


**Validation report form for renewal of crediting period for
CDM project activities
(Version 03.0)**

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION

Title and UNFCCC reference number of the project activity	Production and dissemination of Ceramic Water Purifier by Hydrologic, in the Kingdom of Cambodia (GS1020)
Number and duration of the next crediting period	3 rd Crediting Period
Version number of the validation report	03
Completion date of the validation report	02/07/2025
Version number of PDD to which this report applies	12.1 Dtd. 28/06/2024 12.2 Dtd. 30/01/2025 12.3 Dtd. 27/06/2025
Project participants	Hydrologic Social Enterprise
Host Party	Kingdom of Cambodia
Applied methodologies and standardized baselines	Voluntary Gold Standard methodology: "Methodology for Emission Reductions from Safe Drinking Water Supply" Version 1.0 Publication Date: 03 May 2021.
Mandatory sectoral scopes	1 & 3
Estimated amount of annual average GHG emission reductions or GHG removals by sinks in the next crediting period	18,585 tCO ₂ e
Name and UNFCCC reference number of the VVB	Bureau Veritas India Pvt. Ltd.
Name, position and signature of the approver of the validation report	Sameer Pendse  General Manager – Global Schemes

SECTION A. Executive summary

Bureau Veritas has conducted the validation of the renewal of the crediting period of Production and dissemination of Ceramic Water Purifiers by Hydrologic, in the Kingdom of Cambodia (GS ID 1020), owned by Hydrologic Social Enterprise, which is located at #130A, St.430, Sangkat Tuol Tompong 2, Khan Chamkarmon, Pnom Penh, Kingdom of Cambodia on the basis of Gold Standard criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC and Gold Standard criteria refer to Article 12 of the Kyoto Protocol, the CDM as well as Gold Standard GS4GG, rules and modalities and the subsequent decisions by the Gold standard executive Board, as well as the host country criteria.

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design document and additional background documents; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion. The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas internal procedures.

During this validation there was no CAR, CL and FAR reported and hence no resolution is required.

In summary, it is Bureau Veritas opinion that the project correctly applies the baseline and monitoring methodology Voluntary Gold Standard methodology: "Methodology for Emission Reductions from Safe Drinking Water Supply" – Version 1.0, 3rd May 2021" and meets the relevant UNFCCC and Gold Standard requirements for the renewal of the crediting period.

SECTION B. Validation team, technical reviewer and approver**B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader	ER	Desai	Ram Madhukar	BV Brunei	X	X	X	X
2.	Local Interpreter	ER	Ms. Wat	NA	BV Brunei			X	
..	Technical Expert	IR	Palimisamy	Murugappan	BV Singapore	X			X
..	Financial/ Other Expert		NA	NA	NA				
..	Trainee		NA	NA	NA				

B.2. Technical reviewer and approver of the validation report for RCP

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical reviewer	ER	Patankar	Sanjay	BV India
...	Approver	IR	Pendse	Sameer	BV India

SECTION C. Means of validation**C.1. Desk/document review****METHODOLOGY**

The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas internal procedures.

In order to ensure transparency, a validation report is customized for the project, according to the GOLD STANDARD FOR THE GLOBAL GOALS - PRINCIPLES & REQUIREMENTS Version 1.2 /Ref-12/. The validation report shows, in a transparent manner, criteria (requirements), means of validation and the results from validating the identified criteria. The validation report serves the following purposes:

- It organizes, details and clarifies the requirements a Gold Standard project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

Review of Documents

The Project Design Document (PDD) submitted by Hydrologic Social Enterprise and additional background documents related to the project design and baseline were reviewed.

Furthermore, cross checks were made between information provided in the PDD and information from sources other than those used.

The validation conclusions presented in this report relate to the project as described in the PDD version 12.1/Ref-7/ and subsequent version of 12.2 /Ref-35/ & 12.3 /Ref-41/

C.2. On-site inspection

Duration of on-site inspection: 24/06/2024 to 26/06/2024				
No.	Activity performed on-site	Site location	Date	Team member
1.	- Visit To Hydrologic Factory – To assess the Production, Quality Control and legal requirements. - Visit to Province for Interview with Household to understand Baseline scenario.	Factory and households in Selected provinces	24/06/2024	Ram M. Desai
2.	- Visit to Province for interview with Household to understand Baseline scenario.	Households in Selected Provinces	25/06/2024	Ram M. Desai
3.	- To obtain Background information related to the Renewal of Crediting period of the Project activity. - PDD Review - Stake holder consultation and Feedback round outcomes - Baseline – including suppressed Demand and changes to the baseline since the start of 1 st crediting period - To check and conform the applicability of the selected approved methodologies to the project activity. - Project Technology and changes if any – i.e. Water Filter model design and changes - Additionality Assessment - Kitchen performance Test and Efficiency testing - SDG identification and assessment - Emission Reduction Calculation - SDG identification and assessment - Review of Monitoring plan - Review of Monitoring survey planning - Closing meeting to debrief the findings	Hydrologic Office in Phnom Penh.	26/06/2024	Ram M. Desai

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Mr. Bora		Hydrologic	24-26/06/2024	<ul style="list-style-type: none"> - To understand how PP has assessed to continuation of baseline scenario - To verify the Continuation of Additionality - To understand if any Supressed demand to be considered based on the changes in Baseline. 	Ram M. Desai
2.	Mr. Meng	Chanvibol Meng	Nexus Carbon For Development	24-26/06/2024		
3.	Ms. Mean	Sovanna	Nexus Carbon For Development	24-26/06/2025		
4.	Mr. Vong		Hydrologic	24/06/2024		
5.	Mr. Dual	Dy	Hydrologic	24/06/2024		
6.	Ms. Lach	Phal	Hydrologic	24/06/2024		
7.	Ms. Tho	Kasal	Hydrologic	24/06/2024	<ul style="list-style-type: none"> - Understand Manufacturing process of Ceramic water filter, - Understand QA /QC arrangements including the Microbial test performed periodically. - Understand HSE concerns - Labor welfare and PPE Provisions. - Payment made to Labors - Child Labor engagement - CWP manufacturing Records 	Ram M. Desai
8.	*	*	*Stakeholder	24 & 26/06/2024	To understand Baseline scenario i.e. without Hydrologic Filter how water is treated by Household using other methods and related contribution to SDG Impacts parameters i.e. Fuel usage, Time Spend on Fuel collection, Money spent on fuel / water purchase etc.	

*Names of Stakeholders interviewed during Site Visit are house hold owners who participated during baseline survey performed by the PP. The list of sampled Household owners is provided in in the Appendix 5 of this report and the questions asked to confirm the baseline conditions are listed in Section C.4 below.

C.4. Sampling approach

To ensure the accuracy and integrity of baseline estimation it is important to confirm that the information obtained by PD during baseline monitoring survey is reasonable and provides accurate inputs to establish Baseline without any biasness.

Validation Team has adopted a sampling approach to interview stakeholders to understand whether information gathered during validation site visit is representative of the Baseline survey. Validation team used Baseline_Data_Report_CP3_2024, /Ref-10/ excel sheet as basic inputs to draw samples.

A systematic sampling method was employed to verify the specified datasets, ensuring mitigation of any materiality threats. Additionally, a simple random sampling approach was utilized to select the dataset for verification, enhancing the robustness of the verification process.

VVB made the sampling plan for visiting Household during this verification using Simple random Sampling approach as specified in the CDM-EB67-A06-GUID, Version 4.0 "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities"/Ref-17/.

These sampling approaches found to be appropriate as the household in rural of Cambodia are generally homogenous.

As per EB67, Annex 06, Version 4.0 states that the Sample size calculation by Simple Random Sampling can be done using following formulae:

$$n \geq \frac{1.645^2 N \times p(1-p)}{(N-1) \times 0.1^2 \times p^2 \times 1.645^2 p(1-p)}$$

Where:

The Calculation made for determining the Sample size is provided in the following Table

Total number of Households involved in the Project activity using CWP (N)	150 [Total number of household included during baseline survey by PD.]
Our expected proportion (p)	90% *
Represents the 90% confidence required	1.645

Represents the 10% relative precision ($0.1 \times 0.5 = 0.05 = 5\%$ points either side of p)	0.1
Total Samples of household to be interviewed.	$\frac{1.645^2 \times 150 \times 0.9(1-0.9)}{(150 - 1) \times 0.1^2 \times 0.9^2 + 1.645^2 \times 0.9(1-0.9)}$
	Outcome = 25.186 – Sample to be Verified Rounded up to at least 26 Household.

During this validation there are no CL's, CAR and FAR's reported.

During Validation following questions were asked to obtain relevant information to cross check whether the data obtained during baseline survey is accurate and there is no biased data is found presented.

1. What is the source of drinking water for your household in the dry and rainy season?
2. What is the main source of water for other purposes, such as cooking and hand washing in the dry and rainy season?
3. If the HH is piped water users, what type of piped supply VVBs your household use?
4. How many hours per day is piped water supplied on average
5. If packaged water is the main source of drinking water, is water always available from your main water source?
6. Are you using Packaged Water / Bottled water - if yes From where you get water and How much You pay for water per Month?
7. Is the water used from the main source for drinking usually acceptable? If unacceptable, what is the reason?
8. Do you receive piped water for daily consumption/ household needs?
9. If piped water supply is not available then how much time you spend in getting water for household usage?
10. To make this water drinkable what treatment is used? i.e. Water Filter, or other method?
11. Are you boiling water during the dry and rainy season?
12. If you are boiling water, Which types of main stoves do you use most frequently for boiling water?
13. Which types of secondary stoves do you use most frequently for boiling water?
14. How often do you use each stove?
15. What is the main type of fuel do you use for boiling water in the dry and rainy seasons?
16. What is the secondary type of fuel do you use for boiling water in the dry and rainy seasons?
17. How often do you use each type of fuel?
18. How much money you spent on Fuel?
19. If you are using wood for boiling water, how do you obtain the wood (Purchase / collection)?
20. If collection of wood, then how much time you spent on the collection of wood?

On review of answers provided by each stakeholder found to be correct and is aligning with the data presented in the Baseline Survey Data Report (Baseline_Data_Report_CP3_2024)/Ref-10/

C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Area of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	0	0	0
Application and selection of methodologies and standardized baselines	0	0	0
Validity of original baseline or its update	0	0	0
Estimated emission reductions or net anthropogenic removals	0	0	0
Validity of monitoring plan	0	0	0
Crediting period	0	0	0
Project participants	0	0	0
Post-registration changes	0	0	0
Others (please specify)	0	0	0
Total	0	0	0

SECTION D. Validation findings

D.1. Compliance with PDD form

Means of validation	<p>PDD was completed correctly using the latest PDD template and guideline. PD has used current format of PDD available on the Gold Standard Website i.e. Project Design Document Form for GS Project Activities (KEY PROJECT INFORMATION & PROJECT DESIGN DOCUMENT (PDD)), v.1.5.</p> <p>PDD is found complete in all respect and as per the latest Guideline for completing the PDD. The Latest Revised PDD submitted by the PD is of Version 12.1 Dated 28/06/2024/Ref-7/, Version 12.2, Dated 30/01/2025/Ref-35/ and Version 12.3, Dated 27/06/2025 /Ref-41/.</p>
Findings	Nil
Conclusion	<p>PD has prepared revised PDD as per the guidance provided by the Gold Standard in the Lated Template and this is found inaccordance with</p> <ul style="list-style-type: none"> - Para 10.1.3 of the Core Document – Validation and Verification Standard V1.0. /Ref-13/

D.2. Eligibility of the project under Gold Standard

Means of validation	<p>PD has explained the eligibility of the project under Gold Standard in the PDD Section A.1.1 where PD has considered GS4GG Principles & requirements, Activity Requirement criteria. These conditions were assessed carefully and validation conclusion is provided in the following table.</p>																			
	<table border="1"> <thead> <tr> <th data-bbox="383 930 519 972">Eligibility Criteria</th> <th data-bbox="519 930 808 972">Requirement</th> <th data-bbox="808 930 1105 972">Project Developers Assessment</th> <th data-bbox="1105 930 1412 972">Validation Conclusion</th> </tr> </thead> <tbody> <tr> <td data-bbox="383 972 519 1440">(a) Type of Project</td> <td data-bbox="519 972 808 1440"> <p>Eligible Projects shall include physical action/implementation on the ground. Pre-identified eligible Project types are identified in the Eligibility Principles and Requirements section.</p> <p>3.1.1 Types of Project</p> <p>b) End-Use Energy Efficiency: Project activities that reduce energy requirements as compared to baseline scenario without affecting the level and quality of services or products where the end user of the products and services are clearly identified and when the physical intervention is required at the user end.</p> </td> <td data-bbox="808 972 1105 1440"> <p>Yes. The Project type is automatically eligible for Gold Standard Certification as there are Gold Standard approved Activity Requirements and/or Impact Quantification Methodologies associated with it (Methodology for Emission Reductions from Safe Drinking Water Supply)</p> <p>Yes. By providing safe water, the project activity reduces the energy requirements compared to the baseline scenario by ensuring that households consume less woody biomass through no longer needing to purify their water.</p> </td> <td data-bbox="1105 972 1412 1440"> <p><i>The project is found to be registered project and during this renewal of crediting period it was noted that PD has changed the methodology and changed methodology i.e., Voluntary Gold Standard methodology: "Methodology for Emission Reductions from Safe Drinking Water Supply" – , Version 1.0– 3rd May 2021 is applicable for the project activity. 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		if the Project Area overlaps with that of another Gold Standard or other voluntary or compliance standard programme of a similar nature, the project shall demonstrate that there is no double counting of impacts at design and performance certification (for example use of similar technology or practices through which the potential arises for double counting or misestimation of impacts amongst projects).	as described in section A.3 in the Project Area.	<p>through scanning of various Carbon Registry i.e. VCS, GCC as well as CDM and other country specific schemes, and it is confirmed that the project VVBs not seek registration with any registry except Gold Standard.</p> <p>Based on the above confirmation it is concluded that the project meets the eligibility condition for the Gold Standard Registration.</p>
	(d) Host Country Requirements	Project shall be in compliance with applicable host country's legal, environmental and social regulations.	<p>Yes. PD works with local government to ensure that the Project is implemented in line with relevant regulations.</p>	<p>During Validation Site visit validator checked applicable legal environmental and Safety requirements and it is confirmed that PD has obtained necessary permits to operate Kiln, Health and safety conditions i.e. provision of PPE, monitoring HSE performance, Ensuring Human Resource regulations are met i.e. Minimum Wage, labor welfare, child labor prevention etc. Based on the obtained permits and licenses it is confirmed that PD is complying these regulatory requirements and suitable monitoring is in place. During Validation no violation observed and hence it is concluded that Project activity meets this eligibility criteria for the Gold Standard Registration.</p>
	(e) Contact Details	As part of the Project Documentation the Project Developer shall provide (i) name and (ii) contact details of all Project Participants; AND in case of an organization (iii) the legal registration details and (iv) documentation by the governing jurisdiction that proves that the entity is in good standing (defined as being a legal or other appropriate entity registered in or allowed to operate within the required jurisdiction and with no evidence of insolvency or legal/criminal notices placed against it or any of its directors). Gold Standard retains the right (at its own discretion) to refuse use of the Standard where reputational concerns are highlighted.	<p>Yes. PD's details (i), (ii) and (iii) are provided in the Appendix 2 of this document and the submitted Business registration document.</p> <p>(iv): the PD business license and the Certificate of Tax payment (issued on 26/02/2024) are submitted together with this PDD prove that the entity is in good standing (defined as being a legal or other appropriate entity registered in or allowed to operate within the required jurisdiction and with no evidence of insolvency or legal/criminal notices placed against it or any of its Directors).</p>	<p>PD has provided suitable information in the PDD appendix 2 and it is found meeting the requirement, hence considered meeting eligibility condition.</p> <p>During Validation it is confirmed that PD is paying tax on time and has obtained periodic tax certifications from relevant authority and latest Tax certificate Dated 26/02/2024 is showing that PD has no due from past and hence considered that the entity is in compliance with local legal requirements. There are no litigations found reported against PD.</p>
	Community Service Activity Requirement	<p>3.1.3 Certain Impact Quantification methodologies allow projects to account Suppressed Demand scenario when establishing a baseline. In such cases, the application of Suppressed Demand baseline is limited to Small-Scale and Microscale Projects.</p> <p>Where a Suppressed Demand baseline is applied, it is not possible to 'stack' Gold Standard Certified Impact statements or Products as the definition of the baseline may be contradictory.</p>	<p>Yes. The proposed project is a small-scale project. Even though the project is applicable to apply a suppressed demand baseline for small-scale project according to the methodology, this project adopts no suppressed demand baseline to achieve the highest integrity.</p>	<p>Though the suppressed demand is not applied baseline determination is found to be conservative and it is not overestimating the baseline emission.</p>
	(f) Legal Ownership	Full and uncontested legal ownership of any Products that	<p>Yes. PD clearly communicated to the</p>	<p>PD has demonstrated the Legal ownership through Legal ownership of</p>

		are generated under Gold Standard Certification, (for example carbon credits) shall be demonstrated. Where such ownership is transferred from project beneficiaries this must be demonstrated transparently and with full, prior and informed consent (FPIC). Note that for certain Project types there is a requirement for full and uncontested legal land title/tenure to be demonstrated. These are contained within specific activity or product requirements. All projects shall immediately report to Gold standard any land title/tenure disputes arising.	stakeholders that PD will claim ownership rights at the stakeholder consultation since start of the project activity. In addition, the PD explains that the PD retains the rights of ownership of the GHG reductions to purchasers through sales and/ or thank you note documentation attached in operation manual of CWP.	<i>carbon credits through sales and Thank you Note attached in the Operation Manual of CWP and it is found readily available and valid.</i>
	(g) Other Rights	As well as legal title and ownership, the Project Developer shall also demonstrate where required uncontested legal rights and/or permissions concerning changes in use of other resources required to service the Project (for example, access rights, water rights etc.). Any known disputes or contested rights must be declared immediately to Gold Standard by the Project Developer and resolved prior to further Project implementation in affected areas.	Yes. PD will inform GS of any disputes.	<i>At the time of Validation Visit there was no dispute found recorded.</i>
	(h) Official Development Assistance (ODA) Declaration	All Project Developers applying for project activities located in a country named by the OECD Development Assistance Committee's ODA recipient list and seeking Gold Standard Certification for carbon credits shall declare the Official Development Assistance (ODA) support. The project developer shall follow the GHG Emissions Reduction & Sequestration Product Requirements and submit the declaration at the time of Design Certification.	Yes. PD has submitted a signed ODA Declaration.	<i>ODA is verified and found satisfactory and hence accepted.</i>
	Ongoing Finance Needs (OFN)	As per GS4GG principles & requirements, All Gold Standard Projects (including those that transition from earlier versions) required to demonstrate Financial Additionality.	Yes, In accordance with the Gold Standard Principle and Para 4.1.53 of the Requirement Document, the PD has included the information on OFN in the revised PDD, Section B.5.2. It has been observed that the percentage contribution of carbon revenue for ongoing finance is demonstrated by the PD, with an average of 22% carbon revenue secured during the 2022-2024 period. Additionally, the revenue earned through the sale of CWP accounts for 76%. Further it is also demonstrated that the ongoing finance need for covering the expenses to produce the CWP's and to maintain the subsidized cost under control and support household to maintain CWP's on continual basis to reduce the drop rates and ensure consistent usage rate are covered using carbon finance. This information has been demonstrated by the PD through appropriate accounting documents, which have been reviewed by the validation team to confirm the OFN claim.	<i>OFN Calculation is done by PD and transparently demonstrated the same using a spreadsheet.</i>

			Documents reviewed - Excel sheet OFN_GS1020_CP3 /Ref-38/ - Sales Records for the 2022 – 2024 /Ref-39/ - Audited account results for 2022 – 2024 /Ref-40/	
Findings	Nil			
Conclusion	<ul style="list-style-type: none"> - The information provided by PD in the PDD section A.1.1 found to be satisfactory and hence it is concluded that it meets following criteria. - Gold Standard eligibility criteria in Para 10.1.1 (a) & (e) of Core Document – Validation and Verification Standard, Version 1.0. /Ref-13/ - Section 3 & 4 of GOLD STANDARD FOR THE GLOBAL GOALS PRINCIPLES & REQUIREMENTS, Version 1.2. /Ref-12/ 			

D.3. Application and selection of methodologies and standardized baselines

Means of validation	<p>At the time of 1st registration and previous renewal of crediting period, project developer has used the following methodology:</p> <p>Voluntary Gold Standard methodology: “Technologies and Practices to Displace Decentralized Thermal Energy Consumption” Version 1.0– July 2015</p> <p>During this renewal of crediting period it is observed that PD has changed the application of methodology and applied “Methodology for Emission Reductions from Safe Drinking Water Supply” Version 1.0 Publication Date: 03 May 2021. This is confirmed through The Gold Standard Website where current version of methodology is found to be same i.e. Version 1.0, 3rd May 2021. (https://globalgoals.goldstandard.org/429-ee-sws-emission-reductions-from-safe-drinking-water-supply/)</p> <p>Thus, it is considered that the methodological conditions applicable to the project have remained unchanged since the initial registration.</p> <p>PD has described how project meets the applicability conditions of the selected revised methodology in PDD section B.2. During this validation of renewal of crediting period the applicability of the methodology was re-assessed based on the knowledge of the project from the initial validation, subsequent verifications and the confirmation from the Stakeholders engaged in the project activity. In conclusion, the project activity meets each of the applicability conditions of the methodology. It also meets all the other stipulations and limitations mentioned in the other sections of the methodology.</p> <p>The validation team hereby confirms the applicability of the methodology to the project:</p> <p>2.1.1 This methodology is applicable to project activities that introduce a new, or rehabilitate an existing, zero-emission or low-emission technology to supply safe drinking water. – <i>The project involves Manufacturing and distribution of Ceramic Water Filter to treat the water to make it safe for the drinking purpose and the treatment technology is easy and convenient which reduces the Kitchen Regime as intended by the Methodology and result in the reduction of emissions as there are no energy inputs required and hence it is considered Zero emission technology for supplying safe drinking water to the household. Hence it is confirmed that the methodology condition is met and there is no change in the technology since last renewal of crediting period.</i></p> <p>2.1.2 Technologies include household water treatment technologies (HWT), Institutional water treatment technologies (IWT), Community level water</p>
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- treatment technologies (CWT) and community water supply technologies (CWS). The methodology provides two sets of calculation methods and monitoring requirements, one set that applies to the HWT and IWT types of technologies, and another set that applied to the CWT and CWS types of technologies.- *Ceramic Water Filters used by the household are considered as household water treatment technology (HWT) and thus PP has applied related monitoring emission calculation methods and hence it is considered that project is meeting this methodological condition. This is confirmed using Factory site visit where detailed manufacturing process was verified and checked components used in assembly of the Water filter including its application.*
- 2.1.3 Under this Methodology, a project's objectives are to reduce or avoid greenhouse gas emissions from boiling unsafe drinking water in the baseline, and to supply drinking water that is safe for consumption when it enters the project households or institutional premises. When the drinking water is treated in the household or institution (HWT or IWT), then the water supplied from the treatment technology should be safe. When the water is supplied or retrieved from a CWT or CWS directly to the premises of the household or institution, then the water entering the end-user premises should be safe.- *The technology used for treating the drinking water provides safe drinking water. This is confirmed through Hydrologic Factory visit where detailed manufacturing of ceramic filter is verified and confirmed that the unique manufacturing process provides such a fine porosity of filter where microorganisms and physical impurity is filtered effectively, silver nitrate coating to the filter provides further assurance that all type microorganisms present in the source of drinking water are disinfected / killed and filtered. PP also conducts regular QA/QC by performing water quality test at Factory to confirm that the Coliform content in the treated water is meeting WHO water quality standard. Based on the verification of Microbial analysis it is confirmed that 95% time filters are passing the WHO Standard. Hence it is confirmed that the household Water Treatment technology (HWT) disseminated by the project is meeting the methodological condition consistently..*
- 2.2.1.a Eligible household water treatment technologies (HWT), institutional water treatment technologies (IWT), and community level water treatment technologies (CWT) include bleach/chlorine, water filter (ceramic, sand, composite, membrane, etc.), UV disinfection, etc. – *Project technology utilizes Ceramic water filter manufactured by PP at its own factory in Cambodia and hence it is confirmed that the technology disseminated by project is meeting methodological condition.*
- 2.2.1.b Eligible community water supply technologies (CWS) include new installation of new borehole hand-pumps, borehole hand-pumps rehabilitation, solar powered drinking water pumps, etc. Water pumps powered by fossil-fuel engines are not eligible, with the exception of backup fossil-fuel engines that are used for no more than 10% of operating hours (parameter SDWS 33).- *This methodological condition is not applicable as the project technology is of HWT type.*
- 2.2.1.c All projects involving CWT and CWS technologies must also include ongoing maintenance and repair of the project technology - *This methodological condition is not applicable as the project technology is of HWT type.*
- 2.2.1.d Where the project involves the rehabilitation of an existing technology, the project developer shall provide evidence that the existing technology is non-operational and that there is no planned maintenance or repair for at least 3 months after the date it became non-operational (parameter SDWS 2). – *Gold Standard Project uses Household Water Treatment Technology and this is continuously used since registration and hence there is no rehabilitation of an existing technology involved. Based on the performance of the project technology since registration it is concluded that this*

methodological condition is not applicable.

- 2.2.1.e This methodology allows for project activities to include safe water treatment and/or supply technologies implemented for end-users in households, and/or commercial premises such as shops or institutional premises including half or full day/boarding schools, prisons, army camps & refugee camps. *Based on the review of application of the household water treatment technology i.e. Ceramic water filter used for treating water to make it drinkable, it is confirmed that the project activity meets this methodological condition.*
- 2.2.1.f In cases where the safe water is retrieved at the CWT or CWS location, the water in its improved form shall be available within a distance of 1 km or less from the end-users, as demonstrated by satellite imaging or GPS coordinates⁵ of each CWT or CWS location. Alternatively, as a proxy, a total collection time of 30 minutes or less for a round trip, including queuing, using the travel modes of walking or pedaling may be demonstrated (parameter SDWS 1). *This methodological condition is not applicable as the project technology is of HWT type.*
- 2.2.1.g Project technology performance level (HWT and IWT): It shall be demonstrated based on report of laboratory testing or official notification that the project technology or equipment achieves either (i) the performance target classification 3-star or 2-star level, meaning “Comprehensive Protection,” as per the WHO International Scheme to Evaluate Household Water Treatment Technologies (World Health Organization, 2011) or (ii) compliance with the national standard or guideline for household drinking water treatment technology; if no national guideline or standard is available, then the project technology shall comply with the WHO International Scheme requirements as per (i) (parameter SDWS 2). *As mentioned above it is confirmed during Validation site visit to the factory unit that PP has established a QA/QC regime to conduct water quality test on regular basis i.e. every month for the sampled pots. Under this QA/QC regime influent and effluent water samples from Ceramic Water Filter pots are sent to an accredited lab to test E.coli content to demonstrate that every water filter manufactured is consistently meeting WHO drinking water quality norm specially for the microbial parameter as mentioned above. Based on the lab results it is concluded that 93 - 95% Pots are passing the test consistently, and hence it confirmend that the project technology performance level is meeting international drinking water norm and thus the project meets this methodological condition.*
- 2.2.1.h Project technology performance level (CWT and CWS): For each individual CWT or CWS, it shall be demonstrated at the start of each crediting period with water quality testing reports that the water directly supplied by the project water technology/source achieves both:
- i. microbial quality in line with either (i) national standards or guidelines for microbial quality of drinking water, or in the absence of such requirements, (ii) the guideline values for verification of microbial quality from the Guidelines for drinking-water quality (Table 7.10, WHO, 2017); and
 - ii. compliance with (i) national standards or guidelines on priority chemical contamination and physical and aesthetic aspects, or in the absence of such requirements, (ii) international standards or guidelines on priority chemical contamination and physical and aesthetic aspects- *This methodological condition is not applicable as the project technology is of HWT type.*
- 2.2.1.i The project must conduct annual water hygiene education campaigns for the end-users. (parameter SDWS 20). – *PP has establish an arrangement to conduct an annual water hygiene education campaigns for the end users and it is included in the monitoring plan appropriately, hence it is concluded*

	<p><i>that the project meets this methodological condition.</i></p> <p>2.2.1.j A project applying this methodology may make SDG claims if relevant monitoring parameter(s) is included in the monitoring plan to demonstrate and confirm the project's contribute to SDGs. See parameter SDWS 19. – <i>Based on the description provided in the revised PDD section B.6 it is confirmed that project as identified contribution towards SDG 13, SDG1, SDG3, SDG6, SDG7, SDG8 and SDG15 and established suitable monitoring arrangements against each SDG contribution and hence it is confirmed that project meets this methodological condition.</i></p>
Findings	Nil
Conclusion	<p>PD has described the eligibility of the methodological conditions, Applicable Tools and GS appendix 1 requirements correctly to demonstrate that Project is meeting these conditions, hence found in accordance with the following criteria</p> <ul style="list-style-type: none"> - GS4GG Principles and Requirements Version 1.2, Dtd. 24th October 2019./Ref-12/ - CORE DOCUMENT- Validation and Verification Standard V1.0 for Project activity (paragraph 7.3.1 and 7.3.2) /Ref-13/ - Voluntary Gold Standard methodology: "Methodology for Emission Reductions from Safe Drinking Water Supply" – , Version 1.0– 3rd May 2021. /Ref-15/

D.4. Validity of original baseline or its update

Means of validation	<p>Based on the information presented in the revised PDD Version 12.1 /Ref-7/ as well as subsequent version 12.2 Dtd. 30/01/2025 /Ref-35/, it is observed that PD has not changed the methodology during this renewal of crediting period. Previously PD was using Gold Standard approved methodology "Technologies and Practices to Displace Decentralized Thermal Energy Consumption" Version 1.0– July 2015", during this renewal of crediting period PD has used new methodology i.e., "Methodology for Emission Reductions from Safe Drinking Water Supply" – , Version 1.0– 3rd May 2021 as confirmed in the section D.3 above.</p> <p>The continued validity of the baseline and to update the baseline at the renewal of a crediting period was reviewed in detailed and VVB concludes that even though PD has changed the methodology during this renewal crediting period there is no impact the the baseline requirements and it is validated as give below.</p> <p>PD has explained the Baseline scenario using applied methodological conditions and this was validated as below.</p>			
	Methodology Para.	Baseline scenario	Baseline survey under this proposed project	Validation Conclusion
	3.4.1	For users that boil unsafe water for drinking in the pre-project scenario, the general baseline scenario is that users would have boiled water for drinking in the absence of the project activity.	The baseline survey was conducted with baseline households who did not own the CWP at time of surveying. The general baseline is established with the users who would have boiled water for drinking in the absence of the project activity.	<i>As required by the methodological condition para 3.4.1, baseline candidates shall be those households which are boiling water for drinking purpose. During baseline survey PD has appropriately applied this condition and selected only those houses which are boiling water and collected relevant information to estimate the Baseline emissions appropriately., hence it is confirmed that project activity meets the revised baseline assessment requirement.</i>
3.4.2	For household end-users currently drinking unsafe water, the principles of suppressed demand are applied, such that the general baseline scenario is assumed to be that users would have boiled water for drinking in the absence of the project activity. The suppressed demand baseline VVBs not apply to a large-scale project. A large-scale project can	Since the project is a small-scale project it is required to apply suppressed demand, however, only users that boil water in the pre-project scenario, are accounted under this proposed project, hence the baseline emissions estimated are conservative.	<i>The proposed project qualifies as a small-scale activity under the Gold Standard and applies the approved methodology "Emission Reductions from Safe Drinking Water Supply, Version 1.0." In accordance with the methodological requirements, the concept of suppressed demand is applicable to reflect the legitimate need for water treatment services, even where such services were not previously accessible or utilized.</i>	

		<p>only account the users that boil water in the pre-project scenario. The suppressed demand baseline may be applied for institutional end-users, except where the institution is connected to a public distribution network (PDN) that supplies safe drinking water - unless justified that supplied water quality VVBsn't meet safe water definition (parameter SDWS12).</p>	<p><i>However, for the purpose of ensuring conservativeness, the project proponent has restricted the baseline scenario to include only those users who reported boiling water in the pre-project situation. By not accounting for users who did not previously treat their water—despite the recognized public health need—the project applies a conservative baseline approach. This ensures that the emission reductions are not overstated while still acknowledging the methodological provisions for suppressed demand.</i></p> <p><i>This approach is in line with Section 3.1 of the methodology, which allows for the application of suppressed demand while requiring conservative assumptions and credible evidence. Hence, the baseline emissions estimated for this project are considered conservative and in full compliance with the applicable Gold Standard requirements.</i></p>
<p>As per the GS4GG Principles & Requirements Para 5.1.4.7 c & d it is required to validate the validity of the original baseline or its update. In order to confirm this VVB has applied Methodological TOOL 11 “Assessment of the validity of the current/original baseline and update of the baseline at the renewal of the crediting period” Version 03.0.1 (Annex 47 EB 66), an assessment of the continued validity of the baseline is performed in steps as follows:</p> <p>Step 1: Assessment of the validity of the current baseline for the next crediting period</p> <p>As per the Core Document – Validation and Verification Standard v1.0, Para 10.1.4. a , it is required to assess The impact of new relevant national and/or sectoral policies and circumstances on the baseline(s), taking into account relevant GS guidance (as available) at the time of requesting design certification renewal of the project. The validity of the current baseline is assessed using the following Sub-steps.</p> <p>Step 1.1: Assessment of the compliance of the current baseline with relevant mandatory national and/or sectoral policies (Annex 47, EB 66)</p> <p>The current baseline remains the same as it was in the registered PDD. There have been no changes in the relevant national or sectoral policies since the registration of the earlier PDD that could impact the baseline scenario.</p> <p>The validation team confirms that project activity is not bound by any national or state government mandatory policy and is a voluntary activity of the project participant.</p> <p>The validation team hereby concludes that the selected baseline scenario is in compliance with the relevant mandatory national and / or sectoral policies for the project activity.</p> <p>Step 1.2: Assessment of the impact of the circumstances (Annex 47, EB 6)</p> <p>The policies and circumstances applicable at the time of requesting the renewal of the crediting period have remained the same as they were at the time of the project activity's registration. The baseline scenario identified during the initial validation of the project activity remains the same: i.e., existing kitchen practice of treating water for drinking by boiling it on stoves using high-emission fuels, including non-renewable biomass and fossil fuels such as LPG and kerosene..</p>			

During the validation of the CP3 renewal, it was observed that the PD has applied the new methodology, i.e., 'Emission Reductions from Safe Drinking Water Supply' Version 1.0. According to Para 3.4.1 of this methodology, the baseline scenario is almost identical to the previous methodology applied i.e., "Technologies and Practices to Displace Decentralized Thermal Energy Consumption" Version 3.0– July 2015: "for users who boil unsafe water for drinking in the pre-project scenario, the general baseline scenario is that users would have continued boiling water for drinking in the absence of the project activity".

Based on this it is conformed that there is no material impact of the circumstances and methodological requirement on the baseline scenario identified earlier.

The PD conducted a baseline survey in November 2023, and it was found that the survey design and implementation comply with the SDWS methodology applied by the PD during this renewal of the crediting period. During the baseline survey, the PD sampled households that do not have ceramic water filters and are boiling water for drinking.

During Survey PD has used a relevant questionnaire **/Ref-11/** to gather relevant information which is useful to estimate baseline and project emissions. Survey methods and practice found satisfactory and meeting the requirement of applied methodology including sampling requirement. Survey information gathered through questionnaire **/Ref-11/** is compiled in the excel sheet to perform the analysis and trending of the fuel consumption and other key parameters done satisfactorily and presented in the form of excel tool "Baseline_Data_Report_CP3_2024/**Ref-10**".

Validation Team further does the comparison of the Fuel usage data for the boiling of drinking water during this renewal of crediting period and previous crediting period and it is concluded that there is a marginal change as presented in the below comparison table.

Fuel Type	Improved Stove		Traditional Cook Stove		LPG		Electricity		Biogas Stove		Total	
	3rd Renewal of Crediting Period	2nd Renewal of Crediting period	3rd Renewal of Crediting Period	2nd Renewal of Crediting period	3rd Renewal of Crediting Period	2nd Renewal of Crediting period	3rd Renewal of Crediting Period	2nd Renewal of Crediting period	3rd Renewal of Crediting Period	2nd Renewal of Crediting period	3rd Renewal of Crediting Period	2nd Renewal of Crediting period
Wood	11.25%	11.26%	56.88%	56.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	68.13%	68.18%
Charcoal	1.25%	0.87%	3.13%	5.19%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.38%	6.06%
LPG	0.00%	0.00%	0.00%	0.00%	18.75%	19.91%	0.00%	0.00%	0.00%	0.00%	18.75%	19.91%
Electricity	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.50%	0.87%	0.00%	0.00%	7.50%	0.87%
Agricultural Waste + Animal Waste	0.00%	0.87%	0.00%	4.11%	0.00%	0.00%	0.00%	0.00%	1.25%	0.00%	1.25%	4.98%
Total	12.50%	12.99%	60.01%	66.23%	18.75%	19.91%	7.50%	0.87%	1.25%	0.00%	100.00%	100.00%
Conclusion on Continuation of Baseline Scenario	Marginal Changes in the fuel usage for boiling of drinking water were observed since last renewal of crediting period, which indicates that the baseline scenario is still valid and credible.											

Note: data for 2nd Crediting period is obtained from the last revised PDD during 2nd Renewal of Crediting period. The validation team hereby concludes that the selected baseline at the time of the registration of the PDD is still valid and applicable at the time of the renewal of the 3rd crediting period.

Step 1.3: Assessment of the continuation of use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested (Annex 47, EB 66)

As per registered PDD, and as described in Annex 3 of the methodology, the baseline scenario is the existing kitchen practice of treating water for drinking by boiling it on stoves using high emission fuels including non-renewable biomass and fossil fuels such as LPG, Kerosene. And this is confirmed during Validation Site visit and through previous verification records. PP has done Baseline survey during November 2023. This survey was done by an independent agency. The report submitted by survey agency was verified during this validation and found that the outcomes are transparently provided in detailed report and PP has utilized data obtained through this research to arrive at Emission Calculations.

There is no change in the Baseline situation including the Hydrologic Factory where PD is manufacturing Ceramic Filters.

Step 1.4: Assessment of the validity of the data and parameters (Annex 47, EB 66) Based on the review of Revised PDD and registered PDD it was noted that there few parameters which are changed either due to changes in the baseline situation (i.e. Fuel Usage) and based on the application of latest revise Methodology. However it is noted that there is no impact to the baseline seen due to the change in the values of following parameters.

Parameter	At Validation	At Renewal of 2 nd Crediting period	At Renewal of 3 rd Crediting period	Unit	Conclusion	
Ex-Ante Parameters						
x_f (SDWS 8) Percentage of fuel f use in target population	NA	NA	Values applied are provided in conclusion column	%	Type of stove and fuel	% of stove/fuel (x_f)
					Traditional Stove Users with wood	8.75%
					Other Convection Stove Users with wood	48.13%
					Improved Stove Users with wood	11.25%
					Traditional Stove Users with charcoal	0%
					Other Convection Stove Users with charcoal	3.13%
					Improved Stove Users with charcoal	1.25%
					Others (LPG)	18.75%
Above values are determined from the baseline survey/Ref-10/ report which are found transparent and hence acceptable. This parameter is prescribed in the newly applied methodology and hence this was not applicable for previous crediting periods.						
$EF_{b,t,CO2}$ (SDWS 9) CO2 emission factor from use of fuels	Wood – 112.00 Charcoal – 112.00	Wood – 112.00 Charcoal – 112.00	Wood – 112.00 Charcoal – 165.22	tCO2e/TJ	Default value from IPCC AR5 GWP applied./Ref19/	
$EF_{b,f,nonCO2}$ (SDWS 10) Non-CO2 emission factor from use of fuels, in case the baseline fuel is biomass or charcoal	Wood:8.69 Charcoal: 5.30	Wood:8.69 Charcoal: 5.30	Wood:9.46 Charcoal:44.83 (includes production emissions of CH4 and N2O)	tCO2e/TJ	Default value from IPCC – AR5 GWP applied./Ref19/	
Total Energy Saving (TJ) (SDG 7)	NA	NA	842.00	TJ	Estimated Energy Saving Bssed on the Bseline monitoring from fuel save i.e. Wood, Charcoal and LPG.	
η_{wdb} (SDWS11) Weighted average efficiency of the baseline water boiling devices. Calculate the weighted average of the water boiling efficiency in the project boundary using the proportion of different stove types used and the stove efficiencies.	NA	NA	Three Stone – 10% Other woody – 20% ICS-30% Other (LPG) – 50%	%	This parameter is prescribed by newly applied methodology and hence this was not applicable during previous crediting periods. Ex-Ante values presented in the PDD are the default values obtained from IPCC and AMS III.V Version 5 and hence found reasonable and applicable.	
C_b (SDWS12) A proportion of project end-users who in the baseline were already using safe water, either from an improved water source, or from a water treatment method other than boiling.	NA	NA	21.69	%	Calculated based on the baseline survey result and water quality test result conducted in Cambodia	
q_f (SDWS 13) Capacity of the household or institutional water treatment technology	NA	NA	3.25	Liters per hour	Based on the Hydrologic Test results and Technical specifications of the ceramic Water filter.	
NCV_f (SDWS 14) Net calorific value of fossil fuel f	Wood = 0.015 Charcoal = 0.030	Wood = 0.015 Charcoal = 0.030	Wood = 0.0156 Charcoal = 0.0295 LPG = 0.0473	TJ/tonne	IPCC (2006) "IPCC Guidelines for National Greenhouse Gas Inventories", Volume 2, Energy, Chapter 1, Introduction, Table 1.2, p 1.18/Ref-34/	
Boiling factor (SDWS 19) The percentage of end-users boil water in pre-project scenario as detail in section B.4 of PDD.	NA	NA	53.33%	%	This parameter is prescribed by newly applied methodology and hence this was not applicable during previous crediting periods. However, during previous crediting period PD used Cj and Xboil parameters.	

$f_{NRB,f,y}$ (SDWS 21) Non-renewability of woody biomass fuel in year y in baseline scenario	0.7328	0.9297	0.20	Fraction	The f_{NRB} was assessed by employing the guidance provided in the methodological Tool 30 calculation of the fraction of non-renewable biomass, version 04.0 (CDM Tool 30 v.4.0). Ref-18/ Detailed Validation conclusion on the determination of f_{NRB} value is provided in the Section D.5 of this validation report. PD has applied Default Value sourced from CDM Tool 33 "Default values for common parameters", Version 0.3.0 / Ref-36/ .
C_j Portion of users of the project technology j who in the baseline were already consuming safe water without boiling it	2.60%	25.97%	NA	Fraction	This parameter is not required to be monitored as per the revised Methodology and hence excluded by PD from monitoring plan.
$EF_{b,wood,nonCO2}$ / $EF_{p,wood,nonCO2}$ Non-CO2 emission factor arising from use of fuels in baseline/project scenario	7.54	8.69	This is presented above under parameter $EF_{b,f,nonCO2}$ (SDWS 10)	tCO2e/TJ	It is calculated based on the latest GWP values for Methane & N ₂ O obtained from IPCC Guidelines for National Greenhouse Gas Inventories", Volume 2, Energy, Chapter 2, Stationary Combustion, Table 2.5. Found correct and satisfactory. This value shall be used for the Calculation of Baseline emissions and project emissions.
$EF_{b,charcoal,non-CO2}$ / $EF_{p,charcoal,non-CO2}$ Non-CO2 emission factor arising from use of fuels in baseline scenario	4.51	5.30	This is presented above under parameter $EF_{b,f,nonCO2}$ (SDWS 10)	tCO2e/TJ	It is calculated based on the latest GWP values for Methane & N ₂ O obtained from IPCC Guidelines for National Greenhouse Gas Inventories", Volume 2, Energy, Chapter 2, Stationary Combustion, Table 2.5. Found correct and satisfactory. This value shall be used for the Calculation of Baseline emissions and project emissions.
$EF_{b,LPG,CO2}$ / $EF_{p,LPG,CO2}$	NIL	63.10	This is presented above under parameter $EF_{b,f,nonCO2}$ (SDWS 10)	tCO2e/TJ	Newly Added Parameter for Baseline Fuel during last crediting period. Based on the current changes and availability of LPG in some areas
$EF_{b,LPG,non-CO2}$ / $EF_{p,LPG,non-CO2}$	NIL	0.1548	This is presented above under parameter $EF_{b,f,nonCO2}$ (SDWS 10)	tCO2e/TJ	Newly Added Parameter for Baseline Fuel during last crediting period. Based on the current changes and availability of LPG in some areas.
$NCV_{b,LPG}$ / $NCV_{p,LPG}$	NIL	0.047	This is presented above under parameter NCV_f (SDWS 14)	TJ/ton	Newly Added Parameter for Baseline Fuel during last crediting period. Based on the current changes and availability of LPG in some areas
Ex-Post Parameters					
$M_{q,y}$ (SDWS 18) Ongoing water quality indicated as the fraction of the samples that pass microbial quality standard	NA	NA	93%	%	For ex-ante estimation, the PD applied rate of 93% from CP2-MP6 for water quality test. During future verifications, the PD will conduct the Water quality test required by the approved methodology applied by the the PD, hence it is found satisfactory. Annual testing of the water quality at the user point shall be done using accredited laboratory for E. Coli.
$Q_{p,y}$ Revised Parameter QPW_p (SDWS 24)	1.46	1.63	4.0	Litres per person per day	PD has applied this value based on the baseline survey, it is observed during survey that all households are full-day premises and hence applied default value is 4L/person/day is acceptable and found realistic. This value shall be monitored every two year during project survey / monitoring survey.
$Q_{p,cleanboil,y}$ Revised Parameter $X_{cleanboil,y}$ (SDWS 22)	0.01	0.05	0.10	Percentage (%)	During previous crediting period it was observed that the applied value against this parameter is based on the data from the last WCFT conducted in 2016. During this renewal of CP for ex-ante estimation of this parameter, the PD applied rate of 10% for amount of safe water boiled. During future verifications, the PD will conduct the project survey as required by the methodology to monitor the value. This approach found accepted.
$HN_{p,y}$ (SDWS 25) Number of individuals per premises type p in the project boundary in year y	NA	NA	4.39	Number	For ex-ante estimation, the PD use the data of 4.39 people/household as resulted from the baseline survey.
$N_{p,y}$ Revised Parameter $N_{p,y}$ (SDWS 28) Accumulated number of premises type p with at least one individual project technology in year y	2,197	1,875.74	48,159	Number	Forecasted Value applied here; however, PD has provided a detailed table and forecasted sales number during entire crediting period i.e. 30/11/2024 – 30/11/2028.
$U_{p,y}$ (SDWS 29) The usage rate of the project technology by premises type p during year y to be filled in tab "ER schedule per month"	To be Monitored	To be Monitored	To be Monitored	%	For ex-ante estimation, the PD applied the usage rates from the most recent monitoring survey (CP2-MP6). For ex-ante estimation, the usage rate of age groups which are more than 5 years old are assumed to be zero (0%). During future verifications, the PD will conduct the Usage survey as required by the methodology.

$t_{D,y}$ (SDWS 30) Usage time of the project technology by premises type p in year y	NA	NA	7	Hours Per Day	This parameter is prescribed by newly applied methodology and hence this was not applicable during previous crediting periods.
$DP_{D,y}$ (SDWS 31) Average days the project technology is present for end-users in the premises p in year y	NA	NA	365	Days	This parameter is prescribed by newly applied methodology and hence this was not applicable during previous crediting periods.
$DN_{D,y}$ (SDWS 32) Average number of individual project technologies in each project premises type p in year y			1	Number	This parameter is prescribed by newly applied methodology and hence this was not applicable during previous crediting periods.
LE_y (SDWS 35) Leakage emissions during year y	NA	0.010	0	tCO2e per year / unit of CWP	PD has assumed the value as Zero, this ex-ante evaluation stage due to sources of leakage. However, the actual LPG and diesel consumption will be monitored and assessed during project monitoring surveys and the monitored value shall be used for estimation of Leakage emissions.
Cost saving from buying wood (SDWS 19) – The expenditure saved from buying wood in the project activity	NA	NA	817,211	USD	This parameter was not used during previous crediting period however PD was monitoring it separately to demonstrate SDG contributions. During this Crediting period PD has specifically incorporated this parameter in the monitoring plan and it shall be monitored during monitoring period.
Unit cost of fuel (SDWS 19) – The cost of fuel (wood, charcoal, and LPG) that end-users need to pay	NA	NA	Unit cost of -wood = 35 -charcoal = 350 -LPG = 994.85	USD/tonne	This parameter was not used during previous crediting period however PD was monitoring it separately to demonstrate SDG contributions. During this Crediting period PD has specifically incorporated this parameter in the monitoring plan and it shall be monitored during monitoring period.
Cost saving from buying charcoal (SDWS 19) The expenditure saved from buying charcoal in the project activity	NA	NA	421,574	USD	This parameter was not used during previous crediting period however PD was monitoring it separately to demonstrate SDG contributions. During this Crediting period PD has specifically incorporated this parameter in the monitoring plan and it shall be monitored during monitoring period.
Cost saving from buying LPG (SDWS 19) The expenditure saved from buying LPG in the project activity	NA	NA	1,571,393	USD	This parameter was not used during previous crediting period however PD was monitoring it separately to demonstrate SDG contributions. During this Crediting period PD has specifically incorporated this parameter in the monitoring plan and it shall be monitored during monitoring period.
% of household purchasing fuels (SDWS 19) The percentage of household purchasing fuels in pre-project scenario	NA	NA	Wood = 50% charcoal = 90% LPG = 100%	%	This parameter was not used during previous crediting period however PD was monitoring it separately to demonstrate SDG contributions. During this Crediting period PD has specifically incorporated this parameter in the monitoring plan and it shall be monitored during monitoring period.
% of project population avoided from using polluting fuels (SDWS 19)	NA	NA	72.51	%	This parameter was not used during previous crediting period
Number of populations using safely managed drinking water services (SDWS 19)	NA	NA	378,023	Number	This parameter was not used during previous crediting period
Total number of jobs created (SDWS 19) Total number of jobs created in project activity	NA	NA	100	Staffs	This parameter was not specificall included in the monitoring plan however it was monitored and reported during each monitoring period to demonstrate contribution towards Social indicator.
Amount of GHGs emissions avoided		84,706	18,585	tCO2e	During this renewal of CP it was observed that the GHG emissions avoided are found to be reduced and this because of reduction in sales of CWP.
Forest areas saved (SDWS 19)	NA	NA	48	ha	Due to the change in the fNRB value, there is significant change in the estimation of forest area saving is noticed. At the time of Validation site visit PD applied 0.9297 as fNRB value (Which was estimated Value), later based on the GS review comment PD applied Default value from latest Methodological Tool 33 /Ref-36/, which prescribes 0.20 as the default fNRB value for Host country Cambodia. This change is found conservative and acceptable as per Methodological Tool 30 /Ref-18/.
Hygiene Campaigns (SDWS20)	-	Yes	74,079 Number of people will be covered on annual basis	Annual Hygiene Campaign	This is included in the monitoring plan. The details of the methods for campaign are provided in the PDD section B.7.2.

	<p>Conclusion on step 1 Validation team herewith confirms that the current baseline is still valid as per the latest methodology “Voluntary Gold Standard methodology: “Methodology for Emission Reductions from Safe Drinking Water Supply” ” Version 1.0– 3rd May 2021”</p> <p>Step 2: Update the current baseline and the data and parameters (Annex 47, EB 66)</p> <p>Step 2.1: Update the current baseline Not applicable, since the original baseline scenario where thermal energy is used for boiling of water using fossil fuel and biomass is still continued and is in accordance with the new applied methodology para 3.4.1 hence it is considered valid.</p> <p>Step 2.2: Update the data and parameters The parameters described under step 1.4 above which were determined at the start of the crediting period and not monitored during the crediting period have been updated in accordance to the latest versions of Voluntary Gold Standard methodology: “Methodology for Emission Reductions from Safe Drinking Water Supply” – Version 1, 3rd May 2021”.</p>
Findings	Nil
Conclusion	<p>Based on the above validation it is concluded that PD has explained the validity of the original baseline in relation to the newly applied methodology appropriately and it is found to be in accordance with following criteria</p> <ul style="list-style-type: none"> - Para 10.1.4 of the Core Document – Validation and Verification Standard V1.0 /Ref-13/ - Voluntary Gold Standard Methodology: “ Methodology for Emission Reductions from Safe Drinking Water Supply”- Version 1, 3rd May 2021 /Ref-15/ - Para 5.1.4.7 of GOLD STANDARD FOR THE GLOBAL GOALS PRINCIPLES & REQUIREMENTS, Version 1.2/Ref-12/ - CDM Methodological TOOL 11: “Assessment of the validity of the current/original baseline and update of the baseline at the renewal of the crediting period” Version 03.0.1 (Annex 47 EB 66) /Ref-16/ - Previous registered PDD during 2nd Renewal of Crediting period /Ref-2/

D.5. Estimated emission reductions or SDG Impacts

Means of validation	<p>Baseline Emission Baseline Emissions for the project activity is calculated using Eq.3 from the approved methodology “METHODOLOGY- Emission reductions from Safe Drinking Water Supply v.1.0”/Ref-15/,</p> $BE_y = EF_b \times (1 - C_b - X_{cleanboil,y}) \times Q_y \times M_{q,y} \quad Eq. 3$ <p>Where:</p> <p>BE_y = Baseline emissions from the use of fuel to obtain safe water in the baseline (tCO₂e)</p> <p>C_b = Proportion of project end-users who in the baseline were already using a safe water supply that did not require boiling (%)</p> <p>$X_{cleanboil,y}$ = Proportion of project end-users that boil safe water in the project year y (%)</p> <p>Q_y = Quantity of safe drinking water provided by the project in year y (L)</p> <p>$M_{q,y}$ = Modifier for the water quality in year y</p> <p>In the above equation there are two parameters which needs to be estimated based</p>
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on the survey information / data i.e. EF_b and Q_y to estimate these parameters PD has used Equation 1 and Equation 3 respectively. The application of these equation are found correct and the calculation approach is found transparently shown in the ER Spreadsheet tab “BE per unit” this is found satisfactory and hence acceptable. Formula used for estimating Baseline Emission factor is explained below.

$$EF_b = SE_{w,b,y} \times \sum (x_f * (EF_{b,f,CO2} * f_{NRB,f,y} + EF_{b,f,nonCO2})) \div 10^9 \quad \text{Eq.1}$$

Where:

EF_b	= Emission factor for the use of fuel to obtain safe water in the baseline (tCO ₂ e/L)
$SE_{w,b,y}$	= Specific energy required to boil water (kJ/L), to be calculated as per the paragraph below
x_f	= Proportion of fuel f used in the baseline (fraction determined based on an energy basis)
$EF_{b,f,CO2}$	= CO ₂ emission factor from use of fuel f (tCO ₂ /TJ)
$EF_{b,f,nonCO2}$	= Non-CO ₂ emission factor arising from use of fuel f, when the baseline fuel f is biomass or charcoal (tCO ₂ e/TJ). This parameter is omitted when f is a fossil fuel.
$f_{NRB,f,y}$	= Fractional non-renewability status of woody biomass fuel during year y (fraction). For biomass, it is the fraction of woody biomass that can be established as non-renewable. This parameter is omitted when f is a fossil fuel.
f	= Index for baseline fuel types

Specific Energy required to boil water using baseline technology ($SE_{w,b,y}$) is estimated using following methodological formula (Equation 2) and this is found satisfactory.

$$SE_{w,b,y} = 360.83 / \eta_{wb}$$

Where:

360.83	= Default amount of energy required to obtain 1 L of water after 5 minutes of boiling from a first principles approach 22 kJ/l
η_{wb}	= Efficiency of the stoves for baseline water boiling (%). Weighted average of baseline stove types.

The Project Developer (PD) has determined the fraction of non-renewable biomass (fNRB) using the Methodological Tool 33: “Default values for common parameters” (Version 03.0) **/Ref-36/** by applying the default value approach. In accordance with the applicable methodology, the PD has selected the ex-ante option, whereby the fNRB value is fixed for the entire duration of the crediting period and reported under the “Data and Parameters Fixed ex-ante” section of the Project Design Document (PDD).

In line with Tool 33 **/Ref-36/** provisions, the PD has adopted an fNRB value of 0.20 for the host country, Cambodia, which corresponds to the default value provided in the approved tool. This selection is deemed appropriate and consistent with the requirements set forth under both the Gold Standard and CDM frameworks for the application of default parameters.

To estimate quantity of safe drinking water provided by the project (Q_y) is estimate using Method 2 - HWT and IWT Technologies as explained in the methodological para 3.6.7 using equation 6

$$Q_y = \sum N_{p,y} \times U_{p,y} \times QPW_{hh,p,y} \times DP_{p,y} \quad \text{Eq 6}$$

Where:

$N_{p,y}$	= Number of premises type p with at least one project technology in
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$U_{p,y}$ = Usage rate of the project technology by premises type p during year y (%)
 $QPW_{hh,p,y}$ = Volume of drinking water per premises p per day in year y (L)
 $DP_{p,y}$ = Days the project technology is present for end-users in the premises p in year y

The volume of drinking water per premises per day is determined by considering whether the capacity of the project device is sufficient to provide at least the default amount of drinking water, as follows:

$$QPW_{hh,p,y} = \min((q_i \times t_{p,y} \times DN_{p,y}), (QPW_p \times HN_{p,y}))$$

Where:

q_i = Capacity of the HWT or IWT individual project technology (L/h)
 $t_{p,y}$ = Usage time of the project technology by premises type p in year y (h/day)
 $DN_{p,y}$ = Average number of individual project technologies in each project premises type p in year y
 $HN_{p,y}$ = Number of individuals per premises type p (e.g. household, school) in year y
 QPW_p = Volume of drinking water per person per day for premises type p (L). Apply the default value or monitored value through water consumption field tests in the project scenario, capped at 5.5 L per person per day.

Project emissions

There is neither fossil fuel nor electricity will be required while using CWP and hence PD has estimated that project emission as zero. Based on the design of the CWP and operations of CWP it is confirmed that PD's claim is correct and acceptable.

Leakage Emission (LE_y)

PD has assessed three possible sources of leakages in project context i.e.

- *Members of the population who do not participate in the project, and previously used lower emitting energy sources, instead use the non-renewable biomass saved under the project activity.*
- *The project significantly reduces the NRB fraction within an area where other GHG mitigation project activities account for NRB fraction in their baseline scenario.*
- *The project population compensates for loss of the space heating effect of water boiling by adopting some other form of space heating or by retaining some baseline wood fuel-burning practices.*

All these sources found to be unlikely resulted in the leakages and hence it is considered that there is no leakages to be accounted. This decision is found in accordance with the methodological Para 3.8.1, 3.8.2 and 3.8.3 and hence found acceptable.

Ex-ante value applied by PD in the PDD section B.6.1 is

LE_y = 0.0

Emission reductions (ER_y)

Emission reductions are calculated using following formulae

$$ER_y = BE_y - PE_y - LE_y$$

Emission Reduction thus calculate per Filter is presented in the PDD as

$$ER_y = 18,585 \text{ tCO}_2\text{e per year}$$

The validation team has verified the spreadsheet for the calculation of the emission reductions as well as SDG Contributions provided by the project Developer and is able to confirm the estimated emission reductions is correctly calculated.

Apart from Estimation of Emission Reductions PD also has demonstrated the approach towards estimation of SDG Impacts. The formulae applied for estimation of SDG impacts verified in detailed and the validation conclusion is provided in the below table.

SDG Goals and Corresponding Targets to which Project contributes to sustainable development	Validation of Identified indicators and Estimation Approach
Goal 13: Climate Action (mandatory) 13.2 integrate climate change measures into national policies, strategies, and planning	<p>Amount of emission reduction PD has utilized relevant formulae for estimating Baseline Emissions, Project Emissions, Leakage emissions and Emission reduction from the Voluntary Gold Standard methodology: "Methodology for Emission Reductions from Safe Drinking Water Supply", Version 1.0– 3rd May 2021 – This has been validated in the Section D.5 of this report above, and it is found correct.</p>
Goal 1: No Poverty 1.1 by 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day	<p>Cost of saving fuel i.e., wood, Charcoal and LPG buying PD has identified relevant monitoring parameters and included in the Monitoring plan. Calculation approach is found be in accordance with methodological guidance. The basic formulae used for estimating Cost of Saving from buying fuel is provided as below</p> <ol style="list-style-type: none"> The Project Cost Saving from buying wood = <i>Amount of saved fuel in the project Scenario X % of household purchasing specific fuel X Unit cost of the specified fuel</i> Amount of saved wood in baseline/project scenario is calculated using following formula $= CWP \text{ Units in operation} * QPW_{hh,py} * SE_{wb,y} * xf\text{-wood/charcoal/LPG} / NCV \text{ of Fuel}$ CWP Units in operation = CWP sold * Boiling factor in pre-project scenario * $U_{p,y}$ <i>Net benefit of SDG1 = Project outcome of SDG1 - Baseline outcome of SDG1</i> <p>Based on the review it is confirmed that the calculation approach adopted by the PD is found reasonable, factual and based on the monitored parameters hence accepted. PD has estimated and Ex-Ante values of savings against each type of fuel based on the Baseline survey details and estimate sales and presented in the tabular manner in the PDD section B.6.3 and this estimation is transparently provided in the ER Spreadsheet.</p>
Goal 3: Good Health and Well-being 3.9 By 2030 substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water, and soil pollution and contamination	<p>% of project population avoiding using polluting fuels For estimating the impact PD has considered Baseline estimation as Zero, as there is no avoidance of water boiling practice and household is using polluting fuel i.e., Wood and charcoal.</p> <p>For Project scenario PD has considered the % population using different types of stoves and fuels for boiling water. This will be monitored during each project survey / monitoring survey.</p> <p>Net Benefit against this indicator shall be estimating as <i>Net benefit of SDG3 = Project outcome of SDG3 - Baseline outcome of SDG3.</i></p>
Goal 6: Clean Water and Sanitation 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	<p>Number of populations using safely managed drinking water services Estimating baseline outcome: In the baseline situation, the baseline outcome is zero due to no clean drinking water without project technology.</p> <p>Estimating project outcome: In the project situation, the number of populations using safely managed drinking water can be estimated as following: <i>Project outcome of SDG 6 = CWP Units in operation * HN_{p,y} - Full-time premises</i> Where:</p>

	<p>HNp,y – Full-time premises = Number of individuals per premises type p in the project boundary in year y (SDWS 25.1)</p> <p>Estimating net benefit <i>The net benefit of SDG6 = Project outcome of SDG6 – Baseline outcome of SDG6</i> Above approach is found to be reasonable and hence acceptable.</p> <hr/> <p>Total energy savings Estimating baseline outcome: In the baseline situation, there is no wood, charcoal, and LPG savings so the baseline contribution for SDG7 is zero. Estimating project outcome: The total project energy savings from wood, charcoal, and LPG = <i>(Amount of saved wood in the project scenario*NCV of wood) + (Amount of saved charcoal in the project scenario*NCV of charcoal) + (Amount of saved LPG in the project scenario*NCV of LPG)</i></p> <p>Estimating net benefit <i>Net benefit of SDG7 = Project outcome of SDG7 - Baseline outcome of SDG7</i></p> <p>Above approach established for estimation of baseline and project outcome and net benefits against SDG 7 is found to be practicable and reasonable and hence acceptable.</p> <hr/> <p>Goal 7: Affordable and clean energy 7.3 By 2030, double the global rate of improvement in energy efficiency</p> <hr/> <p>Goal 8: Decent Work and Economic Growth 8.5 By 2030 achieve full and productive employment and decent work for all women and men</p> <p>Total number of jobs created PD Will be monitoring this through the HR recruitment data during each monitoring period and this if found to be reasonable and hence acceptable.</p> <hr/> <p>Goal 15: Life on Land 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally</p> <p>Forest areas saved – The project reduces the reliance on woody biomass, as there is no need to boil water under the project conditions. Currently, woody biomass is typically sourced from nearby forests, posing a risk of forest depletion over time if baseline practices continue. Implementing the project's technology supports sustainable development by preventing deforestation and aiding in the restoration of degraded forest areas.</p> <p><u>Estimating baseline outcome:</u> In the baseline situation, no forest areas were saved. Therefore, baseline outcome benefit is zero.</p> <p><u>Estimating project outcome:</u> In the project situation, amount of forest areas saved can be determined by: Project outcome of SDG 15 = ((Amount of saved wood + Amount of saved charcoal) * f_{NRBJS}) / (Growth stock in forest * Converting factor of biomass from m³ to tonne)</p> <p><u>Estimating net benefit</u> The net benefit of SDG15 = Project outcome of SDG15 – Baseline outcome of SDG15. PD has estimated approximately 48 Hactare of annual average forest land saving due to the continuation of the project activity for the 3rd crediting period.</p>
Findings	Nil
Conclusion	<p>Based on the Assessment of emission reduction calculation approach as presented in PDD by the PD, it is confirmed that the information presented on the Emission reduction calculation approach is correct and this also demonstrates the compliance towards the methodological requirements</p> <p>The Calculation requirements were assessed against following requirements</p> <ul style="list-style-type: none"> - GS4GG Principles and Requirements Version 1.2, Dtd. 24th October 2019./Ref-12/ - CORE DOCUMENT- Validation and Verification Standard V1.0 for Project activity (paragraph 7.3.1 and 7.3.2) /Ref-13/ - Voluntary Gold Standard Methodology: "Methodology for Emission Reductions from Safe Drinking Water Supply", Version 1.0, Dtd. 3rd May 2021. /Ref-15/ - SDG Impact Tool - HSE_CP3_SDG-Impact-tool_GS1020 /Ref-9/ - ER Spreadsheet - HSE_CP3_ER_PDD_GS1020_20240520 /Ref-8/

D.6. Validity of monitoring plan

Means of validation	<p>The Project uses Gold Standard Approved methodology “Voluntary Gold Standard methodology: “Methodology for Emission Reductions from Safe Drinking Water Supply” ” Version 1.0– 3rd May 2021”. As per the Methodology PP has identified relevant parameters which are monitored ex-ante and ex-post are correctly defined in the PDD sections B.6.2, B.7.1, B.7.2 and B.7.3. These parameters are found relevant to the project activity and hence acceptable.</p> <p>There are few ex-ante and ex-post parameters are changed and changes in these parameters were reviewed carefully to assess the impact on the baseline and found that these parameters are conservative and has not impacted on the baseline adversely. Please refer to the verification conclusion on monitoring parameters in the section D.4. Validity of original baseline or its update of this report above. All revised monitoring parameters are validated for the applicability and conservativeness.</p> <p>Validation Team hereby confirms that the monitoring plan complies with the requirements of the methodology, the monitoring arrangements described in the monitoring plan is feasible within the project design and the project participants are able to implement the described monitoring plan.</p> <p>Sustainability Monitoring Plan</p> <p>The validation team has verified that the Monitoring Plan is in accordance with the applied Gold Standard Gold Standard Methodology “Voluntary Gold Standard methodology: “Methodology for Emission Reductions from Safe Drinking Water Supply” ” Version 1.0– 3rd May 2021. The Validation team has checked all the parameters presented in the monitoring plan against the requirements of the methodology and no deviations relevant for the project activity have been found in the plan. The monitoring procedures have been reviewed by the validation team through document review and interviews with the relevant personnel. All parameters that are deemed necessary for the estimation of emission reductions have been included in the PDD.</p> <p>The parameters to be monitored as indicated in the revised GS-PDD, Version 12.1 as well as subsequent version 12.2 to further confirm that the project is contributing positively to sustainable development are as follows:</p>																
	<table border="1"> <thead> <tr> <th>Parameter</th> <th>Parameter ID as per Methodology</th> <th>Frequency</th> <th>Validation Conclusion</th> </tr> </thead> <tbody> <tr> <td>SDG13 Climate Action (mandatory) Amount of emission reduction</td> <td>SDWS 19</td> <td>Annual</td> <td>The monitoring requirements are accurately defined in the SDG Tool, which PD has provided. As a result of its ability to reduce the boiling of potable water, the project is considered acceptable for reducing greenhouse gas emissions.</td> </tr> <tr> <td>SDG6 Number of populations using safely managed drinking water services</td> <td>SDWS 19</td> <td>Annual</td> <td>Project also contributes to sustainable development by providing safe water to many number of persons in host country and thus the project meets the requirement of SDG 6, i.e., Access to the improved source of water – PD can prove this using Sales report as well as Monitoring survey where number of people using safe drinking water from the CWP distributed by PD during monitoring period and hence it is acceptable.</td> </tr> <tr> <td>SDG1 - Cost saving from buying wood - Cost saving</td> <td>SDWS 19</td> <td>Annual</td> <td>Based on the Discussions with Household during Validation Site visit it is confirmed that household is expending on the fuel cost as drinking water is boiled. Once CWP is used boiling of drinking water will be totally avoided and thus monetary saving is achieved.</td> </tr> </tbody> </table>	Parameter	Parameter ID as per Methodology	Frequency	Validation Conclusion	SDG13 Climate Action (mandatory) Amount of emission reduction	SDWS 19	Annual	The monitoring requirements are accurately defined in the SDG Tool, which PD has provided. As a result of its ability to reduce the boiling of potable water, the project is considered acceptable for reducing greenhouse gas emissions.	SDG6 Number of populations using safely managed drinking water services	SDWS 19	Annual	Project also contributes to sustainable development by providing safe water to many number of persons in host country and thus the project meets the requirement of SDG 6, i.e., Access to the improved source of water – PD can prove this using Sales report as well as Monitoring survey where number of people using safe drinking water from the CWP distributed by PD during monitoring period and hence it is acceptable.	SDG1 - Cost saving from buying wood - Cost saving	SDWS 19	Annual	Based on the Discussions with Household during Validation Site visit it is confirmed that household is expending on the fuel cost as drinking water is boiled. Once CWP is used boiling of drinking water will be totally avoided and thus monetary saving is achieved.
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	<p>from buying charcoal - Cost saving from buying LPG</p>	<p>Monitoring arrangement is established well against this parameter and hence found acceptable.</p>
<p>SDG3 % of project population avoided from using polluting fuels</p> <p>SDWS 19</p> <p>Annual</p>	<p>As per the explanation by PD in Baseline scenario different type of fuel is used for boiling drinking water, and majority of household use Wood and Charcoal which lead to the smoke in the kitchen and personnel are exposed to this smoke, this can create health hazards on prolonged exposure. Project technology helps in avoiding boiling of water for drinking purpose, thus it contributes in averting mortality by household air pollution.</p>	
<p>SDG7 Total energy savings</p> <p>SDWS 19</p> <p>Annual</p>	<p>Based on the Discussions with Household during Validation Site visit it is confirmed that household is various fuel i.e. wood, charcoal , LPG for boiling water for drinking purpose. Once CWP is used boiling of drinking water will be totally avoided and thus fuel saving is achieved. Monitoring arrangement is established well against this parameter and hence found acceptable.</p>	
<p>SDG8 The number of jobs created</p> <p>SDWS 19</p> <p>Annual</p>	<p>Yes, the project contributes to this SDG by creating employment i.e. Potters, Factory management staff, workers, Drivers, Sales personnel, admin staff and Survey staff. PD has employment records to prove the number of jobs created by project activity during each monitoring period and hence it is concluded that identification of contribution to SDG 8 is found realistic and credible. Monitoring arrangements made by PD against this SDG is found suitable.</p>	
<p>SDG15 Forest areas saved</p> <p>SDWS 19</p> <p>Annual</p>	<p>Based on the baseline survey, it is established that over 50% of households boil water for drinking purposes using wood as the primary fuel source, contributing significantly to unsustainable wood harvesting and localized deforestation.</p> <p>The implementation of the project technology, which eliminates the need for boiling water, results in a measurable reduction in fuelwood consumption under the project scenario. This directly contributes to reduced deforestation and the conservation of forest areas, thereby supporting the objectives of SDG 15: Life on Land—particularly the target related to halting deforestation and promoting sustainable use of terrestrial ecosystems.</p> <p>The Project Developer (PD) has implemented appropriate monitoring arrangements to track changes in fuelwood consumption and forest impact. The calculation of SDG 15 impact is transparently derived from monitored data and reflects the forest area potentially conserved due to the project activity. Accordingly, the project's contribution to SDG 15 is considered real, measurable, and credible.</p>	
<p>Validation of Safeguarding Principles & Gender Sensitive Requirements PD has provided detailed assessment outcome for the Safeguarding principles Gender Sensitivity for the project activity in the PDD Section D.1 and D.2 respectively. The assessment shows that there is no mitigation measures are required to be implemented against all Principles i.e. from Principle 1 to Principle 9.1 as project is community based project and it does not have any negative impact to the safeguarding principles.</p> <p>Appendix 1 provides detailed assessment of Safeguarding principles adequately and it is found acceptable.</p>		

	<p>he project has been thoroughly reviewed to ensure alignment with the key principles and requirements of the GS4GG Gender Policy on gender-sensitive design and implementation. The project design reflects a strong commitment to gender sensitivity by addressing specific issues that impact women, particularly around reducing the burden of traditional practices, such as wood collection and excessive boiling, that disproportionately affect women. The Project Developer (PD) has prioritized female empowerment as a core component of the project, ensuring that women's roles, needs, and perspectives are incorporated at every stage of development.</p> <p>Furthermore, the PD facilitated meaningful participation from female stakeholders through targeted consultations and baseline surveys, ensuring that their insights, concerns, and feedback directly informed project planning and execution. This inclusive approach has been validated to confirm that the project not only meets but exceeds the GS4GG Gender Sensitive Requirements by embedding gender equity and empowerment within its foundational structure and operational processes</p>
Findings	Nil
Conclusion	<p>The Verification team confirms that the monitoring plan in the PDD is in compliance with the applied Voluntary Gold Standard methodology: "Methodology for Emission Reductions from Safe Drinking Water Supply" ,Version 1.0.</p> <p>PD has ensured that all required monitoring arrangements are established to obtain factual and reasonable information to arrive at conclusion that the project implementation is as per the plan and emission reduction calculation is based on the realistic data obtained through such monitoring campaigns.</p> <p>PD has identified and described the relevant arrangement for Monitoring of SDG indicators, Safeguarding principles and Gender Sensitive requirements in the PDD and it is found in accordance with the GS4GG Requirement.</p>

D.7. Local Stakeholder Consultation

Means of validation	<p>As per Principle 3 "Stakeholder Inclusivity" as stated in the Para 4.1.24 – 4.1.36 of Gold Standard for The Global Goals Principles & Requirements, Version 1.2 – Published October 2019 /Ref-12/, it is must that Projects shall identify and engage relevant stakeholders and seek expert stakeholder input where necessary in the design, planning and implementation of the Project. The Stakeholder consultation shall be conducted as per Gold Standard for the Global Goals Stakeholder Consultation & Engagement Procedure, Requirements & Guidelines, Version 2.1</p> <p>During Renewal of Crediting period it is also necessary to obtain feedback/ comments from relevant stakeholders on ongoing basis. PD has adequately described how PD has conducted Stakeholder consultation on ongoing basis during 1st , 2nd and 3rd crediting period.</p> <p>Summary of Stakholder consultation for CP3 was reviewed during this validation and validation conclusion is provided as below.</p> <p>For the extension of the third crediting period of its Gold Standard project, which entails the ongoing manufacturing and sale of Clean Water Products (CWPs), HSE has actively engaged pertinent participants. Among the several Sustainable Development Goals (SDGs), this effort supports SDG 1 (No Poverty), SDG 3 (Good Health and Well-being), SDG 6 (Clean Water and Sanitation), SDG 8 (Decent Work and Economic Growth), SDG 13 (Climate Action), and SDG 15 (Life on Land).</p> <p>Following Gold Standard criteria, HSE found and invited 71 stakeholders from seven different groups i.e., A, B, C, D, E, F, G to a consultation workshop. Understanding the need of gender inclusiveness, HSE invited female CWP users, possible female non-users, officials from provincial departments (such as the Departments of Environment and Health),</p>
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and representatives from national and international organizations to gather viewpoints from women, so ensuring gender sensitivity. On social media, stakeholders were invited in Khmer and English by letters, emails, and announcements.

Attended by 37 participants—including 14 women—the stakeholder consultation session was scheduled for 01/03/2024 at Sanctuary Residence, Siem Reap City, Siem Reap Province. On important issues including water filter usage, filter quality, product discounts, and project contribution to greenhouse gas (GHG) emission reduction, stakeholders offered comments and feedback. The comments were generally favorable, supporting HSE's contribution to advance sustainable development as well as the advantages of its projects.

HSE has set aside answers via phone, email, or the corporate website for stakeholders who missed the session but wish to offer comments. This open and thorough consultation procedure guarantees that several points of view have been taken into account for the continuous development and effect of the project in line with Gold Standard criteria. Received during onsite stakeholder consultation are addressed and responses are found satisfactory and this information is included in the PDD as well as in the update stakeholder consultation report (SCR) Version 1.1 Dtd. 28/06/2024 /REF-6/. Entire process of stakeholder consultation found satisfactory and in line with the Stakeholder consultation and engagement procedure requirements and guidelines.

PD has prepared a simple Power point presentation in local language to brief stakeholder on the project as well as sustainability parameters affected due to the implementation of project. PP has also engaged experts in the consultation and these experts are from agencies i.e. Government and NGO's.

PD has received few generic comments from the Stakeholders and those comments are found responded satisfactorily, there is no pending comment for the response. It is also observed from the comments received from Stakeholder that no technical, technology related comments received as the Project technology is simple and proven green technology and does not have significant environmental and societal impacts.

PD has briefed all stakeholder during onsite (Physical) consultation that PD has established a mechanism for continuous input / grievance. Grievances / feed backs at any given point is welcomed through an Email and site-based register. Verified the grievance mechanism and found that PD has communicated to all Stakeholders through email and verbally and encouraged them to report any grievance they have on the implementation of the project. However, it is observed that so far there is no grievance found reported by any stakeholders. It is observed that PD has kept a Grievance register at the site office and this mechanism was found briefed to all stakeholders who attended the Stakeholder consultation. This book location is fixed, and it is shown to validator during onsite validation visit. Stakeholders who are intended to record their grievances in person shall use the Grievance Book kept at project site office and if any stakeholder willing to share their grievances through E-mail, then it is possible. Based on this it is concluded that PD has established adequate mechanism to record grievances in case any reported by the stakeholder.

Also, During Validation, personal interviews with sampled stakeholders arranged where same stake holders were invited who attended the Stakeholder consultation. Validation team interacted with the Stakeholders to understand their feedback on stakeholder consultation, project implementation and relevant issues. Stakeholder provided positive opinion about the Project implementation as well as the Stakeholder consultation that PD conducted.

	Overall, the Feedback round was satisfactory and no adverse feedback was noted. All Stakeholders are aware of the project implementation and benefits of the Project to the Environment. It was also understood that few local personnel have got employment during project construction as well as operational phase. PD is helping community by providing financial help to local people to build new house.
Findings	Nil
Conclusion	<p>Based on the Local Stakeholder Consultation process conducted by the PP and the solicitation of stakeholder comments obtained during the Local stakeholder consultation process as presented in PDD section E.1, E.2 as well as Local Stakeholder consultation reports submitted by the PP, it is confirmed that the procedure adopted for the Local Stakeholder consultation is in accordance with following specific requirements.</p> <ul style="list-style-type: none"> - Gold Standard for the Global Goals Stakeholder Consultation & Engagement Procedure, Requirements & Guidelines, Version 1.2 /Ref-12/ - Para 4.1.24 – 4.1.36 of GOLD STANDARD FOR THE GLOBAL GOALS PRINCIPLES & REQUIREMENTS, Version 1.2 – Published October 2019 /Ref-12/ - Voluntary Gold Standard methodology: “Methodology for Emission Reductions from Safe Drinking Water Supply”./Ref-15/

D.8. Crediting period

Means of validation	<p>Information related to the crediting period of the project is validated in accordance with 7.6.1, 7.6.2, 7.6.3 as well as Para 8.2.1 of CORE DOCUMENT- Validation and Verification Standard V1.0, and the validation outcome is presented as below.</p> <p>PDD Section C.1.1 is appropriately explains the start date of the project activity and it is confirmed that the project start date is consistent with the original PDD as per the original PDD start date of the project activity is 09/02/2010 and same is found considered in the revised PDD presented to VVB for validation, hence considered acceptable.</p> <p>Further, it is noted that in original PDD PD has identified 21 years as the Expected Operational lifetime of the project activity with Renewable crediting period. This is also found to be consistently reported in the section C.1.2 of the revised PDD version 12.1 /Ref-7/ as well as subsequent version 12.2 Dtd. 30/01/2025 /Ref-35/ and there is no change in the operation lifetime found noted, hence it is acceptable.</p> <p>In Section C.1.3 of the revised PDD version 12.1 /Ref-7/ as well as subsequent version 12.2 Dtd. 30/01/2025 /Ref-35/ it is noted that PD has mentioned the start date of 3rd and last crediting period as 01/12/2024, this identified date is verified against original PDD as well as the last date of 2nd Crediting period and it is found consistent as 2nd crediting period will completing / ending on 30/11/2024, hence it is acceptable and aligned with original PDD.</p> <p>Based on the above confirmation it is concluded that there is no change to the Start date of the project, Expected Operational Lifetime and the start date of the 3rd Crediting period.</p>
Findings	NIL
Conclusion	<p>The information presented by PD in the PDD related to Crediting period is found in accordance with</p> <ul style="list-style-type: none"> - Para 7.6.1, 7.6.2, 7.6.3 and 8.2.1 of the Gold Standard Core Document Validation and Verification Standard Version 1.0. /Ref-13/ - Para 5.1.4.5 of the GOLD STANDARD FOR THE GLOBAL GOALS PRINCIPLES & REQUIREMENTS, Version 1.2 /Ref-12/

D.9. Project Developers

Means of validation	Based on the information provided in the Original PDD Version 10.0 and revised PDD During 2 nd Crediting period Version 11.1 and latest revised PDD Version 12.2 /Ref-35/ , it is confirmed that the Project Developers registered at the time of initial registration of this gold standard project is same i.e. “Hydrologic Social Enterprise Company Limited”, who is the legal owner of the project activity and this confirmed using Legal license issued by
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	<p>local authority.</p> <p>PD has provided detailed contact information of project developer(s) in the Appendix 2 of Revised PDD. This information is found to be constant with the Web page of GS 1020 on Gold Standard Impact Registry and hence it is confirmed that there is no change in the Project developer noted.</p> <p>PD has demonstrated the Legal ownership of the Credits generated by the project and it is confirmed that PD has complete legal ownership of all credits generated and this has been appropriately communicated to the technology user and consent is also found obtained in the Thank You Note</p>
Findings	Nil
Conclusion	Information provided in the Revised PDD is found to be in accordance with the <ul style="list-style-type: none"> - Para 3.1.1 (e) & (f) of the GOLD STANDARD FOR THE GLOBAL GOALS PRINCIPLES & REQUIREMENTS, Version 1.2. /Ref-12/

D.10. Post-registration changes

Type of post-registration changes (PRCs)	Confirmation (Y/N)	Validation report for PRCs	
		Version	Completion date
Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents ¹	No	NA	NA
Corrections	No	NA	NA
Change to the start date of the crediting period	No	NA	NA
Inclusion of a monitoring plan	No	NA	NA
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines, or other methodological regulatory documents	No	NA	NA
Changes to the project design	Yes	As per the Gold standard there is no need to have separate PRC validation Report the Change in the Methodology is part of the Design Certification Renewal process as specified under Para 5.1.4.7 of Gold Standard for GS4GG. This report confirms the changes in the PDD and its implementation at project level. Version of this report is Version 03 Dtd. 02/07/2025.	
Changes specific to afforestation and reforestation project activities	No	NA	NA

SECTION E. Internal quality control

>> The validation report underwent an Internal Technical Review (ITR) before requesting registration of the project activity.

The ITR is an independent process performed to examine thoroughly that the process of validation has been carried out in conformance with the requirements of the validation scheme as well as internal Bureau Veritas procedures.

The Team Leader provides a copy of the validation report to the reviewer, including any necessary validation documentation. The reviewer reviews the submitted documentation for conformance with

¹ Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

the validation scheme. This will be a comprehensive review of all documentation generated during the validation process.

When performing an Internal Technical Review, the reviewer ensures that:

- The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the Gold Standard rules and requirements.
- The review encompasses all aspects related to the project which includes project design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the project participant as well as the project activity, review of the stakeholder comments and responses, closure of CARs and CLs during the validation exercise, review of sample documents.

The reviewer may raise Clarification Requests to the validation team and will discuss these matters with the Team Leader.

After the agreement of the responses to the Clarification Requests from the validation team as well as the PP(s), the finalized validation report is accepted for further processing such as uploading via the Gold Standard Registry.

SECTION F. Validation opinion

>> Bureau Veritas has performed a validation of the Production and dissemination of Ceramic Water Purifiers by Hydrologic, in the Kingdom of Cambodia, The validation was performed on the basis of procedures for renewal of the crediting period of a registered Gold Standard project activity and included as assessment of:

- a. An impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant CDM EB & Gold standard guidance with regard to renewal of the crediting period at the time of requesting renewal of crediting period;
- b. The correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period
- c. Validity of the monitoring plan with respect to the applied Voluntary Gold Standard methodology: "Methodology for Emission Reductions from Safe Drinking Water Supply" Version 1.0– 3rd May 2021. The validation team concludes that the procedure for requesting renewal of the crediting period has been correctly applied by the project participant. Data and parameters to be determined ex-ante are updated and are valid for the calculation of emission reductions that are expected to result during the operation of the project activity in the new crediting period.

The emissions resulting from the baseline have also been correctly assessed as per the requirements of the methodology that is applicable to the project activity. The project participant intimated the Gold Standard secretariat regarding the renewal of the crediting period along with the information on the VVB and the revised PDD before expiry of the first crediting period. The validation team of the VVB therefore requests the Gold Standard to accord its approval to the renewal of the crediting period for the subject project activity.

Appendix 1. Abbreviations

Abbreviations	Full texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CL	Clarification Request
CP	Crediting Period
CWP	Ceramic Water Purifier (Filter)
CWS	Community water supply technologies
CWT	Community level water treatment technologies
EB	Executive Board
ER	Emission Reduction
FAR	Forward Action Request
GCC	Global Carbon Council
GHG	Greenhouse Gas
GS	Gold Standard
GS4GG	Gold Standard for Global Goals
HSE	Hydrologic Social Enterprise
HWT	household water treatment technologies
ITR	Internal Technical Review
IWT	Institutional water treatment technologies
LPG	Liquefied Petroleum Gas
NGO	Non Government Organization
ODA	Official Development Assistance
PD	Project Developer
PDD	Project Design Document
PRC	Post Registration Changes
QA/QC	Quality Assurance / Quality Control
SCR	Stakeholder Consultation Report
SDG	Sustainable Development Goal
SDWS	Safe Drinking Water Supply
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Verified Carbon Standard
VVB	Validation and Verification Body
WHO	World Health Organization

Appendix 2. Competence of team members and technical reviewers

Mr. Ram M. Desai	Bureau Veritas Certification, Brunei	<p>Team Leader, Climate Change Lead Verifier,</p> <p><i>Environmental Engineer with over all 13 years of experience in various industries related to Water & Waste water engineering design, installation & Commissioning, Integrated Facility Management for Environmental Services operations in various industries i.e Automotive, Pharmaceutical , IT & Electronics (With Clean Room).</i></p> <p><i>Management System Implementation and Maintenance, Green Building concept implementation, Lean Management Implementation, Water & Waste Water engineering Design & project Management, Project Environmental Compliance etc for a construction company.</i></p> <p><i>He is the lead auditor for Environment management system, Quality management system and Occupational health and safety management system and his auditing experience spans for 3 year with BVCI & BVCS. He has</i></p>
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		<i>undergone intensive training on Clean Development Mechanism and was trained as Lead Verifier for CDM in the year 2005 and working as a lead Verifier for validation and verification of CDM/VCS projects</i>
Mr. Sanjay Patankar	Bureau Veritas, India	Technical Reviewer, Climate Change Lead Verifier. Educational qualifications: B.E. (Mech.) M.E. (Mech.) <i>He has over 20 years of experience in engineering manufacturing industry covering various functions like enterprise management, product design, engineering, tool & die design, improvements in the production shop, quality assurance & control and systems planning and implementation, including ISO 9001 based quality management systems. He is working for the last 4 years in Bureau Veritas(India) Pvt. Ltd. as Lead Verifier for CDM and also Lead Auditor for ISO 9001, 14001 and OHSAS 18001 standards/specifications. Has undergone training related to Clean Development Mechanism and is currently involved in validation and verification of CDM project activities</i>
Mr. Murugappan Palanisamy (Technical Specialist)	Bureau Veritas Marine, Singapore	Technical Specialist <i>He is Bachelor of Engineering in Electrical and Electronics. He is working with Bureau Veritas Marine as Electrical Engineer. He is working in Electrical engineering field since last 09 years and is having reach hands on experience in designing, installation, commissioning of electrical systems for various applications in marine and oil and gas sector.</i> <i>He is also having experience in carrying out inspections of various marine equipment including electrical panels, rotating equipments, HVAC equipment's and operations of such equipment's.</i>

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	PD	Registered PDD version.		PD
2	PD	PDD version 11.1 dated 09/11/2017 (During 2 nd CP renewal)		PD
3	PD	Emission reduction calculation spreadsheet.(HSE_CP2_ER_Cal_20171023)		PD
4	VVB	PREVIOUS VALIDATION REPORT – BV/BRUNEI-VAL/0001/2017, REVISION No. 01		VVB
5	PD	Latest Gold Standard Passport, Version 02.0, Dtd. 29/11/2017		PD
6	PD	HSE_CP3-Stakeholder-Consultation-Report_20240628		PD
7	PD	HSE_CP3_PDD(Renewal)_V12.1		PD
8	PD	HSE_CP3_ER_PDD_GS1020_20240520		PD
9	PD	HSE_CP3_SDG-Impact-tool_GS1020		PD
10	PD	Baseline_Data_Report_CP3_2024		PD
11	PD	PFT_CP3_MP5_Questionair_2024_Eng		PD
12	GS	Gold Standard for the Global Goals Stakeholder Consultation & Engagement Procedure, Requirements & Guidelines, Version 1.2		GS
13	GS	Gold Standard For The Global Goals Principles & Requirements, Version 1.2.		GS
14	GS	Gold Standard validation and verification standard, Version 1		GS
15	GS	<i>Voluntary Gold Standard methodology: "Methodology for Emission Reductions from Safe Drinking Water Supply"</i> .		GS
16	UNFCCC -	Methodological Tool 11 - Assessment of the		UNFCCC -

	CDM	validity of the original/current baseline and to update the baseline at the renewal of the crediting period, version 03.0.1, dated 02/03/2012, EB 66 Annex 47.		CDM
17	UNFCCC - CDM	CDM-EB67-A06-GUID, Version 4.0 "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities"		UNFCCC - CDM
18	UNFCCC - CDM	methodological Tool 30 calculation of the fraction of non-renewable biomass, version 02.0 (CDM Tool 30 v.2.0).		UNFCCC - CDM
19	IPCC	IPCC Fifth Assessment Report for GWP values of Wood & Charcoal		IPCC
20	IPCC	IPCC (2006) "IPCC Guidelines for National Greenhouse Gas Inventories", Chapter 12, Harvested Wood Products, Table 12.4, p.12.19		IPCC
21	3 rd party publication	Water Quality Test Results conducted in Cambodia – by Phan, K., Hoeng, S., Phin, S., The, N., Sriv, T., Sao, V., & Chey, C. O. (2023). Chemical risks in drinking water of inhabitants in the basin of the Tonle Sap Great Lake. <i>Journal of Water and Health</i> , 21(12), 1908-1921		3 rd party publication
22	WEPA	WEPA (Water Environment Partnership in Asia) Outlook on Water environmental Management in Asia, 2021 chrome- https://wepa-db.net/wp-content/uploads/2023/02/WEPA_outlook2021_e.pdf		WEPA
23	Aprovecho Research Center	MacCarty, N., et al. (2010) "Fuel use and emissions performance of fifty cooking stoves in the laboratory and related benchmarks of performance", Aprovecho Research Center, Energy for Sustainable Development, The Journal of the International Energy Initiative, Volume 14, Number 3, September 2010, p. 170, Table 1		Aprovecho Research Center
24	UNFCCC - CDM	CDM-SSCWG43-A04 (Information Note-Default values of fraction of non-renewable biomass for Cambodia, version 01.0) CDM-EB-77 (Meeting report CDM Executive Board seventy-seventh meeting, version 01.0) Para 58, page 14).		UNFCCC - CDM
25	World Health Organization	WHO (World Health Organization) (2005) <i>Nutrients in Drinking Water. Water Sanitation and Health Protection and the Human Environment</i> . Pg. 34. [Online] Available from: http://www.who.int/water_sanitation_health/dwq/nutrientsindw.pdf [Last Accessed 28th November 2011].		World Health Organization
26	National Institute of Statistics	National Institute of Statistics and Directorate General for Health, 2023, Cambodia Demographic and Health Survey 2021- 2022		National Institute of Statistics
27	3 rd party publication	Campbell (2005) <i>Study on Life Span of Ceramic Filter - Colloidal Silver Pot Shaped (CSP) Model</i> . Potters for Peace. Managua.		3 rd party publication
28	3 rd party	Lantagne D. 2001. <i>Investigation of the</i>		3 rd party

	publication	<i>Potters for Peace Colloidal Silver-Impregnated Ceramic Filter: Intrinsic Effectiveness and Field Performance in Rural Nicaragua</i> . Alethia Environmental, Allston MA		publication
29	3 rd party publication	Brown J. Sobsey M. and Proum S. 2007. <i>Improving Household Drinking Water Quality: Use of Ceramic Water Filters in Cambodia</i> . WSP Field Note. World Bank Water and Sanitation Program. Phnom Penh p27		3 rd party publication
30	3 rd party publication	Roberts M. 2003. <i>Ceramic Water Purifier – Cambodia Field Tests</i> , IDE Cambodia, Phnom Penh, pp 4-6		3 rd party publication
31	3 rd party publication	Bloem S.C. 2008. <i>Silver Impregnated Ceramic Water Filter - Flowrate versus the removal efficiency of pathogens</i> . Delft University of Technology, Faculty of Applied Sciences, Delft, Netherlands		3 rd party publication
32	3 rd party publication	Aprovecho Research Center (2007) <i>Laboratory Testing of Rocket Stoves of Various Capacities as Compared to the Three Stone Fire</i> . Graph titled <i>Firepower, Various Stove Capacities</i> Pg. 5. [Online] Available from: www.aprovecho.org/lab/pubs/rl/emissions-eval/doc/71/raw [Last Accessed 28th November 2011].		3 rd party publication
33	Party accredited Laboratory	Hydrologic (2023 - 2024) <i>Laboratory tests of bacteria removal using ceramic water filters manufactured by Hydrologic in Cambodia</i>		Party accredited Laboratory
34	IPCC	IPCC (2006) "IPCC Guidelines for National Greenhouse Gas Inventories", Volume 2, Energy, Chapter 1, Introduction, Table 1.2, p 1.18		IPCC
35	PD	HSE_CP3_PDD(Renewal)_V12.2		PD
36	UNFCCC	Methodological tool: Default values for common parameters – Tool 33, Version 03.0		UNFCCC
37	UNFCCC	Methodological Tool - Calculation of the fraction of non-renewable biomass -Tool 30, Version 4.0		UNFCCC
38	PD	Excel sheet OFN_GS1020_CP3		PD
39	PD	Sales Records for the 2022 – 2024		PD
40	3 rd party CA	Audited account results for 2022 – 2024		PD
41	PD	HSE_CP3_PDD(Renewal)_V12.3_GS1020_R2_30062025		PD
42	PD	HSE_CP3_ER_PDD_GS1020_R2_30062025		PD
43	PD	HSE_CP3_SDG-Impact-tool_GS1020_R2_30062025		PD

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CL from this validation

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

Table 2. CAR from this validation

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

Table 3. FAR from this validation

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

Appendix 5. List of Household Interviewed during Site Visit

<u>Sr. No.</u>	<u>Province</u>	<u>Village Name</u>	<u>Name of person interviewed</u>
1.	Kampong Speu	Tang Pou	Reth Narin
2.	Kampong Speu	Tang Pou	Pros Chanthy
3.	Kampong Speu	Tang Pou	Phoung Sreneang
4.	Kampong Speu	Chambak Thom	Tol Lim
5.	Takeo	Trapeng Chambak	Ms. Leng Thol
6.	Takeo	Trapeng Chambak	EL SreyNich
7.	Takeo	Trapeng Chambak	Ms. Tes Saron
8.	Takeo	Trapeng Chambak	Ms. Kat Eam
9.	Takeo	Trapeng Chambak	Mr. Cheng Van
10.	Takeo	Trapeng Chambak	Ms. Chim Hun
11.	Takeo	Trapeng Chambak	Ms. Lak Yarn
12.	Takeo	Trapeng Chambak	Ms. Mak Sothea
13.	Takeo	Trapeng Chambak	Ngoung Khorn
14.	Takeo	Trapeng Chambak	Ty Pha
15.	Takeo	Trapeng Chambak	Ms. Porn Po
16.	Takeo	Tram Kol	Ms. Phat Phally
17.	Takeo	Tram Kol	Ms. Yun Phal
18.	Takeo	Tram Kol	Ms. Menh Oun
19.	Takeo	Prey Chambak	Ms. U.K. Vesna
20.	Takeo	Prey Chambak	Ms. Keo Saona
21.	Takeo	Prey Chambak	Ms. Phon Pheng Sochen
22.	Takeo	Prey Chambak	Ms. Chhoum Kimthouk
23.	Takeo	Prey Chambak	Ms. Ken Sopheak
24.	Takeo	Prey Chambak	Ms. Soum Sokhom
25.	Takeo	Prey Chambak	Ms. Sem Srey Sor
26.	Takeo	Prey Chambak	Ms. Pop Kea

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	31 May 2019	Revision to: <ul style="list-style-type: none">• Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN) and version 02.0 of the “CDM project cycle procedure for project activities” (CDM-EB93-A06-PROC);• Make editorial improvements.
02.0	31 October 2017	Revision to align with the requirements of the “CDM validation and verification standard for project activities” (version 01.0).
01.0	23 March 2015	Initial publication.

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