



**Verified Carbon  
Standard**

# GROUPED PROJECTS FOR SAFE DRINKING WATER FOR SCHOOLS IN VIET NAM

Document Prepared by (Carbon Check (India) Private Ltd.)



|                      |                                                                  |
|----------------------|------------------------------------------------------------------|
| <b>Project Title</b> | Grouped projects for safe drinking water for schools in Viet Nam |
| <b>Version</b>       | 05                                                               |
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|----------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Report Title</b>  | Grouped projects for safe drinking water for schools in Viet Nam                                                                 |
| <b>Client</b>        | Sustainability Investment Promotion and Development Joint Stock Company                                                          |
| <b>Date of Issue</b> | 13-September-2023                                                                                                                |
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## Summary:

### A brief description of the validation and the project

Validation: Sustainability Investment Promotion and Development Joint Stock Company has appointed Carbon Check (India) Private Ltd., to carry out the validation of the project “Grouped projects for safe drinking water for schools in Viet Nam”, with regards to the relevant requirements of VCS Standard Version 4.4 (dated 17-January-2023)/B01-a/.

Project: The project “Grouped projects for safe drinking water for schools in Viet Nam”, is a grouped project which employs CDM methodology AMS-III.AV. (Version 08.0) /B02-a/. The project involves distribution/construction of SDWPs in Viet Nam. The grouped project activity (hereafter referred to as “proposed project activity”) involves the distribution of low greenhouse gas emitting safe drinking water purifier (SDWP) to provide clean drinking water to the schools and institutions (hereafter “users”) of Viet Nam. For this reason, this proposed project activity aims at reducing the wood fuel consumption of traditional stove users by distributing water purifiers to schools and institutions.

The grouped project activity reduces the use and demand for non-renewable biomass that would have been used to boil water as a means to purify water in the absence of this project activity. This directly leads to reduced greenhouse gas emissions.

**Purpose:** The purpose of a validation is to have a thorough and independent assessment of the proposed project activity against the applicable VCS requirements, in particular, 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.

**Scope:** Validation scope is defined as an independent and objective review of the Project Description (PD). The PD is reviewed against the relevant criteria and guidance documents provided by VCS which include the following: VCS Program Guide (v4.3, dated 17-January-2023), VCS Standard (v4.4, dated 17-January-2023), Program Definitions (v4.3, dated 21-December-2022), Registration & Issuance Process (v4.3, dated 17-January-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 CDM methodology AMS-III.AV. (Version 08.0), also assess the claims and assumptions made in the PD without limitation on the information provided by the project participants.

#### **The method and criteria used for validation**

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. On-site interviews with project stakeholders
  - Interviews with relevant stakeholders in 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. Reference to available information relating to projects or technologies similar to project under validation and review based on the approved methodology being applied for the appropriateness of formulae and accuracy of calculations.

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

#### **The number of findings raised during validation**

During the course of validation, a total of 18 findings were raised, which include:

07 Corrective Action Requests (CARs);

11 Clarification Requests (CLs);

00 Forward Action requests (FARs).

All the raised findings have been successfully resolved by the Project Proponent.

**Any uncertainties associated with the validation**

There are no uncertainties associated with the validation of the project activity. The validation has been done with a reasonable level of assurance.

**Summary of the validation conclusion**

Carbon Check (India) Private Ltd. concludes the validation with a positive opinion that the VCS Grouped Project “Grouped projects for safe drinking water for schools in Viet Nam” as described in the PD (version 08, dated 13-September-2023) /01-f/, meets all applicable VCS requirements, including those specified in the VCS Standard (v4.4, dated 17-January-2023)/B01-a/, relevant methodology, tools, and guidelines.

The selected baseline and monitoring methodology (AMS–III.AV: “Low greenhouse gas-emitting safe drinking water production systems”, version 08.)/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 grouped project, with a reasonable level of assurance.

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# 1 INTRODUCTION

## 1.1 Objective

Sustainability Investment Promotion and Development Joint Stock Company has appointed the VVB, Carbon Check (India) Private Ltd. to perform a validation of the VCS Grouped Project “Grouped projects for safe drinking water for schools in Viet Nam”. This report summarizes the findings of validation of the project, performed based on the VCS Program Guide (v4.3, dated 17-January-2023), VCS Standard (v4.4, dated 17-January-2023), Program Definitions (v4.3, dated 21-December-2022), Registration & Issuance Process (v4.3, dated 17-January-2023), VCS Validation and Verification Manual (v 3.2, dated 19-October-2016). Validation is required for all VCS project activities intending to register a grouped project under the VCS program. This report contains the findings and resolutions from the validation of the grouped project.

The purpose of a validation is to have a thorough and independent assessment of the proposed grouped 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, 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, VCUs.

## 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 validation is carried out based on the following requirements, applicable for this grouped project:

- VCS Program Guide v4.3
- VCS Standard v4.4
- Program Definitions v4.3

- Registration & Issuance Process v4.3
- VCS Validation and Verification Manual v3.2
- CDM methodology AMS-III.AV., Version 08.0
- Other relevant rules, including the host country legislation

### 1.3 Reasonableness of Assumptions

☒ Reasonable level of assurance

☐ 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 five percent, as required by section 4.1.8 of the VCS Standard version 4.4 /B01-a/.

### 1.4 Summary Description of the Project

The project “Grouped projects for safe drinking water for schools in Viet Nam”, is a grouped project which employs the CDM methodology; AMS-III.AV: “Low greenhouse gas-emitting safe drinking water production systems”, version 08 /B02-a/. The grouped project involves distribution of 300,000 safe drinking water purifiers (SDWP)s in Viet Nam. The project activity targets identified 8000 schools and institutions with no previous water purifiers access. In this grouped project, the schools include kindergartens, nurseries, primary schools, secondary schools, high schools. Institutions would cover community home, home for disabled, orphanage, nursing home, mental home. Each instance under the grouped project will disseminate no more than 30,000 water purifiers. The geographical boundary is in Viet Nam. Water purifiers are distributed free of cost to users.

The grouped project activity reduces the use and demand for non-renewable biomass that would have been used to boil water as a means to purify water in the absence of this project activity. This directly leads to reduced greenhouse gas emissions.

As per the VCS PD /01-f/, the Project activity will promote the dissemination of Safe drinking water purifier with tank capacity 23 liters and removal of bacteria is 99.999%. The lifespan of SDWPs is 10 years. Each water purifier shall confirm to the technology standards as per paragraph 4(b) of approved methodology AMS-III.AV Version 08. The outlet quality water shall meet microbes defined in QCVN 6-1:2010/BYT for drinking waters and meet the technology standards as per paragraph 4(b) of approved methodology AMS-III.AV Version 08.0.

As per the VCS PD/01-f/ and interviews with the representative of project proponent, each SDWP under project is uniquely identifiable /10/ and would be assured that it is not part of any other VCS registered project. Each project activity instance is uniquely identifiable /10/ by unique system to avoid the double counting. The measures applied to avoid double counting are deemed

acceptable to the validation team. Project proponent has also submitted declaration /17/ and /18/ to confirm the following:

- That the project is not creating any other form of environmental credit under any specific program.
- That the project has not or shall not claim carbon credits on any other scheme after Registration of the project under VCS.

The project proponent for the project activity is Sustainability Investment Promotion and Development Joint Stock Company, owns the rights to VERs /05/.

The total estimated GHG emission reductions from the grouped project are 4,034,467 tCO<sub>2</sub>e for the ten years fixed crediting period and average of 403,447 tCO<sub>2</sub>e/year. The estimated volume of emission reduction of one instance activity is not more than 60,000 tCO<sub>2</sub> per year.

## 2 VALIDATION PROCESS

### 2.1 Method and Criteria

Sustainability Investment Promotion and Development Joint Stock Company has appointed the VVB, Carbon Check (India) Private Ltd., to carry out the validation of the grouped project “Grouped projects for safe drinking water for schools in Viet Nam”, with regards to the relevant requirements of VCS Standard Version 4.4 (dated 17-January-2023)/B01-a/.

The validation includes a thorough and independent assessment of the proposed grouped project against the applicable VCS requirements, the project's baseline, additionality, monitoring plan and the project's compliance with relevant VCS and host party criteria. The validation involves assessment of the project and to confirm that the project meets the applicability conditions of the selected methodology, AMS-III.AV: “Low greenhouse gas-emitting safe drinking water production systems”, version 08/B02-a/ and assess the claims and assumptions made in the VCS PD /01-f/ without limitation on the information provided by the project participants.

The validation team of the DOE has applied a sampling approach, acceptance sampling for the on-site interviews as part of validation in accordance with the paragraph 26 of the Standard: Sampling and surveys for CDM project activities and programmes of activities, (Version 09.0). In accordance with the paragraph 28 of the sampling standard, acceptance sampling has been chosen by the validation team and accordingly steps listed in paragraph 29 and 39 of the sampling standards shall be followed.

Validation team has opted for AQL of 0.5 % and UQL of 20 %; producer risk of 10 % and consumer risk of 10 % in determining the DOE's sample size. Accordingly, the sample size to be interviewed for the above-mentioned parameters are 11, with acceptance number (c) as 0.

The overall validation was conducted using Carbon Check's internal procedures.

## 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.

This report contains the findings and resolutions from the validation and a validation opinion on the proposed grouped project thus confirming the project design as document is sound and reasonable and meets the stated requirements and identified criteria.

The VCS project description/01-f/, emission reduction calculation spread sheet/02-f/, and supporting documents related to the project design and baseline were reviewed as per VCS standard version 04.4 /B01-a/ requirements. The desk review included:

- A review of the data and information presented to verify completeness and consistency in accordance with VCS standard version 04.4 requirements.
- A review of the project description and monitoring methodology, paying particular attention to the applicability conditions of the methodology and baseline and additionality related requirements.
- A review of the monitoring plan and the project's compliance with relevant VCS criteria.

Furthermore, the validation team used additional documentation by third parties like host-party legislation, technical reports referring to the project design or to the basic conditions and technical data.

The VCS PD version 02 dated 16-August-2022 /01-a/ was initially reviewed and CCIPL requested the PP to present the supporting information and documents. The documents reviewed by CCIPL are listed below in Appendix 1. Through the process of the validation, the revised VCS PD and the supporting documents were evaluated to confirm the actions taken by the PP to the CARs and CLs issued by the validation team.

The table in Appendix 1 outlines the documentation reviewed during the validation.

## 2.3 Interviews

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

**Table 1: List of interviewees**

| S. no | Date | Name | Organization | Topic | Interviewed by |
|-------|------|------|--------------|-------|----------------|
|-------|------|------|--------------|-------|----------------|

|     |                 |                                         |                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                          |
|-----|-----------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| /1/ | 10-October-2022 | Bui Ngoc Bao Van                        | Project coordinator-Sustainability Investment Promotion and Development Joint Stock Company (SIPCO) | <ul style="list-style-type: none"> <li>• Project Design</li> <li>• Project Implementation status</li> <li>• Project start date and Project Location</li> <li>• Baseline Scenario</li> <li>• Baseline Identification and Additionality</li> <li>• Qualification and Training</li> <li>• Monitoring and reporting documentation</li> <li>• Quality Assurance – Management and operating system</li> <li>• Social and Environmental Impacts</li> <li>• Local Stakeholders meeting process</li> <li>• Compliance with relevant laws</li> <li>• Roles and responsibility</li> </ul> | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /2/ | 09-October-2022 | Ban Phung secondary day-boarding school | End User (Vice principle)                                                                           | Discuss on the baseline scenario and the additionality (specifically on the cost of the project device) if any.                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /3/ | 09-October-2022 | Ban Phung primary day-boarding school   | End User (Vice principle)                                                                           | Discuss on the baseline scenario and the additionality (specifically on the cost of the project device) if any.                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /4/ | 09-October-2022 | Nan-Xin secondary day-boarding school   | End User                                                                                            | Discuss on the baseline scenario and the additionality (specifically on the cost of the project device) if any.                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /5/ | 09-October-2022 | Nan-Xin primary day-boarding school     | End User                                                                                            | Discuss on the baseline scenario and the additionality (specifically on the cost of the project device) if any.                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Pallavi Gedam and Nguyen Hong Ngoc Trang |

|      |                 |                                                      |                                      |                                                                                                                   |                                          |
|------|-----------------|------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| /6/  | 09-October-2022 | Xin Man boarding school                              | End User<br>(Vice principle)         | Discuss on the baseline scenario and the additionality (specifically on the cost of the project device) if any.   | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /7/  | 09-October-2022 | Coc Dan secondary day-boarding school                | End User                             | Discuss on the baseline scenario and the additionality (specifically on the cost of the project device) if any.   | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /8/  | 10-October-2022 | Ngan Son boarding school                             | End User                             | Discuss on the baseline scenario and the additionality (specifically on the cost of the project device) if any.   | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /09/ | 10-October-2022 | Hoang Thi Ngan                                       | End User                             | Discuss on the baseline scenario and the additionality (specifically on the cost of the project device) if any.   | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /10/ | 10-October-2022 | Chu Thi Huyeu                                        | End User                             | Discuss on the baseline scenario and the additionality (specifically on the cost of the project device) if any.   | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /11/ | 10-October-2022 | Na Khoang semi-boarding school for ethnic minorities | End User                             | Discuss on the baseline scenario and the additionality (specifically on the cost of the project device) if any.   | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /12/ | 11-October-2022 | Lang Ngam semi-boarding school for ethnic minorities | End User                             | Discuss on the baseline scenario and the additionality (specifically on the cost of the project device) if any.   | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /13/ | 09-October-2022 | Hoang Thi Huong                                      | President of Hoang Su Phis district  | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> </ul> Social and Environmental Impacts | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /14/ | 09-October-2022 | Vi Thi Loan                                          | President of Ban Phung's commune VWU | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> </ul> Social and Environmental Impacts | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /15/ | 09-October-2022 | Bui Vau Khuga                                        | Officer of education department      | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> </ul> Social and Environmental Impacts | Pallavi Gedam and Nguyen Hong Ngoc Trang |

|      |                 |                  |                                      |                                                                                                                            |                                          |
|------|-----------------|------------------|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| /16/ | 09-October-2022 | Trieu Thi Lien   | Officer of Hoang Su Phi's district   | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> </ul> Social and Environmental Impacts          | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /17/ | 09-October-2022 | Hoang Tiem Dat   | Officer of Hoang Su Phi's district   | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> </ul> Social and Environmental Impacts          | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /18/ | 09-October-2022 | Nguyen Thi Lam   | Vice president of Xinan province WMU | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> </ul> Social and Environmental Impacts          | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /19/ | 09-October-2022 | Nung Thi Hong    | Officer of Xinan WMU                 | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> </ul> Social and Environmental Impacts          | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /20/ | 09-October-2022 | Lu Thi Ha        | Vice president of Ha Gang WU         | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> </ul> Social and Environmental Impacts          | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /21/ | 09-October-2022 | Hoang Ngoc Bich  | Social and economic department       | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> </ul> Social and Environmental Impacts          | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /22/ | 10-October-2022 | Xong Thi Heu     | Leader of Coc Dan Commune VWU        | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> <li>Social and Environmental Impacts</li> </ul> | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /23/ | 10-October-2022 | Hua Thi Dep      | Officer of Bac Kan province VWU      | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> <li>Social and Environmental Impacts</li> </ul> | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /24/ | 10-October-2022 | Tran Thi Hue     | President of Ngon Son district VWU   | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> <li>Social and Environmental Impacts</li> </ul> | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /25/ | 10-October-2022 | Bui Ngoc Bao Van | Project coordinator of SIPCO         | <ul style="list-style-type: none"> <li>Local Stakeholder Consultation</li> </ul>                                           | Pallavi Gedam and Nguyen Hong Ngoc Trang |

|      |                 |                 |                                                                       | • Social and Environmental Impacts                                                                             |                                          |
|------|-----------------|-----------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|------------------------------------------|
| /26/ | 11-October-2022 | Chu Minh Toan   | Principle (Ngan Son Boarding school)                                  | Discuss on the baseline scenario and the additionality (specifically on the cost of the project stove) if any. | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /27/ | 11-October-2022 | Dam Van Tugen   | Principle (NG Khoang semi-boarding school for ethnic minorities)      | Discuss on the baseline scenario and the additionality (specifically on the cost of the project stove) if any. | Pallavi Gedam and Nguyen Hong Ngoc Trang |
| /28/ | 11-October-2022 | Noag Van Ngugen | Vice principle (NG Khoang semi-boarding school for ethnic minorities) | Discuss on the baseline scenario and the additionality (specifically on the cost of the project stove) if any. | Pallavi Gedam and Nguyen Hong Ngoc Trang |

## 2.4 Site Visits

As discussed in the above section 2.3, an on-site visit was undertaken by the validation team from 09-October-2022 to 11-October-2022 to carry out the following; -

- An assessment of the project design and technical specification, project location, project boundary, additionality, baseline scenario, baseline methodology, GHG emissions quantification and implementation status and operation of the project activity as per the PD.
- A review of information flows for generating, aggregating, and reporting the monitoring parameters and monitoring methodology.
- Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PD;
- The assessment team has verified sufficient appropriate audit evidence, to reduce audit risk to an acceptably low level as requisite to achieve reasonable level of assurance for the current validation.

In line with paragraph 26 of the Sampling Standard, the verification team has applied acceptance sampling approach through on-site interviews on the sampling survey as part of validation. The project participant had applied sampling approach. A representative baseline survey /07/ was conducted by the representatives of Project participant. The validation team has chosen acceptance sampling in accordance with paragraph 28 of the sampling standard /B04/.

Applying paragraph 39 of the sampling standard, version 09 /B04/, a sample size of 11 SDWPs (with no discrepant records) was determined, based on an AQL of 0.5% and UQL of 20%, producer risk 10% and consumer risk 10%. Acceptance number thus determined for the sample is 0.

Accordingly, the VVB has interviewed 11 SWDP end users which include schools and institutions in Viet Nam. Key project details regarding the baseline scenario and additionality of the project, specifically cost of the project device, if any were verified. Details of the schools and institutions interviewed during the on-site inspection are stated in section 2.3 of the report along with key topics discussed. The information provided in the sampling survey data /07/, has been cross checked during the on-site interviews conducted. As a part of acceptance sampling, the validation team could confirm the sampling survey data with no discrepant records. Thus, PP's set of records has been accepted in line with § 33 of the sampling standard, version 09 /B04/.

The validation team carried out on-site interviews with representatives of PP in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for the VCS.

## 2.5 Resolution of Findings

This section summarizes the findings from the validation of the project activity. In this section the findings from the document review, assessments and on-site interviews are provided.

Material discrepancies identified in the course of the validation are addressed either as CARs, CLs or FARs.

**Corrective action requests (CAR)** are issued, where:

- i. mistakes have been made with a direct influence on project results requiring adjustments of the VERs/VCUs monitoring report;
- ii. applicable methodological specific requirements have not been met.

A **Clarification request (CL)** may be used where additional information is needed to fully clarify an issue or where the information is not transparent enough to establish whether a requirement is met.

A total 07 CAR, and 11 CLs had been raised. Please refer to Appendix 4 below for the details of the CARs/CLs and their closure.

### 2.5.1 Forward Action Requests

Forward Action Request (FAR) is to be raised when the monitoring and reporting require attention and/or adjustment for the next verification period.

CC IPL has not raised any FAR during this validation.

## 3 VALIDATION FINDINGS

### 3.1 Project Details

The project “Grouped projects for safe drinking water for schools in Viet Nam”, is a grouped project which employs baseline and monitoring methodology; AMS–III.AV: “Low greenhouse gas-emitting safe drinking water production systems”, version 08/B02-a/. To achieve the targeted volume of emission reductions, the project proponent aims to disseminate 300,000 SDWP in Viet Nam this grouped project. The project results in reducing the amount of non-renewable biomass used for boiling water. Through reduction in nonrenewable biomass consumption, the programme will decrease greenhouse gas emissions. By reducing the consumption of wood fuel, it can contribute to improving public health problems. Section 1.1. of the VCS PD contains a clear summary description of the projects. The completeness and accuracy of the project description was validated through on-site interviews.

The project proponent is Sustainability Investment Promotion and Development Joint Stock Company which will be holding the carbon credits generated from the project activity/05//12/.

The start date for the grouped project is 04-July-2022. /03/ which is the date of installation of first water purifier under this project activity-

The crediting period starts on 04-July-2022/03/ which coincides with the starting date of the project activity, and lasts for 10 years, fixed. This is in accordance with paragraph 3.9.1 of the VCS standard version 4.4/B01-a/ for non-AFOLU projects.

The indication of the project activity location and the geographic boundaries is provided in section 1.12. of the VCS PD. They are in accordance with paragraph 3.12.1 of the VCS Standard and can confirm that the project activity boundary is uniquely defined. The grouped project location and geographic boundaries of the project are those of Viet Nam. This is in accordance with paragraph 3.6.10 of the VCS standard version 4.4/B01-a/, which requires grouped projects to have one or more clearly defined geographic areas within which new project activity instances may be developed.

The VCS PD clearly indicates the project scope, which is scope 3: Energy demand, and more specifically demand-side energy efficiency project. The project is a grouped project, this is indicated in section 1.2. of the VCS PD/01-f/.

The proposed grouped 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 it is located in a jurisdiction or sector with binding limits. The project proponent intends to claim carbon credits under the VCS programme only for the emission reductions achieved. The PP states in the VCS PD 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 Viet Nam under the Kyoto protocol, as indicated in the UNFCCC website /B04/.

The project proponent has declared that the project is not registered under any other GHG program. The validation team has checked the UNFCCC database of registered projects or projects under validation and was able to confirm that the listed projects are not the proposed project activity

The proposed project activity instances do not generate another form of environmental credit. The project proponent indicates in the VCS PD that the project does not intend to generate any other form of GHG related environmental credit other than those claimed under this VCS project.

SDWP reduces non-renewable consumption and emissions savings but also has many other benefits for the schools and institutions. It contributes to sustainable development in Viet Nam through:

- Project can contribute to improving public health problems. Increase in disposable income due to reduced spending on fuels.
- It helps stimulate economic empowerment by creating jobs and entrepreneurs in the construction of SDWP.
- Over the long-term, this project activity is anticipated to reduce deforestation and the emission of greenhouse gas caused by using the burning of wood fuel.

Validation team has noted that the PP has calculated the parameters “QPW<sub>pp</sub>, BL<sub>fuel,i</sub>, f<sub>i</sub>, and X<sub>boil</sub>” as provided in section 5.1 of the PD/01-f/ on the basis of the survey of local usage that was conducted for the target consumer group included in this grouped project /07/. To validate the appropriateness of the parameters, the validation team has used the acceptance sampling approach.

In accordance with paragraph 28 of the sampling standard (Version 09), acceptance sampling has been chosen by the validation team and accordingly steps listed in paragraph 29 and 39 of the sampling standards shall be followed.

The Validation team has opted for AQL of 0.5 % and UQL of 20 %; producer risk of 10 % and consumer risk of 10 % in determining the DOE's sample size. Accordingly, the sample size to be interviewed for the above-mentioned parameters are 11, with acceptance number (c) as 0

The validation team has conducted on-site audit and interviewed sample schools and institutions. The validation team inquired for the below mentioned points.

1. School/institute size.
2. If there is any public water supply in area.

3. How many liters of water is consumed by persons in school/institute and from there they get drinking water.
4. What water treatment do they use and if boiling, which device is used for boiling.
5. Type of fuel used and from where they collect/buy fuel.

On the basis of the information provided by school/institute representatives, validation team confirms that the information data shared by the PP matched with the information provided by the representatives.

During the review of PD, validation team observed PP has calculated *fi*, “Factor to determine amount of non-renewable fuels”, which is fixed ex ante. It is confirmed by validation team that the value applied by PP is calculated as per Tool 30 “Calculation of fraction of non-renewable biomass” version 04.0. and is deemed acceptable.

**Table 1: Eligibility criteria of the grouped project activity**

The eligibility criteria have been provided clearly in section 1.4 of the PD /01-f/ and then justification provided for inclusion of project activity instances for the CDM methodology. AMS – III.A.V: “Low greenhouse gas emitting safe drinking water production systems”, version 08.0

| Sl. No. | Eligibility criteria for the inclusion of new project activity instances             | Applicability                                                                                                                                                                                                                          | Assessment by the validation team                                                                                                                                                                                                                                                                                                                                                                               |
|---------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.      | Meet the applicability conditions set out in the methodology applied to the project. | The new project activity instance will meet all applicability conditions of AMS-III.AV: “Low greenhouse gas - emitting safe drinking water production systems”, version 08.0                                                           | The validation team on the basis of documents review, Manufacturer specification/04/ Microbiological test report from an accredited laboratory. /11/ and on-site interview confirms that grouped project met the applicability conditions set out in the methodology applied to the project.<br><br>Thus, the eligibility criteria has been met for the new project activity instances under this group project |
| 2.      | Use the technologies or measures specified in the project description.               | Each instance under this grouped project will consist of the distribution of water purifier to the schools/institutions where use traditional cookstoves are used for boiling water. The water purification technologies include a low | The Validation team, through document review and on-site interviews analyzed that PP will be using only the SDWP with the technology as mentioned in section 1.11 of this PD.<br><br>Thus, the eligibility criteria has been met for the new project activity instances under this group project                                                                                                                |

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|    |                                                                                                       | <p>greenhouse gas emitting technology as per section 1.11 of this project description.</p> <p>Technologies that use fossil fuels are not eligible. Technologies shall meet minimum criteria for specific instance type, as outline below:</p> <p>Technologies shall be deployed Natural Osmosis systems with the components illustrated in section 1.11 of this project description.</p>                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                       |
| 3. | <p>Apply the technologies or measures in the same manner as specified in the project description.</p> | <p>Technologies that use fossil fuels are not eligible. Technologies shall meet minimum criteria for specific instance type, as outline below:</p> <ul style="list-style-type: none"> <li>- Technologies shall be deployed Natural Osmosis systems with the components illustrated in section 1.11 of this PD</li> <li>- Flow rate: 2 – 3l/hr</li> </ul> <p>Other key features of the design of the systems. Type of service, as well as performance specification based on, inter alia testing/certification:</p> <ul style="list-style-type: none"> <li>- Each unit must achieve water quality for microbes defined in QCVN 6-1:2010/BYT for drinking water</li> <li>- Lifespan is 10 years.</li> </ul> | <p>The Validation team, through document review and on-site interviews analyze that PP will be using only SDWP with the technology in the same manner as specified in the project description.</p> <p>Thus, the eligibility criteria has been met for the new project activity instances under this group project</p> |

|    |                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| 4. | Are subject to the baseline scenario determined in the project description for the specified project activity and geographic area.                        | The new project activity instances will be installed in the schools/institutions within Viet Nam only subject to the same baseline scenario determined in section 3.4.                                                                                                                                                                                                                                                                                                                                                                                                       | <p>The Validation team through document review and on-site interviews analyze that the baseline is demonstrated in the section 3.4 of the PD. PP will install SDWP within the project boundary of Vietnam. This has also been mentioned in the PD.</p> <p>Thus, the eligibility criteria has been met for the new project activity instances under this group project</p>                                                                                                                                      |
| 5. | Have characteristics with respect to additionality that are consistent with the initial instances for the specified project activity and geographic area. | <p>he additionality of the project activity is demonstrated by simple cost analysis that is in line with paragraph 10 (a) of Tool 21 “Demonstration of additionality of small-scale project activities” (version 13.1) and paragraph 33 and 34 of TOOL01 “Tool for the demonstration and assessment of additionality”. To demonstrate additionality by Simple cost analysis, each instance shall confirm and demonstrate that the SDWPs are distributed for free to the Users. The water from the SDWPs are free of cost of end users during the operation of the SDWPs.</p> | <p>The Validation team through document review and on-site interviews analyze that PP has demonstrated additionality as per the 10 (a) of Tool21 “Demonstration of additionality of small-scale project activities” (version 13.1) and paragraph 33 and 34 of TOOL01 “Tool for the demonstration and assessment of additionality (version 07.0) This has also been mentioned in the PD.</p> <p>Thus, the eligibility criteria has been met for the new project activity instances under this group project</p> |
| 6  | Conditions that avoid double counting of emission reductions.                                                                                             | <p>The new project activity instances will:</p> <ul style="list-style-type: none"> <li>• Apply a unique system (i.e., conformity letter) for SDWP in each project instance, assigning a unique ID to each SDWP and allowing to clearly identify each SDWP and to which project instance it belongs.</li> <li>• Each SDWP installed will include project instance assignment and will have</li> </ul>                                                                                                                                                                         | <p>The validation team based on document review and on-site audit confirms, and the unique system submitted by the PP confirms that Each SDWP in activity is uniquely identifiable and not part of any other VSC registered project.</p> <p>Thus, the eligibility criteria has been met for the new project activity instances under this group project</p>                                                                                                                                                    |

|   |                |                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                        |
|---|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                | <p>corresponding end user details (i.e. name, address). This data will be recorded as part of the beneficiary agreement and Project database.</p> <p>· The CME has an agreement in place with residents who use drinking water from SDWPs in the project instance in which the owner transfers the rights to the emissions reductions exclusively to the CME as part of the Carbon Rights Waiver within the Beneficiary agreement</p> |                                                                                                                                                                                                                                                                                                                                                                                        |
| 7 | Capacity Limit | <p>Each project instance in this grouped project will have a maximum capacity of 60,000 tCO<sub>2e</sub> per year throughout the project instance crediting period.</p>                                                                                                                                                                                                                                                               | <p>On the basis of review of the PD, ER sheet and interview with the PP, validation team confirms that each instance under the grouped project will achieve emission reductions less than 60,000 tCO<sub>2</sub>/year.</p> <p>Thus, the eligibility criteria has been met for the new project activity instances under this group project</p>                                          |
| 8 | Target group   | <p>Each project instance will target schools/institutions where use wood fuel to boil water</p>                                                                                                                                                                                                                                                                                                                                       | <p>The validation team on the basis of review of the beneficiary agreement template to be signed at the time of distribution, interview with the PP and interview with the end-users confirms that the end-users are using traditional cookstove to boil water.</p> <p>Thus, the eligibility criteria has been met for the new project activity instances under this group project</p> |

## 3.2 Safeguards

### 3.2.1 No Net Harm

As identified by PP project has no negative impact. The potential negative environmental and socio-economic impacts identified by the project proponent and have been listed in section 2.1 of the PD.

The validation team confirms that for the project does not pose any potential negative environmental and socio-economic impacts. A local stakeholders meeting was conducted for the project and there was no negative feedback.

### 3.2.2 Local Stakeholder Consultation

The stakeholder consultation meeting was held on 04-July-2022 at Thua Thien Hue Provincial Women's Union Headquarters, Thua Thien Hue Province, Viet Nam

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 2.2 the PD /01-f/. The stakeholder meeting conducted by the PP have been listed in section 2.2 of the PD/01-f/. A summary of the local stakeholder participation has been provided. The local stakeholder consultation meetings with the list of participants have been provided to the validation team/08/.

The validation team confirms the procedure and method for engagement, method for documenting the outcomes of local stakeholders' consultation and account of all inputs received. The validation team confirms that the project proponent has taken due account of all input (no negative comments were received for the project). Hence the validation team deemed the local stakeholders meeting procedure including the inputs received as appropriate.

### 3.2.3 Environmental Impact

As per the need for an EIA, Environmental Impact Assessments in Viet Nam are regulated through, and no environmental impacts have been identified by the project proponent.

### 3.2.4 Public Comments

The public commenting period for the project was from 08-September-2022 to 08-October-2022. No public comments were received for the grouped project.

### 3.2.5 AFOLU-Specific Safeguards

This is a non-AFOLU project, hence this section is not required.

## 3.3 Application of Methodology

### 3.3.1 Title and Reference

The Grouped Project provides for projects that use one of the CDM approved methodology:

- AMS-III.AV. “Low greenhouse gas-emitting safe drinking water production systems”, (version 08)”

The associated tools and guideline documents in the Grouped Project include:

- CDM Guideline “Sampling and surveys of CDM project activities and programmes of activities” version 04.0
- CDM Standard “Sampling and surveys for CDM project activities and programmes of activities” version 09.0
- AMS-I.E. - Switch from non-renewable biomass for thermal applications by the user - Version 13.0
- VMR0006 - Energy Efficiency and Fuel Switch Measures in Thermal Applications, v1.2
- TOOL01 “Tool for the demonstration and assessment of additionality”, version 07.0.
- TOOL 21 - “Demonstration of additionality of small-scale project activities” version 13.1
- TOOL30 - Calculation of the fraction of non-renewable biomass. Version 04.0.

### 3.3.2 Applicability

The project applies CDM methodology; AMS-III.AV: “Low greenhouse gas-emitting safe drinking water production systems”, version 08/B02-a/. Applicability criteria for the baseline line methodology and tools are assessed by the validation team by means of document review and interview. The Validation team confirms that the project activity meets the criteria of the applied methodology.

**Table 02: Applicability of Methodology AMS III.AV. v.08**

| Sl. No. | Methodology requirement                                                                                                                    | Justification                                                                                                                                                                                                                                                                                                                                                                                                     | Assessment by the validation team                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Prior to the implementation of the project activity, a public distribution network supplying SDWP) to the project boundary does not exist. | For each project activity instance shall proof that a public distribution network supplying SDWP does not exist in the project boundary. If during the crediting period SDWP is made available through a public distribution network, the emission reductions pertaining to the households, communities or SMEs supplied by the public system area cannot be claimed from that point onwards. This condition will | The validation team has cross checked for the presence of public distribution network supplying SDWP from the baseline survey conducted by PP and also cross check the same by interviewing the schools and institutions during the on-site audit dated 09-October-2022 to 11-October-2022 and found that no public distribution network is supplying SDWP to schools and institutions. Thus, the eligibility criteria has been met for the new project activity instances under this group project. |

|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                           |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | be checked annually during the crediting period.                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                           |
| 2 | It shall be demonstrated based on laboratory testing or official notifications (for example notifications from the national authority on health) that the application of the project technology/equipment achieves compliance either with: (i) the “interim” performance target as per “Evaluating household water treatment options: Health based targets and microbiological performance specifications” (WHO, 2011); and “International Scheme to Evaluate Household Water Treatment Technologies” (WHO, 2014) or (ii) an applicable national standard or guideline. Applicable national standard should be based on laboratory efficacy testing that, at a minimum, includes quantitative microbial measures of pre- and post-treatment challenge waters that are representative of potential drinking water sources, and that includes measured reductions based on at least one pathogen class | The drinking water purifier supply use various water treatment filters according to the water quality of water sources to meet the national standard or guideline of Viet Nam. The outlet quality water shall meet microbes defined in QCVN 6-1:2010/BYT for drinking waters., | The Validation team on the basis of document (Microbiological test report) provided by the PP confirms that the outlet water quality of SDWP meets microbes define in QCVN 6-1:2010/BYT for drinking waters. Thus, the eligibility criteria has been met for the new project activity instances under this group project. |

|   |                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                           |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | (bacteria, viruses, protozoa).                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                           |
| 3 | In cases where the life span of the water treatment technologies is shorter than the crediting period of the project activity, there shall be documented measures in place to ensure that end users have access to replacement purification systems of comparable quality. | The lifespan of the water purifier is 10 years, which is the length of the crediting period of the instance.                                                                                                                      | The Validation team through document review (Technical specification of SDWP provided by the manufacturer confirms that the life span of SDWP is 10 years. Thus, the eligibility criteria has been met for the new project activity instances under this group project.                                                   |
| 4 | It should be demonstrated that the project appliances use technologies that meet the technology standards as per paragraph 4(b) of approved methodology AMS-III.AV Version 08, and that they deliver microbiologically safe drinking Water                                 | Each water purifier shall confirm to the technology standards as per paragraph 4(b) of approved methodology AMS-III.AV Version 08. The outlet quality water shall meet microbes defined in QCVN 6-1:2010/BYT for drinking waters. | The Validation team on the basis of document (Microbiological test report) provided by the PP confirms that the outlet water quality of SDWP meets microbes define in QCVN 6-1:2010/BYT for drinking waters. Thus, the eligibility criteria has been met for the new project activity instances under this group project. |

**Table 03: Applicability of TOOL01 “Tool for the demonstration and assessment of additionality”.**

|   |                                                                                                                                                                                                                                                                                                                                |                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | The use of the “Tool for the demonstration and assessment of additionality” is not mandatory for project participants when proposing new methodologies. Project participants may propose alternative methods to demonstrate additionality for consideration by the Executive Board. They may also submit revisions to approved | Complies. Simple cost analysis in Tool 01 is applied to demonstrate and assessment of additionality for each instance of grouped project. | Validation team on the basis of document review, on-site interviews and review of equipment contract submitted by the PP, confirms that the project is to free distribution of SDWPs to the Household, the PP has no other income from VER revenue, therefore the simple cost analysis is applied to demonstrate additionally. Thus, the eligibility criteria has been met for the new project activity instances under this group project. |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|   |                                                                                                                                                |                                                                                                                                                                                                       |                                                                                                                                                                                                        |
|---|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | methodologies using the additionality tool.                                                                                                    |                                                                                                                                                                                                       |                                                                                                                                                                                                        |
| 2 | Once the additionally tool is included in an approved methodology, its application by project participants using this methodology is mandatory | Complies. The additionality tool is not included in the approved methodology. However, the project participants using simple cost analysis in tool 01 to demonstrate and assessment of additionality. | Project participant has demonstrated additionality using simple cost analysis in tool 01. Thus, the eligibility criteria has been met for the new project activity instances under this group project. |

**Table 04: Applicability of TOOL 21 - “Demonstration of additionality of small-scale project activities**

|   |                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | The use of the methodological tool “Demonstration of additionality of small-scale Project activities” is not mandatory for project participants when proposing new methodologies. Project participants and coordinating/ managing entities may propose alternative methods to demonstrate additionality for consideration by the Executive Board | Complies. The project faces an investment barrier. Therefore, Tool21 is applied.    | It has been observed by the validation team that the additionality of the project is demonstrated by barrier analysis in line with Tool 21. The investment barrier exists in the project and the same has been confirmed by the validation team on the basis of review of the PD, interview with the PP and the end-users during on-site audit. Thus, the eligibility criteria has been met for the new project activity instances under this group project. |
| 2 | Project participants and coordinating/managing entities may also apply “TOOL19: Demonstration of additionality of microscale project activities” as applicable.                                                                                                                                                                                  | Not applicable. The project is small scale project, so this tool is not applicable. | It has been observed by the validation team that the project is a small-scale project. Hence, not applicable.                                                                                                                                                                                                                                                                                                                                                |

**Table 05: Applicability of TOOL30: Calculation of the fraction of non-renewable biomass v 04.0**

|   |                                                                                                                    |                                                                                                                      |                                                                                                                                                                                                |
|---|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | This tool may be used by: (a) DNAs to submit region/country-specific default fNRB values, following the procedures | Complies. This tool was used by the project participants to calculate a project specific value for fNRB under option | It has been observed by the validation team that the project uses Tool 30 to calculate project specific value of fNRB in line with the option (b) of the applicability condition 1 of tool 30. |
|---|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|   |                                                                                                                                                                                   |                                                                                                                  |                                                                                                                                                                                                                                                                       |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | for development, revision, clarification and update of standardized baselines (SB procedures); or (b) (b) Project proponents to calculate project or PoA-specific fNRB values.    | (b) of applicability condition 1.                                                                                | It was cross checked by the validation team on the basis of review of the fNRB report prepared by C4 Eco solutions (Pty) Ltd, submitted to VVB by PP.<br>Thus, the eligibility criteria has been met for the new project activity instances under this group project. |
| 2 | For project or PoA specific fNRB values, project proponents shall assess the area where biomass is sourced and justify the selection of the area in CDM project design documents. | Complies. The area for the calculated value was selected to coincide with the Grouped Project's project boundary | The area where the biomass is sourced is described by the PP and the same is reviewed from the fNRB report submitted by the PP.<br>Thus, the eligibility criteria has been met for the new project activity instances under this group project.                       |

**Table 06: Applicability of AMS-I.E.: “Switch from non-renewable biomass for thermal applications by the user”.**

|   |                                                                                                                                                                                                                            |                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | The use of this methodology in a project of activity under a grouped project is legitimate if the leakage is estimated and accounted for as per the relevant provisions of AMS-I. E under the section for grouped project. | Complies. Leakage is calculated by applying a net to gross adjustment factor of 0.95 to account for leakages. | The validation team observed that the project uses the AMS I.E for the value of leakage emission for the calculation of emission reduction. In line with paragraph 24 of the methodology AMS I.E version 13.0 “By is multiplied by a net to gross adjustment factor of 0.95 to account for leakages. The same is considered by the PP for this project.<br>Thus, the eligibility criteria has been met for the new project activity instances under this group project. |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### 3.3.3 Project Boundary

The Grouped Project boundary is defined as per the methodology AMS-III.AV (v 08.0)/B02-a/.

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

The project boundary for the grouped Project consists of the physical, geographical locations of the distributed SDWP limited to within the Viet Nam.

### 3.3.4 Baseline Scenario

The project activity will use methodology AMS-III.AV: “Low greenhouse gas-emitting safe drinking water production systems”, Version 08.0. This is the most recent valid version available on the UNFCCC website and the VERRA site at the time of validation. Since the project activity that apply the indicative simplified and standardized approach. It is assumed that fossil fuel or non-renewable biomass (NRB) is used to boil water as a means of water purification in the absence of project activity. The emissions are calculated based on the energy demand for boiling water, and in case of displacement of NRB, the baseline emissions are corrected for the fraction of the biomass that can be demonstrated to be non-renewable. Only purified water consumed for drinking purposes can be used in the baseline calculation.

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 for boiling water currently in use and which is used in the absence of the project activity.

During the on-site visit the validation team interviewed 11 end user beneficiaries. Based on the responses received from the end users the validation team confirms that in the absence of the project activity the most common way of treating the water for safer drinking use is boiling. Further, the fuel used for boiling the water was reported as firewood. In addition to the end user interviews, the validation team has performed a thorough review of baseline survey records/07/ provided by the PP.

Validation team based on review of the VCS PD/01-f/ and on-site interviews, 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 scenarios for the applied methodology were also confirmed through on-site interviews with the end users of technologies and representatives of PP.

Validation team confirms that the baseline scenario opted by the project activity is in accordance with the requirements of the applied methodology/B02-a/ and is justified.

### 3.3.5 Additionality

The additionality of the grouped project has been demonstrated by the PP as per the methodology section 5.2 /B02-a/. As per the methodology under this grouped project, the additionality of the project activity is demonstrated by a barrier analysis that is in line with the Tool 21 - “Demonstration of additionality of small-scale project activities” (Version 13.1).

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.

The project demonstrates the existence of an Investment Barrier. Procuring, installing SDWPs requires capital, which is a barrier to the end user of the Project due to difficulties in accessing capital, a wide dissemination of such technology in the Host Country is unlikely. The actions under the Project will alleviate these barriers by distributed free SDWPs to households.

Furthermore, the grouped project meets all the applicability conditions of the applied methodology AMS-III.AV: Version 08 and distributes SDWP at zero cost to the end-users and has no other source of revenue other than the sale of GHG credits. Hence, in line with paragraph 33 and 34 TOOL01 “Tool for the demonstration and assessment of additionality”, the project faces an investment barrier and is additional. Validation team confirms that simple cost analysis is deemed acceptable on the basis of review of the above-mentioned tools, project description and on-site interviews.

Therefore, the validation team confirms that the grouped project is additional, and all the project activity instances that will be included in the grouped project will meet the eligibility criteria. Distribution of Safe drinking water purifiers in Viet Nam 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 Removals

The equations and choices provided in the methodology and all other methodological tools are correctly quoted in the PD/01-f/. The emission reductions of the project instances of the grouped project would be calculated using the formulae mentioned in the applied methodology; AMS-III.AV (version 08)/B02-a/.

Validation team based on the review of the PD /01-f/, confirms that the formulae are correctly presented for the determination of emissions reductions. The parameters and equations presented in the PD/01-f/, 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 PD/01-f/ and ER spreadsheet/02-f/ and methodology ; AMS-III.AV (version 08)/B02-a/.

According to applied methodology ; AMS-III.AV (version 08)/B02-a/. the emissions are calculated as below:

#### **Baseline emissions**

$$BE_y = QPW_y \times m \times X_{boil} \times SEC \times \sum_i (BL_{fuel,i} \times f_i \times EF_{projected\_fossil\ fuel,i} \times 10^{-9}) \quad \text{Equation (1)}$$

Where:

$BE_y$  = Baseline emissions during the year y in (t CO<sub>2</sub>e)

$QPW_y$  = Total quantity of water purified by the project in year y (L)

|                                  |   |                                                                                                                                                                                                                                                                                                                                                    |
|----------------------------------|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| $m$                              | = | Fraction of functional appliances that are providing the SDW (%). Only project appliances that (i) use technologies that meet the technology standards as per paragraph 4(b) and (ii) are operating or replaced by an equivalent in service appliance and (iii) deliver microbiologically safe drinking water, are counted for emission reductions |
| $X_{boil}$                       | = | Fraction of the population served by the project activity for which the common practice of water treatment is or would have been water boiling. It is determined ex ante through surveys                                                                                                                                                           |
| $SEC$                            | = | Specific energy consumption required to boil one litre of water (kJ/L), to be calculated according to paragraphs below                                                                                                                                                                                                                             |
| $BL_{fuel,i}$                    | = | Proportions of baseline fuel type $i$ (NRB and/or fossil fuels) used in the absence of the project activity (fraction)                                                                                                                                                                                                                             |
| $f_i$                            | = | Fraction of non-renewable fuel type $i$ used in the absence of the project activity in year $y$ . For biomass, it is the fraction of woody biomass that can be established as non-renewable biomass ( $f_{NRB}$ ). If the baseline fuel is fossil fuel, the value to be applied is 1                                                               |
| $EF_{projected\_fossil\ fuel,i}$ | = | Emission factor of the fuel type $i$ substituted (t CO <sub>2</sub> /TJ)                                                                                                                                                                                                                                                                           |

#### i. Determination of the quantity of purified water serviced by the project activity in year $y$ ( $QPW_y$ )

The quantity of purified water is the total of water treated by the project activity in year  $y$

As per paragraph 16 of the applied methodology AMS-III.AV (Version 08.0), the quantity of purified water in a year should be monitored and calculated based on the provided options.

Accordingly, PP has chosen option 2.2 and calculated the parameter as follows:

The population serviced by the project activity and an average volume of drinking water per person per day, as follows:

$$QPW_y = P_y \times \min(QPW_{pp}; 5.5) \times 365 \quad \text{Equation (2)}$$

Where:

|            |   |                                                                                                                                         |
|------------|---|-----------------------------------------------------------------------------------------------------------------------------------------|
| $P_y$      | = | Population who consumes the purified water serviced by the project activity in year $y$                                                 |
| $QPW_{pp}$ | = | Average volume of drinking water per person per day (L/person/day) determined ex ante of the crediting period through a baseline survey |

The types of schools targeted by the grouped projects are day-boarding schools, boarding schools and institutions. Depending on the average number of people per school ( $P_{ay}$ ) and number of schools WP shall be distributed ( $N_y$ ), population who consumes the purified water serviced by the project activity in year y is monitored and calculated.

Therefore, the population who consumes purified water serviced by the project activity in year y is 813,778 for day-boarding school, 989,401 for boarding school and 167,125 for institution. Since the population is different for each type of school/institution, the average volume of drinking water per person per day of each type of school/institution is different. Moreover, while the institutions are operational 365 days per year, day-boarding school and boarding school are operational 265 days a year. Thus, the number of days the water purifier is used corresponds to days the school/institute is operational.

Accordingly, the average volume of drinking water per person per day is 3.3 L /person/day for day-boarding schools; 4.5 L/person/day for boarding school; 5.0 L/person/day for institution which is less than the maximum quality of drinking water person per day of 5.5 L /person/day which is in line with the paragraph 18 of the methodology and the same is calculated in section 4.4 of the PD and was verified by the validation team during the on-site interview and deemed acceptable to the validation team.

## ii. Determination of the fraction of fuel type ( $f_i$ ) , (Non-renewable biomass)

PP has contracted an independent party “C4Ecosolutions” for a study and calculation of fNRB as per CDM Methodological Tool: “Calculation of fraction of non- renewable biomass” (v04.0). Validation team confirms that it has checked fNRB calculation report/spread sheet/19/ prepared by C4Ecosolutions

From the review of this report/spread sheet /19/ and interviews with the CME and C4 EcoSolutions (Pty) Ltd, 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 and the value of fNRB is calculated as 0.8813
- The detailed methodology (including the calculation) of conducting the study has been provided in the report /spread sheet /19/.
- The study has been done in accordance with the CDM Methodological Tool: “Calculation of fraction of non- renewable biomass” (v04.0) including the equation 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.

As per paragraph 13 of the Tool 30 version 04.0,

*“If the fNRB value is estimated at the national level, as a cross check, project proponent shall compare the value of estimated NRB with the product of i) total average above ground biomass*

tonnage of the area of forest areas deforested in recent past (tonnes/ha), and ii) most recent available observed annual rate of deforestation (ha/yr). If the estimated NRB value is more than 10% above the value calculated as per the product of biomass and deforestation rate, justification shall be provided for the higher value for NRB.”

CC IPL based on review of fNRB report prepared by C4 EcoSolutions (Pty) Ltd /19/ confirms that the above requirement of tool 30 has been followed and the justification has been provided, which is deemed acceptable to the validation team. The excerpt of fNRB report/19/ is as below

“The resulting non-renewable biomass (NRB) was compared to the top-down product of average above-ground biomass (62.71 t/ha) and the most recent annual deforestation data (207,641 ha/yr). NRB, as calculated in this report according to the CDM Tool 30 v4.0 2022, was found to be 32,630,986 t/yr, which is greater than the cross-check results based on deforestation (13,009,879 t/yr). It is expected that the cross-check estimate of biomass loss from deforestation could underestimate the extent of non-renewable biomass consumption as it only considers the average biomass stocks from completely deforested areas. The cross-check considers unsustainable wood harvesting resulting in forest degradation and substantial reductions in biomass stocks, but not complete deforestation. Consequently, the estimate of NRB is considered applicable for this study given that the guidance provided by CDM Tool 30 v4.0 2022 was followed.”

Accordingly, **fi** is calculated as 0.8813.

However, to ensure the most conservative figure and fair with the new Verra cookstove methodology (VMR006 version 1.2), the project developer voluntarily decided to deduct the calculated fNRB by 26%, this would result in an fNRB value:  $88.13\% \times (1-26\%) = 65.22\%$

Accordingly, **fi** is considered as 65.22%. The VVB deems the approach to be conservative and concludes that the **fi** value applied to the project activity is valid.

**iii. Determination of specific energy consumption required to boil one litre of water is to be calculated as follows:**

$$SEC = [WH \times (T_f - T_i) + 0.01 \times WHE] / h_{wb} \quad \text{Equation (3)}$$

Where:

|       |   |                                                                                                            |
|-------|---|------------------------------------------------------------------------------------------------------------|
| $WH$  | = | Specific heat of water (kJ/L °C). Use a default value of 4.186 kJ/L °C                                     |
| $T_f$ | = | Final temperature (°C). Use a default value of 100 °C                                                      |
| $T_i$ | = | Initial temperature of water (°C). Use annual average ambient temperature; or use a default value of 20 °C |

- $WHE$  = Latent heat of water evaporation (kJ/L). Use a default value of 2260 kJ/L. The latent heat required to boil one litre of water for five minutes is assumed to be equivalent to latent heat for the evaporation of 1% of the water volume (WHO recommends a minimum duration of five minutes of water boiling)
- $h_{wb}$  = Efficiency of the water boiling systems being replaced, estimated ex ante. Default values in Data / Parameter table 3 may be used

***Determination of the efficiency of the water boiling systems. ( $h_{wb}$ )***

Efficiency of the water boiling systems being replaced. Use one of the options below:

- (a) The efficiency of the water boiling system shall be established using representative sampling methods or based on referenced literature values (fraction), use weighted average values if more than one type of systems is encountered;
- (b) 0.10 default value may be optionally used if the replaced system or the system that would have been used is a three stone fire or a conventional system for woody biomass lacking improved combustion air supply mechanism and flue gas ventilation system that is without a grate as well as a chimney; for the rest of the systems using woody biomass 0.2 default value may be optionally used;
- (c) 0.5 default value may be used if the replaced system or the system that would have been used is a fossil fuel combusting system.

The project proponents will distribute the SDWPs to schools/institutes who use traditional cookstove to boil water. Therefore, the efficiency of the water boiling systems is 0.1. The same has been confirmed by the validation team on the basis of the on-site interview and the beneficiary agreement template to be signed between the PP and the beneficiaries.

Accordingly,  $SEC$  is calculated as 3,575 (kJ/L).

The value of the specific consumption is calculated in section 4.4 of the PD, and it is confirmed by the validation team that the same value is used by the PP for the calculation of emission reduction.

**iv. Determining the fraction of functional appliances that are meeting the SDWP standards (m).**

The value for this parameter has been described by PP under section 4.1.5 of the PD and the value assumed is 1 which will be monitoring annually for each monitoring and shall be checked by the VVB assigned during the verification.

**v. Determining the fraction of the population served by the project activity for which the common practice of water purification is or would have been water boiling.**

The value of  $X_{ball}$  is 1.0 and the same has been checked by the validation team based on review of the baseline survey of households done.

**vi. Determining Proportions of baseline fuel type i (NRB and/or fossil fuels) used in the absence of the project activity ( $BL_{fuel}$ )**

The value of  $BL_{fuel}$  is 0.9677 and validation team on the basis of document review, baseline survey and on-site audit confirms that the value applied is acceptable.

**vii. Determining Emission factor of the fuel type i substituted ( $EF_{projected\ fossilfuel}$ )**

The value applied is 85.7 t CO<sub>2</sub>/TJ) is taken from table 2 of AMS I.E version 13 and is deemed acceptable.

Accordingly,  $BE_y$  is calculated as,

$$BE_y = 424,681 \text{ tCO}_2\text{e/y}$$

**Project Emissions**

There are no project emissions considered for this grouped project.

$$PE_y = 0$$

**Leakage Emissions**

Leakage for the project has been taken into account by the PP in line with the paragraph 24 of the methodology AMS I.E., v.13.0 Therefore,  $BE_y$  is multiplied by a net to gross adjustment factor of 0.95 to account for leakages, inwhich case surveys are not required. This is applied for the grouped project.

Hence  $LE_y = BE_y \times (1 - 0.95)$

$$LE_y = 424,681 \times (1 - 0.95) = 21,234 \text{ tCO}_2\text{e/year}$$

**Emission reductions**

Emissions reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y \quad \text{Equation (4)}$$

Where:

$ER_y$  = Emission reductions in year y (t CO<sub>2</sub>e/yr)

$BE_y$  = Baseline emissions in year y (t CO<sub>2</sub>/yr)

$PE_y$  = Project emissions in year  $y$  (t CO<sub>2</sub>e/yr)

$LE_y$  = Leakage emissions in year  $y$  (t CO<sub>2</sub>e/yr)

$BE_y$  is multiplied by a net to gross adjustment factor of 0.95 to account for leakages.

Emissions reductions are calculated as

$$ER_y = BE_y - PE_y - LE_y = 424,681 - 0 - 21,234 = 403,447$$

$ER_y = 403,447$  tCO<sub>2</sub>e/year. This grouped project would achieve a total emission reduction of 4,034,467 tCO<sub>2</sub>e in the 10-year crediting period and an average of 403,447 tCO<sub>2</sub>e per year as indicated in the VCS PD/01-f/ and in the ER spread sheet /02-f/. The estimated volume of emission reduction of one instance activity is not more than 60,000 tCO<sub>2</sub> per year. In conclusion, all values used in the VCS PD to calculate emission reductions are considered reasonable in the context of the proposed grouped project “Grouped projects for safe drinking water for schools in Viet Nam” and calculation approach is correct.

### 3.3.7 Methodology Deviations

No methodological deviations have been applied to the project activity.

### 3.3.8 Monitoring Plan

The grouped project employs baseline and monitoring methodology namely AMS-III.AV: “Low greenhouse gas-emitting safe drinking water production systems”, version 08/B02-a/. According to section 5.1 and 5.2 of PD/01-f/ the parameters determined ex-ante and those to be monitoring ex post as per the requirements of the methodology are given below.

The following parameters are determined ex-ante and mentioned in section 5.1 of the PD:

**Table 08: Parameters Determined ex-ante**

| S.No | Parameter | Unit   | Value                                                                      | Assessment                                                                                                                                  |
|------|-----------|--------|----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | QPWpp     | Litres | Day-boarding school: 3.3 L<br>Boarding school: 4.5 L<br>Institution: 5.0 L | Validation team on the basis of document review (baseline survey) and interview with the end users confirms the acceptability of the value. |
| 2    | LS        | Years  | 10                                                                         | Validation team on the basis of review of                                                                                                   |

|   |                        |                      |        |                                                                                                                                                                                                                                                                |
|---|------------------------|----------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                        |                      |        | Manufacturers specifications of SDWP confirms the acceptability of value.                                                                                                                                                                                      |
| 3 | nwb                    | %                    | 10     | On the basis of document review and on-site audit validation team confirms that the value applied is acceptable.                                                                                                                                               |
| 4 | BLfuel,i               | Fraction             | 0.9677 | Validation team on the basis of document review, baseline survey and on-site audit confirms that the value applied is acceptable.                                                                                                                              |
| 5 | fi                     | Fraction             | 0.6522 | The value is calculated by third party (C4Ecosolutions) in line with the applicable methodological CDM Tool 30, version 4.0. Further in order to comply with latest version of VMR0006, v1.2, PP has voluntarily decided to deduct the calculated fNRB by 26%. |
| 6 | EFprojected fossilfuel | tCO <sub>2</sub> /TJ | 85.7   | The value is taken from table 2 of AMS I.E version 13 and is deemed acceptable.                                                                                                                                                                                |
| 7 | Xboil                  | %                    | 1.0    | The value applied is acceptable and cross checked from the baseline survey and on-site audit.                                                                                                                                                                  |

|   |          |                               |                                                                                                                                                                                   |                                                                                                                                                                  |
|---|----------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8 | $P_{ay}$ | People per school/institution | <ul style="list-style-type: none"> <li>Day-boarding school: 259 people/school</li> <li>Boarding school: 281 people/school</li> <li>Institution: 125 people/institution</li> </ul> | The value is applied based on baseline survey data and used in calculation of baseline emissions. The value applied is deemed acceptable to the validation team. |
|---|----------|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Following parameters are monitored ex-post is stated in section 5.2 of the PD

**Table 09: Parameters monitored ex-post**

| S.No. | Parameters | Unit     | Value applied                                                                                                                                                                                                                  | Assessment                                                                                                                                                                                                                                                  |
|-------|------------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | $P_y$      | Number   | 1,970,304. Including:<br>Day-boarding school: 813,778,<br>Boarding school: 989,401 and<br>Institution: 167,125                                                                                                                 | A survey shall be conducted annually to check the number of persons who consume the purified water supplied by functional project appliances.                                                                                                               |
| 2     | $QPW_y$    | liters   | 2,196,512,679 Liters.<br>Including:<br><ul style="list-style-type: none"> <li>Day-boarding school: 711,648,861 (liters)</li> <li>Boarding school: 1,179,860,693 (liters)</li> <li>Institution: 305,003,125 (liters)</li> </ul> | Calculated value determining quantity of purified water in year y.                                                                                                                                                                                          |
| 3     | $m$        | fraction | 1                                                                                                                                                                                                                              | Every year, SWDP will be tested on a sample basis (through a statistically representative sample) by an accredited Laboratory. Emission reductions cannot be claimed if over 10% of appliances in the project activity fail to meet the final water quality |

|   |                                            |   |   |                                                                                                                                                                                                                                                                                                             |
|---|--------------------------------------------|---|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   |                                            |   |   | requirements as per the applied methodology AMS III AV.                                                                                                                                                                                                                                                     |
| 4 | Check for SDWP public distribution network | - | - | If SDWP is made available through a public distribution network during the crediting period, the emission reductions pertaining to the schools/institutions supplied by the public system cannot be claimed from that point onwards. This condition should be checked annually during the crediting period. |
| 5 | Quality of safe drinking water             | - | - | The parameter monitors the quality of safe drinking water. The parameter is monitored at least every two years, during which SDWPs need to be tested by accredited Laboratory on a sample basis. Emission reductions cannot be claimed if project activity fails to meet SDWP standards                     |

In accordance with section 3.25.1 of the VCS Standard (version 4.4) /B01-a/ all documents and records will be kept in a secure and retrievable manner for at least two years after the end of the project crediting period. The data collecting and management methods as provided in section 5.3 of the VCS PD/01-f/ are acceptable to the validation team. The validation team interviewed representatives of PP and it was established that the database of all the project equipment distributed by PP is created and maintained. The entire database will be kept with protected by PP for a period of more than two years. /B02-a/.

The surveys for parameters Py and m will be done by trained field personnel from the project proponent. Microbiological testing for parameter m and the Quality of safe drinking water will be

established through an independent accredited laboratory in Viet Nam. As per approved methodology AMS-III.AV (version 08.0), the following guidance is being used for the representative sampling method: "A statistically valid sample of the appliances can be used to determine the parameter value, as per the relevant requirements for sampling in the "Standard for sampling and surveys for CDM project activities and programme of activities". A 90% confidence interval and a 10% margin of error requirement shall be achieved for the sampled parameters." The parameters to be sampled within this instance project activity as below

| Parameter                                 | Description of parameter                                                              | Monitoring frequency     |
|-------------------------------------------|---------------------------------------------------------------------------------------|--------------------------|
| Py                                        | Population who consumes the purified water serviced by the project activity in year y | At least annually        |
| Check for SDW public distribution network | Annual check if there is a public distribution network supplying SDW is installed     | At least annually        |
| m                                         | Fraction of functional appliances that are meeting the SDWP Standard                  | At least annually        |
| Quality of safe drinking water            | The quality of the safe drinking water                                                | At least every two years |

The validation team considers that the means of implementation of the monitoring plan, including the data management, monitoring equipment and quality assurance and quality control procedures, are sufficient to ensure that the emission reductions achieved by/resulting from the proposed grouped project therein can be reported ex post and verified. In addition, the sampling plan meets the requirements of the monitoring methodology AMS – III.AV, Version 08.0 /B02-a/ and the Standard of Sampling and Surveys of CDM project activities and Programme of Activities (version 09.0) /B04-a/ and Guidelines for sampling and surveys for CDM project activities and Programme of Activities (version 04) /B04-b /.

Validation team confirms that the overall monitoring plan complies with the requirements of the methodology AMS – III.AV, Version 08.0 /B02-a/, the monitoring arrangements describes in the monitoring plan are feasible within the project design and the project proponents will be able to implement the described monitoring plan.

### 3.4 Non-Permanence Risk Analysis

This is not applicable to the project activity as the project is not an AFOUL (Agriculture, Forestry, and other Land use) project.

## 4 VALIDATION OPINION

The Project Participant, Sustainability Investment Promotion and Development Joint Stock Company, has commissioned the VVB, Carbon Check (India) Private Ltd. to perform an independent validation of the VCS Project Activity “Grouped projects for safe drinking water for schools in Viet Nam”. This report summarizes the findings of the validation 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 process was performed on the basis of VCS Program Guide (v4.3, dated 17-January-2023), VCS Standard (v4.4, dated 17-January-2023), Program Definitions (v4.3, dated 21-December-2022), Registration & Issuance Process (v4.3, dated 17-January-2023) VCS Validation and Verification Manual (v3.2, dated 19-October-2016).

The project activity provides the information in PD/01-a/ as required by the VCS Standard/B01-a/ and Validation and Verification Manual /B01-c/ and in Carbon Check’s opinion meets the requirements of the applied baseline and monitoring methodology AMS–III.AV: “Low greenhouse gas-emitting safe drinking water production systems”, version 08/B02-a/and is likely to achieve the estimated emission reductions. The validation has been performed using a risk- based approach, as described above. The expected annual average emission reductions from the grouped project are 403,447 tCO<sub>2</sub>e/year and total emission reductions for the 10 years crediting period are 4,034,467 tCO<sub>2</sub>e.

Carbon Check (India) Private Ltd concludes the validation with a positive opinion that the VCS Project Activity “Grouped projects for safe drinking water for schools in Viet Nam”, in Viet Nam as described in the PD (version 08; dated 13-September-2023) /01-f/, meets all the applicable VCS requirements, including those specified in the Project Standard, relevant methodology, tools and guidelines.

The selected baseline and monitoring methodology AMS–III.AV: “Low greenhouse gas-emitting safe drinking water production systems”, version 08/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.

Validated GHG emission reductions and removals for the grouped project:

| Year   | Estimated GHG emission reductions or removals (tCO <sub>2</sub> e) |
|--------|--------------------------------------------------------------------|
| Year 1 | 403,447                                                            |
| Year 2 | 403,447                                                            |
| Year 3 | 403,447                                                            |

|                                        |                  |
|----------------------------------------|------------------|
| Year 4                                 | 403,447          |
| Year 5                                 | 403,447          |
| Year 6                                 | 403,447          |
| Year 7                                 | 403,447          |
| Year 8                                 | 403,447          |
| Year 9                                 | 403,447          |
| Year 10                                | 403,447          |
| <b>Total estimated ERs</b>             | <b>4,034,467</b> |
| <b>Total number of crediting years</b> | <b>10</b>        |
| <b>Average annual ERs</b>              | <b>403,447</b>   |

# APPENDIX 1.1: REFERENCE DOCUMENTS

| Ref  | Document                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| /01/ | <p>Project description titled:</p> <ul style="list-style-type: none"> <li>a) Grouped projects for safe drinking water for schools in Viet Nam (version 02; dated:16-August-2022)</li> <li>b) Grouped projects for safe drinking water for schools in Viet Nam (version 03; dated:03-February-2023)</li> <li>c) Grouped projects for safe drinking water for schools in Viet Nam (version 04; dated:14-March-2023)</li> <li>d) Grouped projects for safe drinking water for schools in Viet Nam (version 05; dated:23-March-2023)</li> <li>e) Grouped projects for safe drinking water for schools in Viet Nam (version 07; dated:27-March-2023)</li> <li>f) Grouped projects for safe drinking water for schools in Viet Nam (version 08; dated:13-September-2023)</li> </ul> |
| /02/ | <ul style="list-style-type: none"> <li>• ER estimated spread sheet correspond to /01-a/</li> <li>• ER estimated spread sheet correspond to /01-b/</li> <li>• ER estimated spread sheet correspond to /01-c/</li> <li>• ER estimated spread sheet correspond to /01-d/</li> <li>• ER estimated spread sheet correspond to /01-e/</li> <li>• ER estimated spread sheet correspond to /01-f/</li> </ul>                                                                                                                                                                                                                                                                                                                                                                          |
| /03/ | Consent deed as evidence for the start date of the grouped project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| /04/ | Technical specifications of the SDWP from manufacturer including the life span.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| /05/ | Consent deed as proof of right of relinquishment of VERs from the end users to the project proponent.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| /06/ | Beneficiary agreement confirming that the traditional wood stoves were used for boiling water in the baseline situation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| /07/ | Baseline survey records ( for the parameters QPWpp, BLfuel,i, Xboil) implemented in Viet Nam.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| /08/ | Local stakeholders consultation meeting records.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| /09/ | Project implementation schedule.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| /10/ | Consent deed as evidence of unique identification system of the SDWP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| /11/ | Microbiological test report from an accredited laboratory.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| /12/ | Evidence to demonstrate water purifiers as free of cost to the users.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

|      |                                                                                                                                                                    |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| /13/ | Sample survey or reference literature used to determine the types of stoves and fuel used in the baseline scenario.                                                |
| /14/ | Monitoring survey questionnaire template                                                                                                                           |
| /15/ | SDWP distribution agreement                                                                                                                                        |
| /16/ | Training plan/ records of personnel appointed for surveys.                                                                                                         |
| /17/ | Declaration from the project proponent that the project is not creating any other form of environmental credit under any specific program.                         |
| /18/ | Declaration from the project proponent that the project has not or shall not claim carbon credits on any other scheme after Registration of the project under VCS. |
| /19/ | fNRB calculation report by C4 EcoSolutions (Pty) Ltd. and fNRB calculation spreadsheet.                                                                            |
| /20/ | Evidence for the values used for the ex-ante VER estimation.                                                                                                       |

## APPENDIX 1.1: BACKGROUND DOCUMENTS

| Ref   | Document                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| /B01/ | <p>VCS Requirements</p> <ol style="list-style-type: none"> <li>VCS Standard (v4.4, dated 17-January-2023)</li> <li>VCS Program Guide (v4.3, dated 17-January-2023)</li> <li>VCS Validation and Verification Manual version (v3.2, dated 19/10/2016)</li> <li>Registration &amp; Issuance Process (v4.3, dated 17-January-2023)</li> <li>VCS Program Definitions version (v4.3, dated 21-December-2022)</li> <li>VCS PD template version 4.2</li> </ol> |
| /B02/ | <p>Applied baseline and monitoring methodology</p> <ol style="list-style-type: none"> <li>AMS-III.AV. “Low greenhouse gas emitting safe drinking water production systems”, version 08.0</li> <li>CDM TOOL30 “Calculation of the fraction of non-renewable biomass” version 04.0</li> </ol>                                                                                                                                                            |
| /B03/ | <ol style="list-style-type: none"> <li>“Standard for sampling and surveys for CDM project activities and programme of activities” (version 09.0)</li> <li>Guidelines for sampling and surveys for CDM project activities and Programme of Activities (version 04)</li> </ol>                                                                                                                                                                           |
| /B04/ | <p>Website and links:</p> <ol style="list-style-type: none"> <li>IPCC (<a href="http://www.ipcc-nggip.iges.or.jp">http://www.ipcc-nggip.iges.or.jp</a>)</li> <li><a href="http://cdm.unfccc.int">http://cdm.unfccc.int</a></li> <li><a href="http://www.v-c-s.org">http://www.v-c-s.org</a></li> </ol>                                                                                                                                                 |

## APPENDIX 2 : ABBREVIATIONS

|                  |                                                       |
|------------------|-------------------------------------------------------|
| CDM              | Clean Development Mechanism                           |
| BE               | Baseline Emission                                     |
| CAR              | Corrective Action Request                             |
| CC IPL           | Carbon Check (India) Private Ltd.                     |
| CDM              | Clean Development Mechanism                           |
| CL               | Clarification Request                                 |
| CO <sub>2</sub>  | Carbon Dioxide                                        |
| CO <sub>2e</sub> | Carbon Dioxide Equivalent                             |
| VVB              | Designated Operational Entity                         |
| 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                    |

# APPENDIX 3 : CERTIFICATES OF COMPETENCE



## Carbon Check (India) Private Limited

### Certificate of Competency

#### Ms. Pallavi Gedam

has been qualified as per CCIPL's internal qualification procedures in accordance with the requirements of CDM AS (V7.0), ISO/IEC 14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

*for the following functions and requirements:*

|                                               |                                                            |                                                             |                                                      |
|-----------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------|
| <input checked="" type="checkbox"/> Validator | <input checked="" type="checkbox"/> Verifier               | <input checked="" type="checkbox"/> Team Leader             | <input checked="" type="checkbox"/> Technical Expert |
| <input type="checkbox"/> Technical Reviewer   | <input type="checkbox"/> Health Expert                     | <input type="checkbox"/> Gender Expert                      | <input type="checkbox"/> Plastic Waste Expert        |
| <input checked="" type="checkbox"/> SDG+      | <input checked="" type="checkbox"/> Social no-harm(S+)     | <input checked="" type="checkbox"/> Environment no-harm(E+) | <input type="checkbox"/> CCB Expert                  |
| <input type="checkbox"/> Financial Expert     | <input checked="" type="checkbox"/> Local Expert for India |                                                             |                                                      |

*in the following Technical Areas:*

|                                  |                                            |                                  |                                            |                                  |
|----------------------------------|--------------------------------------------|----------------------------------|--------------------------------------------|----------------------------------|
| <input type="checkbox"/> TA 1.1  | <input checked="" type="checkbox"/> TA 1.2 | <input type="checkbox"/> TA 2.1  | <input checked="" type="checkbox"/> TA 3.1 | <input type="checkbox"/> TA 4.1  |
| <input type="checkbox"/> TA 4. n | <input type="checkbox"/> TA 5.1            | <input type="checkbox"/> TA 5.2  | <input type="checkbox"/> TA 7.1            | <input type="checkbox"/> TA 8.1  |
| <input type="checkbox"/> TA 9.1  | <input type="checkbox"/> TA 9.2            | <input type="checkbox"/> TA 10.1 | <input type="checkbox"/> TA 13.1           | <input type="checkbox"/> TA 13.2 |
| <input type="checkbox"/> TA 14.1 | <input type="checkbox"/> TA 15.1           |                                  |                                            |                                  |

**Issue Date**  
**1<sup>st</sup> January 2023**

**Expiry Date**  
**31<sup>st</sup> December 2023**



**Mr. Vikash Kumar Singh**  
Compliance Officer



**Mr. Amit Anand**  
CEO

CCIPL\_FM 7.9 Certificate of Competency\_V2.1\_012023



## 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/IEC 14065:2020, ISO/IEC 17029:2019 and other applicable GHG programs:

*for the following functions and requirements:*

- |                                                        |                                                                          |                                                             |                                                      |
|--------------------------------------------------------|--------------------------------------------------------------------------|-------------------------------------------------------------|------------------------------------------------------|
| <input checked="" type="checkbox"/> Validator          | <input checked="" type="checkbox"/> Verifier                             | <input checked="" type="checkbox"/> Team Leader             | <input checked="" type="checkbox"/> Technical Expert |
| <input checked="" type="checkbox"/> Technical Reviewer | <input type="checkbox"/> Health Expert                                   | <input type="checkbox"/> Gender Expert                      | <input type="checkbox"/> Plastic Waste Expert        |
| <input checked="" type="checkbox"/> SDG+               | <input checked="" type="checkbox"/> Social no-harm(S+)                   | <input checked="" type="checkbox"/> Environment no-harm(E+) | <input type="checkbox"/> CCB Expert                  |
| <input checked="" type="checkbox"/> Financial Expert   | <input checked="" type="checkbox"/> Local Expert for India and Sri Lanka |                                                             |                                                      |

*in the following Technical Areas:*

- |                                            |                                            |                                  |                                             |                                             |
|--------------------------------------------|--------------------------------------------|----------------------------------|---------------------------------------------|---------------------------------------------|
| <input checked="" type="checkbox"/> TA 1.1 | <input checked="" type="checkbox"/> TA 1.2 | <input type="checkbox"/> TA 2.1  | <input checked="" type="checkbox"/> TA 3.1  | <input type="checkbox"/> TA 4.1             |
| <input type="checkbox"/> TA 4. n           | <input type="checkbox"/> TA 5.1            | <input type="checkbox"/> TA 5.2  | <input type="checkbox"/> TA 7.1             | <input type="checkbox"/> TA 8.1             |
| <input type="checkbox"/> TA 9.1            | <input type="checkbox"/> TA 9.2            | <input type="checkbox"/> TA 10.1 | <input checked="" type="checkbox"/> TA 13.1 | <input checked="" type="checkbox"/> TA 13.2 |
| <input type="checkbox"/> TA 14.1           | <input type="checkbox"/> TA 15.1           |                                  |                                             |                                             |

Issue Date

1<sup>st</sup> January 2023

Expiry Date

31<sup>st</sup> December 2023



**Mr. Vikash Kumar Singh**  
Compliance Officer



**Mr. Amit Anand**  
CEO

## APPENDIX 4 : FINDINGS LOG

Table 1. CLs from this validation

| Finding                                                                                                                                                                                            | CL 01                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>                                                                                                                                                                              | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                                                                                                                                                                                                                                                                                                |
| <b>Description of finding (VVB)</b>                                                                                                                                                                | In section 1.4 (Project Design) of the project description, PP has stated the required eligibility criteria and justified the same. Eligibility criteria 3 has been justified by stating that, “Technologies for community water consumption, with project emissions.” However, it is not clear how this justifies the eligibility criteria. Moreover, no project emissions are considered in the grouped project. PP needs to clarify regarding the statement. |
| <b>Corrective Action or clarification #1</b><br>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)                                    | Project activities to provide clean drinking water to schools/institutions consumption. However, the sentence “Technologies for community water consumption, with project emissions” is not clearly. Therefore, to avoid unnecessary misunderstand, this sentence has been removed in the revised PD version 03.                                                                                                                                                |
| <b>VVB Assessment #1</b><br>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added. | PP has provided the revised PD which has been assessed by the validation team. However, the validation team finds that PP has not made the required changes in section 1.4. PP needs to remove the sentence as per the provided clarification.<br>Hence, this finding remains open.                                                                                                                                                                             |
| <b>Corrective Action or clarification #2</b><br>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)                                    | PP has removed the sentence as per the provided clarification in section 1.4 in updated PD version 04                                                                                                                                                                                                                                                                                                                                                           |
| <b>VVB Assessment #2</b><br>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added. | PP has provided the revised PD which has been assessed by the validation team. PP has justified the eligibility criteria 3 appropriately.<br>Hence, this finding is closed.                                                                                                                                                                                                                                                                                     |
| <b>Conclusion</b><br>Tick the appropriate checkbox                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                                                                                                                                                                                                                                                          |

| Finding               | CL 02                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------|
| <b>Classification</b> | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR |

| Finding                                                                                                                                                                                                   | CL 02                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description of finding (VVB)</b>                                                                                                                                                                       | In section 1.4 (Project Design) of the project description, PP has stated the required eligibility criteria and justified the same. Eligibility criteria 5 has been justified by mentioning that, “ <i>The water from the SDWPs are free of cost to the end users during the operation of the SDWPs</i> ”.<br>PP needs to clarify how the water is free of cost and how this information justifies the additionality if the project. |
| <b>Corrective Action or clarification #1</b><br>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)                                           | CME would distribute the water purifiers completely free of cost to schools/institutions. This shall be confirmed and demonstrated in all of new instance under the grouped project. PP has revised information in the updated PD version 3, dated 03/02/2022                                                                                                                                                                        |
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | PP has provided the revised project description. The validation team has assessed the revised PD and confirms that eligibility criteria 5 under section 1.4 has been justified appropriately. Hence, this finding is closed.                                                                                                                                                                                                         |
| <b>Conclusion</b><br>Tick the appropriate checkbox                                                                                                                                                        | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                                                                                                                                                                                                                               |

| Finding                                                                                                                                                         | CL 03                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>                                                                                                                                           | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description of finding (VVB)</b>                                                                                                                             | <p>In accordance with the requirement of § 3.8 of VCS standard, version 04.4 The project start date of a non-AFOLU project is the date on which the project began generating GHG emission reductions or removals.</p> <p>In section 1.8 of the project description, PP has stated the project start date as 01/07/2022. However, as per the evidence for start date/03/ and project implementation schedule/09/ provided by the PP, the start date is 04-July-2022. PP needs to clarify regarding this discrepancy.</p> |
| <b>Corrective Action or clarification #1</b><br>(PP shall write a detailed and clear corrective action or further information for clarification as per finding) | In the PD version 2, the start date was written 01/07/2022, which is PP's mistake. The actual project start date is 04-July-2022. PP has revised this information it in the updated PD version 3.                                                                                                                                                                                                                                                                                                                       |

| Finding                                                                                                                                                                                                   | CL 03                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | PP has provided the revised PD. The validation team confirms that the start has been stated accurately. The start date has been confirmed by cross-checking the provided evidence.<br>Hence, this finding is closed. |
| <b>Conclusion</b><br><i>Tick the appropriate checkbox</i>                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed               |

| Finding                                                                                                                                                                | CL 04                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>                                                                                                                                                  | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description of finding (VVB)</b>                                                                                                                                    | <p>In section 1.11 of the project description, PP has stated that, <i>"The technology/equipment will be replaced prior to the life span, so that end users can access the same level of water purification system"</i>.</p> <p>As the life span of the project device is 10 years which is same as project crediting period. Since the equipment is replaced prior to end of its life span and the replacement will occur during the project crediting period, PP needs to clarify how it will impact the GHG quantifications. Also, PP needs to clearly state the replacement process in case of physical damage to the equipment.</p> |
| <b>Corrective Action or clarification #1</b><br><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i> | <p>The lifespan of water purifier is 10 years. However, the filter core is recommended to be replaced at least 3 years/time depending on usage needs and input water quality. During use, if the filter core is broken or any abnormality is detected, schools/institutions will contact to registry replacement the core with education department. The project owner will replace the filter core free of cost during the project crediting period, which is 10 years. Emission reduction quantification will continue from the date the equipment is replaced.</p> <p>The information has added in the revised PD version 03.</p>    |

| Finding                                                                                                                                                                                                   | CL 04                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | The project proponent has provided the revised PD. The validation team has assessed the revised PD and confirms that the PP has clearly stated the replacement process. The PP also confirms that the filter core will be replaced free of cost during the project crediting period. Hence, this finding is closed. |
| <b>Conclusion</b><br><i>Tick the appropriate checkbox</i>                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                                                                                                              |

| Finding                                                                                                                                                                                                   | CL 05                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>                                                                                                                                                                                     | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                                                                         |
| <b>Description of finding (VVB)</b>                                                                                                                                                                       | In section 1.12 (Project Location) of the project description, PP has stated that “ <i>The details of coordinates are being submitted separately in KML file.</i> ”<br>PP needs to submit the KML file as stated in the PD.              |
| <b>Corrective Action or clarification #1</b><br><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>                                    | In the updated PD version 3, PP has added the coordinates of the project boundary. The KML file were submitted to VERRA during listing period. It will also be attached in the PP's 1 <sup>st</sup> response email about findings of DOE |
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | The validation team confirms that, PP has submitted the KML file. Hence, this finding is closed.                                                                                                                                         |
| <b>Conclusion</b><br><i>Tick the appropriate checkbox</i>                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                                   |

| Finding               | CL 06                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------|
| <b>Classification</b> | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR |

| Finding                                                                                                                                                                                            | CL 06                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description of finding (VVB)</b>                                                                                                                                                                | In section 1.16, sub-section 1.16.1 of the PD, PP has stated that, “....each unique ID is assigned to a single user whose details are recorded at the time of stove purchase”.<br>PP needs to clarify the following :<br><ol style="list-style-type: none"> <li>1. How assigning a unique ID to a single user is valid at institutional level.</li> <li>2. How information related to stove purchase is relevant to this grouped project.</li> </ol> |
| <b>Corrective Action or clarification #1</b><br>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)                                    | <ol style="list-style-type: none"> <li>1. At institutional level, they will be distributed the quantity of water purifier depending on the demand of each schools/institution. Each water purifier will label a unique ID.</li> <li>2. The information related to stove purchase, which is wrong.</li> </ol> <p>They are PP’s mistakes when wrote PD. The information has been revised in the updated PD version 3.</p>                              |
| <b>VVB Assessment #1</b><br>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added. | PP has provided the revised PD. The validation team has assessed the updated PD and confirms that PP has addressed the findings appropriately. Hence, this finding is closed.                                                                                                                                                                                                                                                                        |
| <b>Conclusion</b><br>Tick the appropriate checkbox                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                                                                                                                                                                                                                                               |

| Finding               | CL 07                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------|
| <b>Classification</b> | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR |

| Finding                                                                                                                                                                                            | CL 07                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description of finding (VVB)</b>                                                                                                                                                                | As per § 3.18.9 of the VCS standard version 4.4 states <i>"The project proponent shall take due account of any and all comments received during the consultation, which means it will need to either update the project design or demonstrate the insignificance or irrelevance of the comment. It shall demonstrate to the validation/verification body what action it has taken"</i> .<br><br>PP needs to mention the public comments if received, during the commenting period under section 2.4 of the PD, since the window for public comment has closed. |
| <b>Corrective Action or clarification #1</b><br>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)                                    | PP did not be received any comment during public comment period. PP has provided the information in the updated PD version 03                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>VVB Assessment #1</b><br>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added. | The PP has provided the revised PD. PP has stated that, no comments were received during the public commenting period. The validation team has confirmed the provided information by cross-checking with the VERRA registry.<br>Hence, this finding is closed.                                                                                                                                                                                                                                                                                                 |
| <b>Conclusion</b><br>Tick the appropriate checkbox                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                                                                                                                                                                                                                                                                                                                                                         |

| Finding                             | CL 08                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>               | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                                                                                                                                                                                                                           |
| <b>Description of finding (VVB)</b> | In section 3.2 of the project description, PP has justified the applicability criteria (2) of tool 21 by stating that <i>"Not applicable. The project instance is a small-scale project, so this tool is not applicable."</i><br>However, as per section 1.10 of the project activity the grouped project is categorized as large project. PP needs to clarify regarding this discrepancy. |

| Finding                                                                                                                                                                                                   | CL 08                                                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Corrective Action or clarification #1</b><br><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>                                    | The instances under the grouped project will disseminate no more 30,000 water purifiers. Therefore, the estimated annual emission reductions for one instances will not be more than 60,000 tCO <sub>2</sub> e/year. Hence, this is small-scale project.<br>PP has revised the discrepancy in the updated PD version 03. |
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | PP has provided clarification regarding the scale of the project. However, the project instance is not clearly defined in the PD. PP needs to clearly define the project instance in section 1.1 and section 1.11 of the PD.<br>Hence, this finding remains open.                                                        |
| <b>Corrective Action or clarification #1</b><br><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>                                    | PP has added the amount of water purifiers and ER estimates for each project instance in section 1.1 and section 1.11 of updated PD version 04.                                                                                                                                                                          |
| <b>VVB Assessment #2</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | PP has provided the revised PD which has been assessed by the validation team. Each project activity instance is clearly defined in section 1.1 and section 1.11 of the updated PD.<br>Hence, this finding is closed.                                                                                                    |
| <b>Conclusion</b><br><i>Tick the appropriate checkbox</i>                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                                                                                                                   |

| Finding                                                                                                                                                                | CL 09                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>                                                                                                                                                  | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                                                                                                                                                                                                                                                          |
| <b>Description of finding (VVB)</b>                                                                                                                                    | As per section 3.5 of the project description, project shall demonstrate additionality by simple cost analysis.<br><br>PP needs to provide the documentary evidence for the cost of the SDWPs systems.                                                                                                                                                                                                                    |
| <b>Corrective Action or clarification #1</b><br><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i> | PP would distribute water purifier free of cost to schools/institutions. This is demonstrated by beneficiary agreement (BA) between SIPCO and schools/institutions. Therefore PP has no other income from VER revenue. BA for the first project activity has been provided to DOE in the supporting document link and the equipment contact would be provided to DOE in email attachments for checking the cost of SDWPs. |

| Finding                                                                                                                                                                                                   | CL 09                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | <p>The validation team has assessed the beneficiary agreement and the equipment purchase agreement submitted by the PP. the validation team confirms that the provided evidence supports the information included in the project description.</p> <p>Hence, this finding is closed.</p> |
| <b>Conclusion</b><br><i>Tick the appropriate checkbox</i>                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                                                                                  |

| Finding                                                                                                                                                                                                   | CL 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>                                                                                                                                                                                     | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Description of finding (VVB)</b>                                                                                                                                                                       | <p>In section 4.4 of the project description, PP has stated the value of fraction of fuel type as 0.9403. However, how this value was calculated is not clear from the PD.</p> <p>PP needs to clearly mention the steps for calculating the parameter <math>f_i</math> in the PD.</p>                                                                                                                                                                                                                                                                                                                                         |
| <b>Corrective Action or clarification #1</b><br><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>                                    | <p>PP had to hire a specialized company for a geographic information system (GIS) is a system that creates, manages, analyses, and maps all types of data to calculate the parameter <math>f_i</math> in the PD. This cost PP several ten thousand USD and PP considered it as a high value asset. Therefore, PP considers this is confidential document including the data to calculate this parameter. As a result, PP only shared report and calculation sheet to VERRA and DOE in the supporting document file.</p> <p>PP has added formula to determine the parameter <math>f_i</math> in the updated PD version 03.</p> |
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | <p>PP has submitted the <math>f_{NRB}</math> report and calculation sheet. The validation team has assessed the supporting documents and confirms that the calculation of parameter <math>f_i</math> is as per the requirements.</p> <p>Hence, this finding is closed.</p>                                                                                                                                                                                                                                                                                                                                                    |

| Finding                                                   | CL 10                                                                                                                                                                                                  |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conclusion</b><br><i>Tick the appropriate checkbox</i> | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed |

| Finding                                                                                                                                                                                                   | CL 11                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>                                                                                                                                                                                     | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Description of finding (VVB)</b>                                                                                                                                                                       | <p>In section 5.1 of the project description, PP has justified the choice of data for the parameter <i>fi</i> by stating that, “For the wood fuel, the value established from “Calculation of the fraction of non-renewable biomass (<i>fNRB</i>) for Cambodia” report....”.</p> <p>Similarly in section 5.3 of the PD, PP states that, “Microbiological testing for parameter <i>m</i> and quality of safe drinking water will be established through an independent accredited laboratory in Cambodia”.</p> <ol style="list-style-type: none"> <li>1. PP needs to explain how the application of <i>fNRB</i> value from Cambodia report is justified, since the geographical boundary defined for this grouped project is limited to Viet Nam.</li> <li>2. PP needs to explain how methodology applicability condition (2), §4(b) is satisfied, which requires the project technology to be in compliance with national standard or guideline, considering that quality of safe drinking water will be established through an independent accredited laboratory in Cambodia.</li> </ol> |
| <b>Corrective Action or clarification #1</b><br><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>                                    | It is PP’s mistake in the writing process. PP has corrected in the revised PD version 03. The project boundary in Viet Nam, so all of data for the parameters belong to Viet Nam.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | PP has provided the revised PD. The validation team has assessed the revised PD and confirms that PP has corrected the typo errors. The project boundary is confirmed as Viet Nam.<br>Hence, this finding is closed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Finding                                                   | CL 11                                                                                                                                                                                                  |
|-----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conclusion</b><br><i>Tick the appropriate checkbox</i> | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed |

Table 2. CARs from this validation

| Finding                                                                                                                                                                                                   | CAR 01                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>                                                                                                                                                                                     | <input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                                                                                                                           |
| <b>Description of finding (VVB)</b>                                                                                                                                                                       | PP has stated the date of issue of the project description as "16/08/2022". However as per the project description template v 4.1, the date format should be "DD-Month-YYYY".<br>PP needs to revise the format of dates throughout the project description as per the VCS requirements.    |
| <b>Corrective Action or clarification #1</b><br><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>                                    | PP has revised the format of date as per template in the updated PD version 3                                                                                                                                                                                                              |
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | PP has provided the revised PD which has been assessed by the validation team. The validation team finds that the required change regarding the date format has not been made. PP needs to change the format of the date as per the VCS requirements.<br>Hence, this finding remains open. |
| <b>Corrective Action or clarification #2</b><br><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>                                    | PP has revised the format of date as per template in points missing from version 03                                                                                                                                                                                                        |
| <b>VVB Assessment #2</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | PP has provided the revised PD which has been assessed by the validation team. Date format has been revised as per the template requirement.<br>Hence, this finding is closed.                                                                                                             |
| <b>Conclusion</b><br><i>Tick the appropriate checkbox</i>                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                                                                                     |

| Finding               | CAR 02                                                                                           |
|-----------------------|--------------------------------------------------------------------------------------------------|
| <b>Classification</b> | <input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR |

| Finding                                                                                                                                                                                            | CAR 02                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description of finding (VVB)</b>                                                                                                                                                                | As per the project description template v 4.1, PP needs to state the estimated total GHG emission reductions and removals over the entire crediting period in section 1.1 of the project description.                      |
| <b>Corrective Action or clarification #1</b><br>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)                                    | PP has added the estimated total GHG emission reductions and removals in section 1.1 of the updated PD version 03.                                                                                                         |
| <b>VVB Assessment #1</b><br>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added. | PP has provided the revised PD. The validation team has assessed the updated PD and confirms that PP has stated the total GHG emission reductions and removals in section 1.1 of the PD.<br>Hence, this finding is closed. |
| <b>Conclusion</b><br>Tick the appropriate checkbox                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                     |

| Finding                                                                                                                                                                                            | CAR 03                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>                                                                                                                                                                              | <input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                                            |
| <b>Description of finding (VVB)</b>                                                                                                                                                                | PP needs to use latest version of all the VCS references, methodologies, and tools applicable to the grouped project.                                                                                       |
| <b>Corrective Action or clarification #1</b><br>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)                                    | PP has updated latest versions of all the VCS references, methodologies, and tools, which are used in the revised PD version 03                                                                             |
| <b>VVB Assessment #1</b><br>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added. | PP has used the latest version of VCS references, methodologies, and tools applicable to the grouped project. This has been checked and confirmed by the validation team.<br>Hence, this finding is closed. |
| <b>Conclusion</b><br>Tick the appropriate checkbox                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed      |

| Finding               | CAR 04                                                                                           |
|-----------------------|--------------------------------------------------------------------------------------------------|
| <b>Classification</b> | <input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR |

|                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description of finding (VVB)</b>                                                                                                                                                                | <p>As per the VCS project description template v 4.1, "Document how each equation is applied, in a manner that enables the reader to reproduce the calculation."</p> <p>PP needs to demonstrate how the values of following parameters were determined with reference to calculation of Baseline emissions.</p> <ol style="list-style-type: none"> <li>1. <i>X<sub>boil</sub></i></li> <li>2. <i>m</i></li> <li>3. <i>BL<sub>fuel,i</sub></i></li> <li>4. <i>EF<sub>project fossil fuel, i</sub></i></li> </ol> |
| <b>Corrective Action or clarification #1</b><br>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)                                    | PP has added demonstrations how the values of following parameters were determined with reference to calculation of Baseline emissions in Section 4.1 in the updated PD version 03                                                                                                                                                                                                                                                                                                                              |
| <b>VVB Assessment #1</b><br>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added. | PP has provided the revised PD. The validation team has assessed the updated PD and confirms that calculations of the subject parameters have been demonstrated appropriately.<br>Hence, this finding is closed.                                                                                                                                                                                                                                                                                                |
| <b>Conclusion</b><br>Tick the appropriate checkbox                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                                                                                                                                                                                                                                                                                                          |

| Finding                                                                                                                                                         | CAR 05                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                             |                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|------------------------------|
| <b>Classification</b>                                                                                                                                           | <input checked="" type="checkbox"/> CAR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input type="checkbox"/> CL | <input type="checkbox"/> FAR |
| <b>Description of finding (VVB)</b>                                                                                                                             | <ol style="list-style-type: none"> <li>1. PP needs to include Data/Parameter table for the parameter <i>q<sub>i</sub></i> (<b>capacity of equipment type i</b>) as per the applied methodology AMS-III AV. v08.0</li> <li>2. PP needs to state the appropriate source of data for ex-ante parameter <i>EF<sub>projected fossil fuel</sub></i> as prescribed in the applied methodology AMS-III AV. v08.0</li> </ol>                                                                                                                               |                             |                              |
| <b>Corrective Action or clarification #1</b><br>(PP shall write a detailed and clear corrective action or further information for clarification as per finding) | <ol style="list-style-type: none"> <li>1. According to para 17 as per the methodology AMS-III.AV version 08, to determine and monitor the quantity of purified water in a year, PP can choose 2 options (including option 2.1 and 2.2). Since PP has used Option 2.2, therefore PD would not include the parameter <i>q<sub>i</sub></i> (capacity of equipment type i)</li> <li>2. PD has provided the appropriate source of the parameter <i>EF<sub>projected fossil fuel</sub></i> in sub-section 4.1.8 in the updated PD version 03</li> </ol> |                             |                              |

|                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | 1. The justification provided by the PP is acceptable to the validation team. Hence, this part of the finding is closed.<br>2. The validation team finds that the source of ex-ante parameter <i>EFprojected fossilfuel</i> is rightly mentioned in the updated PD.<br>Hence, this finding is closed. |
| <b>Conclusion</b><br><i>Tick the appropriate checkbox</i>                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed                                                                                                |

| Finding                                                                                                                                                                                                   | CAR 06                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>                                                                                                                                                                                     | <input checked="" type="checkbox"/> CAR <input type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                                       |
| <b>Description of finding (VVB)</b>                                                                                                                                                                       | PP to use the latest VCS Project Description template (version 4.2).                                                                                                                                   |
| <b>Corrective Action or clarification #1</b><br><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>                                    | The updated PD version 03 has been used the latest VCS Project Description template (version 4.2).                                                                                                     |
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | PP has used the latest VCS project description template. Hence, this finding is closed.                                                                                                                |
| <b>Conclusion</b><br><i>Tick the appropriate checkbox</i>                                                                                                                                                 | <input type="checkbox"/> To be checked during the next periodic verification<br><input type="checkbox"/> Outstanding finding (not closed)<br><input checked="" type="checkbox"/> The finding is closed |

| Finding                             | CAR 07                                                                                                                                                                             |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Classification</b>               | <input type="checkbox"/> CAR <input checked="" type="checkbox"/> CL <input type="checkbox"/> FAR                                                                                   |
| <b>Description of finding (VVB)</b> | In PD section 4.1.2, mention the fNRB value. As this fNRB is estimated at the nation level. The PP needs to clarify if para 13 pf the CDM Tool 30 has been followed to cross check |

| Finding                                                                                                                                                                                                   | CAR 07                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <b>Corrective Action or clarification #1</b><br><i>(PP shall write a detailed and clear corrective action or further information for clarification as per finding)</i>                                    | <p>The resulting non-renewable biomass (NRB) value was compared with the top-down product of average above-ground biomass (62.71 t/ha) and the average annual deforestation rate (185,504 ha/year). NRB, as calculated in this report according to the latest CDM Tool 30, is 45,765,690 t/year, which is significantly greater than the cross-check results based on deforestation (11,632,954 t/year). It is expected that the cross-check estimate of biomass loss from deforestation would grossly underestimate the actual extent of non-renewable biomass consumption as it only considers the average biomass stocks from areas that are completely deforested. Unsustainable wood harvesting those results in forest degradation, and significant reductions in biomass stocks, but not complete deforestation are not considered in the cross-check. The fNRB calculation based on CDM Tool 30 is considered applicable for this study given that the CDM default per capita wood consumption for AMS-II.G. projects is applied, and non-domestic consumption (19,504,675 t/year) has been conservatively excluded.</p> <p>The information has also been illustrated on the FNRB report was made by the Third-Party Organization. The report was sent VVB in supporting document file.</p> |
| <b>VVB Assessment #1</b><br><i>The assessment shall encompass all open issues in the finding. In case of non-closure, additional corrective action and VVB assessments (#2, #3, etc.) shall be added.</i> | <p>The validation team has assessed the fNRB report provided and confirms that the justification is provided as per paragraph 13. An excerpt regarding the same has been included in the validation report.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Conclusion</b><br><i>Tick the appropriate checkbox</i>                                                                                                                                                 | <p><input type="checkbox"/> To be checked during the next periodic verification</p> <p><input type="checkbox"/> Outstanding finding (not closed)</p> <p><input checked="" type="checkbox"/> The finding is closed</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |