.00</td></tr></table>	Year	Area _{biomassloss} (i)	2018	0.00	2019	5.85	2020	0.00		The source has been checked. Correctly inputted in the calculation spreadsheets /14/.
Year	Area _{biomassloss} (i)										
2018	0.00										
2019	5.85										
2020	0.00										
Areafirebiomassloss(i) Annual area of forest stratum that was cleared by using prescribed burning	N/A										
areafireBiomassLoss,ANR(t, i) Area of biomass removed by prescribed burning within ANR stratum <i>i</i> during year <i>t</i>	N/A Not applicable because ANR not included in project activity										
areaprojectAreaWithANR,projectScenario(t, i) Amount of land on which ANR activities are planned under the project scenario for year <i>t</i> and in stratum <i>i</i>	N/A Not applicable because ANR not included in project activity										
Area harvest (t, i) Area of forest in harvest stratum <i>ii</i> that is harvested at time <i>ss</i> .	<table><tr><th>Year</th><th>Area_{harvest} (t, i)</th></tr><tr><td>2018</td><td>9,346.001</td></tr><tr><td>2019</td><td>12,551.160</td></tr><tr><td>2020</td><td>12,773.830</td></tr></table>	Year	Area _{harvest} (t, i)	2018	9,346.001	2019	12,551.160	2020	12,773.830		The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
Year	Area _{harvest} (t, i)										
2018	9,346.001										
2019	12,551.160										
2020	12,773.830										

Data/Parameter monitored	Value		Assessment procedure and result
Area_{projectArea}withHarvest,ProjectScenario(t, i) Size of strata <i>ii</i> within the project area with harvest activities during year <i>ss</i> under the project scenario.	Year	Area _{projectArea} withHarvest,ProjectScenario(t, i)	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
	2018	9,346.001	
	2019	12,551.160	
	2020	12,773.830	
Area_{projectArea}withHarvest,BaselineScenario(t, i) Hectares undergoing transition <i>ii</i> within the harvest areas under the baseline scenario during year <i>ss</i>.	$((\text{Area}_{\text{projectArea}}\text{withHarvest,ProjectScenario}(t,i)/183015.29)^* D_{\text{projectArea}}\text{baselineScenario.DF}(t))$		The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
	Year	Area _{projectArea} withHarvest,BaselineScenario(t, i)	
	2018	115.11	
	2019	175.49	
BetaRegDF (t) and BetaRegDG (t) Beta regression model describing the relationship between time and deforestation/degradation rate in the reference region during the historical reference period.	2007	614.76	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/. Technical meetings and desk review of the Betaregression document were performed by AENOR.
	2008	781.81	
	2009	989.50	
	2010	1245.87	
	2011	1559.07	
	2012	1935.23	
	2013	2374.39	
	2014	2866.50	
	2015	3397.49	
	2016	3963.36	
	2017	4570.12	
	2018	5224.81	
	2019	5931.44	
	2020	6690.42	
	2021	7498.45	
	2022	8348.24	
	2023	9227.92	
	2024	10120.37	
	2025	11002.50	
	2026	11844.62	

Data/Parameter monitored	Value		Assessment procedure and result
	2027	12609.92	
Area under agricultural intensification Size of the area of agricultural intensification separated for each agricultural intensification measure	N/A		-
CTbaseline (h, j, ty, t) Annually extracted volume of harvested timber round-wood for commercial on-sale under the baseline scenario during harvest by species j and wood product class ty during year t	252.15		The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
CTproject(h, j, ty, t) Annually extracted volume of harvested timber round-wood for commercial on-sale inside the project area under the project scenario during harvest h by species j and wood product class ty during year t.	See the Excel "Monitoring Report – Net carbon y VCU's - Jaguar"		The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
ContributionDF (d) and ContributionDG (d) Relative contribution of driver i respectively to total deforestation and forest degradation.	1.00		The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
RelativeDriverImpactDF (t,d) and RelativeDriverImpactDG (t,d) Relative impact of the geographically unconstrained driver cc at time ss of the crediting period respectively on deforestation and forest degradation.	N/A		-

Data/Parameter monitored	Value	Assessment procedure and result									
leakageunconstrained (d) Leakage cancellation rate for avoiding deforestation/degradation from geographically unconstrained drivers.	A default rate of 100% was used as recommended by the methodology.	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.									
Effectiveness (α , d) Effectiveness of every project activity α in decreasing any driver of deforestation d relative to that driver's contribution to deforestation and forest degradation,	Alternative livelihoods: 0.312 Legal recognition of the land tenure status: 0.040 Demarcation and forest protection: 1.000	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.									
Efforest Emission factor related to leakage	See the Excel "Monitoring Report – Net carbon y VCU´s - Jaguar"	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.									
Carbon stock of the sources in the forest stratum. Carbon stock by stratum in baseline before deforestation.	<table border="1"> <thead> <tr> <th></th><th>t C/ha</th><th>tCO₂e/ha</th></tr> </thead> <tbody> <tr> <td>AGL</td><td>116.47</td><td>427.07</td></tr> <tr> <td>BG</td><td>53.30</td><td>195.44</td></tr> </tbody> </table>		t C/ha	tCO ₂ e/ha	AGL	116.47	427.07	BG	53.30	195.44	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
	t C/ha	tCO ₂ e/ha									
AGL	116.47	427.07									
BG	53.30	195.44									
OMo(i)	Follow uncertainty deduction procedures described in methodology.	The source has been checked. Correctly									

Data/Parameter monitored	Value	Assessment procedure and result
Plant-derived organic matter of LULC class or forest stratum i in pool o. [Mg DM ha ⁻¹]		inputted in the calculation spreadsheet s /14/.
ProportionDF (d) and ProportionDG (d) Proportion of the gradual carbon loss that leads to deforestation or forest degradation, respectively, due to driver d	Proportion DF = 100% Proportion DG=0%	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
$C(t, i)$ Carbon stock density at time in stratum (AGL+BG)	Forest: 169.78 Pasture: 31.24	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
$f_{allometric}(y)$ Allometric relationship to convert a tree metric such as DBH or tree height into biomass	See the Excel "Monitoring Report – Net carbon y VCU´s - Jaguar"	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
$f_{belowground}(y)$ Relationship between aboveground and belowground biomass, such as a root-to-shoot ratio	See the Excel "Monitoring Report – Net carbon y VCU´s - Jaguar"	The source has been checked. Correctly inputted in the calculation

Data/Parameter monitored	Value		Assessment procedure and result
			spreadsheet s /14/.
$C_{\text{harvest}}(t,i)$ Biomass carbon stock density at time in stratum i in harvested areas.	Year	$C_{\text{harvest}}(t,i)$	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
	2018	622.51	
	2019	622.51	
	2020	622.51	
$CE_{\text{inventory, harvest}}(t,i)$ Combined error in estimate of average biomass stock density in harvest areas in stratum i at time t.	0.03		The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
$CE_{\text{inventory, ANR}}(t,i)$ Combined error in estimate of average biomass stock density in ANR areas in stratum i at time t	N/A		-
$U_{\text{classification}}$ Discounting factor for NERs from avoided deforestation, based on the accuracy of classification, i.e. dividing land into broad land use types.	0.962		The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.
$U_{\text{stratification}}$ Discounting factor for NERs from avoided degradation, based on the accuracy of stratification, i.e. dividing	0.75		The source has been checked. Correctly inputted in the

Data/Parameter monitored	Value	Assessment procedure and result
forest into individual forest biomass classes.		calculation spreadsheet s /14/.
Utransition Discounting factor for the emission factor for the transition from LULC class or forest stratum 1 to class 2 according to the uncertainty of the biomass inventory.	1.00	The source has been checked. Correctly inputted in the calculation spreadsheet s /14/.

AENOR, through the fully assessment of the calculations and the parameters, as well as the comparison with the methodology and the previous MR, considers that the parameters has been established correctly and they are appropriate.

AENOR deems the parameters monitored and available at validation are correct, reliable, and consistent. Information in the monitoring report is in compliance with the PD, the calculations provided and the applicable methodology. Then, the results showed in the monitoring report are reliable, consistent, and accurate.

4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

The data and parameters used to determine GHG emission reductions and removals are listed in Section 4 of the MR.

During AENOR's verification, the evidence provided by the PP was enough in both quantity and quality to support the determination of GHG emission removals reported by the project.

Quality assurance and control is an essential part of company procedures in order to assure the accuracy of inventory data, modeling results, and carbon accounting. Quality assurance procedures are done in order to minimize and correct any potential data transcription, calculation, or formatting errors that may result in inaccurate carbon accounting results. Forestal Otorongo is responsible for the creation and adoption of QA/QC protocols as required, and for any technical direction of the sector experts or teams. Forestal Otorongo is responsible of making sure the QA/QC protocols /65-66/ are carried out by the sector experts.

All persons involved in the field measurement work, will be fully trained to the current measurement manual before measurements. The dates of training sessions and the persons trained shall be recorded and stored.

The data collected is digitized, reviewed and incorporated into a database in Excel-type spreadsheets, also designed according to the information requirements. The calculations are made in said spreadsheets using the corresponding formulas and they are the ones that allow calculating the monitoring plan indicators that are then presented in the monitoring reports for the period.

All field monitoring processes must be documented, all sampling units or established plots must be georeferenced and systematized within the GIS.

The physical files are stored in the project's administrative office located in the town of Iñapari, while the digital files are stored in an electronic folder called "JAGUAR PROJECT" located on the BOZOVICH server, which is managed by the Specialist. Forest. These files will be kept throughout the useful life of the project and for at least two years after the end of their crediting period.

In accordance with VCS, the PP is committed to storing all project data in a secure and retrievable manner for at least two years after the end of the project crediting period. In order to facilitate project management and long-term accounting, all primary data outputs supporting annual verification including the spatial database is stored and maintained. AENOR has reviewed such information through the onsite visit performed in June 2022, where the VVB was able to check the methods that the PP used to store information digitally and analogically.

Roles and responsibilities are clearly identified in the MR. QA/QC procedures were developed by the PP for maintaining consistency and quality of field inventories over time. Interviews with the PP and inspection of data and results demonstrated that the PP possess all the competencies required for reporting of GHG emissions removals in an accurate way.

Data presented to the audit team were clear and coherent and processing steps could be traced to the corresponding sections of the methodology and monitoring plan with transparency.

Above procedures to ensure this are described in Section 4.3 of the MR, in terms of general QA/QC of the monitoring plan and specific QA/QC procedures applied to data and parameters monitored.

AENOR deems that the PP performed good practices in this assessment and concludes that GHG reductions were quantified correctly in accordance with the PD and applied methodology, and that the that evidence is sufficient in quantity and appropriate in quality to determine the GHG reductions of the project.

4.6 Non-Permanence Risk Analysis

The PP has elaborated a VCS Non permanence Risk Report (NPRR) for the verification process according to the AFOLU Non-Permanence Risk Tool v4.0. As required by the VCS Program, the non-permanence risk rating is reassessed for each verification event.

Below, it is explained the assessment and the issues raised on regard the non-permanence risk rating determined by the PP in the NPRR.

Risk Factor	Risk rating	Assessment	CARs/CLs
INTERNAL RISK (PM+FV+OC+PL) = 6			
Project Management	-4	a-d) N/A (further explanations within th NPRR) e) Management team includes individuals with significant experience in AFOLU project design and implementation, carbon accounting and reporting under the VCS Program or other approved GHG programs. Risk rating = -2 is justified. The REDD Project is developed by a team of professionals with relevant experience in the development and implementation of REDD Projects. The team has participated in validation and verification processes since 2012. The audit team has assessed the evidence provided. f) Adaptive management plan in place risk rating = -2 is justified The Jaguar Amazon REDD+ Project implements an Adaptive Management System, which includes different management tools that define the activities to be implemented (Forest Management Plans and instructions for the implementation of the activities), the same that identify the procedures for monitoring, the systematization of the information and the feedback for continuous improvement of the procedures by updating the instructions and the system itself. AENOR has reviewed some of the different management plans and SOPs that the PP has implemented for the project developing. Thus, AENOR deems that such information is deemed correct. AENOR has reviewed such Management Plans among others /50-51/	No corrective actions or clarifications were requested.
Financial Viability	0	a-c) N/A d) Project cash flow breakeven point is 4 years or less from the current risk assessment risk rating = 0 AENOR has reviwed the cashflow and confirms that the estimations of the achievement of the first year are right.	No corrective actions or clarifications were requested.

		e-g) N/A h) Project has secured 80% or more of funding needed to cover the total cash out before the project reaches breakeven. Risk rating = 0 is justified Secured funds cover 100% of needs before breakeven point. AENOR has reviewed the cashflow provided by the PP and deems that the information is right. i) Project has available as callable financial resources at least 50% of total cash out before project reaches breakeven Risk rating = -2 is justified Callable financial resources are equivalent to more than 100% of needs before breakeven point AENOR has reviewed the financial cashflow and considers that the risk calculation has been done correctly.	
Opportunity Cost	0	a)NPV from the most profitable alternative land use activity is expected to be at least 100% more than that associated with project activities; or where baseline activities are subsistence-driven, net positive community impacts are not demonstrated risk rating = 8 is justified The REDD Project has an annual profit of US\$ 7.68 per hectare, whereas the cattle ranching expected profit is US\$ 50 per hectare . It implies that the most profitable alternative land use is more than 100% profitable than the REDD+ Project. AENOR has reviewed the cashflow /75/ and deems that the information provided is deemed correct. b)-f) N/A g) The Jaguar Amazon REDD+ Project Proponent is a for-profit organization. AENOR has reviewed the title of the company and deems it is correct. Risk rating = 0 h) N/A i) Project is protected by legally binding commitment (see Section 2.2.4) to continue management practices that protect the credited carbon stocks over at least 100 years. No land use change is authorized for agrarian purposes (the main deforestation driver in Peruvian Amazon). The risk of forest clearance authorization for other purposes is very unlikely and unusual. risk rating = -8 is justified	Some CAR / CL were requested (appendix 2)

		PPF is a modality considered in the Law that cannot be changed in the future for non-forest uses so even if the project proponent does not renew it, the area would still be considered a permanent productive forest (PPF) and is legally under protection and eventually could be granted to another concessionaire. No land use change is authorized for agrarian purposes (the main deforestation driver in Peruvian Amazon). The risk of forest clearance authorization for other purposes is very unlikely and unusual. AENOR has reviewed the crediting period and further laws, and considers that the estimation of this risk is deemed correct. AENOR has assessed deeply the description provided by Greenox within the NPRR in the section opportunity cost and considers that the information provided is correct and truthful. Complementary AENOR asked about community impacts during the interviews and considers that the risk calculation has been done correctly.	
Project Longevity	10	a) N/A b) The project has a legal agreement to continue the management practice risk rating = 10 The Jaguar Amazon REDD+ Project area includes two adjacent forest concessions, given to them with Concession Contracts signed in 2002 with the Peruvian State for a period of 40-years renewable every 5 years. This means that there is a legal requirement to continue managing sustainable the forest, even if the contract is not renewed. In that case, that responsibility is transferred to the Government as the areas are classified as "Permanent Production Forests", recognized by the Peruvian State, being their conservation as such guaranteed, since they are defined in the Forestry Legislation as Forest areas that due to their biotic and abiotic characteristics are suitable for permanent and sustainable production of timber and other environmental goods and services. Any project with a legally binding agreement that covers at least a 100-year period from the project start date shall be assigned a score of zero for project longevity. AENOR has reviewed the PD and considers that the risk calculation has been done correctly.	No corrective actions or clarifications were requested.
EXTERNAL RISK (LT+CE+PC) = 0			
Land Tenure and Resource	0	a) N/A	Some CAR /CL were

Access/ Impacts		b)ownership and resource access are held by different entities risk rating = 2 is justified AENOR has reviewed the property deeds and deems that the information provided is deemed correct. c)-e) N/A f) The project areas are “Permanent Production Forests”, recognized by the Peruvian State, being their conservation as such guaranteed, since they are defined in the Forestry Legislation as “Forest areas that due to their biotic and abiotic characteristics are suitable for permanent and sustainable production of timber and other environmental goods and services; and which have been classified as such by the INRENA within the forest zoning”. These areas are made available to individuals in the form of granting recognized by the Ministry of Agriculture for sustainable and permanent use of forest resources and services, this being what will allow to continue with the necessary practices to ensure the forest carbon stocks during the entire crediting period of the Madre de Dios Amazon REDD Project Risk rating = -2 is justified AENOR has reviewed the Law of Forestry and Wildlife (Law N° 29763) and its Regulations (Supreme Decrees 0184-2015-MINAGRI, 019-2015-MINAGRI, 020-2015-MINAGRI and 020-2015-MINAGRI) and deems that the information provided is deemed right. Complementary the FSC certificates have been assessed. g) N/A AENOR considers that the risk calculation has been done correctly.	requested (Appendix 2)
Community engagement	0	a) N/A b) Less than 20 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. Risk rating = 5 is justified 20 km around the project area includes, not only surrounding towns, but Iberia city too, with a population of 3247 inhabitants. An estimate of 843 persons (201 families) live in Portillo, San Francisco and Carachamayoc. This represents 26% of total population of the district. These communities were	No corrective actions or clarifications were requested

		consulted during different moments of the project (preparation and implementation, too) c) Project is seen by the local stakeholders as a generator of positive impacts on the environmental/social/economic aspects of the communities involved in the project. Risk rating = -5 is justified FSC certification includes a very high standard of community impacts assessment and it is still valid. The main positive impact on communities are related with the generation of local employment and with the authorization of Brazil nut harvesting to local families within the project area. AENOR has reviewed those FSC certificates and considers that the risk calculation has been done correctly.	
Political Risk	0	a)-b) N/A c) Governance Score: 0.10 Risk rating = 2 is justified AENOR has reviewed the WB governance indicators and deems it has been calculated properly. d)-e) N/A f) Country is implementing REDD+ Readiness or other activities, UN REDD Country risk rating = -2 is justified AENOR has assessed the statement that Greenox refers in its document and also has reviewed and reproduced the calculation of the governance indicator, obtained from The World Bank Institute Worldwide Governance Indicators. AENOR considers that the value obtained is correct according to the sources. And considers that the risk calculation has been done correctly.	No corrective actions or clarifications were requested
NATURAL (F+Pd+W+G+ON) = 0			
Fire	LS*M=0	Due to the climatic characteristics of the area: high humidity, annual average rainfall of 2000 mm also considered as high, maximum moderate temperatures; there is a very low incidence of natural fires in the Amazon region, which correspond to the department of Madre de Dios and the project area Likelihood of an event like this occurring is Every 50 to less than 100 years Score(LS)= 0	No corrective actions or clarifications were requested

		Mitigation (M)=0.25 AENOR has reviewed the description of the fire risk within the NPRR. The verification team has checked the evidence provided by Greenox such as: http://sinpad.indeci.gob.pe/UploadPortalSINPAD/C OEN_Noticia/mon_nac_inc_forest_31.05.06.pdf http://cedinfor.lamolina.edu.pe/Separatas%20FCF/Proteccion%20Forestal/3SimposioBrasil-Per_.PDF https://www.indeci.gob.pe/wp-content/uploads/2021/02/CAPITULO-III-Estad%C3%ADstica-Series-2003-2019.pdf Also AENOR has asked to different stakeholders about the fire risks and if it could difficult the project implementation. And considers that the risk calculation has been done correctly.	
Pest ad Disease Outbreaks	LS*M=0	The tropical rain forest, due to the great diversity of species it has, is very resistant to plagues and endemic diseases. These usually occur in areas of homogeneous vegetation, such as plantations; and especially when the species are not native in the area, and therefore not fully adapted. In the Amazon forest there are no reports on plagues and endemic diseases in natural forests of Madre de Dios. Then it is considered insignificant and once every 100 years. Score (LS): 0 Mitigation = not required There were no records of disease or pest outbreaks causing any significant impacts to carbon stocks in the forests. AENOR has asked to different stakeholders about their knowledge of pest and disease, and nobody were aware of any episode of pest and disease in the past and considers that the risk calculation has been done correctly.	No corrective actions or clarifications were requested.
Extreme Weather	LS*M=0	The INDECI statistics there are many weather events considered natural emergencies. However, the region of Madre de Dios only has records of floods as recurrent and severe emergency for the population, affecting agricultural areas, pastures and urban areas mostly. For the forests, periodic flooding of the floodplain is part of its natural dynamics and does not represent a risk of change in carbon stocks. Score (LS)=0 Mitigation = not required	No corrective actions or clarifications were requested.

		AENOR has asked to different stakeholders about their knowledge of extreme weather, and nobody were aware of any episode of extreme weather in the past. And considers that the risk calculation has been done correctly.	
Geological Risk	LS*M=0	Madre de Dios is a geologically stable department. According to the National Center of Geophysical Data (CNDG) is a region with no seismic activity (Bernal et al, 2001). This is because it is far from the Fire Belt and the main seismic epicentres of the country. Once every 100 years or more or N/A Score (LS)=0 Mitigation= not required AENOR has asked to different stakeholders about their knowledge of possible geological risks, and nobody were aware of any geological disturbance within the project area and considers that the risk calculation has been done correctly.	No corrective actions or clarifications were requested.
Other natural risk. N/A	LS*M=0	N/A	No corrective actions or clarifications were requested.
OVERALL RISK RATING (6+0+0) = 6.0 . Then, a minimum risk of 10% is considered			

AENOR has checked that information provided in the NPRR for the monitoring period is consistent with supporting documents provided. The assumptions and justifications provided to determine the risk rating of each risk factor are elaborated and they are based on provided documents using conservative assessments. AENOR deems that information provided is reliable and appropriate from reliable sources, thus, the overall risk rating is credible and realistic. Thus, the overall risk rating of 10% is credible and realistic.

5 VERIFICATION CONCLUSION

AENOR has verified that The Jaguar Amazon REDD+ Project is in compliance with the Verified Carbon Standard version 4.3 without qualifications or limitations. The project has been implemented in accordance with the validated Project Description and its validated deviations. The project complies with the validation and verification criteria for projects set out in VCS Version 4, without any qualification or limitation.

AENOR is able to issue a positive verification opinion for the 343,035.56 tCO₂e of verified net GHG emissions reductions and removals, as reported in the Monitoring Report version 04.

The verification assessment covered the monitoring period from 01 of January 2018 until 31 of December 2020 and verified that calculated emission reductions and/or removals were achieved during the monitoring period with a reasonable level of assurance. The overall non-permanence risk rating was 10%. Therefore, the total number of credits to be deposited in the buffer account is 340,274.08 and the total VCU's eligible for issuance are 3,002,761.48 VCU's.

Verification period: 01/01/2018 to 31/12/2020.

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

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ eq)	Net GHG emission reductions or removals (tCO ₂ e)	Buffer pool allocation	VCUs eligible for issuance
2018	-84,072.88	1,048,880.68	-16,941.21	947,866.59	96,480.78	851,385.81
2019	-1,008,748.18	2,141,824.46	-19,793.17	1,113,283.10	113,307.63	999,975.47
2020	-1,152,284.21	2,457,140.92	-22,970.85	1,281,885.87	130,485.67	1,151,400.19
Total	-2,245,105.27	5,647,846.06	-59,705.23	3,343,035.56	340,274.08	3,002,761.48

Net change in carbon stocks: 343,035.56 t CO₂e.

Overall non-permanence risk rating: 10%

VCUs buffer to be deposited: 340,274.08

Total VCUs to be issued: 3,002,761.48 VCU's.

Javier Cócera Cañas

Lead Auditor

27/03/2023



APPENDIX I: LIST OF EVIDENCE PROVIDED

N°	Name
Project documentation	
1	VCS-Non-Permanence-Risk-Report-v4.0 30072021.docx
2	VCS-Non-Permanence-Risk-Report-v4.0 10042022.docx
3	VCS-Monitoring-Report-v4.0 09012022.docx
4	VCS-Monitoring-Report-Template-v4.0 26072021.docx
5	VCS-Monitoring-Report-Template-v4.0 26042022.docx
6	RESUMEN ESPANOL Jaguar corregido 19022022.docx
7	RESUMEN ESPANOL Jaguar corregido 19022022 SIN CC.pdf
8	PD The Jaguar Amazon REDD Project CCB sin CC-2.pdf
9	PD The Jaguar Amazon REDD Project CCB sin CC-2.docx
10	Net carbon y VCU´s Jaguar05012022.xlsx
11	Net carbon y VCU´s Jaguar08092022.xlsx
12	Monitoring Report VCS The Jaguar Amazon REDD Project 08092022.docx
13	Monitoring report - Net carbon y VCU´s Jaguar 05012022.xlsx
14	Monitoring report - Net carbon y VCU´s Jaguar (08092022).xlsx
15	Jaguar.docx
16	Climate Section Update 08092022.docx
Shapes	
17	Raster_Leakage Belt.rar
18	Land_Ownership.rar
19	LandUse_LandCover.rar
20	Leakage_Belt.rar
21	Parcelas de corta.rar
22	Project_boundary.rar
23	Project_stratification.rar
24	Reference_Region.rar
Training	
25	Capacitacion en sistemas agroforestales 2019.pdf
26	Capacitación manejo del cultivo de cacao 2019.pdf
27	Capacitaciones externas 2019.pdf
28	Informe sobre reunión de coordinación con el Ing Edgar Cusi.pdf
29	Promotion of sustainable productive área
30	Informe de Capacitaciones técnicas en agroforestería, reforestación de suelos y reforestación con especies promisorias.pdf
Socialization	
31	Acta de reunión de coordinación de proyectos productivos agroforestales con las comunidades vecinas.pdf

N°	Name
32	Roadshire forest restoration
33	Sentinel_PA_v02.tif.xml
34	Complaint 2020
35	Campaña médica gratuita.pdf
36	Formatos con quejas o sugerencias 2020.pdf
37	Recepción y Respuesta final a quejas o sugerencias 2020.pdf
Benchmark	
38	Benchmark map.png
39	Leakage_belt.shp.xml
40	Madre_de_Dios_Departament.shp
41	Perdida_PA_2007_2017.shp.xml
42	Project_area.shp.xml
43	Transition_from_forest_land_to_pasture_LB.shp.xml
Cv	
44	ANTONIO_FLORES.pdf
45	BRIGETTE_DIAZ.pdf
46	FERNANDO_MOALI.pdf
47	USMILA_TORRES.pdf
48	VITTORIO_DE_DEA.pdf
Significance test	
49	Significance Test.xlsx
Forest management plan	
50	CH_PGMF 2018.pdf
51	OTO_PGMF 2018.pdf
Carbon stock comparison	
52	DINAMICA DEL CARBONO.pdf
53	Estimation of accumulated carbon in a permanent plot of Andean forest in the Francisco Vivar Castro university park, Loja, Ecuador.pdf
54	Inventario Nacional Forestal 2019.xlsx
55	Stock de carbono Otorongo y Chullachaqui.xlsx
56	UNU_FORESTAL_2020_T_MADELEY-CHACON.pdf
Other	
57	Annex 1. San Francisco community support meeting.pdf
58	Annex 3. IIAP meeting on training - 2019.pdf
59	Annex 4. The project proponent will donate timber seeds.pdf
60	Annex 7. Technical training in agroforestry, soil reforestation and reforestation with promising species.pdf
61	Annex 8. Implementation of research projects - Chullachaqui.pdf
62	Annex 9. Implementation of research projects - Otorongo.pdf
63	Annex 10. Results of implementation of research projects.pdf
64	Annex 11. Land demarcation, border maintenance and signalling 2018.pdf

N°	Name
65	Annex 12. Security Protocol - Chullachaqui.pdf
66	Annex 13. Security Protocol - Otorongo.pdf
67	Annex 14. Dialogues about environmental crimes and legal framework.pdf
68	Annex 15. Forest fire prevention patrolling.pdf
69	Annex 16. Boundaries and coordinates of the enabling forest rights - Otorongo.pdf
70	Annex 17. Boundaries and coordinates of the enabling forest rights - Chullachaqui.pdf
71	Annex 18. Land demarcation, border maintenance and signalling 2019.pdf
72	Annex 19. Sustainable Development Goals The Jaguar Amazon REDD+ Project.pdf
73	Annex 20. Periodical patrolling.pdf
74	Annex 21. Coordinates of forest concessions.xlsx
75	Cashflow.xlsx (confidential)
76	FSC-Otorongo.pdf
77	FSC-Chullachaqui.pdf
78	Concession contract Otorongo.pdf
79	Concession contract chullachaqui.pdf
80	Betaregression.html
81	Tasa de deforestación.docx
82	Summary handbook pdf

APPENDIX II: FINDINGS

VCS Corrective action requests (CARs)

VCS CAR ID	01	Date: 21/02/2022
Description		
The MR and the NPRR do not comply with the following instructions of the templates: a) TITLE PAGE: Complete all items in the box on the title page using Arial or Century Gothic 10.5 point, black, regular (non-italic) font. b) Unless applying a merited deviation, please complete all sections using Arial or Franklin Gothic Book 10.5 point, black, regular (non-italic) font. c) Delete all instructions, including this introductory text, from the final document. Additionally, both in the MR and the NPRR, there are empty fields in the front-page boxes.		
Project proponent response		Date: 24/04/2022
The MR has been updated to use the appropriated type of letter in each section and no instructions have been left. The same for the NPRR.		
Documentation provided by Project proponent		
MR NPRR		
VVB Assessment		Date: 24/05/2022
In the front page of the MR the Report ID and Project ID boxes are not complete. In the front page of the NPRR, the monitoring period is not reported using the template format for dates (DD-Month-YYYY to DD-Month-YYYY). Instructions in sections 2 and 3 of the NPRR have not been removed.		
Project proponent response		Date: 18/08/2022
Front page of the MR has been completed. Monitoring period of the NPRR has been corrected using the template format for dates. Instruction in section 2 and 3 of the NPRR have been removed.		

Documentation provided by Project proponent	
VVB Assessment	Date: 20/09/2022
The sections of the MR and NPRR have been updated and deemed correct. However, the colour of the font does not correspond to the template requirements (black)	
Project proponent response	Date: 25/09/2022
The colour of the font has been adjusted to black	
VVB Assessment	Date: 24/10/2022
The section has been updated and deemed correct. CAR 01 is closed	

VCS CAR ID	02	Date: 21/02/2022
Description		
The Project Title in the MR and NPRR front page does not match with the name of the project in the VCS Registry (The Jaguar Amazon REDD+ Project).		
Project proponent response		Date: 24/04/2022
The correct name of the project has been used.		
Documentation provided by Project proponent		
VVB Assessment		Date: 24/05/2022
The project title has not been corrected in the NPRR front page.		
Project proponent response		Date: 18/08/2022
The project title has been corrected in the NPRR front page		

Documentation provided by Project proponent	
VVB Assessment	Date: 20/09/2022
The titles have been updated and deemed corrected. Therefore, CAR 02 is closed	

VCS CAR ID	03	Date: 21/02/2022																																
Description																																		
The reference region and leakage described in section 1.7 of the MR and used in calculations do not match with the reference region and leakage belt provided in the GIS data (Reference_Region.shp and Leakage_Belt.shp).																																		
Project proponent response		Date: 24/04/2022																																
The areas described in Table 18 of the Monitoring Report match exactly with the areas of the shape files that are uploaded in the MEGA.																																		
 TABLE 18: GEODETIC CHARACTERISTICS OF PA, RR AND LG <table><tr><th>Entity</th><th>Project Area</th><th>Reference Region</th><th>Leakage Belt</th></tr><tr><td>Centroid X</td><td>407287</td><td>447623</td><td>452331</td></tr><tr><td>Centroid Y</td><td>8721397</td><td>8702255</td><td>8736370</td></tr><tr><td>Latitude</td><td>11 ° 33' 54.165" S</td><td>11 ° 29' 13.894" S</td><td>11 ° 25' 50.560" S</td></tr><tr><td>Longitude</td><td>69 ° 51' 1.011" W</td><td>69 ° 35' 48.212" W</td><td>69 ° 26' 12.552" W</td></tr><tr><td>Area (ha)</td><td>183,015.29</td><td>516,554.22</td><td>232,114.34</td></tr><tr><td>Tenure</td><td>Forest concessions</td><td>Forest concessions, agrarian plots, BN concessions</td><td>Forest concessions, agrarian plots, BN concessions</td></tr><tr><td>Department</td><td>Madre de Dios</td><td>Madre de Dios</td><td>Madre de Dios</td></tr></table>			Entity	Project Area	Reference Region	Leakage Belt	Centroid X	407287	447623	452331	Centroid Y	8721397	8702255	8736370	Latitude	11 ° 33' 54.165" S	11 ° 29' 13.894" S	11 ° 25' 50.560" S	Longitude	69 ° 51' 1.011" W	69 ° 35' 48.212" W	69 ° 26' 12.552" W	Area (ha)	183,015.29	516,554.22	232,114.34	Tenure	Forest concessions	Forest concessions, agrarian plots, BN concessions	Forest concessions, agrarian plots, BN concessions	Department	Madre de Dios	Madre de Dios	Madre de Dios
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Department	Madre de Dios	Madre de Dios	Madre de Dios																															
Documentation provided by Project proponent																																		
Route: Nube > Shapes > Leakage_Belt.zip, Project_Boundary.zip y Reference_Region.zip																																		

VVB Assessment	Date: 24/05/2022
The PP has provided corrected shape files for the reference region and leakage belt. CAR 03 closed.	

VCS CAR ID	04	Date: 21/02/2022
Description		
Section 1.11 of the MR states: “Forest and Wildlife Law, approved in 2016”. However, the current Forest and Wildlife Law was published in the official journal El Peruano on July 22th, 2011.		
Project proponent response		Date: 24/04/2022
The reference has been modified to date adequately the Law N° 29763.		
Documentation provided by Project proponent		
VVB Assessment		Date: 24/05/2022
The PP has made the adequate corrections. CAR 04 is closed.		

VCS CAR ID	05	Date: 21/02/2022
Description		
In relation to the PD deviation <i>Update of baseline emissions and project emissions from Section 3.2 of PD</i> described in section 3.2.2 of the MR: a) Table 64 of the PD (in the MR) presents the forest loss in reference region between 2007-2017. However, according to the PD, the historic reference period is 2008-2017. b) Table 77 of the PD (in the MR) reports the combined emission factor of AGL+BG for the transition from Selva Baja to Pasture. However, methodology VM0006 requires the separate report of the value per carbon pool. c) $U_{inventory}$ has been incorrectly estimated for Forest stratum (equation EQ 21 incorrectly applied in spreadsheet Net carbon y VCU´s Jaguar 05012022.xlsx). It has not been estimated for Grassland. d) $U_{transition}$ incorrectly estimated.		

- e) Table 88 of the PD (in the MR) present negative values for deforestation rate in the project scenario, which mean actual increase of forest cover when applied in the rest of equations.
- f) Table 89 of the PD (in the MR) present the carbon stock density in harvest areas $C_{harvest}(t, i)$, which is the same as the forest stratum Selva Baja. However, methodology VM0006 requires the quantification of the carbon stock density in harvest areas $C_{harvest}(t, i)$, be made from sample plots established in the harvest areas (section 8.2.7.1 VM0006).
- g) Values for HCWI(OM) in table 89 of the PD (in the MR) don't match with values in spreadsheet *Net carbon y VCU's Jaguar 05012022* tab 'EF'.
- h) Table 90 of the PD (in the MR) present an increase of the carbon stock density in harvest areas $C_{harvest}(t, i)$ in comparison to the natural forest stratum.

Project proponent response

Date: 24/04/2022

The updated version of Section 3 from PD is in Appendix 15 "Climate Section Update" and in the updated spreadsheet.

- a) The historical reference period described in PD includes a mistake in the start year. All the calculations are based on the period 2007-2017, with 2018 excluded because it is an outlier and year 2007 was added because the beta regression model improves its accuracy. It has been updated in the MR.
- b) Table 77 from PD has been updated.
- c) Equation 21 has been adjusted based on a better interpretation of the methodology (it may be seen in Section 3.2.2 and in the updated spreadsheet):
1. HCWI(OM) is measured as dry matter biomass

HCWI(OM _{forestAGL})	HCWI(OM _{forestBG})
8.846210284	3.715132076

2. The sum of mean was in carbon units and was converted to dry matter of biomass units multiplying by (2).

Class	SUM OF MEAN (tC)
Forest	169.78
Pasture	31.24



Class	SUM OF MEAN (t Biomass)
Forest	361.23
Pasture	66.47

$$CE_{inventory}(i) = \frac{\sqrt{\sum_o HWCI(OM_o(i))^2}}{\sum_o OM_o(i)}$$

3. Then, EQ21 is applied:

With the Excel formulae (=SQRT(SUMSQ(8.85,3.72))/361.23), we obtain the $CE_{inventory}=0.03$

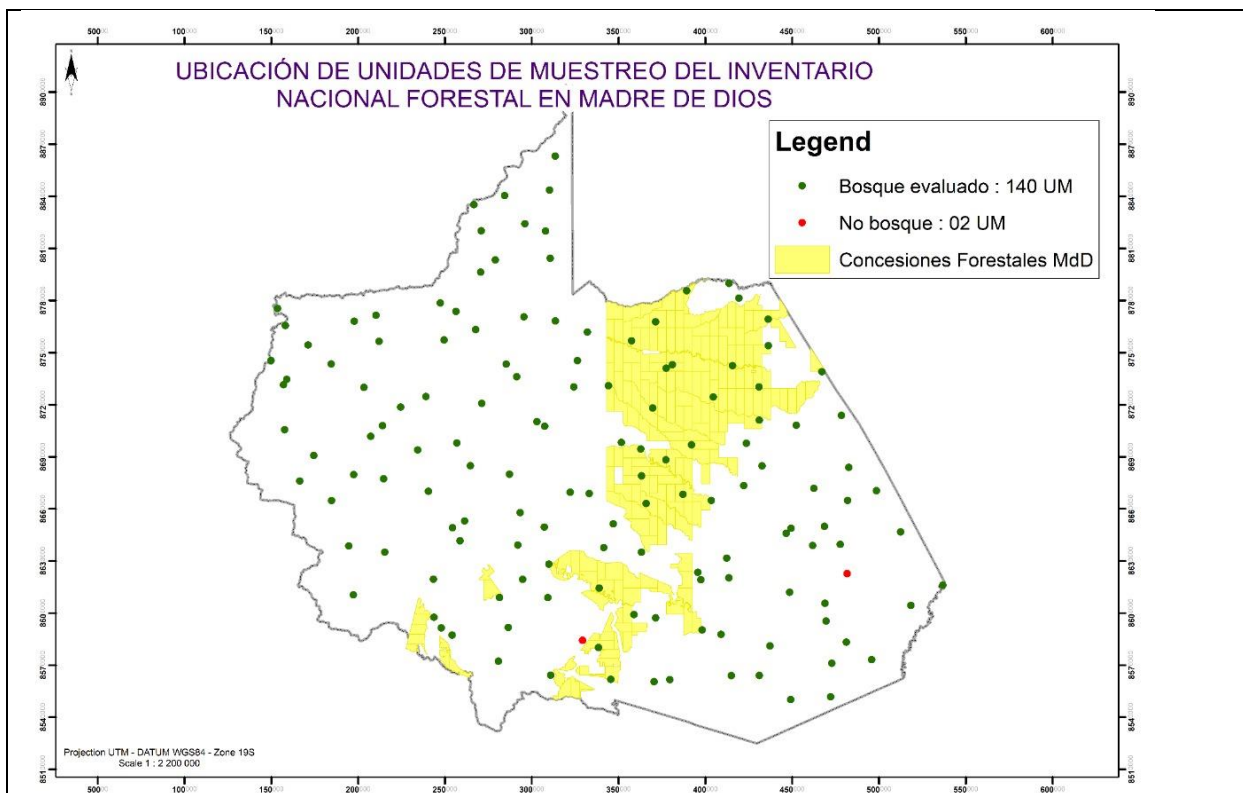
4. As a result, with EQ 22, the $U_{inventory}$ for Forest stratum is still 1, so there are no impacts on the subsequent calculations.

5. The formulae in EXCEL $(=SQRT(SUMSQ(3.32,6.80))/66.48)$ for Grassland achieves a $CE_{inventory}=0.11$.
6. As a result, with EQ 22, the $U_{inventory}$ for Grassland is 1, so, no other changes occur.
- d) $U_{transition}$ is adjusted as may be seen in updated spreadsheet:

	Pool	HCWI(OM) (Biomass)	HCWI(OM) (tCO2)	Sum of mean
Forest stratum	AGL	8.85	16.21	622.51
	BG	3.72	6.81	
Grassland	AGL	3.32	6.08	114.56
	BG	6.80	12.46	

With these data, EQ 33 is applied, and we obtain $CE_{transition}=0.044$, and with EQ 34, $U_{transition}$ is still 1 and there are no changes in any calculation.

- e) Values were adjusted to assume 0 ha/year as the deforestation rate in the Project scenario for the first 10 years. Table 88 from PD and the Calculation Spreadsheet were updated.
- f) Table 90 includes information about carbon content in logging areas $C_{harvest}(t,i)$. The project only uses official information of the country. In this case, Peru has developed a methodology and time series for annual deforestation and sampling plots for each stratum throughout the Amazonia. Some of the sampling plots in the Selva Baja stratum are located in logging concessions, i.e. logging areas, as may be seen in the following map. The difference in carbon density of sampling plots in logging areas compared with other areas in the same stratum Selva Baja, are negligible. The annual average logging emissions is 0 0.26 tCO2eq, which is naturally recovered, especially if we assume that annual growth in this type of forest is over 5 tCO2eq, according to IPCC 2006. Said that, and according with Section 8.2.7.1, the project meets with the requirement that sampling plots must be located within logging areas.



g) Table 89 was updated:

	247.82	104.65	540	95%	118	4.50	8.8462
	113.41	43.95	540	95%	118	1.89	3.7151

h) According to the methodology, in Section 8.2.7.1, it is stated that: “When no individual simulation model is available, a simple spreadsheet model using IPCC biomass growth estimates or growth estimates based on expert opinion corroborated by local studies and historical practice for the project area can be used. The IPCC biomass tables provide estimate of annual growth and total biomass as a function of different forest types, age-group, and time. When biomass removal is tracked along with the annual growth, biomass remaining in forest can be estimated. Note that this approach gives only linear growth.”, while the Project proposes to use the net growth of biomass as established by IPCC 2006 in table 4.9 from forest lands chapter. So, to the average density in forest lands according to the Peruvian Forest and Wildlife Inventory, we have discounted the logged biomass and added the annual growth. The result is the remnant biomass that stays in the forest after logging, with a linear growth approach as recommended by the methodology. $C_{harvest}(t, i)$ values were adjusted assuming

that carbon density in the logging area cannot be higher than carbon density in the rest of that forest stratum, being conservative.																									
Documentation provided by Project proponent																									
WB Assessment	Date: 20/05/2022																								
a) The historic reference period has been corrected. Closed. b) The EF estimated and reported in table 77 is incorrect. VM0006 requires that the total EF_{BG} to be gradually spread over time. That is, the BG carbon emissions from an area deforested in year t=0 shall spread from y=1 to y=10. However, the current application of EF considers an increment of BG carbon content in calendar years, meaning that the areas deforested in 2027 produce 10 times more BG carbon than areas deforested in 2018. Additionally, EF shall be express in terms of emission from year of deforestation, not in calendar years:																									
	<table><tr><th>Year t</th><th>AGL (tCO2/ha)</th><th>BG (tCO2/ha)</th></tr><tr><td>1</td><td>$\frac{44}{12} \cdot (C_{AGL}(CS2) - C_{AGL}(CS1))$</td><td>$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$</td></tr><tr><td>2</td><td>0</td><td>$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$</td></tr><tr><td>3</td><td>0</td><td>$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$</td></tr><tr><td>4</td><td>0</td><td>$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$</td></tr><tr><td>5</td><td>0</td><td>$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$</td></tr><tr><td>6</td><td>0</td><td>$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$</td></tr><tr><td>7</td><td>0</td><td>$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$</td></tr></table>	Year t	AGL (tCO2/ha)	BG (tCO2/ha)	1	$\frac{44}{12} \cdot (C_{AGL}(CS2) - C_{AGL}(CS1))$	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$	2	0	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$	3	0	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$	4	0	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$	5	0	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$	6	0	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$	7	0	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$
Year t	AGL (tCO2/ha)	BG (tCO2/ha)																							
1	$\frac{44}{12} \cdot (C_{AGL}(CS2) - C_{AGL}(CS1))$	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$																							
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7	0	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$																							

8	0	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$
9	0	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$
10	0	$\frac{44}{12} \cdot \frac{(C_{BG}(CS2) - C_{BG}(CS1))}{10}$

- c) The PP has correctly estimated $u_{inventory}$ for both strata. Closed.
- d) Although it has no final impact on the value of $u_{transition}$, $CE_{inventory}$ is still incorrectly estimated. EQ33 requires the use of HWCI ($OM_o(CSi)$) and $OM_o(CSi)$, i.e. organic matter. However, the PP is using tCO_2e values.
- e) Deforestation rate in the ex ante project scenario has been corrected. Closed.
- f) The PP shall provide this justification as part of a methodology deviation in the corresponding section.
- g) Values for Forest have been corrected in table 89. However, values for Pasture are no included.
- h) The PP has corrected values of $C_{harvest}(t, i)$ in table 90 considering a conservative approach. Closed.

Project proponent response

Date: 18/08/2022

- b) Table 77 has been corrected.
- d) $CE_{inventory}$ has been estimated correctly, however, $CE_{transition}$ has been corrected with the use of organic matter for HWCI.
- f) A paragraph describing the approach used, which met the methodological requirement and the conservativeness principle, has been included in the MR
- g) Pasture values have been added.

Documentation provided by Project proponent

VVB Assessment

Date: 20/09/2022

- b. table 77 has been updated
- d. section has been updated and deemed correct
- f. section updated according to the requirement

g. values for pasture have been included

therefore, CAR 05 is closed

VCS CAR ID	06	Date: 21/02/2022
Description		
In relation to the PD deviation <i>Update of baseline emissions and project emissions from Section 3.2 of PD</i> described in section 2.3.3 of the MR, and specific to the content of the PD on the procedures for quantification of GHG Emission Reductions and Removals: a) Section 3.1.4 of the PD states “After defining the Reference Region, we have estimated, from the official source (http://geobosques.minam.gob.pe/geobosque/view/perdida.php), the annual forest loss in the area of the Reference Region since 2008.” However, methodology VM0006 requires specific information to be reported regarding the data sources used to analyze historical deforestation, which is listed in table 4 of the methodology. b) In section 3.2.1 of the PD, under STEP 5: DEFINE LULC CLASSES AND FOREST STRATA and STEP 6 STEP 6: LAND TRANSITIONS BETWEEN LULC CLASSES / FOREST STRATA describes the definition of a single forest stratum ‘Selva baja’ for the project. However, as per section 8.1.2.2 of the VM0006: - Managed forests must be divided into different forest strata according to the forest management regimes unless the differences in management among regimes do not lead to significant differences in carbon density during the baseline validation period. - All areas that will be subject to harvest activities within the project area must be further divided into forest strata according to the harvest plan. The project proponent must present maps of the stratified project areas in the PD. c) Table 71 of the PD has not been updated in section 2.3.3 of the MR. d) In section 3.2.1 of the PD, under STEP 7: MAP ACCURACY ASSESSMENT AND DISCOUNTING FACTOR DETERMINATION, it is stated “The final $u_{classification}$ result is 1.00.” This value is incorrect. e) In table 74 of the PD, the following information required by the methodology VM0006 is missing in relation to Descriptions of the LULC classes and/or LULC-change categories - Description of method used to produce these data. - Information on how these classes may match with IPCC classes and categories f) As required by the methodology VM0006 section 8.1.2.8, for every pair of subsequent images in the historical reference period, calculate the area of each land transition and report in a LULC and forest strata transition matrix. g) In table 75 of the PD, the analysis of the methodology request “The average location error between 2 images must be less or equal to 1 pixel” is missing.		

- h) In section 3.2.1 of the PD, under STEP 8: ASSESS THE RELATIVE IMPORTANCE OF DEFORESTATION DRIVERS, it is stated: “we conclude that the main deforestation agents of the project are: Farmers, Ranchers and infrastructure.” However, the relative importance of the drivers of deforestation has not been assessed following the procedure described in section 8.1.3.2 of VM0006.
- i) Section 2.5.5 of the PD Table 32 includes illegal logging as illegal activities identified within the project area. Also, the additionality analysis described in section 3.1.5 of the PD mentions “Many forest concessions in Madre de Dios are not feasible anymore because they were forced to reduce their forest production area because of the deforestation and illegal logging”. However, there is no assessment regarding the relevance of illegal loggers as main deforestation drivers in section 3.2.1 of the PD under STEP 8: ASSESS THE RELATIVE IMPORTANCE OF DEFORESTATION DRIVERS.
- j) Section 3.2.1 of the PD under STEP 9: MOBILITY OF EACH DEFORESTATION DRIVERS states: “The deforestation drivers are in all the cases rural families, local communities or former migrants, so the access to production areas is mostly with motorcycles.” Section 8.1.3.3 of VM0006 requires “Present a table of the average speed by which each identified mode of transportation can cross each of the LULC classes and forest strata and road categories, such as tracks, seasonally accessible small roads, and year-round accessible two-lane roads. Note the average speed on land with restricted access, such as national parks, as 0. Substantiate the choice with data.”
- k) The PD is missing the identification of quantitative driving variables of deforestation and forest degradation, as required by section 8.1.3.4 of methodology VM0006.
- l) Section 3.2.1 of the PD, under STEP 10: DETERMINE AND CALCULATE EMISSION FACTORS does not follow the procedures required by section 8.1.4 of methodology VM0006. The methodology requires the following for the determination of Emission Factors: “For each LULC class or forest stratum that could be subject to a transition. is necessary to determine the average carbon stock density, based on sampling plots. Plots may be either permanent or temporary, but the location of the plots must be known and available at the time of verification.”
- However, the PP uses carbon data from the Peruvian Government. This deviation from the methodology has not been properly described nor justified in the corresponding section.
- m) In section 3.2.1 of the PD, under STEP 11: CALCULATE TOTAL RATES OF DEFORESTATION AND DEGRADATION IN THE PROJECT AREA, it is stated: “After calculation the annual deforestation rate in the project area in the baseline scenario, we apply EQ1 and results obtained are in table 82.” However, the purpose of EQ1 is to assess the relative importance of conversion of forest land to cropland for subsistence farming as deforestation driver.
- n) VM0006 requires to calculate LULC Class or Forest Stratum-Specific Relative forest cover increase and Regeneration Rates that would have happened under the baseline scenario. In the PD, section 3.2.1 under STEP 11: CALCULATE TOTAL RATES OF DEFORESTATION AND DEGRADATION IN THE PROJECT AREA it is stated: “Regeneration is not significant and is omitted.” Since forest degradation is no within the scope of the project, the inclusion of forest regeneration is no required. However, as the methodology states: “both transitions from forest to non-forest and non-forest to forest (and that were forest at the start of the crediting period, per applicability condition 1) must be included in the baseline.” Forest cover increase rates for every pair of subsequent images in the historical reference period shall be calculated and the averages reported in a table in the PD, as per VM0006 (section 8.1.5.2).

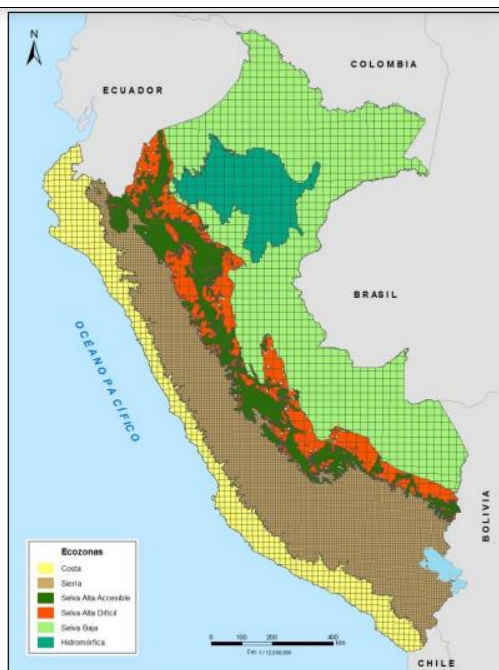
- o) In section 3.2.1 of the PD, under STEP 12: CALIBRATE AND VALIDATE A SPATIAL MODEL, PP has not carried out a calibration and validation of the spatial Model to Predict the Suitability for Deforestation and Degradation, as per the procedure defined in section 8.1.5.3 of the methodology VM0006.
- p) In section 3.2.2 of the PD, it is stated that the source of emissions is from deforestation for croplands (grasslands in the PD deviation of the MR). However, the main deforestation drivers identified in section 3.2.1 also include infrastructure.
- q) Table 85 of the PD has not been modified in the PD deviation of the MR.
- r) Relative project impact can't be more than 1.00.

Project proponent response
Date: 24/04/2022

- a) Data sources used to analyze historical deforestation are mentioned in Table 4 of the methodology and are included in Table 74 of the PD:

Information Needed about the Data Collected	
Source Type	Landsat 7 Images ETM+
Resolution (spatial and spectral)	Spatial Resolution 30 m and Spectral resolution 8 bands
Acquisition date	1999 to 2019
Coordinate system and pre- processing	WGS84 - 18S
Minimum Mapping Unit (ha) Description of method used to produce these data	30 m
Descriptions of the LULC classes and/or LULC-change categories	Forest/Non-Forest- Loss/ No change
Source Type	RapidEye
Resolution (spatial, spectral) Acquisition date	5 m - 2017
Coordinate system and pre-processing	WGS84 - 18S

- b) The project only uses official information of the country. In this case, Peru has developed a methodology and time series for annual deforestation and sampling plots for each stratum throughout the Amazonia. In the case of Madre de Dios, the Peruvian Government has allocated only one forest stratum: Selva Baja. For this reason, the whole project area is Selva Baja and we assume that the whole project area is logging area. The official map for forest strata may be found below:



INFFS, 2019

- c) Table 71 from the PD has been updated.
- d) $u_{classification}$, was adjusted. The new value is 0.9733. All calculations were updated.
- e) Information requested in table 74 of the PD was completed.
- f) According to the second deviation, the only transition considered is from forest stratum Selva Baja to non-forest stratum pastures.

Year	Area converted from Selva Baja to Pastures
2007	614.76
2008	781.81
2009	989.50
2010	1245.87
2011	1559.07
2012	1935.23
2013	2374.39
2014	2866.50
2015	3397.49
2016	3963.36
2017	4570.12

- g) Information requested in table 75 of the PD was completed.

- h) According to second deviation, the assessment determines a unique deforestation driver (conversion from forest lands to pasture lands), which has been calculated following step, in table 8 of the methodology (L1), and step 2, in table 9 of the methodology (L2).

L1: Annual carbon loss by conversion from forest land to cropland [Mg.C/year]	Proportion of gradual carbon loss that causes deforestation or forest degradation, respectively caused by driver L(d).	Total carbon loss caused by deforestation. [MgC/year]	Relative contribution from driver "L1" to deforestation
281796.26	100%	281796.26	1.00
319907.84	100%	319907.84	1.00
360842.63	100%	360842.63	1.00
404423.40	100%	404423.40	1.00
450256.32	100%	450256.32	1.00
497701.17	100%	497701.17	1.00
545834.56	100%	545834.56	1.00
593411.53	100%	593411.53	1.00
638830.59	100%	638830.59	1.00
680106.40	100%	680106.40	1.00

- i) AIDER research (2015), "DRIVERS, AGENTS AND CAUSES OF DEFORESTATION IN PERUVIAN AMAZON - Systematization, special patterns and impact quantification", considers that illegal logging is one of the drivers together with agriculture and cattle ranching and, in some cases, gold extraction. Notwithstanding, it is considered *de minimus*. For this reason, it was excluded from the baseline.
- j) The mobility assessment was described in section 3.2.3. The average speed table is in table 92 of the PD.
- k) The identification of quantitative variables that push deforestation and forest degradation have been added in Section 3.2.1 of the PD.

The following variables explain the location of deforestation:

- Accessibility to forests.
- Distance to markets.
- Distance to settlements.
- Land tenure classes.

As requested by the methodology, the project area and the reference region are similar in many variables.

- l) The description of the second deviation in section 3.1.6 has been improved. This deviation explains that only the most conservative possible scenario is considered, such as the transition of the forest stratum of low jungle to the grass stratum. This deviation is detailed more clearly in section 3.1.6 of the PD.

- m) We fulfilled the purpose of EQ1, as described in the same step, on page 83 of the PD update “...We obtain that the total carbon loss caused by deforestation is similar thanks to the fact that the proportion of gradual loss of carbon that conducts to forest deforestation (proportionDF(d)) is 100% and, as a consequence, the relative contribution of driver 1 to total deforestation is 100% too...”
- n) Transitions from non-forest to forest are not evaluated, because there is no official information from the government, however, according to the IPCC (2006), the annual net biomass growth in table 4.9 of the Forest Lands chapter is 3.1 t biomass, 5.68 tCO₂eq, this growth represents the transition from non-forest to forest which is not significant (<0.001), so it is excluded.
- o) We are taking official information that is generated annually according to the national approach.
- p) As indicated by the second deviation in the updated climate document in section 3.1.6:

Carbon Pool	Pasture ¹	Crop ²	Infrastructure ³
AGL+BG (tCO ₂)	121.87	69.91	0.00

According to these references, the land use change to pastures is the most conservative scenario.

- q) Table 85 of the PD is included in the updated climate section.
- r) The relative impact is 1.

Documentation provided by Project proponent

VVB Assessment

Date: 31/05/2022

- a) The PP has provided the requested information. Closed.
- b) This methodology deviation has not been clearly stated in section 3.2.1 Methodology Deviations of the MR.
- c) The PP has updated table 71 of the PD. Closed.
- d) The PP states: ‘On the other side, the accuracy attained for that classification was 97.33% so the discount factor that corresponds to u_{classification} is 0.9733’. However, according to *Protocolo Metodológico para la Detección de la Pérdida de Bosque*, the lowest accuracy was 96.2% (2017).
- e) Information on table 74 has been included. Closed.

¹ Ramos & Martinez, 2019. https://www.scielo.sa.cr/scielo.php?pid=S0034-77442020000200440&script=sci_abstract

² Cuellar & Salazar, 2016. <http://repositorio.inia.gob.pe/handle/20.500.12955/490>

³ IPCC 2006 – Chapter 8 Settlements.

- f) The figures provide correspond with the result of the beta regression. They do not match with values reported in table 64.
- g) The PP has provided the requested information. Closed.
- h) This information has not been included in the PD deviation. Also, calculation have not been provided. Finally, conversion is forest land to pasture, not cropland.
- i) Justification/evidence to consider illegal logging as *de minimis* shall be provided.
- j) The PP has provided the average speed table. Closed.
- k) Information on quantitative driving variables of deforestation has not been added in section 3.2.1 of the PD.
- l) The current deviation only refers to the consideration of a single land-use change (forest to pastureland). However, justification for the deviation from the requirement of monitoring carbon stocks of forest stratum using sampling plots has not been provided.
- m) The PD provides explanation for the use of EQ1. Closed.
- n) The PP shall include this information as a methodology deviation.
- o) The PP is using ex-post activity data of the reference period 2007-2017 from official sources to create a model to predict future deforestation in the baseline scenario. Methodology VM0006 requires the calibration of a spatial model to determine post-deforestation classes and the impact of the forest scarcity factor on the rate of deforestation. The absence of a spatial model shall be described and justify as a methodology deviation in the corresponding section of the PD and MR.
- p) Include justification in the section.
- q) Table 85 has been updated. Closed.
- r) The PP has corrected the total relative impact. Closed.

Project proponent response
Date: 18/08/2022

- b) As described in response to CAR 05 f, that has been included in Section 3.2.1, the forest stratification deviation accomplishes completely the conservativeness principle.
- d) Accuracy has been modified using the lowest value 96.2%.
- f) Table 64 corresponds to the forest loss in the Reference Region obtained from GEOBOSQUES, the beta regression is applied to this information with the lowest confidence interval of 95%, and in this way the projection of deforestation in the project area is obtained. For said reason, table 64 differs from the results of the beta regression.
- h) Response described above has been included in section 3.2.1, after adjusting the post-deforestation land use (pastures).

- i) The present project only considers to avoid the unplanned deforestation (in this sense, illegal logging is not considered a deforestation driver). At the same time, an investigation carried out by Aider NGO is presented (2015), "MOTORES, AGENTES Y CAUSAS DE LA DEFORESTACIÓN EN LA AMAZONÍA PERUANA - Sistematización, patrones especiales y cuantificación del impacto", which has identified 6 main agents of deforestation in the Peruvian Amazon, dentro de los cuales no se encuentra el driver de Tala ilegal, esto es visible en el cuadro 10 del mismo documento, igualmente la sección 5.3 habla de las causas directas de deforestación, y en el cuadro 11 y 12 vemos la influencia de estas causas por frente priorizado, donde consideran específicamente a Tambopata-Manu y Tahuamanu.
- k) Deforestation drivers have been added in Step 10 of Section 3.2.1 of the PD.
- l) A new annex that compares the average carbon content in the INF (the official data used for project calculations) and the average carbon content in the project area according to an own inventory has been added to demonstrate the conservativeness of the approach. A description of that comparison has been included in the MR
- n) This response has been included as a methodological deviation.
- o) An explanation about why modelling does not have any impact (zero) in the net emissions has been included in the MR.
- p) La justificación ha sido añadida.

Documentation provided by Project proponent

Annex XX: OTO_CHULLA_data

VVB Assessment

Date: 20/09/2022

- b. section updated and deemed correct
- d. value has been updated
- f. Ok, clear
- h. section updated and deemed correct
- i. the evidence has been provided
- k. section updated and deemed correct
- l. explain where the annex has been added.
- n. the section has been added as a deviation
- o. section has been updated and deemed correct
- p. the table has been added to the appropriate section

Project proponent response	Date: 25/09/2022
I. Documents have been added in Annex 21	
VVB Assessment	Date: 24/10/2022
Annex has been provided properly. Therefore, CAR 06 is closed	

VCS CAR ID	07	Date: 21/02/2022
Description		
The value stated in section 4.1 of the MR and use in calculations for carbon fraction of dry matter in wood (CF) is 0.5 Mg C (Mg DM)-1. This value is provided as default value by VM0006 and was retrieved from IPCC GPG-LULUCF 2003. However, the IPCC Guidelines and the INEGI, source of the carbon stock contents, consider a value of 0.47.		
Project proponent response		Date: 24/04/2022
Carbon fraction has been adjusted to value 0.47		
Documentation provided by Project proponent		
VVB Assessment		Date: 24/05/2022
The PP has made the adequate corrections. CAR 07 is closed.		

VCS CAR ID	08	Date: 21/02/2022
Description		
In section 4.2 of the MR: a) The value of size of the leakage area (MN1 $size_{leakageArea}$) reported does not match with the size reported in the PD nor with the provided shapefile.		

- b) The values of hectares undergoing transition ii within the project area, excluding the ANR area, and harvest areas, under the baseline scenario for year ss ($MN3 \Delta area_{projectAreaEAH,BaselineScenario}(t,i)$) reported do not match with values in the spreadsheet nor table 21 section 5.1.
- c) The values of hectares undergoing transition ii within the leakage area under the project scenario for year ss ($MN6 \Delta area_{leakageArea,projectScenario}(t,i)$) reported do not match with values in the spreadsheet nor table in section 5.3.
- d) No value has been reported for area of transition from LULC class or forest stratum 1 to 2 from time 1 to 2 during the historical reference period ($MN7 \Delta area_{historical}(CS_1 \rightarrow CS_2, t_1 \rightarrow t_2)$).
- e) No value has been reported for total area of LULC class or forest stratum 1 at time 1 ($area_{historical}(CS_1, t_1)$).
- f) For total annual area of LULC class that was cleared for creating firebreaks ($MN10 Area_{biomassloss}(i)$) it is stated: "Not applicable because biomass loss for creating firebreaks not included in project activity". However, sections 3.2.2 and 3.2.4 of the PD state that areas were cleared for firebreaks.
- g) QA/QC procedures to be implemented are missing for several parameters.
- h) The value of $MN58 u_{stratification}$ does not match with value in the PD.

Project proponent response
Date: 24/04/2022

- a) The size of leakage area has been updated in Appendix 15 and the shape file is in MEGA.
- b) The area of transition from forest to non-forest has been updated in the MR, in the Calculation Spreadsheet and in table 21 of Section 5.1.
- c) Values have been updated in the MR and in the calculation spreadsheet.
- d) Regeneration is not significant. Because of that, it is omitted.
- e) Regeneration is not significant. Because of that, it is omitted.
- f) A specific fire belt was applied once with the purpose to avoid the expansion of an accidental forest fire. Fire belts are not included in the activities of the project. Emissions associated to fire belts are not significant. As a consequence, they were omitted conservatively.
- g) Quality control and quality assurance procedures were completed for all the monitoring parameters of Section 4.2.
- h) The $u_{stratification}$ value is 0.75 and PD (after table 110), MR (after table 35) and calculation spreadsheet use this value.

Documentation provided by Project proponent
VVB Assessment
Date: 02/06/2022

- a) The size of leakage area has been corrected. However, the size of the reference region reported for MN1 in section 4.2 of the MR has been modified and do not match with the size reported in table 18 nor the shape file. Additionally, $Size_{ReferenceForest}$ does not match with the size of existing forest provided by Geobosque for 2020.
- b) The PP is estimating MN3 based on the proportion of between project area out of harvested areas of the PGMF and the total project area. That is an oversimplification. The methodology requires the use of a spatial calibrated model to determine the location of future deforestation in the baseline

scenario. The PP shall justify any deviation from the methodology in the corresponding section of the MR.

c) The PP has corrected values for parameter MN6. Closed.

d) The PP shall demonstrate that regeneration is not significant.

e) The PP shall demonstrate that regeneration is not significant.

f) In case that firebreaks were created during the monitoring period, emissions shall be monitored, or their insignificance demonstrated.

g) QA/QC procedures to be implemented are missing for several parameters.

h) Parameter MN58 $u_{\text{stratification}}$ is being applied. However, this parameter is specific for forest degradation.

i) Parameter MN2 $\Delta \text{area}_{\text{projectAreaEAH,projectScenario}(t,i)}$ is reported as 0. However, according to Geobosques data, there has been more than 300 ha deforested in project areas not harvested during the monitoring period.

j) Parameter MN5 does not match with the information provided by Geobosques for deforestation in the leakage area.

Project proponent response

Date: 18/08/2022

a) Se ha corregido el tamaño de la Región de Referencia reportado en el parámetro MN1 en la sección 4.2 del RM. Asimismo, se ha actualizado el tamaño de bosque existente proporcionado por Geobosques para el 2020.

$\text{Size}_{\text{ReferenceRegion}}$	$\text{Size}_{\text{ReferenceForest}}$
516554.22	424223.28

b) As detailed in response to CAR 06 o, not using a spatial calibrated model does not have any impact on net emissions.

d) El argumento se encuentra en la sección 3.2.1 del RM, en la desviación "Transition from non-forest to forest"

e) El argumento se encuentra en la sección 3.2.1 del RM, en la desviación "Transition from non-forest to forest"

f) siguiendo la herramienta "Tool for testing significance of GHG emissions in A/R CDM project activities" (Version 01):

* Area del cortafuegos: 5.85 ha

- * Factor de emisión (Bosque a Suelo desnudo): 622.51 tCO₂
- * Emisiones por el único cortafuegos aplicado en el 2019: 3,641.68 tCO₂/ha
- * Emisiones por la conversión de tierras forestales a pastos como único driver más conservador: 1,172,995.41 tCO₂/ha.
- * Contribución relativa de cortafuegos: 0.003
- * Contribución relativa de conversión de tierras forestales a pastos: 0.997

Los cortafuegos por tener una contribución menor al 5% es considerada insignificante.

g) All the cells of QA/QC in Section 4.2 have been completed

h) El parametro ustratification ha sido utilizado siguiendo las indicaciones de la metodología como se menciona en las ecuaciones EQ116 y EQ 117.

i) As may be seen, the area considered as “deforestation” by GEOBOSQUES is referred to roads that were opened for timber extraction. These areas (roads) recover their forest cover after a few years of not being used (when the logging operations go to another cutting plots). It may be confirmed with high-resolution satellite images of 2022, where no cleared areas are identifiable. See Annex 22

j) The values for MN5 have been corrected. The new value is the sum of leakage in the baseline scenario and the maximum feasible value of leakage induced from the project area. Even though, the emissions reported in the leakage belt are higher than this value, according to the methodology, we are using only the maximum induced leakage attributable to the project.

Documentation provided by Project proponent

Annex 22

VVB Assessment

Date: 21/09/2022

- a. The section has been updated and deemed correct
- b. Please, provide further information within the methodology deviation about the corresponding finding.
- d. the section is updated and deemed correct.
- e. the section is updated and deemed correct.
- f. please, include this information in the corresponding section.
- h. ok, it is clear
- i. the explanation is deemed correct as well as the evidence
- j. the values have been updated and deemed correct

Project proponent response	Date: 25/09/2022
b. The deviation Spatial Modelling of deforestation was added, in section 3.2.1 of the RM. f. Information has been included in Section 5.2 of the MR	
VVB Assessment	Date: 25/10/2022
b. section updated and deemed correct f. section has been updated and deemed correct. Therefore, CAR 08 is closed	

VCS CAR ID	09	Date: 21/02/2022
Description		
The estimation of the biomass carbon stock density in harvested areas is incorrect. It should not be higher than the carbon stock density in the original forest class.		
Project proponent response		Date: 24/04/2022
Carbon density in biomass in harvested areas was adjusted to ensure that in the logged areas is not higher than in the original forests.		
Documentation provided by Project proponent		
VVB Assessment		Date: 02/06/2022
The PP has corrected carbon stock density in harvested areas.		
CAR 09 is closed.		

VCS CAR ID	10	Date: 21/02/2022
Description		
Methodology VM0006 requires the estimation of ex post project emissions and leakage following the procedures described in section 9.3 of the methodology.		

However, PP is using procedures for ex-ante estimation to estimate the ex-post project emissions and leakage (sections 5.2 and 5.3 of the MR), which are not applicable.		
Project proponent response		Date: 24/04/2022
Ex ante procedures were eliminated while ex post procedures were maintained in Sections 5.2 and 5.3 of the MR.		
Documentation provided by Project proponent		
VVB Assessment		Date: 02/06/2022
The PP is considering areas deforested in the project area and leakage belt es during the monitoring period as insignificant. However, according to Geobosques, more than 600 ha have been deforested in the project area during the monitoring period. These areas cannot be considered has insignificant and project emissions shall be estimated.		
Project proponent response		Date: 18/08/2022
As may be seen, the area considered as “deforestation” by GEOBOSQUES is referred to roads that were opened for timber extraction. These areas (roads) recover their forest cover after a few years of not being used (when the logging operations go to another cutting plots). It may be confirmed with high-resolution satellite images of 2022, where no cleared areas are identifiable. See Annex 22		
Documentation provided by Project proponent		
Annex 22		
VVB Assessment		Date: 21/09/2022
The information provided is deemed correct CAR 10 is closed		

VCS CAR ID	11	Date: 21/02/2022
Description		
In the NPRR: a) The opportunity risk ratings are missing. Additionally, the total opportunity cost risk rating is incorrect.		

- b) The current Law of Forestry and Wildlife is N°29763, not N° 27308.
- c) Section 2.3.3 of the AFOLU Non-Permanence Risk Tool v4.0. requires that the governance score shall be calculated from the mean of Governance Scores across the six indicators of the World Bank Institute's Worldwide Governance Indicators (WGI), averaged over the most recent five years of available data. However, the most recent five years of available data have not been used for estimating the political risk.
- d) Section 3 does not use the table format required by the template.
- e) Links provided as reference for Fire do not work.

Project proponent response
Date: 24/04/2022

- a) The opportunity cost is 0 as it sums +8 (from a) to -8 (from i) and 0 (as g is not applicable).
- b) The reference to the current law and its bylaws has been corrected. The reason why the previous law was included is because these concessions were granted under the previous law
- c) The chart has been updated eliminating the data from year 2015 and including the data from the most recent available year, 2020. The average value is still in the same range.
- d) Section 3 has been updated with the most recent guidelines of the NPRR
- e) New and updated links have been included to replace the links that are not available anymore in the web of INDECI

Documentation provided by Project proponent
VVB Assessment
Date: 02/06/2022

- a) Opportunity Cost: ratings for risk factors from c) to g) have been provided. However, h) is not provided. Description in mitigation h) implies that it is applicable (-2). Thus, opportunity cost risk rating 0 is incorrect.
- b) Reference to current law has been corrected. Closed.
- c) The governance score has been properly estimated. Closed.
- d) Section 3 is still not using table formats from the template:

Natural Risk (e.g., Fire, Pest and Disease outbreaks, Extreme Weather)	
Significance	
Likelihood	
Score (LS)	
Mitigation	

- e) Working links have been provided. Closed.

f) Total Financial Viability (FV) risk rating may not be less than 0.	
Project proponent response	Date: 18/08/2022
a) The analysis considers that mitigation “i” is applicable instead of mitigation “h”. A deeper clarification has been added in response to CL 17.b. d) The NPRR has been updated to use the form recommended in the NPRR template. f) The risk rating for FV has been updated to meet the requirement of not being less than 0	
Documentation provided by Project proponent	
VVB Assessment	Date: 22/09/2022
CAR 11 is closed	

VCS CAR ID	12	Date: 02/06/2022
Description		
Section 8.4.3 of methodology VM0006 requires to carry out a significance test of GHG emissions at validation. However, the test has not been carried out.		
Project proponent response		Date: 18/08/2022
La prueba de significancia se encuentra dentro del Anexo 26, en un archivo Excel "Monitoring report -Net carbon y VCU´s Jaguar" en la hoja "Significance Test"		
Documentation provided by Project proponent		
VVB Assessment		Date: 22/09/2022
The tab "significance test" is not found within the corresponding file.		
Project proponent response		Date: 25/09/2022
Annex 26 has been updated to include the significance test with a new sheet named T-SIG in the Excel file "Net carbon y VCU´s Jaguar 08092022"		
VVB Assessment		Date: 2/10/2022
The spreadhseet document has been updated including the Significance Test. Therefore CAR 12 is closed		

VCS Clarification requests (CLs)

VCS CL ID	01	Date: 21/02/2022
Description		
In section 1.2 of the MR, as required by the template, indicate applicable project activities (section 4.1.2 of VM0006).		
Project proponent response		Date: 24/04/2022
Section 1.2 has included the activities eligible for this methodology, that are implemented by the project.		
Documentation provided by Project proponent		
VVB Assessment		Date: 24/05/2022
The PP has provided the requested information. CL 01 is closed.		

VCS CL ID	02	Date: 21/02/2022
Description		
In section 1.5 of the MR, as required by the template, indicate the VCS project start date, specifying the day and month.		
Project proponent response		Date: 24/04/2022
The project start date indicated in the PD has been added in Section 1.5		
Documentation provided by Project proponent		
VVB Assessment		Date: 24/05/2022
The PP has provided the requested information. CL 02 closed.		

VCS CL ID	03	Date: 21/02/2022
Description		
Section 1.6 of the MR states the following project crediting period: “01 January 2018 - 31 December 2057; 40-year total period.” However, according to section 2.1.15 of the PD, the crediting period ends on 31 December 2041. Provide clarification on the actual project crediting period end date.		
Project proponent response		Date: 24/04/2022
Project crediting period end date is December 31st, 2057 as stated in the title page of the PD and the MR. Section 2.1.15 of the PD has been clarified in the CCB PD and the Monitoring Report.		
Documentation provided by Project proponent		
VVB Assessment		Date: 24/05/2022
The PP has clarified the crediting period. CL03 closed. *Note to this clarification: there was an error with the understanding of the crediting period between the VVB and the PP while the documentation was reviewed. This Finding was raised in February 2022, but after several rounds and updates of the document, it was clarify that the crediting period ends in 2041 (24 years) as stated in both documents CCB and VCS*		

VCS CL ID	04	Date: 21/02/2022
Description		
In section 1.10 of the MR, as required by the template, indicate whether the project reduces GHG emissions from activities that are included in an emissions trading program or any other mechanism that includes GHG allowance trading		
Project proponent response		Date: 24/04/2022
Section 1.5 has been modified to confirm that emissions reductions of the project will not be traded under any other scheme.		

Documentation provided by Project proponent	
VVB Assessment	Date: 02/06/2022
Statemen shall be included in section 1.10, not 1.5.	
Project proponent response	Date: 18/08/2022
Statement has been moved from Section 1.5 to 1.10	
Documentation provided by Project proponent	
VVB Assessment	Date: 22/09/2022
The section has been updated and deemed correct. CL 04 is closed	

VCS CL ID	05	Date: 21/02/2022
Description		
Section 2.1 of the MR states: “No potential negative environmental and socio-economic impacts are expected to happen with the project implementation. Any adoption of sustainable agrarian practices in local families will be voluntary.” However, the PD includes the following negative impact to local farmers: ban to unsustainable use of natural resources within the forest concession. Provide information on the steps taken to mitigate it, as required by the template.		
Project proponent response		Date: 24/04/2022
The project has designed actions to mitigate potential negative socioeconomic impacts.		
Documentation provided by Project proponent		

VVB Assessment	Date: 24/05/2022
The PP has provided the requested information. CL 05 closed.	

VCS CL ID	06	Date: 21/02/2022
Description		
In section 2.2 of the MR, as required by the template for AFOLU projects, demonstrate how the project has communicated the following with local stakeholders: a) Any changes, where relevant, to risks, costs and benefits the project may bring to local stakeholders. b) Any changes, where relevant, to relevant laws and regulations covering workers' right in the host country.		
Project proponent response		Date: 24/04/2022
No relevant changes in labour legal framework has occurred during the current verification period. Regarding changes in risks, costs and benefits, the main critical change is related with the pandemic crisis in 2020, which has been a global sanitary crisis with very large impacts on the economy of the families.		
Documentation provided by Project proponent		
VVB Assessment		Date: 24/05/2022
Provide this information in the MR.		
Project proponent response		Date: 18/08/2022
An explanation about this issue has been added to Section 2.2		
Documentation provided by Project proponent		

VVB Assessment	Date: 22/09/2022
The section has been updated. Therefore, CL 06 is closed	

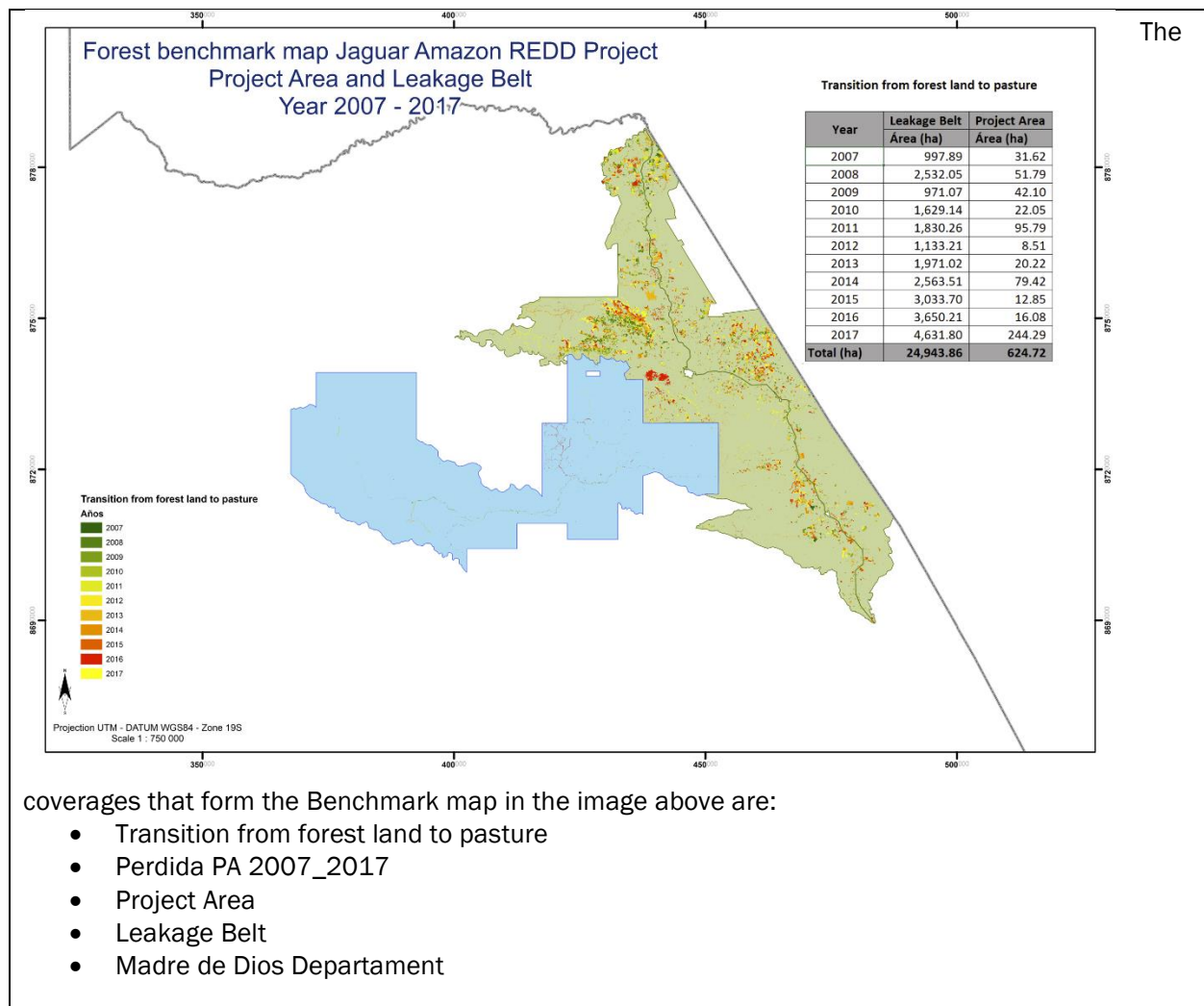
VCS CL ID	07	Date: 21/02/2022
Description		
Section 2.2 of the MR list the forms received by the project as part of the Grievance and Redress Mechanism for 2018 and 2019. State the forms received in 2020 and provide them, if any.		
Project proponent response		Date: 24/04/2022
Forms received in 2020 were included in Section 2.2 of the MR.		
Documentation provided by Project proponent		
VVB Assessment		Date: 24/05/2022
Provide a copy of the form.		
Project proponent response		Date: 18/08/2022
A copy of the form submitted during 2020 has been included in Annex 23		
Documentation provided by Project proponent		
Annex 23		
VVB Assessment		Date: 22/09/2022
The folder is empty.		
Project proponent response		Date: 25/09/2022
Documents have been added to Annex 23 as may be seen in the following route.		

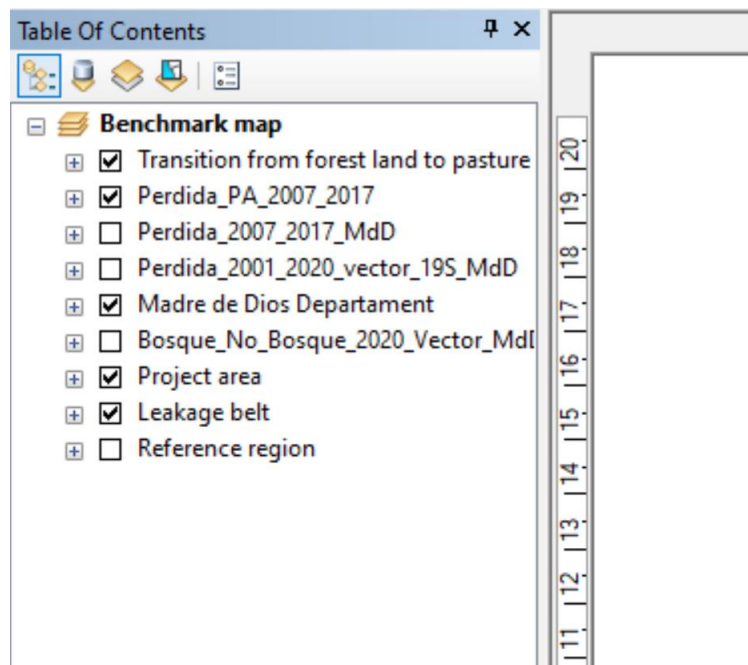
Nube > Anexes > Anexes RM VCS > Annex 23. Complaint 2020 Nombre - Formatos con quejas o sugerencias 2020.pdf - Recepción y Respuesta final a quejas o sugerencias 2020.pdf	
VVB Assessment	Date: 25/10/2022
The route has been updated containing such information. Therefore, CL 07 is deemed closed	

VCS CL ID	08	Date: 21/02/2022
Description		
In relation to the PD deviation <i>Update of baseline emissions and project emissions from Section 3.2 of PD</i> described in section 2.3.3 of the MR: a) Provide the source of sample size and standard deviation for AGL and BG of forest land reported in Table 78 of the PD (in the MR). b) In section 3.2.1 of the PD, under STEP 7: MAP ACCURACY ASSESSMENT AND DISCOUNTING FACTOR DETERMINATION, clarify the number of LULC maps used in the analysis of the historical reference period and provide the accuracy of LULC classification for each map, as required in section 8.1.2.7 of the VM0006. c) In section 3.2.1 of the PD, under STEP 7: MAP ACCURACY ASSESSMENT AND DISCOUNTING FACTOR DETERMINATION, provide information regarding LULC Classification and Forest Stratification as required by section 8.1.2.6 of the VM0006. d) VM0006 section 8.1.2.5 requires: “A forest benchmark map must be generated to show forest cover status in the project and leakage areas.” Provide. e) In section 3.2.1 of the PD, under STEP 11: CALCULATE TOTAL RATES OF DEFORESTATION AND DEGRADATION IN THE PROJECT AREA, as required by section 8.1.5.1 of the methodology VM0006, provide a graph of the historical deforestation rates in the reference region (hectares per year) versus time (years) for each consecutive pair of images in the historical reference period. f) In section 3.2.2 of the PD, under DETERMINING LONG-TERM AVERAGE CARBON STOCK, provided the information from the harvest plan required by section 8.2.7 of methodology VM0006. g) Justify the use of T:40 years in equation EQ79. h) Clarify the classification of identified main deforestation drivers as constrained or unconstrained drivers. i) Provide the source and calculation of Table 97		

Project proponent response	Date: 24/04/2022
a) https://redd.unfccc.int/files/nref_peru_final.pdf, Tables 77 and 79 have been updated. b) Has been added. c) Has been added. d) Has been added in the step 5. e) A figure has been added to step 12. f) Information of logging plan has been added to Section 3.2.2 of the PD. g) Long-term average is based on crediting period of the project. h) The clarification that the drivers are geographically constrained is mentioned in Step 9 of Section 3.2. i) The source and calculation are included in T-SIG sheet of the updated Excel file "Net carbon y VCU´s Jaguar".	
Documentation provided by Project proponent	
VVB Assessment	Date: 31/05/2022
a) Reference to the NREF has not been added to table 79. In addition, provide justification of uncertainty discounting for estimated emissions factors for a transition from one stratum to another (table 78) as per section 8.1.2.7 of the methodology. b) The number of maps (years) is not clear. Enumerate them. In addition, there are references images acquired between 1999 and 2011 and subsequently between 2011 and 2014 and references to maps of 2000 (FCBM) and 2000-2014 MGD. However, the historic reference period is 2007-2017. c) The PP has provided the requested information. Closed. d) Provide GIS file of the Forest benchmark map. e) The PP has provided the requested figure. Closed. f) The PP has provided the required information regarding the harvest plan. However, information regarding 'Activities that are practiced to protect soil, water, site and residual trees in the harvest area' is not in English. g) The PP has justified T=40 years. Closed. h) The PP has provided classification of identified main deforestation drivers as geographically constrained. Closed. i) The PP has provided the source. Closed.	

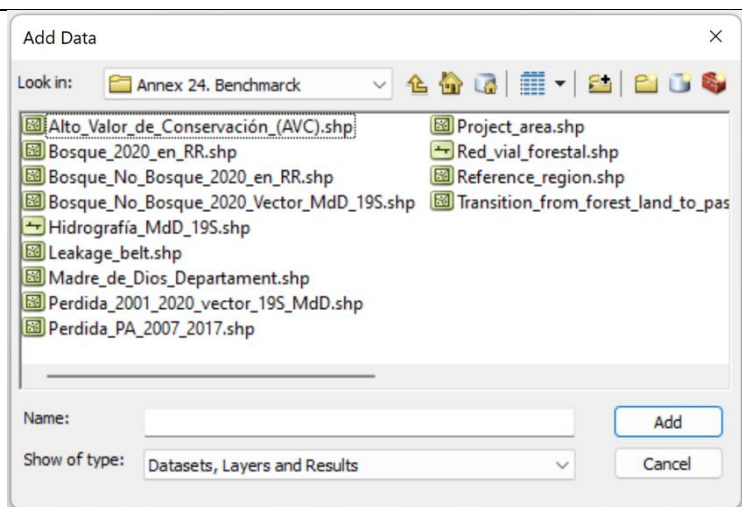
Project proponent response		Date: 18/08/2022
a) la referencia ha sido añadida en la tabla 79 como una cita (https://redd.unfccc.int/files/nref_peru_final.pdf). Por otro lado la justificación del descuento por incertidumbre se ha añadido en la misma table siguiendo las ecuaciones EQ33 y EQ34. b) A single image is obtained for each year reported, for the construction of this single annual image, and given the area covered by the study, it is necessary to download and process many images in a mosaic composition, to assemble a whole, a whole that meets the requirements of the methodology in terms of cloudiness, sharpness and availability, giving priority to those obtained in dry season and without the presence of clouds or forest fires. d) The GIS file of the forest benchmark map has been provided in Annex 24 f) Tables from pages 95 and 98 in Section 3.2.2 were translated to English		
Documentation provided by Project proponent		
Annex 24		
VVB Assessment		Date: 20/09/222
a. The information has been updated b. It is clear d. The file has not been provided yet. f. The section has been updated		
Project proponent response		Date: 25/09/2022
Requested files may be found in Annex 24. To avoid any confusion, we have developed the following changes:		





In Annex 24 of mega, we have uploaded the following shapes:

- Alto Valor de Conservación (AVC)
- Bosque 2020 en RR
- Bosque No Bosque 2020 en RR
- Bosque No Bosque 2020 vector MdD 19S
- Hidrografía MdD 19S
- Leakage belt
- Madre de Dios departament
- Perdida 2001 2020 vector 19S MdD
- Perdida PA 2007_2017
- Project Area
- Red vial forestal
- Reference región
- Transition form forest land to pasture
- Benchmark map



To avoid confusion, only those shapes that make up the Benchmark map will be left in the Mega storage, so they are removed:

- Alto Valor de Conservación (AVC)
- Bosque 2020 en RR
- Bosque No Bosque 2020 en RR
- Bosque No Bosque 2020 vector MdD 19S
- Hidrografía MdD 19S
- Perdida 2001 2020 vector 19S MdD
- Red vial forestal
- Reference región

VVB Assessment

Date: 25/10/2022

c. the GIS file of the Benchmark has been provided.

Therefore, CL 08 is deemed closed

VCS CL ID

09

Date: 21/02/2022

Description

In section 3.1 of the MR, as required by the template, describe how leakage and non-permanence risk factors are being monitored and managed for AFOLU projects.

Project proponent response	Date: 24/04/2022
Most of the project activities are designed not only to reduce emissions within the project area but also in the leakage belt. Even though that, the project will also monitor the deforestation in the leakage area to make adjustments during project implementation.	
Documentation provided by Project proponent	
VVB Assessment	Date: 24/05/2022
As required by the template, provide information on the actual procedures implemented during the monitoring period to monitored leakage and non-permanence risk factors.	
Project proponent response	Date: 18/08/2022
Se adiciono información sobre el procedimiento realizado del monitoreo.	
Documentation provided by Project proponent	
VVB Assessment	Date: 22/09/2022
The section has been updated. CL 09 is closed	

VCS CL ID	10	Date: 21/02/2022
Description		
Section 2.3.1 of the MR describes a methodology deviation related to the scarcity factor. Methodology VM0006 section 8.1.5.4 requires the application of a 'forest scarcity factor' to incorporate a decrease in deforestation rate upon a gradual depletion of forest resources. The PP states in the methodology deviation that: "trying to use them [scarcity factor equations] produced results different to those proposed by the methodology, that states that deforestation rates start to decline (through the scarcity factors) since remnant forests only cover 50% or less of original forest cover, which is not the case because, even in the baseline scenario, the deforestation will only affect less than 10% of total forest cover. As described in Section 3.2 on page 146 of the project description, scarcity factor appears when remnant forests are around than 50%, which in this		

case is very far in the short term. The most likely scenario is that rate projections will underestimate real upcoming threats as recent years have showed.”

The argument of the PP for the methodology deviation is based in the following statement in section 8.1.5.4 of VM0006: “Typically, deforestation rates start to decrease when around 50% of the original forest cover has disappeared. In addition, deforestation usually halts when around 80% of the forest area has disappeared. This pattern has been observed by Meyfroidt and Lambin (2008) in Vietnam. Deforestation rates started decreasing when 50% of forest cover remained, and halted in 1991-1993 at around 25% forest cover.”

However, VM0006 states as well: “This “scarcity factor” must be calibrated using scientific literature in an area close to the project area that has followed a more advanced deforestation route” and “However, the specific values of the forest cover when deforestation will decrease are dependent on project conditions and should be analysed and substantiated within the project document at validation.”

Thus, the PP is required to provide an analysis of the decrease in deforestation rate in relation with the forest cover in areas close to the project area, as required by VM0006.

Project proponent response

Date: 24/04/2022

A clearer explanation about deforestation pattern in the project zone has been elaborated to confirm that the project is not assuming any decrease in the deforestation rate (scarcity factor), but, instead of that, according to recently observed pattern and typical behaviour in similar forests, the trend, in the baseline scenario, is a growing exponential rate, which imply that the project is underestimating the threat, which is in conformance with conservativeness principle.

The scarcity factor used is 1.

Documentation provided by Project proponent

VVB Assessment

Date: 02/06/2022

The PP has provided justification for the deviation.

CL 10 closed.

VCS CL ID

11

Date: 21/02/2022

Description

Section 2.3.1 of the MR describes a methodology deviation related to the LULC classes.

The PP states in the methodology deviation that: “The change in land use that occurs in Madre de Dios occurs mainly for agriculture and pastures; due to the lack of current information, in order to comply with the methodology and have the statistical data for the carbon accounting of aerial and root biomass, the change from forest land use to pasture land use will be taken as the representative class and more conservative of the other possible cases”.

Provide demonstration that this land use change is the most conservative one among those possible.

Project proponent response

Date: 24/04/2022

Land use transitions are the following:

Initial Forest Stratum	Final non-forest stratum
SELVA BAJA	Crops
	Pastures
	Infrastructure

In terms of net carbon emissions:

Stratum	Carbon stock
SELVA BAJA	622.51 ⁴
Crops	69.91 ⁵
Pastures	121.87 ⁶
Infrastructure	0 ⁷

By choosing the transition “SELVA BAJA → Pastures”, the project is choosing the most conservative (it means, the lowest net emissions) approach of the three options.

This is described in section 3.2.1 of the MR.

⁴ https://redd.unfccc.int/files/nref_peru_final.pdf

⁵ Cuellar & Salazar, 2016. <http://repositorio.inia.gob.pe/handle/20.500.12955/490>

⁶ Ramos & Martinez, 2019. https://www.scielo.sa.cr/scielo.php?pid=S0034-77442020000200440&script=sci_abstract

⁷ IPCC 2006 – Chapter 8 Settlements.

Documentation provided by Project proponent	
VVB Assessment	Date: 24/05/2022
The PP has provided the requested justification. CL 11 closed.	

VCS CL ID	12	Date: 21/02/2022
Description		
Section 3.2.2 of the MR describe 3 PD deviations. As required by the template, identify whether the deviation impacts the applicability of the methodology, additionality or the appropriateness of the baseline scenario and provide an explanation of the outcome.		
Project proponent response		Date: 24/04/2022
Section 3.2.2 has been updated. It has been demonstrated that proposed deviations do not affect the principle of conservativeness measured in net GHG reductions. Parameters affected have been identified. The type of impact associated with each proposed deviation has been explicit and clearly explained.		
Documentation provided by Project proponent		
VVB Assessment		Date: 02/06/2022
Include statement indicating that the deviations do not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario.		
Project proponent response		Date: 18/08/2022
Se agrego la declaración mencionada.		
Documentation provided by Project proponent		

VVB Assessment	Date: 23/09/2022
The statement has been submitted to the proper section. However, the format is not the required by the template	
Project proponent response	Date: 25/09/2022
The statement format has been adjusted to meet the template guidance	
VVB Assessment	Date: 25/10/2022
Section has been updated. Therefore, CL 12 is deemed closed	

VCS CL ID	13	Date: 21/02/2022																				
Description																						
In section 4.2 of the MR, for Area of forest in harvest stratum ii that is harvested at time ss (MN14 $Area_{harvest}(t, i)$) and size of strata ii within the project area with harvest activities during year ss under the project scenario (MN14 $Area_{projectAreawithHarvest, ProjectScenario}(t, i)$) it is stated as source Project Description or Forest/Harvest Management Plan. Clarify the specific location of these values within the Project Description or Forest/Harvest Management Plan.																						
Project proponent response		Date: 24/04/2022																				
Areas $_{harvest}(t, i)$ and $Area_{projectAreawithHarvest, ProjectScenario}(t, i)$ are obtained from PGMF Chullachaqui and PGMF Otorongo in section 4.2.2. <table><tr><th>Year</th><th>PC Otorongo</th><th>PC Chullachaqui</th><th>Area harvest (t, i)</th><th>$Area_{projectAreawithHarvest, ProjectScenario}(t, i)$</th></tr><tr><td>2018</td><td>15</td><td>13</td><td>9,346.001</td><td>9,346.001</td></tr><tr><td>2019</td><td>15, 16, 17</td><td>-</td><td>12,551.160</td><td>12,551.160</td></tr><tr><td>2020</td><td>18, 19, 20</td><td>-</td><td>12,773.830</td><td>12,773.830</td></tr></table>			Year	PC Otorongo	PC Chullachaqui	Area harvest (t, i)	$Area_{projectAreawithHarvest, ProjectScenario}(t, i)$	2018	15	13	9,346.001	9,346.001	2019	15, 16, 17	-	12,551.160	12,551.160	2020	18, 19, 20	-	12,773.830	12,773.830
Year	PC Otorongo	PC Chullachaqui	Area harvest (t, i)	$Area_{projectAreawithHarvest, ProjectScenario}(t, i)$																		
2018	15	13	9,346.001	9,346.001																		
2019	15, 16, 17	-	12,551.160	12,551.160																		
2020	18, 19, 20	-	12,773.830	12,773.830																		
Documentation provided by Project proponent																						

VVB Assessment	Date: 02/06/2022
The PP has provided the requested source. CL 13 closed.	

VCS CL ID	14	Date: 21/02/2022
Description		
In section 4.3 of the MR, as required by the template, provide information on: • The methods used for generating/measuring, recording, storing, aggregating, collating and reporting the data on monitored parameters. • The procedures used for handling any internal auditing performed and any non-conformities identified. • The implementation of sampling approaches, including target precision levels, sample sizes, sample site locations, stratification, frequency of measurement and QA/QC procedures. Where applicable, demonstrate whether the required confidence level or precision has been met.		
Project proponent response		Date: 24/04/2022
A detailed description of the method used to generate, measure, record, store and report information gathered through its monitoring system, including quality control procedures has been added.		
Documentation provided by Project proponent		
VVB Assessment		Date: 24/05/2022
The PP has not provided information on i) the procedures used for handling any internal auditing performed and any non-conformities identified and ii) the implementation of sampling approaches, including target precision levels, sample sizes, sample site locations, etc.		
Project proponent response		Date: 18/08/2022
Los procedimientos de auditoría interna y el manejo de las no conformidades han sido añadidas, así como la fuente de la aplicación del enfoque de muestreo.		
Documentation provided by Project proponent		

VVB Assessment	Date: 22/09/2022
The section has been updated and deemed correct. However, review the names and numeration of the tables of the document due to some of them are not numbered.	
Project proponent response	Date: 25/09/2022
Tables have been adjusted with correlative numbers	
VVB Assessment	Date: 25/10/2022
Tables updated and deemed correct. Therefore, CL 14 is deemed closed	

VCS CL ID	15	Date: 21/02/2022
Description		
In section 4.3 of the MR it is stated: “Forestal Otorongo will implement a MRV Department composed by a head and an undetermined number of specialists, depending on the intensity of information that needs to be monitored, specially to monitor the community and biodiversity impacts and the REDD project activities.” Provide information and details of the actual MRV department for the monitoring period.		
Project proponent response		Date: 24/04/2022
The MRV team of the project proponent has had some changes during the period under verification but up to now, the social specialist is back in the field. This change has not implied any modification on the execution of the activities of the project.		
Documentation provided by Project proponent		
VVB Assessment		Date: 24/05/2022
Provide specific information on the MRV Department composition in charge of carbon monitoring.		
Project proponent response		Date: 18/08/2022
A new updated organigram of the MRV Department has been added.		

Documentation provided by Project proponent		
VVB Assessment		Date: 22/09/2022
The responsible for monitoring activities is not defined yet. Please define the person in charge of these activities.		
Project proponent response		Date: 25/09T/2022
The interim responsible of the monitoring activities has been defined and included		
VVB Assessment		Date: 25/10/2022
Corresponding updated is deemed correct. Therefore CL 15 is closed		

VCS CL ID	16	Date: 21/02/2022
Description		
In section 5.1 of the MR, as required by the template, provide sufficient information to allow the reader to reproduce the calculation of the baseline emissions.		
Project proponent response		Date: 24/04/2022
Sufficient information has been updated so that the reader can reproduce the calculation of the reference emissions in section 5.1 of the MR.		
Documentation provided by Project proponent		
VVB Assessment		Date: 02/06/2022
The PP has provided sufficient information. CL 16 closed.		

VCS CL ID	17	Date: 21/02/2022
Description		
In relation to the NPRR, provide de following information/clarification: a) Jaguar REDD+ Project staff's CV involved in the project. b) For opportunity cost risk rating i) it is stated "As indicated in h, the PPF is a modality considered in the Law that cannot be changed in the future for non-forest uses so even if the project proponent does not renew it, the area would still be considered a permanent productive forest (PPF) and is legally under protection and eventually could be granted to another concessionaire. However, article 36 of the Forest Law (Ley Forestal y de Fauna Silvestre Ley N°29763) provides the option of clearing authorization for areas under any category of the national forest patrimony (patrimonio nacional forestal) for the development of productive activities that are not aimed at sustainable forest management. Provide clarification on how the project are is exempt of clearing authorization under article 36. c) For community engagement, provide clarification on the number 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. d) The justification of the likelihood of fire states: "The same author, on another published study also indicates that fires produced to enable new agricultural and livestock areas are locally accepted as it is common practice." Also: "The international forest fire alert system "Fire Alert System" shows that for period 2002 ± 2009, there have been many outbreaks of fire." However, a likelihood of every 10 to 25 years is considered. Clarify/justify the selection of this frequency. e) The justification of the likelihood of extreme weather states: "Another event that affects the population is the cold waves which occur cyclically and can be described as the incursion of polar air masses associated to the sudden decrease in air temperature (15 °C in just a few hours), increase in the cloudiness of strati form type, intensification of the winds and increase of the atmospheric pressure. According to Marengo (1983) the most affected department is Madre de Dios, but as is a natural cyclical event, do not represent a danger to the permanence of the standing forest." However, a likelihood of once every 100 or more or not applicable is considered. Clarify/justify the selection of this frequency.		
Project proponent response		Date: 24/04/2022
a) In annex 1, CVs are attached b) Forest zoning classify lands as A (Agriculture), C (crops), P (pastures), F (forests) or X (protection) categories. Forest concessions are classified as F category. These lands are not authorized to be cleared. c) As stated in the table of Community Engagement of the NPRR, the population living within 20 km of the project boundary is 3,247 inhabitants, while the population living in the settlements of Portillo, Carachamayoc or San Francisco (the towns that are aware of the implementation of the REDD project) are estimated in 843 individuals. It represents 26%		

d) The NPRR has been updated to a likelihood of less than 10 years in the case of forest fires e) Cold waves must not be considered extreme weather as the temperature decreases only to 10 °C in the lowest cases, which could not be considered extreme.	
Documentation provided by Project proponent	
VVB Assessment	Date: 02/06/2022
a) Annex 1 with CVs has not been provided. b) Ley Forestal y de Fauna Silvestre Ley N°29763 states in its article 36 regarding the clearing authorization: “<i>El desbosque consiste en el retiro de la cobertura forestal mediante cualquier método que conlleve la pérdida del estado natural del recurso forestal, en áreas comprendidas en cualquier categoría del patrimonio nacional forestal [...]</i>”. This includes all zonings. Provide further clarification or remove mitigation score. c) State in the NPRR whether the population of Portillo, Carachamayoc or San Francisco have been consulted. d) Provide justification and evidence for the mitigation score of the fire risk. e) PP has provided justification. Closed.	
Project proponent response	Date: 18/08/2022
a) Annex 25 has been created to include the requested CV b) Article 36 of Forestry Law must not be understood as a free authorization for forest cover removal for any purpose. It has been created only for specific activities of public interest as large mining, energy, fossil fuel or public infrastructure (as roads) projects. In that sense, the areas classified as permanent production forests (BPP) are forbidden for any land use change for agrarian purposes (the main deforestation driver in Peru) and it is unlikely that any large public project is being implemented within the project area. c) It has been explicitly mentioned that surrounding communities were informed and consulted regarding relevant aspects of the project. d) Como se menciona en el NPRR en la sección 3, Manta http://cedinfor.lamolina.edu.pe/Separatas%20FCF/Proteccion%20Forestal/3SimposioBrasil-Per_.PDF señala que hay incendios de 450.5 ha/año de bosques amazónicos debido a pequeños incendios reiterados de los bosques primarios y secundarios para el establecimiento de cultivos agrícolas y de pastos principalmente. Esta área representa el 0.25% del área del proyecto, por lo que es no significativo.	

Documentation provided by Project proponent	
a) The route for CVs is Nube > Annexes > Anexxes RM VCS	
VVB Assessment	Date: 15/10/2022
a. Annex is correct b. Ok, it is clear c. Section of the NPRR has been updated d. Section has been updated and deemed correct Therefore, CL 17 is closed	

VCS CL ID	18	Date: 21/02/2022
Description		
In relation to the beta-regression document (Beta Regression in RSTUDIO software.pdf): a) Provide source/calculations of the deforestation rate between 2007-2017 presented in section 1. b) Section 4 of the document states: “Se pueden observar diferencias en el comportamiento de las dos líneas y cuál es la influencia del año 2008 a la tendencia de los datos. El análisis estadístico nos brinda la información suficiente para elegir el modelo 2 (sin el año 2008) y esto se ratifica ya que durante este año existieron acontecimientos importantes que influyeron en las tasas de deforestación.” However, section 8.1.5.1 of the methodology VM0006 states: “Single outliers are most likely due to once-only anomalies (e.g., loss of forest land due to fire, hurricane or other natural disturbance). It is required that the cause of this single outlier be examined to determine if it may be removed. They may only be removed from the other points in the historical reference period if it is demonstrated that the occurrence of the outlier is due to specific conditions that are not present anymore (as would be the case for a natural disturbance).” As required by the methodology, demonstrate that the occurrence of the outlier is due to specific conditions that are not present anymore. c) Provide the equation/calculations used to determine ‘Hectareas_perdidas’ in the table of the Annex.		
Project proponent response		Date: 24/04/2022
a) The updated statistical calculations have been replaced in MEGA in the Excel file “Tasas_modificadas_jaguar” and are described in the document “Tasa_Deforestación_Jaguar”,		

where may be found the deforestation rates for the period 2007-2017, obtained from GEOBOSQUES official source. b) The reason why 2008 is considered and outlier is because it is impossible to predict when will occur again. Even though, the COVID-19 created a similar situation (migratory flows back from urban centers to rural areas) than in 2008, it had a different origin and it is unlikely to occur in the near future at a similar magnitude. c) The updated statistical calculations have been replaced in MEGA in the Excel file "Tasas_modificadas_jaguar" and are described in the document "Tasa_Deforestación_Jaguar", where may be found the deforestation rates for the period 2007-2017, obtained from GEOBOSQUES official source.	
Documentation provided by Project proponent	
VVB Assessment	Date: 02/06/2022
a) The PP has provided the source. Closed. b) Methodology VM0006 requires to determine the cause of the outlier. They may only be removed from the other points in the historical reference period if it is demonstrated that the occurrence of the outlier is due to specific conditions that are not present anymore. The PP is required to provide demonstration that the specific conditions that produced the outlier are not present anymore. c) The PP has provided calculations. Closed.	
Project proponent response	Date: 18/08/2022
The cause of the outlier and the exclusion of 2008 was the global economic crisis that created a recession in our country. There is no way to predict if this will happen again and when. Attached, we have added three economic surveys explaining that crisis	
Documentation provided by Project proponent	
BCR Sintesis Madre de Dios Dancourt 2009 Informe 2008	
VVB Assessment	Date: 22/09/2022
It is clear. CL 18 is closed	