ISO 14064-2 Verification Report

for

Offset Project

"Afforestation, Reforestation and Revegetation (ARR) activities" undertaken by ACEN CORPORATION

In

Philippines

Report No: CCIPL1856/ISO/VER/ARR/20230414

Report Date: 19th April 2024

Document prepared by:

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I. PROJECT DATA

Offset Project title	Afforestation, Reforestation and Revegetation (ARR) activities undertaken by ACEN CORPORATION in Philippines		
Applicable GHG scheme	ISO 14064-2		
Agreed level of assurance and scope of verification	Reasonable level of assurance/ ISO 14064-2 Verification		
Registration No. / Date	1856 / 16th May 2023		
Monitoring period	01st January 2018 — 31st March 2023	**Monitoring Period Number:**	1
Methodology (of applicable GHG Scheme)	ISO 14064-2	**Sectoral Scope/Technical Area**	14.1
Publication of MR	NA		
Final Monitoring Report	Version 3.2, 11/04/2024		
Net GHG removals (2018 – 2023)			

Vintage Year	Cumulative tCO_2e	Annual tCO_2e
01st January 2018 – 31st December 2018	**23,800 tCO_2e**	**14,773 tCO_2e**
01st January 2019 – 31st December 2019	**36,500 tCO_2e**	**14,773 tCO_2e**
01st January 2020 – 31st December 2020	**49,100 tCO_2e**	**14,773 tCO_2e**
01st January 2021 – 31st December 2021	**61,800 tCO_2e**	**14,773 tCO_2e**
01st January 2022 – 31st December 2022	**74,400 tCO_2e**	**14,773 tCO_2e**
01st January 2023 – 31st March 2023	**77,600 tCO_2e**	**3,693 tCO_2e**
TOTAL	**77,600 tCO_2e**	**77,600 tCO_2e**

GHG reducing measure/technology	GHG removals through enhancing carbon sinks within their land bank through assisted natural regeneration and other forest regeneration methods.		

Party(country)	Project proponent(client)	Party considered a project proponent	Contract party
Makati city, Philippines	ACEN CORPORATION	Yes	☒
Brgy Caparispisan, Pagudpud, Ilocos Norte, Philippines	North Luzon Renewable Energy Corp.	No	☐
Visayas Avenue, Diliman, Quezon City, Philippines	Department of Environment and Natural Resources (“DENR”)	No	☐
Makati City, Philippines	Northern Luzon UPC Asia Corporation (“UPC”)	No	☐

II. VERIFICATION TEAM

Verification Team			Role									
Full name	Affiliation	Appointed for Sectoral Scopes (Technical Areas)	Team leader	Acting/trainee Team Leader	Local Expert	Team Member	Technical Expert	Acting/Trainee Tech. Expert	Trainee Auditor	Technical Reviewer	Expert to TR	Trainee TR
Lalit Mohan Saklani	CCIPL	14.1	X				X					
Ahalee Bhowmik	CCIPL	14.1				X	X					
Amit Anand	CCIPL	1.1, 1.2, 3.1, 8.1, 13.1, 14.1 & 15								X		

III. VERIFICATION REPORT

Verification Phases and Status:

☒ Desk Review
☒ Follow up interviews,
☒ On Site Assessment
☒ Corrective Actions / Clarifications Requested
☒ Resolution of outstanding issues
☐ Full Approval and Submission for Issuance or submission to client
☐ Rejected or negative verification opinion

Final Approval Date	Approval	Distribution
☒	**By:**	☒ No distribution without permission from the Client or responsible organizational unit
Date: 2024/04/19	Priya Suman, Compliance Officer	☐ Limited Distribution ☐ Unrestricted distribution

Abbreviations

AGB	Above ground biomass
AOI	Area of Interest
BGB	Below ground biomass
CCIPL	Carbon Check (India) Private Ltd.
CL	Clarification Request
CO_2	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalent
DENR	Department of Environment and Natural Resources
FA	Final Approval
FVR	Final verification Report
GHG Project	Greenhouse Gas Project
GHG Project Proponent	Greenhouse Gas Project Proponent
GHG Report	Greenhouse Gas Report
NLRC	North Luzon Renewable Energy Corporation
QC/QA	Quality control/Quality assurance
SD	Standing deadwood
SOP	Standard Operating Procedures
SWCF	Soil and Water Conservation Foundation
TA	Technical Area
tCO_2e	Tons of CO_2 equivalent
TR	Technical Review(er)
NC	Non-Conformity
VVB	Validation and Verification Body

Verification Opinion — summary

Carbon Check (India) Private Ltd (CCIPL) has performed first verification of the offset project Afforestation, Reforestation and Revegetation (ARR) activities undertaken by ACEN CORPORATION in Philippines and ISO 14064-2:2019 GHG scheme with reference number CCIPL 1856. The verification team concludes that the offset Project Activity as described in the project design/01/ meets all relevant requirements of the ISO standard 14064-2:2019.

Verification methodology and process

The Verification team confirms the contractual relationship signed on the 16/05/2022 between the VVB, Carbon Check (India) Private Ltd. And the client, ACEN CORPORATION. The team assigned to the verification meets the Carbon Check (India) Private Ltd internal procedures including the applicable GHG scheme ISO 14064-3:2019 requirements for the team composition and competence. The verification team has conducted a thorough contract review as per ISO 14065 and Carbon Check procedures and requirements. The contract with client and further contract reviewing process also confirms the level of assurance of the verification and objectives, scope and criteria of the verification. The level of assurance for this verification is reasonable as per the section 5.1.3 of the ISO 14064-3 requirements. The objective, scope and criteria are detailed below.

The verification has been performed as per the requirements described in the applicable GHG scheme requirements and constitutes the review and completion of the following steps:

- Conflict of interest review;
- Selection of verification team;
- Initial interaction with the Client;
- Development of the verification plan;
- Reviewing the project design (1.0 and date), including the monitoring plan;
- Desk review of the project design report and other relevant documents including documents related to the projects activities in emission removals
- On-site assessment (04/09/2023 – 06/09/2023)
- Resolution of CARs and CLs raised during verification
- Follow-up interaction with the client and other project personnel for supplemental information and corrective action as necessary; and
- Issuance of Verification Report after internal technical review.

The project activity has been correctly implemented according to selected monitoring plan and the project design. The monitoring equipment was calibrated and maintained, while collected monitoring data allowed for the verification of the amount of achieved GHG emission. Through the review and on-site visit/i-1-i-14/, the verification team confirms that the project has resulted in the **77,600** Tco_2e emission removals during this period. CCIPL, as a VVB is therefore pleased to issue a positive verification opinion expressed in the attached Certification statement.

Contents

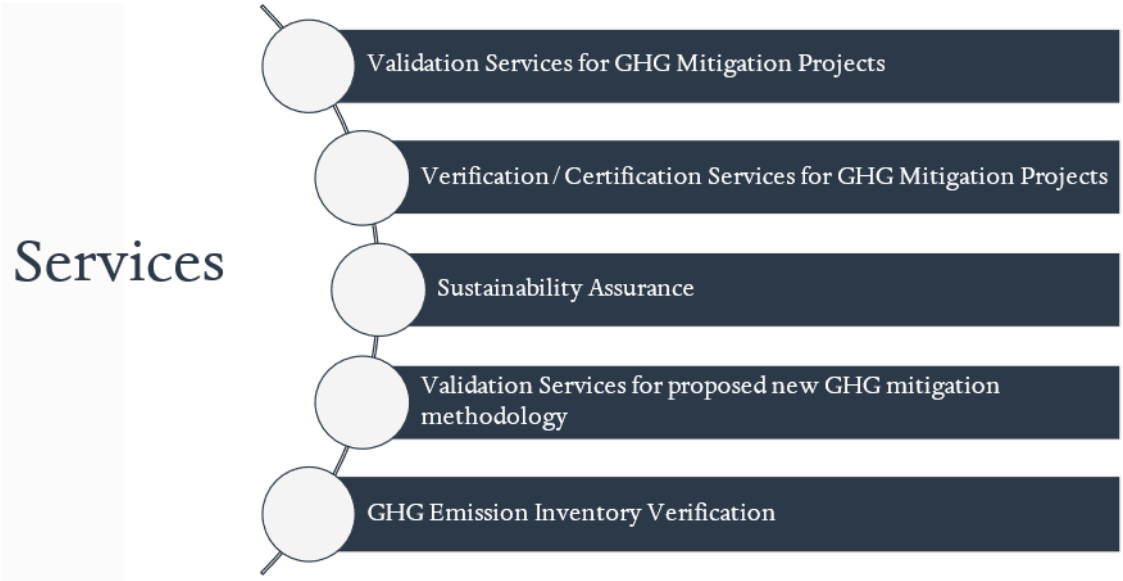
1. INTRODUCTION

Carbon Check (India) Private Limited (hereafter referred to as “CCIPL” or “VVB”) started as a related body to Carbon Check (Pty) Ltd in 2012 and took the responsibility of the central office of the Validation Verification Body (VVB) from November 2014.

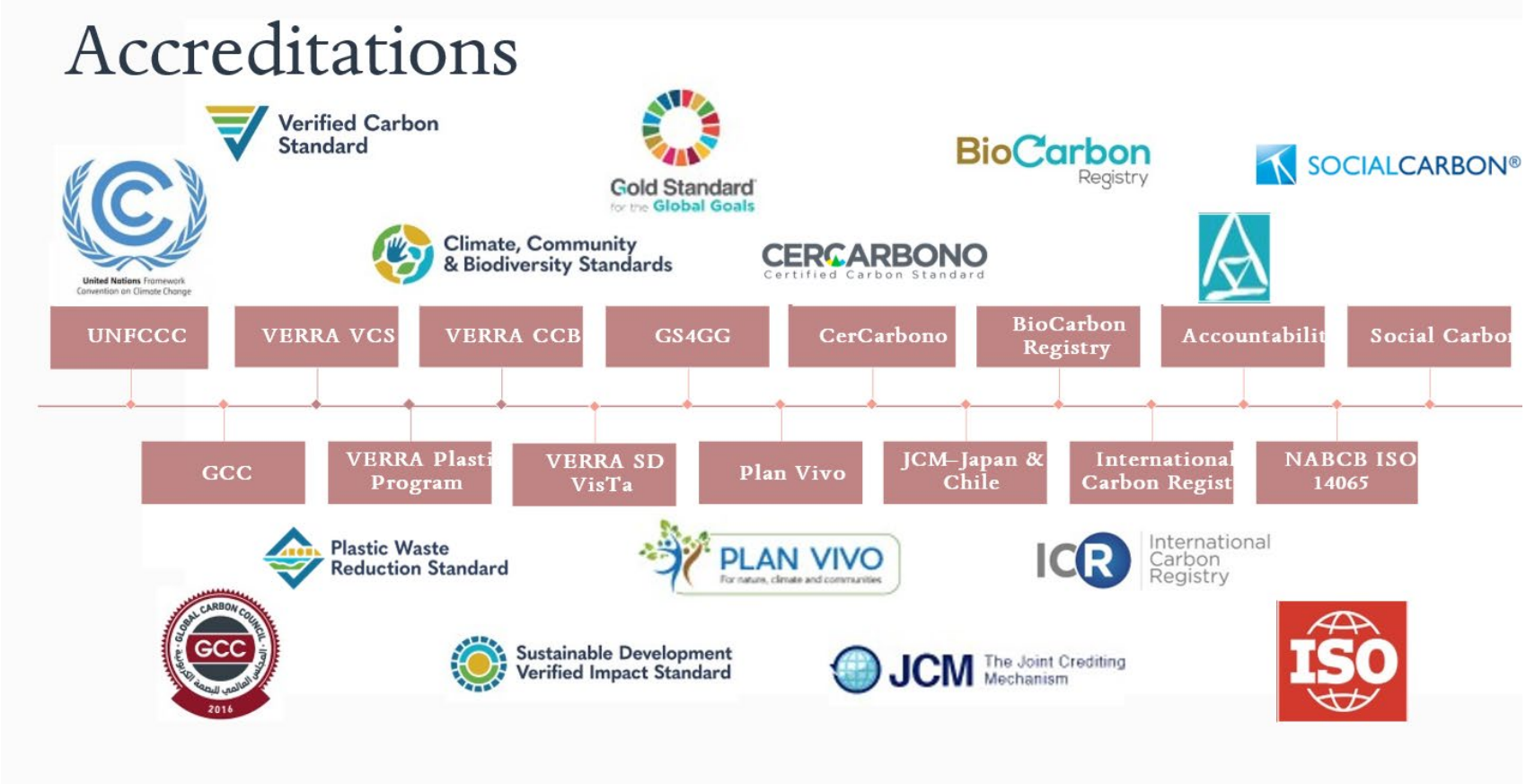
Carbon Check (Pty) Ltd was founded in 2009 in Johannesburg, South Africa as the only accredited Validation Verification Body (VVB) on the African continent.

CCIPL is an internationally renowned certification body committed to excellence in the delivery of impartial and competent third-party assurance services covering validation, verification and certification of climate change projects across the world.

The GHG Project Proponent, Acen Corporation (hereafter referred to as " Project Proponent") has contracted the Carbon Check (India) Private Ltd. an ISO 14064-1, ISO 14064-2 and ISO 14065 certified VVB, to perform an independent verification of the offset Project Activity “Afforestation, Reforestation and Revegetation (ARR) activities” undertaken by ACEN CORPORATION in Philippines (hereafter referred to as “offset project activity”). This report summarises the findings of the verification of the project, performed on the basis of section 6 “Requirements for GHG projects” of the ISO 14064-2:2019. This report contains the findings and resolutions from the verification and a certification statement for the emission reductions attributed due to the GHG project.



Our competence and accreditation:



I. Objective

Verification is the periodic independent review and ex-post determination of both quantitative and qualitative information by a Validation and Verification Body (VVB) of the monitored removals in GHG emissions that have occurred as a result of the offset project activity during a defined monitoring period.

Certification is the written assurance by a VVB that, during a specific period in time, a project activity achieved the emission removals as verified.

The objective of this verification assessment is to verify and certify emission removals reported for the offset "**Afforestation, Reforestation and Revegetation (ARR) activities**" undertaken by ACEN CORPORATION" in "Philippines" for the period 01/01/2018 to 31/03/2023.

The purpose of verification is to review the monitoring results and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data and used to confirm the removals in anthropogenic emissions by sources, is sufficient, definitive and presented in a concise and transparent manner. VVB's objective is to perform a thorough, independent assessment of the project activities.

In particular the monitoring plan, monitoring report and the project's compliance with relevant ISO 14064-2:2019 applicable GHG scheme requirements and host Party criteria are verified in order to confirm that the project has been implemented in accordance with the project design and conservative assumptions, as documented.

II. Scope

The scope of the verification is:

- To verify the project implementation and operation with respect to the GHG offset project design.
- To verify the implemented monitoring plan with the project design and applied baseline and monitoring methodology.
- To verify that the actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- To evaluate the GHG emission removal data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.

The verification shall ensure that the reported emission removals are complete and accurate in order to be certified.

Furthermore, the VVB shall include the following as per section 5.1.6 of ISO 14064-3:2019:

- Boundaries
- Activities, Technologies and processes
- GHG SSRs
- Type of GHGs
- Time period

The verification comprises a review of the offset report[/A-01/] over the monitoring period from 01/01/2018 to 31/03/2023 and based on the project design in part of the monitoring parameters

and monitoring plan, emission removals calculation spreadsheet and all related evidence provided by Project Proponent.

On-site visit and interviews[/i-1-i-14/] are also performed as part of the verification process. This is further mentioned in section 2.3 of this report.

2. VERIFICATION PROCESS

I. Strategic risk Analysis and delineation of the Assessment and sampling plan:

CCIPL employed the following assessment process :

- Conflict of interest review at the time of contract review;
- Selection of Audit Team at the time of contract review;
- Kick-off meeting with the client;
- Review of the draft GHG inventory report submitted by the client;
- Development of the assessment and sampling plan;
- Desktop review and evaluation of GHG inventory calculations;
- Follow-up interaction with Project Proponent and other project personnel for supplemental information and corrective action as necessary; and
- Report development and issuance of final verification statement.

The verification shall ensure that the reported emission removals are complete and accurate in order to be certified. A verification checklist is developed for the Project which summarizes the criteria used to evaluate the Project's compliance with applicable GHG scheme ISO 14064-2, the Project's conformance with each criterion, and the verification team's findings.

II. Conflict of Interest Review

Prior to begin with verification of any offset project, CCIPL conducts an evaluation to identify any potential conflicts of interest associated with the project. If no potential conflicts identified for the offset project, then CCIPL moves with the verification of offset project. This process is followed before issuing LoE to the Project Proponent and also upon the contract for verification is signed between the CCIPL and Project Proponent.

III. Verification Team composition

CCIPL's verification team consisted of the individuals who were selected based on their verification, GHG auditing experience, as well as familiarity with applied technology as listed in section 2.6 of this report.

This verification was carried out by a team selected on the basis of competence and independence criteria. The team is completely independent of all aspects regarding the GHG emissions balance of the Organisation and has not participated in any way in the design of any part of it or of the supporting documents.

Verification team composition (along with communication details/CV of team members) was communicated in LoE and also before start of verification. During the course of verification, any team change shall be communicate to the client and COI shall also be again re-checked.

IV. Audit Kick-off

The kick off call meeting was conducted on 11th August 2023. The communication was focused on confirming the verification scope, objectives, criteria, schedule, and the information required for the verification. Outcome of this kick off meeting were considered while preparing the verification plan (in strategic risk analysis).

V. Development of the verification Plan

The Assessment Team formally documented its assessment plan as well as determine the data-sampling plan. The assessment plan was developed based on discussion of key elements of the GHG inventory assessment process during the kick-off meeting and as per the criteria of engagement. This will be guided by the agreed level of assurance i.e., Reasonable level. The key elements of the plan for verification were discussed as per the requirements of ISO 14064-3:2019 which are as follows:

- Scope and objectives
- Identification of the verification team and their roles on the team
- Client/Responsible party contract
- Schedule of verification activities
- Level of assurance
- Verification criteria
- Materiality
- Schedule for site visits

It also provides an outline of the assessment process and established the activity deliverables. This verification plan also included a sampling plan, which is designed to evaluate all elements in areas of high risk of inaccuracy or non-conformance.
VVB has used the following evidence-gathering activities and techniques in the verification:

- inquiry;
- analytical testing;
- confirmation;
- recalculation;
- examination;
- retracing;
- tracing;
- control testing;
- sampling;
- estimate testing;
- cross-checking;
- reconciliation

The verification plan also provides an outline of the verification process and established project deliverables, VVB has adopted a standard method of calculating sample size by Morris Hamburg (Hamburg, 1985) using precision level, confidence level and response distribution for determining the sample size. Verification team has opted for 20% precision level and 90% confidence level in determining the VVB's sample size. The total permanent sample selected by

PP i.e., 42.

http://www.raosoft.com/samplesize.html

Accordingly, we plan to take 06 samples from the entire plantation area under the project activity for the current monitoring period with pro-rata sample size calculated based on sample size taken by the PP (i.e., weightage of sample size for a project area taken by PP) multiplied by the VVB sample size.

Year of Planting	Name of area			PP Sample size	VVB Sample size
	NLREC windfarm site				
	Natural forest	Agoho plantation	Open grassland		
2018	07	07	07	21	03
2023	07	07	07	21	03
Total				**42**	**06**

VI. A desk review of the GHG inventory report submitted.

- A review of the data and information;
- Cross checks between information provided in the GHG inventory report and information from sources with all necessary means without limitations to the information provided by ACEN Corporation.
- A desk review of the project documents done is listed in section 2.1 & 2.2 of this report.

VII. Follow-up interviews with organization and its stakeholders

On-site visit and follow-up interviews with project stakeholders have been conducted from 4th September 2023 to 6th September 2023. The on-site inspection includes the following:

- ✓ An assignment of implementation and operation of offset project activity with respect to offset project design;
- ✓ Review of information flows for generating, aggregating and reporting the monitoring parameters;
- ✓ Interview with relevant personals to determine whether the operational and data collection procedures are implemented and in accordance with monitoring plan of the offset project design;
- ✓ Cross check of information and data provided in the monitoring report with inventories, purchase records or similar data sources;
- ✓ Check of monitoring equipment's, calibration frequency and monitoring practice in-line with methodology and project design;
- ✓ Review of assumptions made in calculating the emission removal;
- ✓ Implementation of QA/QC procedure in-line with the offset project design.

VIII. Reference to the appropriateness of allometric/volumetric equations and accuracy of calculations will be verified.

IX. The resolution of outstanding issues and the issuance of the final verification report and opinion.

Corrective Actions and Clarification requests

The objective of this phase of the verification is to resolve any outstanding issues (issues that require further elaboration, research or expansion) which have to be clarified/corrective action done prior to final VVB's conclusions on the project implementation, monitoring practices and achieved emission removals. In order to ensure transparency a verification protocol is completed for the project activity. The verification protocol shows in transparent manner criteria (requirements), means of verification and resulting statements on verification actual project activity against identified criteria.
The verification protocol serves the following purposes:

- It organises in a table form, details and clarifies the requirements, a ISO project is expected to meet ISO 14064-2:2019 requirements.
- It ensures a transparent verification process where the VVB will document how a particular requirement has been verified and the result of the verification.
- It ensures that the issues are accurately identified, formulated, discussed and concluded in the verification report.
- It ensures the determination of achieving emission removals from the project activity.

The verification protocol consists of a table i.e., tables of findings and preliminary and final opinion of the VVB on every particular issue raised during the verification process.
The findings of the verification process are summarized in the tables below:

CAR/CL		Section no.		Date:
Description of CAR/CL/FAR				
PP response				**Date:**
Documentation provided by PP				
VVB assessment				**Date:**

A total of 00 FAR, 08 CARs, and 14 CLs had been raised by the VVB and has been satisfactorily closed. Please refer to APPENDIX 2: FINDINGS LOG below for the details of the FARs/CARs/CLs.

Verification Reporting

The Verification team confirms the contractual relationship signed between the 3rd Party Independent assessor, CCIPL and the ACEN Corporation. The team assigned to the assessment meets the CCIPL's internal procedures including the ISO 14064-2: 2019/GHG Protocol requirements for the team composition and competence. The assessment team has conducted a thorough contract review as per CCIPL's procedures and requirements.
The final assessment report is based on the verification of the Carbon Stock Report[/01/] undertaken through application of standard auditing techniques including but not limited to document reviews and stakeholder/personnel interviews, review of the applicable/applied methodology and their underlying formulae and calculations.
This report contains the findings (which has been resolved by the PP) from the assessment and an assessment opinion on the proposed GHG inventory of ACEN Corporation to confirm the Carbon Stock Report is sound and reasonable and meets the stated requirements and identified criteria.

X. Desk review

The following table outlines the documentation reviewed during the verification:

A	Forest Inventory Report
/01/	Afforestation, Reforestation and Revegetation (ARR) activities

B	Carbon Calculations
/01/	2018 & 2022 SUMMARY v3.2_BC 2018 NLR Recomputed v3_BC 2022 NLR Recomputed v3_BC

C	Maps and Shapefiles
/01/	Shapefiles/kml files a) Project area b) Planting area c) Water sources d) Infrastructure (Roads, houses etc) e) Sites of specific importance for Indigenous people, cultural heritage etc
/02/	Map of project area including GPS coordinates
/03/	infrastructure map
/04/	Land Cover Change Land Use Type Map
/05/	Project Area NLR Map with Coordinates
/06/	Reforestation Area Map
/07/	Table of Change
/08/	Water Resources Map
/09/	• 2003 - 2010 - 2015 - 2021 Historical Land Cover Change • 2003 Land Cover • 2010 Land Cover • 2015 Land Cover • 2021 Land Cover
/10/	Planted areas according to compliance 2014 to 2017: • Appendix 2_Compliance planting Map 2014-2017 • Planting years 2014-2017 compliance part
/11/	Planting area beyond compliance 2018 to 2022: • Shapefile_NLR Beyond Compliance • Appendix 3 - Planting beyond compliance 2018 to 2022
/12/	Project site boundary with overlay of planting areas 2014-2017 plantation

D	Baseline
/01/	NLR Land Cover change photos
/02/	FINAL REPORT_ANALOGUE FOREST_aug1.cleaned
/03/	Forest cover change assessment, analysis report
/04/	Historical Land Cover Change Analysis_Statistics
/05/	NLR Land Cover Change Analysis

E	Ownership, Contratcs and Agreements
/01/	Conservation Estate 2023.02.17_ACEN_MOA_NLR (Fully Notarized)
/02/	FLAg 01-2009 (Caparispisan)
/03/	NLR FLAg (TL ROW) 04-2013.cleaned
/04/	NLR FLAg (TL ROW) 01-2010
/05/	Special Tree Cutting and Earth -Balling Permit No- 2013-12

F	Project Operation and Monitoring
/01/	Lead Forester Ed Angadol CV 2022 Marcelino M. Viernes CV 2022 Roldan Dugay CV 2022
/02/	3a NLR Three-Year Replacement& Replanting Plan_Final
/03/	3b Refo guidelines and standards _ North Luzon Renewables
/04/	4 NLR Tree Planting instruction
/05/	4 NLREC-OPR-ENV-04 Biodiversity Conservation, Monitoring, and Assessment_v1
/06/	4 NLREC-OPR-ENV-05 Watershed Rehabilitation and Monitoring_v1
/07/	5 Forest Protection Plan of FLAg No. 1-2009_043021
/08/	5 Forest Protection Plan of FLAg No. 1-2010
/09/	5 Grass fire management plan for the Wind Farm FLAg..
/10/	5 Grass _ Forest Fire prevention_suppression PROTOCOL
/11/	5 NLREC-OPR-ENV-03 Forest Protection and Monitoring within the Forest Land Use Agreement (FLAg) Areas_v1
/12/	Forestry and Sustainability Team Org Chart
/13/	Appendix 8 - Final Report on Analogue Forest Benchmarking
/14/	Pagudpud CLUP 2001-2010

G	Certificate of Completion Compliance Planting
/01/	Appendix 1_Certificate of Completion - Compliance Planting

H	FLAG - Wind Farm Annual Report for 2022
/01/	Appendix 4 - Annual Report of FLAg 01-2009 for 2022

I	First Amendment of Conservation Estate MOA between ACEN and NLR,
/01/	Appendix 5 - First Amendment of CE MOA between ACEN and NLR
/02/	Approved Enhanced CDMP of NLR

J	NLR Community Grievance Form
/01/	NLR Community Grievance_v1

K	Project Start Date
/01/	220613 Seedlings Delivery Acknowledgement Receipt
/02/	Acknowledgement Receipt - Seedlings Payment
/03/	Seedlings Payment AR Batch 4

L	Training Records
/01/	Conservation Estate Trainings - Forestry+MViernesJr

M	Supporting Documents for Emergency Procedures
/01/	Forest Protection Plan of FLAg No. 1-2009_043021
/02/	NLREC-OPR-ENV-03 Forest Protection & Monitoring Plan
/03/	NLREC-OPR-ENV-04 Biodiversity Conservation, Monitoring, and Assessment_v1
/04/	NLREC-OPR-ENV-05 Watershed Rehabilitation and Monitoring_v1

XI. Background documents:

Ref no.	Reference Document
/B01/	ISO 14064-3:2019, Specification with Guidance for the verification and validation of GHG statements
/B02/	ISO 14064-2:2019, Specification with Guidance at the project level for quantification, monitoring and reporting of GHG emission reductions or removal enhancements
/B04/	Guideline on the application of Materiality in verifications / criteria as per applicable GHG scheme
/B05/	IPCC Guidelines for National GHG, 2006
/B06/	Philippine Forest Ecosystems and Climate Change: Carbon stocks, Rate of Sequestration and the Kyoto Protocol. Annals of Tropical Research 25(2): 37-51, 2003
/B07/	Survival rate sampling sites • Shapefile_Location_5% Sample_Survival Rate • Appendix 6 - Survival rate computation per year • MOREFORESTs Reference for survival rate
/B08/	Chave-*et-al*_2014_GlobChangeBio-new_biomass_equations
/B09/	Mokany_*et_al*._2006_-_critical_analysis_root_to_shoot_ratios
/B10/	United Nations Food and Agriculture Organization (FAO)
/B11/	Phillips, O.L., Sullivan, M.J.P., Baker, T.R. et al. Species Matter: Wood Density Influences Tropical Forest Biomass at Multiple Scales. Surv Geophys 40, 913–935 (2019). https://doi.org/10.1007/s10712-019-09540-0.
/B12/	Pearson, T., Walker, S., & Brown, S. (2013). Sourcebook for landuse, land-use change and forestry projects
/B13/	https://dataspace.copernicus.eu/

XII. On-site visit and follow-up interviews with project stakeholders

An OSV was performed by the members of the verification team of Carbon Check on 04/09/2023 to 06/09/2023 and it aims to the following:

- ✓ An assessment of the implementation and operation of the project activity as per the offset project design;
- ✓ A review of information flows for generating, aggregating and reporting the monitoring parameters;
- ✓ Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the approved offset project design;
- ✓ A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources;

- ✓ A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the offset project design and the selected methodology and corresponding tool(s), where applicable;
- ✓ A review of calculations and assumptions made in determining the GHG data and emission removals;
- ✓ An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

The project representatives and stakeholders interviewed are as follows:

SR. No.	Date	Name	Organisation	Topic
/i-01/	04/09/2023 - 06/09/2023	Steffany Redison	ACEN Corporation	• Project Design • Project Implementation status • Project start date and Project Location • Baseline Scenario • Baseline Identification and Additionality • Qualification and Training • Monitoring and reporting documentation • Quality Assurance –Management and operating system • Social and Environmental Impacts • Local Stakeholders meeting process • Compliance with relevant laws • Roles and responsibility
/i-02/	04/09/2023	Vicmar Jugado	College of Forestry and Natural Resources	
/i-03/	04/09/2023	Dixon Gevana	University of the Philippines – Los Banos	
/i-04/	04/09/2023	John Calvin Reyes	ACEN Co-orporation	
/i-05/	05/09/2023	Fduardo Angadol	North Luzon Renewable Energy Group (Senior Manager – Forestry)	
/i-06/	05/09/2023	Maroelind A.Viernes	North Luzon Renewable Energy Group (Junior/ Associate Forester)	
/i-07/	05/09/2023	Florando B.Balbas	Forestry/Specialist in Pagudpud Wind	
/i-08/	05/09/2023	Roldan Dugay	North Luzon Renewable Energy Group	
/i-09/	05/09/2023	Miyosn Macusi	North Luzon Renewable Energy Group	

/i-10/	05/09/2023	Jereme Alos	North Luzon Renewable Energy Group	
/i-11/	05/09/2023	Shena Rose Gania	Pagudpud Wind	
/i-12/	05/09/2023	John Paulo Pedrolina	Pagudpud Wind	
/i-13/	05/09/2023	Ponalal Samlano	Pagudpud Wind	
/i-14/	05/09/2023	Renel Acrleda	Inter Active of NLR	

XIII. Resolution of outstanding issues

The objective of this phase of the verification is to resolve any outstanding issues (issues that require further elaboration, research or expansion) which have to be clarified/corrective action done prior to final VVB's conclusions on the project implementation, monitoring practices and achieved emission removals. In order to ensure transparency a verification protocol is completed for the project activity. The protocol shows in transparent manner criteria (requirements), means of verification and resulting statements on verification of actual offset project activity against identified criteria.

The verification protocol serves the following purposes:

- ✓ It organises in a table form, details and clarifies the requirements, which offset project is expected to meet applicable ISO 14064-2:2019 requirements;
- ✓ It ensures a transparent verification process where the VVB will document how a particular requirement has been verified and the result of the verification.
- ✓ It ensures the determination of achieving credible GHG removals from the GHG project.

The verification protocol consists of two tables. Table 1 reflects the verification requirements and reference to the materials used to verify the project activity against those requirements, as well as means of verification, reference to Table 2 (i.e. tables of findings) and preliminary and final opinion of the VVB on every particular requirement listed in APPENDIX B.

The findings of verification process are summarized in the tables below.

CAR/CL		**Section no.**		**Date:**
Description of CAR/CL/FAR				
PP response				**Date:**
Documentation provided by PP				
VVB assessment				**Date:**

In Table 2 FAR, shall reflect the forward actions initiated by the verification team if the monitoring and reporting require attention and/or adjustment for the next verification period. The completed verification protocol for this project is enclosed in Appendix A to this report.

Findings during the verification can be interpreted as a non-compliance with ISO 14064-2 criteria or a risk to the compliance.

Corrective action requests (CARs) are raised, in case:

(a) Non-conformities with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project proponent(s)/offset project operator, or if the evidence provided to prove conformity is insufficient;
(b) Modifications to the implementation, operation and monitoring of the project activity has not been sufficiently documented by the project proponent(s)/offset project operator;
(c) Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission removals;
(d) Issues identified in a FAR during validation/previous verification(s) that are not being resolved by the project proponent(s) to be verified during current verification.

Requests for clarification (CLs) are raised, if information is insufficient or not clear enough to determine whether the applicable GHG scheme ISO 14064-2 criteria have been met.

A forward action request (FAR) is raised during verification to highlight issues related to project implementation/monitoring that require review during the subsequent verification of the project activity. FARs shall not relate to applicable GHG scheme ISO 14064-2, criteria for issuance.

XIV. Internal quality control

The final verification report has passed an internal technical review before being submitted to the project proponent or applicable GHG registry if applicable. The technical review has performed by a technical reviewer qualified in accordance with CCIPL's qualification scheme for offset project verification.

XV. VERIFICATION TEAM AND INDEPENDENT REVIEW

Carbon Check has appointed a competent team as per the Accreditation Standard /ISO 14065, 14064-3 and Carbon Check internal procedures, the team is outlined below:

Verification Team			Type of Involvement						
Full name	**Location**	**Appointed for Sectoral Scopes (Technical Areas)**	Supervising the work	Desk review	Site Visit + Interview	Report and protocol Writing	Technical Expert Input	Reporting Support	Technical Reviewer
Lalit Mohan Saklani	CCIPL	14.1	X	X	X	X	X	X	
Ahalee Bhowmik	CCIPL	14.1		X	X	X	X	X	
Amit Anand	CCIPL	1.1, 1.2, 3.1, 8.1, 13.1, 14.1 & 15							X

Team Leader/ Technical Expert: Lalit Mohan Saklani is a qualified lead assessor and technical expert at CCIPL. He is a forestry post-graduate and have knowledge & skills for the land use & forestry sector and has been working for past one year in the GHG programs. Currently, he is working on a variety of land use & forestry projects under different GHG programs including GS, CDM and VCS. He is having relevant ecological and biodiversity expertise for assessing WRC, ARR, IFM & REDD projects and relevant forestry and/or other land use experience in the region.

Team member: Ahalee Bhowmik is a qualified lead assessor and technical expert at CCIPL. She is a forestry post-graduate and has knowledge & skills for the land use & forestry sector. She has more around 1 years of work experience in GHG mechanism including development of standards and methodology for an Indian GHG program. Currently, she is working on a variety of land use & forestry projects under different GHG programs including GS, CDM and VCS. She has relevant ecological and biodiversity expertise for assessing WRC, ARR, IFM & REDD projects and relevant forestry and/or other land use experience in the region.

Technical reviewer: Amit Anand is the team leader, technical expert and technical reviewer at CCIPL. He has completed his Bachelor of Science and Master of Science degrees in Environmental Management and has been involved in Clean Development Mechanism (CDM) for last 17 years. He is an expert for Agriculture, Forestry & Other Land Use (AFOLU) in CCIPL and has shared his experience on international platforms such as International Workshop on Capacity

Building Project for MRV of GHG Emission Reductions in Africa, Latin America, Central Asia, and Eastern Europe organized by Ministry of Environment, Japan – 13 to 14 February 2012. He also serves as Executive Director and Chief Executive Officer at CCIPL.

3. VERIFICATION FINDINGS

The findings of the verification are described in the following sections. The verification criteria (ISO 14064-2:2019 requirements), the means of verification and the results of verification are documented in detail in the verification protocol in Appendix A.

I. Project implementation

The implementation of the project activity

Project Proponents/offset project operator:	ACEN CORPORATION
Title of offset project activity:	Afforestation, Reforestation and Revegetation (ARR) activities in Philippines
UNFCCC /applicable GHG scheme registration No:	NA
Applied Baseline and monitoring methodology:	NA
Project Scale:	Small scale
Location of the offset project activity:	Pagudpud, Ilocos Norte, in the northern part of the Philippines
Project's crediting period:	NA
Reported monitoring Period verified in this verification:	5 years and 3 months (01/01/2018 to 31/03/2023)

As part of the site visit the verification team was able to confirm that the offset project implementation is in accordance with the project description contained in the project design/01/.

Project Description	VVB based on the review of the remote sensing shapefiles/c/, planning documents/F07/ and through on-site inspections/i-1-i-14/ confirms that the project activity is being implemented in Philippines namely North Luzon Renewable Energy Corporation, Barangay Caparispisan, Pagudpud, Ilocos Norte. The project aims at creating more carbon sinks through plantation activities. The project activity is being conducted on 1 types of forest i.e., Agoho Plantation. Different sites consisting of different land-uses within the premises of NLREC were selected for the assessment and generation of baseline LFA information.
Pre-project scenario or baseline	VVB, following an assessment of the updated Carbon Stock report/A01/, verifies that the Standard Plot Sampling technique, as suggested by Pielou (1005) and Pearson *et al.* (2005)/B12/, was employed for obtaining essential baseline biomass and carbon stock measurements. The non-destructive technique was utilized to account for all trees and saplings within the 10m x 10m plot. VVB based on the review of the Carbon Forest Monitoring plan document/F07/F08/F09/ confirms that all the baseline emission

	parameters monitored are updated in accordance with the monitoring methodology ISO 14064-2.	
Monitoring methodology	VVB, based on the on-site inspection/i-1-i-14/ and review of the all the supporting evidence confirms that the monitoring methodology is in compliance with ISO-14064-2. VVB, based on the review of the revised Carbon Stock report, confirms that PP has used Chave *et. al*., 2014/B08/; Mokany *et. al*., 2005/B09/, for the calculation of the Above Ground Biomass and Below Ground Biomass. VVB, has also verified the source of the variable "*p*" – specific gravity, as per the allometric equation from United Nations Food and Agriculture Organization (FAO)/B10/ and the pan-tropical mean of Philips *et al*. (2019)/B11/ and has found to be deemed appropriate.	
Project physical features (technology, project equipment, monitoring and metering equipment)	The project activity is based on assisted Reforestation activities, enrichment planting, protection measures, and IEC campaigns within or near the North Luzon Renewable Energy Corporation, Barangay Caparispisan, Pagudpud, Ilocos Norte. The project aims at creating more carbon sinks through plantation activities. The project activity is being conducted on 1 types of forest i.e., Agoho Plantation. Different sites consisting of different land-uses within the premises of NLREC were selected for the assessment and generation of baseline LFA information. Upon reviewing the Annual Report/H01/ provided by PP, VVB verifies that PP has comprehensively outlined survival rates, developmental initiatives, site protection, and maintenance plans related to reforestation, forest protection, tree planting, slope protection activities, as well as environmental monitoring and management plans. VVB, based on the supporting document/B07/ verifies that PP has provided the shapefiles pertaining to survival rates, with the average survival rate recorded at 93%. Upon reviewing the carbon calculation spreadsheet, VVB confirms that PP has addressed the mortality rate of the project, ensuring its accurate inclusion in the carbon calculation process. Additionally, PP has furnished certificates from NLR Windfarm, DENR, and North Luzon Renewable Energy Corp/M/. This confirms that PP has mentioned the measures taken to ensure the permanence of carbon stock beyond the stipulated three years. VVB, based on the review of the revised Carbon Stock report, confirms that PP has used Chave *et. al*., 2014/B08/; Mokany *et. al*., 2005/B09/, for the calculation of the Above Ground Biomass and Below Ground Biomass. VVB, has also verified the source of the variable "*p*" – specific gravity, as per the allometric equation from United Nations Food and Agriculture Organization (FAO)/B10/ and the pan-tropical mean of Philips *et al*. (2019)/B11/ and has found to be deemed appropriate. Furthermore, VVB noted that a total 188.40 ha of trees were planted during the reported monitoring period beyond compliance (CY2018-2023). The area, as referred, has been verified from the shape files/C/ provided by the PP. Based on this assessment, VVB confirms the area as correct and thus acceptable to the VVB.	
Any Project Design Change been sought and approved by EB for the project?	☐ Yes ☒ No	NA

The project activity is being implemented across Philippines namely North Luzon Renewable Energy Corporation, Barangay Caparispisan, Pagudpud, Ilocos Norte. The start date across all the locations is same as 1st January 2018. The start date and progress in each site is verified during the site-visit. VVB, based on the supporting documents "*220613 Seedlings Delivery Acknowledgement Receipt*"/K01/, "*Acknowledgement Receipt – Seedlings Payment*"/K02/ and

"*Seedlings Payment AR Batch 4*"/K03/, confirms that PP has supplied receipts documenting the implementation of the plantation within the project activity.

CCIPL team considers the project description of the project contained in the provided offset report to be complete and accurate.

i. The actual operation of the offset project activity

Verification team during the site inspection confirms that the project activities include plantation of Agoho (*Casuarina equisitifolia*) native tree species.
The plantation also engages the local community and support them in providing alternative livelihood options. This was also confirmed by interviewing local community members. Seven (7) sample plots measuring 10m x 10m each were allocated for each land cover / land use types, consisting of a total of 188.40 hectares.
Project proponent has provided supporting evidence regarding the planting operations. After reviewing the supporting document titled " *Afforestation, Reforestation and Revegetation (ARR) activities undertaken by ACEN CORPORATION* "/01/ submitted by PP, VVB confirms that PP has furnished detailed information on Standard Operating Procedures (SOP), operational procedures for data collection, data recording, data storage, and backup, as well as a comprehensive monitoring plan outlining roles and responsibilities.

In summary, the monitoring period is reasonable, and the operation of the project activity is in accordance with the project design.

ii. Compliance of the monitoring plan with the monitoring methodology including applicable tool(s)

The verification team determined against all the information provided in project design document, whether in-line with the applied monitoring methodology is in compliance with ISO-14064-2. VVB, based on the review of the revised Carbon Stock report, confirms that PP has used Chave *et. al*., 2014/B08/; Mokany *et. al*., 2005/B09/, for the calculation of the Above Ground Biomass and Below Ground Biomass. VVB, has also verified the source of the variable "*p*" – specific gravity, as per the allometric equation from United Nations Food and Agriculture Organization (FAO)/B10/ and the pan-tropical mean of Philips *et al*. (2019)/B11/ and has found to be deemed appropriate.

Requirements	Criteria fulfilled	Assessment by the verification team
Any Deviation been sought for the project/or applicable GHG scheme if applicable.	☐ Yes ☒ No	VVB confirms this after the on-site inspection/i-1-i-14/ that there is no deviation in sampling methodology and is in accordance with the provided design document.
Is complete set of data for the specified monitoring period is available	☒ Yes ☐ No	VVB based on the on-site/i-1-i-14/ inspection and supporting evidence confirms that the available set of data and parameters used in the calculation sheet are valid and this approach of calculation is conservative. VVB, based on the review of the revised Carbon Stock report/A01/, confirms that PP has used Chave *et. al.,* 2014/B08/; Mokany *et. al*., 2005/B09/, for the calculation of the Above Ground Biomass and Below Ground Biomass. VVB, has also verified the source of the variable "ρ" – specific gravity, as per the allometric equation from United Nations Food and Agriculture Organization (FAO)/B10/ and the pan-tropical mean of Philips *et*

Requirements	Criteria fulfilled	Assessment by the verification team
		al. (2019)/B11/ and has found to be deemed appropriate.
Is the required information provided in the project design document has been cross-checked with other sources (ex – plant logbooks, inventories, purchase records, laboratory analysis)	☒ Yes ☐ No	VVB has reviewed the key parameters like DBH and tree height against the raw data sheets during the on-site inspection/i-1-i-14/. Furthermore, VVB has reviewed the carbon density value used against the IPCC guidelines for National Greenhouse Gas inventories,2006 and deems the value as valid and appropriate. However, finding has been raised to provide the raw data sheets to VVB. VVB, following an assessment of the updated Carbon Stock report/A01/, verifies that the Standard Plot Sampling technique, as suggested by Pielou (1005) and Pearson *et al*. (2005)/B12/, was employed for obtaining essential baseline biomass and carbon stock measurements. The non-destructive technique was utilized to account for all trees and saplings within the 10m x 10m plot. The sampling method used by the project proponent has been verified by the VVB after cross checking is against the national inventory of Philippines and the supporting literature.
Is the calculation of offset project activity emissions been in accordance with the formulae and methods described in project design document?	☒ Yes ☐ No	VVB based on the review of the calculation sheet and through own research confirms that the formulae used are valid. However, a finding has been raised due to the use of allometric equation not aligning with the DBH class and inconsistency in the calculation sheet provided by Project proponent which has now been satisfactorily closed.
Is all assumptions used for emission calculation have been justified	☒ Yes ☐ No	The assumptions are based on the calculations taken from literature especially of tropical forests. VVB has reviewed the source literature and confirms the source as valid and applicable.
Is appropriate IPCC default values and other reference values have been correctly applied	☒ Yes ☐ No	The carbon density of each cover type in tone per hectare has been taken as IPCC default value, 50% of the computed biomass of the trees inside the sampling plots. VVB has reviewed the IPCC guidelines for national GHG inventories, 2006 and confirms the value applied as valid.
Does the monitoring methodology provides any provision of verification for parameters other than monitoring of GHG data and shall be specific to the applicability criteria of applied methodology.	☐ Yes ☒ No	NA

The verification team is able to confirm that the monitoring plan contained in the project design is in accordance with the methodology applied by the offset project activity.

VVB based on the review of the methodology used confirms that the monitoring plan is in accordance with the and is valid for this offset project activity.

iii. Compliance of the Actual monitoring with monitoring plan in the offset project design

Any Revision in Monitoring plan is sought and approved by applicable GHG scheme for the offset project?	☐ Yes ☒ No	NA
Does the monitoring report provide line diagram showing all relevant monitoring points?	☒ Yes ☐ No	VVB during the on-site inspection/i-1-i-14/ verified the diagram of sample plots provided in the project design document. VVB confirms that Seven (7) sample plots measuring 10m x 10m each were allocated for each land cover / land use types. For the calculation of Normalized Difference Vegetation Index (NDVI), Sentinel data was sourced from the European Space Agency through the Copernicus Open Access Hub website/B13/. Specifically, Sentinel-2B images for the years 2018 and 2023 were obtained. Also the inventory plan/F05/ and the anchor points has been verified. The GPS location has been verified to cross check the geotagged photos of the site. Furthermore, VVB noted that a total area of 188.40 ha has been planted during the reported monitoring period beyond compliance (CY2018-2023). The area, as referred, has been verified from the shape files/C/ provided by the PP. Based on this assessment, VVB confirms the area as correct and thus acceptable to the VVB.

The monitoring has been carried out in accordance with the monitoring plan contained in the offset project design/01/.

VVB has used a materiality threshold of 5% for the assessment of the small-scale project as per the guidelines in section 5.1.7 of the ISO standard 14064-3:2019. The quantitative materiality is assessed to identify error in value in the GHG statement due to misstatements, misapplication of calculations, etc.
The qualitative materiality is assessed by identifying the intangible issues that affect the GHG statement like poorly managed documented information, difficulty in locating requested information.
VVB has adopted a standard method of calculating sample size by Morris Hamburg (Hamburg, 1985) using precision level, confidence level and response distribution for determining the sample size. Verification team has opted for 20% precision level and 90% confidence level in determining the VVB's sample size. The total permanent sample selected by PP i.e.,28. Accordingly, we plan to take 06 samples from the entire plantation area under the project activity for the current monitoring period with pro-rata sample size calculated based on sample size taken by the PP (i.e., weightage of sample size for a project area taken by PP) multiplied by the VVB sample size.

Year of Planting	Name of area		PP Sample size	VVB Sample size
	NLREC windfarm site			
	Natural forest	Open grassland		
2018	07	07	14	02
2023	07	07	14	02

Total	28	04

The risks and the mitigation addressed in the verification plan are as follows:

Sl No	Risk that could lead to material errors, omissions or misstatements	Assessment of the potential risk		Assessment of the records/information/interview with personnel to check controls/ mitigation measures
		Risk level	Justification	
1.	Project implementation and operation including incorrect project area, laying of permanent sampling plots, data collection procedures, traceability of trees etc	High	Area of project area and planting area leading to incorrect has an impact on overall carbon sequestration calculation of the project and thus considered as high-risk category	The risk was mitigated by the reviewing project maps (kml files), project plantation plan, and review of records of number of individual land area etc.
2.	Competency of monitoring personnel including SOPs for data monitoring, QA/QC procedures.	Medium	Competency of monitoring personnel including SOPs for data monitoring, QA/QC procedures has an impact on overall GHG monitoring and in the opinion of VVB; the risk is considered as medium risk category.	The risk was mitigated by interviewing the personnel involved and checking their eligibility in compliance with QA/QC procedures and SOPs.
3.	Review of information flow from raw data recording to the Carbon sequestration spreadsheet.	High	Review of information flow from raw data recording to the Carbon sequestration spreadsheet has an impact on overall carbon-sequestration calculation of the project and thus considered as high risk category	The risk was mitigated by reviewing the competency of personnel involved in monitoring and data collection, training of the personnel involved in the data capture, calculation and by following the monitoring responsibilities. The training records will be reviewed which will also be confirmed during the on-site visit interviews[i-1-i-14]. Also, the identified risk will be mitigated by verifying data captured and processed manually and/or in spreadsheets versus those that are generated from an automated system.

4.	Use of spreadsheets without adequate controls related to data changes/updates, version tracking, traceability, security	Medium	This possesses a medium risk in opinion of VVB.	The identified risk was mitigated by reviewing the management of access to the records. It will be confirmed through interviews whether the raw data is collected by the field personnel and then transmitted and stored electronically to the PP's office. The data quality control to be checked.
5.	Accuracy and implementation of correct sampling plan including the sample size calculation and measurement of the permanent sampling plots	High	Accuracy and implementation of correct sampling plan including the sample size calculation and measurement of the permanent sampling plots has an impact on overall carbon sequestration calculation of the project and thus considered as high-risk category	Cross-check the procedure to identify the sample size against the sampling guideline and standard and confirm the sample size is calculated correctly. Also, by applying the acceptance sampling approach and by measuring records VVB by its own.
6.	Data collection, Transposition and aggregation/ Data and Information Flow	High	Unintended usage of old/obsolete data, Incomplete documentation, corrections of records, Ambiguous sources of information, non-application of management procedures, mistakes during manual data transfer, Unintended change of spread sheet programming or data base entries, Problems caused by updating/upgrading or change of applied software.	The risk was mitigated by cross-checking data , Plausibility checks of various parameters including the livestock count and default values applied, Appropriate archiving system in both logbooks and electronic formats, Clear allocation of responsibilities, Application of offset project management procedures system, data from electricity meters, Usage of software (Spreadsheets), Limited access to IT systems, Data protection procedures, Check of data aggregation steps, Counter-calculation, Data integrity checks by means of graphical data analysis and calculation of specific performance figures, Check of management system certification, Check of data archiving system, Check of application of Management system procedures.

Carbon Check confirms with a reasonable level of assurance that the claimed emission removals are free from material errors, omissions or misstatements.

II. Monitored parameters

The verification team during the site inspection verified the monitoring parameters as included in the carbon calculation sheet and the provided design document.

Sr No	Data and parameters to be monitored	Value applied	VVB assessment
1.	Area	Agoho Plantation: 188.40 ha	VVB has reviewed the KML files/C-01/ and confirm the project location along with the size of each project area. VVB has reproduced the colour codes as provided and confirms the same. VVB has reviewed the provided evidence in the form of Appendix 19 Afforestation, Reforestation and Revegetation (ARR) activities undertaken by ACEN CORPORATION(version 2). 1. After thorough review of the Carbon Stock Assessment Report/A01/, VVB has determined that the new evidence provided in the form of reclassified NDVI images is significantly more accurate in depicting vegetation densities, namely, bare, sparse, and dense forest cover regions in the project area. Any previous issues with misclassification of forests and other areas have now been resolved. 2. VVB has reviewed LULC images/c/ that classify the project area into 5 classes namely barren land, agricultural/grassland, shrubs, forest, and built-up areas. Landsat 5 data with a 30m*30m resolution was used for the LULC images of years 2003 and 2010 and Sentinel-2 data with a resolution of 10m*10m was used to provide LULC images for years 2015, 2021 and 2023. New LULC images are more accurate and also better demonstrate the conditions prior of the beginning of the project. 3. Furthermore, VVB noted that a total 188.40 ha of trees were planted during the reported monitoring period beyond compliance (CY2018-2023). The area, as referred, has been verified from the shape files/C/ provided by the PP. Based on this assessment, VVB confirms the area is consistent with the GIS shapefiles provided and thus acceptable to the VVB.
2.	Carbon fraction in [tonne C (tonne d.m.)-1]	0.50	VVB based on the source provided i.e., IPCC Guidelines for National GHG, 2006 confirms that the default value used is consistent and applicable.

3.	Number of sample plots	28	VVB after reviewing the raw data sheets confirms that there are 28 permanent sample plots in all the regions.
4.	DBH	Available in raw data and carbon calculation sheet	VVB after reviewing the sample raw data sheets against the carbon calculation sheet/B-01/ confirms that the values input in the sheet are valid and consistent.
5.	Height	Availabe in raw data and carbon calculation sheet	VVB after reviewing the sample raw data sheets against the carbon calculation sheet/B-01/ confirms that the values input in the sheet are valid and consistent.

i. Baseline emissions (2018)

(a) Tree Carbon

Tree biomass and carbon stock values contributed about 14,800 t/ha (from Agoho plantation) of carbon stocks. Stem diameter of trees observed was 9.0±1.5 cm with height of 8.1±2.1 m. On the other hand, Agoho plantation shelters about 4,257 trees per hectare. Diameter and height values of plantation trees were about 5.9±1.2 cm and 8.5±1.4 m, respectively.

(b) Understorey and Necromass

Carbon stocks of the understory and necromass layer were accounted from 3.6 t/ha (for Agoho plantation. Highest carbon stock was observed in the grassland site (4.3 t/ha) where dense clumps of *Themeda triandra* predominate.

(c) Soil

Soil carbon stock is reflective of the vegetation condition. Among the plantation sites, the well-vegetated natural forest has the largest carbon stock with about 75.9 t/ha. It was followed by grassland (58.5 t/ha), and lastly by Agoho plantation (33.8 t/ha). Poor soil organic carbon content (0.95%) was observed in Agoho plantation due to its sandy dry soil condition and slow-decomposing pine needle litter layer.

(d) Total Carbon Stock

Among the sampling sites, Agoho forest demonstrated the largest carbon stock with as much as 14,800 t/ha. Similar to Agoho plantation, soil shares the largest (93%) carbon stock of this site. VVB, following an assessment of the updated Carbon Stock report/A01/, verifies that the Standard Plot Sampling technique, as suggested by Pielou (1005) and Pearson *et al*. (2005)/B12/, was employed for obtaining essential baseline biomass and carbon stock measurements. The non-destructive technique was utilized to account for all trees and saplings within the 10m x 10m plot.

ii. Project emissions

NA

iii. Leakage emissions

Based on the Municipal Comprehensive Land Use Plan by Municipality of Pagudpud/F14/, VVB confirms that the municipalities of Caparispisan, Caunayan, Balaoi, and Saud are included in the total allocation of 2,897 hectares designated for the Strategic Livestock Sub-Development Zone. It is noteworthy that since the initiation of the project as early as 2014, measures have been put in place to prohibit destructive livelihood activities associated with grazing (i.e., slash and burn activities) in the designated zones.

III. Monitoring responsibility

Verification team confirms that the monitoring was done in accordance with the monitoring plan as provided in the project deign report.The responsible personnels were interviewed during the site inspection to verify their competency of measuring and carrying out the procedure of measurements.
NLR along with members from Acen Corporation were responsible for the monitoring and reporting of the monitoring plan. After reviewing the supporting document titled "*Afforestation, Reforestation and Revegetation (ARR) activities undertaken by ACEN CORPORATION*"/A01/ submitted by PP, VVB affirms that PP has furnished detailed information on Standard Operating Procedures (SOP), operational procedures for data collection, data recording, data storage, and backup, as well as a comprehensive monitoring plan outlining roles and responsibilities. Furthermore, PP has presented detailed information encompassing GHG, SSRs, legislative aspects, technical considerations, economic factors, socio-cultural elements, environmental considerations, geographic particulars, site-specific details, and temporal information.

i. Accuracy of equipment

Verification team during the on-site inspection/i-1-i-14/ measures the accuracy of the monitoring equipment by cross checking against the own recorded values to observe any deviation.

Monitoring Equipment:	GPS	Measuring tape
Function:	To record the coordinate	To measure girth at breast height (1.3m) & later convert it into DBH
Monitored parameter:	Latitude, Longitude	DBH
Frequency of calibration:	30 minutes	NA
Remarks	Waypoint averaging on the GPS once three are 9 satellites detected and the minimum accuracy is ±5m.	The tape is precisely used at the height of 1.3m and there should not be any obstruction between bark and the tape.

In summary, the verification team is able to verify that the accuracy the monitoring equipment's were set according to the monitoring plan and relevant requirements of Philippines. Furthermore, the verification team confirms all calibration procedures were carried at the frequency as specified by the monitoring plant of the offset project design Therefore, accuracy of monitoring equipment's is assured.

IV. Deviation from the monitoring plan

Verification team confirms during the on-site inspection/i-1-i-14/ that there are no deviations from the monitoring plan.

V. Assessment of data and calculation of greenhouse gas emission removals

The pools considered by the project proponent for verification are as follows:

- Above ground biomass (AGB)
- Below ground biomass (BGB)
- Understorey and Necromass
- Soil Organic Carbon (SOC)

Verification team confirms that all parameters are used correctly in the calculations. VVB confirms that for both the project and baseline emission, Project Proponent has appropriately considered (including the allometric equation and factor as per literature studies/B08/ referred) and/ or provided justification of either inclusion or exclusion (or de minimus) for the following:

1. Stratification
2. Emissions and removals in the baseline/project scenario
3. Net carbon stock change in biomass carbon pools in the baseline/project scenario

VVB, during the on-site inspection/i-1- i-14/, has reviewed the GHG carbon removals and observed that biomass in the baseline scenario has been calculated and further deducted from achieved removals to calculate net GHG removals by the GHG project, during this monitoring period. Furthermore, VVB noted that a total 188.40 ha of trees were planted during the reported monitoring period beyond compliance(CY2018-2023). The area, as referred, has been verified from the shape files/C/ provided by the PP. Based on this assessment, VVB confirms the area as correct and thus acceptable to the VVB.

The biomass sequester, during the monitoring period, has been measured through sampling plots. The number of sampling plots and their size has been assessed in the section 3.5 of this report. VVB has checked the raw data sheet/B01/ of this field measurement and checked the appropriateness of sampling through acceptance sampling and deemed appropriate. VVB also confirms that the data is correctly transferred in the ex-post carbon calculation spreadsheet. The overall QA/QC process including the competency of the personnel (from ACEN, North Luzon Renewable Energy Corp, DENR and UPC)/E/ were checked by reviewing their CVs/E-01/ and also during the on-site inspection interviews/i-1-i-14/. The MRV personnel were deemed competent to perform this standardised work. The measurement equipment (for canopy) for the sampling/measurement were deemed to be appropriate. VVB also confirms that the arithmetic calculation of the ex-post carbon calculation is appropriate and acceptable to the VVB.

VI. Assessment of actual emission reductions with the estimate emission reductions in PDD/approved offset project design

NA

VII. Issues remaining from the previous verification period or during validation

NA

VIII. Quality and Management System Assurance

The verification team confirms that the management system of the offset project activity is in place; with the responsibilities properly identified and in place. The reporting responsibilities has been explained in the Carbon Forest project monitoring plan/F07/F08/F09/.

APPENDIX A

Carbon Check Certification statement for the Verification Report CCIPL 1856

Carbon Check (India) Private Ltd, the VVB, has performed the verification of the GHG offset project "CCIPL 1856", "***Afforestation, Reforestation and Revegetation (ARR) activities" undertaken by ACEN CORPORATION***" in Philippines. The project activity is designed to generate GHG removals by Assisted natural regeneration and other regeneration methods along with planting of native species.

The Project Proponents are responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions removals from the project. It is VVB's responsibility to express an independent verification statement on the reported GHG GHG removals from the project. The VVB does not express any opinion on the selected baseline scenario or project design. The verification is carried out in-line with the VVS requirements/applicable GHG scheme ISO14064-2 requirements.

The verification has been performed to identify the compliance of the project activity with implementation and monitoring requirements, and to verify the actual amount of achieved emission reductions, through obtaining evidence and information on-site that included i) checking whether the provisions of the monitoring methodology and the monitoring plan were consistently and appropriately applied and ii) the collection of evidence supporting the reported data.

The verification is based on:

- ✓ Offset report version 1.0, of relevant GHG scheme;
- ✓ Approved monitoring methodology

This statement covers verification period of 63 months/ 1915 days between 01-01-2018 and 31-03-2023.

The VVB has raised 14 clarification and 08 corrective action requests, all of which have been successfully resolved by PPs.

The level of assurance for this verification is reasonable.

The VVB considers necessary to give reasonable assurance that reported GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology and the monitoring plan contained in the project design are fairly stated.

The VVB, hereby certifies that the project activity, final achieved GHG removals by sources of GHG equal to 77,600 tCO_2 equivalent and all monitoring requirements have been fulfilled and is substantiated by an audit trail that contains evidence and records.

Vintage Year	Baseline tCO2e	Cumulative tCO2e	Annual tCO2e
01st January 2018 – 31st December 2018	0	23,800 tCO2e	14,773 tCO2e
01st January 2019 – 31st December 2019	0	36,500 tCO2e	14,773 tCO2e
01st January 2020 – 31st December 2020	0	49,100 tCO2e	14,773 tCO2e
01st January 2021 – 31st December 2021	0	61,800 tCO2e	14,773 tCO2e
01st January 2022 – 31st December 2022	0	74,400 tCO2e	14,773 tCO2e
01st January 2023 – 31st March 2023	0	77,600 tCO2e	3,693 tCO2e
TOTAL	**0**	**77,600 tCO2e**	**77,600 tCO2e**

2024/04/19	2024/04/19	2024/04/19
Date	Date	Date
Priya Suman	Amit Anand	Lalit Mohan Saklani
Final Approver	Internal Technical Reviewer	Team Leader
Carbon Check (India) Private Ltd	Carbon Check (India) Private Ltd	Carbon Check (India) Private Ltd

APPENDIX B

Carbon Check
ISO 14064-2 offset project Verification Protocol

Afforestation, Reforestation and Revegetation (ARR) activities undertaken by ACEN CORPORATION in Philippines to Report No. CCIPL1856/ISO/VER/ARR/20230414

Carbon Check's Checklist question	Findings, comments, references, data sources	Conclusion
Note: the checklist question below is based on UNFCCC requirements and ISO 14064-2 and 3 requirements for reasonable assurance verification, please revise it accordingly in case of other GHG scheme to which the offset project is subscribed and also the level of assurance.		
1. Project implementation		
1.1 Have all physical features proposed in the registered PDD/approved project design been implemented at the project site?	VVB confirms through the on-site inspection/i-1-i-14/ that the physical features like boundary fences, boundary walls, barbed wires have been implemented at the project site	VVB concludes that the section is in compliance with ISO-14064-2
1.2 Has the GHG project activity been operated in accordance with the project scenario described in the registered PDD/approved project design and relevant guidance?	Based on the review of the offset report/A-01/ and the on-site inspection/i-1-i-14/, VVB confirms that the offset project activity has been operated in accordance with the project scenario described in the offset report. The assisted reforestation activities, enrichment planting, protection measures, and IEC campaigns are part of the project activity.	VVB concludes that the section is in compliance with ISO-14064-2
1.3 If the offset project activity is implemented on a number of different locations, has the Monitoring report provided the verifiable starting dates for each site?	VVB confirms through the review of shapefiles, offset report/A-01/ and on-site inspection/i-1-i-14/ that the project activity is being implemented North Luzon Renewable Energy Corporation, Barangay Caparispisan, Pagudpud and Ilocos Norte. Furthermore, the start date for all the project sites is same i.e., 2018.	VVB concludes that the section is in compliance with ISO-14064-2
1.4 Is the start date of monitoring period consistent?	NA	VVB concludes that the section is in compliance with ISO-14064-2

Carbon Check's Checklist question	Findings, comments, references, data sources	Conclusion
Note: the checklist question below is based on UNFCCC requirements and ISO 14064-2 and 3 requirements for reasonable assurance verification, please revise it accordingly in case of other GHG scheme to which the offset project is subscribed and also the level of assurance.		
1.5 Does the emission reduction obtained for the monitoring period within the limit of estimate in the registered PDD/approved project design? Is the claimed emission reduction justifiable?	The verified emission removals through the project activity is 77,600 tCO_2e. VVB has reproduced the calculations and confirm the traceability of calculations in the provided carbon calculation sheet/B-01/ for all the sites. VVB, based on the review of the revised Carbon Stock report, confirms that PP has used Chave *et. al.*, 2014/B08/; Mokany *et. Al.*, 2005/B09/, for the calculation of the Above Ground Biomass and Below Ground Biomass. VVB, has also verified the source of the variable "p" – specific gravity, as per the allometric equation from United Nations Food and Agriculture Organization (FAO)/B10/ and the pan-tropical mean of Philips *et al.* (2019)/B11/ and has found to be deemed appropriate.	VVB concludes that the section is in compliance with ISO-14064-2
1.6 Is the monitoring system provided in line diagrams showing all relevant monitoring points?	VVB through the review of the Carbon Forest monitoring plan/F07/F08/F09/ provided confirms that the relevant monitoring points are mentioned in the document. This includes the Monitoring methods and reporting and data management which has been explained in detail.	VVB concludes that the section is in compliance with ISO-14064-2
2. Monitoring and the monitoring plan		
2.1 Is monitoring established in full compliance with the monitoring plan, contained in the registered PDD/approved project design (or new monitoring plan approved by the CDM EB/applicable GHG scheme if applicable)?	VVB, based on the review of the offset project report/01/, confirms that the monitoring followed in line with Carbon Forest Monitoring plan document/F07/F08/F09/.	VVB concludes that the section is in compliance with ISO-14064-2

Carbon Check's Checklist question	Findings, comments, references, data sources	Conclusion
Note: the checklist question below is based on UNFCCC requirements and ISO 14064-2 and 3 requirements for reasonable assurance verification, please revise it accordingly in case of other GHG scheme to which the offset project is subscribed and also the level of assurance.		
2.2 Are all baseline emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions/applicable GHG scheme if applicable?	VVB based on the review of the Carbon Forest Monitoring plan document/F07/F08/F09/ confirms that all the baseline emission parameters monitored are updated in accordance with the monitoring methodology.	VVB concludes that the section is in compliance with ISO-14064-2
2.2.1 Was the monitoring equipment for baseline emission parameters controlled and monitoring results recorded as per approved frequency?	VVB confirms that the monitoring equipment for baseline emission parameters has been calibrated as per the approved frequency and the results recorded are applicable and valid.	VVB concludes that the section is in compliance with ISO-14064-2
2.2.2 Was the monitoring equipment for baseline emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan?	VVB based on the review of the offset report/A-01/ and through on-site inspection/i-1-i-14/ and interviews confirms that the calibration of the equipment has been carried out as per the QA/QC procedures in the monitoring plan.	VVB concludes that the section is in compliance with ISO-14064-2

Carbon Check's Checklist question	Findings, comments, references, data sources	Conclusion
Note: the checklist question below is based on UNFCCC requirements and ISO 14064-2 and 3 requirements for reasonable assurance verification, please revise it accordingly in case of other GHG scheme to which the offset project is subscribed and also the level of assurance.		
2.3 Are all project emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions/applicable GHG scheme if applicable?	VVB based on the review of the offset report/A-01/ and carbon calculation sheet/B-01/ confirms that the relevant emission parameters has been monitored and in accordance with the monitoring plan and monitoring methodology. VVB, based on the review of the revised Carbon Stock report, confirms that PP has used Chave *et. al*., 2014/B08/; Mokany *et. al*., 2005/B09/, for the calculation of the Above Ground Biomass and Below Ground Biomass. VVB, has also verified the source of the variable "p" – specific gravity, as per the allometric equation from United Nations Food and Agriculture Organization (FAO)/B10/ and the pan-tropical mean of Philips *et al*. (2019)/B11/ and has found to be deemed appropriate.	VVB concludes that the section is in compliance with ISO-14064-2
2.4 Are all leakage emission parameters monitored and updated in accordance with monitoring plan, monitoring methodology and relevant CDM EB decisions/applicable GHG scheme if applicable?	NA	VVB concludes that the section is in compliance with ISO-14064-2
2.4.1 Was the monitoring equipment for leakage emission parameters controlled and monitoring results recorded as per approved frequency?	NA	VVB concludes that the section is in compliance with ISO-14064-2

Carbon Check's Checklist question	Findings, comments, references, data sources	Conclusion
Note: the checklist question below is based on UNFCCC requirements and ISO 14064-2 and 3 requirements for reasonable assurance verification, please revise it accordingly in case of other GHG scheme to which the offset project is subscribed and also the level of assurance.		
2.4.2 Was the monitoring equipment for leakage emission parameters calibrated in accordance with QA&QC procedures described in the registered monitoring plan?	NA	--
2.5 Were all monitoring parameters available and verifiable through the whole monitoring period?	VVB through the review of the carbon calculation sheets/B-01/, on-site/i-1-i-14/ measurements and own research confirms that the monitoring parameters available are verifiable through the whole monitoring period. VVB, based on the review of the revised Carbon Stock report, confirms that PP has used Chave *et. al*., 2014/B08/; Mokany *et. al*., 2005/B09/, for the calculation of the Above Ground Biomass and Below Ground Biomass. VVB, has also verified the source of the variable "p" – specific gravity, as per the allometric equation from United Nations Food and Agriculture Organization (FAO)/B10/ and the pan-tropical mean of Philips *et al*., (2019)/B11/ and has found to be deemed appropriate.	VVB concludes that the section is in compliance with ISO-14064-2
3.5.1 In case, only partial monitoring data is available and PP(s)/offset project operator provide estimations or assumptions for the rest of data, was it possible to verify those estimations and assumptions?	VVB confirms that some of the used parameters like wood density, an average value has been taken due to lack of studies in the region for the tree species included in the project activity. VVB has verified the estimations through the supporting literature provided by PP.	VVB concludes that the section is in compliance with ISO-14064-2
3.6 Was management and operation system established and operated in accordance with the monitoring plan?	Based on the on-site interviews/i-1-i-14/ and review of supporting documents/A-01/, VVB confirms that the management and operation system has been established in accordance with the monitoring plan.	VVB concludes that the section is in compliance with ISO-14064-2.

Carbon Check's Checklist question	Findings, comments, references, data sources	Conclusion
Note: the checklist question below is based on UNFCCC requirements and ISO 14064-2 and 3 requirements for reasonable assurance verification, please revise it accordingly in case of other GHG scheme to which the offset project is subscribed and also the level of assurance.		
3.7 Was is it possible to verify that involved management and operation personal is fully aware of the responsibilities and perform all operations according to the registered monitoring plan and internally developed manuals?	VVB during the on-site inspection/i-1-i-14/ has interviewed the personnels involved in the management and operational activities and verifies the competency. Furthermore, VVB confirms that the personnels involved engaged in different aspects of project activity are able to perform all operations according to the developed monitoring plan and SOP. After reviewing the supporting document titled "*Afforestation, Reforestation and Revegetation (ARR) activities undertaken by ACEN CORPORATION*"/A01/ submitted by PP, VVB affirms that PP has furnished detailed information on Standard Operating Procedures (SOP), operational procedures for data collection, data recording, data storage, and backup, as well as a comprehensive monitoring plan outlining roles and responsibilities.	VVB concludes that the section is in compliance with ISO-14064-2
3.8 Does the monitoring system provide organizational structure, role and responsibilities, emergency procedures?	VVB based on the review of the offset report/A-01/, monitoring plan/F07/F08/F09/ and on-site interviews that the monitoring system provided includes organizational structure, role and responsibilities.	VVB concludes that the section is in compliance with ISO-14064-2
3.9 Does any uncertainties identified and addressed?	VVB confirms that the uncertainties identified by PP and the calculation provided in the offset report and carbon calculation sheets/B-01/ is valid and acceptable,	VVB concludes that the section is in compliance with ISO-14064-2
4. Parameters		
4.1 **Monitored parameter**	VVB has provided the monitored parameters and opinion on justification of the applied value in section 3.5 of this report.	VVB concludes that the section is in compliance with ISO-14064-2

Carbon Check's Checklist question	Findings, comments, references, data sources	Conclusion
Note: the checklist question below is based on UNFCCC requirements and ISO 14064-2 and 3 requirements for reasonable assurance verification, please revise it accordingly in case of other GHG scheme to which the offset project is subscribed and also the level of assurance.		
4.2 **Default parameter**	VVB has provided the monitored parameters and opinion on justification of the applied value in section 3.5 of this report.	VVB concludes that the section is in compliance with ISO-14064-2
5. Calculations		
5.1 Have all the calculations related to the project emissions been carried according to the formulae and methods described in the registered approved project design and applied methodology?	VVB confirms that the calculations for AGB, BGB Understorey and Necromass and soil carbon stock has been carried out according to the formula and method described in the offset report/A-01/ and Carbon Forest Monitoring plan document/F07/F08/F09/. VVB confirms the source of formulas taken through reviewing the mentioned literature in the offset report. Furthermore, the justification of the applied formulas has been provided by PP which deems to be valid and satisfactory to VVB. VVB, based on the review of the revised Carbon Stock report, confirms that PP has used Chave *et. al*., 2014/B08/; Mokany *et. al*., 2005/B09/, for the calculation of the Above Ground Biomass and Below Ground Biomass. VVB, has also verified the source of the variable "p" – specific gravity, as per the allometric equation from United Nations Food and Agriculture Organization (FAO)/B10/ and the pan-tropical mean of Philips *et al*. (2019)/B11/ and has found to be deemed appropriate.	VVB concludes that the section is in compliance with ISO-14064-2
5.3 Have all the calculations related to the leakage emissions been carried according to the formulae and methods described in the registered approved project design and applied methodology?	NA	VVB concludes that the section is in compliance with ISO-14064-2

APPENDIX C - LIST OF FINDINGS

Table 1. Remaining FAR from validation and/or previous verifications

FAR ID	00	Section no.		Date: DD/MM/YYYY
Description of FAR				
Not Applicable				
Project participant response				**Date:** DD/MM/YYYY
- -				
Documentation provided by project participant				
- -				
VVB assessment				**Date:** DD/MM/YYYY
Not Applicable.				

Table 2. CL from this verification

CL	01	Section no.	DENR Memorandum Order No 2012-02	Date: 05/09/2023
Description of CL				
As per the DENR Memorandum Order No. 2012-02 for Guidelines and Procedures on the Planting, Maintenance and Removal of Trees in Urban Areas and in Areas affected by the Government Infrastructure projects: *"Every tree cut/removed shall be replaced by planting 100 seedlings preferably of indigenous tree species."* PP is requested to clarify the area that is planted under the compliance of the above-mentioned order and the area reforested additionally apart from that compliance and demonstrate the same in the carbon project document.				
Project participant response				**Date:** 06/09/2023

On October 26, 2017, DENR issued Certificate of Completion to NLR for successfully completing the Replacement Planting target of 205,000 seedlings (Please see Appendix 01: Certificate of Completion) in replacement of trees cut and earth-balled during the construction of the wind farm project.

The total number of tree seedlings required to be planted under compliance planting is only 205, 000 to be accomplished between 2014 to 2017. However, a total of 214, 126 seedlings were planted, exceeding requirements of DENR or 104% completion.

Tree seedlings planted occupies a total of 148.88 hectares within project site (Please see Appendix 02: KMZ files – Planted areas according to compliance 2014 to 2017). Meanwhile, Appendix 03: KMZ files – Planting areas beyond compliance 2018 to 2022 shall reflect areas planted after completion of compliance which is 206.81 hectares.

Total no. of trees planted	Total no. required for compliance	Total trees planted beyond compliance
500, 809	205,000	295, 809

Planting Periods	No. Seedlings planted	Area Planted (ha)
Compliance planting (CY 2014-2017)	205,000	148.88

Beyond compliance (CY2018-2022)	295,809	206.81
GRAND TOTAL	**500,809**	**355.69**

Documentation provided by project participant

Please see the following attachments:

- Appendix 01: Certificate of Completion – Compliance Planting
- Appendix 02: KMZ files – Planted areas according to compliance 2014 to 2017
- Appendix 03: KMZ files – Planting areas beyond compliance 2018 to 2022

VVB assessment | **Date:** 31/01/2024

Based on the review of the Certificate of Compliance, VVB affirms that 205,000 hectares (148.88 ha) fall within compliance, while an additional 206.81 hectares have been planted beyond compliance. Nevertheless, the total area specified in the Excel and Carbon Stock report is 625 hectares. PP is kindly requested to furnish clarification regarding these disparities in the mentioned area, particularly concerning the additional reforested area that exceeds compliance and is deemed eligible for the project activity.

Project participant response | **Date:** 20/03/2024

Both compliance and beyond compliance planting were planted within the ~625 ha project site boundary or the whole site covered by Forest Land Use Agreement – Windfarm (FLAg No. 01 – 2009) . Please refer to Appendix 19 Ilocos Norte Conservation Estate Carbon Stock Project Document (version 2) PDF file – Section 2 Project Boundaries. The Carbon stock computation also refers to the whole project boundary.

Documentation provided by project participant

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VVB assessment | **Date**: 08.04.2024

VVB, based on the review of the revised carbon project document and the Certificate of Compliance, confirms that PP has revised the calculation and area based on the area beyond compliance (CY2018-2022), i.e., 188.40 ha.

CL has been closed

CL	02	**Section no.**	Special tree cutting and earth balling permit no 2013-12	**Date:** 05/09/2023

Description of CL

As per the Special tree cutting and earth balling permit no 2013-12 document issued by Department of Environment and Natural Resources, it has been mentioned that:

"The transplanted trees shall be maintained by the permittee for a period of at least three (03) years."

PP is requested to clarify on the how the permanence of the carbon stock is maintained beyond the three years.

Project participant response | **Date:** 06/09/2023

DENR requires that trees planted under compliance should be maintained at least three (3) years to ensure that trees planted survive.

In the project site, several protection and maintenance activities are being conducted to ensure the permanence of the carbon stock of trees planted including activities beyond three years upon date planted for trees planted for compliance:

1. **Forest Protection Activities (Section 6.2)**
   - Deployment of security guards
   - Organization of Local Forest Protection and Fire Prevention/ Suppression Team (FPFPS)
   - Fire line construction and provision of water supply for Fire Suppression
   - Acquisition of forest protection supplies and equipment
   - Fencing of identified entrances of stray animals
   - Capacity building and training
   - Entry and exit through FLAg area of legitimate stakeholders

2. **Environmental Monitoring and Management within FLAg Areas (Section 8)**
   - Monitoring and evaluation scheme
   - Main environmental management activities
     - Hazardous waste management
     - Solid waste management
     - Air quality management
     - Biodiversity assessment

3. **Survival rate monitoring**
   Below is the survival rate monitoring for each planting year from 2014 to 2022 which is aligned with Management of Resources on Forestlands through Enhanced Sustainable Technologies (MOREFORESTs) reference for survival rate:

Reforestation Survival Details
5% sampling intensity

Plantation Year	No. of Seedlings Planted	No. of inventory samples	Counted survived seedlings	Counted Mortalities	SURVIVAL ASSESSMENT							Average (%) Survival Per Plantation Year	
					Dec 15 Survival (%)	Jul 16 Survival (%)	Jan 17 Survival (%)	Jan 18 Survival (%)	Jan 20 Survival (%)	May 21 Survival (%)	Mar 22 Survival (%)		
2014	35,031	1,752	1,425	327	87	90	84	77	81	81	85	83%	
2015	58,949	2,947	2,811	136	94	94	98	95	95	97	95	96%	Compliance Planting
2016	85,917	4,296	4,024	272		91	95	88	94	95	94	93%	
2017	36,193	1,810	1,687	123				92	93	93	93	93%	
2018	57,580	2,879	2,688	191					93	96	93	95%	
2019	52,938	2,647	2,474	173					93	93	93	93%	Beyond compliance planting
2020	58,714	2,936	2,746	190						94	94	94%	
2021	54,530	2,727	2,531	196							92	92%	
											Ave:	93%	

Documentation provided by project participant

Appendix 04: Forest Land Use Agreement – Windfarm (FLAg No. 01 – 2009) Annual Report for 2022 – refer to Section 6 Site Protection and Maintenance

VVB assessment **Date:** 31/01/2024

Upon reviewing the Annual Report provided by PP, VVB verifies that PP has comprehensively outlined survival rates, developmental initiatives, site protection, and maintenance plans related to reforestation, forest protection, tree planting, slope protection activities, as well as environmental monitoring and management plans. Additionally, PP has furnished certificates from NLR Windfarm, DENR, and North Luzon Renewable Energy Corp. This confirms that PP has mentioned the measures taken to ensure the permanence of carbon stock beyond the stipulated three years.

CL has been closed

CL	03	**Section no.**	MoU between ACEN Corporation and North Luzon Renewable Energy Group	**Date:** 05/09/2023

Description of CL

The MoU agreement signed between the ACEN Corporation and NLRE Group for the Conservation Estate Program Project area covered by FLAg No. 01-2010 and FLAg No. 04-2013, granted by the DNR to NLR covering the ownership of the land titles and carbon credit

and trading is only valid upto 27 August 2023 and shall be renewed upon mutual agreement of the Parties.

PP is requested to clarify on the operational right over the project area as the contract has been expired.

Project participant response	**Date:** 09/10/2023

The Memorandum of Agreement (MOA) between ACEN Corporation and NLR for the Conservation Estate Program was amended to consider long – term ownership rights of the carbon credits from annual to renewable every five (5) years.

In addition to this, ACEN Corporation has 80% stake and ownership of the project and thus, have both operational and management control of NLR and its projects.

Documentation provided by project participant

Appendix 05: First Amendment of Conservation Estate MOA between ACEN and NLR

VVB assessment	**Date:** 31/01/2024

PP has provided the renewed mutual agreement between the parties, which holds validity for a period of five years, spanning from 28th August 2023 to 27th August 2028.

CL has been closed.

CL	04	**Section no.**	6.2,6.10, ISO 14064-2:2019	**Date:** 22/08/2023

Description of CL

As per section 6.10 and 6.2 of the ISO 14064-2 standard, PP shall establish and maintain a monitoring plan to include the following, as applicable:

a) purpose of monitoring:
b) list of parameters being measured and monitored;
c) types of data and information to be reported, including units of measurement;
d) origin of the data;
e) monitoring methodologies, including estimation, modelling, measurement, calculation approaches and uncertainty:
f) monitoring frequency, considering the needs of intended users;
g) monitoring roles and responsibilities, including procedures for authorizing, approving and documenting changes to recorded data;
h) controls that include internal data check for input, transformation and output, and procedures for corrective actions;
i) GHG information management systems, including the location and retention of stored data and data management that includes a procedure for transfers of data between different forms of systems or documentation.
j) Frequency of monitoring and reporting and the project period, including relevant project activities in each step of the GHG project cycle, as applicable.
k) SOPs for MRV team for the field measurement team including SOP for operation and maintenance, Recording Coordinates details, plot and tree tagging, slope measurement and slope correction.

Project participant response	**Date:** 12/12/2023

Please see Appendix 17

Documentation provided by project participant

Appendix 17: Project Document Report, Standard Operating Procedure for Carbon Stock Measurement

VVB assessment	**Date:** 31/01/2024

After reviewing the supporting document titled "*Ilocos Norte Conservation Project Document*" submitted by PP, VVB affirms that PP has furnished detailed information on Standard Operating Procedures (SOP), operational procedures for data collection, data recording, data storage, and backup, as well as a comprehensive monitoring plan outlining roles and responsibilities.

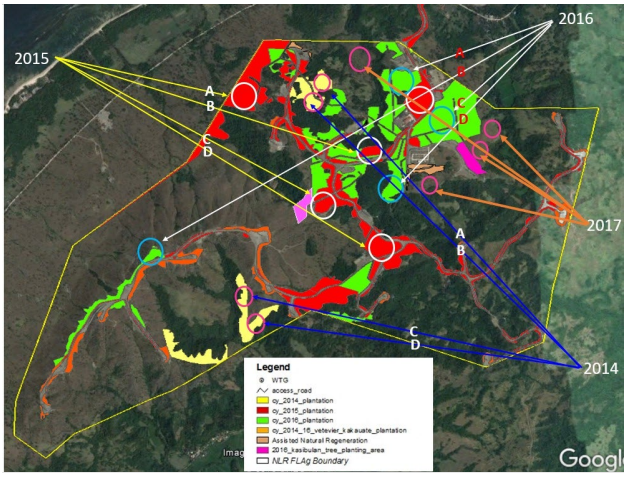
CL has been closed

CL	05	Section no.	--	Date: 05/09/2023
Description of CL				
During the on-site inspection, VVB has observed that the tagging of trees has been detached from the tree and some of the sample numbers along with the tags are missing. For ex: In natural forest plot (NFP 2) for plot size 10x10m, the tags for tree number 14 and 16 were missing from the site. The tagged tree with Number 7 is uprooted now and is now a deadwood. PP is requested to clarify on these discrepancies.				
Project participant response				**Date:** 12/12/2023
The tags referred to in this report are tags under biodiversity monitoring and not for the purposes of carbon stock assessment monitoring. For standard operating procedures of for the project, kindly refer to Appendix 17.				
Documentation provided by project participant				
Appendix 17: Project Document Report, Standard Operating Procedure for Carbon Stock Measurement				
VVB assessment				**Date:** 31/01/2024
Following a review of the supporting document titled "*Ilocos Norte Conservation Project Document*" submitted by PP, VVB confirms that the tags were utilized specifically for biodiversity monitoring and were not intended for the purpose of carbon stock assessment monitoring. **CL has been closed.**				

CL	06	Section no.	Carbon Stock estimation	Date: 22/08/2023
Description of CL				
• As per Section 3.2.1 of the *Carbon Stock Assessment Report*, for the Baseline carbon stock (2018), PP has mentioned that "*Trees contributed about 17.0 t/ha (from Agoho plantation) to 110.9 t/ha (from natural forest) of carbon stocks*" in which the stand density was 4,257 trees/ha for Agoho plantation and 3,500 trees/ha for Natural forest. • Whereas, as per Section 3.3.1 of the *Carbon Stock Assessment Report*, for the current carbon stock (2023), PP has mentioned "*Trees contributed about 39.4 t/ha (from Agoho plantation) to 129.8 t/ha (from natural forest) of carbon stocks*" in which the stand density was 3,457 trees/ha for Agoho plantation and 3,014 trees/ha for Natural forest. PP shall justify the increase of the carbon stock from 2018 to 2023, even when there is a decrease in the stand density of the trees and no change in mean annual increment for the DBH and height of the tree. Furthermore, PP shall clarify if mortality rate of the project has been accounted in the carbon calculation. As per Section 6.4 of the of the ISO 14064-2 standard, PP shall provide justification to demonstrate the conservativeness of the assumptions, values and procedures used for GHG removal calculations.				
Project participant response				**Date:** 12/12/2023

For the updated Carbon Stock Assessment Report, kindly refer to Appendix 16.

Each year, a five percent (5%) sample size is obtained for identified planting sites as identified as aligned with Management of Resources on Forestlands through Enhanced Sustainable Technologies (MOREFORESTs) Section 3.2 Quality Control in Reforestation and ANR/Enrichment Planting. Kindly refer to Appendices 06 and 07 for more information.



Documentation provided by project participant	
Appendix 06: Survival rate sampling sites Appendix 07: Basis for survival rate computation Appendix 16: Revised Carbon Stock Assessment Report w/ soil test results	
VVB assessment	**Date:** 31/01/2024
VVB, based on the supporting document verifies that PP has provided the shapefiles pertaining to survival rates, with the average survival rate recorded at 93%. Upon reviewing the carbon calculation spreadsheet, VVB confirms that PP has addressed the mortality rate of the project, ensuring its accurate inclusion in the carbon calculation process. **CL has been closed**	

CL	07	**Section no.**	Carbon Stock estimation	**Date:** 22/08/2023
Description of CL				
As per Section 3.6 of the *Carbon Stock Assessment Report*, PP has mentioned "*This planting requirement was exceeded by the management, planting a total of 508,000 seedlings in approximately 357 ha area of the wind farm with an average survival rate of 93%*". PP is requested to provide evidence in support of the above statement, including planting receipts/ seedling receipts.				
Project participant response				**Date:** 06/09/2023
In 26th of October 2017, a Ceremonial Tree Planting was held at the project site to mark NLR's completion of the replacement planting requirements covered by Special Tree Cutting and Earth-Balling Permit No. 2013-12 for all trees cut within FLAg No. 01 – 2009. The activity was attended by representatives from the DENR Regional Office, Provincial Environment and Natural Resources (PENRO), Community Environment and Natural Resources (CENRO), LGUs and the Project's shareholders.				

NLR planted and maintained a total of 214, 126 seedlings planted across 134 hectares within the project site. The total number of seedlings planted are beyond NLR's Replacement Planting Plan submitted to DENR on the 29th of July 2015 which required NLR to plant and maintain 205,000 seedlings within years of 2014 to 2017.Throughout the duration of the Replacement Planting Plan, the Department of Environment and Natural Resources periodically reviewed and validated reports which can be reviewed through: FLAg 2017 Annual Evaluation Report and 2017 Annual Report for Three-Year Replacement & Replanting submitted. Annual evaluation reports are submitted, reviewed, and approved by DENR.

For sample procurement documents purchased from community partners, kindly refer to Appendix 13.

Documentation provided by project participant

Please refer to the following documents:

- Appendix 01: Certificate of Completion – Compliance Planting
- Appendix 02: KMZ files – Planted areas according to compliance 2014 to 2017
- Appendix 03: KMZ files – Planting areas beyond compliance 2018 to 2022
- Appendix 04: Forest Land Use Agreement – Windfarm (FLAg No. 01 – 2009) Annual Report for 2022, section 6.1.2 (on pages 16 and 17)
- Appendix 13: Seedling Procurement Document Samples

VVB assessment	**Date:** 31/01/2024

VVB, based on the supporting documents "*220613 Seedlings Delivery Acknowledgement Receipt*", "*Acknowledgement Receipt - Seedlings Payment*" and "*Seedlings Payment AR Batch 4*", affirms that PP has supplied receipts documenting the implementation of the plantation within the project activity.

CL has been closed

CL	08	**Section no.**	Carbon Stock estimation	**Date:** 12/12/2023

Description of CL

PP has used the biomass regression general equation from Brown *et al* ,1997 for AGB and BGB calculation. Based on review of the carbon calculation sheet provided, the project activity involves majorly trees with diameter less than 80 cm.

However, the equation is limited to DBH class of more than 80 cm and the small number of large diameter trees used in the regression equations (e.g., for the moist equation, the largest DBH was 148 cm, with only five trees >100 cm diameter.

PP is requested to justify on the appropriateness of the applied regression equations and the conservativeness of AGB values in compliance with the section 6.7 & 6.13(9) of the ISO 14064 2:2019.

Project participant response	**Date:** 12/12/2023

Please refer to Appendix 16

Documentation provided by project participant

Appendix 16: Revised Carbon Stock Assessment Report

VVB assessment	**Date:** 31/01/2024

retically possible that for large values of D, H would decrease when D increases. We therefore tested whether this regime was likely to be reached empirically. The function reaches a maximum at $D = \exp[-b/(2c)]$, and we verified that this maximum is never reached in practical applications.

All statistical analyses were performed with the R statistical software (R Development Core Team, version 3.0.3).

Results

When we regressed tree AGB (kg) against the product $\rho \times D^2 \times H$, we found the best-fit pantropical model to be:

$$AGB_{est} = 0.0673 \times (\rho D^2 H)^{0.976} \quad (\sigma = 0.357, AIC = 3130, df = 4002) \quad (4)$$

where D is in cm, H is in m, and ρ is in g cm^{-3}. This model performed well across forest types and bioclimatic conditions (Figures S2 and S3). The alternative model where the exponent was constrained to one:

$$AGB_{est} = 0.0559 \times (\rho D^2 H) \quad (\sigma = 0.361, AIC = 3211, df = 4003) \quad (5)$$

gave a slightly poorer performance (greater σ and AIC). Model 4 tends to underestimate AGB by 20% for individual trees with observed AGB exceeding 30 Mg (n = 14; Fig. 2). The trend disappeared for trees in the range 10–30 Mg (2.7% overestimation, n = 94). Because of the spread of values for $\rho D^2 H$, we did not find suitable models to accommodate this bias.

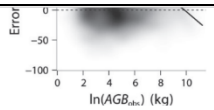


Fig. 2 Goodness-of-fit for Model 4. (a) AGB as estimated from the model vs. observed AGB (n = 4004, gray points), compared with the 1 : 1 line (dashed line). (b) Relative error (estimated minus observed AGB, divided by observed AGB, in%); the thick black line represents a spline regression of the data points, illustrating a slight negative bias at large AGB values (values >30 Mg). The background represents data-point density.

(Fig. 3b). The mean of CV(j) across sites was 56.5% using the pantropical allometric Model 4 vs. 47.4% using the local allometric models. The mean bias was +5.31% across all sites for Model 4, vs. +0.38% for the locally developed models. The pantropical model tended to substantially overestimate the measured total, site-level AGB at seven sites (bias > 30%) and underestimate it (bias< −30%) at one site (Fig. 3b). This bias was not explained by vegetation type or by bioclimatic conditions (Figures S2 and S3). The site-mean form factor (AGB divided by $\rho \times D^2 \times H$) displayed a trend with forest type and bioclimatic factors, but this trend was significant only with CWD (climatic water deficit, R^2 = 0.17, P = 0.02, Figure S4).

To compare more directly the influence of vegetation type and site on Model 4, we also conducted a nested analysis of variance on the relative residuals 100 × (AGB$_{est}$−AGB$_{obs}$). The vegetation type factor

Following a review of the carbon calculation spreadsheet, it has been observed that PP utilized the best-fit pantropical model of Chave *et al*., 2014, for calculating carbon sequestration. However, PP is kindly requested to furnish the source of the variable "*p*" – specific gravity, as per the allometric equation.

Project participant response	**Date:** 20/03/2024
Changes have been applied. Kindly see Appendix 19 Ilocos Norte Conservation Estate Carbon Stock Project Document (version 2) PDF file – Section 6 Carbon Stock Assessment Report and Appendix 20 Recomputed Carbon Stock for the actual computations.	
Documentation provided by project participant	
VVB assessment	**Date**: 08.04.2024
VVB, based on the review of the revised Carbon Stock report, confirms that PP has used Chave *et. al*., 2014; Mokany *et. al*., 2005, for the calculation of the Above Ground Biomass and Below Ground Biomass. VVB, has also verified the source of the variable "*p*" – specific gravity, as per the allometric equation from United Nations Food and Agriculture Organization (FAO) and the pan-tropical mean of Philips *et al*. (2019) and has found to be deemed appropriate. Finding has been closed.	

CL	09	**Section no.**	Additionality	**Date:** 22/08/2023
Description of CL				
During the review of the "Carbon Project Description", it was observed that PP has not provided any information on how they would ensure that the permanence of the CO_2 sequestered in the project area, under the carbon forest programme. During the site visit, VVB has observed that the Natural Forest has no implementation of reforestation activities. PP shall elaborate and clarify on the same and while doing so consider all the relevant natural or anthropogenic factors which could lead to reversal of the amount of carbon sequestered through the project activity.				
Project participant response				**Date:** 06/09/2023
As mentioned in project participant response for CL 02, below are several protection and maintenance activities are being conducted to ensure the permanence of the carbon stock: 1. **Forest Protection Activities (Section 6.2)** • Deployment of security guards				

- Organization of Local Forest Protection and Fire Prevention/ Suppression Team (FPFPS)
- Fire line construction and provision of water supply for Fire Suppression
- Acquisition of forest protection supplies and equipment
- Fencing of identified entrances of stray animals
- Capacity building and training
- Entry and exit through FLAg area of legitimate stakeholders

2. **Environmental Monitoring and Management within FLAg Areas (Section 8)**
   - Monitoring and evaluation scheme
   - Main environmental management activities
     - Hazardous waste management
     - Solid waste management
     - Air quality management
     - Biodiversity assessment
3. **Survival rate monitoring**

Below is the survival rate monitoring for each planting year from 2014 to 2022 which is aligned with Management of Resources on Forestlands through Enhanced Sustainable Technologies (MOREFORESTs) reference for survival rate:

Reforestation Survival Details
5% sampling intensity

Plantation Year	No. of Seedlings Planted	No. of inventory samples	Counted survived seedlings	Counted Mortalities	SURVIVAL ASSESSMENT							Average (%) Survival Per Plantation Year	
					Dec 15 Survival (%)	Jul 16 Survival (%)	Jan 17 Survival (%)	Jan 18 Survival (%)	Jan 20 Survival (%)	May 21 Survival (%)	Mar 22 Survival (%)		
2014	35,031	1,752	1,425	327	87	90	84	77	81	81	85	83%	
2015	58,949	2,947	2,811	136	94	94	98	95	95	97	95	96%	Compliance Planting
2016	85,917	4,296	4,024	272		91	95	88	94	95	94	93%	
2017	36,193	1,810	1,687	123				92	93	93	93	93%	
2018	57,580	2,879	2,688	191					93	96	93	95%	
2019	52,938	2,647	2,474	173					93	93	93	93%	Beyond compliance planting
2020	58,714	2,936	2,746	190						94	94	94%	
2021	54,530	2,727	2,531	196							92	92%	
											Ave:	93%	

In addition to these efforts, project proponent is conducting all the below activities to ensure the safety of the FLAg area from fire or other means of forest degradation:

Project site control

- Site entry protocols for project site is being implemented. All working personnel and guests of the project site shall access main gates and provide identification and activity details;
- Project site is fenced to prevent stray animals from entering the vicinity , spanning across 1,274 meters;
- Project site, including the natural forest is secured by fire lines maintained with manual weeding;
- Regular clearing of Wind farm medium voltage line as additional fire lines;
- Establishment of five-meter width fire lines along project site boundaries spanning 9, 333145 meters that serve as boundary markers and suppress growth of grass that might cause fire break;
- Project site is monitored by watch towers and patrolled by roving security personnel 24/7
- Organizational of local forest protection and fire prevention/ suppression team (FPFPS);

- Conduct of capacity-building and training during monthly toolbox sessions for forest protection workers covering re-orientation of forest protection, fire prevention, and solid waste management; and

Project site preventive, monitoring, and mitigation measures to ensure that all possible anthropogenic factors that might affect the project are taken into consideration.

- Conduct of regular information, education, campaign among:
  - Roving guards
  - Laborers
  - Community
- Presence of equipment for fire suppression:
  - Fire truck
  - Manual swatters
  - Acquisition of forest protection supplies and equipment such as water truck, power sprayers, backpack sprayer, and water container drums;

- Three water sources were identified and established for fire suppression

Furthermore, below are calendar of activities undergone on an annual basis:

Activities	Schedule	Responsible Group
Fireline Maintenance	January to March	Planting and Maintenance
Seedling production at Nursery	January to August	Nursery
Nursery Maintenance (watering of seedlings, pruning, and nursery beautification)	Daily	Nursery
Conduct of survival rate survey	March to April	Planting and maintenance
Support to medium voltage line clearing	January to June	Planting and Maintenace
Site preparation (weeding, brushing, hole digging, sticking)	June to August	Planting and Maintenance
Planting	August to October	Planting and Maintenance
Maintenance (ring weeding, watering (if needed))	November to December	Planting and Maintenance
Deployment of night refo guards	Whole year – during dry season	Night Reforestation Guards
Roadside and turbine pads clearing	Daily	Planting and Maintenance
Nursery Improvements - Construction of potting sheds in the nursery, assembly area expansion, water impounding construction, and fishpond construction	February to August	Planting and Maintenance, Nursery

For the response on no planting activities for natural forest area - "Reforestation" activities are no longer appropriate in an existing natural forest unless it's an open canopy type forest, enrichment planting and/or assisted natural regeneration (ANR) silvicultural treatments can be done to facilitate/improve the forest structure into closed canopy type. Provided this, aalthough there are no planting activities within the natural forest, protection and maintenance activities are still being implemented to ensure that no fire incidents shall affect the area. Furthermore, below are controls and activities that support the permanence of the $C0_2$ sequestered in the project area. For more information, kindly refer to Appendix 4.

ACEN's consultant, UP Los Banos College of Forestry and Natural Resources, included recommendations in maintaining the project site as detailed in 2018 Benchmarking for the establishment of an analogue forest in the North Luzon Renewable Energy Corporation, Barangay Caparispisan, Pagudpud, Ilocos Norte which is integrated in daily operations of the project included as Appendix 8:

Continue the forest protection to prevent the occurrence of forest fires inside the FLAg
Duration : 2018 to 2034
Key initiatives:

- Regular maintenance of the 11 kilometers of Fireline
- Maintenance of the 3 water sources in case of fire incidents

- Capacity building of the Forest protection group conducting the regular forest protection
- Constant coordination and working together with the Brgy LGU and BFD in the conduct of IEC and in the implementation of related ordinances
- Deployment of 14 reforestation guards around the WF during summer months especially at nighttime

Furthermore, for site team procedures related to forest protection, monitoring, biodiversity conservation, and fire suppression, kindly refer to Appendix 18

Documentation provided by project participant

- Appendix 04: Forest Land Use Agreement – Windfarm (FLAg No. 01 – 2009) Annual Report for 2022, section 6.1.2 (on pages 16 and 17)
- Appendix 08: Benchmarking Report for Analogue Forest
- Appendix 18: Supporting Documents for Emergency Procedures

VVB assessment	**Date:** 31/01/2024

Upon reviewing the supporting documents provided by PP, VVB verifies that PP has comprehensively outlined survival rates, developmental initiatives, site protection, and maintenance plans related to reforestation, forest protection, tree planting, slope protection activities, as well as environmental monitoring and management plans. Additionally, PP has furnished certificates from NLR Windfarm, DENR, and North Luzon Renewable Energy Corp. This confirms that PP has mentioned the measures taken to ensure the permanence of carbon stock beyond the stipulated three years.

CL has been closed

CL	10	**Section no.**	6.2, ISO 14064 2:2019	**Date:** 22/08/2023

Description of CL

In compliance with the section 6.2 of the ISO 14064 2:2019, PP shall provide evidence of historical imagery and shapefiles to demonstrate the conditions prior to project initiation.

Project participant response	**Date:** 06/09/2023

Please see historical images attached in Appendix 09:

- Years 2003, 2010, 2015, and 2021

Also, kindly note that 2003, 2010, 2015 and 2021 land cover data produced by the National Mapping and Resource Information Authority (NAMRIA) were utilized for generating the land cover map and analyzing land cover change inside the North Luzon Renewable Energy Farm based on the multi-level, hierarchical land cover classification system. NAMRIA used unsupervised classification technique in remote sensing or image classification. This is the process of classifying multispectral or hyper-spectral images into patterns of varying colors of lands at that represent clusters of statistically different sets of multiband data, and this is the basis in their interpretation of basic elements of satellite images like tone, color, size, shape, texture and shadow. Initially 20 classes (2003 and 2010) were used in classifying land cover but were condensed into 14 classes (2015 and 2021): closed forest (broadleaved, coniferous, mixed), open forest (broadleaved, coniferous, mixed, forest plantation broadleaved, forest plantation coniferous), mangrove forest, built-up, annual crop, perennial crop, fishpond, inland water, marshland/swamp, barren, grassland, fallow, brush/shrubs.

Moreover, 2010, 2015 and 2021 land cover data were generated from the 30m-resolution Landsat satellite data. ArcGIS v.10.4 Model Builder was used to develop a toolbox for tabulating activity data from land cover categories.

Specifically, three main types of land cover change were of interest in the analysis of land cover inside NLR: wooded grassland/brushland/shrubs to open forests, plantation to grassland and/or other uses (loss) and grassland to forest (forest gain or plantations that were

transformed into forests). Forest gain (forestation) is defined as non-forest lands converted to forest lands and is reflected in new forests being established (e.g. afforestation and reforestation such as compliance planting of NLR). According to the IPCC Good Practice Guidance on LULUCF (IPCC, 2003), "afforestation" is the direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forested land.

The land cover change analysis of the NLR Wind Farm recognizes that the 2010 land cover data produced by NAMRIA was not well ground-trothed to validate the maps and that the documentation and accuracy assessments of their both 2010 and 2015 land cover data are not yet certain. The final electronic copies of these land cover datasets provided by NAMRIA was utilized as is, although these limitations would need to be kept in mind when interpreting the results of this analysis. Based on the land cover data of NAMRIA, it may be argued that change from grassland or brushland to open forest within a span of 5 years including for those plantation areas planted from 2016 - 2021 may not yet be categorized as forest gain since this period may not be sufficient time for forests to reach maturity. This forest change may be more appropriately treated as an incremental change in vegetation biomass.

Documentation provided by project participant

Appendix 09: Historical Imagery: 2003, 2010, 2015, and 2021

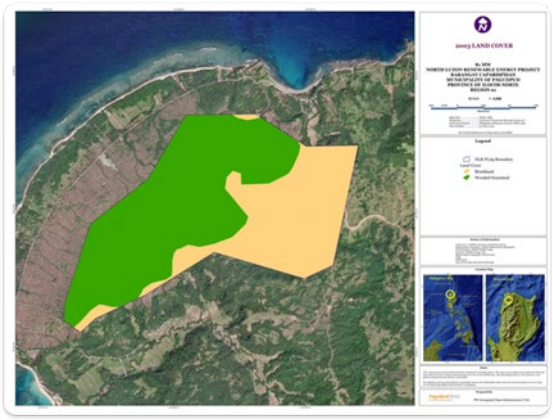
VVB assessment	**Date:** 31/01/2024

The files shared by PP exhibit inconsistencies that are incongruent with the requirements of ISO 14064-2 Standard; kindly refer the explanation of these inconsistencies below:

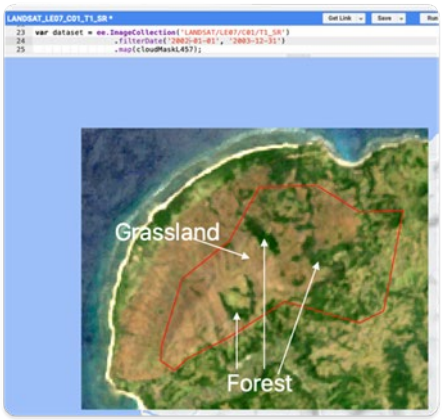
1- LULC files provides don't match with the contrasted information available for the project, also taking in consideration the scale of LULC done by NAMRIA and the geographic scale of the project, in the figure below is clearly evidenced that LULC 2003 doesn't match with the image for the same year, is evident that forest areas not corresponding with contrasted imagen for the same reference year.

2- Additionally, it is recommended to adjust the LULC scale to the project to demonstrate the conditions prior of the beginning of the project; furthermore, Lansat images data sources and other available sources can be used to have a better fitted of the LULC adjustment for 2003.

2003 Land Cover



2003 Lansat 7



Project participant response	**Date:** 20/03/2024

Kindly see Appendix 19 Ilocos Norte Conservation Estate Carbon Stock Project Document (version 2) PDF file – Section 6 Carbon Stock Assessment Report and Section 8 - Land Cover Classification of the Project
VVB assessment **Date:** 03/04/2024
PP has provided evidence in the form of *Appendix 19 Ilocos Norte Conservation Estate Carbon Stock Project Document(version 2)*. 1. After thorough review of the Carbon Stock Assessment Report, VVB has determined that the new evidence provided in the form of reclassified NDVI images is significantly more accurate in depicting vegetation densities, namely, bare, sparse, and dense forest cover regions in the project area. Any previous issues with misclassification of forests and other areas have now been resolved. 2. Revised LULC images have been provided by the PP that classify the project area into 5 classes namely barren land, agricultural/grassland, shrubs, forest, and built-up areas. Landsat 5 data with a 30m*30m resolution was used for the LULC images of years 2003 and 2010 and Sentinel-2 data with a resolution of 10m*10m was used to provide LULC images for years 2015, 2021 and 2023. New LULC images are more accurate and also better demonstrate the conditions prior of the beginning of the project. **Finding is Closed**

CL	11	**Section no.**	4, Carbon Project document	**Date:** 22/08/2023
Description of CL				
As per Section 4 of Carbon Project Description, "*Silvicultural treatments to ensure the continuous healthy growth of planted trees are needed to ensure their effective carbon sequestration function*". PP is requested to provide the details of the silvicultural treatments that will be implemented in the project activity and the impact of the silvicultural treatments.				
Project participant response				**Date:** 06/09/2023
The 2018 Benchmarking for the establishment of an analogue forest in the North Luzon Renewable Energy Corporation, Barangay Caparispisan, Pagudpud, Ilocos Norte (Appendix 08) covers recommendations on planting maintenance including silvicultural methods to ensure carbon sequestration function. This is integrated in the activities being done onsite such as: **"…Enrichment planting.** Interspersed planting of native species in maturing Agoho (*Casuarina equisitifolia*) trees could improve the carbon sequestration and plant diversity. This intervention seizes the advantage of existing trees in providing shade and wind break for growing native trees. In selecting the appropriate native tree species, ecological and socio-economic conditions should also be sufficiently met. This necessitates a careful consideration of the original species that used to grow in the area, and local preferences towards the economic benefits that these trees will provide to the local people. **Thinning and regular pruning.** Thinning and regular pruning in the coming years can help improve tree carbon stock of Agoho plantation. These silvicultural interventions will help improve the stature (bole or stem diameter) growth hence larger carbon sequestration capacity. Thinning or selective removal of trees (to reduce competition) should also complement the enrichment planting using native species. The natural forest stands generally depict some of the ideal conditions for restoration vis-à-vis Analogue forest establishment. This stand shelters native trees that could be the sources of planting materials (eg. seeds and wilding).				

Critical to successful carbon sink project is the regular monitoring and maintenance of the reforestation site. The established permanent monitoring plots would help elicit stand growth and performance, and most importantly by generating helpful information that will guide the formulation of stand management plans vis-à-vis for improving carbon stock capacity…."
Documentation provided by project participant
Appendix 08: Benchmarking Report for Analogue Forest
VVB assessment **Date:** 31/01/2024
VVB, based on the supporting document "*Appendix 8 - Final Report on Analogue Forest Benchmarking*", confirms that PP has provided the detailed information regarding the species composition, endemic species, diversity index, dominant species, LOI, PAI, and silvicultural treatments implemented within the project activity. **CL has been closed**.

CL	12	**Section no.**	Leakage	**Date:** 22/08/2023
Description of CL				
During the on-site inspection, VVB has been informed that some areas of the site were previously grazing land. PP is requested to clarify on the leakage emissions from the project area in the provided offset report. In case of no leakage, supporting clarification, evidence or information shall be demonstrated.				
Project participant response				**Date:** 06/09/2023
Prior implementation of project, area where the wind farm is located part of Pagudpud's Strategic Agricultural and Fishery Development Zones (SAFDZs) as indicated in its Pagudpud Comprehensive Land Use Plan 2001 – 2010 (Appendix 10 – Pagudpud Comprehensive Land Use Plan). It is indicated that the municipalities of Caparispisan, Caunayan, Balaoi, and Saud are part of the total 2,897 hectares allocated for Strategic Livestock Sub-Development Zone (Source: Pagudpud CLUP 2001 – 2010). However, upon project implementation as early as 2014, protection activities efforts have started which includes the banning of destructive livelihood activities related to grazing (i.e, slash and burn activities). Please refer to Appendix 10 for more details.				
Documentation provided by project participant				
Appendix 10: Pagudpud Comprehensive Land Use Plan, refer to SAFDZ Map Pages 59 and 60				
VVB assessment				**Date:** 31/01/2024
Based on the Municipal Comprehensive Land Use Plan by Municipality of Pagudpud, VVB confirms that the municipalities of Caparispisan, Caunayan, Balaoi, and Saud are included in the total allocation of 2,897 hectares designated for the Strategic Livestock Sub-Development Zone. It is noteworthy that since the initiation of the project as early as 2014, measures have been put in place to prohibit destructive livelihood activities associated with grazing (i.e., slash and burn activities) in the designated zones. **CL has been closed**.				

CL	13	**Section no.**	Supporting document	**Date:** 22/08/2023
Description of CL				

PP shall provide the following documents:

a) Internal Audit Report
b) Sustainability Report
c) Justification for Calculation, Approach and Methodology
d) Raw data sheet used for the estimation of stand density.
e) Training records
f) Copy of the report for Degradation - past year and current
g) Records for Employment Contract – people involved ;
h) Land Use Records (including approvals for land-use change).
i) Grievances Mechanism
j) Procurement process for Saplings
k) Laboratory test reports for Soil Organic Carbon
l) Project Area NLR Maps with co-ordinates (Provided file is corrupt)

Project participant response	**Date:** 12/12/2023

For the following documents, supporting information and attachments are as follows:

1. **Internal audit report.** ACEN has engaged University of the Philippines Los Banos College of Forestry and Natural Resources in establishing an Analogue Forest in the project site in 2018. The engagement included a baseline establishment and annual reassessment and monitoring which started in 2023. The report covers the following components:
   a. Land Function Analysis
   b. Biodiversity (Flora)
   c. Watershed Management
   d. Carbon stock monitoring
   e. Pest and Diseases Management (New component, added in 2023)

   Furthermore, the proponent through the site team submits an annual report to DENR (Appendix 04) which is reviewed, monitored , and approved by the latter.

2. **Sustainability Report.** NLR submits an annual CDMP Report to DENR covering FLAg FLAg No. 01 – 2009 with available Annual Report as follows: 2015 to 2022. The latest CDMP Report has been attached as a supporting document. Monthly reports are also generated by site team as part of the Monthly Operations Report of NLR. Please see latest monthly report for August 2023.

   Justification for calculation, approach, and methodology. – please refer to Appendix 16

3. **Raw data sheet used for the estimation of stand density –** please refer to Appendix 16

4. **Training records.** – Please refer to Appendix 15

5. **Copy of the report for degradation**. - Please refer to Appendix 04

6. **Records for Employment Contract**.- Please refer to Appendix 5, Employee Names

7. **Land Use Records. –** Please refer to Appendices 9 and 10

8. **Grievance Mechanism** – Please refer to Appendix 12

9. **Procurement Process for Saplings** – Please refer to Appendix 13

10. **Laboratory test reports for soil organic carbon**- please refer to Appendix 16

11. **Project area NLR maps with coordinates** – Please refer to Appendix 14

Documentation provided by project participant
Appendix 04: Forest Land Use Agreement – Windfarm (FLAg No. 01 – 2009) Annual Report for 2022, section 6.1.2 (on pages 16 and 17) Appendix 05: First Amendment of Conservation Estate MOA between ACEN and NLR, Employee Names Appendix 08: Benchmarking Report for Analogue Forest Appendix 09: Historical Imagery: 2003, 2010, 2015, and 2021 Appendix 10: Pagudpud Comprehensive Land Use Plan , refer to SAFDZ Map, Pages 59 and 60 Appendix 11: Approved Enhanced Comprehensive Development and Management Plan Appendix 12: NLR Community Grievance Form Appendix 13: Seedling Procurement Document Samples Appendix 14: Project site boundary Appendix 15: Training Records List Appendix 16: Revised Carbon Stock Assessment Report w/ soil test results
VVB assessment **Date:** 31/01/2024
VVB, based on the review of all supporting documents, confirms that PP has provided all the required documentation pertaining to the project activity, thus leads to the closure of the finding. **CL has been closed**.

CL	14	**Section no.**	A.3.1, ISO 14064-2:2019	**Date:** 22/08/2023
Description of CL				
As per Section A.3.1 of the of the ISO 14064-2 standard, PP shall: a) provide complete information on environmental and social impact assessment, b) demonstrate contribution to sustainable development, c) demonstrate how the project contributes to national environment and development priorities and strategies.				
Project participant response				**Date:** 12/12/2023
Please refer to Annex 17				
Documentation provided by project participant				
Annex 17: Project Document Report				
VVB assessment				**Date:** 31/01/2024
VVB, based on the review of the revised carbon stock report, confirms that PP has furnished comprehensive details regarding the environmental and social impact assessment, alignment with SDGs, and adherence to national environmental and development priorities.. **CL has been closed.**				

Table 3. CAR from this verification

CAR	01	**Section no.**	6.7, ISO 14064 2:2019	**Date:** 22/08/2023

Description of CAR
a) PP shall use direct methods for calculating biomass, namely species-specific allometric equations. This is to avoid inflated biomass calculation from conversion of volume to biomass using biomass expansion factor. (Petersson et al.[1]) b) Furthermore, it was observed that the shared calculation sheet doesn't provide any information on formulae and default factors used for tab "2023_Summary" calculation along with information on source or reference. PP shall provide data source references for the allometric equations used for all carbon pools selected. c) For tab "Tree Carbon_NF", PP shall provide the scientific name for all the tree species. d) For tab " Soil Carbon - Cell H" PP is requested to explain the source of % SOC. e) PP is requested to provide the reference of all the literature review mentioned in the Carbon Stock Assessment Report along with the Evidence of peer review literatures. f) PP is requested to revise the Carbon removal calculation as per the Vintage Year and shall also revise it in the Carbon Stock Assessment Report to maintain the consistency of the report. g) PP shall include the baseline emissions/removals in the report demonstrating the final verified project removals after removing the baseline emissions/removals.
Project participant response **Date:** 12/12/2023
Kindly refer to Appendix 16
Documentation provided by project participant
Appendix 16: Revised Carbon Stock Assessment Report
VVB assessment **Date:** 31/01/2024
VVB, based on the review of the Revised Carbon Stock Report, confirms that Carbon removal calculation as per the Vintage Year is missing in the report. PP is requested to provide the same in the carbon calculation spreadsheet. PP is further requested to furnish a Track Change version highlighting all modifications made in the Carbon Stock report.
Project participant response **Date:** 20/03/2024
Please refer to Appendix 19 Ilocos Norte Conservation Estate Carbon Stock Project Document (version 2) word file tracked changes for historical changes and Appendix 19 Ilocos Norte Conservation Estate Carbon Stock Project Document (version 2) PDF file Section 7 – Identified GHG sources in the project implementation.
Documentation provided by project participant
VVB Assessment **Date**: 08.04.2024
VVB, based on the review of the revised Table 9 of the Carbon Stock Report, confirms that PP has provided the calculation as per the vintage year from 2018 – 2022. **Finding is closed**

CAR	02	Section no.	Carbon project document	Date: 05/09/2023
Description of CAR				
During the on-site inspection, VVB has been informed that the Natural plantation was part of the compliance planting for the Special tree cutting and Earth balling permit. PP is requested to revise the carbon project document, specifying the additional area planted after meeting				

[1] https://www.sciencedirect.com/science/article/pii/S0378112712000072

the compliance along with the carbon calculation sheets for the same. Kindly revise the site and plots verified accordingly.
Project participant response **Date:** 12/12/2023
Kindly refer to Appendix 16
Documentation provided by project participant
Appendix 16: Revised Carbon Stock Assessment Report
VVB assessment **Date:** 31/01/2024
PP is further requested to furnish a Track Change version highlighting all modifications made in the Carbon Stock report.
Project participant response **Date:** 20/03/2024
Please refer to Appendix 19 Ilocos Norte Conservation Estate Carbon Stock Project Document (version 2) word file tracked changes for historical changes
Documentation provided by project participant
VVB assessment **Date**: 08.04.2024
VVB, based on the review of the revised carbon project document and the Certificate of Compliance, confirms that PP has revised the calculation and area based on the area beyond compliance (CY2018-2022), i.e., 188.40 ha. **CL has been closed**

CAR	03	**Section no.**	6.2, ISO 14064 2:2019	**Date:** 22/08/2023
Description of CAR				
PP is requested to revised the project document in compliance with section 6.2 of the ISO 14064 2:2019 mentioning the: a) Project title, Project Purpose(s) and objective(s); b) Project technologies, products, services and the expected level of activity c) Identification of risks that could substantially affect the project's GHG emission reductions or removal enhancements and, if applicable, any measures to manage those riks d) Roles and responsibilities, including contact information of the project proponent and other project participants, including the intended users, and roles and contact information for relevant regulator(s) or administrators of the GHG programme to which the GHG project subscribes e) A chronological plan or actual dates and justification for the following: • The date of initiating project activities • GHG baseline time period • Date of termination of the project • Frequency of monitoring and reporting and the project period • Frequency of verification and validation, as applicable				
Project participant response **Date:** 12/12/2023				
Kindly refer to Appendix 16				
Documentation provided by project participant				
Appendix 16: Revised Carbon Stock Assessment Report				
VVB assessment **Date:** 31/01/2024				
VVB, based on the review of the supporting document "*Ilocos Norte Conservation Project Document*" verifies that PP has furnished comprehensive information regarding project specifics, ownership, technologies employed, services rendered, roles and responsibilities, project duration, monitoring and reporting frequency, as well as the frequency of verification. **CAR has been closed**				

CAR	04	**Section no.**	6.4, ISO 14064 2:2019	**Date:** 05/08/2023
Description of CAR				

PP is requested to revise the project carbon document determining the GHG baseline considering the following as per the section 6.4 of the ISO 14064 2:2019:

- Identified GHG SSRs (Sinks, Sources and Reservoirs)
- Data availability, reliability and limitations
- Other relevant information concerning present or future conditions, such as legislative, technical, economic, socio-cultural, environmental, geographic, site-specific and temporal assumptions or projections.

Project participant response	**Date:** 12/12/2023
Kindly refer to Appendices 16 and 17	
Documentation provided by project participant	
Appendix 16: Revised Carbon Stock Assessment Report Appendix 17: Project Document Report, Standard Operating Procedure for Carbon Stock Measurement	
VVB assessment	**Date:** 31/01/2024
VVB, based on the review of the revised Carbon Stock and SOP, affirms that PP has presented detailed information encompassing GHG, SSRs, legislative aspects, technical considerations, economic factors, socio-cultural elements, environmental considerations, geographic particulars, site-specific details, and temporal information. **CAR has been closed.**	

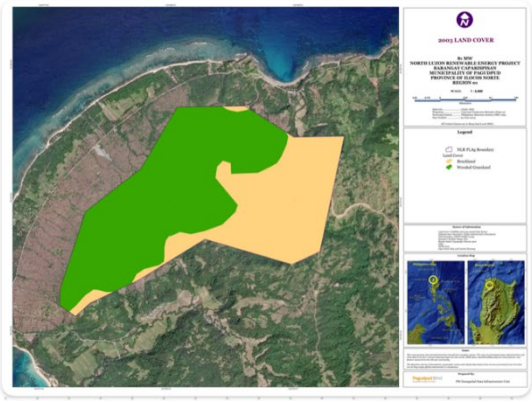
CAR	05	**Section no.**	6.13(10), ISO 14064 2-2019	**Date:** 22/08/2022
Description of CAR				
As per section 6.13(10) of the ISO 14064 2:2019, PP is requested to provide the uncertainty analysis and the statement on how it affects the GHG statement and how it has been addressed to minimize misrepresentation. Along with that, PP is requested to provide the approach for the sample size calculation and the confidence and precision level applied.				
Project participant response				**Date:** 12/12/2023
Kindly refer to Appendix 16				
Documentation provided by project participant				
Appendix 16: Revised Carbon Stock Assessment Report				
VVB assessment				**Date:** 31/01/2024
VVB, following an assessment of the updated Carbon Stock report, verifies that the Standard Plot Sampling technique, as suggested by Pielou (1005) and Pearson et al. (2005), was employed for obtaining essential baseline biomass and carbon stock measurements. The non-destructive technique was utilized to account for all trees and saplings within the 10m x 10m plot. **CAR has been closed.**				

CAR	06	**Section no.**	01 Project Boundaries and KML Files	**Date:** 22/08/2023
Description of CAR				
As per section 6.2 of ISO 14064-2 Standard, the PP shall describe: "*c) project location, including organizational, geographic and physical location information, allowing for the unique identification and delineation of the specific extent of the project*" VVB, based on review of files, provided by PP confirms that there are some inconsistences: 1. Landcover maps of the years 2003,2010,2015 and 2021 are inconsistent, (Land cover classes are different and do not correspond to each other). Therefore, it is necessary to standardize the land cover class maps.				

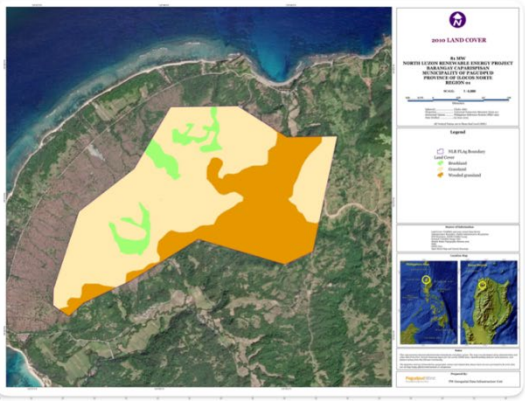
a. The land cover map for 2003 shows two land cover classes, whereas the map for 2010 displays three classes, for 2015 there are five classes, and for 2021 there are six classes.
b. In 2003, the Wooded Grassland category is labeled as Grassland or Brushland in 2010. Similarly, Brushland in 2003 is categorized as Grassland and Wooded Grassland in 2010.

c. Some areas of Grassland category in 2015 is classified as Open Forest in the 2021 map, and the Brushland category in 2015 is designated as Open Forest Land in the 2021 map.

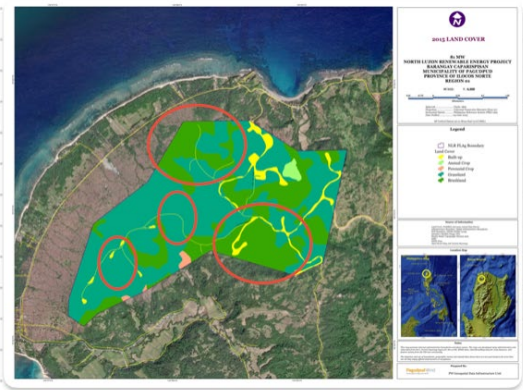
2003 Land Cover



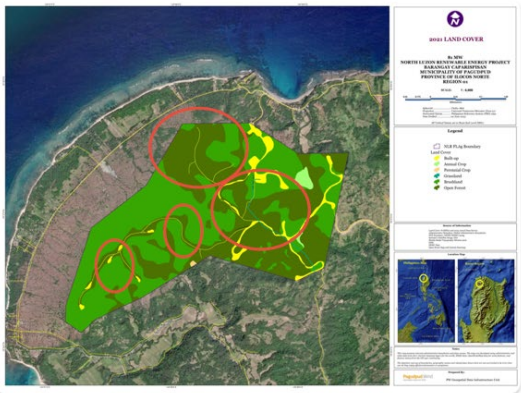
2010 Land Cover



2015 Land Cover

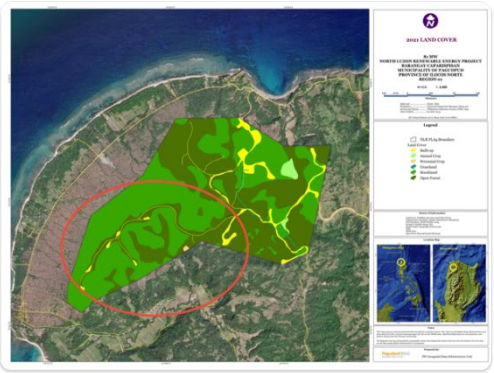


2021 Land Cover



2. In Land cover map 2021 areas of open forest have infrastructure inside (Built up and paved or ballasted roads), (for better definition of forest should split).

2021 Land Cover



2021 Google earth imagery 03-2021

3. Land cover shapefiles (2003,2010,2015 and 2021) is required.

Hence, PP is requested to provide revised shapefiles incorporating the above mentioned requirements.

Project participant response	**Date:** 06/09/2023

Please see historical images attached in Appendix 09:

- Years 2003, 2010, 2015, and 2021

Also, kindly refer to CL 10 responses on the basis for land and land use classification where it was mentioned that "The land cover change analysis of the NLR Wind Farm recognizes that the 2010 land cover data produced by NAMRIA was not well ground-trothed to validate the maps and that the documentation and accuracy assessments of their both 2010 and 2015 land cover data are not yet certain. The final electronic copies of these land cover datasets provided by NAMRIA was utilized as is, although these limitations would need to be kept in mind when interpreting the results of this analysis."

Furthermore, some areas of Grassland category in 2015 is classified as Open Forest in the 2021 map, and the Brushland category in 2015 is designated as Open Forest Land in the 2021 map.

Documentation provided by project participant

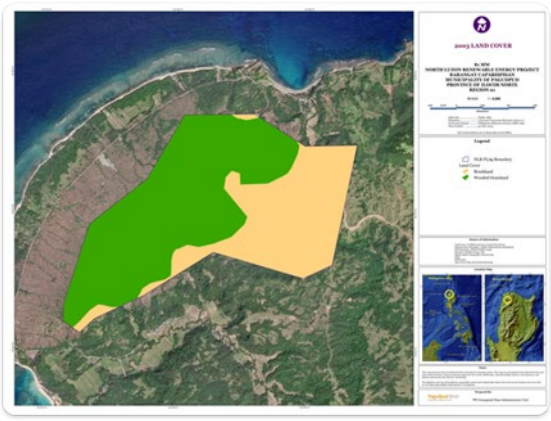
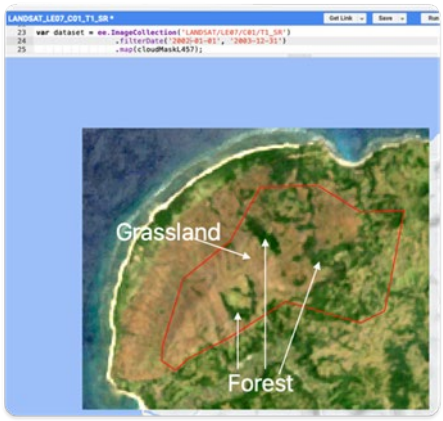
Appendix 09: Historical Imagery: 2003, 2010, 2015, and 2021

VVB assessment	**Date:** 31/01/2024

The files shared by PP exhibit inconsistencies that are incongruent with the requirements of ISO 14064-2 Standard; kindly refer the explanation of these inconsistencies below:

1. LULC files provides don't match with the contrasted information available for the project, also taking in consideration the scale of LULC done by NAMRIA and the geographic scale of the project, in the figure below is clearly evidenced that LULC 2003 doesn't match with the image for the same year, is evident that forest areas not corresponding with contrasted imagen for the same reference year.

2. Additionally, it is recommended to adjust the LULC scale to the project to demonstrate the conditions prior of the beginning of the project; furthermore, Lansat images data sources and other available sources can be used to have a better fitted of the LULC adjustment for 2003.

2003 Land Cover	2003 Lansat 7
	

Project participant response	**Date:** 20/03/2024
Kindly see Appendix 19 Ilocos Norte Conservation Estate Carbon Stock Project Document (version 2) PDF file – Section 6 Carbon Stock Assessment Report and Section 8 - Land Cover Classification of the Project	
VVB assessment	Date: 04/04/2024

PP has provided evidence in the form of *Appendix 19 Ilocos Norte Conservation Estate Carbon Stock Project Document(version 2)*.

1. After thorough review of the Carbon Stock Assessment Report, VVB has determined that the new evidence provided in the form of reclassified NDVI images is significantly more accurate in depicting vegetation densities, namely, bare, sparse, and dense forest cover regions in the project area. Any previous issues with misclassification of forests and other areas have now been resolved.
2. Revised LULC images have been provided by the PP that classify the project area into 5 classes namely barren land, agricultural/grassland, shrubs, forest, and built-up areas. Landsat 5 data with a 30m*30m resolution was used for the LULC images of years 2003 and 2010 and Sentinel-2 data with a resolution of 10m*10m was used to provide LULC images for years 2015, 2021 and 2023. New LULC images are more accurate and also better demonstrate the conditions prior of the beginning of the project.

CAR is Closed

CAR	07	**Section no.**	Carbon project document	**Date:** 22/08/2022
Description of CAR				
PP is requested to revise the monitoring period date specifying in the DD/MM/YYYY format, in the carbon project document and in the carbon calculation sheet as per the available monitoring data.				
Project participant response				**Date:** 12/12/2023
Noted on this. Kindly refer to Appendix 16				
Documentation provided by project participant				
Appendix 16: Revised Carbon Stock Assessment Report				
VVB assessment				**Date:** 31/01/2024
VVB, based on the review of the revised Carbon Stock Report, confirms that monitoring period date specifying in the DD/MM/YYYY format is missing in the report. PP is requested to revise the report in Track Change version.				
Project participant response				**Date:** 20/03/2024

Please refer to Appendix 19 Ilocos Norte Conservation Estate Carbon Stock Project Document (version 2) PDF version for period coverage – specifically Table 9 Projected Carbon stock and sequestered CO2 of the NLR windfarm from 2018 to 2022
Documentation provided by project participant
VVB Assessment — Date: 08.04.2024
VVB, based on the review of the revised Carbon Stock Report, confirms that the monitoring period date specifying in the DD/MM/YYYY format has been mentioned in the report. Finding is closed

TR- CAR	08	**Section no.**	Project Title	**Date:** 19/04/2024
Description of CAR				
Project title in in the signed contract is "*Afforestation, Reforestation and Revegetation (ARR) activities undertaken by ACEN CORPORATION*" in "Philippines" whereas in the PD the project title is "*Ilocos Norte Conservation Estate Carbon Stock Project Document*", which is not consistent with name in the contract.				
Project participant response				**Date:** 12/12/2023
PP has rename the documents to align with signed contract name to reflect technical team's recommendation				
Documentation provided by project participant				
Revised PD				
VVB assessment				**Date:** 31/01/2024
VVB, based on the review of the revised PD confirms that PP has corrected the project name making it consistent with the contract agreement in-between ACEN Corporation and Carbon Check India Private Limited. CAR is closed				

Table 4. FAR from this verification

FAR	NA	**Section no.**	XX	**Date:** DD/MM/YYYY
Description of FAR				
NA				
Project participant response				**Date:** DD/MM/YYYY
XX				
Documentation provided by project participant				
XX				
VVB assessment				**Date:** DD/MM/YYYY
XX				

APPENDIX D

Certificates of Competency

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Lalit Mohan Saklani

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☐ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☐ CCB Expert	☐ Legal Expert	☐ Financial Expert	☐ Environmental, Health and Safety financial matters
☐ SDG+	☐ Social no-harm(S+)	☐ Environment no-harm(E+)	
☒ Local Expert for India			

in the following Technical Areas:

☐ TA 1.1	☐ TA 1.2	☐ TA 2.1	☐ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☐ TA 13.1	☐ TA 13.2
☒ TA 14.1	☐ TA 15.1	☐ TA 16.1		

Issue Date
5th December 2023

Expiry Date
31st December 2024

Ms. Priya Suman
Compliance Officer

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
Dec 2023	Initial Adoption

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023
[1] Please refer to previous version of FM 7.9 for the revision history

Carbon Check (India) Private Limited

Certificate of Competency

Ms. Ahalee Bhowmik

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☐ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☐ Plastic Waste Expert
☐ CCB Expert	☐ Legal Expert	☐ Financial Expert	☐ Environmental, Health and Safety financial matters
☐ SDG+	☐ Social no-harm(S+)	☐ Environment no-harm(E+)	
☒ Local Expert for India and Bangladesh			

in the following Technical Areas:

☐ TA 1.1	☐ TA 1.2	☐ TA 2.1	☐ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☐ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☐ TA 13.1	☐ TA 13.2
☒ TA 14.1	☐ TA 15.1	☐ TA 16.1		

Issue Date
5th December 2023

Expiry Date
31st December 2024

Ms. Priya Suman
Compliance Officer

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
Dec 2023	Initial Adoption

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023
[1] Please refer to previous version of FM 7.9 for the revision history

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Amit Anand

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

for the following functions and requirements:

☒ Validator	☒ Verifier	☒ Team Leader	☒ Technical Expert
☒ Technical Reviewer	☐ Health Expert	☐ Gender Expert	☒ Plastic Waste Expert
☒ CCB Expert	☐ Legal Expert	☒ Financial Expert	☐ Environmental, Health and Safety financial matters
☒ SDG+	☒ Social no-harm(S+)	☒ Environment no-harm(E+)	
☒ Local Expert for India and RSA			

in the following Technical Areas:

☒ TA 1.1	☒ TA 1.2	☐ TA 2.1	☒ TA 3.1	☐ TA 4.1
☐ TA 4. n	☐ TA 5.1	☐ TA 5.2	☐ TA 7.1	☒ TA 8.1
☐ TA 9.1	☐ TA 9.2	☐ TA 10.1	☒ TA 13.1	☒ TA 13.2
☒ TA 14.1	☒ TA 15.1	☐ TA 16.1		

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
2022[1]	Annual revision
Jan 2023	Annual revision
Dec 2023	Change in the template due to revision in TA and function

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

[1] Please refer to previous version of FM 7.9 for the revision history