



## **Validation Report**

Version 3.0 25-October-2024

Document Prepared by AENOR.





# Forest Carbon Partnership Facility (FCPF) Carbon Fund

## **Validation Report (VAR)**

ER Program Name and Country:	Emission Reduction Program of Chile
Crediting Period	01-01-2018 to 31-12-2023
Name of the VVB:	AENOR CONFIA S.A.U.
Contact information of the VVB:	Génova 6. 28004 Madrid - Spain. Telephone +34 914326000 jfuentes@aenor.com www.aenor.com
Date of the Validation Report:	25-10-2024
Version:	3.0
Report Approved by	José Luis Fuentes



### 1. VALIDATION STATEMENT

The review and cross-check of explanations and justifications included in the Monitoring Report Version 3 dated on 23-08-2024 and supporting documents, have provided AENOR with sufficient evidence to determine with a reasonable level of assurance the compliance of the Emission Reduction Program in Chile, with the applicable validation with extended scope criteria and materiality set out in the Forest Carbon Partnership Facility (FCPF) requirements.

The scope covered by the validation with extended scope includes the ER Program's crediting period (01-01-2018 to 31-12-2023), the selected Reference Period is from 01-01-2001 to 31-12-2013 the accounting area is 13,232,401ha, the REDD Country Participant's Forest Monitoring System, the Centralized 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 carbon stock - Included

Conservation of Carbon Stocks - Included

Sustainable forest management - Excluded

Non-anthropogenic emissions - Included

#### Carbon pools

Above-Ground biomass (AGB) - Included

Below-Ground biomass (BGM) - Included

Dead Organic Matter-Included

Soil Organic Carbon (SOC) – Excluded

#### GHG

CO<sub>2</sub> - Included

CH<sub>4</sub> - Included

N<sub>2</sub>O – Included

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

A total of 17 MCAR, 4 mCAR and 8 Observations were raised as part of the validation process. All MCAR, mCAR and OBS were successfully addressed by the ER Program and closed by the VVB.

Regarding the reference Level, it is AENOR's opinion that the ER program for emission reductions program of Chile meets the applicable validation criteria set out in the FCPF requirements, and that it is free of material misstatements. Hence, AENOR recommends the FCPF Carbon Fund to continue with the relevant subsequent steps to proceed with the verification of the FCPF ERs.

Statement issuing date: 24-September-2024

Intended User: World Bank Group, FCPF Carbon Fund Participants

Javier Cócera Cañas

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## 2. Agreement

#### 2.1 Level of Assurance

The validation with extended scope audit assessment was conducted to provide a reasonable level of assurance concerning material misstatements, errors, or omissions in conformance with the validation 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 Reference Level 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 audit was to conduct a systematic, independent, and documented process for the evaluation of the GHG assertion made by the Emission Reduction Program in Chile, against the FCPF validation criteria to determine if the Program is in compliance to the agreed criteria, and its implementation can be expected to result in the proposed GHG reductions and removal enhancements as described in the ER Monitoring Report and its Annex 4.

The general objectives of the validation, 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 Reference Level has 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 Reference Level is materially accurate;
- Identify sources of uncertainty due to both random and systematic errors related with the Reference Level setting 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 validation with extended scope, as required by paragraph 33 of the VVG v2.5, were:

- Determine that the ER Program's scope in terms of sources, sinks and carbon pools is in accordance with the applicable validation criteria;
- Assess whether the ER Program's methods are in accordance with applicable validation criteria as the latest IPCC Guidelines;
- Assess if the Reference level is in accordance with applicable validation criteria.



#### 2.3 Criteria

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

- FCPF Methodological Framework, v3, April 2020.
- Validation and Verification Guidelines v2.5 September 2023.
- Buffer Guidelines v4.2 June 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 (v3.1 July 2024), the Validation Report Template (v1.2, September 2021) and the Verification Report Template (v1.4, May 2024);
- ISO 14064-3:2006
- ISO 14065:2013
- ISO 14066:2011

The following documents will be considered as documents that provide acceptable methods for satisfying requirements provided in the above criteria, as per VVG paragraph 38:

- 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 validation with extended scope, as per paragraph 37 of the VVG 2.5:

Criteria/indicator	Topic
3	Scope and methods
4	Carbon pools and GHG
5	IPCC guidelines
6	Data availability
7, 8, 9.1	Identification and address source(s) of uncertainty
10 to 13	Reference level
14.2, 14.3	Robust Forest Monitoring system
15	National Forest Monitoring System
16	Community participation in Monitoring and Reporting

#### 2.4 Scope

The scope of validation included as per section 8.4 of the VVG v.2.5:

- The Crediting Period of the FCPF program applicable to the ER Program;
- The selected Reference 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 Methodological Framework;
- The Carbon Pools and greenhouse gases to be accounted for as required by the Methodological Framework;
- The REDD Country Participant's Forest Monitoring System 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 validation, 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 validation process based on the desk review found that there are not quantitative and or qualitative material discrepancies affecting the Reference Level and the Reference Level setting.



## 3. METHODOLOGY AND PLANNING

## 3.1 Validation Team

Name	Role	Activities				
		Desk review	Site visit	Reporting	Supervision	Technical review
Javier Cócera	Team Leader	х		Х	х	
Pablo Moreno	Team Leader 2	х		Х	Х	
Daniel Bermejo	Validator/verifier auditor	х		Х		
Adrián Vidal	Validator/verifier auditor	X		Х		
Marcos Recio	Validator/verifier auditor	X		Х		
Joao Barata	Validator/verifier auditor trainee	Х		Х		
José Luis Fuentes	Reviewer					Х
Luis Otero	Local expert	Х	Х			

## 3.2 Validation schedule

Tasks	Deliverable	Date	Responsible
1. Kick-off meeting	Minute of KOM	08-02-2024	All parties
2. Reception of ERMR	ERMR	08-02-2024	FMT
3. Initial Desk Review	Preliminary relevant findings, if applicable	05-02-2024	AENOR
4. Draft Sampling Plan	Preliminary sampling plan	29-02-2024	AENOR
5. Sampling Plan reviewed by FMT	Sampling plan with comments	04-03-2024	AENOR/ FMT
6. Sampling plan	Sampling plan	07-03-2024	AENOR
7. Draft Audit Plan	Preliminary audit plan	02-04-2024	AENOR
8. Audit Plan reviewed by REDD Country and FMT	Audit plan with comments	05-04-2024	AENOR/ Country participant / FMT
9. Audit Plan	Audit plan	08-04-2024	AENOR
10. Country visit / office meetings	Visit	29-04-2024 to 03-05-2024	AENOR/ Country participant/ FMT
11. Issuance of the list of findings	List of findings	10-05-2024	AENOR
12. Review of the country's answer to the list of findings	Response of the Country to the 1 <sup>st</sup> round of findings	28-06-2024	Country Participant



13. Issuance of the second round of findings	Second round of findings, if applicable. If other rounds are needed, two weeks will be added for the review by the country, and two weeks to the review and response by AENOR	27-06-2024	AENOR
14. Review of the country's answer to the list of findings	Second round of findings, if applicable. If other rounds are needed, two weeks will be added for the review by the country, and two weeks to the review and response by AENOR	07-06-2024	Country participant is responsible to response the round of findings, and after the answer, AENOR is responsible to review the Country participant responses
15. Draft validation and verification reports preparation	Preliminary reports	29-07-2024	AENOR
16. Technical review	Draft validation and verification reports	26-07-2024	AENOR
17. Draft validation and verification reports revised by Country Participant and FMT	Plan with comments	10-08-2024	Country participant / FMT
18. Issuance of validation and verification report after revision	Final validation and verification reports	23-08-2024	AENOR

## 3.3 Methodology description

The validation with extended scope was performed simultaneously with the first verification, 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 with extended scope 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) validation and verification scope;
- c) validation and 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 ER Monitoring Report. All statements, claims and procedures described within the scope of the validation included in the ER Monitoring Report were part of the assessment of the



sampling/evidence-gathering plan and all the reviewed supporting evidence were evaluated against the 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 validation process.

The validation 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 validation team with the requested information or by making the appropriate corrections. Updated versions of the documentation were submitted by the Country Participant and the validation team reassessed them against the guidance documentation. This process was repeated iteratively until all MCAR and mCAR were fully closed.

The findings issued during the validation 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 Monitoring Report and included an examination of the Annex 4. Specially, in relation to the carbon pools, sources and sinks included within the scope of the ER Program, the methodological approach for the determination of the Reference Level, its alignment with IPPC guidelines, the data and parameters used for calculations, the estimated uncertainty, and the design of the NFMS.

In addition to the ER Monitoring Report, all documentation cited in it was downloaded and reviewed in order to verify its public accessibility and to crosschecked with the statements made in the ER Monitoring Report. These documents include, among others, calculation spreadsheets used for the determination of emission factors (EF) and estimation of the Reference Level, 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 validation 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 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 validation, 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 validate the stated figures in this validation 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 validation 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 by other means, AENOR as VVB carried out a "hybrid" audit that ensured the achievement of the assurance level required by the FCPF.

Thus, the Audit was performed an onsite visit, and many aspects were assessed onsite by the local expert, who visited the Country in April and May 2024. The rest of the team reviewed all documents remotely and they were able to attend the meeting remotely.

Three technical sessions (one for the validation with extended scope and one for each verification 1<sup>st</sup> and 2<sup>nd</sup>) were carried on April 30<sup>th</sup> the two first and 2<sup>nd</sup> of May 2024, with Country Participant's staff involved in the management of the ER Program and the elaboration of the ER Monitoring Report. The aim of the sessions was to cross-check and verify with the responsible staff of each area the procedures described in the 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 tables include the list of all Country Participant's staff that participated in the technical sessions.

Nō	Name	Organization
1	Rodrigo Sagardía	INFOR (Instituto Forestal de Chile)
2	Rodrigo Guinez	INFOR (Instituto Forestal de Chile)
3	Marco Barrientos	INFOR (Instituto Forestal de Chile)
4	Georgina Trujillo	CONAF
5	Noelia Espinosa	CONAF
6	Ana Rickmers	CONAF
7	Naikoa Aguilar Amuchastegui	FMT
8	María Michel Fuentes	FMT

The program covered during the audit was the following:

Activity & Information	Date	Location
Opening meeting Introduction and scope of the Audit. Review of meeting agenda. Generalities.	29/04/2024	Predio Rucamanque (38°40'41" S; 72°37'2" O)
Technical meeting 1 (validation with extended scope):  1. Carbon pools, sources and sinks  Sources and sinks associated with the REDD+ Activities.  Criterion 3 MF  Significant Carbon Pools and greenhouse gases. Criterion 4 MF	30/04/2024	CONAF offices in Santiago de Chile



Activity & Information	Date	Location
2. Reference level		
Use of the most recent Intergovernmental Panel on Climate Change (IPCC) guidance and guidelines. Criterion 5 MF.		
Key data and methods detailed and available for reconstruction of the Reference Level. Criterion 6 MF.		
Clearly documented Forest Reference Emission Level or Forest Reference Level for the ER Program Measures Area. Criterion 10,11, 12 and 13 MF		
3. Measurement, monitoring and reporting		
Robust Forest Monitoring Systems. Criterion 14 MF.		
National Forest Monitoring System. Criterion 15 MF.		
Community participation in Monitoring and Reporting. Criterion 16 MF.		
4. <u>Uncertainties of the calculation</u>		
Identification and address source(s) of uncertainty (identify, minimize, quantify remaining). Criterion 7, 8, 9.1 MF.		
Interviews to stakeholders DAY 1		
Independent agenda.	02/05/2024	
Technical meeting 2 (1 <sup>st</sup> verification):		
System for measurement, monitoring and reporting     emissions and removals occurring within the monitoring     period		
Consistency of monitored estimates with RL 14.1 MF.		
2. Quantification of emission reductions		
Calculation of Emission Reductions. Criterion 22 MF		
3. <u>Uncertainty of the estimate of emission reductions</u>		
Estimation of residual uncertainty. Criterion 9.2, 9.3 MF.		CONAF offices in
4. <u>Transfer of title to ERs</u>	02/05/2024	Santiago de Chile
REDD projects and programs DMS. Criterion 37.	02/05/2024	
Double counting. Criterion 23 MF.		
5. <u>Reversals</u>		
Addressing and account for reversals Criterion 18.2 and 19 MF		



Activity & Information	Date	Location
Interviews to Stakeholders DAY2	03/05/2024	
Closing Meeting: Remarks, clarifications, questions, following steps.	03/05/2024	CONAF offices in Santiago de Chile



### 4. VALIDATION OF ER PROGRAM DESIGN

## 4.1 Completeness of Report

AENOR made a review of the ER Monitoring Report, supporting information, procedures, calculations, and supporting documentation of the Emission Reduction Program in Chile, and confirms that Annex 4 of the ER Monitoring Report contains the required information to be subject to validation with extended scope.

## 4.2 Start date of the crediting period

AENOR assessed information provided in the ER Monitoring Report and is able to confirm that the start date of the ER Program's crediting period, 01 of January 2018, complies with the definition of the start date provided in the FCPF Glossary of Terms, since:

- It is not earlier than the date the first ER Program Measure generating ERs has been implemented.
- It has justified with objective evidence to AENOR.
- It is not earlier than June 2012, date of program inclusion into the carbon fund portfolio.
- It does not fall within the Reference period (January 1, 2001- December 31, 2010). The Reference Level of Chile considers the 2001 2010 period for activities that occur in forest remaining forests and 2001 2013 for activities that generate changes in land use.
- It has been demonstrated to AENOR that the ER Program complies with requirements on safeguards, carbon accounting, and double-counting as specified in the MF since the start date.

#### 4.3 Sources and Sinks

The ER Program selected the following GHG sources and sinks (REDD+ activities):

#### GHG sources and sinks (REDD+ activities)

Emissions from deforestation - Included

Emissions from forest degradation - Included

Enhancement of carbon stock - Included

Conservation of Carbon Stocks - Included

Non-anthropogenic emissions – Included

AENOR assessed the justifications and methods provided in Annex 4 - section 7.1 of the ER Monitoring Report and found acceptable the justifications provided to include or exclude the sources and sinks. Emissions from deforestation are included in the Reference Level, as well as emissions from forest degradation since these emissions are significant, in compliance with the requirements set by criterion 3 of the MF. Enhancement of carbon stocks are also included, since these are mainly removals related to reforestation, natural regeneration, and agroforestry plantations. Also included are the non-anthropogenic emissions mainly related to the browning effect, considered as such for the calculations and making an important impact on the results.

Additionally, AENOR confirms that the ER Program the inclusion of conservation of forest carbon stocks because there is national definition for this REDD+ activity, and there is comprehensive accounting for GHG emissions and removals from forests so that GHG emissions and removals that may be included in these sources are included in previous REDD+ activities.

There are no plans for improving data since the excluded sources represent a small fraction of forest-related emissions.



## 4.4 Carbon pools and GHG

The following carbon pools and types of GHG have been included from the ER Program:

#### **Carbon Pools**

- Above-Ground biomass (AGB) Included
- Below-Ground biomass (BGM) Included
- Dead Organic Matter Included
- Soil Organic Carbon (SOC) Excluded

#### GHGs

- CO2 Included
- CH4 Included
- N2O Included

AENOR has assessed the rationale of the ER Program for selecting or excluding carbon pools and greenhouse gases and deems that it is reasonable and in accordance with criterion 4 of the MF. The program accounts all significant carbon pools.

No overestimations are occurring due to the inclusion of non-significant carbon pools and GHG. AENOR confirms that the ER Program has no proposed plans for improving data on excluded pools, as they already included them all.

#### 4.5 Reference Period

According to the MR and the information provided by the Country, the reference period for the ERP has been estimated with the data available from different areas in different years depending on the availability of information being all the available information considered for its calculation and the different activities. Hence, resulting in a reference period 2001-2013 for changes in land use or sub-use and 2001-2010 for forest remaining forest. AENOR confirms that the start and end dates of the Reference Periods (01-01-2001 to 31-12-2013 have been defined in accordance with criterion 11 of the MF and that it complies with the definition provided in the FCPF Glossary of Terms.

#### 4.6 Forest Definition

The definition of the forest used for the construction of the FREL complies with the definition stated in Law 20,283 on restoration of Native Forests and Forestry Development of Forest and native Forest For this program, a combination of these 2 definitions is used. "Site inhabited by plant formations dominated by trees and which occupies a surface of at least 5.000 square meters with a minimum width of 40 meters, treetop cover above 10% of said total surface in arid and semi-arid conditions, and 25% in more favorable conditions" adding all native forests diffenied by "Forest formed by native species of natural generation, natural regeneration, or plantation under canopy with the same species existing in the original distribution area, with accidental presence of randomly distributed exotic species" and the definition of forest plantations provided by FAO 2015

AENOR assessed the information according to criterion 12 MF and the guidance from UNFCCC decision 12/CP.17, and deems that it was an appropriate selection of forest definition, and consistently used in the construction of the Reference Level of the ERP in Chile.

## 4.7 Calculation of average annual historical emissions

After review of all ER Monitoring Report information, procedures, calculations, and supporting documentation, and according to the scope of the validation with extended scope carried out, AENOR confirms that:

 Payment for emission reductions Program in Chile made a systematic and step-by-step assessment of the methods, assumptions, and approaches used for the calculation of historical emissions, i.e., the Reference Level;



- All equations parameters and fixed data, such as AD and EF, are appropriately linked to the
  equations used for the quantification of the Reference Level;
- The correctness of presented information, publicly available, reported with a transparent and coherent step-by-step process that enables reconstruction of the Reference Level to validate its compliance with the requirements of applicable criteria;
- 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;
- The GHG emissions, emission reductions of the Reference Level, and its technical corrections, are materially accurate, and free of material misstatements, errors, or omissions;
- The ER Program's equations and methods are in accordance with applicable validation criteria as
  the latest IPCC Guidelines, using the most recent guidance and guidelines, as adopted or
  encouraged by the Conference of the Parties as a basis for estimating forest related GHG
  emissions by sources and removals by sinks.
- The emissions from forest degradation are accounted. These emissions were estimated using the best available data according to indicator 3.3 of the MF.

## 4.8 Activity data and emission factors

### 4.8.1 Activity data

AENOR confirms that the reliability of the source and nature of the reported evidence justified the selection of the monitored data and parameters; and that all parameters related to activity data and described below have been reported in line with guidelines provided in the template and validation criteria.

AENOR confirms the correctness of each step of monitoring from measurement to data transfer and calculation and confirmed the information for each parameter is complete and that the stated parameters are free of error and material misstatements.

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

AENOR confirms that Activity Data were determined periodically and allowed for the Reference Level to be estimated for the Reference Period.

Assessment details are as follows per activity data grouped parameters:

Parameters	$\Delta A_{TO\_OTHERSi,t}$ = Areas of different Forest Types(i) converted to another category of land use during the 2001 – 2013 period.
Free of Material Misstatement	Yes
Reported Appropriately	Yes
	The activity data used for the reference period was obtained from a sampling approach for estimating areas that incorporates the following characteristics:
Assessment Details	A sufficiently dense and balanced sample size to capture changes in land cover classes.
	Hybrid machine (algorithm) / human (visual) interpretation to assign land cover classes and changes: Several change detection algorithms, from several sources of satellite images and/or other



spatially explicit information and visual interpretation were used to detect change classes.

Cross-validation principle, both for machine interpretation (convergence of evidence) and human interpretation (elimination of subjective bias). This required the formalization of decision rules.

Quality control and integrated quality assurance at all stages of the process.

ER-MR presented information about data sources for estimating Activity Data, methods for mapping land-use and land-use change (including sampling design and size, assessment and labelling, analysis and Activity Data calculation), QA/QC procedures applied, values applied, and uncertainty associated with these parameters.

The validation team conducted an independent analysis of similar remotely sensed data to confirm that the source data was reliable and appropriate. Additionally, the validation team was able to ensure that LULC classification was appropriate and followed the defined classification system.

The validation 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. An empirical analysis with a reference product (ESA CCI map 2015-2020) shows that a systematic sampling of 1km x 1km over the ERP area is required to capture the changes with a relative sampling error of less than 15% on the land cover change classes. Complementary, the audit team attended during the onsite visit, the explanations from the technical staff of Chile and considers that the explanations and the development of these parameters are correct and are in relation to the information stated in the MR.

Parameters	$A_{\text{DegFF}}$ = Area of degradation of forests remaining forests monitored during 2001 - 2010 period, in areas not affected by browning (NBA).
Free of Material Misstatement	Yes
Reported Appropriately	Yes
Assessment Details	ER-MR presented information about data sources for estimating Activity Data, methods for mapping land-use and land-use change (including sampling design and size, assessment and labelling, analysis and Activity Data calculation), QA/QC procedures applied, values applied, and uncertainty associated with these parameters.



The validation team conducted an independent analysis of similar remotely sensed data to confirm that the source data was reliable and appropriate. Additionally, the validation team was able to ensure that LULC classification was appropriate and followed the defined classification system.
The validation 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 validation team has also reviewed the specific manual used to improve the quality of the process and the value. The visual interpretation of the plots uses Collect Earth Online projects to enable the technicians to assess various drivers of forest degradation.

Parameters	A <sub>DegNFF</sub> = Surface of degradation areas resulting from the conversion of forests into plantations during the 2001-2013 period.
Free of Material Misstatement	Yes
Reported Appropriately	Yes
Assessment Details	ER-MR presented information about data sources for estimating Activity Data, methods for mapping land-use and land-use change (including sampling design and size, assessment and labelling, analysis and Activity Data calculation), QA/QC procedures applied, values applied, and uncertainty associated with these parameters.
	The validation team conducted an independent analysis of similar remotely sensed data to confirm that the source data was reliable and appropriate. Additionally, the validation team was able to ensure that LULC classification was appropriate and followed the defined classification system.
	The validation 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 validation team has also reviewed the specific manual used to improve the quality of the process and the value. The visual interpretation of the plots uses Collect Earth Online projects to
enable the technicians to assess various drivers of forest degradation.

Parameters	A = Area burned between 2001-2010 in the ERP Regions.
Free of Material Misstatement	Yes
Reported Appropriately	Yes
	ER-MR presented information about data sources for estimating Forest Fire Activity Data, methods for mapping land-use and land-use change (including sampling design and size, assessment and labelling, analysis and Activity Data calculation), QA/QC procedures applied, values applied, and uncertainty associated with these parameters.
	The validation team conducted an independent analysis of similar remotely sensed data to confirm that the source data was reliable and appropriate. Additionally, the validation team was able to ensure that LULC classification was appropriate and followed the defined classification system.
Assessment Details	The validation 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 validation team has also reviewed the specific manual used to improve the quality of the process and the value. The visual interpretation of the plots uses Collect Earth Online projects to enable the technicians to assess various drivers of forest degradation.

Parameters	$\Delta$ Atoothers $i$ , $t$ = Area of used non-forest land converted into forest during the reference level.
Free of Material Misstatement	Yes
Reported Appropriately	Yes
Assessment Details	ER-MR presented information about data sources for estimating Activity Data, methods for mapping land-use and land-use change (including sampling design and size, assessment and labelling,



analysis and Activity Data calculation), QA/QC procedures applied, values applied, and uncertainty associated with these parameters.
The validation team conducted an independent analysis of similar remotely sensed data to confirm that the source data was reliable and appropriate. Additionally, the validation team was able to ensure that LULC classification was appropriate and followed the defined classification system.
The validation 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 validation team has also reviewed the specific manual used to improve the quality of the process and the value. The visual interpretation of the plots uses Collect Earth Online projects to enable the technicians to assess various drivers of forest degradation.

Parameters	A <sub>EnhFF</sub> = Areas of non-conservation native forest that remains forest during the 2001– 2010 period for the Sixth Region of the ERP, in areas not affected by browning (NBA).
Free of Material Misstatement	Yes
Reported Appropriately	Yes
Assessment Details	ER-MR presented information about data sources for estimating Activity Data, methods for mapping land-use and land-use change (including sampling design and size, assessment and labelling, analysis and Activity Data calculation), QA/QC procedures applied, values applied, and uncertainty associated with these parameters.
	The validation team conducted an independent analysis of similar remotely sensed data to confirm that the source data was reliable and appropriate. Additionally, the validation team was able to ensure that LULC classification was appropriate and followed the defined classification system.
	The validation 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 validation team has also reviewed the specific manual used to
improve the quality of the process and the value. The visual
interpretation of the plots uses Collect Earth Online projects to
enable the technicians to assess various drivers of forest
degradation.
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Parameters	$\Delta A_{TO\_OTHERSi,t}$ = Areas of conservation native forest that remains as such during the 2001-2010 period in the Six Region of the ERP, in areas not affected by browning (NBA).
Free of Material Misstatement	Yes
Reported Appropriately	Yes
	ER-MR presented information about data sources for estimating Activity Data, methods for mapping land-use and land-use change (including sampling design and size, assessment and labelling, analysis and Activity Data calculation), QA/QC procedures applied, values applied, and uncertainty associated with these parameters.
	The validation team conducted an independent analysis of similar remotely sensed data to confirm that the source data was reliable and appropriate. Additionally, the validation team was able to ensure that LULC classification was appropriate and followed the defined classification system.
Assessment Details	The validation 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 validation team has also reviewed the specific manual used to improve the quality of the process and the value. The visual interpretation of the plots uses Collect Earth Online projects to enable the technicians to assess various drivers of forest degradation.

Parameters	Browning = Areas of native forest that remains as such affected by browning during the 2001–2010 period in the six Region of the ERP.
Free of Material Misstatement	Yes
Reported Appropriately	Yes
Assessment Details	ER-MR presented information about data sources for estimating Browning Data, methods for mapping land-use and land-use change (including sampling design and size, assessment and labelling,



analysis and Activity Data calculation), QA/QC procedures applied, values applied, and uncertainty associated with these parameters.

The validation team conducted an independent analysis of similar remotely sensed data to confirm that the source data was reliable and appropriate. Additionally, the validation team was able to ensure that LULC classification was appropriate and followed the defined classification system.

The validation 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 validation team has also reviewed the specific manual used to improve the quality of the process and the value. The visual interpretation of the plots uses Collect Earth Online projects to enable the technicians to assess various drivers of forest degradation.

The Audit team has received confirmation from the FMT team that the browning effect emissions are excluded in both conservation and degradation activities whereas in affected forest strata, it will be considered.

Thus, AENOR confirms the sufficiency of quantity and appropriateness of quality of the evidence used to determine the Activity data factors and later used in the GHG reductions and removals calculations, and also that the Activity data is compliant with the Methodological Framework and the IPCC Guidelines and Guidance.

#### 4.8.2 Emission Factors

AENOR confirms the reliability of the source and nature of the reported evidence justified the selection of the emission factors; and that these have been reported in line with guidelines provided in the template and validation criteria.

AENOR confirms the correctness of each step of monitoring from measurement to data transfer and calculation and confirms the information for each parameter is complete and that the stated parameters are free of error and material misstatements.

AENOR confirms the source of emission factors is from data collected during different national inventories, and models or average values of direct measurements reported in literature and following IPCC Guidance and Guidelines.

AENOR confirms that emission factors of the ER-MR and the methods to determine them are the same for Reference Level setting and for Monitoring.

Assessment details on emission factors are as follows:

Parameters Root-to-shoot ratios of native forest (R factor)
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Parameters	Biomass expansion factor (BEF) for the native forest
Free of Material Misstatement	Yes
Reported Appropriately	Yes
	The data used in this document are from Tier 2 level (country-specific data) and come from the information collected in the country (Gayoso et al., 2002; INGEI, 2020).
	The validation team conducted independent analysis of the information provided to confirm that the source data was reliable and appropriate. The validation team has reviewed the sources and these parameters were explained during the onsite visit.
Assessment Details	Additionally, the validation team judged that the methods to estimate these parameters were reasonable and appropriate.
	The validation team performed an independent check of the Uncertainties in belowground biomass estimates for dense and secondary forests.
	The validation team conducted independent data checks for each step necessary in the quantification of these parameters. Additionally, the validation team conducted an independent review of the literature cited in reference to each equation in the calculation procedure.



The uncertainty associated with these parameters was independently calculated after a thorough review of the calculation spreadsheets; and the validation team reviewed and confirmed that the estimation of uncertainty was correct and without any error.
The validation team reviewed the ER Monitoring Report and associated links to ensure that all data related to this parameter are made public.

	Basic wood density value (D)			
Parameters				
Free of Material Misstatement	Yes			
Reported Appropriately	Yes			
Assessment Details	The data used in this document are from Tier 2 level (country-specific data) and come from the information collected in the country (Gayoso et al., 2002; INGEI, 2020).			
	The validation team performed an independent check of the Uncertainties in AG biomass estimates for all calculations in Chile.			
	The validation team conducted independent data checks for each step necessary in the quantification of these parameters. Additionally, the validation team conducted an independent review of the literature cited in reference to each equation in the calculation procedure.			
	The uncertainty associated with these parameters was independently calculated after a thorough review of the calculation spreadsheets; and the validation team reviewed and confirmed that the estimation of uncertainty was correct and without any error.			
	The validation team reviewed the ER Monitoring Report and associated links to ensure that all data related to this parameter are made public.			

Parameters	Above and below ground biomass of other uses			
Free of Material Misstatement	Yes			
Reported Appropriately	Yes			
	The data used in this document are from Tier 2 level (country-specific data) and come from the information collected in the country (Gayoso et al., 2002; INGEI, 2020) and a Expert National Panel.			
Assessment Details	Data from the literature has been re-evaluated by the VVB team, which confirms that the values are consistent with those of the program area.			
	The validation team conducted independent data checks for each step necessary in the quantification of these parameters. Additionally, the validation team conducted an independent review of the literature cited in reference to each equation in the calculation procedure.			



The uncertainty associated with these parameters was independently
calculated after a thorough review of the calculation spreadsheets; and
the validation team reviewed and confirmed that the estimation of
uncertainty was correct and without any error.
The validation team reviewed the ER Monitoring Report and associated links to ensure that all data related to this parameter are made public.

Parameters	Above and below ground biomass of native forest			
Free of Material Misstatement	Yes			
Reported Appropriately	Yes			
Assessment Details	The data for this parameter has been has been gathered at a national level from the INGEI (2020)			
	Data from the literature has been re-evaluated by the VVB team, which confirms that the values are consistent with those of the program area.			
	The validation team conducted independent data checks for each step necessary in the quantification of these parameters. Additionally, the validation team conducted an independent review of the literature cited in reference to each equation in the calculation procedure.			
	The uncertainty associated with these parameters was independently calculated after a thorough review of the calculation spreadsheets; and the validation team reviewed and confirmed that the estimation of uncertainty was correct and without any error.			
	The validation team reviewed the ER Monitoring Report and associated links to ensure that all data related to this parameter are made public.			

Parameters	Dead organic matter of native forest (DOM)			
Free of Material Misstatement	Yes			
Reported Appropriately	Yes			
Assessment Details	The data for this parameter has been has been gathered at a national level from the INGEI (2020) for mixed forests a weighted average is used with the data from different forest types. The SOP provided by the Country Participant SOP_06 Fields Operations Manual was reviewed and checked its implementation in the field visit carried during the country visit.  Data from the literature has been re-evaluated by the VVB team, which confirms that the values are consistent with those of the program area. The validation team conducted independent data checks for each step necessary in the quantification of these parameters. Additionally, the validation team conducted an independent review of the literature cited in reference to each equation in the calculation procedure.			



The uncertainty associated with these parameters was independently
calculated after a thorough review of the calculation spreadsheets; and
the validation team reviewed and confirmed that the estimation of
uncertainty was correct and without any error.
The validation team reviewed the ER Monitoring Report and associated links to ensure that all data related to this parameter are made public.

Parameters	Combustion factor				
Free of Material Misstatement	Yes				
Reported Appropriately	Yes				
Assessment Details	This data is taken from the IPCC 2006 for extra tropical forest. The uncertainty and QA/QC methods are the ones set by IPCC documentation.				
	Data from the literature has been re-evaluated by the VVB team, which confirms that the values are consistent with those of the program area.				
	The validation team conducted independent data checks for each step necessary in the quantification of these parameters. Additionally, the validation team conducted an independent review of the literature cited in reference to each equation in the calculation procedure.				
	The uncertainty associated with these parameters was independently calculated after a thorough review of the calculation spreadsheets; and the validation team reviewed and confirmed that the estimation of uncertainty was correct and without any error.				
	The validation team reviewed the ER Monitoring Report and associated links to ensure that all data related to this parameter are made public.				

Parameters	CH₄ emission factor				
Free of Material Misstatement	Yes				
Reported Appropriately	Yes				
Assessment Details	The methane emission factor has been taken from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 4, Chapter 2, Table 2.5				
	The validation team conducted independent data checks for each step necessary in the quantification of these parameters. Additionally, the validation team conducted an independent review of the literature cited in reference to each equation in the calculation procedure.				
	The uncertainty associated with these parameters was independently calculated after a thorough review of the calculation spreadsheets; and the validation team reviewed and confirmed that the estimation of uncertainty was correct and without any error.				
	The validation team reviewed the ER Monitoring Report and associated links to ensure that all data related to this parameter are made public.				



Parameters	N <sub>2</sub> O emission factor			
Free of Material Misstatement	Yes			
Reported Appropriately	Yes			
Assessment Details	The $N_2O$ emission factor has been taken from the 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume 4, Chapter 2, Table 2.5.			
	The validation team conducted independent data checks for each step necessary in the quantification of these parameters. Additionally, the validation team conducted an independent review of the literature cited in reference to each equation in the calculation procedure.			
	The uncertainty associated with these parameters was independently calculated after a thorough review of the calculation spreadsheets; and the validation team reviewed and confirmed that the estimation of uncertainty was correct and without any error.			
	The validation team reviewed the ER Monitoring Report and associated links to ensure that all data related to this parameter are made public.			

Parameters	Periodic annual increment (PAI) according to forest type			
Free of Material Misstatement	Yes			
Reported Appropriately	Yes			
Assessment Details	The INGEI (2020) provides this data. The audit team was able to confirm the correct implementation of the SOPs used by the Country Participant during the site visit.			
	The uncertainty associated with these parameters was independently calculated after a thorough review of the calculation spreadsheets; and the validation team reviewed and confirmed that the estimation of uncertainty was correct and without any error.			
	The validation team reviewed the ER Monitoring Report and associated links to ensure that all data related to this parameter are made public.			

Thus, AENOR confirms the sufficiency of quantity and appropriateness of quality of the evidence used to determine the Emission factors and later used in the GHG reductions and removals calculations, and also that the Emission Factors are compliant with the Methodological Framework and the IPCC Guidelines and Guidance.

## 4.9 Adjustments to the average annual historical emissions over the reference period

The Reference Level has not been adjusted in the average annual historical emissions regarding the conditions mentioned in Criterion 13 in ER-MR.



However, the browning has caused major changes in the country's forest situation and the project that is consulting on it as part of the program's actions on monitoring, could recommend future adjustments in subsequent verifications.

Therefore, the VVB will assess the results of the Browning project in subsequent verifications.

#### 4.10 Estimated Reference Level

AENOR assessed the Reference Level for the ER Program for the Crediting Period and confirms that the Reference Level is materially accurate. AENOR confirms the relation, and its consistency, between the Reference Level, the development of the FREL/FRL submitted to the UNFCCC and the country's existing greenhouse gas inventory.

The results of the estimated Reference Level before technical correction are as follows, according to ER Monitoring Report:

Year of Reporting period	Average annual historical emissions from deforestation over the Reference Period (tCO2e/yr)	If applicable, average annual historical emissions from forest degradation over the Reference Period (tCO2e/yr)	If applicable, average annual historical removals by sinks over the Reference Period (tCO2e/yr)	Adjust- ment, if applic-able (tCO2e/yr)	Reference level (tCO2e/yr)
2018	5,140,727	11,914,436	-10,740,394	NA	6,314,770
2019	5,140,727	11,914,436	-10,740,394	NA	6,314,770
Total	10,281,454	23,828,872	-21,480,788	0	12,629,539

## 4.11 Consistency of the Program's Reference Level with national FREL/FRL and GHG Inventory

All procedures and methodologies to produce ADs and EFs are defined and validated at national level by all actors in the NFMS. The methodologies designed by these groups are the same and respond to the local and international context and the roles and responsibilities of the different national organisations remain identical.

The collection procedures on EFs are the same used at national and sub-national level. It is worth recalling that the procedure for producing ADs recently updated with the support of the World Bank, FAO and IGN-FI, is the one that will be used for the next determinations of ADs both at the sub-national and national levels in the framework of the development of FRELs.

AENOR confirms that ERP-Chile proposed Reference Level is consistent with the national FREL/FRL submitted to the UNFCCC and with the country's existing and future GHG inventory.

## **4.12** Uncertainty of the Reference Level

#### 4.12.1 Identification and assessment of sources of uncertainty

The Country Participant identified and assessed though a stepwise approach, the sources of uncertainty of the Reference Level 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.



The validation 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 Reference Level due to random and systematic errors. AENOR confirms that the sources of uncertainty are systematically identified and correctly assessed in the Reference Level, and addressed according to validation 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.

#### 4.12.2 Uncertainty of the estimate of the Reference Level

Chile's ER Program applied Monte Carlo methods (IPCC Approach 2) for quantifying the Uncertainty of the Emission Reductions. Because the MC propagation analysis includes 134 parameter values, it has been provided access to uncertainty and emission factor calculation tool to see all parameter values used in the analysis. The Country Participant estimated the uncertainty of the Reference Level based on Monte Carlo analysis. The uncertainty estimate for the Reference Level 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 validation team reviewed and confirmed that elements mentioned in section 4.12.1 related to the estimation of uncertainty for the Reference Level 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 ER Monitoring Report. Therefore, AENOR concludes that the application of Monte Carlo simulation for the quantification of Uncertainty of the Reference Level was performed correctly and free of errors and misstatements.

## 4.12.3 Sensitivity analysis and identification of areas for 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.

AENOR confirms that uncertainty of AD and EF used in Reference Level setting and the monitoring period are quantified in a consistent way.

AENOR reviewed and confirmed that above-mentioned (section 4.12.1) elements related to the sensitivity analysis were all addressed in the provided calculation spreadsheets. The validation team also confirmed that the estimations were free of errors and the results matched the sensitivity analysis included in the ER Monitoring Report. Therefore, AENOR concludes that the sensitivity analysis was performed correctly.

## 4.13 Data quality and availability

The validation team reviewed the quality and descriptions of the data and reproduced calculations of the Reference Level as presented in the ER Monitoring Report and related documents and is able to confirm that the steps are described with enough detail to enable the reconstruction of the Reference Level.

Additionally, AENOR confirms that the main methodological steps, relevant spatial information, maps, or synthesized data, related to the Reference Level, and the reported emissions are documented and included in the monitoring report and made publicly available online. There is not a specific webpage to find together all the references, but along the ER Monitoring Report there are links and references that lead to the data, methods, and assumptions.



#### 5. NON-COMPLIANCES AND OBSERVATIONS

To ensure conformance of the ER Program with all requirements set by the FCFC and the audit criteria (section 2.3), the validation 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 validation 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) nonmaterial 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 validation 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 validation team with updated versions of the ER Monitoring Report, which the validation team reassessed against the guidance documentation. The validation 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.

All findings issued were closed in this audit. The findings are reported in the appendix 1 of this report.



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

#### Non Conformities (NCs)

Major CAR ID:	01	Date: 10/05/2024		
Description of NC				
In the shared ER-PD there are several links that do not work or seem to be broken, please update this as the information shall be available for every reader.				
Project Participant response		Date: 08/06/2024		
This is not part of the auditing, the ERPD does not must be reviewed.				
Documentation provided by the Project Participant				
VVB Assessment		Date: 20/06/2024		
Noted. Closed.				

Corrected, CAR02 closed.



Major CAR ID:

Description of NC

In the initial table, the version of the document is missing.

Project Participant response

Date: 08/06/2024

The version of this document corresponds to number 2. It has been corrected in the text.

Documentation provided by the Project Participant

VVB Assessment

Date: 20/06/2024



Major CAR ID:	03	Date: 10/05/2024
Description of NC		



In section 1.1 of the ER-MR, regarding the requirements of the template, in the subsection: Progress on the actions and interventions under the ER program, the key dates and the milestones are missing.

The monitoring report was updated considering the following corrections:

- Outcomes of deforestation reduction actions: 1,297 inspections at property level, derived from third party complaints, were conducted in the 6 regions of the accounting area during the reporting period. 438 property inspections and compliance controls were also conducted through satellite images (SAT/Logging and Extraction Monitoring Unit, LEMU). 686 inspections on firewood production sites and roadside checks were achieved in accordance with Title IV of 20,283 (D.S N°93). Finally, 11,878 hectares associated to native forest management, forestry law, extraction, felling, or work plan related to technical studies were also inspected. Actions executed during 2018 and 2019 by the CONAF Inspection Management, as established in Law No. 20,283
- Outcomes of forest degradation reduction actions: Multiple initiatives considering improvements on firewood productive chains were conducted during the reporting period, focused on reducing market informality and therefore enabling sustainable management. Some of these actions included supporting beneficiaries (owners and farmers) in order to raise financing for the production, processing or commercialization of goods and/or services, associative business development planning, farmer certification and associativity network development (technical tours, work groups). In 2018, 688 firewood production sites were addressed with a total stock of 451,216 stere cubic meters of dry firewood, while 419 production sites with a total stock of 255,284 stere cubic meters of dry firewood were addressed in 2019. During the period of this report 2018-2019, related to other aspects of degradation, 27 community plans for forest fire prevention were developed within the framework of the Prepared Community program for forest fires, along with 51 municipal protection plans for areas at risk of forest fires. From a more technical perspective, 10 assessments were conducted for large fires during the 2018 - 2019 period. Finally, regarding the extent of capacity building for reducing risks for degradation, work was done with 5,329 beneficiaries of training sessions and inspections within the controlled burning program for forestry and agricultural waste. 295,260 beneficiaries were also trained in preventive forest management.
- Throughout the monitoring period (2018-2019), outcomes of stock enhancement actions: 146 hectares were implemented within the framework of the participative afforestation program, while the tree planting program delivered 345,000 and 65,000 native plants to beneficiaries and indigenous communities/associations, respectively. Also 1,330 native forest sustainable management plans were subsidized under Law 20,283 of Native Forest Recovery and Forest Promotion, which entails implementing actions across a total of 2,863 hectares.
- Throughout the monitoring period (2018-2019), Outcomes of conservation actions: 14 concession audits were conducted in the National System of State-Protected Wilderness Areas (SNASPE, acronym in Spanish), including 4 National Parks located in 3 regions within the Accounting Area (AC, acronym in Spanish). 5 management plans under the SNASPE enhanced planning method -including actions on climate change- were also developed or updated, and a Wilderness Protected Area planning manual was developed. 40 strategies for threat management in 13 National Parks, 19 National Reserves and 4 Natural Monuments were implemented during the reporting period, along with creation, expansion and re categorization proposals for 5 Protected Wilderness Areas (ASP, acronym in Spanish) being also generated.



• Throughout the monitoring period (2018-2019), outcomes of cross – cutting actions: 425 teachers from rural schools and the forest – urban interface were trained in systematic environmental education issues. 42 education plans for ASP conservation were also developed, and 1,617 beneficiaries were trained in urban woodland and environmental management. In a more technical aspect, 12 large – scale training activities were conducted regarding the benefits of Law 20,283, its promotion instruments, procedures (deadlines, requirements, amounts), topics regarding native forest silviculture, planning (management plans) along with commercialization and productive chains.

#### Activities funded by international agencies

- Throughout the monitoring period (2018-2019), FPCF II/Implementation of <u>Specialized Technical Regional Units (UTRE, acronym in Spanish)</u>: these units were established in each region of the ER Program with the aim of providing expert advice regarding the implementation of natural resource best management practices within the framework of ENCCRV action measures. UTREs were implemented in the regions within the ER Program to enhance the technical capabilities of the institution and local beneficiaries (Mainly medium and small-scale owners).
- GEF/<u>Sustainable Land Management Project</u> (PMST, acronym in Spanish): this project implements activities in the La Araucanía region of the ER Program. 44 activities were implemented during the 2018 – 2019 period in this region, mainly associated to the ENCCRV MT.6 action measure, specifically regarding environmental training and education.
- Throughout the monitoring period (2018-2019), UN-REDD National Program/<u>Support Program for the Chilean National Strategy on Climate Change and Vegetation Resources (ENCCRV)</u>: Assessment, implementation and gathering of lessons learned from operative action measures looking to establish new sustainable, replicable and scalable forest management models, including project implementation for Environmental Services based payment projects (PSA, acronym in Spanish).
- Throughout the monitoring period (2018-2019), Swiss Agency for Development and Cooperation (SDC)/Second contribution phase for ENCCRV development: a pilot project of ecological restoration was implemented in the La Araucanía region during 2019 during this second collaboration phase. The purpose of this initiative was the environmental restoration of the Purén Alto River, to improve water availability and reduce erosion in small rural properties as a climate change adaptation action. The main activities conducted in the territory were the placement of erosion control modules, reforestation with native species, and innovation activities associated to rainfall accumulation, collection, and consumption.

Moreover, in table of page 10 about drivers of deforestation and degradation, there are some differences between this table and the ERPD page 42. Related to the deforestation and degradation drivers the ERPD table 10.1 section 10, there are measures described for each driver identified. Clarify why not all the mitigation measures have been implemented or update the information accordingly. In the ERPD the following drivers where mentioned:

- 1. Expansion due to agricultural and livestock farming.
- 2. Urban expansion.
- 3. Unsustainable use of vegetation resources.
- 4. Forest fires.
- 5. Expansion of monoculture forests.



- 6. Use of forests for livestock.
- 7. Effects of climate change, desertification and drought.

And measures for 5 out of the 7 drivers were described, please provide an explanation on why not every measure has been implemented or complete the ER-MR with the complete implementation of the strategy.

Project Participant response		Date: 08/06/2024		
The information was updated according to the following, just for the mentioned drivers:				
DD cause/driver	ERPD proposed strategy to reduce displacement risks (2016)	Strategy update for report period (2018-2019)		



## Expansion of monoculture forests

This situation could spread to regions in the north of the ER Programme Area due to strong economic returns from plantations in there. Maps from the Land Registry indicate that this is a relatively common transition in these regions. particularly the substitution of treefilled scrubland, which is now considered native forest. а However, national mitigation measures, such as improved auditing of the CONAF, environmental awareness and the recognition of native forests, should avoid this type of displacement. Focusing on mitigation in terms of planning and territorial legislation with a view to prohibiting such substitution in certain areas could cause displacement to other areas within the ER Programme Area. However, planning also involves designating optimal areas establishing new exotic plantations where substitution would cause less environmental damage, thus diminishing the potential for displacement.

As part of the measures related to planning at the territorial level. expected that priority areas for exotic plantations will be delimited through the Territorial Regional Planning Plans. The above, considering that in 2018 Law No. 21,074 was enacted regarding strengthening of the regionalization of the country and which modifies Law No. 19,175. objective of this law is to regulate the preparation and approval of Regional Territorial Planning Plans in coherence with the regional development strategy, national the territorial planning policy, long-term climate the strategy and the regional climate change action plan.

The plans are characterized by being instruments that guide the use of the region's territory sustainable development, define strategic guidelines and macrozoning of the territory, establish binding conditions for the location of waste, infrastructure and productive activities and recognize areas under State protection.

#### **Documentation provided by the Project Participant**

VVB Assessment Date: 13/06/2024

Key milestones have been included and the modifications required have been made. CAR03 is closed.



Major CAR ID:	04	Date: 10/05/2024
Description of NC		

In section 1.2 There is an incongruence in the indirect causes table in section 1.2 in the relevance

for Public policy deficiencies for regulation as it is identified as "Very high" in the table and in the text that converts to medium, please clarify. Something similar happens with "Deficiency in public policies due to promotion or enforcement and within plagues and diseases it is stated that the degree of relevance of this driver has increased. However, it has been maintained.			
Project Participar	nt response	<b>Date:</b> 08	/06/2024
The section was	updated accordin	g to the ne	ext information:
Public policy deficiencies for regulation	Very high	Ver y high	The level of relevance of this driver is still very high, as even though efforts have been made to advance in the improvement and promotion of regulatory instruments for the forestry sector Strengthening skills in the application evaluation process. Preparation of various instructions and procedures that allow improving the evaluation of requests related to Law Decree No. 701, Law No. 20 283 and Supreme Decree No. 490, of 1976, of the Ministry of Agriculture, at this point a focused instruction stands out in the evaluation of native forest cutting management plans for recovery for agricultural purposes. Training for the use of the Forest Extraction and Harvest Monitoring System (LEMU). Training for the use of the Planet platform, a technological tool that allows interaction with geographic information for data integration within the framework of the Integrated Forest Ecosystem Monitoring System project) a large gap still persists, and the existing instruments are neither sufficient nor adequate for meeting goals and achieving sectorial climate challenges.
Deficiency in public policies due to promotion or enforcement	Medium	Me diu m	The level of relevance of this driver remains medium, as even though efforts have been made to advance in the improvement and promotion of regulatory instruments for the forestry sector, a large gap still persists, and the existing instruments are neither sufficient nor adequate for meeting goals and achieving sectorial climate challenges.
Documentation provided by the Project Participant			
VVB Assessment Date: 13/06/2024			
Correction reviewed. CAR04 closed.			





Major CAR ID: 05 Date: 10/05/2024

### **Description of NC**

#### In section 2.1:

The equation 9 is not exactly the eq 2.8 of the IPCC as reported, it is summarized, it needs to be complete. Also, equation 11, which is reported as 2.8 of the IPCC 2006 is not correct.

#### **Project Participant response**

Although section 2.1 is referred to, It is understood that the finding corresponds to section 2.2.

The country presents in the document a summarized version of IPCC eq 2.8, both for equations 9 and 11 in the MR. In this simplified version, the term EF considers (V \* BCEF \* (1+R)), portion of the equation that is previously calculated in the thematic map, the elements of Volume, Conversion Factor and expansion of biomass and relationship stem root).

It has been indicated in the reporting document in eq 9 and eq 11 that they correspond to an adaptation of eq 2.8 of the IPCC.

## **Documentation provided by the Project Participant**

VVB Assessment Date: 20/06/2024

Correction reviewed, CAR05 is closed.

Major CAR ID: 06 Date: 10/05/2024

### **Description of NC**

In section 2.2: clearly identify and include the details in the ER-MR whether the information requested in FCPF MF criterion 6 has been made publicly available, if that is not the case, please include a valid justification of why it is not available to the public.

### Project Participant response Date: 08/06/2024

All information has been made available publicly, no information has been omitted or left unpublished. The information is in section 3.2 but links were added in section 2.2 next to the equation for each REDD+ activity.

## **Documentation provided by the Project Participant**



VVB Assessment	Date: 20/06/2024
VVB ASSESSMENT	Date: 20/06/2024

Information has been added and deemed correct. CAR06 is closed.

Major CAR ID: 07 Date: 10/05/2024

### **Description of NC**

In section 3.1 related to the values used:

- Please provide the origin of the value 0.496166 for the basic density. (not found in the provide source). Idem for the value 0.2869 R-shoot. Idem for the parameter above and below ground biomass of other uses, include this information for all the values in this section or explain where is possible to identify in the document) The values used shall be identified and justified in the document.
- 2 Please explain the changes for values de la cordillera (values for 5 Mature, 2,7 Young and 2,7 Mature/young)
- 3 In the evidence for Lenga, the parameter showed is 5 instead of 5.8 and 3.9.
- The parameter for Coihue de Magallanes is 2.6 in the evidence provided instead of 3.7. explain the difference.
- 5 The audit team was not able to find the value 0,45 for International-extra tropical forest for the parameter combustion factor of page 57.

Project Participant response Date: 08/06/2024



1.The values provided for these parameters have been previously presented in the ERPD, the basic wood density, R factor and biomass values for other land uses. The basic density value comes from INGEI 2020 (page 403) and corresponds to the average density for native species (0.50). The R value for native species comes from INGEI 2020 page 404, based on the Biomass Inventory and Carbon Accounting document, from the FONDEF project MEASURING THE CARBON CAPTURE CAPACITY IN CHILE FORESTS AND PROMOTION IN THE WORLD MARKET.

The values for land uses in urban and industrial areas (Settlements) and cropland use the reference values of the IPCC 2006, referred to in INGEI 2020, page 404. The biomass values for grasslands and shrublands correspond to reference data taken from the Gayoso 2006 study.

2. From point 2 to point 5, it is suggested that the auditor specify the parameter he is describing, in order to respond with complete certainty. It is also suggested that the evidence provided be reviewed in greater depth before describing the findings.

Regarding point 2, the indicated values account for the periodic annual increment by forest type and structure of development. The data source provides two types of data, increment for managed native forests and increment for second growth native forest and for those forest within areas of national parks or reserves. According to this, a value is assigned for the periodic increment, trying to be as conservative as possible. When the information is available according to structure of development, for mature and mature/young forests the increment associated with DBH 40.1-50 cm was used, while the range 30.1-40 cm is assigned to young and stunted. When information on the structure of development is not available, the value of managed forests is assigned. The adult/renewal values are homologated with the renewal structure, in the case of conversion from non-forests to forests.

For the Cipres de la Cordillera forest type, the value 5 is used for managed forests, and 2.7 corresponding to the smallest diameter classes.

- 3. For Lenga, the evidence provided does not have a value of 5. INGEI 2020 shows a value of 5.8 for Lenga forests that have a management plan. For the selection of the value it is assumed that this type of forest is highly managed, therefore this increment value is assigned for matures & stunted. For renewal and adult/renewal, the lowest increments are considered for the diameter classes of this forest type, which is considered the most conservative assumption, corresponding to the diameter class less than 10 cm, and between 50-60 cm.
- 4. Regarding to Coihue de Magallanes, INGEI 2020 indicates the value of 2.6 for forests with management plans, and values between 3.7, 4.6 and 6.1 per diameter class. Based on the difference in values for managed forests, the IPA of managed forests is used for the matures & stunted structure, along with the IPA of smaller diameter classes.
- 5. There is a translation error, the value is for all temperate zone forests, as indicated on page 2.54 of the 2006 IPCC Guidelines, Volume 4, chapter 2 "GENERIC METHODOLOGIES APPLICABLE TO MULTIPLE LAND USE CATEGORIES". It was corrected in the ERMR1.

#### **Documentation provided by the Project Participant**



Inventario de Biomasa y Contabilidad de Carbono, del proyecto FONDEF MEDICIÓN DE LA CAPACIDAD DE CAPTURA DE CARBONO EN BOSQUES DE CHILE Y PROMOCION EN EL MERCADO MUNDIAL, available in

https://docs.google.com/document/d/1dUB1BPkAmE6OAQag7cWhRLWHqC6jSFjQ/edit?usp=sharing&ouid=103115075145926052872&rtpof=true&sd=true

INVENTARIO DE CARBONO EN PRADERAS Y MATORRALES PARA EL ESTUDIO DE LINEA DE BASE PROYECTO SIF Sociedad Inversora Forestal S.A. REGIONES VII Y VIII, available in: <a href="https://drive.google.com/file/d/1dZ1uOl8tYKlu-Yp6I52aOguNrsJ9ck6b/view?usp=sharing">https://drive.google.com/file/d/1dZ1uOl8tYKlu-Yp6I52aOguNrsJ9ck6b/view?usp=sharing</a>

VVB Assessment Date: 27/06/2024

The information provided has been reviewed along with the documentation provided. CAR07 is closed.

Major CAR ID: 08 Date: 10/05/2024

# **Description of NC**

#### In section 3.2:

Provide an explanation on why for the parameter area of degradation of forests remaining forests monitored during 2001-2010 are taken from that period but the parameters above and below biomass are for the period 2011-2013.

Please clarify where the values for surface of degradation areas from page 61 has been taken i.a. 119.3, 337,3.

Provide the origin of the parameter for areas of different forest types in page 59.

Project Participant response Date: 08/06/2024



The aboveground biomass parameter is not calculated for the period 2011-2013, please clarify this information. It is calculated according to the national forest inventory and the processing of information for the national GHG inventory. Belowground biomass is calculated as a proportion of aboveground biomass, represented by the R Factor.

To maintain consistency with the national GHG report, the AGB parameter is applied in the same way. The forest inventory operates by accumulating data and calculating value updates with remeasurement of sampling plots data sets.

- The values 119.3 and 337.3 correspond to the deforestation activity on page 59, they have been taken from the Deforestation spreadsheet, as activity data from land use land use change maps: <a href="https://plataforma.enccrv.cl/static/erpa/mr1/deforestacion/Herramienta\_Deforestacion\_NR2\_MR1">https://plataforma.enccrv.cl/static/erpa/mr1/deforestacion/Herramienta\_Deforestacion\_NR2\_MR1</a> v016.xlsx

Please, clarify if this NC refers to another table in the report.

- The areas for the different forest types originated from the land use land use change maps, the data of which is represented in the Deforestation spreadsheet: <a href="https://plataforma.enccrv.cl/static/erpa/mr1/deforestacion/Herramienta\_Deforestacion\_NR2\_MR1\_v016.xlsx">https://plataforma.enccrv.cl/static/erpa/mr1/deforestacion/Herramienta\_Deforestacion\_NR2\_MR1\_v016.xlsx</a>

## **Documentation provided by the Project Participant**

VVB Assessment Date: 20/06/2024

The information provided and explanations given are deemed complete. Hence CAR08 is closed.



Major CAR ID: 09 Date: 10/05/2024

# **Description of NC**

#### In section 4.3:

According to the template, some tables are missing through the section, please complete. Some of the reported values are not correct, i.a. the length of the monitoring period and reporting period seem to be wrong.

### **Project Participant response**

It is suggested to take into account that this monitoring report was delivered at the beginning of January 2024, using a specific report template, being approved by FMT completeness check for the VyV process. The updated template of the monitoring report was available in February 2024.

However, the new table has been added as indicated by the new report template. Likewise, the lack of clarity is raised in how the completeness check process is considered completed when adding a new element to the report, without the FMT checking process.

There is no clarity on wrong values, please indicate. If the NC refers to the length of the monitoring period and reporting period, consider the start of the reporting period is January 1 2018, and the end is December 4th, 2019, with 703 days of reporting period.

## **Documentation provided by the Project Participant**

VVB Assessment Date: 20/06/2024



More clarity is provided for the wrong values: the monitoring period is presented as 460 days in the top table and 730 in the bottom period, please correct or clarify as needed.

### 4.3 Calculation of emission reductions

	Deforestation	If applicable, forest degradation	If applicable, enhanced removals from afforestation/ reforestation (A/R)	If applicable, enhanced removals from other activities besides A/R	Total (tCO <sub>2-e</sub> )
Emission or removals in the Reference Level (tCO <sub>2-e</sub> )	10.281.454	23.828.872	-1.084.890	-20.395.898	12.629.539
Emissions or removals under the ER Program during the Monitoring Period (tCO <sub>2-0</sub> )	9.715.634	75.904.922	-2.274.646	-65.157.730	18.188.179
Emission Reductions during the Monitoring Period (tCO <sub>2</sub> -e)	565.820	-52.076.050	1.189.756	44.761.832	-5.558.639
Length of the Reporting period / Length of the Monitoring Period (# days/# days)	703/760 <u>≡(</u> 0,9630)				
Emission Reductions during the Reporting Period (tCO <sub>2</sub> - e)	1.089.785	-100.299.899	2.291.503	86.212.515	-5.353.046

+‡+		
	Total Reference Level emissions during the Monitoring Period (tCO <sub>2</sub> -e)	12,629,539
	Net emissions and removals under the ER Program during the Monitoring Period (tCO <sub>2</sub> -e)	18,188,179
	Emission Reductions during the Monitoring Period (tCO <sub>2</sub> -e)	-5,558,639
	Length of the Reporting period / Length of the Monitoring Period (# days/# days)	703/730 (0.963014)
	Emission Reductions during the Reporting Period (tCO <sub>2</sub> -e) <sup>22</sup>	-5,353,046

CAR09 remains open.

# Project Participant response Date: 05/07/2024

The finding corresponds to a typographical error. The value of the divisor is 730, the calculation is correct, and this value will be corrected in the document.

VVB Assessment Date: 12/07/2024

Closed.

Major CAR ID:	10	Date: 10/05/2024
Description of NC		



In section 5 according to the template:

The measurement has a contribution to overall uncertainty considered HIGH. However, in the MR is considered low. The same applies for representativeness.

The consideration as Bias or Random, is missing in uncertainty table.

Sampling is considered as N/A, however in the guidelines it applies as random. Please provide an explanation or correct as necessary.

## **Project Participant response**

- -The measurement is indicated for data that comes from land use change, and those that come from the measurement of permanent forest. This distinction has been made in the document. The representativeness contribution is considered Low, as it was explained in the table.
- -The table has been corrected by incorporating the missing consideration
- -In the case of the applied methodology, sampling is not used to estimate areas, which is why the contributions in these points are N/A in the report.

# **Documentation provided by the Project Participant**

VVB Assessment Date: 27/06/2024

The corrected values are deemed as correct.

The explanation is considered correct. CAR 10 is closed.



Major CAR ID: 11 Date: 10/05/2024

# **Description of NC**

In section 6.2: in relation to the instructions given by the FMT and FCPF MF indicator 37.4 the audit team is requesting more information on the implementation and operation of Programs and Projects Data Management System and to provide access to the audit team in order to asses the system or whether this system has already been audited, to which compliance AENOR is requesting evidence.

# **Project Participant response**

The data Management System developed for the ERP of the ENCCRV is the ENCCRV information management platform, available at <a href="https://www.plataforma.enccrv.cl">www.plataforma.enccrv.cl</a>. This DMS currently works only registering projects developed under the ENCCRV, but could be expanded to the CONAF activities in the national territory. The system does not register other projects from private owners.

For that, the country uses a register allocated in <a href="https://www.enccrv.cl/medicion-y-monitoreo">https://www.enccrv.cl/medicion-y-monitoreo</a>, in which the information on projects developed in the area of ERP accounting and ENCCRV implementation is organized. To do this, the country team carries out a review of the project certification records, systematizing those that could generate double accounting or double payment. This avoids double counting of ER.

In the event that ER transactions occur from CONAF to the Carbon Fund, the country has reported that CATS (Carbon Assets Tracking System) provided by the World Bank will be used.

### **Documentation provided by the Project Participant**

VVB Assessment Date: 13/06/2024

CAR 11 is closed.



Major CAR ID: 12 Date: 10/05/2024

# **Description of NC**

### In section 6.4:

Currently, there are six REDD+ projects linked to the voluntary market implemented by VCS in Chile 21. According to its own records, no credits due to emission reductions have been claimed during the 2018-2019 reporting period which significantly reduces potential inconveniences. This information is not correct. all of them are under validation, and only three have successfully achieved the validation.

it is stated that the valdivian coastal reserve project issues 58,154 VCUs/year. However, this information is wrong, please correct accordingly.

Project Participant response Date: 08/06/2024



At the moment of delivery of 1st Monitoring Report(Dec 2023), of the 6 projects related to the voluntary market registered on the Verra registry, three projects had registered status: Mikro-Tek In, Agrícola y Forestal SNP Ltda and The Nature Conservancy; and three projects were under validation: Bosques Cautín S.A. and two from NFC Green SpA as listed on the website: https://www.enccrv.cl/medicion-y-monitoreo section 2.4.

Of these projects, Mikro-Tek (Reforestation of degraded lands in Chile through the use of mycorrhizal inoculation) uses only exotic species in its implementation, so it has no implications regarding double counting with the ENCCRV.

The two remaining registered projects: TNC (Avoid planned deforestation and degradation in the Valdiviana Coastal Reserve, Chile) and Agrícola y Forestal SNP Ltda (Reforestation of degraded lands in the California Valley of Patagonia, Chile) do not present information regarding records of issue (Issuance Records). Due to this, reduced emissions transactions cannot be verified from the 2018-2019 monitoring period in the two projects mentioned above.

However, considering that they are under registered status, the non-accounting of emissions related to these projects during the ERPA credit period will be considered. It should be noted that during the first monitoring milestone, no ERs were recorded, so it would not be an inconvenience in the accounting of this monitoring milestone.

In relation to the error identified for the TNC project (Avoid planned deforestation and degradation in the Valdiviana Coastal Reserve, Chile), the value 58,154 corresponds to the Estimated Annual Emission Reductions, which is registered on the page VERRA. Below you can see two screenshots showing this amount.

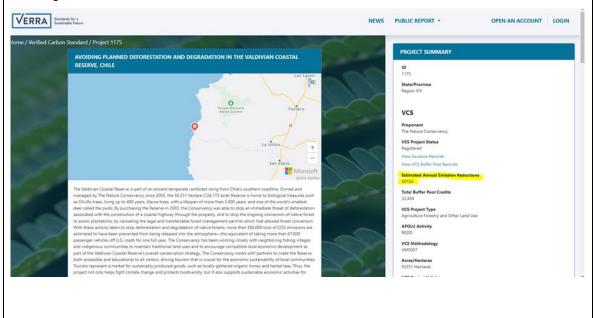




Table 1.4. Ex ante estimates of net emission reductions (not including non-permanence risk buffer deduction).

Years	Estimated GHG emission Reductions or removals (tCO <sub>2e</sub> )
2004	121,960.3
2005	136,422.5
2006	54,548.3
2007	51,902.4
2008	42,999.4
2009	30,862.5
2010	39,512.1
2011	41,627.4
2012	30,242.2
2013	31,462.9
Total estimated ERs	581,540
Total number of crediting years in first 10-year baseline period	10
Average annual ERs	58,154

<sup>\*</sup> Hereafter, the year refers to the year at the end of the annual interval, hence 2004 represents the year from 4 November 2003 to 3 November 2004.

The Bosques Cautín S.A project currently appears on the VERRA platform requesting registration, in addition to presenting a value of annual emissions greater than that registered on our platform. This data will be updated in the monitoring report.

# **Documentation provided by the Project Participant**

VVB Assessment	Date: 13/06/2024
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Corrections are accepted. CAR 12 is closed.



Major CAR ID: 13 Date: 10/05/2024

### **Description of NC**

In section 7.3: risk related to Exposure and vulnerability to natural disturbances is described in the ERPD as medium but reported high, please correct this incongruence or provide a valid explanation.

# **Project Participant response**

The risk associated with exposure and vulnerability to natural disturbances has been updated from medium to high, because one survey developed by World Bank & the country was done finding phenological evidence of the impact of drought & mega drought in forest land within the ERP area. The drought & mega drought is a natural disturbance whose effect has generated the browning in the forest canopy, including the death of any individuals. The study revealed the effect of the lack of water on the phenological cycle of the vegetation in the program area, identifying some anomalous behaviors in certain variables, with integral productivity being the one that best represented the anomalies.

These anomalies were linked to drought, allowing us to identify a proportion of the forests directly affected by this phenomenon, managing to segregate carbon flows in these areas.

In this way, the risk increases completely when the generated impact is detected, demonstrating the importance of its occurrence in the program area. No further information is provided because the study carried out was shared previously.

# **Documentation provided by the Project Participant**

VVB Assessment Date: 13/06/2024

This is considered correct. CAR13 is closed.



Major CAR ID: 14 Date: 10/05/2024

# **Description of NC**

In section 8: the quantity of Ers to be allocated to the Uncertainty buffer (h) is incorrect. Same for (J), please correct them.

# Project Participant response Date: 08/06/2024

As evidenced in section 8, for this first monitoring report the country's performance is negative, therefore no reduced emissions are generated that can be transferable to uncertainty reserves, reversals or grouped reserves. This is why there is no ER allocated in those buffers. The values in these cells are zero.

# **Documentation provided by the Project Participant**

VVB Assessment Date: 27/06/2024

Ok. CAR 14 is closed.



Major CAR ID:	15	Date: 10/05/2024

# **Description of NC**

In section 12.1: Table of Sources of uncertainty does not comply with the requirements included in the Guidelines on the application of the Methodological Framework Number 4

On Uncertainty Analysis of Emission Reductions, version 1.0; as the following columns are missing: Systematic, Random, Contribution to overall uncertainty (High / Low), Addressed through QA/QC?, and Residual uncertainty estimated?

Please note that cells with H/L are used to indicate where the ER Program is required to assess the contribution to overall uncertainty of that particular component, cells with YES/NO indicate that it is the ER Program's choice in how they deal with the particular component, and the cells labelled without a choice (e.g. H, Yes, No) are prescribed.

# Project Participant response Date: 08/06/2024

The information has been updated, correcting the table as indicated.

#### **Documentation provided by the Project Participant**

VVB Assessment Date: 27/06/2024

Corrected values have been reviewed. CAR 15 is closed.



Major CAR ID: 16 Date: 10/05/2024

### **Description of NC**

Provide a justification for the use of the same parameters for all different forest types as discussed in the technical sessions that took place from the 30<sup>th</sup> of April to the 2<sup>nd</sup> of May. Take as an example the values used in the spreadsheet "Herramienta Deforestación NR2 MR1" in tab "Tabla LU"

### **Project Participant response**

One of the parameters discussed in the sessions was the basic density of wood, data for which an average is applied for all forest types. This is justified because the country does not have sufficient information to establish a value by forest type. That is why the same factor is used.

### **Documentation provided by the Project Participant**

VVB Assessment Date: 20/06/2024

The rationale behind the use of the same value is clear, however, please justify if this is the more accurate method available taking into account peer-reviewed publications and any other source to calculate this.

CAR 16 remains open.

Project Participant response Date: 08/07/2024

Date: 05/07/2024

In scientific publications and other available sources, there are no wood density values calculated by forest type. Global publications including Zanne, or IPCC tables 4.13 and 4.14 also do not separate by forest type, and none refer to them being country-specific values, but refer to South America in Zanne, and to the Americas in the case of the IPCC. We consider that it is more accurate to use the national average values that come from specific values obtained in Chilean forests for the most representative species (rauli oak, etc.), combined with values from the IPCC for those species that do not have national data. If specific species are compared, global databases tend to have higher values than national ones, so their use could end up in an overestimation of emissions.

VVB Assessment Date: 12/07/2024

The information is deemed correct. Therefore, MCAR 16 is closed



Major CAR ID: 17 Date: 10/05/2024

# **Description of NC**

According to the MF 6.1 and 6.2 indicators, the ER-MR (sections MR 2.2, 3, 4.2, Annex 4: 8.3, 9.1) shall mention if key data and methods for building the Reference Level and monitoring period have been made public. If this information has not been made public, explain why.

# Project Participant response Date: 08/06/2024

All the data and information used for calculations has been published and shared with the audit team in the links available in the monitoring reports, and in the excel spreadsheets. There is not information pending or share with the audit team or public.

# **Documentation provided by the Project Participant**

VVB Assessment Date: 27/06/2024

Ok. CAR17 is closed.



### Minor Corrective Action Requests (mCARs)

Minor CAR ID:	01	Date: 10/05/2024
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#### **Description of the CL**

Section 1.1: In the table from the sub section "Strategy Update to mitigate/and or minimize potential displacements" please include information on how not reducing taxes for sustainable producers might have affected the risk of deforestation or whether the risk quantification has been updated i.e. from low to medium.

Moreover, include information on how for the "agriculture and livestock expansion" driver, it remains at low without any implementation of the planned strategy in this regard.

### **Project Participant response**

Firstly, it should be noted that according to the provisions of Law No. 20,283, native forests are exempt from the land taxes levied on agricultural lands and should not be considered for the purposes of the application of the Inheritance, Assignments and Donations Tax Law.

Small forest owners are subject to the income system presumably established in article No. 20 of the Income Tax Law, but not to the tax regulations contained in the first and second paragraphs of article No. 35 of Law No° 20,283. With the above, the possibility of displacement due to the nonentry into force of the tax exemption for income would not have major effects since forest owners do not pay taxes on their land.

Additionally, as established by the N°20.283 law, the forest management plan aims at the sustainable use of the native forest resources, with the objective of obtaining timber and non-timber goods, considering the multifunctionality of the forests and biological diversity, safeguarding the quality of the water and avoiding the deterioration of the soil, so in no case would its correct execution be a cause of deforestation.

In reference to the replacement of forest with agricultural crops, in 2020, the replacement of native forest with agricultural crops was declared illegal, rejecting the felling of native forest for the use of land in plantations, based on Decree Law No. 701. The above since it was proven incompatible to authorize a management plan for cutting native forest to recover land for agricultural purposes, since the authorization would not comply with the objective of protecting, recovering and improving the native forest to ensure forest sustainability and environmental policy. In view of the foregoing, CONAF, through Resolution No. 203/2020, abides by legal opinion No. 6,271 of the Comptroller General of the Republic and instructs the completion of the procedure for entering management plans for felling native forest for the recovery of land for agricultural.

#### **Documentation provided by the Project participant**

https://www.contraloria.cl/pdfbuscador/dictamenes/006271N20/html

https://bosquenativo.cl/wp-content/uploads/2020/04/2020-04-03-resolucion-conafdictamen-contraloria5.pdf



VVB Assessment	Date: 20/06/2024
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The explanation is considered sufficient. mCAR01 is closed.

Minor CAR ID: 02 Date: 10/05/2024

### **Description of the CL**

In section 1.2: Provide more information in the ER-MR for the downwards tendency of transformation from native forests into forest plantation as well as where to find the specific data in the document provided as evidence. Include this kind of information for every driver. Moreover, clarify whether the agriculture and livestock activity expansion data provided is exclusive for agriculture or is also for livestock. Include more information in the document.

# Project Participant response Date: 08/06/2024

The information provided in 1.2 related to this driver is based on the data generated from the change of use maps, which account for the reduction in the substitution surface, in addition to the background that it is legally unfeasible to change the surface of native forests for surfaces with exotic plantations.

Regarding agricultural information, there is data provided in the change map, at the level of IPCC uses and sub-uses, where the change surfaces can be discriminated against.

The precise data on forest loss by other areas can be found in the spreadsheets provided for the deforestation activity, the link to which has been shared again in the report.

**Documentation provided by the Project participant** 

VVB Assessment Date: 20/06/2024

Ok. mCAR 02 is closed.



Minor CAR ID: 03 Date: 10/05/2024

# **Description of the CL**

In section 2.1 please provide the origin of equation 1: estimation of deforestation

# **Project Participant response**

The equations are presented in 2.2, please confirm that you are referring to this section and not 2.1.

Equation 1 comes from 2.15 of the IPCC Volume 4 Chapter 2 GENERIC METHODOLOGIES APPLICABLE TO MULTIPLE LAND USE CATEGORIES, adding the equivalent carbon conversion for forest land use changes to all non-forest land uses.

**Documentation provided by the Project participant** 

VVB Assessment Date: 27/06/2024

Ok, mCAR03 is closed.



Minor CAR ID: 04 Date: 10/05/2024

# **Description of the CL**

In section 3.2 explain the origin of the parameters of area of used non-forest land converted into forest during the reference level Page 63. idem for areas of conservation native forests that remains as such during the 2011-2010 period Page 65.

# Project Participant response

The data for area or activity data originated from the LULUC maps and from the thematic map of carbon fluxes. This information was shared through the links for each REDD+ activity spreadsheet of calculation.

This observation is repeated in the findings reports.

**Documentation provided by the Project participant** 

VVB Assessment Date: 27/06/2024

Ok, noted. mCAR04 is closed.



# **Observations**

Obs ID:	01	Date: 10/05/2024	
Description of the CL			
Related to the initial table:  Clarify the correct name of the program it is different within the ER-PD name for the program.  Indicate the version of the document			
Project Participant res	Project Participant response Date: 08/06/2024		
The name of the program has been corrected according to what is indicated in the ERPD.			
Regarding the version of the document, it has already been raised as Major CAR 02. Please clarify if it corresponds to a Major or Minor, and it is appreciated for not reiterating the observations.			
Documentation provided by the Project participant			
VVB Assessment		Date: 27/06/2024	
Ok, Obs01 closed.			



Obs ID: 02 Date: 10/05/2024

#### **Description of the CL**

#### Section 1.1:

Provide evidence to check and demonstrate the outcomes of deforestation reductions actions, such as 1,297 inspections, the 688 firewood, the 27 community plans, the 425 teachers from rural schools, etc. All this information needs to be crosschecked, please clarify where the audit team can access this information or provide it.

Provide further details about the strategy update for report period (last column of table 10) for each driver.

### **Project Participant response**

The information provided in 1.1 comes from the SAFEGUARDS REPORT OF THE CHILE EMISSIONS REDUCTION PROGRAM, RETROACTIVE REPORTING PERIOD JANUARY 2018 - DECEMBER 2019, which has NO Objection from the World Bank. This report is developed based on the Internal Management indicator verifiers of the Corporación Nacional Forestal, which annually report compliance with internal institutional goals.

More details on the update strategy for this reporting period have been provided in previous observations. Please consider the information provided above.

# **Documentation provided by the Project participant**

REPORTE DE SALVAGUARDAS DEL PROGRAMA REDUCCIÓN DE EMISIONES DE CHILE PERIODO DE REPORTE RETROACTIVO ENERO 2018 - DICIEMBRE 2019, Disponible en:

SAFEGUARDS REPORT OF THE CHILE EMISSIONS REDUCTION PROGRAM, RETROACTIVE REPORTING PERIOD JANUARY 2018 - DECEMBER 2019. Available in:

https://docs.google.com/document/d/12ppcgoESnf5aWy64HagnCFtg8Au0HPO9/edit?usp=sharing&ouid=103115075145926052872&rtpof=true&sd=true

VVB Assessment Date: 27/06/2024

Obs 02 is closed.



Obs ID: 03 Date: 10/05/2024

#### **Description of the CL**

#### In section 1.2:

The paper provided as evidence, Miranda et el., 2020 is not open source, please provide the evidence in an accessible way.

Within urban and industrial activity expansion it is stated that there are no systematized statistics, but it is a recognized reality, please provide further details about this assumption. please, in those observations or source of information in which there are no systematized statistics but it is reported as a widely recognized reality, please provide additional information.

### **Project Participant response**

A new link has been assigned to access this evidence, from an open page. Please verify access to: https://repositorio.uchile.cl/handle/2250/177622

The indicated trends can be followed directly with the information that the country provides in the analyzes of land use change, in the National GHG Inventories, and in the public platforms for access to information on land use and forest dynamics.

As in the previous response, the information can be reviewed in the indicated documents and on the SIMEF Minagri platform.

### Documentation provided by the Project participant

INGEI Series 1990-2020: https://snichile.mma.gob.cl/wp-

content/uploads/2023/04/2022\_IIN\_CL.pdf

INGEI Series 1990-2018: https://snichile.mma.gob.cl/wp-

content/uploads/2022/06/Informe\_del\_Inventario\_Nacional\_de\_GEI\_serie\_1990-2018.pdf

Monitoring of land use changes: https://simef.minagri.gob.cl/herramientas/reporte-estadistico-ver

VVB Assessment Date: 27/06/2024

Ok, Obs03 is closed.



Obs ID: 04 Date: 10/05/2024

## **Description of the CL**

#### In section 2.1:

Provide further information about the following: also has a mechanism for receiving citizen complaints either via postal mail or e-mail when there is information of any acts where a violation of the Forest Law of Chile has taken place.

In page 42 it is stated that CF = conversion factor of no-CO2 gas into CO2e, ton gas no-CO2 ton CO2e-1. CF value is 25 for CH4 and 298 for N2O, according to IPCC 2006. Please specify what chapter within the documentation.

### **Project Participant response**

- More information about mechanism for receiving citizen illegal logging complaints has been provided in the subsection of Role of communities in the forest monitoring system contained in section 2.1
- The values 25 for CH4 & 298 for N2O refers to global warming potential for GHG calculations. This data is taken from the national GHG inventory 1990-2018 serie, based on AR4 IPCC, available in <a href="https://snichile.mma.gob.cl/wp-content/uploads/2022/06/Informe\_del\_Inventario\_Nacional\_de\_GEI\_serie\_1990-2018.pdf">https://snichile.mma.gob.cl/wp-content/uploads/2022/06/Informe\_del\_Inventario\_Nacional\_de\_GEI\_serie\_1990-2018.pdf</a>

### Documentation provided by the Project participant

VVB Assessment Date: 27/06/2024

Information provided correct. Obs 04 is closed.



Obs ID: Date: 10/05/2024

### **Description of the CL**

Section 3.1: in table 319.4.a1 the audit team was able to find only the initial parameters for each species, if there are more, it is not clear where the reference points to.

Section 3.2: the parameters area burned between 2011-2010, come from the document "herramientas\_incendios", tab incendios NR, rows 23. However, the parameters in such document have decimals. Please include the decimals

# Project Participant response Date: 08/06/2024

The observation is not understood, please clarify.

No burned area parameters are presented between 2011-2010. The data is for 2001-2010 and 2018-2019. Decimals were added to the report section.

### Documentation provided by the Project participant

# VVB Assessment Date: 20/06/2024

The first observation is related to the AGB and BGB values of native forests, please clarify where to find each in the evidence provided.

Obs05 remains open.

Project Participant response Date: 05/07/2024

This observation was discussed in a meeting on Thursday 4<sup>th</sup> July. During the session, Aenor explained that the observation was closed.

VVB Assessment Date: 12/07/2024



Obs ID: 06 Date: 10/05/2024

# **Description of the CL**

Section 4.1: please provide the Letter No 119/2020 and the acceptance of the technical corrections by the FMT.

Project Participant response Date: 08/06/2024

# Access link to Official Letter 119/2020:

https://drive.google.com/file/d/1\_S6Jzev29e2Qh0NxN5Bfi1OHoXu5idkV/view?usp=sharing FMT response:

https://drive.google.com/file/d/1de\_YnbyeXMJTMuJAmlohy5U5dEo9QzyZ/view?usp=sharing

**Documentation provided by the Project participant** 

VVB Assessment Date: 13/06/2024

Evidence reviewed. Obs06 is closed.



Obs ID: Date: 10/05/2024

#### **Description of the CL**

Section 6.4: provide further explanation of the following statement: CONAF has not defined procedures and agreements to sell or assign ERs of the ER Program area to other entities under a different GHG program or standard. Indeed, these projects could trade ER for the period 2018-2019. In order to avoid double counting, CONAF considers the exclusion of the areas reported in as participants of a voluntary carbon market standard, thus avoiding considering ERs from areas committed to other buyers. In particular, for this period it was not possible to collect the geographical areas, however, transactions with other standards were not recorded either.

### **Project Participant response**

CONAF has not defined the procedures and agreements to sell or assign ERs of the ER program because all the results generated by the program implementation will be used by the country to the commitments of climate change mitigation actions. In addition to the above, the results of the ERP are distributed to the beneficiaries in the program area according to the benefit sharing plan established by the country.

Currently in Chile, an emissions compensation mechanism is being developed, in which the option of generating solution projects based on the nature of the forestry area is proposed, for which an increase in the generation of projects in the forestry area could be generated. accounting. However, the development of this mechanism is still incipient.

Regardless of the above, the established procedure indicates that in the case of generating RE in the program area, CONAF must exclude these areas and the transactions associated with these projects, in order to guarantee that double accounting and double payment are avoided.

### Documentation provided by the Project participant

VVB Assessment Date: 13/06/2024

Corrections noted. Obs07 closed.



Obs ID: 08 Date: 10/05/2024

# **Description of the CL**

Section 7.2: If this section is not applicable, it may make sense to eliminate the table, leaving a complete explanation of why it is not applicable.

# Project Participant response Date: 08/06/2024

The country team understands that it is not possible to delete the reporting template. Please confirm this information with the FMT.

# **Documentation provided by the Project participant**

VVB Assessment Date: 27/06/2024

Ok, it is ok to leave it as is. Obs 08 is closed.



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

AENOR has reviewed all evidence provided. The evidence provided by the country are located within the Monitoring report in the corresponding section for each evidence. The evidence is located within external links that can be visited to contrast the information. AENOR confirms that all the links referenced in the MR work properly and they are updated. If some links were broken when AENOR tried to open them, some findings have been raised to solve the problem.



# **Document information**

Version	Date	Description
1.0	July 2024	Initial version adopted.
2.0	August 2024	Corrections after FMT, Country and ITR reviews
2.1	September 2024	Corrections after FMT reviews.
3.0	October 2024	Minor corrections after FMT reviews.