Verification Report

Version 1.3

20-September-2024

Document Prepared by AENOR CONFÍA S.A.

Forest Carbon Partnership Facility (FCPF)
Carbon Fund

Verification Report (VER)

ER Program Name and Country	Emission Reduction Program of Costa Rica
Reporting Period Covered In this Report	01-01-2020 to 31-12-2021
Number of FCPF ERs	3,341,413 tCO_2e
Number of ERs allocated to the Uncertainty Buffer	506,274 tCO_2e
Number of ERs allocated to the Reversal Buffer	185,634 tCO_2e
Number of ERs allocated to the Pooled Reversal Buffer	185,634 tCO_2e
Name of the VVB	AENOR CONFÍA S.A.
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Report Version	1.3
Date of the Verification Report	20-09-2024
Report Approved by	José Luis Fuentes, Climate Change Manager

1. VERIFICATION STATEMENT

The review and cross-check of explanations and justifications included in the Second Monitoring Report Version 2.0 dated 17-06-2024 and supporting documents have provided AENOR with sufficient evidence to determine with a reasonable level of assurance the compliance of the reported information with the applicable verification criteria and materiality set out in the Forest Carbon Partnership Facility (FCPF) Methodological Framework (MF), the Validation and Verification Guidelines (VVG) and other applicable normative documents requirements.

The scope covered by the verification includes the ER Program´s crediting period (01-01-2018 to 31-12-2024), the second monitoring period (01-01-2020 to 31-12-2021), the accounting area (5,133,939.5 ha), the REDD Country Participant's Forest Monitoring System, the national REDD+ Programs and Projects Data Management System and the following GHG sources and sinks (REDD+ activities), carbon pools and type of GHGs:

GHG sources and sinks (REDD+ activities)
Emissions from deforestation − Included
Emissions from forest degradation − Included
Enhancement of forest carbon stocks − Included
Conservation of forest carbon stocks− Excluded
Sustainable management of forests− Excluded
Carbon Pools
Above Ground Biomass (AGB) − Included
Below Ground Biomass (BGB) − Included
Dead Wood − Included
Litter− Included
Soil Organic Carbon (SOC), including peat − Excluded
GHGs
CO_2 − Included
CH_4 − Excluded
N_2O− Excluded

The verification was performed through a combination of document review, interviews, and communications with relevant personnel. Findings were issued, requesting; MAJOR Corrective Action Request (MCAR), MINOR Corrective Action Requests (mCAR) or Observations (OBS) according to the FCPF VVG v2.5 section 11, to ensure compliance with all requirements.

A total of 10 MCAR, 1 mCAR and 3 Observations were raised as part of the second verification process. All 10 MCAR were successfully addressed by the ER Program and closed by the VVB and no OBS remain open. 1 mCAR remains open for the next verification. These findings are described in Appendix 1 of this report. There were no standing mCAR from first verification.

AENOR is able to verify with a reasonable level of assurance that the Emissions Reductions (ER) generated by the ER Program of Costa Rica, quantified in accordance with the verification criteria, amount to 9,852,768 tCO_2e. AENOR verified that the uncertainty buffer ERs amount to 506,274 tCO_2e, that the Reversal Buffer ERs amount to 185,634 tCO_2e, and that the Pooled Reversal Buffer ERs amount to 185,634 tCO_2e as well. The amount of FCPF Units to be issued would be 3,341,413 tCO2e. There are no uncertainties associated with the verification conclusion.

Statement Issuing Date: 11-July-2024

Intended User: World Bank Group, FCPF Carbon Fund Participants

Carlos Jiménez — Team Leader

José Luis Fuentes — Climate Change Manager

2. AGREEMENT

2.1 Level of Assurance

The second verification audit assessment was conducted to provide a reasonable level of assurance concerning material misstatements, errors, or omissions in conformance with the verification criteria and scope set out in the FCPF requirements, in conformance with paragraph 31 of the VVG v2.5. The provisions undertaken to ensure such a reasonable level of assurance included a risk assessment of the sources and the magnitude of potential errors, omissions, and misstatements, as required by section 4.4.1 of ISO 14064-3:2006, previous to the elaboration of a sampling/evidence-gathering plan.

Based on the previous provisions and considering the findings raised during the audit, a positive evaluation statement reasonably ensures that the FCPF Program GHG assertion is materially correct and is a fair representation of the GHG data and information provided in the ER Monitoring Report and supporting documents.

2.2 Objectives

The objective of the audit was to conduct a systematic, independent, and documented process for the evaluation of the GHG assertion made by the FCPF ER Program of Costa Rica for the reporting period from 01-January-2020 to 31-December-2021 against the FCPF criteria applicable to verification and to determine if the reported information in the second ER Monitoring Report is in compliance to the agreed criteria and free from material errors, omissions, or misstatements.

The general objectives of the verification, as required by paragraph 32 of the VVG v2.5, were:

- Review of the ER Monitoring Report and supporting information to confirm the correctness of presented information;
- Identify if the methodological steps and data are publicly available in accordance with applicable criteria;
- Assess whether the start date of the crediting period proposed by the ER Program is in compliance with the definition provided in the FCPF Glossary of terms;
- Assess the extent to which the reported ERs have been reported with a transparent and coherent step-by-step process that enables reconstruction and have meet the requirements of applicable criteria;
- Assess the extent to which the GHG emissions/Emission Reductions are materially accurate;
- Identify sources of uncertainty due to both random and systematic errors related with any sources of bias that can impact the estimate of the total ERs and determine whether the ER Program has conducted the uncertainty analysis in compliance applicable criteria;
- Assess the National Forest Monitoring System (NFMS) of the ER Program and validate that there are controls for sources of potential errors, omissions, and misstatements in place;
- Identify components of the NFMS that require attention and/or adjustment in future monitoring and reporting or identify areas of risk of future non-compliance.

The specific objectives of the verification, as required by paragraph 34 of the VVG v2.5, were:

- Assess the extent to which the methodologies and methods used to estimate GHG emissions and removals during the Reporting Period are consistent with the Reference Level and with the Monitoring Plan as described in the ER Monitoring Report;
- Assess the extent to which the ER Monitoring Report includes a complete and accurate report, to the extent possible, on the implementation of its strategy to mitigate and/or minimize potential Displacement and on any on changes in major drivers in the ER Accounting Area;

- Assess the extent to which the ER Monitoring Report contains a complete and accurate report on the mitigation, to the extent possible, of significant risks of Reversals identified in the assessment, and addresses the sustainability of ERs;
- Determine whether the ER Program has quantified ERs allocated to the Uncertainty, Reversal, and Pooled Reversal Buffer during the Reporting Period in compliance with the Methodological Framework and other applicable criteria;
- Assess the extent to which systems to avoid that ERs generated under the ER Program have not been counted or compensated for more than once have been adequately implemented and confirm that issuance has not occurred in other known registries;
- Determine whether the national or centralized REDD+ Programs and Projects Data Management System are implemented and operated in compliance with the Methodological Framework and other applicable criteria.

2.3 Criteria

The audit assessment was carried against the criteria set for verification by the following documents:

- FCPF Methodological Framework (MF), v3, April 2020.
- Validation and Verification Guidelines v2.5 September 2023.
- Buffer Guidelines v4.1 January 2024.
- Guidelines on the application of the Methodological Framework.

    1. Use of Interpolation of Data in Relation to the Reference Period of an ER Program v1 June 2016.
    2. Technical Corrections to GHG Emissions and Removals Reported in the Reference Period v2 November 2020.
    3. The Definition of Reporting Periods of Emission Reduction Programs v1 November 2018.
    4. Uncertainty Analysis of Emission Reductions v1.0 November 2020.

- Process Guidelines v6.1 March 2024.
- Glossary of Terms v2.2 May, 2022.
- Guidelines contained in the ER Monitoring Report Template (v2.5), the Validation Report Template (v1.2, September 2021) and the Verification Report Template (v1.3, August 2022);
- ISO 14064-3:2006
- ISO 14065:2013
- ISO 14066:2011

The following documents were considered as documents that provide acceptable methods for satisfying requirements set by the above criteria, as per paragraph 38 of the VVG v2.5:

- 2006 IPCC Guidelines;
- 2013 IPCC Wetlands Supplement;
- 2019 refinement to the 2006 IPCC Guidelines;
- GFOI 2016 Methods and Guidance Document;
- FCPF Guidance Notes.

Specifically, the following criteria and indicators of the MF were applicable to the verification, as per paragraph 37 of the VVG v2.5:

Criteria/Indicator	Topic
6	Data availability
7, 8, 9.1	Identification and address source(s) of uncertainty
9.2, 9.3	Estimation of residual uncertainty
14.1	Consistency of monitored estimates with RL
17.3, 17.4	Monitoring and reporting of displacement mitigation
18.2	Addressing reversals
19	Account for reversals
22	Calculation of Emission Reductions
23	Double counting
37	REDD projects and programs DMS

2.4 Scope

The scope of verification included, as per section 8.4 of the VVG v2.5:

- The Crediting Period of the ER Program;
- The selected Reporting Period;
- The ER Program Accounting Area as defined in the ER Program's Final ER Program Document (ER-PD);
- The GHG sources and sinks associated with any of the REDD+ activities accounted for as required by the MF;
- The carbon pools and GHGs to be accounted for as required by the MF;
- The REDD Country Participant's NFMS as described in the ER Monitoring Report;
- The national REDD+ Program and Projects Data Management System (DMS) as described in the Monitoring Report.

2.5 Materiality

The materiality threshold of the verification, as required section 8.5 of the VVG v2.5, was:

- Quantitative: the threshold for materiality with respect to the aggregate of errors, omissions, and misrepresentations relative to the total reported GHG emission and removals was one percent (1%). (Under-estimation of the Reference Level was not considered a material discrepancy).
- Qualitative: any issue related to management system and controls, poorly managed documentation, and non-compliance with the applicable requirements of the MF and other applicable criteria; and any errors in reporting of factual information in the ER Monitoring Report as required by the FCPF MF.

The verification process based on the desk review and onsite visit found that there are not quantitative nor qualitative material discrepancies affecting the Reference Level and the Reference Level setting.

The verification process based on the desk review and onsite visit found no quantitative or qualitative material discrepancies affecting the GHG assertion and leading to overestimations of the reported ERs.

3. METHODOLOGY AND PLANNING

3.1 Verification team

Name	Role	Activities				
		Desk review	Site visit	Reporting	Supervision	Technical review
Carlos Jiménez	Team Leader / Verifier auditor	X	X	X	X	
Adrián Vidal	Verifier auditor	X		X		
Daniel Bermejo	Verifier auditor	X		X		
Pablo Moreno	Verifier auditor	X		X		
Javier Cócera	Verifier auditor	X		X		
Marcos Recio	Auditor in trainee	X		X		
Jose Luis Fuentes	Project Manager				X	X

3.2 Verification schedule

Activity	Deliverable	Date	Responsible
Kick-off meeting	Minutes of KOM	07 Sept 2023	All parties
Initial desk review	Preliminary relevant findings, if applicable	14 Sept 2023	AENOR
Sampling plan	Sampling plan (draft and final)	21-28 Sept 2023	AENOR/FMT
Audit plan	Audit plan (draft and final)	28 Sept-5 Oct 2023	AENOR/ CR / FMT
Country visit/office meetings		17-18 Oct 2023	AENOR/ CR / FMT
First round of findings sent by AENOR	First list of findings	08 Nov 2023	AENOR
Country answer to findings		18 May 2024	CR
VVB review country´s answer to findings and emission of second round of findings	Second round of findings	14 June 2024	AENOR
Country answer to findings		17 June 2024	CR
VVB review country´s answer to findings	Closure of findings	27 June 2024	AENOR
Draft verification report / Internal Technical Review	Draft report	1-5 Jul 2024	AENOR
Country review draft report	Revised draft report with CR/FMT	5 Jul 2024	CR/FMT

Activity	Deliverable	Date	Responsible
	comments		
Final verification report with verification statement	Final report	12 Jul 2024	AENOR

3.3 Methodology description

The verification was performed through a combination of document review, interviews, and communications with relevant personnel. The conformity was evaluated against the criteria described in section 2.3.

A sampling/evidence-gathering plan was developed for the validation and first verification of the ER Program, as required by section 9.4 of the VVG v2.5. A risk assessment of the sources and the magnitude of potential errors, omissions, and misstatements was carried out, as required by section 4.4.1 of ISO 14064-3:2006, previous to the elaboration of the sampling/evidence-gathering plan. The sampling/evidence-gathering plan was developed considering all the criteria set by section 4.4.3 of ISO 14064-3:2006:

a) Agreed level of assurance;

b) Verification scope;

c) Verification criteria;

d) amount and type of evidence (qualitative and quantitative) necessary to achieve the agreed level of assurance;

e) methodologies for determining representative samples; and

f) risk of potential errors, omissions, or misstatements.

All evidence requested and reviewed was crosschecked in order to evaluate the consistency of information in the second ER Monitoring Report. All statements, claims and procedures described within the scope of the verification included in the second ER Monitoring Report were part of the assessment of the sampling/evidence-gathering plan and all the reviewed supporting evidence were evaluated against the second ER Monitoring Report.

The magnitude of the sampling was based on the previous experience of AENOR as VVB and ensure the achievement of reasonable level of assurance. The sampling/evidence-gathering plan was open to be modified based on any new risks or materiality concerns that could potentially lead to errors, omissions or misstatements identified during the verification process.

The audit team carried out a deep and meticulous review of the calculation spreadsheets to verify the correct application of the used methodology (formulae, equations) and checked that data required to calculate the GHG emission was appropriately provided.

All documentation provided by the Country Participant was assessed against the applicable criteria described in section 2.3. Several MCAR, mCAR and OBS were raised and submitted to the Country Participant to ensure compliance with all requirements, which addressed them either by providing to the audit team with the requested information or by making the appropriate corrections. Updated versions of the documentation were submitted by the Country Participant and the audit team reassessed them against the guidance documentation. This process was repeated iteratively until all MCAR were fully closed (there were no standing mCAR from validation).

All findings, 10 MCAR, 1 mCAR and 3 OBS, issued by AENOR's audit team during the verification process have been closed. 1 mCAR remains open for the next verification. The findings issued during the verification process and the inputs for their closure are described in Appendix 1 of this report.

3.4 Review of documentation

A detailed review of all documentation was conducted to ensure consistency with and identify any deviation from FCPF requirements. Initial review focused on the ER second Monitoring Report. Specially,

in relation to the reported ER, the methodological approach for their determination and its consistency with the Reference Level, the accuracy and availability of data and parameters used for calculations, the estimated uncertainty, the design of the DMS, displacement, reversals, and risk of double counting.

In addition to the second ER Monitoring Report, all documentation cited in it was download and reviewed in order to verify its public accessibility and to crosschecked with the statements made in the second ER Monitoring Report. These documents include, among others, calculation spreadsheets used for the determination of emission factors (EF) and estimation of the ER, GIS data (satellite images and remote sensing analysis) used for determination of activity data (AD), and additional documents related to monitoring procedures, literature sources of parameters, etc.

As result of the desk review of documents and interviews, the audit team required additional documentation to the Country Participant to verify certain statements or have further clarification regarding GHG assertions, data and parameters used or employed procedures. All the additional documents requested were added to the later versions of the second ER Monitoring Report, as required by criterion 6 of the MF.

For a listing of all documents provided by the Country Participant and review for the verification, see Appendix 2.

AENOR confirms that sufficient evidence was presented for all GHG assertions and that there is a clear audit trail that contains the evidence and records that confirm the stated figures in this verification report since:

- Sufficient evidence available: the Country Participant has provided the 100% of data used in the calculations to achieve the final estimated amount of GHG emissions and removals.
- Nature of evidence: the raw data were collected from reliable sources. They are detailed in the program documents and have been provided to the audit team.
- Cross-checked evidence: AENOR cross-checked the collected information through interviews with stakeholders and reproducing calculations.

3.5 REDD Country Visit

In accordance with FCPF Carbon Fund Facility Management Team (FMT) and the Country Participant, and provided that a reasonable level of assurance was achievable, AENOR as VVB, carried out an onsite audit that ensured the achievement of the assurance level required by the FCPF.

Thus, the audit was performed onsite, complemented with desk revision: some aspects were assessed remotely, since reported Emission Reductions rely on activity data estimates through Earth Observation data obtained in a centralized Forest Monitoring System with few field data. On the other hand, other aspects were assessed onsite thanks to the Team Leader onsite visit, as VVG paragraphs 48 and 50 allows.

The audit was based on the following auditing techniques:

- Document review and cross checks between the information provided in the second ER Monitoring Report and supporting information and evidence provided by the Country Participant.
- Review, based on the selected methodologies, tools and the other applied methodological regulatory documents, of the appropriateness of formulae and accuracy of calculations.
- Meetings, via teleconference and during the onsite visit, with relevant stakeholders and personal responsible for the implementation of the ER Program and the elaboration of the second ER Monitoring Report.
- Cross checks between information provided by interviewees to ensure that no relevant information was omitted.

The audit procedure was agreed with the Country Participant on the basis of available means and safety procedures. The teleconferences were carried using IT software agreed with the Country Participant.

One technical session (verification) during the site visit was carried out on October 17th-18th 2023 with Country Participant's staff involved in the management of the ER Program and the elaboration of the second ER Monitoring Report. The aim of the sessions were to cross-check and verify with the responsible staff of each area the procedures described in the second ER Monitoring Report and additional documents, as well as to clarify doubts from the audit team, prior to the issuance of the first round of findings.

The following table includes the list of all Country Participant's staff that participated in the technical sessions, who gathered in the FONAFIFO offices, together with the VVB Team leader, while the rest of the VVB team supported with documentary revision.

Name	Organization	Role/Position
María Elena Herrera Ugalde	FONAFIFO	Directora Estrategia Nacional REDD+
Guisella Quirós Ramírez	FONAFIFO	Coordinadora MRV REDD+
Johan Cordoba Peraza	FONAFIFO	Geógrafo
German Obando	WB	REDD MRV Specialist, PDB Project

The program covered during the technical sessions was the following:

Activity & Topics
Opening meeting: Introduction and scope of the audit. Review of meeting agenda. Generalities and audit procedures. **Verification technical meeting:** 1. Implementation and operation of the ER program during the reporting period Monitoring and reporting of displacement mitigation Criterion 17.3, 17.4 2. System for measurement, monitoring and reporting emissions and removals occurring within the monitoring period Consistency Forest Monitoring Systems. Criterion 14 MF 3. Data and parameters Key data and methods detailed and available for reconstruction of the reported emissions and removals. Criterion 6 MF 4. Quantification of emission reductions Calculation of Emission Reductions. Criterion 22 5. Uncertainty of the estimate of emission reductions Identification and address source(s) of uncertainty (identify, minimize, quantify remaining). Criterion 7, 8, 9.1 MF Estimation of residual uncertainty. Criterion 9.2, 9.3 6. Transfer of title to ERs REDD projects and programs DMS. Criterion 37 Double counting. Criterion 23 7. Reversals Addressing and account for reversals Criterion 18.2 **Closing meeting:**

Activity & Topics
Remarks, clarifications, questions, following steps.

Additionally, interviews were carried out with representatives of other institutions and organizations involved in the REDD+ Program of Costa Rica, to crosscheck and verified the information provided in the second ER Monitoring Report. The following table summarizes the interviews to these stakeholders.

Institution / Organization	Role in Program	Interviewee / Position
Instituto Meteorológico Nacional (INM)	National GHG Inventory	Ana Rita Chacón Head of the IMN Development Department
Sistema Nacional de Áreas de Conservación (SINAC)	COVIRENAs (Natural Resources Surveillance Committees) coordination.	Vicente Meza Biologist at Prevention, Protection and Control Department of SINAC
Oficina Nacional Forestal (ONF)	Interlocutor between government entities and the private sector	Felipe Vega Executive Director in ONF
Colegio de Ingenieros Agrónomos (CIAgro)	Supervises forestry professionals in charge of REDD+ Program implementation	Michael Garro Executive Prosecutor of the College of Agricultural Engineers

4. SUMMARY OF FINDINGS

4.1 Implementation status of the ER Program and update on drivers

AENOR has reviewed the second ER Monitoring Report and all supporting documents and deems they are complete and accurate. The verification team confirms that sufficient information has been included to explain any changes in major drivers in the ER Accounting Area and the status of the implementation of the strategy to mitigate and minimize potential displacement.

4.2 System for measurement, monitoring and reporting emissions and removals occurring within the monitoring period

4.2.1 Forest Monitoring System

AENOR confirms that the NFMS of the ER Program is functioning and can produce high quality data. The documents reviewed by the verification team demonstrate the necessary controls to address relevant sources of potential errors, omissions, and misstatements are in place. AENOR also confirms that the NFMS has been developed in accordance with the requirements of the MF.

4.2.2 Measurement, monitoring and reporting approach

AENOR assessed section 2.2 of the second ER Monitoring Report and attests that the equations and methods used for measuring, monitoring, and reporting are correct and consistent with the Reference Level as described in the first MR (Annex 4) and ER-PD.

In addition, AENOR confirms that the link among the equation parameters and the parameters under fixed data and parameters and monitored data and parameters are appropriate and correct.

4.3 Fixed Data and Parameters

After review of all information, procedures, calculations, and supporting documentation, AENOR confirms that the fixed data and parameters are applied consistently in line with the ER Monitoring Report template (see sections 4.8.1 Activity data and 4.8.2 Emission Factors, in AENOR's Validation Report of the ER Program of Costa Rica) and are consistent with the reported fixed data and parameters described in Annex 4 of the first ER Monitoring Report.

AENOR confirms that fixed data and parameters are made publicly available according to criterion 6 of the MF, since links to access all sources are provided in the ER Monitoring Report.

4.4 Monitored Data and Parameters

AENOR confirms that all data and parameters subject to monitoring have been reported and are free of errors and material misstatements. Additionally, the verification team confirms that the reported data is in line with the guidelines provided in the ER Monitoring Report template.

A unique and uniform methodology was used both for FREL/FRL and for the forest emission due to land use change estimate, in order to avoid those changes registered in the cartographic comparison of LULC maps were affected by the combination of different techniques and methods. In the same way as in the FREL/FRL, the analysis of degradation was only performed on the area of forest remaining forest according to the land-use map to avoid double-counting of baseline emissions between deforestation and forest degradation. This procedure avoided any measurements of degradation that were also accounted for under deforestation. In both cases, AENOR reproduced all spreadsheets' information to check the correctness of each step of monitoring from measurement to data transfer and calculation, and in line with IPCC methods used to estimate emissions and removals for Measurement, Monitoring and Reporting (MMR).

AENOR confirms the reliability of the source and nature of the reported evidence justified the selection of the monitored data and parameters; and that have been reported in line with the verification criteria.

AENOR also confirms that methodological steps and data were publicly available in accordance with applicable criteria, and the open links to the multiple sources are provided in the ER MR. AENOR confirms that the evidence provided by the ER Monitoring Report is sufficient and appropriate to determine the GHG reductions and removals.

AENOR confirms that the ER Program of Costa Rica monitors emissions by sources and removals by sinks included in the scope using the same methods to those used to set the Reference Level.

AENOR confirms that ER Monitoring Report states as monitoring period from 01-January-2020 to 31-December-2021, which matches with the Reporting Period.

Assessment details are as follows per monitored parameters:

Parameters	Activity Data of Deforestation (AD_D) Activity Data of Reforestation (AD_R) Forest remaining forests (AD_{F-F})
Free of Material Misstatement (Yes/No)	Yes
Reported Appropriately (Yes/No)	Yes
Assessment Details	These parameters represent, respectively: - Deforestation: Hectares of forest that changed to non-forest land in a year summed each year (i) of the monitoring period. - Reforestation: Hectares of non-forest that changed to forest land in a year, summed for each year (i) of the monitoring period. - Forest remaining forests: Hectares of Forest remaining forests in a year,

	summed for each year (i) of the monitoring period. These activity data parameters are based on annual historical time series analysis of land-use change and forestry across the Accounting Area, as well as in FREL/RFL. Costa Rica second ER Monitoring Report presented information about data sources for estimating Activity Data during the monitoring period, methods for mapping land-use and land-use change (including selection of images, pre-processing and geometric validation, radiometric normalization, random forest classification, post processing and Activity Data calculation), QA/QC procedures applied, values applied, and uncertainty associated with these parameters. The verification team conducted an independent analysis of similar remotely sensed data to confirm that the source data was reliable and appropriate. Additionally, the audit team was able to ensure that LULC classification was appropriate and followed the defined classification system. The verification team conducted independent data checks for each step necessary for the quantification of these parameters. Activity data parameters were examined using remotely sense imagery to ensure accurate classification of LULC classification. Spatial analyses conducted in ESRI GIS confirmed the geographical boundary, ensuring that all activity data fell within the Accounting Area and that the Accounting Area was computed correctly. Independent data checks were used to ensure that the quantification of the parameters was performed correctly, this included an independent review of the literature cited in reference to the applied equations. The uncertainty associated with this parameter was independently calculated after a thorough review of the calculation spreadsheets. The calculation of uncertainty applied the methodology from Olofsson, et al. (2014), and the verification team reviewed and confirmed that the estimation was correct and without any error.

Parameters	Activity Data of Degradation (AD_{Deg}) Activity Data of Permanent Forest Regeneration (AD_{E})
Free of Material Misstatement (Yes/No)	Yes
Reported Appropriately (Yes/No)	Yes
Assessment Details	These parameters represent, respectively: - Degradation: Hectares of forest with a reduction of canopy cover during the monitoring period. - Forest Enhancement: Hectares of forest with an increase of canopy cover during the monitoring period Costa Rica second ER Monitoring Report presented information about data sources for estimating Activity Data (including type of sampling, number of sampling units, classification scheme, imagery sources, interpretation key, data collection and analysis), values applied, QA/QC procedures applied, and uncertainty associated with these parameters. The verification team conducted independent analysis of the information provided to confirm that the source data was reliable and appropriate.

	Additionally, the audit team was able to ensure that LULC classification was appropriate and followed the defined classification system. The verification team conducted independent data checks for each step necessary for the quantification of these parameters. Spatial analyses conducted in ESRI GIS confirmed the geographical boundary, ensuring that all activity data fell within the Accounting Area and that the Accounting Area was computed correctly. Independent data checks were used to ensure that the quantification of the parameters was performed correctly; this included an independent review of the literature cited in reference to the applied equations. The uncertainty associated with this parameter was independently calculated after a thorough review of the calculation spreadsheets.

5. VERIFICATION OF GHG ASSERTION

5.1 ER Program Reference level for the Reporting Period

The Reference level for the Reporting Period, according to the first ER Monitoring Report, and, as reported in AENOR's Validation Report, is as follows:

Year of monitoring/ reporting period *t*	**Average annual historical emissions from deforestation over the Reference Period (tCO_{2-e}/yr)**	**If applicable, average annual historical emissions from forest degradation over the Reference Period (tCO_{2-e}/yr)**	**If applicable, average annual historical removals by sinks over the Reference Period (tCO_{2-e}/yr)**	**Adjustment, if applicable (tCO_{2-e}/yr)**	**Reference level (tCO_{2-e}/yr)**
2020	5,985,795	1,383,974	-4,784,051	-	2,585,717
2021	5,985,795	1,383,974	-4,784,051	-	2,585,717
Total	11,971,589	2,767,948	-9,568,102	-	5,171,435

5.2 ER program emissions by sources and removals by sinks

After the review of all ER Program information, procedures, calculations, and supporting documentation, AENOR confirms that the equations and methods used for measuring, monitoring, and reporting are correct and consistent with the Reference Level, free of material misstatements, errors, and omissions.

The Country Participant presented the estimated emissions by sources and removals by sinks included in the ER Program with two separate integration tools: deforestation and degradation. The Country Participant also prepared an Emission Reduction Calculation Tool based on the FREL and Degradation tool results. Both can be publicly accessed, and the links are provided in the second ER Monitoring Report.

Note that during the development of the second MR an error was found in the forest degradation estimation tool. The error affected the total ERs calculated for 2018-2021. To remedy this, the number of ERs obtained in the first Monitoring Report was kept, while the ER estimate for the second MR was adjusted to match the corrected accumulated ERs for 2018-2021. Section 8 of the second MR explains the adjustment made by the Country Participant and the adjusted ER calculation for 2020-2021 (last column in the following table).

AENOR reviewed the entire estimation process to confirm that is in line with the MF and the verification criteria. AENOR was able to reconstruct ER estimate with given calculation spreadsheets. The formulae applied were correct to reproduce the final estimate of ER. The reported ERs are materially accurate. AENOR confirms that the ERs have been reported following a transparent and coherent step-by-step process that enabled the reconstruction of estimates.

Year of reporting period *t*	Emissions from deforestation (tCO_{2-e}/yr)	If applicable, emissions from forest degradation (tCO_{2-e}/yr)*	If applicable, removals by sinks (tCO_{2-e}/yr)	Net emissions and removals (tCO_{2-e}/yr)	Net emissions and removals (tCO2-e/yr)[a] *Adjusted after correction in Degradation estimation
2020	542,797	2,764,822	-5,793,491	-2,485,873	-2,439,319
2021	574,858	2,764,822	-5,624,483	-2,284,803	-2,242,015
Total	1,117,655	5,529,643	-11,417,974	-4,770,676	**-4,681,334**

5.3 Uncertainty of Emission Reductions

5.3.1 Uncertainty analysis

The Country Participant identified and assessed though a stepwise approach, the sources of uncertainty of the Emission Reduction in Activity Data (measurement, representativeness, sampling), Emission Factors (DBH measurement, H measurement, plot delineation, wood density estimation, biomass allometric model, sampling, and in other parameters such as Carbon Fraction, root-to-shoot ratios, etc.), as well as in Integration. This approach was the same as for the uncertainty analysis of Reference Level.

The audit team recalculated the uncertainty statistics independently to confirm the accuracy of the reported precision, reviewed assumptions and sources associated with parameters used in the quantification, and reviewed uncertainty of the Emission Reductions due to random and systematic errors. AENOR confirms that the sources of uncertainty are systematically identified and correctly assessed in the Measurement Monitoring, and Reporting system, and addressed according to verification criteria, including the Guideline on the application of the Methodological Framework Number 4.

Additionally, AENOR confirms that there is an appropriate process for reducing uncertainty in the activity data and emission factors, where possible: systematic errors are minimized through the implementation of a consistent and comprehensive set of standard operating procedures, including a set of quality assessment and quality control processes; and random errors and other uncertainties are minimized to the extent practical based on the assessment of their relative contribution to the overall uncertainty of the emissions and removals.

5.3.2 Uncertainty of the estimate of Emission Reductions

The Country Participant estimated the uncertainty of aggregated Emission Reductions based on Monte Carlo analysis, same as for the Reference Level. A total of 10,000 iterations were calculated for the cumulative emissions of the monitoring period. The uncertainty estimate for the Emission Reductions strictly follows the guidelines of Approach 2: Monte Carlo simulation from 2006 IPCC Volume 1 General Guidance and Reporting Chapter 3 as well as the Guideline on the application of the Methodological Framework Number 4. The cumulative uncertainty during the crediting period was be estimated through propagation of errors approach using the values of the reporting periods.

[a] FCPF_CF_ER_Calculation_2018-2021.xlsx / Tab ER_Retroactive_Correction.

The verification team reviewed and confirmed that elements mentioned in 5.3.1 related to the estimation of uncertainty for the ER were all addressed in the provided Uncertainty spreadsheet. AENOR also confirmed that the estimations were correct and that the results matched the Reference Level included in the second ER Monitoring Report. Therefore, AENOR concludes that the application of Monte Carlo simulation for the quantification of Uncertainty of the Emission Reductions was performed correctly and free of errors and misstatements, and that cumulative uncertainty during the crediting period was estimated through propagation of errors approach using the values of the different reporting periods. In conclusion, AENOR CONFÍA S.A. confirms that the aggregate uncertainty of emissions reductions is 66.9% for the Monitoring Period and 62.41% for the Crediting Period, and that the correct uncertainty discount (12%) was applied correctly.

5.3.3 Sensitivity analysis and identification of areas of improvement of the MRV system

In order to identify the relative contribution of each parameter to overall uncertainty, a sensitivity analysis was conducted by the Country Participant in which the uncertainty of each parameter was selectively removed prior to running Monte Carlo simulations and combining uncertainties.

The carbon stocks used to estimate emission factors for deforestation were by far the largest source of uncertainty. When this uncertainty source was removed, total uncertainty decreased by over 54.2%. The mapping error of new forests during the reference period, the error of the ratio of aboveground biomass to percent canopy cover, and changes in canopy cover in forests remaining forests during the monitoring period also had sizable impacts on uncertainty. When the uncertainty for each of these was removed, uncertainty decreased by 6.9%, 6.8%, and 6.2% respectively.

AENOR confirms that uncertainty of AD and EF used in Reference Level setting is quantified in a consistent way.

AENOR confirmed that the underlying sources of error in data and methods for integrated measurements of deforestation, degradation and enhancements were combined into a single combined uncertainty estimate and are reported at the two-tailed 90% confidence level, obtaining a result of 12% of for the uncertainty discount.

AENOR reviewed and confirmed that above-mentioned (section 5.3.1) elements related to the sensitivity analysis were all addressed in the provided calculation spreadsheets. The verification team also confirmed that the estimations were free of errors and the results matched the sensitivity analysis included in the second ER Monitoring Report. Therefore, AENOR concludes that the sensitivity analysis was performed correctly.

5.4 Transfer of Title to ERs

5.4.1 Ability to transfer title

According to the information reported in the ER MR and the evidence provided during the verification audit, the ER Program has identified the existence of unclear or contested title to ERs during the Reporting Period. The ER Program has developed the procedures to avoid multiple claims of ER Titles and solve disputes over titularity of ER.

The ER Program has been able to increase its ability to transfer the title over ERs covered in the MR1, which was updated retroactively during this second verification to reflect the latest geospatial and legal overlay analysis as of December 31, 2023 for the calculation of transferrable ERs.

According to FCPF Program announcement of May 25 2022, the assessment of the ability of ER Programs to transfer title to ERs, or the percentage of ERs for which title is clear or uncontested is covered by the FMT´s review. Thus, WB FMT team confirmed the % proposed, as per request of AENOR CONFÍA S.A.

At the moment of the second verification, the percentage of ERs for which the ability to transfer Title to ERs is clear or uncontested is 42.81% for the first monitoring period (01-01-2018 to 31-12-2019), which is an additional 3.28% of ER title transferability reported in the previous version of the MR1, and 42.82% for this second monitoring period (01-01-2020 to 31-12-2021).

5.4.2 Program and Projects Data Management System

AENOR confirms that the Country Participant has a draft documented DMS in place that includes specific provisions to ensure transparency and avoid multiple claims of ER Title. AENOR confirms that Operational guidance is in place and complies with the requirements of the MF.

The Country Participant developed an updated GIS database to delimit the forest areas in the country by beneficiaries with right to claim the corresponding ER Titles. The cases of potential conflicts and overlaps have been properly documented and procedures for determining the rightful owner of the ER Titles have been clearly defined in accordance with laws and regulations of Costa Rica.

An audit of the operations of the DMS by AENOR was not deemed necessary as per the instructions of the FMT. However, during the first verification process FMT requested AENOR to carry out a specific audit of the Program and Projects DMS, as per indicator 37.4 of the MF and FCPF program announcement dated August 20, 2021.

In 2023, the REDD+ Secretariat, the National Meteorological Institute, and the UNDP Result-Based Program began collaborating to evaluate two options for implementing the Mitigation Action Registry. A specialized company is expected to start construction of the Registry System in 2024. Finally, since the DMS is still a draft, not yet operational, a mCAR (mCAR #1) was issued to be followed up during the next verification.

5.4.3 Double counted ERs

AENOR confirms that systems to effectively detect and prevent double counting and/or compensation of ER generated has been properly designed and put in place and that, during the audit, no evidence of ER double-counted or compensated was found in the crosschecked revision that AENOR carried out by looking at other GHG programs/registries.

No ERs have been sold, assigned or otherwise used by any other entity for sale, public relations, compliance or any other purpose including ERs accounted separately under other GHG accounting schemes nor ERs have been set-aside to meet Reversal management requirements under other GHG accounting schemes.

5.5 Reversals

5.5.1 The occurrence of major events or changes in ER Program circumstances that might have led to Reversals during the Reporting Period compared to the previous Reporting Period(s)

This section is not applicable, as there have been no reversals during the monitoring period.

5.5.2 Quantification of Reversals during the Reporting Period

This section is not applicable, as there have been no reversals during the monitoring period.

5.5.3 Reversal Risk Assessment and Buffer ERs

Risk Factor	**Risk indicators – Assessment by VVB**	**Resulting reversal risk set-aside percentage**
Default risk	*N/A*	*10%*
Lack of broad and sustained stakeholder support	Reversal Risk is considered low: 10% discount. Stakeholders are aware of the strategies to reduce deforestation, benefit sharing plans, and other mechanisms developed by the ER program. REDD+ Secretary is taking action to minimize the probability of a reversal due to overlay issues.	*0%*

	AENOR considers that the information is appropriate.	
Lack of institutional capacities and/or ineffective vertical/cross sectorial coordination	Reversal Risk is considered low: 10% discount. Based on the information provided by the ER Program in the ER-MR and the interviews carried out by the verification team, AENOR considers that FONAFIFO evidences Costa Rica's capacity to successfully coordinate and implement forest protection programs at the national scale in coordination with different levels of government institutions, and has experience of cross-sectoral cooperation. AENOR considers that the information is appropriate.	*0%*
Lack of long-term effectiveness in addressing underlying drivers	Reversal Risk is considered low: 5% discount. The ER Program has laws and regulations conductive to REDD+ objectives. Costa Rica has developed a REDD+ Strategy Implementation Plan that defines priority actions under the Emissions Reduction Program. Additional actions to address drivers of deforestation and degradation have been taken since the start of the ER Program, such as the inclusion of representative agents of deforestation (i.e., crop and livestock farmers) or degradation (i.e., illegal selective loggers) in stakeholder consultations and the benefit sharing plan. AENOR considers that the information is appropriate.	*0%*
Exposure and vulnerability to natural disturbances	Reversal Risk is considered low: 5% discount. Low-intensity natural disturbances are frequent and cause small and diffuse impacts that cannot be easily differentiated from the impacts caused by anthropogenic factors. They are to be excluded in future measurement reports of the Program results, thereby posing no risk of reversals. The high-intensity natural disturbances that can occasionally result in significant impact occur at a lower frequency. AENOR considers that the information is appropriate.	*0%*
	Total reversal risk set-aside percentage	*10%*
	Total reversal risk set-aside percentage from ER-PD or previous monitoring report (whichever is more recent)	*10%*

In conclusion, AENOR determined that the Buffer Guidelines have been correctly used to calculate the Total reversal risk set-aside percentage, and the conservativeness principle in order to determine the default reversal risk set-aside percentages and the discounts have been applied by the Country Participant, since the Total reversal risk set-aside percentage is the same as in the ER-PD and the first MR and no reasons have been found to increase it. The section in MR2 was updated to include evidence specific to the current monitoring period. On the other hand, the Country Participant established indicators for the risk factors that allow discerning the threshold for considering a risk as low, medium or high, and its consequent assignment of a reversal risk set-aside percentage for each type of risk.

AENOR verified that enough evidence was provided to justify the default reversal risk set-aside percentages and the discounts. ERs allocated to the Buffer are quantified in the following section.

5.6 Calculation of emission reductions

AENOR confirms that the ER Program of Costa Rica has quantified ERs in compliance with the MF, the ER Monitoring Report template, and the rest of applicable criteria, including FCPF Guidelines.

AENOR confirms that the evidence provided allow assessing the GHG assertion made in the second ER Monitoring Report as sufficient, without material discrepancy, and with a reasonable level of assurance, with respect to material misstatements, errors, or omissions.

The results are as follows:

		2020	2021	Total
A	**Reference Level (tCO_2-e) (Section 5.1)**	2,585,717	2,585,717	5,171,435
B	**Net emissions and removals under the ER Program (tCO_2-e) (Section 5.2)**	-2,439,319	-2,242,015	-4,681,334
C	**Emission Reductions during Reporting Period (tCO_2-e) (A-B)**	5,025,036	4,827,732	9,852,768
D	**If applicable, number of Emission Reductions from reducing forest degradation that have been estimated using proxy-based estimation approaches (use zero if not applicable)**	0	0	0
E	**Number of Emission Reductions estimated using measurement approaches (C-D)**	5,025,036	4,827,732	9,852,768
F	**Percentage of ERs (A) for which the ability to transfer Title to ERs is clear or uncontested (Section 5.4.1)**	42.82%	42.82%	42.82%
G	**ERs for which the ability to transfer Title to ERs is clear or uncontested that are sold, assigned or otherwise used by any other entity for sale, public relations, compliance or any other purpose (Section 5.4.3)**	0	0	0
H	**Total ERs (D+E)*F-G**	2,151,720	2,067,235	4,218,955
I	**Conservativeness Factor to reflect the level of uncertainty from non-proxy based approaches associated with the estimation of ERs during the Crediting Period (Section 5.3.2)**	12%	12%	12%
J	**Emission Reductions allocated to the Uncertainty Buffer (0.15*D/C*H)+(I*E/C*H)**	258,206	248,068	506,274
K	**Total reversal risk set-aside percentage applied to the ER program (Section 5.5)**	10%	10%	10%

		2020	2021	Total
L	**Emission Reductions allocated to the Reversal Buffer (H-J)*(K-5%)**	94,676	90,958	185,634
M	**Emission Reductions allocated to the Pooled Reversal Buffer (H-J)*5%**	94,675	90,959	185,634
N	**Number of FCPF ERs (H-J-L-M)**	1,704,163	1,637,250	3,341,413

6. NON-COMPLIANCES AND OBSERVATIONS

To ensure conformance of the reported information in the ER Monitoring Report with all requirements set by the FCFC and the audit criteria (section 2.3), the audit team issued findings in accordance with section 11 of the VVG v2.5 in the following cases:

- Major Corrective Action Request (MCAR): i) the evidence provided to demonstrate conformity is insufficient, unclear, or not transparent and may lead to a material error, omission, or misstatement, and/or a breakdown in the systems delivery; ii) underlying assumptions used to develop the reported estimates are not supported by data; iii) material errors, omissions or misstatements have been made in applying assumptions, in data or calculations; or i) non-compliance with verification criteria.
- MINOR Corrective Action Requests (mCAR): i) the evidence provided to demonstrate conformity is insufficient, unclear, or not transparent, but does not lead to a material error, omission, or misstatement, and/or a breakdown in the systems delivery; or ii) non-material errors, omissions or misstatements have been made in applying assumptions, in data or calculations;
- Observations (OBS): i) there is no objective evidence to prove that there is a non-conformity, but the VVB observes practices and/or methods that could result in future MCAR and mCAR; or ii) the VVB wishes to identify an area of the Forest Monitoring System that requires attention and/or adjustment in future monitoring and reporting.

The findings were submitted by the audit team in a single document, in which the Country Participant was able to offer answers to each of them and list supporting documents provided.

The Country Participant made the requested corrections and provided the audit team with updated versions of the ER Monitoring Report, which the audit team reassessed against the guidance documentation. The audit team either closed the opened findings when corrections, evidence and answers were satisfactory to comply with the audit criteria or asked for further corrections or clarifications. This process was repeated iteratively until all MCAR were suitably closed, as required by paragraph 62 of the VVG v2.5 (there were no standing mCAR from first verification). Specifically, 2 rounds were required to close all MCAR. Additionally, the Country Participant requested 1 meeting with the audit team to provide additional information related to one of the findings (updated of transferability of titles percentage).

10 MCAR and 3 OBS issued by AENOR's audit team during the verification process have been closed. 1 mCAR remains open for the next verification. There are no non-compliances pending for the subsequent verification. Appendix 1 includes the description of all findings issued and the inputs for their closure.

APPENDIX 1: OVERVIEW OF NON-COMPLIANCES & OBSERVATIONS ISSUED DURING THE SECOND VERIFICATION BY THE VERIFICATION TEAM

Major Corrective actions (MCARs)

NC ID: Major	**01**	**Date:** 08/11/2023
Description of NC		
Section 3.1, page 30, states that "Finally, 699 checkpoints were assessed: 315 in stable forest areas (areas classified as forest in 2000/01 remaining forest in 2010/11), 237 in the non-stable forest (areas classified as non-forest in 2000/01 remaining non-forest in 2010/11), 53 in afforestation/reforestation areas (areas classified as non-forest in 2000/01 classified as forest in 2010/11) and 47 in deforested areas (areas classified as forest in 2000/01 classified as non-forest in 2010/11)." However, the sum of the different classes described in the text is 652 checkpoints. The audit team checked the Shapefile with 716 checkpoints, and found that 649 of them were not "NULL" (and therefore, one of the classes described). Please clarify the differences in these values and correct accordingly.		
Project Participant response		**Date:** 18/05/2024
Text in section 3.1, page 30 is modified accordingly to the 716 dataset: A total of 716 reference points were assessed in this study. Out of these, 312 were in stable forest areas (areas classified as forest in 2000/01 remaining forest in 2010/11), 228 were in stable non-forest areas (areas classified as non-forest in 2000/01 remaining non-forest in 2010/11), 55 were in afforestation/reforestation areas (areas classified as non-forest in 2000/01 classified as forest in 2010/11), and 44 were in deforested areas (areas classified as forest in 2000/01 classified as non-forest in 2010/11). A total of 77 points were excluded from consideration. Out of these, 60 points were excluded because of poor-quality land-use interpretation, 10 points had no land-use information available on the map, and 7 points were excluded because of the booth, lack of map information, and poor-quality interpretation. Finally, after the accuracy assessment analysis, a total of 639 points were considered.		
Documentation provided by the Project Participant		
A pivot table has been added in sheet 2001-2011_AccuracyAssessment of CDI_CostaRicaREL_AnalisisExactitud_MCS2000-2001 vs MCS2010-2011 excel file, to support this information accessible at https://docs.google.com/spreadsheets/d/1wUfwkW4E74Y-AZHCesr4coNIs0e_SabC?rtpof=true&usp=drive_fs .		
VVB Assessment		**Date:** 14/06/2024
Closed. Text has been rephrased in MR section 3.1 and now it matches shapes and evidence CDI_CostaRicaREL_AnalisisExactitud_MCS2000-2001 vs MCS2010-2011.		

NC ID: Major	**02**	**Date:** 08/11/2023

Description of NC	
In the accuracy assessment analysis presented in the Excel file "CDI_CostaRicaREL_AnalisisExactitud_MCS2000-2001 vs MCS2010-2011", in the sample size sheet the z value is 1,96, which corresponds to a 95% confidence interval. However, the confidence interval chosen in the MR and in the Activity Data sheet is 90%, according to MF criterion 9.2. Please clarify the differences in these values and/or correct accordingly.	
Project Participant response	**Date:** 18/05/2024
Based on a 90% confidence interval estimate of activity data in the MR, a sample size was calculated using a Z value of 1.96 for a two-tailed interval.	
Documentation provided by the Project Participant	
NA.	
VVB Assessment	**Date:** 14/06/2024
Closed. Clarification accepted.	

NC ID: Major	**03**	**Date:** 08/11/2023
Description of NC		
In Section MR 3.1: 1. Page 35, the equation for "Tropical Premontane Wet Transition to Basal-Atlantic" is actually for Tropical Moist according to the source (Cifuentes, 2008, Table 2.5, p. 42). As it is intended for Moist Forests, it could be a typo in the MR. Please clarify the value used and correct accordingly. 2. Page 37, in the table showcasing Carbon stocks in Primary Forest, the parameter t CAGB ha-1 is rounded up to the unit while parameters t CDWB ha-1 and t CL ha-1 are rounded up to the first decimal. Please unify rounding criteria. 3. Page 38, in the table showcasing Carbon stocks of non-Forest land uses, the value for the land use "Grasslands, wooded" is incorrectly rounded up to 8, as the real value stated in the spreadsheet "BaseDeDatos_v5" is 7.10.		
Project Participant response		**Date:** 18/05/2024
1. We confirm that equation for "Tropical Premontane Wet Transition to Basal-Atlantic" is for Tropical Moist according to the source (Cifuentes, 2008, Table 2.5, p. 42). Typo in the MR was corrected in page 35. Tropical Moist Equation was used in FREL Tool. 2. Page 37, in the table showcasing Carbon stocks in Primary Forest, the values of t CAGB ha-1 are rounded up to the first decimal. 3. Page 38, in the table showcasing Carbon stocks of non-Forest land uses, the value for the land use "Grasslands, wooded" **is correctly** rounded up to 8, as the real value stated in the spreadsheet "BaseDeDatos_v5" is **7.77** (see cell G31 in sheet 3.DensidadesCarbono)		
Documentation provided by the Project Participant		

Please see cell G31-sheet 3.DensidadesCarbono in BaseDeDatos_V5.xlsx Excel file accessible at https://drive.google.com/file/d/1d6QqYQci7_Qo7DJhS5eOKgCqLFDXhttps://drive.google.com/file/d/1d6QqYQci7_Qo7DJhS5eOKgCqLFDX-rFX/view?usp=sharingrFX/view?usp=sharing

VVB Assessment	**Date:** 14/06/2024
1. **Closed**. Typo corrected in MR text. 2. **Closed**. Figures properly rounded. 3. **Closed**. Clarification accepted.	

NC ID: Major	**04**	**Date:** 08/11/2023
Description of NC		
MR section 5.1, according to the Guidelines on the application of the Methodological Framework Number 4 On Uncertainty Analysis of Emission Reductions, version 1.0: 1. Regarding AD, the Contribution to overall uncertainty of Measurement is High. 2. Regarding AD, the Contribution to overall uncertainty of Sampling is High. 3. Regarding EF, uncertainty of Biomass allometric model shall be addressed through QA/QC. 4. Regarding EF, uncertainty of Sampling shall be addressed through QA/QC. 5. Regarding EF, the Contribution to overall uncertainty of other parameters (e.g. Carbon Fraction, root to-shoot ratios) is High, shall be addressed through QA/QC, and their residual uncertainty shall be estimated. 6. Regarding Integration, uncertainty of Integration shall be addressed through QA/QC. Please, include in the text a rationale for the deviation if applicable.		
Project Participant response		**Date:** 18/05/2024
Items 1, 3, 4, 5 and 6 has been modified in Section 5.1 accordingly to the application of the Methodological Framework Number 4 On Uncertainty Analysis of Emission Reductions, version 1.0. Item 2. Activity Data, Contribution to overall uncertainty of Sampling. This source of uncertainty does not apply to the estimate of Activity Data because the calculation is based on a geographical comparison of wall-to-wall maps.		
Documentation provided by the Project Participant		
costa_rica_fcpf_er_monitoring_report_2sd_rp_final_August23_CLean_Modified.docx https://docs.google.com/document/d/1J4FtsPrOQ02YdxPrWJaarbhSuGd4UNUT?rtpof=true&usp=drive_fs		
VVB Assessment		**Date:** 14/06/2024
Closed. In 'Table 10: Sources of uncertainty to be considered under the FCPF MF' requested items have been corrected.		

NC ID: Major	05	Date: 08/11/2023
Description of NC		
Table 7 of the MR explains how the error found in the degradation tool affected retroactively the emissions of the first monitoring period and, consequently, the FCPF ERs issued in that period. Since this fact is not found in an updated public version of MR1, for transparency, please indicate in MR2: 1) the quantification of the change in the emissions reduction of the first period and FCPF ERs finally issued (indicated in FCPF_CF_ER_Calculation_2018-2021.xlsx), 2) the remedial measures agreed with the FMT by going from 10,486,289 to 10,396,947 tCO2-e corresponding to Emission Reductions during the First Reporting Period.		
Project Participant response		**Date:** 18/05/2024
The country and FMT have agreed on a method to address the error found in the forest degradation estimation tool. The error affected the total ERs calculated for 2018-2021. To remedy this, the number of ERs obtained in the first Monitoring Report (Value A in the table of section 8 of the First Monitoring Report) will be kept. The ER estimate for the second MR will be adjusted to match the corrected accumulated ERs for 2018-2021. Section 8 of the report explains the adjustment made and the adjusted ER calculation for 2020-2021.		
Documentation provided by the Project Participant		
costa_rica_fcpf_er_monitoring_report_2sd_rp_final_August23_CLean_Modified.docx https://docs.google.com/document/d/1J4FtsPrOQ02YdxPrWJaarbhSuGd4UNUT?rtpof=true&usp=drive_fs		
VVB Assessment		**Date:** 14/06/2024
Closed. Section 8 of the MR2 explains the adjustment made and the adjusted ER calculation for 2020-2021, and the updated calculation workbook was provided.		

NC ID: Major	06	Date: 08/11/2023
Description of NC		
In section 6.1 of the MR: 1. Please include an explanatory note to indicate why the % of 'ERs for which the ability to transfer Title to ERs is clear or uncontested' changed in the MR2 in the years 2018-2019 (first monitoring period) compared to what reported in MR1, due to active recruitment and material error adjustments in the degradation tool. 2. Please clarify how private voluntary projects (VCM) are not included in the % of 'ERs for which the ability to transfer Title to ERs is clear or uncontested' reported, if they do not receive PSA, CREF or form part of the natural heritage of the State, with respect to what is registered in the DMS. 3. Please include a link to the DMS consulting report.		

Project Participant response	**Date:** 18/05/2024
1. The following text has been added in notes at the bottom of Table 11 in Section 6.1: "A geospatial overlay analysis of ER title owners determines the percentage of REs able to transfer the Title to the REs. This analysis considers the following geo-databases: (i) forest land in the State Natural Heritage, (ii) private forest owners with CREF contracts, (iii) private forest owners with active PES contracts during the monitoring period, (iv) private forest owners with active Biodiversity contracts, and (v) Indigenous Territories. The geospatial overlay analysis is conducted annually, and only active PES and Biodiversity contracts are considered. As the total area of active PES and Biodiversity contracts changes yearly due to contract expiration, the percentage of ERs that can be transferred varies between years." 2. The following text has been added in notes at the bottom of Table 11 in Section 6.1: "Private voluntary projects are not included in the REs able to transfer the Title to the REs since they do not receive PSA, CREF, or form part of State Natural Heritage; therefore, they are not registered in the Data Management System of the ER-Program". 3. The following link has been added to access annual summaries (2018, 2019, 2020, 2021) of eligible areas in both geo-database and Excel file formats by clicking on the link below: https://fonafifo-my.sharepoint.com/:f:/g/personal/redd_fonafifo_go_cr/Ej0dcqWiJ4dOqWz2G90V51kBcxPNA1GjUkz5Y9me-G1A9A?e=7eJOqA	
Documentation provided by the Project Participant	
costa_rica_fcpf_er_monitoring_report_2sd_rp_final_August23_CLean_Modified.docx https://docs.google.com/document/d/1J4FtsPrOQ02YdxPrWJaarbhSuGd4UNUT?rtpof=true&usp=drive_fs	
VVB Assessment	**Date:** 14/06/2024
Closed. Clarifications requested properly included in MR section 6.1. DMS consulting report provided.	

NC ID: Major	**07**	**Date:** 08/11/2023
Description of NC		
During the audit, the Country Participant confirmed that the 42% declared for the calculation of 'ERs for which the ability to transfer Title to ERs is clear or uncontested' will be updated before the end of 2023, therefore sections 6.1 and 8 of the MR and the corresponding annexes must be updated before the completion of the documentary review process and issuance of the verification report.		
Project Participant response		**Date:** 18/05/2024
The MR has been updated to reflect the latest geospatial overlay analysis as of January 2024 for the calculation of transferrable ERs in Sections 6.1 and 8.		
Documentation provided by the Project Participant		
costa_rica_fcpf_er_monitoring_report_2sd_rp_final_August23_CLean_Modified.docx https://docs.google.com/document/d/1J4FtsPrOQ02YdxPrWJaarbhSuGd4UNUT?rtpof=true&usp=drive_fs		

VVB Assessment	Date: 14/06/2024
Closed. MR1 and MR2 were updated to reflect the latest geospatial overlay analysis as of January 2024 for the calculation of transferrable ERs in Sections 6.1 and 8. FMT team confirmed the % proposed, as per request by email by the VVB. It was confirmed the compliance with indicators 28.3, 36.2 and 36.3 of the Methodological Framework v3, considering that according to FCPF Program announcement of May 25, 2022, the assessment of the ability of ER Programs to transfer title to ERs, or the percentage of ERs for which title is clear or uncontested is covered by the FMT´s review.	

NC ID: Major	08	Date: 08/11/2023
Description of NC		
The Gold Standard Registry lists 4 AR projects in Costa Rica: Reforestation Project in Costa Rica 01 (GS11708), BaumInvest Forest Landscape Restoration Programme (GS11707), BaumInvest Reforestation Project (GS2913) and VisionsWald - VisionForest (GS3264). Please justify in MR section 6.4 how double counting of ERs generated from the Costa Rica FCPF ER Program was avoided with these specific initiatives, according to MF criterion 23.		
Project Participant response		**Date:** 18/05/2024
Section 6.4 has been updated as follows: ¨There are four Afforestation and Reforestation (AR) projects in Costa Rica that are listed in the Gold Standard Registry. These projects are Reforestation Project in Costa Rica 01 (GS11708), BaumInvest Forest Landscape Restoration Programme (GS11707), BaumInvest Reforestation Project (GS2913) and VisionsWald - VisionForest (GS3264). To avoid double counting of Emission Reductions (ERs) generated from the Costa Rica Forest Carbon Partnership Facility (FCPF) ER Program with these specific initiatives, the Private Voluntary Projects have not been included in the ERs that can transfer the Title to the ERs. It is also important to note that these Private Voluntary Projects do not receive PSA, CREF, or form part of State Natural Heritage. As a result, they are not registered in the Data Management System of the ER-Program¨		
Documentation provided by the Project Participant		
costa_rica_fcpf_er_monitoring_report_2sd_rp_final_August23_CLean_Modified.docx https://docs.google.com/document/d/1J4FtsPrOQ02YdxPrWJaarbhSuGd4UNUT?rtpof=true&usp=drive_fs		
VVB Assessment		**Date:** 14/06/2024
Not closed. It is mentioned “It is also important to note that these Private Voluntary Projects do not receive PSA, CREF, or form part of State Natural Heritage. As a result, they are not registered in the Data Management System of the ER-Program”. Please, provide the shape with the areas registered in the DMS.		
Project Participant response		**Date:** 17/06/2024
You can access annual summaries (2018, 2019, 2020, 2021) of eligible areas registered in the DMS in		

both geo-database and Excel file formats by clicking on the link below: https://fonafifo-my.sharepoint.com/:f:/g/personal/redd_fonafifo_go_cr/Ej0dcqWiJ4dOqWz2G90V51kBcxPNA1GjUkz5Y9me-G1A9A?e=7eJOqA
Documentation provided by the Project participant
Eligible areas registered in the DMS in both geo-database and Excel file formats at the link below: https://fonafifo-my.sharepoint.com/:f:/g/personal/redd_fonafifo_go_cr/Ej0dcqWiJ4dOqWz2G90V51kBcxPNA1GjUkz5Y9me-G1A9A?e=7eJOqA

VVB Assessment	**Date:** 27/06/2024
Closed. Evidence provided and positively assessed.	

NC ID: Major	**09**	**Date:** 08/11/2023
Description of NC		
In section MR 7.3. Reversal risk assessment: 1. The risk analysis is similar to that presented in MR1. Please update the section with more detail that justifies the risk and includes evidence specific to the current monitoring period. 2. The reversal risk assessment has not established indicators for the risk factors that allow discerning the threshold for considering a risk as low, medium or high, and its consequent assignment of a reversal risk set-aside percentage for each type of risk.		
Project Participant response		**Date:** 18/05/2024
1. The reversal risk assessment table has been updated including evidence specific to the current monitoring period. 2. A table with the reversal risk assessment indicators has been added in section 7.3.		
Documentation provided by the Project Participant		
costa_rica_fcpf_er_monitoring_report_2sd_rp_final_August23_CLean_Modified.docx https://docs.google.com/document/d/1J4FtsPrOQ02YdxPrWJaarbhSuGd4UNUT?rtpof=true&usp=drive_fs		
VVB Assessment		**Date:** 14/06/2024
Closed. 1. The reversal risk assessment table has been updated including evidence specific. 2. A table with the reversal risk assessment benchmark been added.		

NC ID: Major	**10**	**Date:** 08/11/2023

Description of NC
The following references require updates to comply with indicator 6 of the MF (Data availability): 1. Reference 13: Link incorrectly referenced, as it should refer to the SIMOCUTE, not the Decreto Ejecutivo N° 42886-MINAE-MAG-JP. 2. Reference 24: Link works, but is incorrectly referenced, as it is duplicated. 3. Reference 53: Clarify if this version of the document is the same as Reference 39, as the version number is the same, but the name is not. If not, update all references to this document to the latest version. 4. Reference 55: Link works, but is incorrectly referenced, as it is duplicated. 5. Reference 59: Reference is not correct, as it does not refer to the latest version of the Degradation Tool (Reference 59 is for v3, while Reference 40 is for v4). Update all references to this document to the latest version. 6. Reference 65: Link works, but is incorrectly referenced, as it is duplicated. 7. In page 47, in the footnote after Reference 88 it appears a reference to Ortiz-Malavassi, E. (2020), incorrectly labelled as 71, that is not referenced in the text.

Project Participant response	**Date:** 18/05/2024
1. Reference 13 was corrected. 2. Reference 24 is correct. 3. Reference 53. The document in 53 should be the same as in 39. The link included in reference 53 has been corrected. 4. Reference 55 is correct. 5. Reference 59 was corrected. All links referring to the Degradation tool were checked, and there are accessing the updated version of the Degradation Tool. 6. Reference 65 is correct. 7. Page 47. Reference labelled as 71 was deleted.	

Documentation provided by the Project Participant
costa_rica_fcpf_er_monitoring_report_2sd_rp_final_August23_CLean_Modified.docx https://docs.google.com/document/d/1J4FtsPrOQ02YdxPrWJaarbhSuGd4UNUT?rtpof=true&usp=drive_fs

VVB Assessment	**Date:** 14/06/2024
1, 3, 5, 7. **Closed**. References corrected/updated. **Not closed:** 2. Reference 24: Link works, but is incorrectly referenced, as it is duplicated. 4. Reference 55: Link works, but is incorrectly referenced, as it is duplicated. 6. Reference 65 is correct.	

Project Participant response	**Date:** DD/MM/YYYY
2. Reference 24: Link for accessing Santamaria et al. 2015 has been corrected. 4. Reference 55. Link for accessing Costa Rica ER-PD has been corrected. 6. Reference 65. Link for accessing BaseDeDatos_V5.xlsx has been corrected.	

Documentation provided by the Project participant	
References has been updated in the ERMR document costa_rica_fcpf_er_monitoring_report_2sd_rp_final_August23_CLean_Modified 17-Jun-2024.docx https://docs.google.com/document/d/1UYYyU-gU7eg2KYKHMmm5_2knYmtKsBso?rtpof=true&usp=drive_fs	
VVB Assessment	**Date:** 27/06/2024
Closed. References have been corrected.	

Minor Corrective actions (mCARs)

NC ID: Minor	01	Date: 11/07/2024
Description of NC		
In 2023, the REDD+ Secretariat, the National Meteorological Institute, and the UNDP Result-Based Program began collaborating to evaluate two options for implementing the Mitigation Action Registry. A specialized company is expected to start construction of the Registry System in 2024. Finally, since the DMS is still a draft, not yet operational, a mCAR (mCAR #1) was issued to be followed up during the next verification. For the next verification, the VVB shall assess Country Participant DMS compliance against MF criteria 37.1 to 37.4.		
Project Participant response		**Date:**
Documentation provided by the Project Participant		
VVB Assessment		**Date:**

Observations (Obs)

Obs ID:	01	Date: 08/11/2023
Description of the OBS		
1. Page 22, section MR 2.2: Regarding Gross emissions of the RL from deforestation and degradation over the Reference Period, the units should be tCO2e*year -1, not tCO2e*year 1. 2. Page 72, section MR 6.2: Typo. “Syste” instead of System.		
Project Participant response		**Date:** 18/05/2024
1. Page 22. The typo was corrected.		

2. Page 72. The typo was corrected.
Documentation provided by the Project participant
costa_rica_fcpf_er_monitoring_report_2sd_rp_final_August23_CLean_Modified.docx https://docs.google.com/document/d/1J4FtsPrOQ02YdxPrWJaarbhSuGd4UNUT?rtpof=true&usp=drive_fs

VVB Assessment	**Date:** 14/06/2024
Closed. Typos corrected.	

Obs ID:	**02**	**Date:** 08/11/2023
Description of the OBS		
According to Guidance on completing the ER-MR, in MR template, "All instructions, including this section, should be deleted when submitting the ER-MR to the Facility Management Team of the FCPF". However, the instructions remain in the 3rd page of the MR.		
Project Participant response		**Date:** 18/05/2024
Instructions on the 3rd page of MR were deleted.		
Documentation provided by the Project participant		
costa_rica_fcpf_er_monitoring_report_2sd_rp_final_August23_CLean_Modified.docx https://docs.google.com/document/d/1J4FtsPrOQ02YdxPrWJaarbhSuGd4UNUT?rtpof=true&usp=drive_fs		
VVB Assessment		**Date:** 14/06/2024
Closed. Instructions deleted.		

Obs ID:	**03**	**Date:** 14/06/2024
Description of the OBS		
Please, update 'Date of Submission' in the front page of the MR2.		
Project Participant response		**Date: 17**/06/2024
Date of submission has been updated in the front page of ERMR costa_rica_fcpf_er_monitoring_report_2sd_rp_final_August23_CLean_Modified 17-Jun-2024.docx https://docs.google.com/document/d/1UYYyU-qU7eg2KYKHMmm5_2knYmtKsBso?rtpof=true&usp=drive_fs		
Documentation provided by the Project participant		

NA.	
VVB Assessment	**Date:** 27/06/2024
Closed. Version and date updated.	

APPENDIX 2: EVIDENCE PROVIDED BY COUNTRY PARTICIPANT AND REVIEWED BY AENOR

Title	File
Forest Carbon Partnership Facility (FCPF) Carbon Fund ER Second Monitoring Report (ER-MR) v4.0, 14-05-2024	costa_rica_2sd_ERMR_final_Clean_17-Jun-2024.pdf
ER-PD, MR1, National REDD+ Strategy.	https://www.forestcarbonpartnership.org/country/costa-rica
SATIF (Sistema de Alerta Temprana en Incendios Forestales)	https://www.imn.ac.cr/alerta https://gestion.incendiosforestales.cr/mapa/mapa
Guía Nacional para la Capacitación y Certificación de Personal en Manejo Integral del Fuego en Costa Rica	https://www.acguanacaste.ac.cr/images/imagenes-noticias/proteccion/guía_nacional_de_capacitación_cr.pdf
SIPLAMA (Sistema de Planes de Manejo Forestal)	http://siplama.sirefor.go.cr/zf_GestionSolicitudes/Index/paginadebienvenida
SICAF (Sistema de información para el control del Aprovechamiento Forestal)	https://sicaf.addax.cc
Sistema de Información de Recursos Forestales de Costa Rica (SIREFOR)	https://www.sirefor.go.cr/
Sistema Integrado De Atencion Y Tramite De Denuncias Ambientales (SITADA)	https://www.sitada.go.cr/denunciaspublico/
Tool for evaluating the management effectiveness of Protected Wilderness Areas	https://www.sinac.go.cr/ES/docu/ASP/Herramienta-Evaluacion-Efectividad-de-Manejo.pdf
Oficio de aprobación del SINAC-CONAC-SA-155-07-2021 con fecha del 15 de julio de 2021	https://www.sinac.go.cr/ES/transprncia/Acuerdos%20CONAC%202021/ACUERDOS%20SO%20N%C2%B0%207-2021.pdf
New PSA 2020 procedures manual	https://onfcr.org/wp-content/uploads/Manual-de-Procedimientos-PSA-2020-14-abril-2020.pdf
Decreto Ejecutivo N° 42886-MINAE-MAG-JP available at	http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=94331&nValor3=125551&strTipM=TC
Creación y operación del Sistema Nacional de Monitoreo de cobertura y uso de la tierra y ecosistemas (SIMOCUTE) - 42886-MINAE-MAG-JP	http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=94331&nValor3=125551&strTipM=TC
Fondo Nacional de Financiamiento Forestal	https://www.fonafifo.go.cr/
FP144 Costa Rica REDD-plus Results-Based Payments for 2014 and 2015	https://www.greenclimate.fund/project/fp144
Contratos de PSA por tamaño de proyectos	https://www.fonafifo.go.cr/es/servicios/estadisticas-de-psa/

Title	File
Plan de Implementación de la Estrategia Nacional REDD+ Costa Rica. Secretaria Ejecutiva REDD+ Costa Rica. 2017.	https://ceniga.go.cr/wp-content/uploads/2020/02/plan_de_implementacion_enreddcr.pdf
Benefit Sharing Plan, National REDD+ Strategy. June 2020. Ministry of Environment and Energy (MINAE), Costa Rica.	http://documents1.worldbank.org/curated/en/785151594625278269/pdf/Benefit-Sharing-Plan.pdf
Ministerio de Comercio Exterior (COMEX)	https://www.comex.go.cr/estadísticas-y-estudios/comercio-bienes/exportaciones/
Sistema Nacional de Métrica de Cambio Climático (SINAMEC)	http://sinamecc.opendata.junar.com/dashboards/21151/inventario-nacional-de-gases-de-efecto-invernadero-ingei/
MINAE, 2019. Technical Annex of the Republic of Costa Rica, in accordance with the provisions of Decision 14 / Cp.19. 64pp.	https://unfccc.int/sites/default/files/resource/4863_3_iba-2019-anexotecnico_Edited.pdf
Resumen del Diseño del Sistema de Información sobre Salvaguardas REDD+ en Costa Rica. 2017. FONAFIFO. 80 pp.	http://reddcr.go.cr/sites/default/files/centro-de-documentacion/propuesta_sis-redd_informe_final_-_fonafifo.pdf
Brandt, J. S., & Buckley, R. C. (2018). A global systematic review of empirical evidence of ecotourism impacts on forests in biodiversity hotspots. Current Opinion in Environmental Sustainability, 32, 112–118.	https://doi.org/10.1016/j.cosust.2018.04.004
Santamaria et al. 2015. Mercado de la madera y derivados en Costa Rica. 216pp.	https://onfcr.org/wp-content/uploads/media/uploads/documents/mercado-de-la-madera-y-derivados-en-cr-final.pdf
IPCC. 2003. Good Practice Guidance for Land Use, Land-Use Change and Forestry. Intergovernmental Panel on Climate Change (IPCC). Edited by Jim Penman, J.; Gytarsky, M.; Hiraishi, T.; Krug, T.; Kruger, D.; Pipatti, R.; Buendia, L.; Miwa, K.; Ngara, T.; Tanabe K.; Wagner, F. IPCC National Greenhouse Gas Inventories Programme. Published by the Institute for Global Environmental Strategies (IGES) for the IPCC. 583 p.	https://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf.html
Sistema Nacional de Monitoreo de la Cobertura y Uso de la Tierra y Ecosistemas	https://simocute.go.cr/
MINAE, 2019. Technical Annex of the Republic of Costa Rica, in accordance with the provisions of Decision 14 / Cp.19. 64pp.	https://unfccc.int/sites/default/files/resource/4863_3_iba-2019-anexotecnico_Edited.pdf
Agresta, Dimap, Universidad de Costa Rica, Universidad Politécnica de Madrid. 2015. Final Report: Generating a consistent historical time series of activity data from land use change for the	https://www.dropbox.com/s/ygjw6zq00a1qtbm/Informe_tecnico_feb_2015.pdf?dl=0

Title	File
development of Costa Rica's REDD plus reference level: Methodological Protocol. Report prepared for the Government of Costa Rica under the Carbon Fund of the Forest Carbon Partnership (FCPF). 44 pp.	
Ortiz-Malavassi, E. (2017). Evaluación Visual Multitemporal (EVM) del Uso de la tierra, Cambio en el Uso de la Tierra y Cobertura en Costa Rica Zonas A y B Tarea 1: Estimación del área de cambio de uso de la tierra durante el periodo 2014-2015.	https://drive.google.com/file/d/1GXdN43f-DNKelkM8y7gBLrKou-f7LI-G/view?usp=sharing
Aguilar, L. (2020). Evaluación Visual Multitemporal para la determinación de la degradación forestal para los periodos 2014-2015-2017-2019 y determinación de datos de referencia para periodo 2017-2019. Tercer Informe.	https://drive.google.com/file/d/1ERutZo6vNI6MXUCmlrky7wiaeOqOLMqh/view?usp=sharing
Ministerio de Ambiente y Energía. (2015). Volumen 4 Marco conceptual y metodológico para la Inventario forestal nacional de Costa Rica.	https://www.sirefor.go.cr/pdfs/Volumen4-MarcoC-Imprenta.pdf
Rodríguez, J. (2018). INFORME FINAL DE CONSULTORÍA Estudio de parcelas temporales para estimar el stock de carbono en bosques intactos, degradados y altamente degradados en zona A. (Contrato N°020-2018-REDD).	https://drive.google.com/file/d/1dSyL8Dldwym5VN1jXpnAbmPovUW3AiTu/view?usp=sharing
Coto, O. (2018). INFORME FINAL DE CONSULTORÍA. Estudio de parcelas temporales para estimar el stock de carbono en bosques intactos, degradados y altamente degradados en zona B. (Contrato N°019-2018-REDD).	https://drive.google.com/file/d/1svYPJGEoBHpLn72sg4ejpf6uZkp6lllM/view?usp=sharing
Obando, G. (2019). COORDINACIÓN GENERAL DE LA IMPLEMENTACIÓN DEL PLAN DE MEJORA DEL NIVEL DE REFERENCIA. Tercer Informe de Consultoría N ° 016-2018-REDD.	https://drive.google.com/file/d/1MEHZ6dvQKY52X58UtlG02o4Uw9x1HV6v/view?usp=sharing
FREL Tool	https://docs.google.com/spreadsheets/d/103jZDLVaK3bKC-OQwBV4CmSYj_sSZ5nh?rtpof=true&authuser=mrvreddcr%40gmail.com&usp=drive_fs
FREL Tool Manual	https://drive.google.com/file/d/14CsE_rpBBrEJgyUTplziKKsGGVm_YtL_/view?usp=sharing
Degradation Tool	https://docs.google.com/spreadsheets/d/11r7J0a6BHZx5aWyzC45UatWy3XAlnfp0?rtpof=true&authuser=mrvreddcr%40gmail.com&usp=drive_fs
Costa Rica Carbon Densities database v5 Sept 2015	https://drive.google.com/file/d/1LJ8pbd0EuiVoS7JuMc8ps

Title	File
	_OwlD12MUuH/view?usp=sharing
- Emission Reduction Calculation tool (including Calculation of the percentage of transferrable ERs)	https://docs.google.com/spreadsheets/d/17ivM7Lgv22C7myLo31gwlJSevKLYdtII/edit?usp=sharing&ouid=101528572552038951719&rtpof=true&sd=true
Monte Carlo propagation analyses to estimate uncertainty of Emission Reductions	https://docs.google.com/spreadsheets/d/12NZpIs3Rl4UrTydeOMTZkVg3ao38IFg7/edit?usp=sharing&ouid=101528572552038951719&rtpof=true&sd=true
Sensitivity analyses of the uncertainty estimate for Emission Reductions.	https://drive.google.com/drive/folders/1sPjBD5kjd8JN6vXvLb6LaaTUjdRh8VtT?usp=sharing
Winrock International. (2018). Ejercicio: estimación de emisiones por actividades en bosques que permanecen como tales.	https://drive.google.com/file/d/1Mk8MACXEKDROXQg2UP7t4FDqQmc8Q5S9/view?usp=sharing
Geodatabase with the time-series of land use maps created for the reference period 1985/86-2012/13	https://drive.google.com/drive/folders/1XulVBwfZNam6aclksq-ZMQoK_ISqy0V2?usp=sharing
Ministry of the Environment and Natural Resources of Costa Rica. (2016). Modified REDD+ Forest reference emission level/forest reference level (FREL/FRL). COSTA RICA. Submission To The Unfccc Secretariat For Technical Review According To Decision 13/CP.19.	https://redd.unfccc.int/files/2016_submission_frel_costa_rica.pdf
Ministry of the Environment and Natural Resources of Costa Rica. (2018). Costa Rica Emission Reductions Program to the FCPF Carbon Fund (Second Revision).	https://www.forestcarbonpartnership.org/system/files/documents/Costa Rica ERPD EN_Oct24-2018_clean.pdf
Canty, M. J. y A. A. Nielsen, 2008. Automatic radiometric normalization of multitemporal satellite imagery with the iteratively re-weighted MAD transformation. Remote Sensing of Environment 112 (2008):1025-1036.	-
Olofsson et al. (2014) Good practices for estimating area and assessing accuracy of land change. Remote Sensing of Environment 148, 42-57.	
Ministry of the Environment and Natural Resources of Costa Rica. (2018). Costa Rica Emission Reductions Program to the FCPF Carbon Fund (Second Revision).	https://www.forestcarbonpartnership.org/system/files/documents/Costa Rica ERPD EN_Oct24-2018_clean.pdf
Accuracy Assessment 2001-2011 analysis	https://drive.google.com/file/d/1wUfwkW4E74Y-AZHCesr4coNIs0e_SabC/view?usp=sharing
Official roads map for Costa Rica (National System of Territorial Information - SNIT)	http://www.snitcr.go.cr/Metadatos/full_metadata?k=Y2FwYW1ldGFkYXRvczo6Y2FwYTo6SUdOXzU6OnZpYXNfNTAwMA

Title	File
Potere, D. (2008). Horizontal positional accuracy of Google Earth`s high-resolution imagery archive. In: Sensors, 8,12: 7973-7981 p.	http://www.mdpi.com/1424-8220/8/12/7973/htm
Sistema Nacional de Áreas de Conservación (SINAC) - Programa REDD-CCAD-GIZ. (2015). Cartografía base para el Inventario Forestal Nacional de Costa Rica 2013-2014.	https://www.sirefor.go.cr/pdfs/Documento-cartografia-Imprenta.pdf
Ministerio de Ambiente y Energía. (2015). Volumen 4 Marco conceptual y metodológico para Inventario forestal nacional de Costa Rica.	https://www.sirefor.go.cr/pdfs/Volumen4-MarcoC-Imprenta.pdf
Cifuentes, M. (2008). Aboveground Biomass and Ecosystem Carbon stocks in Tropical Secondary Forests Growing in Six Life Zones of Costa Rica (Oregon State University).	https://drive.google.com/file/d/1FsiTVc78EHcU0gQ4JfFJFSlPqesm3JFW/view?usp=sharing
Chave J et al. (2005). Tree allometry and improved estimation of carbon stocks and balance in tropical forests. Oecologia 145: pp. 87-99.	-
Cairns M.A., Brown S., Helmer E.H., and Baumgardner G.A. (1997). Root biomass allocation in the world's upland forests. Oecologia 111:1-11.	-
Myers, R. 2013. Fenología y crecimiento de Raphia taedigera (Arecaceae) en humedales del noreste de Costa Rica. En:Rev. Biol. Trop. (Int. J. Trop. Biol. ISSN-0034-7744) Vol. 61 (Suppl. 1): 35-45	
Tree Functional Attributes and Ecological Database. (2018). Wood Density. Recuperado el 10 de 12 de 2018.	http://db.worldagroforestry.org/
Calculo_FE_041220.xlsx	https://drive.google.com/file/d/1bqrLUfbUreR18MsNDHLWHRzZKEbF2RGr/view?usp=sharing
Hansen, M.C., Potapov, P.V., Moore, R., Hancher, M., Turubanova, A., Tyukavina, D., Thau, D., Stehman, S.J.m Goetz, T.R., Loveland, T.R., Egorov, A., Chini, L., Justice, C.O. & Townshend, J.R.G. 2013: High – Resolution Global Maps of 21st-Century Forest Cover Change	http://science.sciencemag.org/content/342/6160/850
Córdoba-Peraza, J. (2023). Informe final mapa de cobertura y uso de la tierra 2021 de la serie histórica de Costa Rica Secretaria REDD+.	https://drive.google.com/file/d/14pihK3Lqt622Mziv1qF2qz-IB6Ta-RtG/view?usp=sharing
Córdoba-Peraza, J. (2019). Informe final Elaboración del mapa de cobertura y uso de la tierra en Costa Rica 2015.	https://drive.google.com/file/d/14rmbzUdfHL9Zw62PQtbVmbY6blbIm79U/view?usp=sharing

Title	File
Córdoba-Peraza, J. (2020). Informe final Elaboración del mapa de cobertura y uso de la tierra en Costa Rica 2019.	https://drive.google.com/file/d/1WPr46RFOu_1Vr5rAYO_QDUlaL090zWd3/view?usp=sharing
LULC map 2019 (MCS 2019/20)	https://drive.google.com/drive/folders/1NRxm3yRV6yT1NgLwhp_z00wxyA0fpMdx?usp=sharing
LULC map 2021 (MCS 2020/21)	https://drive.google.com/drive/folders/19nhF3IXjVpS6EEuGfhCnS-HiQdI4A5RB?usp=sharing
Aguilar, L. 2023. Evaluación Visual Multitemporal (EVM) para la determinación de la degradación forestal en los puntos de la malla sistemática de puntos del SIMOCUTE N1 correspondiente al bosque permanente para el periodo 2019-2021 y recolección de datos de cambio de uso de suelo con datos de referencia recolectados mediante EVM con la malla sistemática de puntos del SIMOCUTE N1 sobre imágenes de alta resolución. II Informe. Procedimiento Operativo Estándar.	https://drive.google.com/drive/folders/1AA7GKA--SpT2hxbGMPCsg3QKYOSxVnYT?usp=sharing
Norway's International Climate and Forests Initiative Imagery Program	https://www.planet.com/nicfi/
Reference data and uncertainty estimate excel file	https://drive.google.com/drive/folders/19vN91oetoPetOxdetRiA0r6PtR-TDDiZ?usp=sharing
Decree 40464-MINAE	http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?param1=NRTC&nValor1=1&nValor2=84456&nValor3=108959&strTipM=TC
Manual of Requirements and Procedures for the Emissions Reduction Program	https://www.imprentanacional.go.cr/pub/2022/09/16/ALCA197_16_09_2022.pdf
Executive Decree N 43649-MINAE	https://onfcr.org/wp-content/uploads/MODIF-PSA-publicado-en-La-Gaceta-165-31-Ago-22.pdf
Decree 41127-MINAE	http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?nValor1=1&nValor2=86584
Decree 35669-MINAE	http://www.pgrweb.go.cr/scij/Busqueda/Normativa/Normas/nrm_texto_completo.aspx?nValor1=1&nValor2=66973
Concept note of Design and testing of a cross-sectorial Measurement, Reporting, Verification and Registry framework for Costa Rica's National Climate Change Metrics System	http://sinamecc.go.cr/biblioteca-sinamecc/conceptoSinamecc
SINAMECC Mitigation Actions Registry for the Costa Rica Emission Reduction Program (PRE)	https://docs.google.com/spreadsheets/d/1ltS_8NvZeF79ZfqAVrTVcltq2_UB88GB/edit?usp=sharing&ouid=101528572552038951719&rtpof=tru

Document information

Version	Date	Description
1	01 July 2024	Initial draft version of verification report.
1.1	05 July 2024	Version after the Technical Internal Review
1.2	11 July 2024	Version after FMT revision.