



VERIFICATION REPORT

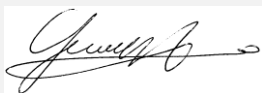
GOMES DE MATTOS CERAMIC FUEL SWITCHING PROJECT



Document Prepared by RINA Services S.p.A

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Summary:

RINA Services S.p.A. (RINA), commissioned by Sustainable Carbon Projetos Ambientais Ltda, has verified the monitoring report and greenhouse gas emission reductions reported for the project activity Gomes De Mattos Ceramic Fuel Switching Project in Brazil, with regards to relevant requirements for VCS rules and Social Carbon Standard version 5.0. The objective of the Gomes De Mattos Ceramic Fuel Switching Project is fuel switching from native firewood to renewable biomass from native wood from forest management. The project applies the CDM approved methodology AMS-I.E – Switch from Non-Renewable Biomass for Thermal Applications by the User – version 07 of 22/07/2016 and corresponding tools.

The Sustainable Carbon Projetos Ambientais Ltda has requested RINA to perform the VCS and Social Carbon verification for which a VCS and Social Carbon Monitoring Report and supporting documents were provided. RINA, acting as an independent third party, has assessed the documents and evidence provided, and performed desk assessment and presential assessment, which included a desk review, inspection of project site, interviews with stakeholders, interviews with the top management of PP and interviews with the technical and field staff of the project activity.

The objective/scope of the verification is to have an independent review ex post determination by a VVB (Validation and Verification Body) of the monitored GHG emissions reductions by switching fuel occurred as a result of the implementation of the project activity during a defined monitoring period.

Method and Criteria: Verification was conducted using RINA procedures in line with the requirements specified in the VCS Requirements, i.e. VCS Program Guide, VCS Version 4.4 of 29/08/2023, VCS Standard version 4.5 of 11/12/2023 and Social Carbon Standard version 5.0 of July 2013. The GHG emission reductions estimated

are on the basis of the approved methodology AMS-I.E – Switch from Non-Renewable Biomass for Thermal Applications by the User – version 07 of 22/07/2016.

RINA team confirmed that information contained and the emissions reductions claimed in the Monitoring Report is calculated in compliance with the requirements of the Verified Carbon Standard (VCS) and Social Carbon Standard and the requirements of the methodology applied.

During this verification 8 Clarification Requests (CRs) were identified related to the monitoring, implementation or operations of the proposed VCS and Social Carbon monitoring report (VCS SocialCarbon Gomes de Mattos version 01 of 30/12/2022) in relation to all relevant VCS requirements v 4.5 and Social Carbon Standard v 5.0 for the project activity and the applied monitoring methodology; these findings have been discussed in appendix 2 of this report.

In summary, it is RINA's opinion that the project activity "Gomes de Mattos Ceramic Fuel Switching Project" as described in the VCS MR, version 09 of 11 March 2024, meets all relevant VCS requirements for VCS and Social Carbon projects and correctly applies the CDM methodology AMS-I.E "Switch from Non-Renewable Biomass for Thermal Applications by the User", version 07. In addition, the GHG emission reductions reported for the project in the VCS monitoring report (version 09) of 11-March 2024 are fairly stated. The GHG emission reductions were calculated correctly on the basis of the CDM methodology AMS-I.E "Switch from Non-Renewable Biomass for Thermal Applications by the User", version 07.

RINA is able to certify to a reasonable level of assurance that the emission reductions from the project activity "Gomes de Mattos Ceramic Fuel Switching Project" during the period 01 November 2017 to 31 July 2022 amount to 155,547.00 tonnes CO2 equivalent.

CONTENTS

1 INTRODUCTION	5
1.1 Objective	5
1.2 Scope and Criteria	5
1.3 Level of Assurance	6
1.4 Summary Description of the Project	6
2 VALIDATION PROCESS	7
2.1 Method and Criteria	7
2.2 Document Review	8
2.3 Interviews	11
2.4 Site Inspections	12
2.5 Resolution of Findings	12
3 VALIDATION FINDINGS	15
3.1 Project Details	Error! Bookmark not defined.
3.2 Safeguards	16
3.3 Application of Methodology	18
3.4 Non-Permanence Risk Analysis	20
4 SOCIALCARBON INDICATORS AT POINT ZERO	32
5 VALIDATION CONCLUSION	41
APPENDIX 1: ABBREVIATIONS	46
APPENDIX 2: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUEST	46

1 INTRODUCTION

1.1 Objective

RINA has been commissioned by Sustainable Carbon Projetos Ambientais Ltda to perform an independent verification of its VCS and Social Carbon “Gomes de Mattos Ceramic Fuel Switching Project”, in accordance with the VCS standard version 4.5 and Social Carbon standard v 5.0.

The reported GHG emission reductions for the given monitoring period must undergo independent third- party verification and certification of emission reductions as the basis for issuance of Voluntary Emission Reductions (VERs/VCUs).

The objectives of this verification exercise are, by review of objective evidence, to establish that:

- The project activity has been implemented and operated as per the project description (PD) and that all physical features (technology, project equipment, and monitoring and metering equipment) of the project are in place.
- Monitoring report and other supporting documents are complete.
- The data is recorded and stored as per the monitoring methodology and approved monitoring plan.
- To confirm that the monitoring system is implemented and fully functional to generate Voluntary Emission Reductions (VERs/VCUs) without any double counting, and
- To establish that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

1.2 Scope and Criteria

The verification scope is:

- to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- to evaluate the GHG emission reduction 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 project is assessed against the of VCS program guide v 4.4, VCS standard v4.5 and Social Carbon Standard version 5.0 and all the GHG program requirements. RINA has, based on the recommendations in the latest version of VCS Validation and Verification Manual v 3.2, and employed a rule-based approach (as criteria) in the verification, focusing on the identification of significant reporting rules and the reliability of project monitoring.

The Verification is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the Monitoring Report.

For Social Carbon it was used Social Carbon Indicators Brazilian Red Ceramic factories Indicators September 2013. Version 1.1/53/.

1.3 Level of Assurance

The final verification report before being submitted to the client were subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent RINA's instructions, with reasonable level of assurance.

The technical review was performed by a technical reviewer(s) qualified in accordance with RINA's qualification scheme for VCS validation and verification.

The verification team and the technical reviewers consist of the following personnel.

Role	Last Name	First Name	Country
Lead Verifier, Technical Expert	Freitas	Cláudia	RINA Brazil
Technical Reviewer	Carvalho	Thaís	RINA Brazil

1.4 Summary Description of the Project

Project Proponent	Cerâmica Gomes de Mattos Ltda Sustainable Carbon – Projetos Ambientais Ltda
Title of the project activity	Gomes de Mattos Ceramic Fuel Switching Project
Baseline and monitoring methodology	AMS-I.E: Switch from Non-Renewable Biomass for Thermal Applications by the User - Version 07 of 22-July-2016.
Location of the project activity	The project is located in Crato Ceará state in the Northeast of Brazil.
Brief description of the project	The project involves fuel switching from native wood from deforestation activity to renewable biomasses. By switching non-renewable fuel (native wood) to renewable biomasses the project will achieve 155,687.00 tCO₂e GHG emission reduction during the current monitoring period. The project also follows Social Carbon Standard and has established social and environmental indicators for monitoring its evaluation. In this monitoring period the project is in Point Five.
Project crediting period	01-May-2016 to 30-April-2026 (10 years)
Social and environmental	The project activity implementation avoids the use of non-renewable fuels due to the use of <i>clean and efficient technologies through the use of renewable biomass as fuel. The project improves the local environmental and social conditions by using renewable biomasses and the generation of best also by contributing to the reduction on the use of non-renewable fuels and the improvement in the quality of life of the nearby community due to modernization works close to the project and an increase in the number of jobs. The project start date was defined as 01-April-2006.</i>

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification was conducted using RINA procedures in line with the requirements specified in the VCS Standard v4.5 /05/ and Social Carbon Standard v 5.0 /08/, the applied GHG methodology

Switch from Non-Renewable Biomass for Thermal Applications by the User AMS-I.E version 07 /06/ and its associated tools as well as applying standard auditing techniques.

The verification consisted of the following phases:

- Document review;
- Follow-up actions- presential audits, remote meetings, including interviews and site assessments, videos and pictures of the site;

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

A complete list of documents/evidences reviewed is included in section 2.2.

2.2 Document Review

The VCS Social Carbon Gomes de Mattos Monitoring Report version 09 of 11 March 2024 /01/, and additional background documents related to the project design and monitoring (i.e. VCS Monitoring Report Template, Approved VCS methodology, Verification Requirements) as well as scientific literature and country law were reviewed in the light of VCS Standard v4.5 /05/ and Social Carbon Standard v5.0 /08/.

All documents reviewed are referenced throughout the verification report as well as in Verification Findings in Appendix 2.

Below is a list of documents that were reviewed during the verification:

/01/	Sustainable Carbon: VCS Social Carbon Gomes de Mattos Monitoring Report version 01 of 31/07/2022, version 02 of 20/04/2023, version 03 of 18/07/2023, version 04 of 25/08/2023, version 05 of 26/10/2023, version 06 of 27/11/2023, version 7 of 19/12/2023, version 08 of 10 January 2024 and version 09 of 11 March 2024
/02/	Sustainable Carbon: emission reductions calculation spreadsheet: VCS_MR_Calculation_CGM_8th_01 11 2017_31 07 2022_v.01, VCS_MR_Calculation_CGM_8th_01 11 2017_18 07 2022_v.02 and CS_MR_Calculation_CGM_8th_01 11 2017_18 07 2022_v.03
/03/	VCS: Validation and Verification Manual version 3.2 of 19/10/2016
/04/	VCS: VCS Program Guide, VCS Version 4.4 of 29/08/2023
/05/	VCS: VCS Standard, Version 4.5 of 13/12/2023
/06/	VCS: Switch from Non-Renewable Biomass for Thermal Applications by the User AMS-I.E version 07 of 22/07/2016.
/07/	TOOL05 Methodological tool: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation - version 03.0 of 22/09/2017
/08/	Social Carbon Standard version 5.0 of July 2013
/09/	VCS: Project Design: PD Gomes de Mattos_v9 of 16/04/2018

/10/	Renewal of crediting period report Gomes de Mattos Ceramic Fuel Switching Project ESPL – Report ID VCS.VAL.17.123
/11/	Website: https://verra.org/project/rina-services-s-p-a/ VCS: List of sectoral scopes RINA S.p.A is accredited Language: English Retrieved on: 03/07/2023
/12/	VCS Project Database: https://registry.verra.org/ , last accessed on 03/07/2023
/13/	CDM: https://cdm.unfccc.int/Projects/projsearch.html , last accessed on 03/07/2023
/14/	Gold Standard: https://registry.goldstandard.org/projects?q=&page=1&countries=BR last accessed on 03/07/2023
/15/	Lippel: http://www.lippel.com.br/br/categorias/processamento/picadores-de-madeira/picadores-de-madeira-fixos-a-tambor/picador-de-madeira-fixo-a-tambor-ptl-300x600-9.html
/16/	CGM: Attendance lists for health and safety training in the monitoring period
/17/	CGM: Sustainable Forest Management Plan in the Caatinga biome
/18/	TOOL 12 Methodological tool “Project and leakage emissions from transportation of freight” – 01.1.0
/19/	TOOL 16: Project and leakage emissions from biomass version 4.0
/20/	CGM: Employee list for this monitoring period
/21/	CGM: Employee Registration Control Assumption 2017-2022
/22/	CGM: Employee registration sheet
/23/	CGM: Receipts for donations to the Cancer Institute of Ceará 2017 - 2022
/24/	CGM: Football field photos
/25/	CGM: Donation receipts 2017 - 2022
/26/	CGM: Satisfaction Survey 2017 - 2022
/27/	CGM: Comments received Satisfaction Survey
/28/	CGM: Pictures of the suggestion boxes
/29/	CGM: Pictures of the end of the year party /29/
/30/	CGM: CIPA Records
/31/	CGM: PGR - Risk Management Program and PPRA - Environmental Risk Prevention Program reports
/32/	CGM: PCMSO - Medical Control in Occupational Health Program reports
/33/	CGM: PCA - Hearing Conservation Program reports
/34/	CGM: Pictures of technology improvements
/35/	CGM: PPE - Personal Protective Equipment's records
/36/	CGM: Occupational health and safety service contract
/37/	CGM: CER Gomes de Mattos monitoring worksheet 2017 - 2022
/38/	CGM: Solid Waste Management Plan

/39/	Ibama Consultation of Environmental Notices and Embargoes of 06/04/2022
/40/	CGM: Pictures of the sustainable management plan
/41/	CGM: Biome exploration permit 2023.2.2022.68474
/42/	Ibama Negative Certificate of Debt 22587559 of 07/05/2022
/43/	Environment Superintendence Semace Authorization for plot exploration 8/2018 - Diflo
/44/	Operating license 013/2022, of the Secretary of Urbanism and Environment of the municipality of Crato
/45/	Water Grant 1862/2018 of Secretary of Water Resources of the state of Ceará
/46/	License for clay extraction 015/2022 of the Secretary of Urbanism and Environment of the municipality of Crato
/47/	Federal technical registry 48424 of the Brazilian Institute for the Environment and Renewable Natural Resources – Ibama
/48/	CGM: Setec – F26 - Determination of face measurements - Effective dimensions
/49/	CGM: Sectorial Quality Program (PSQ) certifications 2016 to 2022
/50/	CGM: posts in Instagram (@ceramicaassuncao)
/51/	CGM: posts in Youtube: https://www.youtube.com/watch?v=k1Qj94cvCak .
/52/	CGM: Sales Report
/53/	SocialCarbon Indicators Brazilian Red Ceramic factories Indicators September 2013. Version 1.1
/54/	CDM: General guidance on leakage in biomass project activities (attachment C of appendix B) of Indicative Simplified Baseline and Monitoring Methodologies for Selected Small-Scale CDM Project Activity Categories.
/55/	CGM: Satellite images of farms and their areas
/56/	CGM: Geopark Araripe 1 to 14 pictures
/57/	CGM: Football field photos
/58/	CGM: Employee of the month chart
/59/	CGM: Football tournament photo
/60/	CGM: Natal Employees Award
/61/	CGM: Sustainable management plan – Cana Brava
/62/	CGM: Sustainable management plan – Pau D´Arco and Bonfim
/63/	CGM: Pictures of kilns and their protection grids
/64/	CGM: Photos of tiles and fans
/65/	GMC: Sectorial Quality Program (PSQ) certificates different types of bricks
/66/	CGM: Records of stakeholder's meetings
/67/	Banner 1 – Pau D´Arco and Bonfim farms
/68/	Declaration of performance of the carbon credit project
/69/	Kilns fuel Forest Origin Document (DOF)
/70/	Registers of return trip road distance between the origin and destination of freight transportation activity f in monitoring period

/71/	Full Exploration Authorizations – APO: # 2023.2.2023.15596 and 2023.2.2023.15605 of Sítio Cana Brava and Fazenda Pau D'Arco e Bonfim)
/72/	Photo of the entrance of the "Fazenda Pau D'Arco e Bonfim".

2.3 Interviews

Below the list of people interviewed during the onsite verification process.

Date	Name	Role	Organization	Topic
11/01/2023	Stephenson Ramalho de Lacerda *	Manager	Gomes de Mattos Ceramic	Project activity management, operation and monitoring, project operation data organization, project biomass production and Social Carbon indicators
	Bruno de Almeida Figueiredo **	Safety technician	Gomes de Mattos Ceramic	Social Carbon indicators
	Lara de Paula	Senior analyst	Sustainable Carbon	Project activity monitoring, emissions reductions calculation Social Carbon indicators
	Mariana Carriles	Technical consultant	Sustainable Carbon	Social Carbon Indicators
	Ailton L. da Silva	Local consultant	Sustainable Carbon	Project production

For the information regarding SocialCarbon indicators the PP applied a questionnaire to Mr. Stephenson Ramalho de Lacerda the ceramic representative during the data collection for the preparation and issuance of the monitoring report. This data collection was carried out remotely.

The ceramic team is responsible for the storage of the project documents in the indicators sectors: health and safety, environment, administrative/financial, operation among others. The Sustainable Carbon team analyze the documents to check if they are in accordance with the information provided during the interview.

RINA has assessed the Social Carbon indicator scores through documented evidences and interview with stakeholders described in the table above. The meetings and check of support evidences, videos and pictures were used to assess the social and environmental indicators in order to confirm that the impacts arising from a carbon offset project for the six resources of the methodology (Social, Human, Financial, Natural, Biodiversity and Carbon) are correctly scored/described.

* Stephenson Ramalho de Lacerda, manager, is responsible for the project activity management, administrative activities related to the carbon project, such as the development of environmental and social initiatives, financial planning and control of carbon credit revenues, operation and monitoring, project operation data organization as well as the destination for proceeds, providing evidence and necessary documents to complete Social Carbon report by the Sustainable Carbon team.

** Bruno de Almeida Figueiredo ceramics safety technician, is responsible for managing Social Carbon indicators.

2.4 Site Inspections

The site inspection was carried out on 11/01/2023.

No.	Activity performed on-site	Site location	Date	Team member
1	Implementation and operation of the project activity. Checked the operational area, interviewed key personnel of the plant to confirm operational and data collection procedures, cross-checked between information provided in the monitoring report and data plant.	Gomes de Mattos Operational plant and office in Crato municipality	11/01/2023	Cláudia Freitas
2	Physical inspection of the site	Gomes de Mattos Operational plant and office in Crato municipality		
3	Reviewed information flows for generating, aggregating and reporting the monitoring parameters	Gomes de Mattos Operational plant and office in Crato municipality		
4	Reviewed calculations and assumptions made in determining the GHG data and emission reductions.	Gomes de Mattos Operational plant and office in Crato municipality		
5	Checked the quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters	Gomes de Mattos Operational plant and office in Crato municipality		

6	Cross-checked between information provided in the monitoring report and data evidence.	Gomes de Mattos Operational plant and office in Crato municipality		
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2.5 Resolution of Findings

The objective of this phase of the verification was to resolve any outstanding issues that needed be clarified prior to RINA's positive conclusion on the monitoring report and the project design.

A corrective action request (CAR) is issued if one of the following occurs:

- The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions.
- The VCS requirements have not been met.
- There is a risk that emission reductions cannot be monitored or calculated.

A clarification request (CR) is raised if information is insufficient or not clear enough to determine whether the applicable requirements of VCS version 4.5 standard and Social Carbon standard version 5.0 have been met.

The number of CARs and CRs raised by RINA are the following:

CR: 8. CAR: 0

The list of findings and their resolution are presented at Appendix II of this report.

2.5.1 Forward Action Requests

A forward action request (FAR) is raised during verification to highlight issues related to project implementation that require review concerning monitoring and reporting during the next monitoring period and subsequent verification of the project activity.

A forward action request (FAR) should be issued, where:

1. the actual project description/ provisions for project monitoring and reporting practices requires attention and /or adjustment for the next consecutive verification period, or
2. an adjustment of the MP is recommended.

No FARs was raised in the validation of this 2nd crediting period as confirmed by the verification team in the validation report /10/ or by RINA in this monitoring period.

2.6 Eligibility for Validation Activities

Not applicable.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

The project activity is not registered or seeking registration under other GHG program(s); moreover, there is no evidence of the project's rejection from any other GHG programs as per the GS /14/ and CDM /13/ project data base

3.2 Methodology Deviations

No methodology deviation applied in this monitoring period.

3.3 Project Description Deviations

No project description deviations applied to the project activity in this monitoring period.

3.4 Grouped Projects

The project activity is not a grouped project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

The project activity involves fuel switching from native wood to biome renewable biomass. The ceramic operates with 2 "Hoffmann" kilns and one "Câmara" kiln.

As per the on-site assessment, observations, interviews and collected evidences, it was possible to assess that, in general, the project activity has been implemented as described in the VCS-PD.

- a. The GHG emission reductions generated by the project have not become included in any emissions trading program or any other mechanism that includes GHG allowance trading; the project has not received nor sought any other form of environmental credit, and neither has become eligible to do so since validation or previous verification. Finally, the project has not participated nor been rejected under any other GHG programs since validation or previous verification. The main sustainable development contributions area is pioneer initiative that encourages the development of new technologies throughout the country.
- b. use of clean and efficient technologies through the use of renewable biomass as fuel;
- c. use of renewable biomasses resulting in GHG emission reductions.

During the onsite visit the VVB confirmed that there were no delays or deviations in the project implementation hence the project has been implemented as described in the PD /09/. No leakage was considered and project emissions were calculated as 185.00 tCO₂e as per the applied methodology.

There are no material discrepancies between the actual monitoring system, and the monitoring plan set out in the project description and the applied methodology.

4.2 Safeguards

4.2.1 No Net Harm

The burning of biomass generates particulate material and CO₂ identified as negative impact, which also occurs when using fossil fuel. However, because it is renewable energy, it has a carbon neutral life cycle.

All The project activity will generate ashes due to the burning of the biomass. This impact will be mitigated by incorporating the ashes into the clay used as thermal insulator in the kilns entrance.

Hence the project does not cause any relevant negative impact as all generated energy is a result of the natural resources available. In fact, the project will improve the local environmental conditions.

4.2.2 Local Stakeholder Consultation

The project participant has a direct relationship with local community and has appropriate channels to receive comments from local stakeholders. The project activity has a local stakeholder consultation access in place and working.

During the on site visit the verification team interviewed employees and confirmed that PP has an environmental management area prepared to receive comments from the community through the website, telephone, e-mail or even personally.

Verification team has interviewed internal employees and confirms that no comments /complaints have been observed during the monitoring period.

4.2.3 AFOLU-Specific Safeguards

This is not an AFOLU project.

4.3 Accuracy of GHG Emission Reduction and Removal Calculations

RINA has assessed the information provided by the PP by reviewing the data and information to verify their completeness, the monitoring plan /01/, the applied methodology /06/, evaluating the data management and the quality assurance and quality control of the reported GHG removals.

All methods and formulas are in accordance with the applied methodology and monitoring plan of the validated VCS-PD /09/ and all monitored data is traceable. Parameters at validation were cross checked with the project description /09/.

- the approved CDM methodology AMS-I.E – Switch from non-renewable biomass for thermal applications by the user – version 07.0 /06/ is applied to the project activity. GHG emission reduction is calculated as baseline emissions;

- project emissions is calculated due to the result of biomass transportation of a distance over 200 Km. As it is a small scale project, emissions from energy consumption associated with processing of biomass residue is disregarded /06/. It was considered that the biomass providers are located over a distance of 200 km of the Ceramic factory, it will be calculated using the methodological tool “Project and leakage emissions from transportation of freight” – 01.1.0 /18/. It will be used the option B “using conservative default values”. The emissions caused by transportation will be monitored during the verification to ensure the distance is less than 200 km and if it is over than 200 km calculate the project emissions;

- no leakage is considered for this kind of project, in accordance with the applied methodology and “General guidance on leakage in biomass project activities”, as all possible sources of leakage are demonstrated at the MR as:

- there is no transference of equipment;
- the amount of biomasses to provide thermal energy for the project activity represents a non-representative quantity of these kind of biomasses, which avoids the possibility of leakage;
- the project is expected to decrease the use of non-renewable biomass by similar users, especially due to the incentive of carbon credits.

Data and parameters monitored:

Parameter	Description	Value applied /02/
PR _y	Production of ceramic devices	245,781.40 ton of ceramic pieces The amount is acquired by counting the total production of the period considered for each ceramic factory and data is aggregated on a monthly and yearly basis. The invoices for purchasing fuel for kilns were checked during the visit to the ceramics /69/.
Q _{renbiomass}	Amount of renewable biomass utilized	19,096.00 tonnes Total of native wood from forest management in this monitoring period. The amount of biomass is monitored in accordance with the volume described at the receipt. As per PD /09/ the values in the receipts are described in m³ (when applicable), shall be converted into tonnes through the specific gravity of each biomass. The specific gravity values of each renewable biomasses used in this project are (in ton/m³): Sources of data: native wood from forest management 0.880. The ceramics factory preferably uses "native forest management wood" once the GMC has two management areas (Sítio Cana BRrava and Fazenda Pau D'Arco e Bonfim) from which is extracted its biomass. During the intervals between the management releases by the environmental agency, CGM ceramic buys from other suppliers,

		as wood extraction requires authorization /70/. The values in the "Project Emissions", 19,096 tons of biomass used, 10,866 tons come from the factory's management plans. A photo of the entrance of the "Fazenda Pau D'Arco e Bonfim" was provided as evidence /72/.
Origin of renewable biomass	Renewable origin of the biomass	Value and unit not applicable Data is controlled by the project developer through the information given by the biomass providers. The guarantee of acquiring renewable wood is achieved by invoices from the providers. The biomass native wood from forest management plan are considered renewable as fulfilling the options described in the methodology applied.
Leakage of non-renewable biomass	Leakage resulted from the non-renewable biomass	0 tCO _{2e} Sources of leakage is predicted in the applied methodology and are monitored. PP has accessed national surveys, scientific articles, official statistical data and regional data to ensure that there was no leakage from non-renewable biomass.
f_{NRB-y}	Woody biomass fraction used in the absence of the project activity in year 'y' that can be established as non-renewable biomass using survey methods, government data or approved default country specific fraction of non-renewable biomass (f_{NRB}) values available on the CDM website.	% 92.00 The monitoring of this parameter is based in national and international articles and database every monitoring period.
Renewable biomass surplus	Amount of renewable biomass available	0 ton or m ³

		It is used to calculate the leakage of renewable biomass. The sources of leakage predicted in methodology applied is monitored. The measurement of leakage is based in national and international articles and databases every monitoring period. These sources provide information about the biomass availability in the project activity's region. It was estimated to be zero based on the 3 sources of the leakage in the applied methodology AMS I-E: a) If the project activity includes substitution of non-renewable biomass by renewable biomass, leakage in the production of renewable biomass must be considered; b) Leakage relating to the non-renewable biomass shall be assessed from ex-post surveys of users and areas from where biomass is sourced and c) If the equipment is transferred from another activity or if the existing equipment is transferred to another activity.
NCV _{biomass}	Net calorific value of non-renewable woody biomass that is substituted	0.015 TJ/ton of wood IPCC default: for wood fuel based on the gross weight of the wood.
D _{f, m}	Return trip road distance between the origin and destination of freight transportation activity <i>f</i> in monitoring period <i>m</i>. Determined for each freight transportation activity <i>f</i> for a reference trip using the vehicle odometer or any	Kilometer If the biomass providers are located over a distance of 200 km of the Ceramic, it is calculated using the methodological tool "Project and leakage emissions from transportation of freight" – 01.1.0

	other appropriate sources as on-line sources.	/18/. It was used the option B “using conservative default values”. The distance from suppliers to the ceramics was checked by the verification team /70/. Detailed distances through supply to the ceramic in kilometer are provided in MR v09 section 4.2. This parameter is recorded by the ceramic in sheets with the distance between the ceramic and the furnisher.
FR _{f,m}	Total mass of freight transported in freight transportation activity <i>f</i> in monitoring period <i>m</i>	19,096.00 tonnes This parameter is record by the ceramic in a sheet with the distance between the ceramic and the furnisher. The cross-check was carried out by checking the biomass receipts by the lead verifier during the onsite visit. The biomass used is managed wood, hence it is not possible to use a scale for measurements, but rather a volumetric measurement (m³) which is later converted into tons. Detailed native wood from forest management is in MR v09 FR_{f,m} table and table 9.

It was verified that the emission reduction spreadsheet is traceable and correct, with no manual transposition errors.

Baseline emissions (*BE_y*)

The baseline emissions are calculated as bellow.

$$BE_y = B_y \times f_{NRB,y} \times NCV_{biomass} \times EF_{projected_fossil_fuel}$$

Where:

BE_y: Baseline emissions during the year *y* (tCO₂e);

B_y: Quantity of wood biomass that is substituted or displaced (tonne);

f_{NRB,y}: Fraction of non-renewable biomass (wood) used in the absence of the project activity in year *y*;

NCV_{biomass}: Net calorific value of non-renewable biomass (TJ/tonne);

EF_{projected fossil fuel}: Emission factor for the projected fossil fuel consumption in the baseline (tCO₂e/TJ)

BE_y = 155,872.00 tCO₂e

Project emissions (*PE_y*)

According to applied methodology the project emissions could be a result of biomass transportation of a distance over 200 Km or emissions from energy consumption associated with processing of biomass residue. As it is a small-scale project, may neglect emissions from energy consumption associated with the cultivation of biomass. Although if the biomass providers are located over a distance of 200 km of the Gomes de Mattos Ceramic, it will be calculated using the methodological tool “Project and leakage emissions from transportation of freight” /18/. It was used option B “using conservative default values”. The emissions caused by transportation is monitored during the verification to ensure the distance is less than 200 km and if it is over than 200 km calculate the emissions by the following equation:

$$PE_{TR,m} = \sum_f D_{f,m} \cdot FR_{f,m} \cdot EF_{CO_2,f} \cdot 10^{-6}$$

Where:

PE_{TR,m}: Project emission from road transportation of freight monitoring period *m* (tCO₂)

D_{f,m}: Return trip road distance between the origin and destination of freight transportation activity *f* in the monitoring period *m* (km)

FR_{f,m}: Total mass of freight transported in freight transportation activity *f* in monitoring period *m* (t)

EF_{CO₂,f}: Default CO₂ emission factor for freight transportation activity *f* (g CO₂/ t km)

f: Freight transportation activities conducted in the project activity in monitoring period *m*

PEy = 325.00 tCO₂e

Leakage emissions (LEy)

During this monitoring period leakage was estimated as 0(zero) tCO₂e in accordance the applied methodology AMS I-E /06/ that predicts three possible sources of leakage:

- a) If the project activity includes substitution of non-renewable biomass by renewable biomass, leakage in the production of renewable biomass must be considered.

The leakage from biomass projects should be estimated according to the “General guidance on leakage in biomass project activities” (attachment C of appendix B) of Indicative Simplified Baseline and Monitoring Methodologies for Selected Small-Scale CDM Project Activity Categories /54/, which identifies different emission sources based on the type of biomass considered (refer to table below).

Table Sources of leakage according to the type of the biomass

Biomass Type	Activity/Source	Shift of pre project activities	Emissions from biomass generation/ cultivation	Competing use of biomass
Biomass from forests	Existing forests	-	-	X
	New forests	X	X	-
Biomass from croplands or grasslands (woody or non-woody)	In the absence of the project the land would be used as a cropland/wetland	X	X	-
	In the absence of the project the land will be abandoned	-	X	-
Biomass residues or waste	Biomass residues or wastes are collected and use.	-	-	X

Native wood from forest management. The Sustainable Forest Management Plan is organized into three stages: the division of the property in exploitable areas and areas of permanent preservation that are inaccessible to exploitation; the planning of roads that connect the area with the primary roads and the allocated area is divided for exploration in blocks in order to sustain forest exploitation annually. As per law 12.651 of 25 May 2012 on the protection of native

vegetation (Article 31) the minimum requirements of the management plan consider the rotation cycle between 12 and 15 years. The total area properly regularized with Sustainable Forest Management Plan in the Caatinga biome corresponds to around 400,000 hectares.

The production of wood with Sustainable Forest Management Plan in Caatinga biome was around 1,800,022.5 m³ in 2012. As the ceramic average consumption presented in this project activity is about 5,755.22 m³ per year, as verified in the organization's internal spreadsheets, the consumption of this kind of fuel represents less than 1% of the total of wood with sustainable forest management plan produced in the region.

Hence the renewable biomass did not have potential to generate leakage emissions.

- b) Leakage relating to the non-renewable biomass shall be assessed from ex-post surveys of users and areas from where biomass is sourced.

It was identified the following potential sources of this type of leakage: use/diversion of non-renewable biomass saved under the project activity by non-project households/users who previously used renewable energy sources; use of non-renewable biomass saved under the project activity to justify the baseline of other project activities can also be potential source of leakage and increase in the use of non-renewable biomass outside the project boundary to create non-renewable biomass baselines can also be potential source of leakage.

The project contributes to reduce the use of non-renewable biomass, especially due to the incentive of carbon credits. Based on the above it can be concluded that this source of leakage, until the date of this monitoring report, is not considered for this project activity.

- c) If the equipment is transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered.

The leakage is not applicable for this project activity as there was no transference of equipment, in spite of new equipment had to be acquired.

The verification team has checked and can confirm that no leakage is considered for this kind of project, as per the applied methodology due to all possible sources of leakage are demonstrated at the MR and the amount of biomasses to provide thermal energy for the project activity represents a non-representative quantity of these kind of biomasses, which avoids the possibility of leakage and there is no transference of equipment.

The project activity consumes of native wood from forest management and the production of native wood from forest management in the project's region verified by the VVB is 1,584,020.00 tonnes and the renewable biomass surplus represent less than 1 % of the total native wood from forest management in Caatinga biome, so this renewable biomass had no potential to generate leakage emissions during this monitoring period.

Hence the biomass renewable consumed in this project activity does not encompass any type of leakage due to there is a great amount of these renewable biomasses available locally.

LEy: 0 (zero)

Emissions Reductions (ER)

According to the applied methodology, ERy are calculated as below:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ERy: Emission reductions in year y;

BEy: Baseline emissions in year y;

PEy: Project emissions in year y;

LEy: Leakage emissions in year y.

$$ER_y = 155,547.00 \text{ tCO}_2\text{e}$$

The records, data and information provided by the project participant were found valid for the current verification period. The documents were verified during site visit. Interviews were performed during site visit with involved personnel and PP's representatives to confirm the data; the GHG emission reduction calculations were check step by step with PP's representatives and the quality of evidence was considered adequate level by the verification team to ensure an accurate quantification of the emission reductions.

The VVB cross-checked all the paramenter values and evidences presented by PP and can confirm that the parameters and calculations was applied correctly.

4.4 Quality of Evidence to Determine GHG Emission Reductions and Removals

RINA was able to confirm that the calculations are based on records, data and information submitted by the project proponent which were found valid for the current verification period. The documents were verified during site visit and when possible, were checked directly from its source. Interviews were performed during site visit with involved personnel and PP's representatives. The GHG emission reduction calculations were check and the quality of evidences was adequate to ensure an accurate quantification of the emission reductions.

4.5 Non-Permanence Risk Analysis

Not applicable. It is not an AFOLU project.

4.6 SOCIALCARBON Results

4.6.1 Social Resource

Indicator	1 Diversity				
Situation	The Gomes de Mattos Ceramic has 102 employees and 8 belong to the minority group which represent 8% of the workers.				
There are currently no employees at the factory from minority groups and there are no plans to hire minorities.	There are currently no employees from minority groups, but the factory has made plans to hire minorities.	Less than 15% of employees belong to a minority group.	Between 15 ≤ 30% of employees are from minority groups.	More than 30% of employees are from minority groups.	In addition to more than 30% of employees being minorities, the factory presents initiatives or combat forms of discrimination.
Score	3 (three)				
Justification	The ceramic has currently 8% of employment from excluded social groups and has the intention to contract more woman.				
Evidence	Interviews with ceramic representatives Employee list for this monitoring period /20/ Employee Registration Control Assumption 2017-2022 /21/ Employee registration sheet 2018 to 2022 /22/				

Indicator	2 Community development
Situation	The Gomes de Mattos Ceramic has the follow actions: The ceramic has built a field to provide leisure to the workers and community members. Besides CGM promotes soccer tournaments between the community teams and its workers and the people in the community have free access to use the soccer field. Geopark Araripe: The CGM has a formal partnership with Geopark Araripe, a park of Global Geoparks Network. The network is a result of the UNESCO National Geopark Program. The Geopark is an ecological territory and aims to conserve and disseminate geological sites allied to economic and sustainable development. In the period analyzed CGM provided educational tours around the factory for students and visitors of the park. Recyclable residue collectors' partnership: The CGM has a partnership with an association of Crato municipality that collects recyclable residues of the region. The ceramic refurbished three cars of collecting recycle material to the association. Sponsored athlete: CGM sponsors a local athlete of Jiu – Jitsu, Ricardo Lima.

The factory has no initiatives/ activities planned that benefit the local community.	The factory responds to occasional (not continuous) requests for assistance.	The factory supports community members or civil society organizations: - Regularly: one per month; OR - Significant: at least 10 different parties were benefited.	In addition to scenario 3, the factory lends out equipment, space and/or provides manpower for activities that benefit the local community.	The factory is formally involved in the development and implementation of social and/or environmental projects in partnership with public entities and/or civil society organizations.	In addition to scenario 5, the factory has formalized planning in order to maximize their contribution to local community development, through survey with the community, establishing new partnerships, etc.
Score	5 (five)				
Justification	It was verified that the Ceramic makes several activities with its employees and the local community and sponsor a local athlete.				
Evidence	Interviews with ceramic representatives Geopark Araripe http://geoparkararipe.org.br/ and records /23/ Football field photos /24/				

Indicator	3 Employee satisfaction surveys				
Situation	The employees can make comments and give opinions in 3 suggestion boxes in the factory The safety technician does regular meetings with the employees about several topics, such as ceramic cleaning and Personal Protection Equipment (PPE) use. In these meetings, the employees can express suggestions and complaints. All suggestions and complaints are registered in the CIPA minutes. The CGM built a recycling container and created a mobile library due to workers suggestions.				
Lack of a consultation system for employee feedback.	There are attempts to implement an employee consultation system, but it	The system for employee consultation is being utilized but is limited	In addition to scenario 3, the factory has implemented or is currently	The factory promotes periodic satisfaction surveys among employees.	In addition to scenario 5, the factory has stipulated targets and timelines for

	is not being properly utilized. Example: There is a suggestion box, but employees do not use it.	to a suggestion box.	implementing one or more suggestions made by employees.	Example: monthly meetings, book for documenting information, etc.	solutions to employee complains.
Score	5 (five)				
Justification	The employees comment and give suggestions in a formal way.				
Evidence	Interviews with ceramic representatives Picture of the suggestion boxes /28/				

4.6.2 Human Resource

Indicator	4 Additional employee benefits				
Situation	CGM offers to the employees: partnership with Industry of Social Service - SESI to offer to employees and their families a club, where they can have leisure and basic health services such as dentist; doctor once in a month to attend the employees; an ophthalmologist once in a year to attend the employees; soccer field. The ceramic chooses the best worker of the month and gives a present to him, such as television, microwave and offer a New Year's party for all employees and their families. Besides a psychologist to support employees who have lost relatives victims of Covid 19.				
The factory offers no additional benefits to employees.	Some employees receive an additional benefit.	All employees receive sporadic additional benefits, independent of frequency.	All employees receive an additional benefit monthly.	All employees receive more than one additional benefit monthly.	All employees receive more than one additional benefit monthly and there are also award programs based on merit.
Score	6 (six)				

Justification	It was verified that the Gomes de Mattos Ceramic employees have several additional benefits.
Evidence	Interviews with ceramic representatives Pictures of the end of the year party /29/

Indicator	5 Health and safety practices				
Situation	The CGM provide the necessary Personal Protective Equipments - PPE for the workers carry on their activities safely. There is internal control of the PPEs use and retreat. The ceramic encourages the PPE's use by signs and campaigns. Workers that do not use the PPE's properly are adverted. The factory has a Safety technician who is responsible for ensuring best practices of health and safety in the ceramic. CGM accomplishes all the mandatory programs: Risk Management Program – PGR NR 9 (regulatory norm of the Ministry of Labor, until 2022 the name was PPRA - Environmental Risk Prevention Program); Program for Controlling Medical and Occupational Health – PCMSO NR7 and Internal Commission for Accident Prevention – CIPA NR 5. Annually the CGM promotes an Internal Week of Accidents Prevention SIPAT (NR 5), a whole week of training and lectures about health and safety to the employees. During the event, there is a multidisciplinary team which addresses diverse themes with the employees such as violence and its consequences in traffic, work life quality, harmony in traffic, alcoholism, motivation and self-esteem. During Covid 19, the factory distributed masks and alcohol gel to all employees, emphasizing the correct use of PPE to eradicate the pandemic				
There is no control of PPE distribution. None of the health and safety programs required by law are being implemented.	PPE distribution is being controlled OR there is at least one health and safety program required by law being implemented	The factory meets all legal requirements.	The factory meets all legal requirements and: (a) penalizes employees who do not properly use the PPE and/or (b) has signs encouraging the use of PPE in the factory and/or (c) The factory promotes lectures and events	In addition to scenario 4, the factory contracts or has a technical professional or safety engineer on staff to ensure best practices in the company.	In addition to scenario 5, the factory develops complementary programs such as PPR, PPRPS and PCA; and/or The factory encourages physical activity or conducts activities for disease prevention.

			addressing issues related to health and safety in the workplace.		
Score	6 (six)				
Justification	Gomes de Mattos Ceramic has the mandatory programs, encourages the PPE use and has a Safety technician.				
Evidence	Interviews with ceramic representatives CIPA Records /30/ PGR - Risk Management Program and PPRA - Environmental Risk Prevention Program reports /31/ PCMSO - Medical Control in Occupational Health Program reports /32/ PPE - Personal Protective Equipment's records /35/ PCA - Hearing Conservation Program reports /33/				

Indicator	6 Training and capacity building programs				
Situation	The Ceramic offers to workers specific training and qualifications when a new equipment is bought to learn its operation and handling. CGM also offers lectures of health and security themes to the employees. CR1: PP is required to present evidences of trainings. PP has presented registers regarding Safety and Health requirements This CR is closed.				
The company has not invested in lectures nor professional training courses for staff.	The factory organized occasional lectures.	Training courses were offered to individual employees, but not to all employees.	In addition to item 3, the individual employees who were contemplated by the training courses replicate the knowledge via lectures to other employees; and/or	In addition to scenario 4, the factory has an internal campaign to encourage employees to complete their high school education; and/or The factory promotes a literacy program	In addition to scenario 5, the Ceramic factory has established a strategic plan regarding training and capacity building programs.

			Regular lectures were offered to employees (at least two per semester).	for youth and adults.	
Score	4 (four)				
Justification	All employees are contemplated by trainings and lectures.				
Evidence	Interviews with ceramic representatives. Attendance lists for health and safety training /16/				

4.6.3 Financial Resource

Indicator	7 Biomass supply				
Situation	Gomes de Mattos Ceramic fed the kilns with native wood from areas with Forest Management Plan managed by CGM: Pau D'Arco and Bonfim farm: 2,204 hectares Boqueirão farm: 2,344 hectares Cana Brava farm: 422 hectares Besides the three farms above the PP also purchases wood from management plans managed by third parties that are mentioned in VCS_MR_Calculation_CGM_8th_01 11 2017_31 07 2022_v.02 /02/. Verification team checked the Forest Management Plans managed by PP and the Forest Origin Document (DOF) of the suppliers with external Forest Management Plans /69/				
The factory has no control of the source and amount of biomass used; and/or the factory is using non-renewable fuel in the production process.	The factory only has partial control of the source and amount of biomass used.	The factory has total control of the source and amount of renewable biomass used, however 100% of the biomass comes from renewable wood.	The factory has total control of the source and amount of renewable biomass used and less than 50% of the fuel is coming from agro-industrial waste.	The factory has total control of the source and amount of renewable biomass used and more than 50% of the fuel is coming from agro-industrial waste.	The factory has total control of the source and amount of renewable biomass used and 100% of the fuel is coming from agro-industrial waste.

Score	3 (three)
Justification	The Ceramic hat total control of the biomass source which is 100% form renewable wood.
Evidence	Interviews with ceramic representatives. CER CGM monitoring spreadsheet 2017 – 2022 /37/ Sustainable Forest Management Plan in the Caatinga biome /17/ Satellite images of farms and their areas /55/

Indicator	8 Planning and control					
Situation	The ceramic has organized controls of the income received from carbon credit sales through spreadsheets that show the entry of carbon credit revenues and the destination for proceeds. CGM has not presented future planning.					
The factory has no organized controls of the income received from carbon credit sales nor the destination for proceeds.	The factory has partial control of the income received from carbon credit sales and the destination for proceeds.	The factory has organized controls of the income received from carbon credit sales, but control of the destination for proceeds is partial.	The factory has organized controls of the income received from carbon credit sales, as well as of the destination for proceeds. However, the factory presents no future planning.	The factory has organized controls of the income received from carbon credit sales, as well as of the destination for proceeds. However, the factory presents incomplete future planning.	The factory has organized controls of the income received from carbon credit sales, as well as of the destination for proceeds. The factory presents satisfactory future planning (timeline, budget, responsible involved and benefits).	
Score	5 (five)					
Justification	The ceramic has organized controls of the income received from carbon credit sales, and the destination for proceeds but has not presented future planning.					
Evidence	Interviews with ceramic representatives. Sales Report CGM /52/					

Indicator	9 Carbon credit investments					
Situation	In this monitoring period CGM invested 100% of the income generated by carbon credit in technology improvements and in social benefits for the community. CR2: PP is required to present evidences of social benefits for the community. PP has provided registers of Geopark Araripe and soccer games. This CR is closed.					
The income generated by carbon credit sales was not invested in the factory nor in the community, or there are no organized controls of the allocation of proceeds.	Less than 20% of the income generated by carbon credit sales was invested the factory or in the community development.	Between 20 and 40% of the income generated by carbon credit sales was invested the factory or in the community development.	Between 40 and 60% of the income generated by carbon credit sales was invested the factory or in the community development.	Between 60 and 80% of the income generated by carbon credit sales was invested the factory or in the community development.	Between 80 and 100% of the income generated by carbon credit sales was invested the factory or in the community development.	
Score	6 (six)					
Justification	Gomes de Mattos Ceramic invested 100% in technology for the company and benefits to community.					
Evidence	Interviews with ceramic representatives. Pictures of technology improvements /34/ Geopark Araripe 1 to 14 pictures /56/ Football field photos /57/ Employee of the month chart /58/ Football tournament photo /59/ Natal Employees Award /60/					

4.6.4 Natural Resource

Indicator	10 Environmental management
Situation	Waste: The ceramic has control over the generation and disposal of waste; the residues have the correct destination and there is a waste management plan that is updated annually.

	Water: CGM has humidifiers of high pressure to humidify the clay and to reduce the water consumption. They reduced the water output of men's bathrooms and encourage short showers there. Air: The ceramic has three chimneys in the operational area and has installed scrubbers in all chimneys. Nature conservation: The ceramic has three areas of sustainable management plan, which add up to around 3,700 hectares of native trees planted. In this monitoring period the waste management plan has been structured. CR3: PP is required to present evidences of the waste management plan. The PP made available the Solid Waste Management Plan - PGRS, required by law, which details the amount, type of waste and treatment carried out. This CR is closed.				
There are no environmental management initiatives.	There are up to two specific initiatives to prevent/reduce the main environmental impacts caused by the Ceramic factory.	There are more than two initiatives to prevent / reduce the main environmental impacts caused by Ceramic factory.	In addition the scenario 3, the factory is structuring an environmental management system in the company.	The factory has implemented a formal environmental management system.	The factory's environmental management system has been certified by a third party.
Score	3 (three)				
Justification	It was evidenced by the performed interviews with ceramic representatives and at the site visit that the ceramic has implemented more than two initiatives in the environmental management and the company is developing a environmental management system.				
Evidence	Interviews with ceramic representatives. Pictures of reuse of clay and humid clay in the shed /61/ Gomes de Mattos Ceramic Solid Waste Management Plan /38/				

Indicator	11 Brazilian environmental legislation
Situation	The Gomes de Mattos Ceramic is in conformity with the Brazilian environmental laws. Operating license: There is an operational license valid emitted by SEMACE (Environmental Agency of Ceará). CR4: PP is required to present operating license valid during the monitoring period under evaluation. Operating license 013/2022 of 02 February 2022 was present and it covers the entire monitoring period. This CR is closed.

License for clay extraction: The ceramic extracts clay from three different areas licensed by State Superintendence of Environment /36/: • Sítio Lagoinha: License 15/2022 • Sítio Boqueirão: License 8/2018 • Sítio Quebra: License 7/2018. Water Grant 1862/2018, validity 21 September 2031 /37/ The Brazilian Institute for the Environment and Renewable Natural Resources – Ibama Negative Certificate of Debt 22587559 /38/ CGM has a partnership with civil society organizations like Geopark Araripe and Recyclable Residue Collectors' Association, cooperating with those environmental projects.					
The factory does not possess any of the following: -operating license -license for clay extraction -water grant - federal technical registry	The factory only possess two of the following: -operating license -license for clay extraction -water grant - federal technical registry	The factory only possess three of the following: -operating license -license for clay extraction -water grant - federal technical registry	The factory possesses all of the following: -operating license -license for clay extraction -water grant - federal technical registry However, they do not meet all the conditions established by them.	All licenses are up to date and all conditions established by them are being met.	In addition to the previous scenario, the factory collaborates with public administration and/or civil society organizations for cooperation with environmental projects.
Score	6 (six)				
Justification	All licenses are up to date for the monitoring period, and all are in conformity conditions to require their renovations. Besides, CGM collaborates with civil society organizations.				
Evidence	Interviews with ceramic representatives. Operating license /44/ Water Grant 1862/2018 /45/ Licenses for clay extraction /46/ - Sítio Lagoinha: License 15/2022 - Sítio Boqueirão: License 8/2018 - Sítio Quebra: License 7/2018				

Ibama Negative Certificate of Debt 22587559 /39/.

Indicator	12 Voluntary environmental initiatives				
Situation	CGM has a formal partnership with Geopark Araripe, which is a park of Global Geoparks Network. The network is a result of the UNESCO National Geopark Program. The Geopark is an ecological territory, which aims to conserve and disseminate geological sites allied to economic and sustainable development. In this monitoring period CGM has provided educational tours around the factory for students and visitors of the park. Nature conservation: The ceramic has three areas of sustainable management plan, they all add up around 3,700 hectares of native trees planted. In one of the areas, Pau D'Arco and Bonfim farm (2,000 hectares), CGM established a partnership with Aquase NGO to protect endangered bird species. This area has been selected because it is close to the National Araripe Forestry. In the area, there is a national bird observatory where the ceramic receives visitors for free to learn about the birds diversity of Caatinga biome. Two areas of sustainable management plan (Pau D'Arco and Bonfim farm and Boqueirão farm) are reference units of biodiversity products. The recognition was made by Araripe Foundation and Ministry of Science and Technology. CR5: PP is required to present evidences for this indicator (Social Carbon 12) Several pieces of evidence were presented, such as: planialtimetric survey in parks close to the project. This CR is closed.				
The factory is not involved in voluntary environmental initiatives.	The factory has implemented only one internal environmental initiative. Example: Planting ten tree saplings on factory grounds.	The factory has implemented more than one internal initiative or is showing continuity for an existing Initiative. Example: Periodic planting of saplings on factory grounds.	The factory has implemented more than one initiative or ongoing initiative whose benefits extend to workers families.	In addition to the previous scenario, the benefits of the initiatives also extend to community members.	In addition to the previous scenario, the factory promotes voluntary environmental initiatives with civil society organizations and/or public administration.
Score	6 (six)				

Justification	Gomes de Mattos ceramic promotes voluntary environmental initiatives as tree planting.
Evidence	Interviews with ceramic representatives. Geopark Araripe 1 to 14 pictures /56/ Sustainable management plan – Cana Brava /61/ Sustainable management plan – Pau D´Arco and Bonfim /62/

4.6.5 Biodiversity/Technology Resource

Indicator	13 Technological advances to improve efficiency of the production process				
Situation	Efficiency of kilns: two Hoffman kilns with high efficiency and one 'Câmara' continuous kiln considered with highest efficiency in the production process. Brick drying methods: the ceramic units are dried with the heat from the kilns and the furnace in the drying process with control of the temperature and humidity. Kiln temperature control: thermocouples are used to measure temperatures. Kiln feeds: there are mechanical burners to the kilns feed. Production: CGM controls and records production at different stages of the production process through an online tool to share monitoring data (Dropbox) Infrastructure: in this monitoring period the ceramic installed protection grids in the productive process machines /39/.				
The factory does not meet any of the characteristics described.	The factory meets one of the characteristics described.	The factory meets 2-3 of the characteristics described.	The factory meets 4 of the characteristics described.	The factory meets all of the characteristics described.	In addition to scenario 5, the factory has organized planning to improve general conditions of the production process.
Score	5 (five)				
Justification	It was evidenced by the interviews with ceramic representatives and during the site visit that the ceramic meets all the technologies characteristics described.				
Evidence	Interviews with ceramic representatives. Onsite visit				

	Pictures of kilns and their protection grids /63/
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Indicator	14 Technological advances to improve the general conditions of the working environment				
Situation	Cleanliness: CGM has responsible workers for cleaning. There is not excess of dust and broken tiles around the factory. The sanitary facilities are in good condition. Noise control has been installed to comply with legislation, through measurements required by the PPRA and PGR. Heat: the ceramic uses fans to reduce employees' exposure to kiln's heat. Also, the employees' uniforms were adapted to the heat, they use shorts and protecting socks. Lightning: the productive process shed are high to ensure a good natural lighting. The ceramic also uses translucent tiles and LED lamps. Appropriate signage: the ceramic has the appropriate signage.				
The factory does not meet any of the characteristics described.	The factory meets one of the characteristics described.	The factory meets 2-3 of the characteristics described.	The factory meets 4 of the characteristics described.	The factory meets all of the characteristics described.	In addition to scenario 5, the factory has organized planning to improve general conditions of the working environment.
Score	5 (five)				
Justification	It was evidenced by the interviews with ceramic employees and during the site visit that the ceramic has several features that improve the general conditions of the working environment.				
Evidence	Interviews with ceramic representatives. Onsite visit PGR - Risk Management Program and PPRA - Environmental Risk Prevention Program reports /31/ Photos of tiles and fans /64/				

Indicator	15 Product quality
Situation	Gomes de Mattos Ceramic factory has Sectorial Quality Program (PSQ) certification. CR6: PP is required to present the PSQ certificate. All certificates have been made available This CR is closed.

No efforts were made to analyze or improve product quality.	Samples of some products were evaluated by quality tests.	Samples of all products were evaluated by quality tests.	Some of the products have quality certification.	All products have quality certification.	In addition to scenario 5, the factory has an in-house quality lab.
Score	4 (four)				
Justification	The ceramic has two bricks with quality PSQ certification				
Evidence	Interviews with ceramic representatives. GMC Sectorial Quality Program (PSQ) certificates different types of bricks /65/				

4.6.6 Carbon Resource

Indicator	16 Stakeholder consultation				
Situation	CGM promotes lectures to the stakeholders regarding sustainability practices carried on in the ceramic. During the lectures, the factory asks the stakeholders' opinion and answer questions about the environmental initiatives. The ceramic has a trained team to perform the stakeholders' consultation. The factory states that there is a high demand by stakeholders regarding the sustainability practices carried on in the factory, they look for the ceramic lecture by phone especially. CR8: For this monitoring period in order to update de information regarding Social Carbon indicators a questionnaire was sent to the Ceramic responsible who have talked to those involved with the project by telephone to check the data. PP has presented the required evidence. CR8 is closed.				
During the time period analyzed, the factory did not conduct a stakeholder consultation.	During the time period analyzed, the factory conducted an informal (no records) stakeholder consultation.	During the time period analyzed, the factory conducted a formal (with records) stakeholder consultation; however negative	During the time period analyzed, the factory conducted a formal (with records) stakeholder consultation, and no negative	As well as the previous scenario, there are continuous means of communication with stakeholders.	As well as the previous scenario, the next consultation is being planned together with stakeholders.

		comments were made regarding the project.	comments were made regarding the project.		
Score	5 (five)				
Justification	The ceramic has conducted formal stakeholders consultation in the monitoring period in analysis and continuous means of communication are available (lectures and phone).				
Evidence	Interviews with ceramic representatives. Records of stakeholder's meetings /41/				

Indicator	17 Green marketing				
Situation	Gomes de Mattos Ceramic does a broad disclosure of the sustainability practices of the factory through radio, local TV and flyers. Besides CGM intends to invest more on green market using social media. CR7: PP is required to present evidences of the green marketing strategies. PP has presented the required evidence. CR7 is closed.				
The factory does not have marketing strategies based on their environmental practices.	The factory markets their environmental practices only using one means of communication. Example: magazine advertisement.	The factory markets their environmental practices using more than one means of communication. Example: magazine advertisement and billboard.	The factory has an established green marketing strategy, but still has not seen positive results.	The factory has an established green marketing strategy and sees positive results.	As well as the previous scenario, the factory has plans to invest in green marketing.
Score	2 (two)				
Justification	The ceramic has established green marketing strategy and plans to invest in Green Marketing.				
Evidence	Interviews with ceramic representatives. Banner 1 – Pau D´Arco and Bonfim farms /67/				

Indicator	18 Project performance
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Situation	The director of the ceramic believes that the project adds value not only to his product, but also to the company's image among the community (residents, customers, environmental agencies) as well as toward employees who feels proud to belong to a company that promotes and disseminates sustainability.				
The factory is very dissatisfied and threatens to abandon the carbon project.	The factory is dissatisfied but does not plan to abandon the carbon project.	The factory is indifferent about the carbon project.	The factory believes the carbon project is something positive but has complaints.	The factory is very satisfied with the carbon project.	In addition to the previous scenario, the factory considers the carbon project a competitive advantage for their business and encourages other factories to adopt similar practices.
Score	6 (six)				
Justification	The project representative is satisfied with the carbon project due to the organization generated in the ceramic and advantages in the business.				
Evidence	Interviews with ceramic representatives. Declaration of performance of the carbon credit project /68/				

5 ANALYSIS OF SOCIALCARBON RESULTS

5.1 Current Performance

Resource	Critical	Satisfactory	Sustainable	Average Score	Performance
----------	----------	--------------	-------------	---------------	-------------

Social	0.0%	33.3%	66.7%	4.3	Satisfactory
Human	0.0%	33.3%	66.7%	5.3	Sustainable
Financial	0.0%	33.3%	66.7%	4.7	Satisfactory
Natural	0.0%	33.3%	66.7%	5.0	Sustainable
Biodiversity/Tech	0.0%	33.3%	66.7%	4.7	Satisfactory
Carbon	0.0%	33.3%	10.0%	4.4.3	Satisfactory

5.2 Historical Performance

Social	Point Zero	Point One	Point Two	Point Three	Point Four	Point Five	Point Six	Point Seven
	2.5	2.4	3.6	4.1	4.3	4.7	5.3	4.3

Historic Analysis of Social Resource: The decrease in Social Resource score is due to the resignation of employees during the Covid-19 pandemic. The ceramic still manages practices that contribute to local community development and there is an existing system for employee feedback. The system used was limited to a suggestion box but the employees have the opportunity to express their opinions during CIPA meetings.

Human	Point Zero	Point One	Point Two	Point Three	Point Four	Point Five	Point Six	Point Seven
	2.8	3.2	3.0	3.3	4.7	5.3	5.3	5.3

Historic Analysis of Human Resource: The Human Resource remained the same as point six due to the lectures offered to all employees as schedule of CIPA meetings. The factory continues to offer additional benefits to the employees as food stamps, work parties, consultation with doctor inside the factory, and others. Also, the ceramic factory offered lectures of health and security themes to all employees.

Financial	Point Zero	Point One	Point Two	Point Three	Point Four	Point Five	Point Six	Point Seven
	3.8	4.0	4.2	4.0	4.7	4.7	5.0	4.7

Historic Analysis of Financial Resource: This resource decreased due to during Point Six part of the biomass used came from agro-industrial waste, preventing it from being sent to final disposal, while during Point Seven 100% of the biomass came from areas with Forest Management Plan.

Natural	Point Zero	Point One	Point Two	Point Three	Point Four	Point Five	Point Six	Point Seven
	3.6	4.1	4.1	4.3	5.3	5.3	5.3	5.0

Historic Analysis of Natural Resource: This resource remains the same since point four due to the voluntary environmental initiatives. The partnerships established by CGM with regional institutions which contributes with the development of the region and benefits many stakeholders. In the period analyzed both factory areas of sustainable management plan are still being recognized as reference units of biodiversity products by Araripe Foundation and Ministry of Science and Technology.

Biodiversity	Point Zero	Point One	Point Two	Point Three	Point Four	Point Five	Point Six	Point Seven
	3.8	5.0	5.0	4.7	4.7	4.7	4.7	4.7

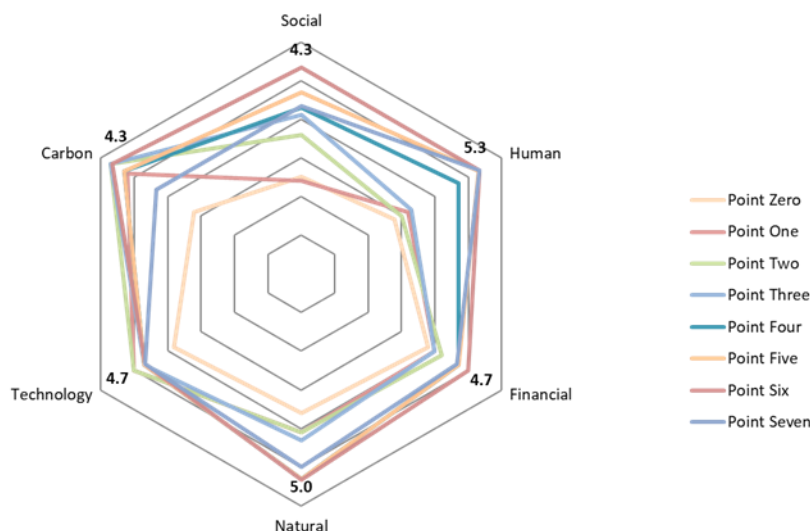
Historic Analysis of Biodiversity Resource: This resource remains the same since point three when the factory had the PSQ - Sectorial Quality Program – certification to prove the quality of some of their products, especially in the fabrication, identification, visual features, shape, dimensional characteristics, water absorption, and impermeability, among others and they are looking to certificate all their products. There were not significant changes in the Technological resource from the previous SCR to the current Report.

Carbon	Point Zero	Point One	Point Two	Point Three	Point Four	Point Five	Point Six	Point Seven
	3.2	5.2	5.7	5.7	5.3	5.3	5.7	4.3

Historic Analysis of Carbon Resource: The difference, compared to the previous period, occurred due to the reduction in activities in this indicator in this monitoring period. The project performance is a highlight once the owner believes the project adds value not only to the product, but also to the company's image to the community.

General Performance	Point Zero	Point One	Point Two	Point Three	Point Four	Point Five	Point Six	Point Seven
	3.3	4.0	4.3	4.4	4.8	5.0	5.2	4.7

5.3 Performance Hexagon



6 VERIFICATION CONCLUSION

Sustainable Carbon – Projetos Ambientais Ltda. has contracted RINA to perform the independent verification of the emission reductions of the VCS project “Gomes de Mattos Ceramic Fuel Switching Project”, with VCS Project ID 64, for the monitoring period 01/11/2017 to 31/07/2022 (both days included).

Sustainable Carbon – Projetos Ambientais Ltda. is responsible for the collection of data in accordance with the monitoring plan and the reporting of GHG emissions reductions from the project activity.

RINA's verification approach is based on the understanding of the risks associated with the GHG emission report, data and the controls in place to reduce these. RINA performed the verification by obtaining evidence and other information and explanations considered necessary to give reasonable assurance that reported GHG emission reductions are fairly stated.

The verification team confirms that the project activity is completely implemented as per the description given in the registered VCS-PD /09/ and the actual operation conforms to the description in the VCS-PD /09/.

The GHG emissions reductions reported for the period from 01/11/2017 to 31/07/2022 (including both days) are fairly stated in the final version 08 of the Monitoring Report /01/. The GHG emission reductions were calculated correctly based on the approved baseline and monitoring methodology AMS-I.E – version 07 /06/ and the monitoring plan contained in the VCS-PD /09/.

As a result of the Social Carbon verification, RINA's team confirms that:

- the indicators and reports are in accordance with Social Carbon Standard version 5.0 /08/;
- the project is periodically monitored and Point Zero is used as the baseline;
- perspectives of improvement and efforts to seek for its improvement are being done. However, a decrease in the performance has been verified in the resources financial resource and carbon resource this monitoring period;
- the report has been validated by an accredited entity, an on-site visit has been carried out and this verification report has been issued.

RINA states that the project is in line with Social Carbon requirements. All applicable criteria for the verification are in accordance with applicable rules and requirements.

The characterization of the Point Seven for the project as “satisfactory”, as described in the referenced documents, is accurate.

Verification period for VCS and Social Carbon: From 01/11/2017 to 31/07/2022.

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2017	3,060.00	46.00	0.00	3,014.00
2018	38,047.00	140.00	0.00	37,907.00
2019	36,198.00	90.00	0.00	36,108.00
2020	24,727.00	40.00	0.00	24,687.00
2021	33,966.00	2.00	0.00	33,964.00
2022	19,874.00	7.00	0.00	19,867.00
Total				155,547.00

APPENDIX 1: ABBREVIATIONS

Abbreviations	Full texts
BE	Baseline Emissions
CDM	Clean Development Mechanism
CER(s)	Certified Emission Reduction(s)
CAR	Corrective Action Request
CR	Clarification Request
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DOE	Designed Organization Entity
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse gas(es)
LE	Leakage Emissions
MP	Monitoring Plan
MR	Monitoring Report
PA	Project Activity
PE	Project Emissions
PCMSO	Program for Medical Control of Labor Health
PGR	Risk Management Program
PP	Project Participant
PPE	Personal Protection Equipment
RINA	RINA Services Spa
QA/QC	Quality Assurance / Quality Control
SC	Social Carbon
SCR	Social Carbon Report
SEMACE	Secretariat of Environment of the State of Ceará
tCO ₂ e	Tons of Carbon Dioxide Equivalent

UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCS-PD	VCS – Project Description
VCU	Verified Carbon Unit

APPENDIX 2: CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS AND FORWARD ACTION REQUEST

Table 1. FAR from validation and/or previous verifications

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

Table 2. CL from this verification

CR ID	1	Section no.	4.6.2 6	Date: 11/01/2023
Description of CR				
<i>Social Carbon 6. PP is required to present evidences of trainings.</i>				
Project participant response				Date: 18/04/2023
Annually, CGM Ceramics conducts health and safety training for its employees. Evidence of the most recent CIPAT week, which took place in August 2022, is being provided in the form of attendance lists and photographs from the training sessions. The company places great importance on ensuring that all employees are well-informed and equipped to work safely in the workplace.				
Documentation provided by project participant				
<i>Findings > CL ID 01 > "CIPAT" photos</i>				
VVB assessment				Date: 15/05/2023
<i>PP has presented registers regarding Safety and Health requirements This CR is closed</i>				

CR ID	2	Section no.	4.6.2 9	Date: 11/01/2023
Description of CR				
<i>Social Carbon 9. PP is required to present evidences of social benefits for the community.</i>				
Project participant response				Date: 18/04/2023

The evidences of social benefits for the community are being provided. Photos of the partnership between the factory and Geopark Araripe, a park of the Global Geoparks Network, have been submitted as evidence. Additionally, photos of soccer tournaments held at a field built by the CGM factory for the leisure of workers and community members have also been provided. The Geopark Araripe website (<http://geoparkararipe.urca.br/>) can be consulted for further information on the park and its benefits to the community.

Documentation provided by project participant

Findings > CL ID 02 > "Geoparque Araripe" and "Campo Futebol" photos

VVB assessment **Date:** 15/05/2023

*PP has provided registers of Geopark Araripe and soccer games.
This CR is closed.*

CR ID	3	Section no.	4.6.2 10	Date: 11/01/2023
Description of CR				
<i>Social Carbon 10: PP is required to present evidences of the waste management plan</i>				
Project participant response				Date: 18/04/2023
The Waste Management Plan for the current CGM Ceramic monitoring period is being provided. This is part of the company's commitment to sustainable waste management practices.				
Documentation provided by project participant				
<i>Findings > CL ID 03 > "PGRS CGM.pdf"</i>				
VVB assessment				Date: 15/05/2023
<i>The PP made available the Solid Waste Management Plan - PGRS, required by law, which details the amount, type of waste and treatment carried out. This CR is closed</i>				

CR ID	4	Section no.	4.6.2 11	Date: 11/01/2023
Description of CR				
<i>Social Carbon 11: PP is required to present operating license valid during the monitoring period under evaluation.</i>				
Project participant response				Date: 18/04/2023
The CGM Ceramic operating license nº 013/2022 is being provided.				
Documentation provided by project participant				
<i>Findings > CL ID 04 > "Licença de Operação"</i>				
VVB assessment				Date: 15/05/2023
<i>Operating license 013/2022 of 02 February 2022 was present and it covers the entire monitoring period. This CR is closed</i>				

CR ID	5	Section no.	4.6.2 12	Date: 11/01/2023
Description of CR				
PP is required to present evidences for Social Carbon 12				
Project participant response				Date: 18/04/2023
The exploration permits of the Pau D'arco, Bonfim, and Canabrava sites are being provided. These areas of the sustainable management plan (Pau D'Arco and Bonfim farm, and Boqueirão farm) are reference units for biodiversity products, as recognized by the Araripe Foundation and the Ministry of Science and Technology. In addition, photos of the Geopark Araripe are being sent.				
Documentation provided by project participant				

<i>Findings > CL ID 05 > "POA PAUDARCO E BONFIM"; "POA CANABRAVA"; "PAUDARCO E BONFIM"; "CANABRAVA"; "CANABRAVA 2" and "Geoparque Araripe" photos.</i>	
VVB assessment	Date: 15/05/2023
<i>Several pieces of evidence were presented, such as: planialtimetric survey in parks close to the project.</i>	
<i>This CR is closed.</i>	

CR ID	6	Section no.	4.6.2 15	Date: 11/01/2023
Description of CR				
Social Carbon 15: PP is required to present the PSQ certificate				
Project participant response				Date: 18/04/2023
CGM Ceramic has submitted 10 types of bricks to SETEC Controle Técnico for testing, and technical results are being provided through reports.				
Documentation provided by project participant				
<i>Findings > CL ID 06 > "Cerâmica CGM Ens. 420 - 425.pdf"; "Cerâmica CGM Ens. 414 - 419 9x14x19.pdf"; "Cerâmica CGM Ens. 232 - 237.pdf"; "Cerâmica CGM Ens. 226 - 231 9x14x19.pdf"; "Cerâmica CGM Ens. 149 - 154.pdf"; "Cerâmica CGM Ens. 91 - 96.pdf"; "Cerâmica CGM Ens. 83 - 88.pdf"; "Cerâmica CGM Ens. 43 - 48.pdf"; "Cerâmica CGM - 09x14x19 89 - 94.pdf" and "Cerâmica CGM - 09 x 14 x 19 89 - 94.pdf".</i>				
VVB assessment				Date: 15/05/2023
<i>All certificates have been made available</i>				
<i>This CR is closed.</i>				

CR ID	7	Section no.	4.6.2 17	Date: 11/01/2023
Description of CR				
Social Carbon 17: PP is required to present evidences of the green marketing strategies.				
Project participant response				Date: 18/04/2023
The Gomes de Mattos Ceramics is a widely recognized company in the region and frequently engages in informal promotions to reach out to the local community. Currently, a survey of the Gomes de Mattos Ceramics' latest promotions and outreach efforts is being conducted to be provided. This includes events where the factory owners deliver speeches and participate in interviews to promote their brand. A pertinent example of this can be observed in a video available on Youtube: https://www.youtube.com/watch?v=k1Qj94cvCak .				
Documentation provided by project participant				
Youtube: https://www.youtube.com/watch?v=k1Qj94cvCak .				
VVB assessment				Date: 15/05/2023
Examples of green marketing strategies are available in Youtube: https://www.youtube.com/watch?v=k1Qj94cvCak				
<i>This CR is closed.</i>				

CR ID	8	Section no.	6 (MR)	Date: 15/05/2023
Description of CR				
<i>PP is required to present summary information on the stakeholders process, interviewed personnel meetings and registers as attendance lists.</i>				
Project participant response				Date: 18/07/2023
<i>A questionnaire was applied do the responsible of the ceramic. After completion, a remote meeting was held to validate the responses.</i>				
Documentation provided by project participant				
<i>MR version 07</i>				

VVB assessment	Date: 21/07/2023
<i>PP has revised and updated documents accordingly.</i>	
<i>This CR is closed.</i>	

Table 3. CAR from this verification

CAR ID	Section no.	Date: DD/MM/YYYY
Description of CAR		
<i>Not applicable</i>		
Project participant response		Date: DD/MM/YYYY
-		
Documentation provided by project participant		
DOE assessment		Date: DD/MM/YYYY

APPENDIX 3: QUALIFICATION CERTIFICATES



CERTIFICATO DI QUALIFICA PER GLI SCHEMI VOLONTARI* QUALIFICATION CERTIFICATE FOR VOLUNTARY SCHEMES*

Si attesta che il sig./sig.ra:
 We declare that Mr/Mrs/Ms:

Thais De Lima Carvalho

è qualificato come:
 is qualified as:

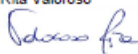
TEC, VAL, VER, TL, ITRP

per le seguenti aree tecniche:
 for the following technical areas:

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.1	Thermal energy generation	1
1.2	Renewables	1
2.1	Electricity distribution	2
13.1	Solid waste and wastewater	13

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	19/07/2016	First issue with new template (this certificate is linked to CDM qualification)

Responsabile di schema
 Scheme Leader
 Rita Valoroso



*SCHEMI VOLONTARI/ VOLUNTARY SCHEMES: ACR American Carbon Registry, CCB The Climate, Community & Biodiversity Alliance, GS Gold Standard, JI Joint Implementation, SCS Social Carbon Standard, VCS Verified Carbon Standard.

TEC: Technical expert; VAL: Validator; VER: Verifier; TL: Team leader; FIN EXP: Financial Expert; ITRP: Independent technical reviewer

RINA Services S.p.A. è accreditato/riconosciuto da
 RINA Services S.p.A. is accredited /recognized by

UNFCCC	quali Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects
VCSA	per condurre la Validazione e la Verifica di Progetti VCS to carry out Validation and Verification of VCS Projects
GS Foundation	per condurre la Validazione e la Verifica di Progetti GS to carry out Validation and Verification of GS Projects
Ecologica Institute	per condurre la Validazione e la Verifica di rapporti SCS to carry out Validation and Verification of SCS Reports
American Carbon Registry ACR	per condurre la Validazione e la Verifica di Progetti ACR to carry out Validation and Verification of ACR projects
The Climate, Community & Biodiversity Alliance CCB	per condurre la Validazione e la Verifica di Progetti co-benefit CCB to carry out Validation and Verification of co-benefit CCB projects


CERTIFICATO DI QUALIFICA
QUALIFICATION CERTIFICATE

 Si attesta che il sig./sig.ra:
 We declare that Mr/Mrs/Ms:

Claudia FREITAS

 è qualificato come¹:
 is qualified as:

 TL – VAL – VER – TEC – REG-EXP²

 nello schema²:
 for the scheme:

CDM – JI – VCS – SCS – CCB – UER – ISO14064-2

 per le seguenti aree tecniche:
 for the following technical areas:

1.1 - 1.2 - 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORIAL SCOPE
1.1	Thermal Energy generation	1
1.2	Renewables	1
13.1	Waste Handling and Disposal	13

 in accordo alle istruzioni dell'Unità responsabile (OU) per sostenibilità & cambiamenti climatici.
 in accordance with the instructions of the responsible unit (OU) for the sustainability & climate change.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	27/07/2018	-
4	22/02/2022	Detail of countries relevant to REG-EXP qualification

 Il Resp. CEINS
 Head of CEINS


1 Legend:

 VAL: Validator
 VER: Verifier
 TEC: Technical Expert
 TL: Team Leader
 FIN-EXP: Financial Expert
 REG-EXP: Regional Expert
 ITR: Independent Reviewer
 DET: Determiner

2 Legend:

 CDM: Clean Development Mechanism
 VCS: Verified Carbon Standard
 GS4GG: Gold Standard for Global Goals
 SCS: SocialCarbon Standard
 JI: Joint Implementation
 ISO14064-2: International standard 14064 part 2
 UER: Upstream Emission Reduction
 CCB: The Climate, Community & Biodiversity Alliance

² Germany, Brazil, Paraguay, Panama, Argentina, Indonesia

 RINA Services S.p.A. è accreditata da UNFCCC, quale Entità Operativa Designate (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologia Institute per condurre la Validazione e la Verifica di report SCS.
 RINA Services S.p.A. is accredited by the UNFCCC as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS4GG Projects and by the Ecologia Institute, to carry out Validation and Verification of SCS Reports.

GHG_QUAL_CERT_EN(06-2021)

Page 1 of 1