DELAGUA CLEAN COOKING GROUPED PROJECT IN THE GAMBIA

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Project Title	DelAgua Clean Cooking Grouped Project in The Gambia
Project ID	VCS 4000
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VCS Standard Version	VCS Standard, v4.5
Client	DelAgua Health The Gambia (Voluntary) Ltd
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Summary:

- **A description of the project**

The project "DelAgua Clean Cooking Grouped Project in The Gambia" employs VCS methodology; VMR0006 version 1.2 /B02/. The project involves distribution of high thermal efficiency fuel-efficient improved cookstoves (ICS) to replace the baseline cookstove models at household level in Gambia. It is intended that under this project high thermal efficient cookstoves will be distributed which will burn wood more efficiently thereby improving thermal transfer to pots, saving fuel wood. In addition to halting the progressing deforestation in Gambia, this project will also help in reducing health risks associated with indoor smoke pollution and time spent for the collection of firewood.

- **A description of the validation and verification**

Validation and Verification: DelAgua Health The Gambia (Voluntary) Ltd has appointed Carbon Check (India) Private Ltd., to carry out the combined validation and verification of the project "DelAgua Clean Cooking Grouped Project in The Gambia", with regards to the relevant requirements of VCS Standard V4.5 (dated 29-August-2023). The combined validation and verification are based on the site visit, desk review of the VCS Joint PD & MR and the corresponding supporting emission reduction calculation spread sheets /02/-and other relevant supporting documents made available to the validation and verification team by the project proponent accompanied by on-site interviews. This verification involves the period of 23-Feburary-2023 to 31- December-2023.

- **The purpose and scope of validation and verification**

Purpose: The purpose of validation is to have a thorough and independent assessment of the proposed project activity against the applicable VCS requirements, particularly the project's baseline, monitoring plan, and compliance with the relevant VCS and host Party criteria. These are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reductions. Carbon Check's objective is to perform a thorough, independent assessment of the validation of the project activity.

The purpose of the verification is to review the monitoring results and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data, used to confirm the reductions in anthropogenic emissions by sources are sufficient, definitive and presented in a concise and transparent manner. The monitoring plan, monitoring report, and the project's compliance with relevant VCS, UNFCCC, and host party criteria are verified to confirm that the project has been implemented in accordance with previously the y registered design and conservative assumptions, as documented.

Scope: Validation scope is defined as an independent and objective review of the Project Description section of the Joint PD & MR. The Joint PD & MR is reviewed against the relevant criteria and guidance documents provided by VCS which include the following: VCS Program Guide (v4.4, dated 29-August-2023), VCS Standard (v4.5, dated 29-August-2023), Program Definitions (v4.4, dated 29-August-2023), Registration & Issuance Process (v4.4, dated 04-October-2023) VCS Validation and Verification Manual (v3.2, dated 19-October-2016) applicable at the time in order to confirm that the project meets the applicability conditions of the selected baseline and monitoring VCS methodology VMR0006

(version 1.2,Dated 06-July-2023), also assess the claims and assumptions made in the PD without limitation on the information provided by the project participants.

The scope of the verification is:

- To verify the project implementation and operation with respect to the registered VCS JOINT PD & MR.
- To verify the implemented monitoring plan with the registered VCS Joint PD & MR and applied baseline and monitoring methodology.
- To verify that the actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.
- To evaluate the GHG emission 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 verification shall ensure that the reported emission reductions are complete and accurate in order to be certified.

- **The method and criteria used for validation and verification**

The validation consists of the following four phases:

I. **A desk review of the project description documents.**

- A review of data and information.
- Cross checks between information provided in PD and information from sources with all necessary means without limitations to the information provided by the project proponent.

II. **Onsite interviews with project stakeholders**

- Interviews with relevant stakeholders in the host country with personnel having knowledge with the project development via telephone, email, or direct on-site visits;
- Cross-checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent.

III. **Onsite interviews with project stakeholders**

- Interviews with relevant stakeholders in the host country with personnel having knowledge with the project development via telephone, email, or direct on-site visits;
- Cross-checking between information provided by interviewed personnel with all necessary means without limitations to the information provided by the project proponent.

IV. **Issuance of Final Validation Report**

- The resolution of outstanding issues and the issuance of the final validation report and opinion.

The verification consists of the following four phases:

I. Desk review, involving:

- Review of the data and information presented to verify their completeness.
- Review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures.
- Evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

II. Onsite assessment involving:

- Assessment of the implementation and operation of the proposed VCS project activity as per the VCS Joint PD & MR.
- Verification of implemented monitoring plan as per the VCS Joint PD & MR and applied baseline and monitoring methodology.
- Review of information flows for generating, aggregating, and reporting the monitoring parameters.
- Interview with relevant personnel to confirm that the operational and data collection procedures are implemented in accordance with the monitoring plan in the VCS Joint PD & MR.
- A cross-check between information provided in the monitoring report and data from other sources such as inventories, purchase records, or similar data sources.
- A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the VCS Joint PD & MR and the selected methodology.
- Review of calculations and assumptions made in determining the GHG data and emission reductions.
- Identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

III. The number of findings raised during validation and verification

- A risk-based approach has been followed to perform this Gap Validation & Verification. During the course of Joint Gap Validation & Verification, a total of 11 findings were raised, which includes:
- 07 Corrective Action Request (CAR); 04 Clarification Requests (CLs).
- All the raised findings have been successfully resolved by the PP.

IV. Any uncertainties associated with the validation and verification

There are no uncertainties associated with the joint validation & verification of the project activity. The validation and verification have been done with a reasonable level of assurance.

The VCS Joint PD & MR/01/, emissions reduction calculations /02/ along with the supporting documents provided are in line with all the VCS requirements /B01/. The validation and verification team has detected no further uncertainties or quality restriction.

- Summary of the validation and verification conclusions

Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the VCS Project "DelAgua Clean Cooking Grouped Project in Gambia" as described in the Joint PD - MR (version 10.0 dated 19-September-2024) /01-a/, meets all applicable VCS requirements, including those specified in the VCS Standard (v4.5, dated 29-August-2023), relevant methodology, tools, and guidelines.

The selected baseline and monitoring methodology (VMR0006 version 1.2, dated 06-July-2023) is applicable to the project and correctly applied. Carbon Check (India) Private Ltd. Therefore, requests the registration of the project as a VCS project.

In CCIPL's opinion, the emission reductions reported for the "DelAgua Clean Cooking Grouped Project in Gambia" in the monitoring report are fairly and correctly stated. CCIPL is therefore able to certify that the emission reductions from the "DelAgua Clean Cooking Grouped Project in Gambia" The average annual and total GHG emission reduction expected from the grouped project is expected to be 780,560 tCO_2e and 6,244,483 tCO_2e, respectively, over the first 7-year crediting period.

The first monitoring period for the project activity is 23-February-2023 to 31-December -2023. Total 76,140 improved cookstove distributed during current monitoring period and the actual emission reduction achieved during current monitoring period is 167,575 tCO2e.

CONTENTS

1 INTRODUCTION 9

1.1 Objective 9

1.2 Scope and Criteria 9

1.3 Reasonableness of Assumptions and Level of Assurance 11

1.4 Summary Description of the Project 11

2 VALIDATION AND VERIFICATION PROCESS 12

2.1 Method and Criteria 12

2.2 Document Review 13

2.3 Interviews 13

2.4 Site Visits 19

2.5 Resolution of Findings 19

3 VALIDATION FINDINGS 20

3.1 Project Details 20

3.2 Project Activity Instances in Grouped Projects 27

3.3 Application of Methodology 42

3.4 Non-Permanence Risk Analysis 66

4 VERIFICATION FINDINGS 66

4.1 Project Implementation Status 66

4.2 Accuracy of Reduction and Removal Calculations 67

4.3 Quality of Evidence to Determine Reductions and Removals 70

5 VALIDATION AND VERIFICATION OPINION 70

5.1 Validation and Verification Summary 70

5.2 Validation Conclusion 71

5.3 Verification conclusion 72

5.4 Ex-ante vs Ex-post ERR Comparison 73

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION 75

APPENDIX 2: REFERENCE DOCUMENTS 76

APPENDIX 3: BACKGROUND DOCUMENTS 77

APPENDIX 4: ABBRIEVIATIONS 78

APPENDIX 5: FINDINGS LOG 79

APPENDIX 6: CERTIFICATE OF COMPETENCE 88

1 INTRODUCTION

1.1 Objective

DelAgua Health The Gambia (Voluntary) Ltd. has appointed the VVB, Carbon Check (India) Private Ltd. to perform a joint validation and verification of the VCS Project "DelAgua Clean Cooking Grouped Project in The Gambia". This report summarizes the findings of validation of the project, performed based on the VCS Program Guide (v4.4, dated 29-August-2023), VCS Standard (v4.5, dated 29-August-2023), Program Definitions (v4.4, dated 29-August-2023), Registration & Issuance Process (v4.4, dated 04-October-2023), VCS Validation and Verification Manual (v 3.2, dated 19/10/2016). Validation is required for all VCS project activities intending to register project under the VCS program. The purpose of a joint validation and verification is to have a thorough and independent assessment of the proposed project against the applicable VCS requirements, in particular, the project's baseline, monitoring plan and the project's compliance with relevant VCS and host Party criteria. These are validated in order to confirm that the project design and monitoring report, as documented, is sound and reasonable and meets the identified criteria. Validation and verification are a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of emission reductions, VCUs.

Through this joint validation and verification activities, it is to be confirmed that:

- The project is implemented as described in the VCS Joint PD & MR /01/
- The monitoring system is implemented and fully functional to generate emission reductions without any double counting,
- The data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reductions calculation.

The joint validation and verification followed the requirements of the current version of the VCS standard version 4.5 and VCS program guide (version 4.4)/B01/ to ensure the quality and consistency of the joint validation and verification work and the report.

1.2 Scope and Criteria

The validation scope is defined as an independent and objective review of the Project Description (PD), project design, the project's baseline study and monitoring plan and other relevant documents. The PD is reviewed against the relevant criteria and decisions by the VCS Program, and against the approved baseline and monitoring methodology. Carbon Check has employed a risk-based approach in the validation, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

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

The joint validation and verification of this project is based on the Joint PD & MR /01/ emission reduction calculation spreadsheets /02/, supporting documents made available to the verifier /02 – 31/ and information collected through performing onsite visit interviews. Furthermore, publicly available information was considered as far as available and required.

CCIPL has employed a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

The joint validation and verification are carried out on the basis of the following requirements, applicable for this project:

- VCS Program Guide v4.4
- VCS Standard v4.5
- Program Definitions v4.4
- Registration & Issuance Process v4.4
- VCS Validation and Verification Manual v 3.2
- VCS Methodology: VMR0006.: Methodology for Installation of High Efficiency Firewood Cookstoves" (Version 1.2)/B02/.
- AMS-II.G.: Small-scale Methodology: Energy efficiency measures in thermal applications of non-renewable biomass, Version 13.0
- Other relevant rules, including the host country legislation.

The scope of this joint validation and verification, by independent checking of objective evidence, is as follows:

- To verify that the project is implemented as described in the joint VCS Joint PD & MR.
- To assess the project's compliance with other relevant rules including the host country legislation.
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions without any double counting.
- 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.

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

The method and criteria used for verification consisted of the following phases:

1. Completeness check and desk review
2. On site interviews with stakeholders
3. Resolution of outstanding issues and issuance of final verification report and applicable VCS Validation and Verification Deeds of Representation.

CCIPL conducts all its work under strict rules to safeguard impartiality and ensure the independence of the verification team. The verification team VVBs did not provide any consulting or recommendations for the client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

1.3 Reasonableness of Assumptions and Level of Assurance

The joint validation and verification report is based on the Joint PD & MR /01/, supporting documents /02-18/ made available to the Validation and Verification team and information collected through performing interviews.

The verification has been planned and organized to achieve a:

☒ Reasonable level of assurance as per VCS Standard (v4.5)

☐ Limited level of assurance

The threshold for quantitative materiality with respect to the aggregate of errors, omissions and misrepresentations, relative to the total reported GHG emission reductions and/or removals was limited to one percent, as required by section 4.1.10 of the VCS Standard version 4.5/B01/.

1.4 Summary Description of the Project

The project “DelAgua Clean Cooking Grouped Project in The Gambia” is a project that employs the VCS methodology, VMR0006, version 1.2 /B02/. The project involves the distribution of energy-efficient cookstoves to the population of Gambia, located in West Africa. Currently, under the project activity, it is expected to distribute a total of 200,000 ICS throughout the program’s lifetime in Joint PD and MR Section 1.1. /01/. The ICS will be high efficiency cooking devices, leading to a reduction in indoor smoke

levels, time spent on the collection of firewood used for cooking a specified quantity of meal, and a reduction in the usage of firewood compared with the pre-project scenario.

The first monitoring period for the project activity is 23-February-2023 to 31-December-2023. A total of 76,140 improved cookstoves were distributed during the current monitoring period, and the actual emission reduction achieved during the current monitoring period is 167,575 tCO2e.

The project proponent for the project activity is DelAgua Health The Gambia (Voluntary) Ltd, which owns the rights to VERs /06/.

The project activity has been implemented in accordance with the joint VCS PD and MR /01/, and the emission reductions are calculated conservatively as per the applied methodologies /B02/. The ICS numbers have varied during the actual implementation, and the same has been updated during the verification activity. The estimated average annual GHG emission reduction is 780,560 tCO2e and the total is 6,244,483 tCO2e for the ICS grouped project activity over the entire crediting period.

2 VALIDATION AND VERIFICATION PROCESS

2.1 Method and Criteria

DelAgua Health The Gambia (Voluntary) Ltd has appointed the VVB, Carbon Check (India) Private Ltd., to carry out the joint validation and verification of the project “DelAgua Clean Cooking Grouped Project in The Gambia" with regards to the relevant requirements of VCS Standard Version 4.4 /B01/.

The joint validation and verification include a thorough and independent assessment of the proposed project against the applicable VCS requirements /B01/, in particular the project's baseline, additionality, monitoring plan, and compliance with relevant VCS and host party criteria. The validation involves an assessment of the project to confirm that the project meets the applicability conditions of the selected methodology, VMR0006. version 1.2/B02/, and to assess the claims and assumptions made in the Joint PD and MR /01/ without limitation on the information provided by the project participants. The overall joint validation and verification were conducted using Carbon Check’s internal procedures.

The Joint validation and verification consist of the following three phases:

1. Completeness check and desk review of the joint PD and MR, monitoring plan, monitoring methodology, applicable tools in particular attention to the frequency of measurements, quality of metering equipment including calibration requirements, QA/QC procedures and other relevant documents.

2. On-site visit interviews (including follow-up interviews with project stakeholders, when deemed necessary). The onsite interviews include the following:
   - An assessment of the implementation and operation of project activity with respect to joint PD and MR.
   - Review of information flows for generating, aggregating, and reporting the monitoring parameters.
   - Interview with relevant personals to determine whether the operational and data collection procedures are implemented and in accordance with the monitoring plan of the project.
   - Cross check of information and data provided in the monitoring report with purchase records or similar data sources.
   - Review of assumptions made in calculating the emission reductions (if any). Implementation of QA/QC procedure in-line with the VCS joint PD & MR and methodology requirements.
3. Resolution of outstanding issues and the registration and issuance of the final joint validation and verification report and as applicable the VCS validation and verification Deed of Representation.

2.2 Document Review

During the document review, CCIPL has applied standard auditing techniques including but not limited to document reviews and on-site interviews, review of the applicable/applied methodology and its underlying formulae and calculations to assess the quality of information provided. The validation and verification were performed primarily based on the review of the VCS joint PD & MR and the supporting documentation. This process included:

- A review of data and information presented by the PP to verify their completeness.
- A review of the MP and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the QA/QC procedures, and
- An evaluation of data management and the QA/QC system in the context of their influence on the generation and reporting of ERs.

The Joint PD and MR /01/ was initially reviewed and CCIPL requested the PP to present the supporting information and documents /02/-/18/. The documents were reviewed by CCIPL. Through the process of the validation and verification, the revised Joint PD and MR, monitoring report and the supporting documents were evaluated to confirm the actions taken by the PP to the CARs and CLs issued by the CCIPL team.

The list of documents referred during the course of this verification has been provided in Appendix-1.1.

2.3 Interviews

The table below describes the onsite interview process and further identifies personnel, including their roles, who were interviewed and/or provided information additional to that provided in the joint project description & MR /01 and any supporting documents.

VVB has applied a sampling approach for the stakeholder's interview and for acceptance sampling in accordance with the paragraph 26 & 39 c of the Standard: Sampling and surveys for CDM project activities and programmes of activities, Version 09.0. In accordance with paragraph 28 of the sampling standard, acceptance sampling has been chosen by the verification team, and accordingly, the steps listed in paragraph 29 of the sampling standard were followed. So, in accordance with paragraph 39 (c) of the sampling standard the Verification team opted for AQL of 1.0% and UQL of 20%; producer risk of 10 %, and consumer risk of 5 % in determining the VVB's sample size for which the sample size (n) is 8 with acceptance number (c).

Table 01: On-site interview process

SR. No.	Date	Name	Organization	Topic	Interviewer
/01/	29/11/2023 – 01/12/2023	Ajay Dixit	DelAgua	1. Project Design 2. Project Implementation status 3. Project start date and Project Location 4. Baseline Scenario 5.Baseline Identification and Additionality 6.Qualification and Training 7.Monitoring and reporting documentation 8.Quality Assurance – Management and operating system 9.Social and Environmental Impacts 10.Local Stakeholders meeting process 11. Compliance with relevant laws 12. Roles and responsibility, Data Management and Reporting	Vijay Mathew Buba Sey

/02/	29/11/2023 – 01/12/2023	Owen Doel	DelAgua	1.Project Design 2. Project Implementation status 3.Project start date and Project Location 4. Baseline Scenario 5.Baseline Identification and Additionality 6.Qualification and Training 7.Monitoring and reporting documentation 8.Quality Assurance – Management and operating system 9.Social and Environmental Impacts 10.Local Stakeholders meeting process 11. Compliance with relevant laws 12. Roles and responsibility, Data Management and Reporting	Vijay Mathew Buba Sey
/03/	29/11/2023 – 01/12/2023	Ousman Badjie	DelAgua	1. Project Design 2.Project Implementation status 3. Project start date and Project Location 4. Baseline Scenario 5.Baseline Identification and Additionality 6.Qualification and Training 7.Monitoring and reporting documentation 8.Quality Assurance – Management and operating system 9.Social and Environmental Impacts 10.Locak stakeholder meeting 11.Compliance with relevant laws	Vijay Mathew Buba Sey

				12.Roles and responsibility, Data Management and Reporting	
/04/	29/11/2023 – 01/12/2023	Fatoumata Bayo	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/05/	29/11/2023 – 01/12/2023	Nenegalleh Pah	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/06/	29/11/2023 – 01/12/2023	Nyaling Baldeh	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/07/	29/11/2023 – 01/12/2023	Haddy Secka	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/08/	29/11/2023 – 01/12/2023	Sira Camara	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/09/	29/11/2023 – 01/12/2023	Jainaba Sall	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/10/	29/11/2023 – 01/12/2023	Jarrai Jawneh	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/11/	29/11/2023 – 01/12/2023	Kaddijatou Jawo	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/12/	29/11/2023 – 01/12/2023	Fatty Fatou Project stove ID: DS 000525	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/13/	29/11/2023 – 01/12/2023	Nyara Kassama Project stove ID:	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey

		DS000427			
/14/	29/11/2023 – 01/12/2023	Habby Sey Project stove ID: DS000820	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/15/	29/11/2023 – 01/12/2023	Sita Kurubally Project stove ID: DS000710	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/17/	29/11/2023 – 01/12/2023	Katty Mann eh Project stove ID: DS001663	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/18/	29/11/2023 – 01/12/2023	Fatoumatta Jallow Project stove ID: DS000930	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/19/	29/11/2023 – 01/12/2023	Babun Darboe Project stove ID: DS000881	End User (Monitoring survey)	Monitoring survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/20/	29/11/2023 – 01/12/2023	Mabintou Manka	End User (KPT/Baseline)	KPT/Baseline survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/21/	29/11/2023 – 01/12/2023	Nyima Bondi	End User (KPT/Baseline)	KPT/Baseline survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey

/22/	29/11/2023 – 01/12/2023	Binta Sanyang	End User (KPT/Baseline)	KPT/Baseline survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/23/	29/11/2023 – 01/12/2023	Fatou Bah	End User (KPT/Baseline)	KPT/Baseline survey of the project activity and	Vijay Mathew Buba Sey
/24/	29/11/2023 – 01/12/2023	Mariatou Jobe	End User (KPT/Baseline)	KPT/Baseline survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/25/	29/11/2023 – 01/12/2023	Kaddy Bah	End User (KPT/Baseline)	KPT/Baseline survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/26/	29/11/2023 – 01/12/2023	Mansata Sanno	End User (KPT/Baseline)	KPT/Baseline survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey
/27/	29/11/2023 – 01/12/2023	Fatoumata Ceesay	End User (KPT/Baseline)	KPT/Baseline survey of the project activity and grievance mechanism.	Vijay Mathew Buba Sey

Apart from the monitoring survey, VVB has also interviewed the beneficiary and confirmed the baseline cookstove (i.e Three stone fire) used prior to the implementation of the project stove. Furthermore, through document review registration certificate cum consent deed signed by the beneficiary, VVB could verify that all new instances comply with the above 10% efficiency requirement as per the applied methodology /B02/.

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2.4 Site Visits

Carbon Check has conducted an on-site inspection to confirm the implementation and operation status of the group project activity. A reasonable level of assurance has been maintained through the on-site visit for the purpose of validation and verification as follows:

- An assessment of the implementation and operation of the project activity through onsite interviews with the representatives of the project proponent and end users.
- Confirmation of the pre-project scenario
- Confirmation of the applicability of the methodology and monitoring and controlling instruments and operational arrangements.
- Confirm the data collection procedures are implemented in accordance with the MP
- Assessment of the project boundaries
- Assessment of the monitoring provisions by checking the monitoring arrangement.
- A review of information aggregating and reporting of the monitoring parameters
- A check of the observations of monitoring practices against the requirements of the VCS JOINT PD & MR and the applied monitoring methodologies.
- A review of calculations and assumptions made in determining the GHG data and ERs, and
- An identification of QA/QC procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters.

2.5 Resolution of Findings

This section summarizes the findings from the joint validation & verification of the project activity. In this section the findings from the document review, assessments and onsite interviews are provided. Material discrepancies identified in the course of the validation are addressed either as CARs, CLs or FARs.

- Clarification requests (CLs): Project reporting lacks transparency and further information is needed to determine if a material discrepancy is present.
- Corrective action requests (CARs): The VVB has identified a material discrepancy or non-conformance that the project proponent must address.

The validation & verification team identified 07 CAR and 04 CLs. All CAR and CLs raised by Carbon Check during this joint validation & verification have been resolved by the PP. Please refer to Appendix 4 below for the details of the CARs/CLs and their closure. If this was not completed, the ERs cannot be certified and recommended for issuance to the VCS Registry.

2.5.1 Forward Action Requests

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

Forward Action Request (FAR) is to be raised when the monitoring and reporting require attention and/or adjustment for the next verification period. FARs VVBs not relate to VCS requirements for issuance of ERs achieved during subject monitoring.

CCIPL has not raised any FAR during this joint validation and verification.

Provide details of any forward action requests raised, for the benefit of subsequent project audits.

3 VALIDATION FINDINGS

3.1 Project Details

VVB confirms the details provided in the table below and the details provided by the PP in the Joint PD & MR are found to be appropriate and conforms the with applicable requirements. In order to verify these, PP has reviewed and crosschecked the relevant documents /02/-/23/. Further The completeness and accuracy of the project description were validated through onsite interviews/25/.

<table>
<tr><th>Item</th><th>Evidence gathering activities, evidence checked, and assessment conclusion</th></tr>
<tr><td>Audit history</td><td>PP has provided the audit history in section 1.1 of the Joint PD&MR/1/. The verra registry page has been reviewed to
<table>
<tr><th>Audit type</th><th>Period</th><th>Program</th><th>Validation/verification body name</th></tr>
<tr><td>Validation/ verification</td><td>23-Feb-2023--31-Dec-2023</td><td>VCS</td><td>Carbon Check Pvt. Ltd.</td></tr>
<tr><td>Total</td><td>23-Feb-2023--31-Dec-2023</td><td>VCS</td><td>Carbon Check Pvt. Ltd.</td></tr>
</table>
confirm that the information provided in the Joint PD_MR is accurate.</td></tr>
<tr><td>Sectoral scope</td><td>3.1 Energy Demand</td></tr>
</table>

AFOLU project category, if applicable	NA
Project activity type	Type II (Energy Efficiency Improvement)
General eligibility of the project to participate in the VCS Program	The group project focuses on energy-efficient cookstove distribution, which falls under the category of efficiency improvements in thermal applications, thus eligible for the VCS Program. In the section 1.4 of the VCS Joint PD&MR v8.0, General eligibility criteria are provided by PP, the project is eligible under the scope of the VCS program based on the following criteria: • The program aims reduces greenhouse gas (GHG) emissions from cooking fuel combustion, including CO_2, CH4, and N_2O gases. • The program's ICS utilizes the VCS-approved methodology "VMR0006 "Methodology for Installation of High Efficiency Firewood Cookstoves", version 1.2." The start date of the project was on 23-February-2023 and the and the pipeline listing was initiated on 9-December-2022. The project meets the pipeline listing requirements. Public comment was open from 03-January-2023 to 02-February - 2023 and there were no comments received during this period. The VVB has conducted opening meeting on November 2023, after the public comment period was completed.
AFOLU project eligibility, if applicable	N/A
Transfer project eligibility, if applicable	N/A
Project design	The project activity is designed as a group project activity and includes several project activity instances (PAIs) of the same activity type in one project description. New instances shall be introduced to the grouped project activity at any monitoring period; this is indicated in Section 1.5. of the VCS Joint PD and MR/01/ In the section 1.5 of the Joint PD and MR/01/, the PP describes the eligibility criteria for new instances of grouped projects conforms with the following VCS Program requirements:

	• Eligibility criteria as per section 3.6.10 to 3.6.15 of the VCS Standard v4.5VCS Standard v4.5 • Eligibility criteria as per section 3.6.16 to 3.6.18 of the VCS Standard v4.5 • Applicability conditions of AMS II.G version 13 • Eligibility conditions specific to inclusion of New PAIs In order to verify the eligibility criteria of the project design and new instances of the grouped project has reviewed the relevant documents /02/-/23/ and through onsite visit/25/
Project ownership	DelAgua Health The Gambia (Voluntary) Ltd
Project start date	23-February-2023
Project crediting period	23-February-2023 to 22-February-2030
Project scale	Large Project
Likelihood of achieving estimated GHG emission reduction or removals	6,244,483 for the first 7-year crediting period & 780,560 annually
Technologies and measures implemented by the project activity	The project "DelAgua Clean Cooking Grouped Project in The Gambia" employs baseline and monitoring methodology (VRM0006 version 1.2/B02/. The project involves the distribution of Improved Cooking Stoves (ICS) in Gambia. The ICS distributed through this project will replace the baseline cookstoves, i.e., three-stone fires or conventional open fires. This project is expected to be distributed to a total of 200,000 ICS throughout the program's lifetime. The project results in reducing the amount of non-renewable biomass used for cooking and each household will receive one ICS. Through the reduction in non-renewable biomass consumption, the program will decrease greenhouse gas emissions. In the project, the Cookstoves Kuniokoa Generation 3 with Pot Skirt Stove will burn the wood efficiently, which improves the thermal energy directly to the pot, thus conserving non-renewable biomass
Implementation schedule of the project activity or activities	The implementation schedule is given in Section 1.1 of the VCS Joint PD and MR. The grouped project planned to distribute the 200,000 improved cookstoves in host country. The first ICS

	under the grouped project was distributed on 23-February-2023. The monitoring period for the current issuance request is 23-February-2023 to 31-December-2023. Last stove distributed under the current MP is on 03 October 2023. Total 76,140 ICS have been distributed till the end of the monitoring period. For administrative purposes, the ICS have been clubbed as per investor groups. The cookstoves distributed under the current MP is Burn Kuniokoa stoves. For the current monitoring period, there are three investor groups. The operation of stoves was confirmed by a survey undertaken as part of monitoring requirements of VCS PD and it was found that 99-100% of the stoves are in use. The results of surveys are demonstrated in the ER spreadsheet and furnished to VVB for verification. The cookstoves were distributed in the targeted project area, with the location chosen in consultation with the local representative. Considering there were no stove distribution after 03 October 2023, hence the first monitoring surveys were undertaken between 15th November and 27th November 2023 by visiting the sampled households. Sample size was selected by using the latest version 4 of CDM guideline, "Sampling and surveys for CDM project activities and programmes of activities" version 04.
Project location	The indication of the project activity instance location and the geographic boundaries is provided in Section 1.13. of the VCS Joint PD and MR. They are in accordance with paragraph 3.11.1 of the VCS Standard and can confirm that the project activity boundary is uniquely defined. The project location and geographic boundaries of the project are in the Gambia for this monitoring period. This is in accordance with paragraph 3.6.10 of the VCS standard version 4.5 /B01/, which requires projects to have one or more clearly defined geographic areas within which new project activity instances may be developed. The project's geographical location is outlined in the provided KML files/26/. The PP has provided details of the coordinates of locations of the project activity in which the ICS is distributed in the section 1.13 of the Joint PD& MR/01/. The geo co-ordinates of the project location are as follows: 13.4432° N, 15.3101. °W

	In order to pinpoint and validate the project location, VVB collected GPS coordinates during the onsite inspection. These coordinates were compared with the GPS locations documented in the JPD&MR, v7.0/01/ and those indicated for project location in the KML file/26/ provided by PP. Additionally, the accuracy of these location was cross verified by reviewing the approval for project activities from the relevant authorities, confirming alignment with the project locations as stated by the Project Proponent. Based on the observations, VVB confirms that the locations mentioned in the approval documents are in line with the project locations as indicated by the Project Proponent.
Conditions prior to project initiation	The project activity will use methodology VMR0006 version 1.2/B02/. Since the project activity that apply the indicative simplified methodology VMR0006 version 1.2/B02/, the baseline scenario for this project activity is the one indicated by this methodology, i.e. “The baseline scenario is the target population's continued use of non-renewable biomass (i.e.,firewood or charcoal) or fossil fuel (i.e., coal or kerosene) to meet similar thermal energy needs, as provided by project devices’. The baseline described in the PD complies with the requirements of the methodology, as the energy baseline is the existing level of consumption of non-renewable biomass used by the cooking systems currently in use and which is used in the absence of the project activity. The project activity baseline in The Gambia focuses on the use of inefficient, conventional cooking devices by the rural population. The baseline stoves are 3-stone stoves with poor combustion air supply or flue gas ventilation systems, using non-renewable biomass (firewood). A baseline survey confirmed the baseline technology, confirming that these stoves were unimproved and using firewood as fuel. The project's implementation involves verifying this information through signed usage practices posters. The baseline survey was conducted using CDM Guidelines: Sampling and Survey for CDM PA and PoA version 4.0/B04/. The population was divided into two groups: Eastern and

	Western Gambia, with a 90/10 precision confidence of 43. The sample size was calculated for each group, with a 90/10 precision confidence of 43. Kitchen testing (KPTs) was conducted on 142 households, establishing the quantity of woody biomass consumed in the pre-project scenario. The average annual woody biomass used for kitchen activities was 0.839 metric tons per person, which was scaled up to household size using the average household size of The Gambia of 8.28 in 2020. The average amount of woody biomass used in kitchen activities in the baseline scenario was 6.947 metric tons a year. VVB based on review of the VCS Joint PD & MR /01/ and baseline survey reports/02/ confirms that the documentary evidence used in determining the above baseline scenarios are relevant, and correctly quoted and interpreted in the project description and confirms that conditions existing prior to project activity implementation are the same as the baseline scenario explained in the section 1.14 and 3.4 of the VCS Joint PD & MR/01/.
Project compliance with applicable laws, statutes and other regulatory frameworks	In the section 1.15 of the Joint PDMR, the PP has described that the Gambia government do not have any laws or regulations related to the distribution of the ICS to households. This was confirmed by the VVB through reviewing public documents/27/ and onsite visit/25 /.
Double counting and participation under other GHG programs	The project is not involved in any other form of GHG emission program and VCUs generated from this verification will not be used for other trading program to avoid any kind of double counting. The same is confirmed by the PP during the on-site audit. VVB also conducted independent review regarding the same and found that the statement of the PP is accurate, and project is not involved in any other kind of GHG trading for the present monitoring period.
No double claiming with emissions trading programs or binding emission limits	The proposed project is an energy efficiency project activity and is located in a non-Annex I country. Therefore, the ER generated would not be part of an emission trading program, nor would it be located in a jurisdiction or sector with binding limits. The project proponent intends to claim carbon credits under the VCS program only for the emission reductions achieved. The PP states in the VCS Joint PD and

	MR that the emission reductions generated by this project will not be used for compliance with an emission-trading program or to fulfil binding commitments. In fact, at the time of validation, no binding targets have been set by Gambia under the Kyoto Protocol, as indicated on the UNFCCC website (B04).
No double claiming with other forms of environmental credit	The proposed project activity instances do not generate another form of environmental credit. The project proponent indicates in the VCS Joint PD & MR that the project does not intend to generate any other form of GHG-related environmental credit other than those claimed under this VCS project.
Supply chain (Scope 3) emissions double claiming	PP will inform the manufacturers of the project stoves and the implementation partner that the Verified Carbon Units (VCUs) may be issued for the greenhouse gas emission reductions and removals under this grouped project. For these VCUs, the PP will be claiming carbon credits under VERRA. PP will further apprise that the ownership of these credits lies exclusively with DelAgua Health The Gambia (Voluntary) Ltd to avoid any potential risk of double claiming of Scope 3 emissions.
Sustainable development contributions	The distribution of Integrated Controlled Cooking Systems (ICS) in The Gambia is expected to significantly reduce indoor air pollution levels, reducing the risks associated with traditional cooking devices like 3 stone fires. This will help reduce the number of deaths among children due to indoor household air pollution and improve indoor air quality. ICS will also save women time spent collecting firewood, which can be used for better household management or income-generating activities. The project aims to distribute ICS to individual households in The Gambia at no cost, reducing their reliance on firewood fuel usage. The ICS models claim to reduce fuel usage by over 50%, allowing households to lead a healthier and less worried life. The project will provide indirect employment to the distribution team and maintain permanent staff in Banjul. The workforce will be trained to meet monitoring data requirements. The ICS will also reduce GHG emissions caused by burning firewood, as per the VCS methodology VMR0006, ver. 1.2. The implementation of the project activity contributes to the following sustainable development goals:

	• SDG :1.4 Proportion of population living in households with access to basic services • SDG 3.9 Mortality rate attributed to household and ambient air pollution • SDG 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature • SDG 5.4 Proportion of time spent on unpaid domestic and care work, by sex, age and location • SDG 8.3 Proportion of informal employment in total employment, by sector and sex • SDG 7.1 Proportion of population with primary reliance on clean fuels and technology • SDG 13.0. Tonnes of greenhouse gas emissions avoided or removed
Additional information relevant to the project	No additional information is provided by the Project Proponent.

3.2 Project Activity Instances in Grouped Projects

The DelAgua Clean Cooking is a Grouped Project in The Gambia aims to distribute Improved Cook Stoves (ICS) to rural households in The Gambia, a least developed country. The Gambian law does not mandate the distribution of ICS, and the Grouped Project is a voluntary initiative run by the PP. The project activity is a Grouped Project Activity, combining multiple Project Activity Instances (PAIs) of the same activity type and sectoral scope into one Project Description. Each ICS distributed under this grouped project will be considered as a project activity instance. New instances shall be introduced to the grouped project activity at any monitoring period, this is indicated in the VCS Joint PD & MR /01/.

The applicability of the grouped project and inclusion of the new project activity instances into the grouped project is provided below;

Criterion	Justification by the PP	Assessment
Grouped projects shall specify one or more clearly defined geographic areas within which project activity instances may be developed. Such geographic areas shall be specified using geodetic polygons	Each PAI will have clearly defined geographic areas and such area will be specified using geodetic polygons.	VVB confirms that the PAI has been implemented in Gambia. The PP has provided details of the coordinates of locations and geodetic polygons of the project activity to VVB and adding details in section 1.13 of the Joint

		PD& MR/01/. In order to pinpoint and validate the project location, VVB collected GPS coordinates during the onsite inspection. These coordinates were compared with the GPS locations documented in the JPD&MR, v7.0/01/ and those indicated for project location in the KML file/26/ provided by PP. Based on the observation confirms that the justification provided by the PP is appropriate.
Determination of baseline scenario and demonstration of additionality are based upon the initial project activity instances. The initial project activity instances are those that are included in the project description at validation and shall include all project activity instances currently implemented on the issue date of the project description.	Baseline scenario and demonstration of additionality shall be based upon the initial project activity instances	VVB confirms that The baseline scenario and additionality for PAIs, which are included in section 1.14 and 3.4 of the VCS Joint PDMR are appropriate and in line with the applied methodologies.
Where a grouped project includes multiple project activities, the project description shall designate which project activities may occur in each geographic area.	The grouped project includes only one project activity.	Based on the observation confirms that the grouped project includes only one project activity.

The baseline scenario for a project activity shall be determined for each designated geographic area, in accordance with the methodology applied to the project.	Baseline scenario for a project activity shall be determined for each designated geographic area, in accordance with the methodology applied to the project	Baseline scenario has been determined for PAIs for Gambia VVB confirms that the baseline scenario for Project activity is determined for each designated geographical area which are included in section 1.14 and 3.4 of the VCS Joint PDMR are appropriate and in line with the applied methodologies.
The additionality of the initial project activity instances shall be demonstrated for each designated geographic area, in accordance with the methodology applied to the project	Additionality for a project activity instance shall be determined for each designated geographic area, in accordance with the methodology applied to the project	Based on the observation and review of the Joint PD & MR, VVB confirms that Additionality has been determined for each designated geographic area which is included in the section 3.5 of the Joint PD & MR. This is in line with the applied methodology.
Where factors relevant to the determination of the baseline scenario or demonstration of additionality require assessment across a given area, the area shall be, at a minimum, the grouped project geographic area. Examples of such factors include, inter alia, common practice; laws, statutes, regulatory frameworks, or policies relevant to	All the factors relevant to the determination of baseline or demonstration of additionality shall be done for the geographical boundary of the grouped project	The project activity is the ICS distribution in Gambia. Based on the observation VVB confirms that baseline and demonstration of additionality for PAIs has been done for Gambia.

demonstration of regulatory surplus; determination of regional grid emission factors; and historical deforestation and degradation rates		

Eligibility Criteria for the Inclusion of the New PAIs is given below:

Criterion	Justification by the PP	Assessment
The new PAI must occur within one of the designated geographic areas specified in the project description	The distribution of the ICS will be within the jurisdictions of The Gambia, and therefore, the project activity will only distribute to the beneficiaries that are in agreement with the requirements of the program.	VVB confirms that each PAI under grouped project is within host country The Gambia. The same is cross checked and verified with distribution data base wherein location details of each end user are recorded. .
The new PAI must comply with at least one complete set of eligibility criteria for the inclusion of new project activity instances. Partial compliance with multiple sets of eligibility criteria is insufficient.	The eligibility criteria set must be complied by the PAIs at all points in time throughout the crediting period. If at any point, it is found that the PAI is not complying with the set of eligibility criteria, then it may be excluded from the crediting for the duration of the monitoring period, until it is able to demonstrate the compliance of the eligibility criteria.	Based on the observation, the PAIs meets the eligibility criteria for inclusion under grouped project activity. New Instances may be added to the grouped project activity in the future. The MR act as the documentary compliance summary. The PP will provide the supportive evidences for the same while including new PAIs
The new PAI must be included in the monitoring report with sufficient technical, financial, geographic and other relevant information to demonstrate compliance with the applicable set of eligibility criteria and enable sampling by the validation/verification body.	The new PAIs will include all the technical, financial, geographic and other relevant information related to the compliance of the applicable set of eligibility criteria & also enable sampling by the VVB.	VVB confirms that the new PAIs will include all the technical, financial, geographic and other relevant information related to the compliance of the applicable set of eligibility criteria & also enable sampling by the VVB/ The MR will act as as the supporting evidence for the stated requirement by the PP.
The new PAI must have evidence of project ownership, in respect of each project activity	The PAI related evidence on the project ownership will be in the form of a distribution end user receipt poster. This	The PP has provided the evidence related to the ownership rights of the PAI and is verified by the VVB.

instance, held by the project proponent from the respective start date of each project activity instance (i.e., the date upon which the project activity instance began reducing or removing GHG emissions).	will be signed by the end user, and a photograph of him/her holding the poster along with the ICS will be saved in the PAI database.	
The new PAI must have a start date that is the same as or later than the grouped project start date.	The GP is under planning stage right now, and therefore, the new PAIs will have a start date later than the GP start date.	The start date of the grouped project activity is 23-February-2023.This is verified by the relevant documents /04/. For the new PAIs,it will have start date later than the GP start date.
The new PAI must be eligible for crediting from the later of start date of the project activity instance or the start of the verification period in which they were added to the grouped project, through to the end of the total project crediting period	The PAI will be only eligible for the crediting from its start date through to the end of the project crediting period (only).	VVB confirms that The PAIs are eligible for crediting from the start date of the GP through to the end of the project crediting period. The start date of the PAI can be verified through the distribution database, while the end date of GP crediting can be referenced from the VCS Project Registry webpage. The overlap of monitoring periods can be checked through previous monitoring reports.
The new PAIs shall not be or shall not have been enrolled in another VCS project	It will be ensured that the PAI that is being enrolled under the VCS GP was not previously enrolled under any other VCS project and will not be enrolled under other VCS project if it is removed from the VCS GP.	The PAI enrolled under the VCS GP will not be enrolled under any other VCS project and will not be enrolled under any other VCS project if removed from the VCS GP.
The new PAI shall adhere to clustering requirement that states the project proponent shall include in a singular project all project activity instances within ten kilometers of another instance of the same project activity and with the same project proponent	It will be ensured that PAI included within 10 kilometers of another instance of the same project activity by the same PP is in a singular project	In compliance with section 3.6.8 of the VCS Standard v4.5, PP has included all the PAIs (i.e., ICS) in a singular project only regardless of their distances from each other (another instance) within the country. There are no other project of the same project activity and by the same PP in the Gambia. Thus, the grouped project complies with the requirement that all project

		activity instances within ten kilometres of another instance of the same project activity and with the same project proponent are included in a single project only. All the new PAIs shall be included in this project only. This is confirmed by the VVB during the onsite visit and interviews.
Where a capacity limit applies to a project activity included in the project, no project activity instance shall exceed such limit. Further, no single cluster of project activity instances shall exceed the capacity limit, determined as follows: 1) Each project activity instance that exceeds one percent of the capacity limit shall be identified. 2) Such instances shall be divided into clusters, whereby each cluster is comprised any system of such instances such that each instance is within one kilometer of at least one other instance in the cluster. Instances that are not within one kilometer of any other instance shall not be assigned to clusters. 3) None of the clusters shall exceed the capacity limit and no further project activity instances shall be added to the project that would cause any of the clusters to exceed the capacity limit.	The GP does not have any specified capacity limits applicable, since there are no capacity limits defined within the applied methodology, VMR0006, ver. 1.2. Therefore, this eligibility criteria are not applicable.	As per the applied methodology, VMR0006, ver. 1.2, there are no capacity limits specified. Hence it is not applicable for the grouped project activity.

3.2.1 Stakeholder Engagement and Consultation

3.2.1.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder identification	Stakeholders were identified and assessed according to the guidelines outlined in section 3.18.1 of the VCS standard, v.5 /B01/. During validation and verification process VVB found that a comprehensive approach was taken to identify all the relevant stakeholders of the project. The VVB team thoroughly examined the legal, environmental, and socio-economic impacts associated with the project activity while evaluating and analyzing stakeholders and stakeholder groups. This involved mapping out the persons, groups, and entities who are directly or indirectly affected by the project (i.e., those deriving income, livelihood, and/or community value from the project). These stakeholders were further evaluated based on how deeply affected they may be by the project, and those most impacted have been included in the stakeholder engagement. Based on this comprehensive assessment, it is determined that the stakeholder identification process has effectively captured all (potential) stakeholders. The approach to stakeholder identification is considered appropriate for the project's context.
Legal or customary tenure/access rights	The project does not affect any legal or customary tenure issues or access rights as it is not a land use project.
Stakeholder diversity and changes over time	The project's primary stakeholders are rural households in Gambia, and there are no anticipated changes in their composition.
Expected changes in well-being	The distribution of efficient cookstoves could reduce the release of pollutants and save women time by consuming less fuelwood, allowing them to focus on other tasks. This helps reduce household air pollution caused by inefficient cookstoves, which causes long-term illnesses and deaths.

Location of stakeholders	The project beneficiaries and staff are primarily situated in rural Gambia, while the Ministry of Petroleum and Energy is based in the capital city of Banjul, the country's capital.
Location of resources	Not applicable since it's not a land use project

3.2.1.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Stakeholder engagement process	The local stakeholder consultation meetings were held on at the Ocean Bay Hotel, on 21 November 2022 from 8.00AM to 10.00AM with an objective of gathering comments and concerns of the stakeholders on the grouped project level, to be implemented in various districts of The Gambia and have been provided in the section of 2.1.2 of the joint PD & MR /01/which was verified by the VVB through onsite visit/25/ and documents related to stakeholder consultation/22//18/.
Consultation outcome	The Project Proponent has reported its feedback and grievance redressal procedure in Section 2.1.2 of the joint PD & MR /01/, and the policy is outlined in the document "Project Grievance Redress Mechanism" /18/. The key comments made by the local stakeholders were all answered during the local stakeholder consultation meetings and have also been provided in the section of 2.1.2 the joint PD & MR /01/. In the opinion of the assessment team, based on the onsite inspection interviews and observations, the grievance redressal procedure will address issues that may arise during project planning and implementation.
Ongoing communication	The ongoing communication process has been designed where beneficiaries and stakeholders have PP contact information and the understanding that they should contact the organization with any problems, questions, or grievances. The stakeholders can also connect through VDC members, who are part of communities where stoves have been distributed. During the onsite inspection interviews and based on document review /22/, /18/, it can be confirmed that

	ongoing communication procedure has been designed and is implemented according to section 2.1.2 of the Joint PD & MR /01/ and that it is effective in its aim.
Stakeholder input	VVB confirms the procedure and method for engagement, the method for documenting the outcomes of local stakeholders' consultation, and account of all inputs received. During the monitoring period, no negative feedback or comments were reported from the stakeholders. VVB confirms that the project proponent has taken due account of all input/ feedback received during the monitoring process (positive or negative) have been compiled in the survey results spreadsheet/08/, this has been checked by the verification team during the onsite inspection interviews. Hence VVB deemed the local stakeholders ongoing communication as appropriate.

3.2.1.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Obtaining consent	DelAgua has signed a Memorandum of Understanding with the Ministry of Petroleum and Energy to distribute improved cookstoves to rural households in Gambia. The project has also been delivered in collaboration agreements with regional governors, aiming to reduce firewood consumption and indoor air pollution, improving respiratory health. Primary stakeholders are being approached to sign up for free improved cookstoves.
Outcome of FPIC discussion	DelAgua operates under an MoU with the Gambia Government, ensuring the project is working under government approval and regular reporting. The PP has ensured that every individual stakeholder has able to provide their consent to participate in the project.

3.2.1.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Development process	DelAgua developed a grievance redress procedure using frameworks that had tested in other sub-Saharan African contexts. The local team adapted the process to the local context, and iterated and rolled out for the wider project. Key stakeholders include village development committees and dedicated resources within the DelAgua team. Grievances are raised with local beneficiaries through trust and social bond systems, and reported to DelAgua staff with a dedicated lead. Communication channels are culturally appropriate, and grievances are managed in culturally appropriate ways. VVB confirms the statement provided in the Joint PD&MR is found appropriate and is verified by the checking the relevant documents/18/ and by interviewing the local stakeholders and staffs during the onsite visit.
Grievance redress procedure	The grievance redressal process has been designed where beneficiaries and stakeholders have PP contact information and the understanding that they should contact the organization with any problems, questions, or grievances. The stakeholders can also connect through VDC members, who are part of communities where stoves have been distributed. During the onsite inspection interviews and based on document review /22/. it can be confirmed that grievance addressal procedure has been designed and is implemented according to section 2.1.2 of the Joint PD & MR /01/ and that it is effective in its aim.

3.2.1.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No Comments received during the public comment period	Not applicable as none was received during the 30 days listing period on VERRA registry. The VCS PD was made available for the public comments from 03 January 2023 to 02 February 2023	The public commenting period for the project was from 03-January-2023 to 02-Febuary-2023. No public comments were received during this period.

		VVB has confirmed the same by crosschecking the project VERRA Registry/29/.

3.2.2 Respect for Human Rights and Equity

3.2.2.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination and sexual harassment	As per the statement provided in the section 2.3.1 by the PP, DelAgua's HR unit monitors and implements various HR policies for staff and beneficiaries, ensuring no instances of discrimination or sexual harassment were recorded during the monitoring period. VVB confirm the statement provided in the Joint PD&MR is appropriate. This is verified from the relevant documents/24/ and interviews with the stakeholders.
Management experience	As per the statement provided in the section 2.3.1 by the PP DelAgua, has been delivering these projects for over a decade and does not sub-contract any of their implementation to non-DelAgua entities.
Gender equity in labor and work	As per the statement provided in the section 2.3.1 by the PP, DelAgua is committed to gender equity in recruitment policies, actively aiming to increase female recruitment whenever possible.
Human trafficking, forced labor, and child labor	As per the statement given in clause 2.3.2 of PD&MR v1.0 , the Implemented project activity complies with all the relevant state & national laws and there is no child is forced to or allowed to work in the project activity.

3.2.2.2 Human Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion

Human rights	As per statement provided by the PP in the section 2.3.2 of the Joint PD & MR/01/, The project distributes improved cookstoves to households, avoiding legal or customary tenure or access rights to territories and resources. Primary stakeholders can choose whether to receive a free stove, regardless of their tribal, ethnic, religious, or political background. The stoves are distributed irrespective of the beneficiaries' backgrounds, and they are not forced or coerced to use them during monitoring work. This approach ensures that stakeholders, indigenous people, local communities, and customary rights holders have equal access to the stoves.

3.2.2.3 Indigenous Peoples and Cultural Heritage

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Preservation and protection of cultural heritage	As per the statement provided in the section 2.3.3 of the Joint PD&MR/01/, The project distributes improved cookstoves to Gambia households without affecting cultural heritage sites. Primary stakeholders are invited to provide their names during beneficiary data collection, without being obligated to change their traditional practices. The aim is to encourage future cooking events using the improved cookstoves. VVB confirms that the project doesn't affect the cultural heritage as per the joint PD and MR, which was confirmed through an onsite visit and an interview with the stakeholders/25/.

3.2.2.4 Property Rights

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Rights to territories and resources	This is not applicable since the project activity involves only the distribution of ICS cookstoves.
Respect for property rights	This is not applicable since the project activity involves only the distribution of ICS cookstoves.

3.2.2.5 Benefit Sharing

N/A

3.2.3 Risks to Local Stakeholders and the Environment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Risks to stakeholder participation	As per the statement provided in the section 2.2 of the Joint PD&MR/01/, there were no identified in stakeholder participation. Stakeholders were informed about a meeting by a press release in "The Standard Times" and an email on 04-November-2022. The stakeholders were invited to the meeting through posters and other means, and their comments were openly and transparently discussed during the physical meeting, which included a presentation on the proposed project activity. VVB confirms the statement provided is found appropriate by crosschecking the relevant documents /22/, onsite visit/25/ and interview with the stakeholders.
Working conditions	As per the statement provided in the section 2.2 of the Joint PD&MR/01/, the DelAgua staffs are at risk. This was due to their remote working locations. The PP has a health, safety, and security policy for all the staff. Also, the PP maintains a risk register that tracks all risk types, safety, and security and is updated quarterly as part of its overall risk management strategy. VVB confirms the statement provided in the Joint PD&MR is found appropriate by crosschecking the relevant documents /18/, onsite visit/25/ and interview with the local staffs of the Project.
Safety of women and girls	As per the statement provided in the section 2.2 of the Joint PD&MR/01, the project identified risks of exploitation of women and girls. DelAgua follows a clear code of conduct for all staff, which is regularly updated and enforced. With regards to project beneficiaries, the projects help reduce collection, reducing vulnerability to wildlife and potential criminal situations for project beneficiaries. VVB confirms the statement provided in the Joint PD&MR is found appropriate by crosschecking the relevant documents /22/, onsite visit/25/ and interview with the local stakeholders.

Safety of minority and marginalized groups, including children	As per the statement provided in the section 2.2 of the Joint PD&MR/01, the project identified risks of children being recruited to the deliver the project. The Implemented project activity complies with all the relevant state & national laws and there is no child is forced to or allowed to work in the project activity. DelAgua enforces a policy on child labor, requiring all staff, suppliers, and vendors to comply. This policy reduces exposure to smoke during cooking meals for project beneficiaries, especially when children are near their mothers. The policy is regularly updated and enforced. VVB confirms the statement provided in the Joint PD&MR is found appropriate by crosschecking the relevant documents /22/, onsite visit and interview with the local stakeholders/25/.
Pollutants (air, noise, discharges to water, generation of waste, release of hazardous materials)	As per the statement provided in the section 2.2 of the Joint PD&MR/01/, The project identified no risk to both staff and project beneficiaries related to pollutants. The project does not involve the manufacture, trade, release, and/or use of hazardous and non-hazardous materials, thus it will not result in any release of pollutants. VVB confirms the statement provided in the Joint PD&MR is found appropriate by crosschecking the documents/01//05//21/ and onsite visit and interview with the local stakeholders/25/

3.2.4 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	In the section 2.4 of the Joint PD&MR/01/, the PP identified no risk related to biodiversity and ecosystems. The ICS reduces s GHG emissions through improved design and performance, without altering fuel or introducing pollutants, ensuring no impact on biodiversity or ecosystems. VVB confirms the statement provided in the Joint PD&MR is found appropriate by crosschecking the relevant documents/05//10//22//26/ and onsite visit/25/

Soil degradation and soil erosion	In the section 2.4 of the Joint PD&MR/01/, the PP identified no risk related such as soil degradation and soil erosion, since it's a ICS distribution project. Project stoves reduce wood fuel demand and pressure from wood cutting, thereby indirectly preventing erosion from tree cutting and felling within the project boundary. VVB had cross verified the statement through reviewing the relevant documents /05//10//22//26/ and onsite visit/25/.
Water consumption and stress	In the section 2.4 of the Joint PD&MR/01/, the PP identified no risk related to water consumption since it's an ICS distribution project in the Gambian household. VVB had cross verified the statement through reviewing the relevant documents /05//10//22//26/ and onsite visit/25/.
Usage of fertilizers	In the section 2.4 of the Joint PD&MR/01/, the project describes there are not involvement of usage of fertilizers. The project involves distribution of ICS only. VVB had cross verified the statement through reviewing the relevant documents /05//10//22//26/ and onsite visit/25/.

3.2.4.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species and habitat	The project involves the distribution of Improved Cooking Stoves (ICS) in Gambia. The project is not located in or adjacent to habitats for rare, threatened, or endangered species. Since it's an ICS distribution project, the project boundary involves the physical, geographical site of the efficient devices that utilize biomass. VVB had cross verified the statement through reviewing the relevant documents /05//10//22//26/ and onsite visit/25/.

3.2.4.2 Introduction of Species

The project involves the distribution of Improved Cooking Stoves (ICS) in Gambia. Hence this section is not applicable.

3.2.4.3 Ecosystem conversion

The project involves the distribution of Improved Cooking Stoves (ICS) in Gambia and the grouped project is not an ARR, ALM, WRC, or ACoGS. Hence this section is not applicable.

3.3 Application of Methodology

3.3.1 Title and Reference

The Project provides for projects that use one of the VCS-approved methodologies:

VMR0006: Methodology for Installation of High Efficiency Firewood Cookstoves, Version 1.2.

The associated methodologies, tools, and guideline documents in the Project include:

- Methodology "AMS-II. G: Energy efficiency measures in thermal applications of non-renewable biomass" Version 13.0;
- CDM TOOL19 "Demonstration of additionality of microscale project activities" Version 10.0
- CDM TOOL30 "Calculation of the fraction of non-renewable biomass" Version 04.0;
- CDM TOOL33 "Default values for common parameters" Version-01.0;
- CDM Guideline "Sampling and surveys of CDM project activities and programmes of activities" version 04;
- CDM Standard "Sampling and surveys for CDM project activities and programmes of activities" version 09;
- Guidelines: "General Guidelines for CDM SSC methodologies" Version-23.1

3.3.2 Applicability

The applicability of methodology is justified as below:

Methodology ID	Applicability condition	Assessment and conclusion
VMR0006: V1.2.	This methodology applies to project activities that introduce energy efficiency and fuel switch measures in thermal applications (including cookstoves, ovens, and dryers) that:	Through document review and on-site visits, VVB verified that the confirmed that the proposed group project involves an increase in thermal efficiency in cookstoves to reduce consumption of non-renewable biomass.

	1) Increase thermal efficiency to reduce the consumption of non-renewable biomass; or 2) Switch from fossil fuel (coal or kerosene) to renewable biomass in new or existing improved thermal energy generation units.	Therefore, this applicability criteria have been met by the project activity.
VMR0006: V1.2.	This methodology is applicable to both 'Projects' and 'Large Projects' under the following conditions: 1) All applicability conditions of the latest version of AMS II.G. must be met. 2) The project activities must be implemented in households, community-based kitchens, institutions (e.g., schools), or small and medium-sized enterprises (SMEs).	Through document review and onsite visit interviews, VVB can confirm that both types of cookstoves will only be distributed in households, and each ICS distributed under this project will be considered a large project. The average annual GHG emission reduction for the project is greater than 300,000 metric tons of CO_2 per year, and hence the project is a large one as per VCS Standard 4.5. Therefore, this applicability criteria have been met by the project activity.
VMR0006: V1.2.	For fuel switch activities, the following additional conditions must be met: 3) Projects must exclusively use renewable biomass2, and meet the following additional conditions: (a) If biomass residues are used, they have been left for decay or burned without energy recovery before the	Through document review and onsite visit interviews, VVB confirmed that the group project does not involve fuel switch measures. Therefore, the applicability criteria are not applicable.

	implementation of the project activity. (b) If biomass residues from a production process are used, the implementation of the project does not result in an increase of the processing capacity of raw input or any other substantial changes (e.g., product change) in this process. (c) If biomass from dedicated plantations is used, the applicability conditions of TOOL16 "Project and leakage emissions from biomass" must be satisfied.	
VMR0006: V1.2.	The renewable biomass sources must be documented in the project description and monitoring periods, including origin, quantities, and pre-project conditions. If the biomass is sourced from a third-party, proof of purchase must be provided (e.g., contractual agreements or purchase receipts).	Through document review and onsite visit interviews, VVB confirmed that the group project does not involve fuel switch measures. Therefore, the applicability criteria are not applicable.
VMR0006: V1.2.	More than one type of biomass may be used (e.g., briquettes and wood chips).	Through document review and onsite visit interviews, VVB confirmed that the group project does not involve fuel switch measures. Therefore, the applicability criteria are not applicable
AMS-II.G., V13.1	In the case of cookstoves, the methodology is applicable to	VVB has reviewed the manufacturer specification

	the introduction of single pot or multi pot portable or in-situ cookstoves with rated efficiency of at least 25 per cent.	and test reports/12/ which confirms that the ICS distributed to the end users i.e, the Kuniokoa Generation 2 stoves has an thermal efficiency of 51.3%.This is found appropriate to the Validation and verification team. Thus, the eligibility criteria have been met for the new project activity instances under this group project.
AMS-II.G., V13.1	The aggregate energy savings of a single project activity shall not exceed the equivalent of 60 GWh per year or 180 GWh thermal per year in fuel input.	VVB confirms that the PAI under the GP has an energy saving of 0.28 GWhth/year, less than 20 GWhth/year, making them microscale units. As per Paragraph 15 of CDM Tool 19, if each unit qualifies as a microscale unit, the project is not required to meet microscale or small-scale thresholds and can be verified from the ER sheet.
AMS-II.G., V13.1	Non-renewable biomass has been used in the project region since 31 December 1989, using survey methods or referring to published literature, official reports or statistics.	The validation team reviewed publicly available documents and the use of Non-renewable biomass since 1989 in Gambia. This is deemed appropriate to the Validation team. Thus, the eligibility criteria have been met for the new project activity instances under this group project.
AMS-II.G., V13.1	For cases where the biomass is sourced from renewable sources, the project	Not applicable

	participants should use a corresponding Type I methodology.	
AMS-II.G., V13.1	The CDM-PDD or CDM-PoA-DD/CPA-DD shall explain the proposed method for distribution of project devices including the method to avoid double counting of emission reductions such as unique identifications of product and end-user locations (e.g.programme logo).	VVB by means of onsite visit audit interviews confirms that the proposed method for distribution of project devices includes the method to avoid double counting of emission reductions such as unique identifications of product, end-user details (name, address etc) and unique GPS referenced location (if available). Therefore, VVB confirms that the record-keeping system will eliminate double counting.
AMS-II.G., V13.1	The project document shall also explain how the proposed procedures prevent double counting of emission reductions, for example to avoid that project stove manufacturers, wholesale providers or others claim credit for emission reductions from the project devices.	VVB confirms that the proposed procedures prevent double counting of emission reductions. This is verified from the onsite visit and can be cross verified with the end user agreement.

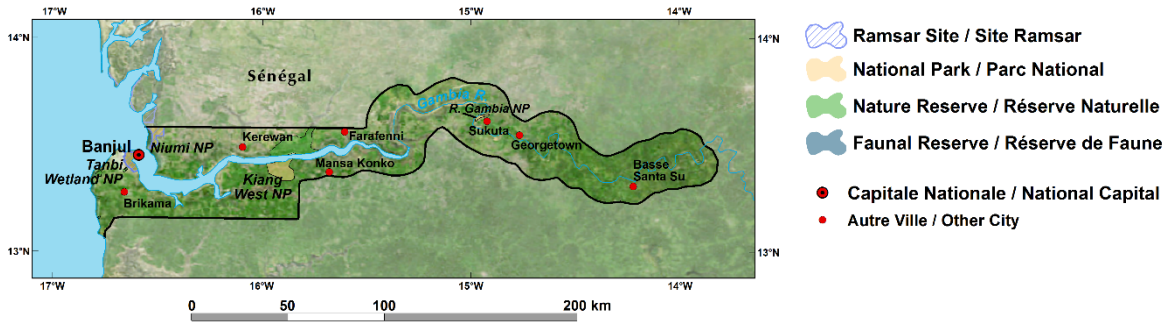
3.3.3 Project Boundary

As per the applied methodologies VMR0006, V1.2 and AMS-II. G_v13.0, the project boundary of the project is the physical, geographical site of the efficient devices that utilize biomass.

The sources of greenhouse gas identified in the Joint PD & MR /01/ are deemed to be appropriate and assessed below:

Source		Gas	Included?	Assessment and conclusion
Baseline	Source 1 Emission from burning of non-renewable Biomass, i.e. Woody Biomass for household cooking requirements	CO_2	Yes	Identified as major source, since in the Pre-project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of CO_2
		CH_4	Yes	Identified as major source, since in the in the Pre-project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of CH_4
		N_2O	Yes	Identified as major source, since in the in the Pre-project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of N_2O
Project	Source 1 Emission from burning of non-renewable Biomass, i.e. Woody Biomass for household cooking requirements	CO_2	Yes	Identified as major source, since in the project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of CO_2
		CH_4	Yes	Identified as major source, since in the project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of CH_4
		N_2O	Yes	Identified as major source, since in the project scenario it involves the use of non-renewable Biomass, i.e. Woody Biomass for cooking requirements resulting emission of N_2O

The map showing the project boundary of the project in which the ICS is distributed is given below:



VVB confirms that the sources of greenhouse gas identified in the Joint PD & MR /01/ are deemed to be appropriate and the project boundary is defined as per the applied methodologies VMR0006, V1.2/B02/ and AMS-II. G_v13.0/B02/.

3.3.4 Baseline Scenario

The project activity will use methodology VMR0006 version 1.2. This is the most recent valid version available on the VERRA site at the time of validation. Since the project activity that apply the indicative simplified methodology VMR0006 version 1.2, the baseline scenario for this project activity is the one indicated by this methodology, i.e. "The baseline scenario is the target population's continued use of non-renewable biomass (i.e., firewood or charcoal) or fossil fuel (i.e., coal or kerosene) to meet similar thermal energy needs, as provided by project devices. "The baseline described in the Joint PD_MR complies with the requirements of the methodology, as the energy baseline is the existing level of consumption of non-renewable biomass used by the cooking systems currently in use and which is used in the absence of the project activity.

VVB based on review of the VCS Joint PD & MR /01/ confirms that the documentary evidence used in determining the above baseline scenarios are relevant, and correctly quoted and interpreted in the project description. The baseline scenario for the applied methodology was also confirmed through onsite interviews with the end users of technologies and representatives of PP.

A baseline survey was undertaken to confirm the baseline technology, it was confirmed that three stone and other traditional stoves prevalently used along with a few metal pots. Baseline surveys and KPTs were conducted for 142 households based on confidence interval/ precision level of 90/10. The values for Bold and Np,HH were determined during baseline surveys and KPTs.

VVB used acceptance sampling during validation of baseline surveys for checking the PP's sample size. In accordance with the §31 and §32 of the sampling standard, version 09/B04, a sample size of 11 was required based on an AQL of 0.5 % and UQL of 20 %, producer risk 10 % and consumer risk 10 %. The AQL and UQL selected is based on the Table 2 of the sampling standard, version 09/B04/ and complies with the requirements provided in §31 and §32 of the sampling standard, version 09/B04/. Acceptance number (c) thus determined for the sample is 0. The baseline survey results were cross-checked with the household respondents, and it was confirmed that the baseline KPTs were conducted at the households. It was observed that out of the 8 samples for baseline surveys and KPTs, the responses matched with the PP's record. Thus, PP's sample has been accepted with an acceptance number of c=0.

PP conducted baseline surveys using the VMR0006 ver. 1.2 methodology, the latest version of AMS.II.G., and the Clean Cooking Alliance KPT protocol, following the guidance provided in the latest version of AMS.II.G.

PP has determined the sample size using the CDM Guideline: Sampling and Survey for CDM PA and PoA version 4.0.

The Gambia is divided into five regions, each with multiple districts. To demonstrate generalization, PP has selected randomly six districts from each region, resulting in the following six:

1.Foni Jarrol (Western Region),

2.Kiang Central (Lower River Region),

3.Upper Baddibu (North Bank Region),

4.Niamina East (Central River Region);

5.Sami (Central River Region);

6. Fulladu East (Upper River Region).

PP has calculated the sample size in accordance to the CDM Guideline, resulting in a minimum of 43 for the Bold parameter. Oversampling was done to account for potential non-responses, data quality concerns, and hardware errors, resulting in a total target sample size of 150, with 142 households successfully conducting baseline KPTs in line with the CCA KPT protocol.

The procedures followed for conducted KPT has been described by the PP in the section 3.4 of the JPDMR, version 9.0 /01/. The trained enumerators delivering this baseline was split into two groups. The Eastern Group comprised the Central River Region and Upper River Region, while the Western Group comprised the Western Region, Lower River Region, and North Bank Region. This was to prevent teams travelling across the entire country and to ensure baseline KPTs were delivered in a cost-effective way. VVB, through interviews during site visit and verifying KPT survey sheets, confirms that the survey procedure is in line with the KPT protocols and is found acceptable.

It is confirmed by the VVB that the baseline KPTs were conducted using a specially designed questionnaire as per KPT protocol approved by Clean Cooking Alliance. The questionnaire has the provision of accounting seasonal variation as per the KPT protocol. The survey involved measurement of fuelwood consumption in households using a weighing scale and moisture meter. The consumption in the sampled households were measured for three consecutive days, with visits made on four consecutive days. The first day was spent briefing families about the visit and its purpose.

VVB confirms that for KPT results, The PP utilized a digitized data collection method, recording survey responses and measurement records via smartphones. Each household's responses were centralized in a database, and the final KPT survey Excel sheet was exported for further analysis.

As per the results, the average annual woody biomass used for kitchen activities in Gambia was 0.839 tonnes per person, compared to 6.947 tonnes in the baseline scenario, calculated by multiplying the average household size of 8.28 according to the Global Data Hub for 2022.

The parameter was within the 95/10 confidence/precision which can be checked in the table below:

Mean Consumption	0.839 (tonnes/person/Year)

Precision (95/10)	7.37%

VVB confirms that the baseline scenario opted by the project activity is in accordance with the requirements of the applied methodology /B02/ and is justified and also confirms that the host country does not have any official policies or programs requiring the distribution of household cookstoves that are fuel-efficient. The project is not mandated by any law, statute, or other regulatory framework, or for UNFCCC non-Annex I countries, any systematically enforced law, statute, or other regulatory framework.

3.3.5 Additionality

The additionality of the project has been demonstrated by the PP as per the methodology section 7/B02-a/. The methodology uses the activity method for the demonstration of additionality. As per the methodology, the project activity falls under the positive list of technologies and project activity types that are defined as automatically additional. PP has demonstrated regulatory surplus in accordance with the rules and requirements regarding regulatory surplus set out in the latest version of the VCS Standard, and it can be confirmed that the project is not mandated by any law, statute, or other regulatory framework, or for UNFCCC non-Annex I countries, any systematically enforced law, statute, or other regulatory framework.

In addition, the project activity meets all the applicability conditions of the applied methodology VMR0006, version 1.2, distributes stoves at zero cost to the end-users, and has no other revenue source other than the sale GHG credits. Hence, the project qualifies for the positive list and is deemed additional.

Project activities that are implemented as part of government schemes or are supported by multilateral funds cannot be considered additional, even if the stoves are distributed free of charge or at a highly subsidized rate, and hence are not eligible to use this methodology.

The additionality has also been included in the eligibility criteria in the Joint PD_MR. Each project activity instance shall meet the requirements of the eligibility criteria in order to be included in the project activity. Project Activity Instance (Instance) is defined as “a particular set of implemented technologies and/or measures that constitute the minimum unit of activity necessary to comply with the criteria and procedures applicable to the project activity under the methodology applied to the project.” Therefore, each ICS is considered a project activity instance.

Therefore, VVB confirms that the distribution of improved cooking stoves (ICS) in Gambia is additional; the emission reductions achieved by the project would be below those that would have occurred without the implementation of the project.

3.3.6 Quantification of GHG Emission Reductions and Carbon Dioxide Removals

The equations and choices provided in the methodology and all other methodological tools are correctly quoted in the Joint PD & MR /01/. The emission reductions of the project instances of

the project would be calculated using the formulae mentioned in the applied methodology; VMR0006 (version 1.2) /B02/.

VVB based on the review of the Joint PD & MR /01/, confirms that the formulae are correctly presented for the determination of emissions reductions at project instance level. The parameters and equations presented in the Joint PD & MR /01/, as well as other applicable documents, have been compared with the information and requirements presented in the methodology respectively. An equation comparison has also been made to ensure consistency between all the formulae presented in the Joint PD & MR/01/ and ER spreadsheet/02/ and methodology VMR0006 (version 1.2) /B02/.

PP has not accounted for baseline emissions and project emissions separately; instead, PP directly quantified emission reductions based on the reduced consumption of non-renewable biomass or fossil fuels. This is in line with the applied methodology VMR0006 (version 1.2)/B02.

For leakage emission, had applied an adjustment factor to account for leakage related to the non-renewable woody biomass saved by the project activity (Adj_{LE}). This in line with the paragraph 41 of the applied methodology AMS-II. G Version 13.0/B02/.

The improved cookstove is introduced as energy efficiency measure in the project. Therefore, following equation is used which replaces Equations 1 and 2 of the AMS-II.G. This equation used is in line with the applied methodology VMR0006 (version 1.2) /B02/.

$$ER_y = \sum_i \sum_j B_{y,savings,i,j} \times N_{0,i,j} \times n_{y,i,j} \times \mu_y \times f_{NRB,y} \times NCV_{biomass} \times \left(EF_{wf,CO2} + EF_{wf,non\ CO2}\right) \times Adj_{LE} \times (1 - u_d)$$

(equation 1)

Where:

ERy = Emission reductions in year y (tCO2e)

$B_y, savings_{,i,j}$ = Quantity of woody biomass that is saved per project device i and batch j in year y (tonnes)

$N_{0,i,j}$ = Number of project devices of type i and batch j commissioned (number)

$n_{y,i,j}$ = Proportion of commissioned project devices of type i and batch j (N_0, i, j) that remain operating in year y (fraction)

μ_y = Adjustment to account for any continued use of pre-project devices during the year y

$f_{NRB,y}$ = Fraction of woody biomass that can be established as non-renewable biomass (%)

$NCV_{biomass}$ = Net calorific value of the non-renewable woody biomass that is substituted or reduced (TJ/tonne)7

$EF_{wf,CO2}$ = CO2 emission factor for non-renewable woody biomass (tCO2/TJ)

$EF_{wf,non\ CO2}$ = non-CO2 emission factor for non-renewable woody biomass (tCO2e/TJ)

Adj_{LE} = Adjustment factor to account for leakage related to the non-renewable woody biomass saved by the project activity (fraction)

u_d = Uncertainty deduction for fnrb (%)

The quantify of woody biomass saved $B_{y,savings,i,j}$ due to implementation of improved cook stoves are estimated using Option 3 i.e. equation 7 of AMS-II.G Version-13.0 as follows:

$$B_{y,savings,i,j} = B_{old,i,j} \times \left(1 - \frac{\eta_{old,i,j}}{\eta_{new,i,j}}\right) \quad \text{Equation (3)}$$

Where:

$B_{old,i,j}$ = Annual quantity of woody biomass that would have been used in the absence of the project activity to generate thermal energy equivalent to that provided by the project device type i and batch j (tonnes/year).

$\eta_{old,I,j}$ = Efficiency of old devices being replaced by the project devices of type i and batch j (fraction)

$\eta_{new,i,j}$ = Efficiency of the project device i and batch j (fraction).

The PP has chosen para 37 (c) of AMS-II. G Version 13.0 to determine the loss of efficiency of project devices due to aging. This involves determining the rate of efficiency drop for a representative sample of the first batch of project devices in year y, and assuming the same rate applies to all other batches. The efficiency of the first batch will be monitored annually through representative samples, and the rate of loss in efficiency will be applied correspondingly to all batches.

Each household will receive one unit of ICS, so the baseline fuel consumption will be determined as follows.

$B_{old,i,j} = B_{old,HH} / N_{d,HH}$

Where,

$B_{old,HH}$ =Annual quantity of woody biomass that would have been used in the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices (tonnes/household/year)

$N_{d,HH}$ = Number of project devices per household (number)

The PP may replace or repair project devices with the same or higher efficiency models, as per para 38 of AMS-II. G Version-13.0, based on the third-year ICS monitoring estimates for the Burn Kunikoa model.

The PP has provided the detailed calculations on the VERs in the ER sheet for both :(i) estimates throughout the crediting period and actual VERs obtained in the first monitoring period.

The estimated emission reductions for ICS are given below:

Vintage period	Estimated baseline emissions (tCO_2e)	Estimated project emissions (tCO_2e)	Estimated leakage emissions (tCO_2e)	Estimated reduction VCUs (tCO_2e)	Estimated removal VCUs (tCO_2e)	Estimated total VCUs (tCO_2e)
23-Feb-2023 to 31-Dec-2023	-	-	-	358,389	-	358,389
01-Jan-2024 to 31-Dec-2024	-	-	-	820,037	-	820,037
01-Jan-2025 to 31-Dec-2025	-	-	-	1,045,571	-	1,045,571
01-Jan-2026 to 31-Dec-2026	-	-	-	1,033,939	-	1,033,939
01-Jan-2027 to 31-Dec-2027	-	-	-	978,671	-	978,671
01-Jan-2028 to 31-Dec-2028	-	-	-	969,008	-	969,008
01-Jan-2029 to 31-Dec-2029	-	-	-	912,114	-	912,114
01-Jan-2030 to	-	-	-	126,754	-	126,754

22-Feb-2030						
Total	-	-	-	**6,244,483**		**6,244,483**

The VCS methodology, VMR0006 is applicable to both 'Projects' and 'Large Projects'. Hence there are no limits on volume of credits from Improved Cookstove component that can be certified per annum.

This project would achieve an estimated total emission reduction of 6,244,483 tCO_2e tCO_2e in the 7-year crediting period and an annual average of 780,560 tCO_2e during the crediting period Start 23/02/2023. So, the start date of the project activity will be the actual date from which the distribution activities will start taking place, which may be 23/02/2023.

The project activity has distributed over 76,140 ICS and the total emission reduction achieved in the monitoring period is 167,575 tCO_2e as which is also provided in the ER spreadsheet/02/.

In conclusion, all values used in the VCS Joint PD & MR to calculate emission reductions are considered reasonable in the context of the proposed project "DelAgua Clean Cooking Grouped Project in The Gambia" and calculation approach is correct.

3.3.7 Methodology Deviations

No methodology deviations are identified in the project activity.

3.3.8 Monitoring Plan

The project employs baseline and monitoring methodology namely VMR0006, version 1.2 /B02/. According to section 6.1 and 6.2 of Joint PD & MR /01/ the parameters determined ex-ante as per the requirements of the methodology are given below.

Parameters	Unit	Value	Source	Assessment
$B_{old,p}$	tonnes/person/year	0.839	Baseline KPT survey report	The quantity of annual wood consumption per household is established using KPT survey, wherein the per capita wood consumption is established using KPT for baseline

				stoves, the same is multiplied by average family size in The Gambia has confirmed the value to be appropriately provided in the Joint PD&MR by verifying the value t with Baseline KPT survey report. It Is confirmed that PP has conducted the baseline KPTs using the Clean Cooking Alliance (CCA) KPT protocol. The sampling was done is line with the CDM guideline: "Sampling and Surveys for CDM Project Activities and Programme of Activities," version 4.0.
$N_{p,HH}$	Number/household	8.28	Global data lab https://shorturl.at/I0589[1]	VVB has confirmed the Average number of persons served per household prior to project implementation

[1] https://globaldatalab.org/areadata/table/hhsize/GMB/?levels=1+4

				provided in the Joint PD&MR is appropriately given and cross verified by checking with publicly available document such as global data lab/28/
$B_{old,HH}$	tonnes/household/yea	6.947	Calculated	VVB confirms that the calculation to find Annual quantity of woody biomass that would have been used the household in the absence of the project activity to generate useful thermal energy equivalent to that provided by the project devices is correctly provided and has been cross verified by the checking the values from KPT survey conducted by the third party/08/
$B_{old,i,j}$	tonnes/year	6.947	KPT survey in the host country	The KPT survey determines annual wood consumption per household in The Gambia by multiplying

				baseline stove consumption by average family size. VVB has verified that each house hold will receive 1 ICS. therefore Bold, $_{i,j}$ = Bold,i,j = $B_{old,HH}$ /$N_{d,HH}$= 6.947/1 = 6.947 . This has been confirmed by the checking the value with KPT survey report/08/.
$\eta_{old,i,j}$	Fraction	15%	CDM Tool 33	VVB confirms that the The default values for the efficiency of pre-project device used for cooking For a three-stone fire using firewood is appropriately taken which has been verified from the applied CDM tool 33/B03/.
$EF_{wf\ CO2}$	ton CO2/TJ	112	IPCC	VVB confirms that the value for the CO2 emission factor for woody biomass is appropriately taken and is verified from the IPCC values/B05/

$EF_{wf\ non\text{-}CO2}$	ton CO2/TJ	9.46	IPCC	VVB confirms that the value for the non-CO2 emission factor for woody biomass is appropriately taken and is verified from the IPCC values/B05/
Adj_{LE}	Fraction	0.95	Applied Methodology AMS-II. G, Version 13.0	VVB confirms that the value for Adjustment factor to account for leakage related to the non-renewable woody biomass saved by the project activity is appropriately taken and is line with the applied methodology AMS-II. G, Version 13.0/B02/
$fNRB_{,y}$	Fraction	0.90	Third Party Report	VVB confirms that the calculation of $fNRB_{,y}$ is correct and in line with the CDM Methodological tool: Calculation of the fraction of non-renewable biomass (v4.0) and thus acceptable to the validation team.The

				assessment of $fNRB_{,y}$ provided below.

<u>Assessment of $f_{NRBl,y}$</u>

PP has contracted an independent party "C4Ecosolutions" for a study and calculation of ƒNRB as per CDM Methodological Tool: "Calculation of fraction of non- renewable biomass" (v04.0). Validation team confirms that it has checked ƒNRB calculation spread sheet /12/ prepared by C4Ecosolutions. As per the applied methodological tool, In the case of ex ante calculation of ƒNRB, the parameter ƒNRB shall be estimated using the most recent historical year for which data is available. Review of ƒNRB report /12/ prepared by C4Ecolution revealed that all the data used for the calculation is latest available data at the time of validation.

Review of ƒNRB calculation spread sheet /12/ prepared by C4Ecosolutions reveals that the total woody biomass consumption in a country comprises its domestic, non-domestic energy and non-domestic non-energy consumption. For Gambia, this total is estimated using consumption data sourced from the FAO Forest Products Databases and World Bank. population statistics. The reported volumes of fuelwood consumed in cubic meters are converted to metric tonnes using the FAO default conversion factor. The reported value of charcoal consumption is converted to the equivalent woody biomass using the latest CDM Tool 30 v04.0 2022, default charcoal-to-wood biomass conversion factor. Finally, consumed volumes of commercial forest products — including industrial roundwood, sawn wood, veneer sheets and wood-based panels— are converted to metric tonnes using a biomass conversion and expansion factor provided for the region.

Domestic woody biomass consumption is estimated by multiplying the 2019 per capita consumption rates for wood fuel obtained from FAO (Table 1) /12/ with total 2021 population of Gambia. The FAO accounts for non-users as the per capita consumption rate of fuel wood is estimated by dividing the total consumption of fuelwood in 2019 by the total population in 2019. Accordingly, the total domestic woody biomass consumption is conservatively estimated to be 600,409 t/yr. The non-domestic woody biomass consumption is estimated using 2019 per capita consumption rates obtained from FAO and disregards the deforestation likely occurring because of the conversion of land for agricultural use and informal or illegal harvesting, as available data for these activities are scarce.
Non-domestic energy consumption is reported as the quantity wood charcoal, and non-domestic non-energy consumption is reported as the quantity of industrial roundwood, sawn wood, veneer sheets and wood-based panels.

Per capita consumption rates were multiplied by the national 2021 population for each consumption category. Gambia's non-domestic energy and non-domestic non-energy consumption values are estimated to be 308,380t/yr and 37,311t/yr, respectively. Gambia's total woody biomass consumption is the sum of domestic, non-domestic, non-energy, and non-domestic energy consumption and is estimated to be 946,100t/yr,

In Gambia two ecological zone has been found i.e., Tropical dry forest, and Tropical moist forest, the same was verified by referring the Global ecological zones for FAO forest reporting. The resulting average MAI estimates for Gambia are 1.60, and 0.90 t/ha/year for the tropical dry forest, tropical moist forest, tropical mountain system, and tropical rainforest respectively. Table below provides the validated total, protected and remote forest cover extent, mean annual increment and renewable biomass by ecological zone for Gambia.

Ecological Zone	Total forest cover (ha)	Protected area cover (ha)	Remote area cover (ha)	MAI(t/ha/yr)	Annual growth (t/yr)
Tropical dry forest	31,837	70	1,586	1.60	48,290
Tropical moist forest	57,217	3,096	2,453	0.90	46,425
Total	89,054	3,166	4,039	-	94,715

The quantity of renewable biomass (RB) for Gambia as per the verified ƒNRB report and calculation sheet /12/ is estimated to be 94,715 t/yr. The calculation is based on the equation -04 of tool 30 v04. /B03/, checked and deemed appropriate by the VVB.

The difference between woody biomass consumption and renewable biomass is considered to be non-renewable. Non-renewable biomass utilisation in Gambia is, therefore, validated as 851,385 t/yr. The fraction of non-renewable biomass is the quotient of the non-renewable and the total biomass. The fraction of non-renewable biomass for the Gambia is, therefore, validated as 0.90. From the review of this report/spreadsheet/12/ and interviews with the CME and C4 EcoSolutions (Pty) Ltd, the validation teams confirm the following:

The report has been prepared by an independent party (i.e., C4 EcoSolutions (Pty) Ltd.), who is experienced in conducting such study.

- The detailed methodology (including the calculation) of conducting the study has been provided in the report /spread sheet /12/.

- The study has been done in accordance with the CDM Methodological Tool: "Calculation of fraction of non- renewable biomass" (v4.0) including the equitation used and the data source as required by the tool.

- All the reference and data source used for the calculation/study has been listed and assessed by the VVB

In line with paragraph 6 of tool 30 v4 /B03/, fNRB value has been compared with peer reviewed literature such as "The carbon footprint of traditional wood fuels" by Bailis and colleagues using the WISDOM method". It has also been observed by the VVB that the resulting value is higher than the expected as per the cited peer reviewed literature. While direct comparisons between the WISDOM and CDM methodologies are only sometimes appropriate, given the different approaches of the methodologies, the following factors can contribute to variations in the fNRB estimates between the two methods:/12/

1. More recent population statistics (2021) for Gambia were used in the present study. The more recent data represents an increase in population numbers since the 2009 data utilised in the study by Bailis and colleagues.

2. Updated 2019 FAO forest products statistics were used in the present study, whereas the study conducted by Bailis and colleagues used 2013 FAO forest products statistics.

3. The approach used to determine the amount of forest that is accessible yields lower estimates in the present study when compared to the study by Bailis and colleagues. This results in a lower estimated RB and consequently increased NRB and fNRB.

4. In the present study, MAIs were calculated using a weighted average based on the forest area of three categories (i.e., primary forests, above 20-year secondary forest, below 20-year secondary forest). Data from the 2019 Refinement of the 2006 IPCC Guidelines was used in combination with extrapolating the observed forest gain extents between 2000 and 2012 to a future 20-year period. As per the study by Bailis and colleagues, MAI values were derived from a combination of field observations and IPCC values, followed by a different estimation of growth rates as a percentage of standing stock. This approach often yields higher MAIs and may lead to higher estimations of RB and subsequently, lower estimations of NRB and fNRB.

On the basis of the review of the tool 30 version 4, and the f_{NRB} report provided by the PP the above information is deemed acceptable. Thus, in the opinion of validation team, the calculation of $f_{NRB,y}$ is correct and in line with the CDM Methodological tool: Calculation of the fraction of non-renewable biomass (v4.0) and thus acceptable to the validation team.

Parameters monitored ex-post

<table>
<tr><th>Parameters</th><th>Unit</th><th>Value</th><th>Source</th><th>Assessment</th></tr>
<tr><td>$N_{o,i,j}$</td><td>Number</td><td>76,140
<table>
<tr><th>S. No.</th><th>Investor Group</th><th>Total distribution of Burn Kunikoa</th></tr>
<tr><td>1</td><td>Investor Group 1</td><td>26,741</td></tr>
<tr><td>2</td><td>Investor Group 2</td><td>24,773</td></tr>
<tr><td>3</td><td>Investor Group 3</td><td>24,626</td></tr>
<tr><td></td><td>Total</td><td>76,140</td></tr>
</table></td><td>Distribution Database</td><td>VVB confirms the Number of commissioned project devices and is crosschecked with the distribution database/10/.</td></tr>
<tr><td>$\eta_{y,i,j}$</td><td>Number</td><td>Investment Group 1: 0.99
Investment Group 2: 1.00
Investment Group 3: 0.99</td><td>Monitoring surveys</td><td>VVB confirms that the values applied for Proportion of commissioned project devices of type i and batch j (No,i,j) that remain operating in year y is appropriate and is monitored one in every two years.</td></tr>
<tr><td>$\eta_{new,i,j}$</td><td>Fraction</td><td>
<table>
<tr><th>Group</th><th>Pot-skirt usage</th></tr>
</table></td><td>Third party Lab test</td><td>VVB confirms that the values taken for the</td></tr>
</table>

		Investor Group 1 — 97.15% Investor Group 2 — 92.56% Investor Group 3 — 92.21%	report (Option 1)	efficiency of the device of each type i and batch j implemented as part of the project activity is appropriate and is verified from the Third-party Lab test report which is accredited under the Uganda National Bureau of Standards (UNBS) Laboratory Recognition Scheme, adhering to ISO IEC 17025:2005 international standards. /30/.The UNBS accreditation is consistent with international standard and recognized within the national accreditation framework, the accreditation provided by UNBS to CREEC is appropriate and equivalent

				to that given by other recognition accreditation on bodies. This is in line with requirements of the applied methodologies.
μ_y	Fraction	<table><tr><th>S. No.</th><th>Year</th><th>μy Valu</th></tr><tr><td>1</td><td>Investor Group 1</td><td>0.768</td></tr><tr><td>2</td><td>Investor Group 2</td><td>0.666</td></tr><tr><td>3</td><td>Investor Group 3</td><td>0.737</td></tr></table>	Monitoring	VVB confirms that the value for Adjustment to account for any continued use of pre-project devices during the year y is taken appropriately and is line with the applied tool/B02/. This is monitored at least once in every two years
$NCV_{biomass}$	TJ/tonne	0.0156	IPCC Default for firewood	VVB confirms that the value applied for Net calorific value of renewable biomass is appropriate and is verified from the IPCC Default value for firewood /B05/.

Life Span	Years	10 years	Manufacturer's specifications	VVB has confirmed the life time of the project device provided as 10 years is true and is cross verified against manufacturers specifications/ 04/
$N_{d,HH}$	Number	1	Sale database	VVB confirms that the value provided Number of project devices distributed per household is true and is cross verified by checking the sales record/16/ and interview with the end users/25/
Date of commissioning of project device i	Date	23-February-2023	Sale database	VVB confirms that Actual date of commissioning of the project device is 23-February-2023 and is crosschecked and verified by relevant documents/04 //16/.

The validation and verification team determined that the monitored parameters and data used to estimate emission reduction under project activity and as mentioned in Section 6.1 and 6.2 of the VCS Joint PD&MR v3.0 /01/ are appropriate and meet the requirements of the methodology VMR0006, version 1.2 /B02/.

3.4 Non-Permanence Risk Analysis

This is not applicable to the project activity as the Project is not an AFOLU (Agriculture, Forestry and Other Land Use) project.

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

Implementation Status	Assessment steps, evidence checked, & conclusion:
Project implementation	The project "Distribution of Improved Cooking Stoves (ICS) in the Least Developed Country Gambia" employs VCS methodology; VMR0006 version 1.2 /B02/. The project involves distribution of high thermal efficiency fuel-efficient improved cookstoves (ICS) to replace the baseline cookstove models at household level in Gambia. It is intended that under this project high thermal efficient cookstoves will be distributed which will burn wood more efficiently thereby improving thermal transfer to pots, saving fuel wood. In addition to halting the progressing deforestation in Gambia, this project will also help in reducing health risks associated with indoor smoke pollution and time spent for the collection of firewood. The group project is planned to distribute 200,000 ICS. Each Household will receive one ICS. The monitoring period for the current issuance request is 23-February-2023 to 31-December-2023. The last stove distributed under the current MP is on 03-October- 2023. A total of 76,140 ICS has been distributed till the end of the monitoring period.

	VVB has confirmed the current implementation status of the project activity by reviewing the information in the VCS Joint PD&MR v3.0 /01/ and checking the distribution database provided by the Project Proponent.
Monitoring plan	The monitoring plan was assessed to be effectively and fully implemented at the time of the verification exercise. Monitoring activities were also observed to be carried out in accordance with the documented monitoring plan. The monitoring system was deemed appropriate and suitable for the project activity The VVB did not identify and material discrepancy between the actual monitoring system and the monitoring plan as set out in the VCS Joint PD&MR v3.0 /01/and the applied methodology VMR0006, version 1.2 /B02/
AFOLU-specific project implementation	Not applicable as the project activity do fall under For AFOLU Projects.

4.2 Accuracy of Reduction and Removal Calculations

The equations and choices provided in the methodology and all other methodological tools are correctly quoted in the Joint PD & MR /01/. The emission reductions of the project instances of the project and project activity instance are calculated using the formulae mentioned in the applied methodologies; VMR0006 version 1.2/B02/. The verification team has reviewed the emission reduction spread sheets (ER sheets) and checked all the formulae and found they are correct and are in accordance with the monitoring plan of the PD and the applied monitoring methodology.

Sampling approach: -

The VVB confirms that the project has been implemented in accordance with the Joint PD & MR/01/.

Monitoring period: From 23-February-2023 to 31-December -2023.

The first monitoring period for the project activity is 23-February-2023 to 31-December-2023. Total of 200,000 ICS improved cookstove will be distributed and operational during recent monitoring period and the actual emission reduction achieved during current monitoring period is 167,575 tCO_2e. The sampling plan implemented by the PP is in accordance with the applied approved monitoring methodology /B02/ and the VCS Joint PD & MR /01/. The PP has appropriately performed a Simple random sampling procedure, reliability levels were set at 95% confidence and 10% precision in line with the applied methodology VMR 0006 version 1.2/B02/.

As the VCS Joint PD & MR /01/ mentions the option for Simple random sampling procedure, it is acceptable to the validation and verification team.

The sampling surveys have been carried out by the well-trained personnel /14/. Monitoring parameters Ny,j,j,μy and loss of efficiency are monitored through monitoring sample surveys. Monitoring of the parameters ensures compliance with the applied methodology VMR0006, version 1.2 /B02/. Verification team has checked the survey records confirming the monitoring parameters are appropriately given.

PP has surveyed total 235 ICS for monitoring and 142 for KPT sampled households for the current monitoring period.

VVB used sampling during verification for checking the operational status in the households. The sampling done by VVB reflects the population of the project activity. Applying paragraph 39 (c) of the sampling standard, version 09 /B04/, a sample size of 08 households was chosen (with no discrepant records). A sample size of 08 ICS was chosen, based on an AQL of 0.5% and UQL of 20%, producer risk 10% and consumer risk 10%. Acceptance number (c) thus determined for the sample is 0. VVB interviewed 08 samples from monitoring survey. It was observed that out of the 08 samples, all the 08 stoves were found to be operational, and this matched with the PP's records and hence no discrepant records were observed with the Joint PD & MR /01/ and ER sheets /02/ and thus c=0. Thus, PP's set of records has been accepted in line with paragraph 33 of the sampling standard, version 09 /B04/. Validation and Verification team has cross verified these sample documents.

The monitoring parameters to be monitored through the sampling plan are:

1.Number of project devices operating during year y (Ny,j,j)

2.Adjustment to account for any continued use of pre-project devices during the year y (μy)

3. Pot skirt usage rate (factor accounting the skirt usage during the ICS usage)

4. Loss of efficiency as per para 37 (c) of AMS.II.G. v13, water boiling test

As per the applied methodology VMR0006 version 01.2 section 9.2 /B02/. The necessary confidence / precision of 95/10 each of the parameters are met. This has been cross verified by the verification team from the supporting documents submitted/13/.

On site assessment of Monitoring parameters (namely μ_y and $N_{,y,i,j}$) was conducted based on following two methods:

- Confirmation with the household/end user whether or not the PP has performed monitoring/measurement campaign (or parameter μ_y) and survey on stove operation (for the parameter $N_{,y,i,j}$).
- Assessment of Competence of personnel involved in conducting standardized tests viz., μ_y and surveys: Verification team has reviewed the abilities, qualifications and recognition of involved personnel and institutions of the measuring team involved in the μ_y. The verification team based on the onsite inspection interviews confirms that the team was qualified to carry out the μ_y in line

with the methodology.

During the onsite interviews with PP's representative, VVB was able to understand the process in line with the methodology VMR 0006 version 1.2/B02/ and the PP monitoring procedure in line with the VCS Joint PD & MR /01/.

The monitoring surveys were conducted from 15-November-2023 to 27-November-2023 for the current monitoring period (23-February-2023 to 31-December-2023.No discrepancy was found in the data/information flow. As per the section 2.3 above the end users were not interviewed in a single day. Hence, the survey process deemed acceptable to the verification team. Furthermore, the database /10/ and sample sales invoice /16/ was also checked/cross verified to confirm the number cookstove for the parameter N,y,i,j.

As per paragraph 25 of the Sampling Standard, version 09 /B04/, the verification team has to verify whether the project participants entity have implemented the sampling and surveys according to the sampling plan in the registered monitoring plan. The verification includes determining:

(a) Whether the required confidence/precision has been met

(b) Whether the selected sample was representative of the population.

As per the applied methodology VMR0006 version 01.2 section 9.2 /B01/. The necessary confidence / precision of 95/10 each of the parameters are met. This has been cross verified by the verification team from the supporting documents submitted/12/.

Emission reductions have been calculated in accordance with the applied methodology VMR0006 version 1.2 /B02/. The PP has used monitored data and ex-ante fixed data including default values as mandated/permitted by the applied methodology. The values used for calculation of GHG emission reductions have been thoroughly checked by the verification team and was found appropriate and correct. The Parameters Determined ex-ante is listed in section 6.1 of this Joint validation and verification report.

The spread sheet submitted by the PP clearly and transparently mentions values of the data parameters used for calculation of emission reductions. The input values have been verified from the reliable and authentic sources including monitoring records (distribution records) /10/, VCS Joint PD & MR /01/, and applied methodology /B01/. The emission reductions calculated were compared with the emission reduction spread sheet /02/ and found to be correct. No significant reporting risks have been identified for the data reported.

For future verifications, simple random sampling or stratified random sampling will be employed by the PP based on relevant strata, such as stove vintage and model. The` sampling approach is independent of investment groups, focusing solely on stove models and vintages in accordance with the established methodology. While investment groups are considered for internal purposes to meet investor expectations, the PP may opt to incorporate investment groups in future sampling for verifications. However, such considerations will remain non-binding.

VVB confirms that all parameters are used correctly in the calculations, all results are verifiable and transparent, all assumptions are described and based on verifiable evidence and calculations are done in accordance with the pre-defined formulae from registered VCS Joint PD & MR /01/. The average annual and total GHG emission reduction expected from the grouped project is expected to be 780,560 tCO_2e and 6,244,483 tCO_2e, respectively, over the first 7-year crediting period.

VVB has checked and confirmed the calculations in the spreadsheet and found to be accurate. The monitoring report is supported by an emission reduction spreadsheet. The consistency and formula were verified and found to be accurate.

4.3 Quality of Evidence to Determine Reductions and Removals

When verifying the report emission reduction, CCIPL ensured that there was a clear audit trail that contained the evidence and records that validate the stated figures. All source documents that form the basis for assumptions and other information underlying the GHG data are shown above.

When assessing the audit trails, CCIPL also examined:

1.Whether sufficient evidence was available, both in terms of frequency and in covering the full monitoring period

2.The source and nature of the evidence

3.If comparable information was available from sources other than that used in the monitoring report, CCIPL cross-checked the monitoring report against the other sources to confirm that the stated figures were correct. The sources and the data referenced are shown in Appendix 1 below.

CCIPL also assessed that the data collection system met the requirements of the monitoring plan as per the applied methodology.

Proper data management inclusive of data acquisition and aggregation, data management system is being followed for the project activity.

The monitoring personnel at site are well trained and follow reproducible routines. Thus, they are competent to carry out the relevant tasks with sufficient accuracy.

5 VALIDATION AND VERIFICATION OPINION

5.1 Validation and Verification Summary

The Project Participant, DelAgua Health The Gambia (Voluntary) Ltd, has commissioned the VVB, Carbon Check (India) Private Ltd. to perform a Joint validation and verification of the VCS Project Activity "DelAgua Clean Cooking Grouped Project in the Gambia". This report summarizes the findings of the validation and verification of the project, performed on the basis of VCS criteria, as well as criteria given to provide for consistent project operations, monitoring, and reporting.

The validation and verification process were performed on the basis of all guidance and criteria as provided in VCS Standard version 4.5 /B01/, VCS Program Guide version 4.4 /B01/, VCS Validation and Verification Manual version 3.2/B01/ and Registration & Issuance Process version 4.4/B01/.

The project activity provides the information in Joint PD & MR /01/ as required by the VCS Standard/B01/ and Validation and Verification Manual /B01/ and in Carbon Check's opinion meets the requirements of the applied baseline and monitoring methodology, VMR0006 version 1.2 /B02/and is likely to achieve the estimated emission reductions. The joint validation and verification have been performed using a risk-based approach, as described above. The average annual and total GHG emission reduction expected from the grouped project is expected to be 780,560 tCO_2e and 6,244,483 tCO_2e , respectively, over the first 7-year crediting period.

5.2 Validation Conclusion

Carbon Check (India) Private Ltd concludes the validation with a positive opinion that the VCS Project Activity "DelAgua Clean Cooking Grouped Project in The Gambia", as described in the VCS Joint PD & MR (version 10, dated 19-September-2024) /01/, meets all the applicable VCS requirements, including those specified in the Project Standard, relevant methodology, tools and guidelines.

CCIPL's validation opinion is purely based on the information made available to us by the project proponent during validation and hence CCIPL cannot guarantee the accuracy or correctness of the information. Keeping this in mind, no party can hold CCIPL liable for any decisions made or not made in this report.

The selected baseline and monitoring methodology (VMR0006, Version 1.2) is applicable to the project and correctly applied.

Crediting Period: 23-February-2023 to 22-February-2030

Validated estimated GHG emission reductions and carbon dioxide removals for the project crediting period:

Vintage period	Estimated baseline emissions (tCO_2e)	Estimated project emissions (tCO_2e)	Estimated leakage emissions (tCO_2e)	Estimated reduction VCUs (tCO_2e)	Estimated removal VCUs (tCO_2e)	Estimated total VCUs (tCO_2e)

23-Feb-2023 to 31-Dec-2023	-	-	-	358,389	-	358,389
01-Jan-2024 to 31-Dec-2024	-	-	-	820,037	-	820,037
01-Jan-2025 to 31-Dec-2025	-	-	-	1,045,571	-	1,045,571
01-Jan-2026 to 31-Dec-2026	-	-	-	1,033,939	-	1,033,939
01-Jan-2027 to 31-Dec-2027	-	-	-	978,671	-	978,671
01-Jan-2028 to 31-Dec-2028	-	-	-	969,008	-	969,008
01-Jan-2029 to 31-Dec-2029	-	-	-	912,114	-	912,114
01-Jan-2030 to 22-Feb-2030	-	-	-	126,754	-	126,754
Total	-	-	-	6,244,483		6,244,483

5.3 Verification conclusion

Carbon Check (India) Private Ltd concludes the verification with a positive opinion that the VCS Project Activity "DelAgua Clean Cooking Grouped Project in The Gambia", as described in the VCS Joint PD & MR (version 10, dated 19-September-2024) /01/, meets all the applicable VCS requirements, including those specified in the Project Standard, relevant methodology, tools, and guidelines.

The selected baseline and monitoring methodology, VMR0006, Version 1.2/B02-a/ is applicable to the project and correctly applied. Carbon Check (India) Private Ltd therefore requests the registration of the project as a VCS project activity.

The VVB confirms that the project has been implemented in accordance with the Joint PD & MR/01/.

Verification Period: 23-February-2023 to 31-December-2023

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

:

Vintage period	Baseline emissions (tCO_2e)	Project emissions (tCO_2e)	Leakage emissions (tCO_2e)	Reduction VCUs (tCO_2e)	Removal VCUs (tCO_2e)	Total VCUs (tCO_2e)
23-Feb-2023 to 31-Dec-2023	-	-	-	167,575	-	167,575
Total	-	-	-	167,575	-	167,575

The verification team is of the opinion that the project has been implemented in accordance with the joint PD & MR. The monitoring complies with the MP and the monitored data and calculation of ERs are assessed and confirmed as correct.

Therefore, CCIPL hereby certifies, and requests the issuance of, the reported ERs during the monitoring period of 23-February-2023 to 31-December-2023 amounting to 167,575 tCO_2e to the VCS Registry.

5.4 Ex-ante vs Ex-post ERR Comparison

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Vintage period	Ex-ante estimated reductions/ removals	Achieved reductions/ removals	Percent difference	Explanation for the difference

23-Feb-2023 to 31-Dec-2023	358,389	167,575	-53.24%	The current monitoring period's decrease in emission reduction is primarily due to the distribution of ICS in phases and the lower average operational age of ICS compared to the appropriate number of days.
Total	**358,389**	**167,575**	**-53.24%**	The current monitoring period's decrease in emission reduction is primarily due to the distribution of ICS in phases and the lower average operational age of ICS compared to the appropriate number of days.

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

N/A

APPENDIX 2: REFERENCE DOCUMENTS

Ref	Document
/01/	Joint Project Description and Monitoring Report titled: DelAgua Clean Cooking Grouped Project in The Gambia (version 10; dated: 19-September-2024)
/02/	ER calculation spreadsheets ERS TG V.5
/03/	Ex ante estimations sheets • ERS TG-4000 V5_PC_OMcheck2 • fNRB The Gambia_DelAgua_calculation sheet_27 Jan 2023_CDM Tool30 v4.0 • Gambia_KPT
/04/	Evidence for the start date of the project (commissioning certificate)
/05/	Technical specifications
/06/	Self-Declaration - proj ID 4000 - jsb signed - 06.06.2023
/07/	Monitoring survey questionnaire template
/08/	Survey records for the monitoring period
/09/	Calibration records for the monitoring equipment used during the monitoring period
/10/	Database for the ICS distributed and sales records for the monitoring period
/11/	Evidence for unique identification of each of the ICS
/12/	• fNRB The Gambia_DelAgua_report_27 Jan 2023_CDM Tool30 v4.0 • fNRB The Gambia_DelAgua_calculation sheet_27 Jan 2023_CDM Tool30 v4.0 • Kuni_WBT with pot skirt_CREEC, May 2021 • Kuni_WBT without pot skirt_CREEC Report June 2020 • Kuniokoa G2 Product Fact Sheet_070721
/13/	Sample size and precision level achieved calculator for the monitoring period
/14/	Training records
/15/	Evidence for the random sample selection for the parameters opted for monitoring survey
/16/	Sample sales records/warranty cards for the stove
/17/	End user consent/Carbon Credit waiver
/18/	TG Grievance Registry - Updated June 2023
/19/	Joint Validation and verification contract in between CCIPL and “DelAgua”.
/20/	Monitoring Survey -- Random Sample Generation Screenshot (1)
/21/	4000 TG 1st stove distributed photos
/22/	LSC Advert - TG
/23/	Man, Specs Kuniokoa Gen 2
/24/	HR Policy
/25/	Onsite Visit
/26/	KML Files
/27/	FAOLEX Database
/28/	Global Data Lab (https://shorturl.at/lO589)
/29/	VERRA Registry
/30/	Third Party Lab test report for ICS

/31/	Baseline survey reports

APPENDIX 3: BACKGROUND DOCUMENTS

Ref	Document
/B01/	VCS Requirements a. VCS Standard (v4.5, dated 29-August-2023), b. VCS Program Guide (v4.4, dated 29-August-2023), c. VCS Validation and Verification Manual version (v3.2, dated 19/10/2016) d. Registration & Issuance Process (v4.3, dated 21/12/2022) e. VCS Program Definitions version (v4.4, dated 29-August-2023), VCS MR template version 4.3
/B02/	Applied baseline and monitoring methodology a. VMR0006. version 1.2, "Methodology for Installation of High Efficiency Firewood Cookstoves" b. AMS-II. G_v13.0
/B03/	Methodological Tool • CDM Tool 30 "Calculation of the fraction of non-renewable biomass" Version 04.0 • CDM Tool 01" Tool for the demonstration and assessment of additionality" version 7.0.0 • CDM TOOL 33: Default values for common parameters, V2.0
/B04/	a. "Standard for sampling and surveys for CDM project activities and programme of activities" (version 09.0) b. Guidelines for sampling and surveys for CDM project activities and Programme of Activities (version 04)
/B05/	Website and links: 1. IPCC (http://www.ipcc-nggip.iges.or.jp) 2. http://cdm.unfccc.int 3. http://www.v-c-s.org

APPENDIX 4: ABBRIEVIATIONS

CDM	Clean Development Mechanism
BE	Baseline Emission
CAR	Corrective Action Request
CCIPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CL	Clarification Request
CO_2	Carbon Dioxide
CO_{2e}	Carbon Dioxide Equivalent
DPR	Detailed project report
DVR	Draft Validation Report
EB	CDM Executive Board
EF	Emission Factor
ER	Emission Reduction
FAR	Forward Action Request
FVR	Final validation Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
IPCC	Intergovernmental Panel on Climate Change
MW	Mega Watt
MWh	Mega Watt Hour
NA	Not Applicable
OSV	On Site Visit
PD	Project Description
PP	Project Proponent
QC/QA	Quality control/Quality assurance
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VCSA	Verified Carbon Standard Association
VCU	Verified Carbon Unit
VVB	Validation Verification Body
VVM	Validation and Verification Manual
VVS	Validation and Verification Standard

APPENDIX 5: FINDINGS LOG

Table 1 CLs from this verification

CL ID	01	Section no.	5.4	Date: 06/12/2023
Description of CL				
1. In the section 5.4 of the Joint PD_MR, In page 43, the value of $N_{o,l,j}$ is taken as 100,000,but in the calculation part of the Ery, the value used for the calculation is 125,000. PP is requested to clarify the same. 2. In Section 5.4, the calculated value of $\mathbf{B_{y,\ Savings,i,j}}$ is 4.613. However, it is not consistent with Section 7.5 and the ER sheet, in which the value given is 3.29. PP is requested to clarify the same. 3. In section 5.4 of the Joint PD_MR, for the parameter "$\eta_{new,l,j}$", only the value for the Kuniokoa is provided. PP is requested to clarify why the value for the S-32x model is not provided. In addition, for the calculation of "$B_{y,\ savings,i,j,}$ **",**only Kuniokoa model is considered. PP is requested to clarify why they S-32 X model is not considered for the calculation of the same.				
Project participant response				**Date: 18/01/2023**
1. The PP has made the value of $N_{o,l,j}$ consistent in PDMR and ER sheet. The total ICS to be distributed under the GP is 200,000 and the same has been mentioned in PDMR and ER Sheet. 2. PP has updated section 5.4 and section 7.5 of the PDMR. Under section 5.4, PP has just added on sample calculation based on 3rd year of crediting period. However, under section 7.5, ex-post calculations have been added based on actual monitoring results from the field. **3.** PP has clarified now under section 5.4 that only a sample calculation has been added which is based on 3rd year of crediting and for Burn Kuniokoa stove. It is also mentioned at the end that detailed ER calculation can been seen in the ER calculation sheet which has details of both the models				
Documentation provided by project participant				
Revised PDMR and ER Sheet				
VVB assessment				**Date: 20/02/2023**
1.PP has revised the PDMR, and the details provided by the PP are found appropriate. Hence this part of CL is closed. 2.The clarification provided by the PP are found appropriate. Hence this part of CL is closed. 3.The justification provided by the PP are found appropriate. Hence this part of the CL is closed. The details provided by the PP are found appropriate. Therefore, the VVB has accepted the same. Hence CL 01 is closed.				

CL ID	02	Section no.	6.2	Date: 06/12/2023
Description of CL				

PP is requested to provide clarification for the following:

2)

1. The monitored parameter in the excel sheet for "Number of project devices of type i and batch j operating during year y" not consistent with parameter given in the section 6.2 of the JD_MR and as per the methodology. The parameter "$\mathbf{N_{y,i,j}}$" is supposed to be the Proportion of commissioned project devices of type i and batch j ($N_{0,i,j}$) that remain operating in year y (fraction) as per the methodology.
2. In the section 6.2 of the Joint PD_MR The description provided in the ER sheet for the parameter "$N_{y,i,j}$" is not consistent with the Joint PD-MR and applied methodology. Further the value is not provided in the parameters in the ER sheet.
3. In section 6.2 of the Joint PD_MR, the value applied for the parameter "$\eta_{new,i,j}$ " , efficiency of the project stove without skirting of Kuniokoa Generation 2 is not consistent with the values provided in the ER sheet.
4. The description and value provided for the measurement methods and procedures applied for the parameter "μ_y" is not consistent with the applied methodology AMS-II. G_v13.0.

Project participant response	**Date: 19/01/2023**

1. PP has corrected the notations, description and value of the parameters under section 6 to make it in line with methodology v1.2 and ER sheet.
2. Same as above.
3. PP has rectified the efficiency values of the project stoves without skirting in Section 6.2 of the Joint PD-MR.
4. The description and value have been made considering with the applied methodology AMS II G v13.

Documentation provided by project participant

Revised PDMR and ER Sheet

VVB assessment	**Date: 21/02/2024**

1.PP has revised the relevant sections and excel sheet. Hence this part of CL is closed.

2.PP has revised the excel sheet and the value is now provided in the excel sheet. Hence this part of the CL is closed.

3.PP has not specified the models considered the value applied for the parameter "$\eta_{new,i,j}$ " in the ER sheet. PP is requested to specify the values pertaining to each model.

4.PP has revised the description and values as per the methodology and made consistent. Hence this part of CL is closed. The project requires clarification on the corresponding section. Hence CL 02 is open.
Project participant response **Date: 28/02/2024**
PP has revised the PDMR to include only 1 indicative model i.e. Burn Kuniokoa. Other models may be included in the GP as long as they meet the applicability conditions of the applied methodology.
VVB assessment **Date: 21/02/2024**
The justification provided by the PP is found acceptable. Hence CL 02 is closed.

CL ID	**03**	**Section no.**	**1.12/ /5.4**	**Date: 22/02/2024**
Description of CL				
1) The entire ICS distribution dates in the "ER calculation sheet" of the ER sheet during the monitoring period were limited to October and the emission reduction is calculated during the period 23-February-2023 to 31-December 2023.PP is requested to clarify why the emission reduction till 31st December is not considered. Further PP is requested to confirm whether any distribution was made after October 2023 when the monitoring period was in effect. 2) PP is requested to clarify why the emission reduction calculation didn't consider different efficiencies as there are two cookstoves of different efficiency which has been distributed under the grouped project activity.				
Project participant response **Date: 28-02-2024**				
1. There were no ICSs distributed between Oct-23 to Dec-23 hence, the last ICS added to the ER calculation sheet is from Oct'23. **2.** PP has revised the PDMR to include on one indicative model i.e. Burn Kuniokoa. Other models may be included in the GP as long as they meet the applicability conditions of the applied methodology.				
Documentation provided by project participant				
Revised PDMR				
VVB assessment **Date: 15/03/2024**				
1.The justification provided by the PP is acceptable. Hence this part of CL is closed. 2.PP has revised the PDMR. The justification provided by the PP are found acceptable.				

CL 03 is closed.

CL ID	04	Section no.	1.12/ /5.4	Date:15/03/2024
Description of CL				
During the review of the ICS Distribution database, VVB has observed that there are many same names which are repeating. For example, in the village Allunhareh of District Fulladu East, Upper River **region, there are many such** cases. Kindly we request you to clarify how each ICS will be traced back uniquely to its end users to prevent double counting.				
Project participant response				**Date: 19/03/2024**
Considering the data privacy laws we cannot share personal information for entire database. However, we have shared phone number and national IDs for a few household to prove that these are not the same households. Please find attached the excel where you can check that the phone number are different for the households with same name and village. We have also provided national IDs for couple of them for your reference.				
Documentation provided by project participant				
VVB assessment				**Date: 19/03/2024**
The justification provided by the PP is found appropriate. Hence CL 04 is closed.				

Table 2 CARs from this verification

CAR ID	01	Section no.	1.1/1.2/1.12/1.4	Date: 06/12/2023
Description of CAR				
1. The latest version of the Joint PD-MR template is available on the VERRA site. PP is requested to use the latest version of the template. 2. PP is requested to provide the details of the new project instances added to the project activity and along with the timelines.				

3. As per section 1.2 of the VCS Joint Project Description and Monitoring Template, V4.3, PP is requested to include the audit history of the project.
4. As per section 1.4 of the VCS Joint PD_MR, PP is requested to "Demonstrate that the applied methodology is eligible under the VCS Program. Where applying a methodology with scale and/or capacity limits demonstrates that the project is not a fragmented part of a larger project or activity that would otherwise exceed such limits. If applicable, demonstrate that no single cluster of project activity instances exceeds the capacity limit".

Project participant response	**Date: 19/01/2023**

1. PP has revised the Joint PD-MR basis latest applicable template. The version available currently on the VERRA platform is not mandatory to be used prior to 1st March 2024.
2. PP has treated 1 ICS distributed under this project as 1 project instance. Section 1.1 of the Joint PDMR talks about PP's plan for distributing ICS over the current crediting period. The same section also highlights number of ICS distributed as of the end of current monitoring period 31-12-2023.
3. PP has included audit history in Section 1.1 of the Joint PD-MR. PP has continued to use template V4.2, since the effective date of template V4.3 is in future i.e. 1 March 2024
4. Para 3.1.8 of VCS Standard v4.5 states "*Where projects apply methodologies from approved GHG programs, they shall conform with any specified capacity limits (see the VCS Program document VCS Program Definitions for the definition of capacity limit) and any other relevant requirements set out with respect to the application of the methodology and/or tools referenced by the methodology under those programs*."
   3) However, in this project, the applied methodology is VMR0006 v1.2 which prescribes no such capacity limit and hence no assessment has been included in Section 1.4 of the Joint PD-MR.

Documentation provided by project participant

Revised PDMR

VVB assessment	**Date: 21/02/2024**

1.PP has now revised to latest version of the Joint PD_MR template V4.3. Hence this part of CAR is closed.

2.The justification provided by the PP are found acceptable. Hence this part of CAR is closed.

3.The details provided by the pp are found appropriate. Hence this part of the CAR is closed.

4.The justification provided by the PP are fund acceptable. Hence this part of the CAR is closed.

The details provided by the PP are found appropriate. Therefore, the project verification team has accepted the same. Hence CAR 01 is closed.

CAR ID	02	Section no.	1.13/1.16	Date: 06/12/2023
Description of CAR				
1. PP is requested to provide location of the project in accordance with section 3.11 of the VCS standard, V4.5 2. In accordance with the requirements of section 3.24 the VCS Standard, v4.5, Demonstrate that the impacted good or service's producer(s) or retailer(s) have been notified of the project and the potential risk of Scope 3 emissions double claiming via email. This shall include stove manufacturers and end users.				
Project participant response				**Date: 20/02/2024**
1. PP has included the location as per VCS Standard 4.5 2. As per VCS standard 4.5, Scope 3 is applicable from 1st March 2024. Considering the monitoring period is from 23-Feb-2023 to 31-Dec-2023, this is not applicable for the current MP.				
Documentation provided by project participant				
Revised PDMR				
VVB assessment				**Date: 21/02/2024**
1.PP has now included the location as per VCS Standard 4.5. 2.The justification provided by the PP are found acceptable. The details and justification provided by the PP are found appropriate and acceptable. Therefore, the VVB has accepted the same. Hence CAR 02 is closed.				

CAR ID	03	Section no.	6.1	Date: 06/12/2023
Description of CAR				
The Parameter "u_d " is not provided which is available at the time of validation as per the methodology. PP is requested to provide the same. Further the parameter given for the description “Uncertainty deduction for fNRB” in ER sheet is incorrect. PP is requested to provide the parameter both in Joint PD_MR and in ER sheet with respect to the applied methodology.				

Project participant response	Date: 18/01/2023
The PP has now added “ud” i.e. Uncertainty deduction for fNRB in relevant sections of Joint PD-MR and in the ER sheet	
Documentation provided by project participant	
Revised ER Sheet and PDMR	
VVB assessment	**Date: 21/02/2023**
PP has now revised the Joint PD_MR and in ER sheet. The details provided by the PP are found appropriate. Therefore, the VVB has accepted the same. Hence CAR 03 is closed.	

CAR ID	04	Section no.	7.1	Date: 06/12/2023
Description of CAR				
In Section 7.1 of the Joint PD_MR and in the ER, the description provided for the data/parameter "$N_{y,\,i,\,j}$” is not consistent with the applied methodology. PP is requested to provide a description for the respective parameter as per the methodology.				
Project participant response				**Date: 18/01/2023**
The PP has brought the description of the concerned parameter in line with the applied methodology VMR0006 v1.2 i.e. No,i,j (Number of project devices of type i and batch j commissioned) in Section 7.1 of the Joint PD-MR.				
Documentation provided by project participant				
Revised PDMR				
VVB assessment				**Date: 21/02/2024**
PP has revised the description in the PD consistent with the methodology. The revised details are found appropriate. CAR 04 is closed.				

CAR ID	05	Section no.	1.4	Date: 06/12/2023
Description of CAR				
Pp is requested to demonstrate how the new PAIs are meeting the eligibility criteria for adding instances.				
Project participant response				**Date: 18/01/2023**

PP has demonstrated how the new PAIs would meet the eligibility criteria of VMR0006 v1.2 in Section 1.4 of the Joint PD-MR.	
Documentation provided by project participant	
Revised PDMR	
VVB assessment	**Date: 22/02/2024**
The applicability conditions are provided as per the older version of the methodology VMR0006,version 1.0.PP is requested to use the latest version of the methodology. The CAR 05 is open.	
Project participant response	**Date: 28/02/2024**
PDMR has been revised to include all the applicability conditions as per VMR0006 v1.2	
Documentation provided by project participant	
Revised PDMR	
VVB assessment	**Date: 22/02/2024**
PP has revised the Joint PDMR and included all the applicability conditions and are found appropriate. Hence CAR 05 is closed.	

CAR ID	**06**	**Section no.**	**1.12**	**Date: 06/12/2023**
Description of CAR				
PP shall submit the evidence for: distribution record with end user location, purchase records, ownership of the project, start date of the project, supportive documents related to technical specifications and the operational lifetime of the ICS of the stove models, monitoring survey, local stakeholder consultation, test certificate (third party) to prove efficiency of the cookstove, end user agreement to confirm the ownership rights of ER, third party supportive for Fnrb values, KPT survey reports, CREEC lab certification reports, supportive evidences for SDGs.				
Project participant response				**Date: 19/01/2023**
PP has shared required evidence in CAR ID 06 to VVB.				
Documentation provided by project participant				
VVB assessment :				**Date:22/02/2023**

PP is requested to provide the following: • Manufacturing specification documents of SSM S32-X Rocket stove, • Database for ICS distribution records • Employment records related to the SDG mentioned in section 8.3. The project requires more details and supportive. Hence CAR 06 is open.	
Project participant response	**Date: 28/02/2024**
PP has removed reference of SSM S32-X from the PDMR ICS database is added to ER sheet "M.P.-1 ER Calculations" Employment records have been provided for SDG8	
VVB assessment	**Date: 03/03/2024**
PP has provided the requested documents. The details provided by the PP is found acceptable. Hence CAR 06 is closed.	

CAR ID	**07**	**Section no.**	**6.1**	**Date: 06/12/2023**
Description of CAR				
It is assessed that, as per the Global Data Hub, the average household size is 8.28 and the total stove distribution quantity is proposed to be 300,000. Considering this, the total population size proposed to distribute the ICS comes out to be 2.48 million, which is 94% of the current population of The Gambia. How does CME expect to cover 94% of the population of the country, considering that there are other entities engaged in the distribution of cookstoves and that over 9% of the population of Gambia already has access to clean fuel and technologies? CME shall update according to a feasible targeted distribution considering the share of other ICS distribution entities working in the region and total access to clean fuels and technology already in place within the project boundary.				
Project participant response				**Date: 19/01/2024**
The planned distribution is over a period of 7 years, and the actual distribution will be based on available beneficiaries to accept the ICS by PP, hence the PP has considered it appropriate to consider the full potential. However, the current distribution schedule accounts to distribute 200,000 stoves across the geography.				
Documentation provided by project participant				
Revised PDMR and ER Sheet				
VVB assessment				**Date: 21/02/2024**
The justification provided by the PP are found appropriate. Therefore, the VVB has accepted the same. Hence CAR 07 is closed.				

APPENDIX 6: CERTIFICATE OF COMPETENCE

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Vijay Mathew

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

for the following functions and requirements:

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

in the following Technical Areas:

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

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

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

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

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

Carbon Check (India) Private Limited

Certificate of Competency

Mr. Hariprasath A L

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

for the following functions and requirements:

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

in the following Technical Areas:

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

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
Dec 2023	Initial Adoption

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

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

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Ms. Indumathi C

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

for the following functions and requirements:

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

in the following Technical Areas:

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

Issue Date

5th December 2023

Expiry Date

31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

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

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

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

Carbon CHECK

Carbon Check (India) Private Limited

Certificate of Competency

Buba Sey

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

for the following functions and requirements:

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

in the following Technical Areas:

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

Issue Date	Expiry Date
1st December 2023	31st December 2024

Priya Suman

Ms. Priya Suman
Compliance Officer

Sanjay Agarwalla

Mr. Sanjay Kumar Agarwalla
Technical Director

Revision History of the document:

Revision date	Summary of changes
May 2023	Initial Adoption
Dec 2023	Template changes to include additional functions and TA

CCIPL_FM 7.9 Certificate of Competency_V4.0_112023

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