

**Validation report form for inclusion of voluntary
project activities
Gold Standard for Global Goals**

BASIC INFORMATION			
Title and GS reference number of the programme of activities (PoA)	GS11189: Improved Cookstove And Safe Water Programme		
Version number of the validation report	2.0		
Completion date of the validation report	29/11/2023		
Title and reference number of each VPA to be included	VPA Ref. no.	Title	
	GS 12251 to GS 12275	GS12251: Improved Cookstove and Safe Water Programme – Kenya – VPA 49 to GS12275: Improved Cookstove and Safe Water Programme – Kenya – VPA 73	
Version numbers of the VPA-DDs to which this report applies	VPA 49 to VPA 73:	Version 5.0, dated 22/11/2023	
Applied methodologies and standardized baselines for each CPA	VPA no.	Applied methodologies	
	VPA 49 to VPA 73	Emission Reduction from Safe Drinking Water Supply, Version 1.0 – 03/05/2021	
Sectoral scopes for each CPA	VPA no.	Sectoral scopes (indicate mandatory and conditional sectoral scopes)	
	VPA 49 to VPA 73	Sectoral Scope: 3	
Coordinating/managing entity (CME)	Impact Carbon LLC		
Host Parties	Kenya		
Estimated SDG Impacts	SDGs	Estimated Annual Average	Unit
		VPA 49 to VPA 73	

	SDG 13	59,618	tCO ₂ e
	SDG 1 (SDG Indicator 1.4.1)	620	Number (Percent)
	SDG 3 (SDG Indicator 3.9.2)	90%	Percent
	SDG 6 (SDG Indicator 6.1.1)	620 90%	Numbers Percent
	SDG 7 (SDG Indicator 7.1.2)	90%	Percent
	SDG 8 (SDG Indicator 8.5.1)	12	Number
Name and UNFCCC reference number of the VVB	Earthood Service Private Limited E-0066		
Name, position and signature of the approver of the validation report	 Dr. Kaviraj Singh, Managing Director		

SECTION A. Executive summary

The purpose of the VPAs is to provide safe drinking water by the help of low GHG Water Purification Technologies (WPS). All the VPAs will use carbon finance to support local partners engaged in operation, sales and distribution and maintenance of various WPS technologies. The VPAs are being submitted for inclusion under the registered PoA under GS4GG (PoA GS 11189) programme and the Coordinating/managing entity of the PoA is Impact Carbon LLC and the VPA Implementor is Impact Water LLC. Details of all the VPAs to be included under the PoA in this validation are given below:

Parameter	Validated information
GS ID of the VPAs to be included	GS12251 (VPA 49) to GS12275 (VPA 73)
Title of the VPAs	Improved Cookstove and Safe Water Programme – Kenya - VPA 49 to Improved Cookstove and Safe Water Programme – Kenya – VPA 73
Methodology applied	VPA 49 to VPA 73: Emission Reduction from Safe Drinking Water Supply, Version 1.0
Crediting period	5 years, Renewable

VPAs aim at installing the WPS to the population of Kenya and the targeted population of VPAs GS12251 (VPA 49) to GS12275 (VPA 73) are schools and institutions present within the geographical boundary of Kenya. The targeted population uses traditional methods of boiling water using non-renewable/fossil fuel resources. This traditional technology includes three stone fired cookstove, that completely relies on non-renewable/fossil fuel which is the main source of indoor pollution and can cause various respiratory disorders.

Start date of VPA GS12251 (VPA 49) to GS12275 (VPA 73) is the sale of first water purification system under the VPAs. Start date and Crediting period and start for VPA GS12251 (VPA 49) to GS12275 (VPA 73) are:

VPA	Start date	Crediting Period
VPA 49	30/01/2023	30/01/2023 to 29/01/2028
VPA 50	08/03/2023	08/03/2023 to 07/03/2028
VPA 51	10/03/2023	10/03/2023 to 09/03/2028
VPA 52	11/04/2023	11/04/2023 to 10/04/2028
VPA 53	14/04/2023	14/04/2023 to 13/04/2028
VPA 54	09/05/2023	09/05/2023 to 08/05/2028
VPA 55	18/05/2023	18/05/2023 to 17/05/2028
VPA 56	31/05/2023	31/05/2023 to 30/05/2028
VPA 57	21/06/2023	21/06/2023 to 20/06/2028
VPA 58	07/07/2023	07/07/2023 to 06/07/2028
VPA 59	14/07/2023	14/07/2023 to 13/07/2028
VPA 60	21/07/2023	21/07/2023 to 20/07/2028
VPA 61	31/07/2023	31/07/2023 to 30/07/2028
VPA 62	09/08/2023	09/08/2023 to 08/08/2028
VPA 63	30/08/2023	30/08/2023 to 29/08/2028
VPA 64	15/09/2023	15/09/2023 to 14/09/2028
VPA 65	01/10/2023	01/10/2023 to 30/09/2028
VPA 66	01/10/2023	01/10/2023 to 30/09/2028
VPA 67	01/10/2023	01/10/2023 to 30/09/2028
VPA 68	01/01/2024	01/01/2024 to 31/12/2028
VPA 69	01/01/2024	01/01/2024 to 31/12/2028
VPA 70	01/01/2024	01/01/2024 to 31/12/2028

VPA 71	01/01/2024	01/01/2024 to 31/12/2028
VPA 72	01/01/2024	01/01/2024 to 31/12/2028
VPA 73	01/01/2024	01/01/2024 to 31/12/2028

VPA GS12251 (VPA 49) to GS12257 (VPA 55) fall under the category of Retroactive as per the Project Cycle and GS Principle and Requirements. VPA GS12251 (VPA49) to GS12275 (VPA 73) has a crediting period of 5 years, renewable twice (Total crediting period of 15 years). The start date and length and type of the crediting period is in-line with the PoA description in PoA-DD/4/ and GS PoA Requirements/11/.

Scope of Validation

The scope of the services provided by Earthood Services Private Limited is to perform validation of the VPAs GS12251 (VPA 49) to GS 12275 (VPA 73) under the PoA. The scope of validation is to assess the claims and assumptions made in the VPA DD against the GS4GG and UNFCCC's CDM criteria, including but not limited to, , applied methodology Emission from Safe Drinking Water Supply, Version 1.0/5/, GS4GG Principle & Requirements ver.1.2/14/, GS4GG Programme of Activities Requirements ver. 2/11/, Community Services Activity Requirements ver 1.2/7/., GHG Product Requirements/8/, GHG emissions reductions sequestration and product requirements v2/27/.

Validation Process

The validation process is undertaken by the validation team that involves the following:

1. The desk review of documents and evidence submitted by the project participant in the context of GS4GG criteria along with the reference CDM rules and guidelines issued by CDM EB,
2. A remote audit to assess the baseline practices followed by interviews with CME and the VPA Implementers,
3. Reporting audit findings concerning clarifications and non-conformities and the closure of the findings, as appropriate,
4. Preparing a draft validation report for the inclusion of VPA complying with the Gold Standard requirements.

An independent Technical Review team reviews the validation report prepared by the validation team. The final validation report that is accepted by Technical Reviewer is then approved on behalf of Earthood Services Private Limited and processed further as per GS4GG procedures.

Conclusion

The review of the VPA DDs, supporting documentation and subsequent follow-up actions have provided Earthood with sufficient evidence to determine the fulfilment of stated criteria. Earthood is of the opinion that the VPAs titled "Improved Cookstove and Safe Water Programme – Kenya - VPA 49 to Improved Cookstove and Safe Water Programme – Kenya – VPA 73" as described in the final VPA DDs/9/ meet all relevant requirements of GS4GG, is in accordance with the laws and regulations of the host country Kenya and has correctly applied the methodology "Emission reduction from Safe Drinking Water Supply", Version 1.0/5/ for safe drinking water. Therefore, the VPAs are being recommended to GS4GG for request for inclusion.

SECTION B. Validation team, technical reviewer and approver

B.1. Validation team member

S	Role	≥	Last name	First name	Affiliation	Involvement in
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No.					(e.g. name of central or other office of VVB or outsourced entity)	Desk/document review	Remote Audit inspection	Interviews	Validation findings
1.	Team Leader	IR	Varshney	Divij	Central office	Y	Y	Y	Y
2.	Technical Expert (TA 3.1), GS Approved Auditor	IR	Varshney	Divij	Central office	Y	Y	Y	Y
3.	Local Expert (Kenya)	IR	Njeri	Virginia	Central office	Y	Y	Y	Y

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

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	IR	Guleria	Shifali	Central office
2.	TA Expert to TR (TA 3.1)	IR	Guleria	Shifali	Central office
3.	Approver	IR	Singh	Kaviraj	Central office

SECTION C. Means of validation

C.1. Desk/document review

The validation of the Voluntary Project Activities (VPAs) is performed primarily as a document review of the VPA design documents for VPA GS12251 (VPA 49) to GS12275 (VPA 73), Emission Reduction Calculation sheet/28/, the baseline survey forms/30/ and independent research on several platforms. The cross checks between information provided in the VPA-DDs/9/ and information from sources other than those used (if available), the validation team's sectoral or local expertise and, if necessary, independent background investigations. The complete list of documents/evidence assessed by validation team is included under Appendix 3.

C.2. On-site inspection

Duration of on-site inspection: NA				
No	Activity performed on-site	Site location	Date	Team member

During the current validation, the remote audit was conducted for the validation of inclusion of the VPA 49 to 73 under the registered PoA GS 11189. As per paras 5.12.6 of the PoA Requirements, “The CME shall take into consideration the fact that a site visit by the VVB may be required when a new technology/methodology is introduced into the PoA (if not completed at the time of registering the PoA)”. It has been confirmed that CME has introduced water purification systems in the targeted population of schools and institutions of Kenya, the WPS technology implemented is the same as the registered PoA and design certified VPAs 39 – 47. Hence, no new technology has been introduced in the validating VPAs (VPA 49 – 73). Therefore, as per para 5.12.6 of PoA Requirements has been conducted by the validating VVB.

The remote audit included the interviews with the CME representatives and the CPA implementers. The VVB also interviewed the end-users on sampling basis as discussed under section C.3. of this report.

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Turgesen	Mark	Global Development Director, Impact Carbon and Impact Water Kenya	05-10-2023	VPA Implementation, distribution and operational framework, Stakeholder consultation Implementation, Distribution records, database management	Divij Varshney and Virginia Njeri
2.	-	Utkarsh	Carbon Manager, Impact Carbon and Impact Water Kenya	05-10-2023	PoA-DD, Methodology applicability, Monitoring plan, Sampling methodology, ER calculations	Divij Varshney and Virginia Njeri
3.	-	Moses	Carbon Team Associate, Impact Water	05-10-2023	PoA-DD, Methodology applicability, Monitoring plan, Sampling methodology, ER calculations	Divij Varshney and Virginia Njeri
4.	Lohia	Rohit	Climate Secure India Private Limited	05-10-2023	Data analysis,	Divij Varshney and Virginia Njeri

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5.	Pathania	Rishabh	Climate Secure India Private Limited	05-10-2023	QA/QC		Divij Varshney and Virginia Njeri
6.	Singh	Divakar	Climate Secure India Private Limited	05-10-2023			Divij Varshney and Virginia Njeri
Interviews of End-Users							
1.			M.C.K. Kijijone Primary	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
2.	-	Daniel	Gathima Primary School	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
3.	-	Peter	A.C.K Bwaja Primary and Junior Secondary School	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
4.	-	Stefen	Ayucha Primary School	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
5.	-	Eric	Aduwa Primary School	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
6.	-	Jewel	Getembe Primary School	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
7.	-	Peter	Bware mixed Secondary School_Uri ri	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
8.	-	Charles	Akado Primary School	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
9.	-	Serimunia	Bartabwa Primary School	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
10.	-	Yoyel	A.B.C. Labuiywet Primary school	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
11.	-	Steven	Tabolwa Primary School	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri

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12.	-	Stanele	A.B.C Ngiluni Primary School	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
13.	-	Daniel	A.C.K ST. Andrews Wagwer Mixed Secondary School	05-10-2023	VVB Survey	Remote	Divij Varshney and Virginia Njeri
Interview of Local Stakeholders							
1.	-	Nelson	Governme nt Official	09-10-2023	VVB Remote Audit		Divij Varshney and Virginia Njeri
2.	Gicharu	Brigitte	Director, Women maker	09-10-2023	VVB Remote Audit		Divij Varshney and Virginia Njeri

Type of questions asked by the Team member

No.	Questions asked by Team Leader To End users
1.	Number of people in the institution
2.	Baseline water source
3.	Baseline water purification method
4.	Suppressed water purification method
5.	Baseline cookstove type for water boiling
6.	Baseline Fuel type for water boiling
7.	Baseline waterborne illness incidences
8.	Type of institution/School
9.	Supressed water purification method

No.	Questions asked by Team member To Stakeholder participants	Nature of Responses Received
1.	Did you participate in the virtual stakeholder consultation and feedback round?	Positive
2.	The means of invitation	Positive
3.	Feedback given to the PoA and the included VPAs	Positive
4.	Evaluation of the feedback forms	Positive
5.	CME's resolution to the received feedback	Positive
6.	Grievance Mechanism	Positive

C.4. Sampling approach**CME Approach:**

CME in its monitoring plan has mentioned to follow sampling procedures given in Emission reductions from Safe Drinking Water Supply, Version 1.0/5/ for determining the sample size of parameters corresponding to the VPA/technology. A confidence precision of 90/10 or 95/10 will be ensured by CME for meeting the annual/biennial monitoring criteria. The sampling approach undertaken by CME is duly explained under section B.7.2 of the VPA-DDs/9/, which has been assessed by the validation team and found to be correct and in-line to the applied methodology/5/.

VVB's Sampling approach:

For the validation VVB applied the CDM sampling standard version 9.0 states under paragraph 28 that *"When the project participants or the coordinating/managing entity have applied a sampling approach, the VVB may apply acceptance sampling as described in the steps indicated in paragraphs 29–38 below as part of validation /verification activities"*. Since the PD has determined the value of parameter through sampling for baseline users, the validation team will conduct acceptance sampling in line with paragraph 28 of the sampling standard version 9.0.

In order to meet the requirements of paragraph 30 and 31 of Standard for Sampling and surveys for CDM project activities and programmes of activities, Version 9, the validation team applied acceptance sampling in the validation (in accordance with para 28). The validation team has selected random sample of PD's sampled records to check the acceptability (or otherwise) of the data for each such record with PD's sample records and determine if the PD's sample observation were consistent to VVB remote surveys.

The current validation is for GS12251 to GS12275 (VPA 49 to VPA 73) . The validation team has selected the sample size as 11 institutions (i.e., 11 baseline users for WPS) for the purpose of remote audit inspection to check the acceptability of PD's sampling results or otherwise.

Sample Size:

PoA and VPA Ref No.	AQL	UQL	Producer Risk	Consumer Risk	Sample Size; Min	Acceptance No.
PoA- 11189 VPA- 12251 to VPA- 12275	0.5%	20%	10%	10%	11	0

As per para 4.1.1 (d) of Site Visit and Remote Audit Requirements and Procedures//, "If a PoA is verified using remote auditing techniques, and the verification involves a sampling approach, then the samples size that VVB audits shall be 10% more than the minimum required sample size." Since, remote audit has been conducted for the inclusion of the VPAs under the PoA, VVB has selected 2 extra samples for the remote interviews. Hence, a total of 13 Samples has been interviewed by the VVB. Remote interviews were conducted with the CME representatives on 05/10/2023 to confirm the baseline practices, monitoring system of the PoA, provision to avoid double counting and the provision for soliciting feedback from the stakeholders.

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

Areas of validation of compliance (SECTION D)	No. of CL	No. of CAR	No. of FAR
Titles of the VPAs and corresponding generic VPAs			
Compliance with VPA-DD form			
General description of the VPAs		CAR#01	
Application of methodologies and standardized baselines			
• Reference to methodologies and standardized baselines			
• Project boundary, sources and GHGs			
• Baseline scenario	CL#01 CL#03		
Estimation of emission reductions or net anthropogenic removals			
• Equations and parameters applied to calculate GHG emission reductions or net anthropogenic GHG removals			
• Data and parameters fixed ex ante	CL#04		
• Ex ante calculation of GHG emission reductions or net anthropogenic GHG removals	CL#05		

• Summary of ex ante estimates of GHG emission reductions or net anthropogenic GHG removals			
Monitoring plan			
• Data and parameters to be monitored			
• Description of the monitoring plan			
• Sampling Approach			
Additionality		CAR#03	
Start date, crediting period type and duration			
Environmental impacts			
Local stakeholder consultation	CL#06		FAR#01
Remote Survey			
Eligibility for inclusion	CL#02	CAR#02	
Safeguarding Principles			FAR#01
Double counting			
GPS Location of units			
Implementation of the VPA			
Total	05	03	01

SECTION D. Validation findings

D.1. Proposed CPAs and corresponding generic VPAs

VPA title and reference number	Version number of the VPA-DD	Host Party	Version number of the PoA-DD into which the VPA is included
Improved Cookstove and Safe Water Programme – Kenya -VPA49 GS12251	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA50 GS12252	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA51 GS12253	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA52 GS12254	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA53 GS12255	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA54 GS12256	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA55 GS12257	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA56 GS12258	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA57 GS12259	5.0	Kenya	5.0

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Improved Cookstove and Safe Water Programme – Kenya -VPA58 GS12260	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA59 GS12261	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA60 GS12262	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA61 GS12263	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA62 GS12264	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA63 GS12265	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA64 GS12266	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA65 GS12267	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA66 GS12268	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA67 GS12269	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA68 GS12270	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA69 GS12271	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA70 GS12272	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA71 GS12273	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA72 GS12274	5.0	Kenya	5.0
Improved Cookstove and Safe Water Programme – Kenya -VPA73 GS12275	5.0	Kenya	5.0

D.2. Compliance with VPA-DD form

Means of validation	The VPA DDs/9/ have been prepared using the applicable version of GS VPA-DD template, i.e., version 2.3/10/. It has been checked from the GS
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	website that the form used is appropriate and applicable for the VPA. Each section of the VPA-DD/9/ was also checked with the guidelines stated in the form/36/ and found to be fulfilling it.
Findings	No findings were raised.
Conclusion	The VPA-DDs /9/ are found to comply with the applicable form with all the sections filled are in line to the form guidelines/10/51/.

D.3. General description of the VPAs

Means validation	of	The VPAs to be included in the PoA involve the installation/distribution of Water Purification System in Kenya. VPA GS12251 to VPA 12275 (VPA 49 to VPA 73) are related to reduction of GHG emission and to provide clean drinking water to end-users. The CME of the VPAs is Impact Carbon LLC and VPA Implementor is Impact Water LLC. There is total 25 VPAs that are to be included in the host country of Kenya. The geographical boundary of VPA is confined to be Kenya through the installation database/12/ and Interviews conducted with the CME's representatives/21/. The VPAs take forward the same goal as that of the PoA under which they seek inclusion. There are 25 VPAs included and implemented under the PoA are as follows: GS12251: Improved Cookstove and Safe Water Programme – Kenya -VPA49 GS12252: Improved Cookstove and Safe Water Programme – Kenya -VPA50 GS12253: Improved Cookstove and Safe Water Programme – Kenya -VPA51 GS12254: Improved Cookstove and Safe Water Programme – Kenya -VPA52 GS12255: Improved Cookstove and Safe Water Programme – Kenya -VPA53 GS12256: Improved Cookstove and Safe Water Programme – Kenya -VPA54 GS12257: Improved Cookstove and Safe Water Programme – Kenya -VPA55 GS12258: Improved Cookstove and Safe Water Programme – Kenya -VPA56 GS12259: Improved Cookstove and Safe Water Programme – Kenya -VPA57 GS12260: Improved Cookstove and Safe Water Programme – Kenya -VPA58 GS12261: Improved Cookstove and Safe Water Programme – Kenya -VPA59 GS12262: Improved Cookstove and Safe Water Programme – Kenya -VPA60 GS12263: Improved Cookstove and Safe Water Programme – Kenya -VPA61 GS12264: Improved Cookstove and Safe Water Programme – Kenya -VPA62 GS12265: Improved Cookstove and Safe Water Programme – Kenya -VPA63 GS12266: Improved Cookstove and Safe Water Programme – Kenya -VPA64 GS12267: Improved Cookstove and Safe Water Programme – Kenya -VPA65 GS12268: Improved Cookstove and Safe Water Programme – Kenya -VPA66 GS12269: Improved Cookstove and Safe Water Programme – Kenya -VPA67 GS12270: Improved Cookstove and Safe Water Programme – Kenya -VPA68 GS12271: Improved Cookstove and Safe Water Programme – Kenya -VPA69 GS12272: Improved Cookstove and Safe Water Programme – Kenya -VPA70 GS12273: Improved Cookstove and Safe Water Programme – Kenya -VPA71 GS12274: Improved Cookstove and Safe Water Programme – Kenya -VPA72 GS12275: Improved Cookstove and Safe Water Programme – Kenya -VPA73 Technology: The type systems implemented under the VPAs are as follows: 1. Water Purification System (WPS) WPS is the only technology that is implemented under VPA 49 to VPA 73, the specification of the WPS technology mentioned in all the VPAs is cross-checked with the specification/33/ provided by the CME. The specifications are as follows:		

Model	Technology Type	Lifetime	Removal of E. Coil
UltraFLO	Chemical	Expiry: 5 Years Capacity:	99 (2-log)

			Flo: 340,000 Ltrs Inline: 720,000 Ltrs	
	UltraTAB	Chemical	Expiry: 5 years Capacity: Big Pack: 48,000 Ltrs Small Pack: 10,000 Ltrs	99 (2-log)

Implementation status:
The WPS technology under VPA 49 to VPA 55 have been implemented and will start crediting under GS4GG retroactively in accordance with date of LSC in line with the GS Principle and requirements/14/, start date of the VPAs have been verified from the end-user agreement/44/ and delivery notes/45/ of the respective VPAs. The crediting cycle length is 5 years and type of the crediting period is renewal twice for the VPAs, as per Paragraph 4.1.40 of Principles & Requirements (Version 1.2)/14/.

No-ODA
The VPA is not being funded by any Annex-I party which could be verified through the no ODA declaration provided by CME to the validation team/15/.

Grievance Mechanism:
According to GS4GG principle and requirements v1.2/14/ para 4.1.28, "If the Consultation is conducted after the start date, the Project Developer shall provide further explanation of how comments received during the consultation are taken into account and implement a Grievance Mechanism in line with the Stakeholder Consultation & Engagement Requirements."
The continuous Input or Grievance Expression Process Books is part of the project implementation and will be made available at various distribution sites. The stakeholder also has the option of contacting the CME via post or email to details provided below:

Impact Water Kenya
PO Box 1903-00606, Nairobi House #44, Muthithi Road Westlands, Nairobi
Contact Number: +256 790 911 934
Email: info@impactcarbon.org

All the details related to the management system and the grievance mechanism were confirmed from the CME representatives during the remote audit conducted on 05/10/2023/21/.

Findings	CAR#01 was raised and resolved.
Conclusion	The validation team confirms that the information provided is complete and correct concerning the description of technology and/or measures to be used, the description is as per the registered VPA DD and is following the GS4GG principles and requirement/14/ including a description of the purpose of the VPA. The validation team confirms that: 1. The validation team has assessed that the implementation and operation of the proposed VPAs, comply with the relevant GS4GG principles and requirements.

	2. The data collection system meets the requirements of the applied methodologies and the other applied methodological regulatory documents. 3. The coordinating/managing entity has addressed the FARs identified during the GS preliminary review. Please refer to appendix 4 for details.
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D.3.1. Assessment of the eligibility of the VPA under PoA

Means validation of	Paragraph 3 of the GS4GG Principles and Requirements/14/ includes the general criteria that applies to all the projects seeking Gold Standard Certification. The demonstration of the PoA meeting the eligibility criteria has been represented below:		
	Eligibility Criteria	Justification from CME	Means of Validation
	Technology	For WPS: The WPS technologies under the VPA are in compliance with the national standards. Supporting Evidence: Technical specifications / official notification from approved agencies for Chlorination (UltraTAB / UltraFLO).	CME has submitted technical specifications/33/ of the project technology and letter that substantiates the compliance of WPS technology with national standard/9/. This is in accordance with GS4GG Principles and Requirements paragraph 3.1.1 (a)/14/.
	Location	Each VPA will be located within the physical/geographical boundary of the PoA	The aim of the VPA/s is to provide safe drinking water to the schools and institutions in Kenya (VPA 49 to VPA 73) as declared by CME under respective VPA-DDs/9/. The geographical boundary was confirmed from the location of the end users during the Remote site visit/21/ as cross-checked against https://www.latlong.net/ and this is in line with para 3.1.1 (d) of Community Service Activity Requirements (Version 1.2)/14/. This is in accordance with GS4GG Principles and Requirements paragraph 3.1.1 (a)/14/.
	Additionality	Each VPA will satisfy the criteria for	VPA aims at distribution

		demonstrating additionality through one of the following options: Option 1: As per Activity Requirement: As per GS4GG Community services activity requirements, Version 1.2, Para 4.1.9, Projects that meet any of the following criteria are considered as deemed additional and therefore are not required to prove Financial Additionality at the time of design certification: (a) Positive list (Annex B of this document) (b) Projects located in LDC, SIDS, LLDC (c) Microscale projects Option 2: CDM Tool • Para 12 and 13 of Tool 19 (version 9.0); or • Para 10/Figure 1 of Tool 21 (Version 13.1); or Para 11 of Tool 21 (Version 13.1)	of WPS in the institutions of Kenya. Each of the WPS unit results in emission reductions less than 600 tCO₂e per annum, which has been verified through the Ex-ante ER calculation sheet/28/ and is found to be within the threshold as per para 1.1.3 of annex B of the CSA requirement version 1.2 /7/.
	De-Bundling	As per GS4GG Programme of activities requirements section 10.1.1, de-bundling provisions do not apply to Voluntary PoAs.	Not Applicable
	Double Counting	Each VPA will utilize identifiers for every appliance under the PoA to show that the appliance belongs to that specific PoA. The unique identifier will be designating each appliance as part of the	The VPAs are located in Kenya and is confirmed by the VVB during the remote survey conducted on 05/10/2023/21/. This is in accordance with GS4GG Principles and Requirements

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		PoA, and CME master distribution/installation records will ensure each sale is credited under only a single VPA.	paragraph 3.1.1 (b)/14/. The various carbon registries have been checked by the Validation team to confirm that the VPA exclusively belong to the PoA. Furthermore, a declaration/22/ has been provided by the CME confirming about the provision to eliminate double counting. At the time of implementation, each WPS will be assigned a unique serial ID to enable the identification of the installed/distributed WPS units belonging to the VPAs, same has been verified through the delivery note/45/, end-user agreements/18/ and installation database/12/.
	History	V/CPAs are neither registered as project activities with other offset Schemes, included in other registered PoAs, nor the project activities that have been deregistered. unless transitioning to GS from other standard.	VPAs are not registered under any other PoA, which has been verified through checking the various registries like GS, CDM, VCS, GCC etc. and it is confirmed that VPAs are not registered in any other program, a declaration/23/ has also been submitted by the CME to confirm the same.
	Start Date	Each VPA will prove that the start date of the VPA is on or after the start date of the PoA, or state that the VPA is claiming credits retroactively. As the project involves distribution/installation of WPS (distributed technology) the start date is the date of implementation of the first unit under the	The first date of the installation/crediting of WPS units will be the date of the commencement of the project for VPA 49 to VPA 73. The start date of VPA 49 to VPA 64 has been verified through the end-user agreement/44/. The expected date from VPA 65 to VPA 67 to start at 01/10/2023 and VPA 68

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		project.	to 73 are expected to start at 01/01/2024. This is in accordance with GS4GG Principles and Requirements paragraph 3.1.1 (d)/14/.
	Crediting Period	Each VPA will have a renewable crediting period.	Date and duration of all the VPAs is 5years and it is renewable twice.
	Public Funding	Each VPA will confirm that it does not results in diversion of Official Development Assistance (ODA). Declaration by CME that the VPA does not involve any funding that results in diversion of ODA.	VPA are not receiving any external funding as per the ODA declaration/15/ submitted by the CME/VPA implementor.
	CME Approval	Each VPA will prove it has received the approval of the CME of the PoA.	The CME approval letter/17/ has been submitted to provide evidence of CME's approval to all the VPAs.
	Methodology	VPA will apply the GS methodology: "Emission Reductions from safe drinking water supply" Version 1.0 and adhere to all applicability conditions and other requirements of the methodology	All the conditions of applicability of baselines & methodology have been explained in Section D.4 below.
	Target Group	The target group of the PoA, and each included VPA, are schools and/or institutions: those that prior to the implementation of the PoA either used or would have used, fossil fuels and/or non-renewable biomass to boil and purify water for drinking.	End-user agreement/18/ and sales database/12/ that was checked shows the end users are the Institutions in Kenya. This is in accordance with GS4GG Principles and Requirements paragraph 3.1.1 (h)/14/.
	Sampling	VPA will adhere to the sampling requirements stipulated in "Standard for Sampling and surveys for CDM project activities and	Sampling has been conducted on a VPA level. and follow the guidelines of Sampling and surveys for CDM project activities and

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		programmes of activities" version 09.0.	programme of activities" (Version 09.0)/13/ Guidelines for Sampling & surveys for CDM project activities and programmes of activities" (Version 04.0)/32/.
	Stakeholder Consultation and Environmental Analysis	VPA will conduct a Local Stakeholder Consultation/ SFR, as applicable and adhere to the Environmental Impact Analysis requirements of the host country	Stakeholder Consultation report /42 proves that all the VPAs are as per stakeholder's and Environmental guidelines. As per the 2 nd Schedule of Environmental Management and coordination Act (EMCA) 1999 (Amended 2012), this project does not fall under the category of mandatory requirement of Environmental Impact Assessment (EIA). Hence, EIA is not required for this project/51/.
	VER Ownership	Each VPA will assure ownership of the VERs is secured by the CME	VVB has reviewed the Sample of End-User agreement/18/ which are the evidence of VER ownership transfer to the VPA Implementor. Then, the ownership of the credits transferred to the CME through a contractual agreement between Impact carbon (CME) and Impact Water (VPA Implementor). Hence it has been confirmed that all the VER ownership has been transferred to CME.
	Meth threshold	Each WPS VPA will ensure that it will meet the small-scale thresholds and remain within those thresholds throughout the	For WPS: According to Ex-ante ER sheets/28/, VPA-DDs/9/ the total emission for each VPA is 59,618 tCO ₂ e that qualifies it as a small-scale project.

		crediting period.	
	SDG outcome assessment	The monitoring plan for SDG shall include: 1. reduction in smoke, PM, soot emissions after shifting to the project ICS 2. reduction in incidence of diarrhoea and water borne diseases etc. after shifting to the project WPS 3. Number of ICS/WPS distributed and operating. 4. Total Number of WPS distributed/installed under the project and % of WPS distributed/installed provide safe drinking water quality 5. Number of male/female persons hired. 6. Fuel savings reported by users in the PoA after shifting to ICS	As per the VPA-DD (Section B.7), all the outcomes will be assessed and monitored accordingly. SDG indicators, its value and monitoring frequency is found to be in accordance with the VPA-DD/9/.
	Safeguarding Principles	Conducted at VPA level	Safeguarding principles are discussed individually under the section D and Appendix 1 of the VPA-DD/9/, all the principles are discussed along with the mitigation measures. The same has also been assessed in section E.1 of this report.
	Retroactive VPAs	Retroactive VPAs that are submitted to GS /SustainCert at a date later than one year from the VPA start date shall not be eligible for Gold Standard Certification.	In the preliminary review which was conducted on 07/08/2023, the retroactive VPAs (VPA 49 to VPA 55) are already included. Hence the eligibility of the VPA has been satisfied for the Gold Standard

			Certification.
	CER Labelling	Projects in other standards seeking labelling of CERs under GS4GG shall demonstrate compliance with section 2.0, Annex B of GHG Emissions Reduction and Sequestration Product Requirements	Not applicable
	Conditions to be met in multi-country PoAs	Not applicable. Although the PoA is multi-country, a VPA shall remain limited to a singular country in the PoA and shall not include more than one country in the VPA boundary.	The project boundary is defined in the section A.2 of the VPA-DD/9/ and the entire project lies in the boundary of Kenya, which has been verified through the sales database/12/, end-user agreements/18/ and remote site visit/21/.
Findings	CL#02 and CAR#02 was raised and resolved.		
Conclusion	The VVB has accepted and validated the general eligibility criteria that applies to all VPAs seeking Gold Standard Certification. The eligibility of the VPAs is found to be valid in accordance with the section 3.1.1 of GS4GG principles and requirements version 1.2/14/.		

D.4. Application of methodologies and standardized baselines

D.4.1. Reference to methodologies and standardized baselines

Means of validation	The methodology applied for the VPAs are Emissions reduction from Safe Drinking Water Supply, Version 1.0/5/		
	The applicability conditions of the methodology "Emission reductions from Safe Drinking Water Supply Version 1.0 – 03/05/2021"/5/ are validated below:		
	Applicability Criteria as per methodology	Justification from CME	Assessment
	This methodology is applicable to project activities that introduce a new, or rehabilitate an existing, zero-emission ¹ or low-emission technology to supply safe drinking water.	The VPA involves distribution of Low GHG Emission Water Purification Systems ("WPS") in schools and Institutional premises that would have boiled water in the baseline.	The VPAs aim at implementing WPS technologies in schools and Institutional premises that is replacing the

¹ Zero emission technology refers here to emissions generated by technologies once installed within the targeted premises and operational – it does not refer to life cycle emissions such as upstream emissions associated with the production or delivery of the technology.

			requirement of boiling the water and reducing the GHG emission as confirmed through the interview of the WPS end-users during the remote survey by the VVB.
	Technologies include school water treatment technologies (HWT), Institutional water treatment technologies (IWT), Community level water treatment technologies (CWT) and community water supply technologies (CWS).	The Project technology includes Institutional water treatment technologies (IWT).	The VPAs aims at providing safe water by using different technologies, all the technologies included are being distributed to the institutions based in Kenya as confirmed during the remote audit surveys/21/ and it was confirmed from the remote audit interviews and installation database/12/ that the project technologies include institutional water treatment technologies
	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 schools or institutional premises. When the drinking water is treated in the school or institution (HWT or IWT), then the water supplied from the treatment technology should be safe.	The VPA involves distribution/installation of low greenhouse gas, Institutional water treatment technologies (IWT). These are point of use systems, located in the end user premises. These systems avoid GHG emissions from boiling unsafe drinking water in the baseline. Ex-post monitoring shall be conducted on	The VPA involves institutional water treatment technologies which are installed in the premises of the institutions and render safe water for drinking. The installation avoids boiling water as

	When the water is supplied or retrieved from a CWT or CWS directly to the premises of the school or institution, then the water entering the end-user premises should be safe.	sampling basis to demonstrate that the project systems deliver safe water. Emission reductions shall be accounted accordingly.	prevalent in the baseline. It was confirmed through the end user interviews that the water from the systems is safe and boiling water for drinking is common in the baseline. CME through the monitoring survey would ensure that the project systems deliver safe water.
	The methodology is applicable under the following conditions:	Please refer below for justifications:	
	a) Eligible school 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.	Examples of WPS technologies to be included in the VPA, but not limited to, are as follows: 1. Chemical disinfection (chlorine) – UltraTAB/ UltraFLO	All the WPS technologies mentioned by the CME were found to be Ultra Tab/ Ultra Flo as confirmed during the remote survey and installation database/12/. However, the VPAs have the provision to include more technologies.

	b) Eligible community water supply technologies (CWS) include new installation of new WPS hand-pumps, WPS 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 SWDS 33).	Not applicable, as VPA involves distribution/installation of low greenhouse gas point of use Institutional water treatment technologies (IWT).	Not applicable. Since, VPA involves institutional water treatment technologies which are installed in the premises of the institutions.
	c) All projects involving CWT and CWS technologies must also include ongoing maintenance and repair of the project technology.	Not applicable, no CWT or CWS technologies are involved.	Not applicable. Since, VPA involves institutional water treatment technologies which are installed in the premises of the institutions.
	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.	Not applicable, rehabilitation of existing technology is not envisaged in the VPA.	Not applicable. Since, VPA involves institutional water treatment technologies which are installed in the premises of the institutions.

	e) This methodology allows for project activities to include safe water treatment and/or supply technologies implemented for end-users in schools, and/or commercial premises such as shops or institutional premises including half or full day/boarding schools, prisons, army camps & refugee camps.	The VPA involves distribution/installation of low GHG, Institutional water treatment technologies (IWT) in schools and other Institutions in Kenya.	VPAs are spread within geographical boundary of Kenya and WPS units were found to be implemented in schools and other institutions of Kenya as confirmed through the end-user interview during the remote audit and through the independent check of the location mentioned in the project database on get geo coordinate.
	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 coordinates ² 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.	Not applicable, no CWT or CWS technologies are involved.	Not applicable. Since, VPA involves institutional water treatment technologies which are installed in the premises of the institutions.

² Acceptable formats for GPS coordinates include DMS (degrees, minutes and seconds), DMM (degrees and decimal minutes), and DD (decimal degrees).

	g) Project technology performance level (HWT and IWT): It shall be demonstrated based on report of laboratory testing ³ or official notification ⁴ 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 school 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).	The project technologies meet compliance with the national standard/guidelines. Please refer the confirmation letter from local agency.	VPAs were found to be as per National/Local standards and guidelines. A confirmation letter/25/ has also been provided by the CME.
	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	Not applicable, no CWT or CWS technologies are involved.	Not applicable. Since, VPA involves institutional water treatment technologies which are installed in the premises of the institutions.

³ The testing should be undertaken under conditions that are representative of the operation conditions of the project site(s) including feedwater.

⁴ For example, notifications from the national authority on health.

	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. (parameter SWDS 3).		
	i) The project must conduct annual water hygiene education campaigns for the end-users.	The project will conduct annual water hygiene education campaigns for the end-users. This has been developed as a monitoring parameter. Refer monitoring plan section.	The CME shall conduct the Annual Water Hygiene Education Campaigns for the awareness of end-users under the monitoring plan formulated by the CME as confirmed through the interviews of the CME/VPA implementer during the remote audit survey.

	Project shall document the national, regional and local regulatory framework for provision of safe drinking water in the project boundary (parameter SDWS 4). The project shall not undermine or conflict with any national, sub-national and local regulations or guidance for safe drinking water supply, operation, and maintenance, including any tariff requirements.	For national, regional and local regulatory framework for provision of safe drinking water in the project boundary refer section A.1 of the VPA-DD. The VPA does not undermine or conflict with any national, sub-national and local regulations or guidance for safe drinking water supply, operation, and maintenance, including any tariff requirements.	As per the regulatory framework of Kenya, the project does not undermines any law or guidelines of the host country for the safe drinking water supply, operation and maintenance.
	If the expected technical life of project technology (parameter SDWS 7) is shorter than the crediting period, describe measures to ensure that end users are provided replacement systems of comparable quality at the end of the expected technical life (for example, replace with comparable or better technology, retrofit with performance guarantee, etc.). This applies both for new technology and rehabilitated.	The technical lifetime of the systems is not limited. Instead, the system lifetime is based on the lifetime of the cartridge / Tab Pack as applicable. Depending on the type of system installed/distributed, the lifetime is deemed renewed automatically, every time the system is reinforced with a new cartridge / TAB pack. Thus, the systems are not constrained with respect to lifetime. The supplies (quantity and date) made are being monitored as part of proposed monitoring plan for this purpose.	The lifetime of the system is renewable as its lifetime depends upon the cartridge/Tab pack which are supplied by the project developer, if it stops working or expires. Hence, lifetime of the system cannot be fixed.
	All CWT and CWS projects must include ongoing maintenance and repair of the project technology. The PDD must describe the maintenance and repair plan, including the system for logging/documenting of technology operation and maintenance events including periods of downtime¹³. The log of operation and maintenance	Not applicable, the VPA does not involve CWT/CWS systems.	Not applicable. Since, The VPA involves institutional water treatment technologies which are installed in the premises of the institutions.

	shall be required during the monitoring period to demonstrate project technology operation".		
Findings	No Findings were raised.		
Conclusion	The validation team confirms that the VPAs meet all the applicability conditions of the applied methodology /5/.		

D.4.2. Project boundary, sources and GHGs

Means validation of	The project boundary basically defines the physical and geographical boundary of the project facility as per the applied methodology/5/, and it is well defined in the VPA-DDs/9/ (section B3). The project boundary includes the point location of installed/distributed WPS units to provide safe drinking water users of Kenya. Therefore, the project boundary covers all the points of installed/distributed WPS units, beneficiaries in all the locations. The project boundary is clearly defined in the VPA-DDs/9/. Emissions sources included in the project boundary have been appropriately included in all the VPA-DDs. CO₂, CH₄ and N₂O emissions due to use of non-renewable biomass in the traditional stove for baseline scenario (for all the project sites) and in the project scenario the VPA replaces the use of non-renewable biomass/fossil fuel, the technologies included does not require electricity for operation, hence no project emissions are considered from the WPS units.
Findings	No findings
Conclusion	The project boundary, sources and GHGs have been determined in-line with the applied methodology/5/.

D.4.3. Baseline scenario

Means validation of	The baseline scenario in the VPAs is same as the one set at PoA level. CME has applied methodology "Emissions reduction from Safe Drinking Water Supply, Version 1.0"/5/. There are number of cases reported in Kenya due to unsafe drinking water, inadequate hygiene and sanitation as per the KENYA ENVIRONMENTAL SANITATION AND HYGIENE POLICY 2016-2030. The CME has conducted the baseline survey in Aug – Sept 2021 for the design certified VPAs (VPA 31 - 47), results of which has been used to establish the baseline scenario. The approach has been checked and found to be appropriate by the VVB since, it has been less than 3 years since the baseline survey was conducted and the results of the same has been validated and accepted by GS during the inclusion of VPA 31 – 47. The source of drinking water as per the baseline survey/19/ are:									
	<table><tr><th>Source of drinking water</th><th>Number of Schools/Institutions</th><th>Percentage of Schools/Institutions</th></tr><tr><td>Improved sources</td><td>159</td><td>88.33%</td></tr><tr><td>Unimproved Sources</td><td>21</td><td>11.66%</td></tr></table>	Source of drinking water	Number of Schools/Institutions	Percentage of Schools/Institutions	Improved sources	159	88.33%	Unimproved Sources	21	11.66%
	Source of drinking water	Number of Schools/Institutions	Percentage of Schools/Institutions							
	Improved sources	159	88.33%							
	Unimproved Sources	21	11.66%							

	The VPAs aim at the following: Installation of WPS to provide safe drinking water to the institutions of Kenya. (VPA 49 to VPA 73) According to the applied methodology, the baseline scenario is that fossil fuel and/or NRB is used to boil water as means of water purification in the absence of the project activity. VVB through the interview of the sample of WPS end-users during the remote survey, confirmed that most the end users (schools/institutions) boiled either some or all water on the traditional stoves to ensure potability before the implementation of the technology. From the interview of the WPS users it was confirmed that few of the end-users also reported consuming unsafe water due to lack of resources to boil water. Thus, in-line to para 3.4.2 and 3.4.3 of the applied methodology/5/ suppressed demand has been taken into consideration for establishing the baseline in-line to the applied methodology/5/. Also, it has been confirmed through the ER sheet that VPAs are small-scale. The assessment team has reviewed the VPA-DDs/9/ are in line with the applied methodology/5/ and it is confirmed that the CME has correctly identified the baseline scenario.
Findings	CL#01 and CL#03 was raised and resolved.
Conclusion	The validation team based on the description provided above with regard to the assessment of the requirements confirms that: (a) All the assumptions and data used by the project participants are listed in the VPA-DDs/9/ and or its annexures, including their references and sources; (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the VPA-DDs/9/. (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable. (d) Relevant national and/or sectoral policies and circumstances are considered and listed in the VPA-DDs. (e) The approved baseline methodology has been correctly applied to identify the most plausible baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed PoA. The validation team confirms that it has taken other steps and other sources of information used to cross-check the information contained in the PoA-DD/4/, wherever applicable, as listed above.

D.4.4. Ongoing financial need

Means validation of	It has been confirmed from the no ODA declaration/15/ that there is no provision for public funding available for the VPAs.
Findings	No findings.
Conclusion	Not applicable.

D.4.5. Prior consideration

Means validation of	VPA 49 to VPA 55 (GS12251 to GS12257) are retroactive VPAs with the start date as stated in section D.6 and submitted for preliminary review (07/08/2023) within one year the start date.
Findings	No findings.
Conclusion	Retroactive cycle VPAs (VPA GS11251 to GS11257) were found to be submitted for preliminary review within one year of VPA start date. Hence, prior consideration is not applicable.

D.4.6. Demonstration of Additionality

Means validation of	Applicability conditions	Justification by the Project proponent	Means of validation
	Specify the methodology or activity requirement or product requirement that establish deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).	As per Positive List - Annex B, the project meets the criteria given in 1.1.3 <i>Project activities solely composed of isolated units where the users of the technology/measure are schools or communities or institutions and where each unit results in ≤ 600 MWh of energy savings per year or ≤ 600 tonnes of emission reductions per year.</i>	VPA 49 to VPA 73 aims at installation of WPS in the institutions of Kenya. It will be ensured that each WPS unit results in emission reductions less than 600 tCO ₂ e per annum which is within the threshold of the applied methodology/5/. The same has been verified through the ex-ante ER sheet/28/ and each unit installed is found to be within the threshold limit.
	Describe how the proposed project meets the criteria for deemed additionality.	Each project unit shall result in emission reductions less than 600 tCO ₂ e per annum. In case the VPA generates more than 60,000 tCO ₂ e per annum, the VERs shall be capped at 60,000 tCO ₂ e per annum. Hence the project meets the requirements of Positive List mentioned within the CSA Requirements and hence is deemed additional. Refer cell E34 of the Tab: Assumptions & ER Values of ER calculator	Each project WPS unit will result in emission reduction less than 600 tCO ₂ e/annum. The same has been verified through the ex-ante ER sheet/28/ and each unit installed is found to be within the threshold limit.
Findings	CAR#03 was raised and resolved.		
Conclusion	The VPA was found to be additional.		

D.5. Estimation of emission reductions or net anthropogenic removals

D.5.1. Equations and parameters applied to calculate GHG emission reductions or net anthropogenic GHG removals

Means of validation	The VPAs apply methodology Emissions reduction from Safe Drinking Water Supply, Version 1.0/5/. The methodological choices have been explained below: The applied methodology Emissions reduction from Safe Drinking Water Supply, Version 1.0/5/ defines the methodological steps to determine the project emissions, baseline emissions, leakages and anthropogenic emissions by the proposed project activity. For water purification technologies the overall GHG reductions achieved by the project activity in year y are calculated as follows: The baseline emission factor shall be calculated as follows: $EF_b = SE_{w,b,y} * \sum (x_f * (EF_{b,f,CO_2} * f_{NRB,f,y} + EF_{b,f,nonCO_2})) \div 10^9$ Where: EF_b = Emission factor for the use of fuel to obtain safe water in the baseline (tCO₂e/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,CO_2} = CO₂ emission factor from use of fuel f (tCO₂/TJ) $EF_{b,f,nonCO_2}$ = Non-CO₂ emission factor arising from use of fuel f, when the baseline fuel f is biomass or charcoal (tCO₂e/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. The specific energy required to boil water using the baseline technology ($SE_{w,b,y}$) is determined as follows, by calculating the energy input required to obtain 1 L of boiling water, including boiling and vaporization losses, taking into account default or measured stove efficiency. $SE_{w,b,y} = 360.83 / \eta_{wb}$ Where: 360.83 = Default amount of energy required to obtain 1 L of water after 5 minutes of boiling from a first principles approach kJ/l η_{wb} = Efficiency of the stoves for baseline water boiling (%). Weighted average of baseline stove types The baseline emissions shall be calculated as follows: $BE_y = EF_b \times (1 - C_b - X_{cleanboil,y}) \times Q_y \times M_{q,y}$ Where: BE_y = Baseline emissions from the use of fuel to obtain safe water in the baseline (tCO₂e)
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C_b	=	Proportion of project end-users who in the baseline were already using a safe water supply that did not require boiling (%)
$X_{\text{cleanboil},y}$	=	Proportion of project end-users that boil safe water in the project year y (%)
Q_y	=	Quantity of safe drinking water provided by the project in year y (L)
$M_{q,y}$	=	Modifier for the water quality in year y

In the case of IWT, the quantity of safe drinking water provided by the project Q_y is determined as follows:

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

Where:

$N_{p,y}$	=	Number of premises type p with at least one project technology in year y
$U_{p,y}$	=	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
$N_{p,y}$	=	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:

No project emissions as no electricity/ fuel use are involved as per the applied methodology.

The emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y	=	Emission reductions in year y (t CO2e/yr)
BE_y	=	Baseline emissions in year y (t CO2e/yr)
PE_y	=	Project emissions in year y (t CO2e/yr)
LE_y	=	Leakage emissions in year y (t CO2e/yr)

	Emission reduction estimated from each of the VPAs (GS12251 to GS12275) is 59,618 tCO ₂ e per annum which has been verified from the emission reduction sheets/28/.
Findings	No findings were raised.
Conclusion	The methodological choices are justifiable and appropriate as per GS4GG requirements. All the values applied, and calculations are reviewed from the ER calculation sheets/28/, baseline survey sheet/30/ and were found to be acceptable by the assessment team.

D.5.2. SDG outcome assessment

Means of validation	The monitoring plan in the PoA-DD/04/ is correctly applied to the PoA. The monitoring plan has been found to be in compliance with the requirements of the applied methodology/5/.			
	Sustainable Development Goals Targeted	Most relevant SDG Target	SDG Impact Indicator (Proposed or SDG Indicator)	VVB Assessment
	SDG 13: Climate Action (mandatory)	Not applicable	Amount of CO ₂ e emissions reduced by the project per year.	The reduction in the use of fossil fuel to boil the unsafe water will result in emission reductions and eventually reduce the effects of climate change in country like Kenya. The value of the parameter will be checked through the ER sheet/28/.
	SDG 1: No poverty	1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including	1.4.1 Proportion of population living in schools with access to basic services Indicator: Total number of premises (Schools / institutions) with at least one WPS distributed / installed under the project	The distribution of WPS has helped to raise the living standard and provided the basic services to the end-users of Kenya. The value of the parameter will be verified through the Installation database/12/.

		microfinance		
	SDG 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.	3.9.2 Mortality rate attributed to unsafe water, unsafe sanitation and lack of hygiene (exposure to unsafe Water, Sanitation and Hygiene for All (WASH) services). Indicator: % sampled Schools / institutions reporting reduction in incidence of diarrhoea and water borne diseases etc. after shifting to the project WPS	VPAs are reducing the health-related risk associated with the unsafe water. WPS has improved the water quality of the water for the Kenya's population. The value of the parameter will be monitored through the ex-post monitoring surveys conducted by CME.
	SDG 6: Clean Water and Sanitation	6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all	6.1.1 Proportion of population using safely managed drinking water services Indicator: Total Number of WPS distributed/installed under the project and % of WPS distributed/installed providing safe drinking water quality	VPAs which aimed at installing the WPS in the institution ensures better water quality. End users also confirmed during the remote audit survey that water quality received from the WPS was found to be better than the water consumed in the baseline situation. The value of the parameter will be monitored through the ex-post monitoring surveys conducted by the CME.
	SDG 7: Affordable and Clean Energy	7.1 By 2030, ensure universal access to affordable, reliable, and modern energy services	7.1.2 Proportion of population with primary reliance on clean fuels and technology Indicator: % Schools / institutions reporting an operational WPS in	VPAs aim at distributing WPS which helped in reducing the dependency on traditional stove thereby increasing the

			project	access to safe drinking water. The value of the parameter will be monitored through the ex-post monitoring surveys conducted by the CME.
	SDG 8: Decent Work and Economic Growth	8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value	8.5.1 Average hourly earnings of female and male employees, by occupation, age and persons with disabilities Indicator: Number of male / females employment created by project	Implementation of VPAs has led to generation of employment as compared to the baseline situation. The value of the parameter will be checked through the employment records/47/.
Findings	None			
Conclusion	The SDGs chosen by CME are accurate & the monitoring of all the parameter align with the methodology of Emissions reduction from Safe Drinking Water Supply Version 1.0 /5/			

D.5.3. Data and parameters:

Means of validation	The monitoring plan in the PoA-DD/04/ is correctly applied to the PoA. The monitoring plan has been found to be in compliance with the requirements of the applied methodology Emissions reduction from Safe Drinking Water Supply, Version 1.0/5/. The values of ex-ante parameter and monitored parameters can be found in the table given below. Parameter(s) fixed ex-ante: For VPA 49 to VPA 73			
	Relevant SDG Indicator	Parameter	Value in VPA-DD	Assessment
	SDG 1	Access to Basic Services (number of premises with at least one WPS distributed / installed	0	VPAs aim at distributing WPS to the institutions of Kenya thereby replacing the baseline method of boiling of

		under the baseline), ABS _{baseline}		water for consumption. Thus, PD assumes the parameter value to be zero as none of the institutes were having WPS in the baseline scenario.
	SDG 3	% of users reporting reduce in incidence of diarrhoea and water borne diseases etc. in baseline , IH _{baseline}	0%	VPAs aim at distributing WPS to the institutes of Kenya thereby replacing the baseline method of boiling of water for consumption. Thus, PD assumes the parameter value to be zero as none of the institutes were having WPS in the baseline scenario.
	SDG 6	Total Number of WPS distributed /installed under the baseline and % users reporting safe water quality in baseline, SWO _{baseline}	0	VPAs aim at distributing WPS to the institutes of Kenya thereby replacing the baseline method of boiling of water for consumption. Thus, PD assumes the parameter value to be zero as none of the

						institutes were having WPS in the baseline scenario.
	SDG 7	Access to affordable and clean energy (% of operating WPS units under Baseline), $AAC_{baseline}$	0%			VPAs aim at distributing WPS to the institutions of Kenya thereby replacing the baseline method of boiling of water for consumption. Thus, PD assumes the parameter value to be zero as none of the institutes were having WPS in the baseline scenario.
	SDG 8	Quantitative Employment and income generation (Number of person (male and female) hired under Baseline), $QE_{IG_{baseline}}$	0			VPAs aim at distributing WPS to the institutes of Kenya thereby replacing the baseline method of boiling of water for consumption. Thus, PD assumes the parameter value to be zero as none of the institutes were having WPS in the baseline scenario.
	SDG 13	Project technology description	Description	UltraFLO	UltraTAB	The value for this parameter has been applied as verified from

			Manufacturer	Medentech	Medentech	the Manufacturer's specification/33/, as shared by the CME. Also, it has been confirmed through an official confirmation letter from the KEBS, that the products comply with national standards/25/.
			Product Name	FLO, Inline	Big Pack, Small Pack	
			Technology type	Chlorination	Chlorination	
			Performance classification	Complies with National standard	Complies with National standard	
	SDG 13	Regulatory framework for safe water supply	Kenya environmental sanitation and hygiene policy 2016-2030 recognizes that unsafe drinking water, along with inadequate hygiene and sanitation contributes much of the disease burden in Kenya. This policy therefore recommends development and implementation of sanitation and hygiene interventions that address faecal contamination and vector breeding in household/school water storage and promoting appropriate technology options for household/school water treatment and safety in tandem with sanitation and hygiene interventions at household/School/ community levels. The implementation of the project is fully in line with the relevant water resources policies/framework of Kenya. The project does not undermine or conflict with any national, sub-national and local regulations or guidance for safe drinking water supply, operation and maintenance, including any tariff requirements. Further, the			The VPAs are in line with all the local and national Safe Water guidelines, which has been verified through the confirmation letter from the Kenya Bureau of standards/25/.

			national standards and local regulations for safe drinking water supply do not impose any cap on parameters used by the methodology and therefore have no implications on emission reduction calculations.																																
SDG 13	Water sources in the project boundary	<table><tr><td>No</td><td>Drinking water source</td><td>Premises (%)</td></tr><tr><td>1.</td><td>Government/ Private piped connection</td><td>22.78</td></tr><tr><td>2.</td><td>Surface water</td><td>10.56</td></tr><tr><td>3.</td><td>Well, /Borehole</td><td>42.22</td></tr><tr><td>4.</td><td>Rainwater</td><td>20.00</td></tr><tr><td>5.</td><td>Trucked Water</td><td>3.33</td></tr><tr><td>6.</td><td>Others</td><td>1.11</td></tr></table> As per the Annex 2 of the methodology, the classification of Improved Sources and Unimproved Sources is: <table><tr><td>S.No</td><td>Source of drinking water</td><td>% Premises</td></tr><tr><td>1.</td><td>Improved sources</td><td>88.33</td></tr><tr><td>2.</td><td>Unimproved Sources</td><td>11.66</td></tr></table>			No	Drinking water source	Premises (%)	1.	Government/ Private piped connection	22.78	2.	Surface water	10.56	3.	Well, /Borehole	42.22	4.	Rainwater	20.00	5.	Trucked Water	3.33	6.	Others	1.11	S.No	Source of drinking water	% Premises	1.	Improved sources	88.33	2.	Unimproved Sources	11.66	The value for this parameter is different for Improved Source and Unimproved Sources, all the values of the parameter has been taken from the baseline survey/19/ conducted by CME in Aug-Sept 2021, results of which have been duly verified by the VVB since, it has been less than 3 years since the baseline survey was conducted and the results of the same has been validated and accepted by GS during the inclusion of VPA 31 - 47.
No	Drinking water source	Premises (%)																																	
1.	Government/ Private piped connection	22.78																																	
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S.No	Source of drinking water	% Premises																																	
1.	Improved sources	88.33																																	
2.	Unimproved Sources	11.66																																	
SDG 13	Stove technologies used in the project boundary	<table><tr><td>Stove Technology</td><td>School/ Institutions (%)</td></tr><tr><td>Traditional / 3 Stone Fire</td><td>98.84</td></tr><tr><td>Traditional Charcoal Pot</td><td>1.16</td></tr></table>	Stove Technology	School/ Institutions (%)	Traditional / 3 Stone Fire	98.84	Traditional Charcoal Pot	1.16	Stove technologies used in the project boundary was found to be traditional 3 stone fire																										
Stove Technology	School/ Institutions (%)																																		
Traditional / 3 Stone Fire	98.84																																		
Traditional Charcoal Pot	1.16																																		

						(98.84%) and Traditional charcoal pot (1.16%) as confirmed from the baseline survey/19/ conducted by CME in Aug-Sept 2021, results of which has been duly verified the VVB since, it has been less than 3 years since the baseline survey was conducted and the results of the same has been validated and accepted by GS during the inclusion of VPA 31 – 47. The same has been verified through the VVB remote audit/21/ and most of the end-users were previously using traditional three stone fire to boil the water.					
	SDG 13	Expected technical life of project technology	<table><tr><th>Description</th><th>UltraFLO</th><th>UltraTAB</th></tr><tr><td>Treatment Volume (Ltrs)</td><td>Flo: 340,000 Inline: 720,000</td><td>Big Pack: 48,000 Small Pack:</td></tr></table>	Description	UltraFLO	UltraTAB	Treatment Volume (Ltrs)	Flo: 340,000 Inline: 720,000	Big Pack: 48,000 Small Pack:		
Description	UltraFLO	UltraTAB									
Treatment Volume (Ltrs)	Flo: 340,000 Inline: 720,000	Big Pack: 48,000 Small Pack:									

				10,000	3/ records provided by the CME. Also, it has been observed that the product (filters) distributed are consumables and will be distributed by the VPA Implementor to the target population, so the lifetime of the same is not found to be constraint. The approach applied by the CME has been reviewed and found to be appropriate.
			Life Span / Expiry-filter	5 years	
			Life Span / Expiry - system	20 years	20 years
	SDG 13	Percentage of fuel use in target population, X_f	98.84% Wood Fuel 1.16% Charcoal		The value of this parameter has been applied as 98.84% for wood-fuel and 1.16% for charcoal which is found to be in accordance with Baseline survey of Schools and institutions/19 / conducted by CME in Aug-Sept 2021, results of which has been duly verified by the VVB for design certified GS VPAs (VPA 31 - 47) since, it

				has been less than 3 years since the baseline survey was conducted and the results of the same has been validated and accepted by GS during the inclusion of VPA 31 – 47.
	SDG 13	CO2 emission factor from use of fuels, $EF_{b,f,CO2}$	Wood = 112 tCO ₂ /TJ Charcoal = 165.22 tCO ₂ /TJ (includes charcoal production emissions)	The value of this parameter has been taken from the default value from the IPCC default value for Wood and charcoal: IPCC 2006 Guidelines for National Greenhouse gas Inventories, which is found to be inline with the applied methodology/5 /.
	SDG 13	Non-CO2 emission factor from use of fuels, in case the baseline fuel is biomass or charcoal, $EF_{b,f,nonCO2}$	AR5 GWP - Wood: 9.46 tCO ₂ e/TJ - Charcoal: 44.83 tCO ₂ e/TJ (includes production emissions of CH ₄ and N ₂ O)	The value of this parameter has been taken from the default value from the IPCC default value for Wood and Charcoal: IPCC 2006 Guidelines for National Greenhouse gas Inventories,

				which is found to be inline with the applied methodology/5 /.								
	SDG 13	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, C _b	4.44%	The value of this parameter applied has been calculated based on the baseline survey conducted by CME in Aug-Sept 2021, results of which has been duly verified by the VVB for design certified GS VPAs (VPA 31 - 47) since, it has been less than 3 years since the baseline survey was conducted and the results of the same has been validated and accepted by GS during the inclusion of VPA 31 - 47.								
	SDG 13	Capacity of the school or institutional water treatment technology , q _i	<table><tr><td>Description</td><td>UltraFLO</td><td>UltraTAB</td></tr><tr><td>Treatment Capacity (Ltrs)</td><td>FLO; 340,000 Inline: 720,000</td><td>Big Pack: 48,000 Small Pack: 10,000</td></tr></table>	Description	UltraFLO	UltraTAB	Treatment Capacity (Ltrs)	FLO; 340,000 Inline: 720,000	Big Pack: 48,000 Small Pack: 10,000	The value of this parameter has been applied as per the manufacturer specification/33/.		
	Description	UltraFLO	UltraTAB									
Treatment Capacity (Ltrs)	FLO; 340,000 Inline: 720,000	Big Pack: 48,000 Small Pack: 10,000										
SDG 13	Fractional non-renewability status of	93.51%	The fraction of woody non-renewable biomass saved									

		woody biomass fuel during year y , in case the baseline fuel is biomass or charcoal, $f_{nrb,f,y}$	by the project activity has been determined and fixed at the time of validation. Calculation of fNRB is reviewed in a separate calculation sheet provided by CME. Application of Tool 30: Calculation of the fraction of non-renewable biomass/48/ is found to be appropriate. The tool choices are explained below: -According to para 9 of tool, the fNRB value may either be fixed ex-ante or be monitored ex-post. The PP has chosen to fix the value ex-ante. -In line with para 10 of the tool, the most recent historical data available for the same vintage has been used for the fNRB calculations i.e. values from year 2019. -The calculations for fNRB value, as demonstrated in the calculation sheet, have
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				been done using the equations 1,2, 3 and 4 of the applied tool. The application of these equations is found appropriate and in line with the tool. All parameters' sources used for calculations of fNRB are found to be of similar vintages and using the latest available data from credible national and government released studies and census. The values of all parameters used in calculations were checked from the sources provided in calculation sheets and were found to be consistently reported. The calculations were also found in line with tool 30. Thus, it is concluded that description, justification, sources and calculations are in accordance with applied methodology and tool. The
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						value applied is found to be appropriate and acceptable. The value of this parameter has been applied as per C4 Ecosolutions report/34/
	SDG 13	Litres per person per day, QPWp	Type of Premises	Default value	Applicability	The Value of this parameter has been applied as per the applied methodology/5 /.
			Full-day premises	4 /person / day	Premises like schools etc.	
			Boarding school	4 /person / day	-	
			Half time premises	3 /person / day	Premises like day schools, offices etc.	
	SDG 13	Weighted average efficiency of the baseline water boiling devices.	10.12%			The value of this parameter has been calculated in line with the applied methodology/5 /. CME has taken two types of baseline stoves, Traditional 3-stone fire and traditional charcoal stove. The number of stoves of each type has been identified by the baseline survey, which is found to be appropriate.

			The calculation of weighted average to determine the efficiency has been checked and found to be appropriate.
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Baseline survey:

For some of the parameters mentioned above the value has been sourced from the baseline survey and design certified VPAs (VPA 31 - 47). The sampling approach adopted for conducting the surveys was reviewed by the team to validate the values. The population considered for drawing the samples was obtained from the official website of Ministry of Education, Republic of Kenya which was found reliable source of information. The population size was about 9,000 schools therefore as per the applied methodology (which reiterated to TPDDTEC for baseline surveys) the minimum sample size of 100 was applicable. A total of 200 schools were targeted to obtain the required information, out of these 100 were project schools and 100 were non-project schools. Out of the 200 schools that were reached 180 responded and results from those were reviewed in the desk review. The sampling approach and results obtained from the survey were found satisfactory.

Data and parameters to be monitored:**For VPA 49 to VPA 73**

Relevant SDG Indicator	Parameter	Value in VPA-DD	Frequency	Assessment
SDG 1	Access to Basic Services (Total number of premises with at least one WPS distributed / installed under the project); ABS _{Project}	620	Continuous	The CME has applied the value based on the maximum number of project technology (SSC Threshold), which can be distributed in the respective VPAs. The sales database/12/ has also been reviewed, it has been confirmed that a maximum of 620 project technology has been distributed in VPA 49 – 63. The value

					of the parameter will be monitored annually through sales records which will be maintained by the CME on a regular basis.
	SDG 3	% of users reporting reduction in incidence of diarrhoea and water borne diseases etc. (improved health) in project, IH _{Project}	90%	At least annual or biennially	The CME has applied the estimated value as per judgement and through other projects of similar nature. The value will be monitored annually/biennially through ex-post monitoring survey.
	SDG 6	Total Number of WPS distributed/installed under the project and % WPS distributed / installed providing safe drinking water to beneficiaries in project; SWQ _{project}	620 and 90%	At least annual or biennially	The CME has applied the estimated value as per judgement and through other projects of similar nature. The value will be monitored annually/biennially through ex-post water quality test.
	SDG 7	Access to affordable and clean energy (% users reporting an operational WPS in Project); AAC _{project}	90%	At least annual/biennially	The CME has applied the estimated value as per judgement and through other projects of similar nature. The value will be monitored annually/biennially through ex-post monitoring survey.
	SDG 8	Quantitative Employment and income generation (Number of person (male and	12	Annually/biennial	The CME has applied the estimated value as per judgement and through other projects of similar

		female) hired under project); QE IG _{project}			nature. The value will be monitored annually/biennially and will maintain the HR /sales records.
	SDG 13	M _{q,y} : Ongoing water quality indicated as the fraction of the samples that pass microbial quality standard of host country	0.90	Annual	The value of the parameter will be determined through water quality test on the sampling basis ex-post. It will be determined annually, and the first round of testing will be conducted within six months from the start date of registration. The approach applied is found to be inline with the applied methodology/5/.
	SDG 13	Water hygiene education campaigns	-	Annual	The CME will apply the value as per the survey based on the questionnaire to assess hygienic handling of clean water. The parameter will follow annual frequency and the parameter will be monitored through question-based survey.
	SDG 13	Proportion of project end-users that boil safe (treated, or from safe supply) water after installation of project technology; X _{cleanboil,y}	0 %	Annually	The value of the parameter will be determined through project survey. It will be determined annually. The approach applied is found to be inline with the applied methodology/5/.
	SDG 13	Number of	480	Annually	The value of the

		individuals per premises type p in the project boundary in year y: $HN_{p,y}$			parameter is determined through the sales or distribution records/12/ and will be recorded at the time of installation of the project technology. The CME will cross-check the data recorded in database through one of the methods (project survey, official governmental publications or statistics, credible published literature, studies) as specified in the applied methodology. The approach by the CME has been checked and is found to be in line with the applied methodology/5/.
	SDG 13	Accumulated number of premises type p with at least one individual project technology in year y: $N_{p,y}$	620	Continuous	The value of the parameter will be determined through Sales or Distribution records/12/. It will be monitored continuously.
	SDG 13	Usage rate of the project technology by premises type p during year y: $U_{p,y}$	90%	Annually	The value of the parameter will be determined through project surveys. The parameter is monitored to check the operability of the project technology in the targeted population. The parameter will be monitored annually.

SDG 13	Average days the project technology is present for end-users in the premises p in year y; DP _{p,y}	200	Annually	The value will be calculated annually through sales records/12/ and Schools Academic calendar/46/ which will be maintained by the CME on a regular basis.
SDG 13	Average number of individual project technologies in each project premises type p in year y; DN _{p,y}	-	Annually	The value will be monitored annually through sales records which will be maintained by the CME on a regular basis.

The assessment team confirmed that the monitoring parameters are sufficient to calculate the emission reductions in accordance with the applied methodology/5/. The parameters will be calculated or measured as mentioned above section.

The validation team confirms that list of parameters identified by the CME and as mentioned in the PDD/04/ are in line with the monitoring methodology and SDG monitored parameters will be assessed on the basis of monitoring frequency mentioned.

Implementation of Sampling Plan

The CME as per the monitoring plan shall follow CDM Guidelines for sampling and surveys for CDM project activities and programmes of activities (Version 04.0)/32/ and Standard for Sampling and surveys for CDM project activities and programmes of activities (Version 09 .0)/13/ to design the sampling plan for the VPAs in line with the applied methodology are Emissions reduction from Safe Drinking Water Supply, Version 1.0/5/. The target population will be the institutions and schools of Kenya. All the VPAs i.e., GS12251 to GS12275 (VPA 49 to VPA 73) will be implemented in the Kenya with same baseline scenario and technology and therefore the CME has chosen to apply across VPA sampling. The CME will apply stratified random sampling for determining the usage rate of units distributed based on age as project technologies age over time and/or are replaced and accordingly calculate the sample size.

The CME requested for the deviation from GS with regards to the monitoring requirement of the WPS and the requirements of the methodology which got approved on 07/12/2021. The deviation was basically requested for ageing-based survey for WPS systems. CME requested to have project surveys for WPS stratifying each technology irrespective of their age and by grouping more than 10 small scale VPAs together. This was approved by GS as WPS system are not affected by ageing over time as is also observed in all water purification technologies. There is no mechanical wear and tear in the water

	purification process. The functioning of the WPS in the VPAs is dependent on filters/cartridges. The cartridges or filters upon being consumed and replenished with a fresh tablet/cartridge replenishes the functioning of the equipment. The survey team are required to visit each institution for the surveys with a survey questionnaire and backups shall be taken into consideration in case of non-availability of the users. The Validation team confirms that the sample requirements are in line with the applied methodology/5/.
Findings	CL#04 was raised and resolved.
Conclusion	The sampling plan was found to be accurately set by the CME as per the implemented technology.

D.6. Start date, crediting period type and duration

Means of validation	According to GS4GG Principles and Requirements version 1.2 para 4.1.40/14/, "For distributed technology projects, the start date is the date of installation of the first unit under the project". The first unit installed under the VPAs are marked as the start date of the VPAs/44/, which has been verified through the end-user agreement/44/ and is found to be appropriate. The expected operational lifetime of the VPA is 21 years. The VPA crediting period is of 5 years, renewable twice. The start date and crediting period of the VPAs (VPA 49 to VPA 73) are as follows:		
	VPA	Start date	Crediting Period
	VPA 49	30/01/2023	30/01/2023 to 29/01/2028
	VPA 50	08/03/2023	08/03/2023 to 07/03/2028
	VPA 51	10/03/2023	10/03/2023 to 09/03/2028
	VPA 52	11/04/2023	11/04/2023 to 10/04/2028
	VPA 53	14/04/2023	14/04/2023 to 13/04/2028
	VPA 54	09/05/2023	09/05/2023 to 08/05/2028
	VPA 55	18/05/2023	18/05/2023 to 17/05/2028
	VPA 56	31/05/2023	31/05/2023 to 30/05/2028
	VPA 57	21/06/2023	21/06/2023 to 20/06/2028
	VPA 58	07/07/2023	07/07/2023 to 06/07/2028
	VPA 59	14/07/2023	14/07/2023 to 13/07/2028
	VPA 60	21/07/2023	21/07/2023 to 20/07/2028
	VPA 61	31/07/2023	31/07/2023 to 30/07/2028
	VPA 62	09/08/2023	09/08/2023 to 08/08/2028
	VPA 63	30/08/2023	30/08/2023 to 29/08/2028
	VPA 64	15/09/2023	15/09/2023 to 14/09/2028
	VPA 65	01/10/2023	01/10/2023 to 30/09/2028
	VPA 66	01/10/2023	01/10/2023 to 30/09/2028
	VPA 67	01/10/2023	01/10/2023 to 30/09/2028
	VPA 68	01/01/2024	01/01/2024 to 31/12/2028
	VPA 69	01/01/2024	01/01/2024 to 31/12/2028
	VPA 70	01/01/2024	01/01/2024 to 31/12/2028
	VPA 71	01/01/2024	01/01/2024 to 31/12/2028
VPA 72	01/01/2024	01/01/2024 to 31/12/2028	
VPA 73	01/01/2024	01/01/2024 to 31/12/2028	
Findings	No findings		
Conclusion	The lifetime and crediting period of the VPAs lies within the crediting		

	period of the PoA and is in accordance with GS4GG Principles and Requirements/14/.
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D.7. Environmental impacts

Means validation of	EIA is not required in the Host country Kenya.
Findings	Not Applicable
Conclusion	Not Applicable

D.8. Stakeholder consultation

Means validation of	The CME, Carbon Impact LLC held physical local stakeholder meetings on 30th May 2023 at Apollo Center, Westlands, Nairobi, Kenya. Local Stakeholder consultation report/42/ was checked to confirm that all the relevant stakeholders were invited to the LSC meeting through email, post and public notification/42/. It was confirmed from the on-site interviews with the CME representatives that during the meeting, a detailed objective of the project activity was given to attendees and the transfer of product ownership was also discussed. Stakeholder feedback round (SFR) was also conducted which started from 14/08/2023 to 01/10/2023, which has been verified through the SFR round invitation mails/42/. No additional comments have been received from the participants that will influence the project design or implementation. The LSC participants were also interviewed about the LSC meeting discussion, grievance mechanism and impact of project and opinion about the project and the positive response has been received. The VVB team confirms that there were no negative comments received from the stakeholder consultation rounds and all the queries or concerns raised by the stakeholder were satisfactorily resolved by the CME. The PD has maintained grievance mechanism in place so as to capture the inputs or comments from the stakeholders: i. Annex W expression book has been kept at the Office of Impact Water in Kenya ii. help@goldstandard.org iii. Kenya: +256 790 911 934 iv. info@impactcarbon.org
Findings	CL#06 and FAR#01 was raised and resolved.
Conclusion	LSC was found to be conducted for the VPA. The validation team confirms that CME has considered and addressed all the stakeholder comments.

SECTION E. Sustainability Assessment

E.1. Safeguard principles assessment

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management or risk mitigation.	Assessment team's Opinion/ justification for the mitigation measure
Principle 1: Human Rights			
1. Does the project developer, its representatives and the Project disrespect	No	- is informed by human rights analysis, including from UN human rights mechanisms	VVB has confirmed that the CME and the VPA Implementor will respect related laws of Kenya and

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internationally proclaimed human rights? 2. Is the project involved or complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights? 3. Have local communities or individuals raised human rights concerns regarding the project (e.g., during the stakeholder engagement process, grievance processes, public statements)? 4. Is there a risk that rights-holders (e.g., Project-affected stakeholders) do not have the capacity to claim their rights? 5. Does this project undermine national or regional measures for the realisation of the right to development?		(human rights treaty bodies, universal periodic review, special procedures) - includes measures to assist the government to realise (respect, protect and fulfil) human rights under international law and to implement human rights-related standards in national law (whichever is higher) - enhances the availability, accessibility and quality of benefits and services for potentially marginalised individuals and groups, and to increase their inclusion in decision-making processes that may impact them (consistent with the non-discrimination and equality human rights principle) - provides reasonable accommodations to strengthen inclusivity and accessibility of project benefits and services to persons with disabilities.	will not lead to violations of human rights or discrimination of any kind as defined in the Universal Declaration of Human Rights/43/.
Would the project potentially involve or lead to: 1. adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalised groups? 2. inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalised or excluded individuals or groups, including persons with disabilities? 3. restrictions in availability, quality of and/or access to resources or basic	No	The project incorporates a human rights-based approach through various strategies that align with international human rights standards and principles. • The project design is informed by human rights analysis, drawing from UN human rights mechanisms such as human rights treaty bodies, universal periodic reviews, and special procedures. This ensures that the project's goals and strategies align with recognized human rights principles and obligations. • The project includes	VVB has confirmed that the CME and the VPA Implementor will respect related the laws of Kenya and will not lead to violations of human rights or discrimination of any kind as defined in the Universal Declaration of Human Rights/43/.

services, in particular to marginalised individuals or groups, including persons with disabilities? 4. exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?		measures to assist the government of Kenya in realizing, respecting, protecting, and fulfilling human rights under international law. By supporting the dissemination of WPS to schools and institutions, the project contributes to the government's efforts to provide safe drinking water, which is a fundamental human right. • By targeting schools and institutions that may have limited access to clean drinking water, the project directly addresses the needs of potentially vulnerable populations, consistent with the non-discrimination and equality human rights principle. • The project strives to provide reasonable accommodation to strengthen inclusivity and accessibility of its benefits and services to persons with disabilities. This could involve ensuring that the water purification technologies are designed and distributed in a way that accommodates the needs of individuals with disabilities, promoting their equal access and participation. • The project's central focus is on providing safe drinking water, aligning with the human right to water and sanitation. By addressing a critical need, the project directly contributes to the enjoyment of a fundamental human	
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		right. • Access to clean water reduces the risk of waterborne diseases, which positively impacts the right to health. By improving community health, the project indirectly supports other related human rights. • The project explicitly targets marginalized groups such as schools and institutions with limited access to clean water. This demonstrates a commitment to addressing disparities and ensuring that those who are often underserved benefit from the project. • The project's emphasis on involving local communities, including marginalized individuals, in decision-making processes fosters inclusivity and empowers these groups to shape the project's outcomes. • The project acknowledges the challenge of limited water access and aims to overcome barriers by providing water purification systems. By doing so, it directly addresses the restriction in availability of a basic resource, especially for marginalized individuals. • improving water quality and reducing waterborne diseases, the project contributes to community well-being. This, in turn, can lead to reduced tensions and conflicts over access to limited resources, supporting	
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		conflict prevention.	
Principle 2. Gender Equality			
1. Have women's groups/leaders raised gender equality concerns regarding the project, (e.g., during the stakeholder engagement process, grievance processes, public statements)? 2. Does the project undermine the principles of non-discrimination, equal treatment, and equal pay for equal work? 3. Does the project prevent men and women from having equal opportunities to participate in identified tasks and activities, whether through paid work, volunteer work, or community contributions, as appropriate? 4. Does the project limit the participation of women or men based on pregnancy, maternity/paternity leave, or marital status? 5. Is information about project objectives being communicated in a way that is inappropriate for the local context and not tailored to the methods of understanding of both women and men, which could hinder their participation? 6. Has the project assessed gender risks without referencing the country's gender strategy or equivalent national commitment? 7. Has expert stakeholder(s) been involved, and has their input been requested	No	- The project's focus on providing water purification systems (WPS) to schools and institutions directly supports gender equality by reducing the burden on women and girls who often bear the responsibility of water collection. - Access to safe drinking water through WPS contributes to better health outcomes, benefiting women and girls, and aligns with Sustainable Development Goal (SDG) 3: Good Health and Well-being. - The project's emphasis on distributing WPS technologies primarily to schools and institutions reduces the influx of workers to communities, mitigating the risk of changes in power dynamics that could exacerbate gender-based violence. - Improved community health and safety resulting from the project can indirectly contribute to a safer environment, aligning with SDG 5: Gender Equality and SDG 16: Peace, Justice, and Strong Institutions. - The project aims to increase the inclusion of women and girls in decision-making processes, addressing potential discrimination by ensuring their perspectives are considered.	The VPA will not directly or indirectly lead or contribute to adverse impacts on gender. The VPA is about implementation of water purification systems in Kenya are foreseen to improve the general conditions of women and not to lead to any risk of contributing issues. This is in line with the Gender equality and HR policy of the Impact Carbon (CME).

for the project design on gender equality and women's empowerment? Would the project potentially involve or lead to: 1. adverse impacts on gender equality and/or the situation of women and girls? 2. exacerbation of risks of gender-based violence? For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc. 3. reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits? 4. limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? For example, activities that could lead to natural resources degradation or depletion in		• By providing training and employment opportunities related to WPS technologies, the project promotes gender equality in access to opportunities, in line with SDG 8: Decent Work and Economic Growth. • The project's focus on reducing the use of non-renewable biomass and fossil fuels aligns with environmental sustainability goals, reducing pressure on natural resources and indirectly supporting livelihoods that depend on them. • Proper training on technology usage and maintenance ensures responsible resource management, consistent with SDG 15: Life on Land, and supports women's roles in resource access and protection. In summary, the project is designed to support gender equality, minimize gender-based violence risks, promote inclusivity, and enhance women's access to resources and opportunities. It aligns with various Sustainable Development Goals while actively working to mitigate any potential adverse impacts on gender equality, women's empowerment, and resource management.	
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communities who depend on these resources for their livelihoods and well-being.			
Principle 3: Community Health and Safety			
1. Does the project involve potential risks to the health and safety of affected communities during its life cycle? 2. Does the project involve any potential risks to the workers' safety and health? Where the project potentially involve or lead to: 1. construction and/or infrastructure development (e.g., roads, buildings, dams)? 2. air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation? 3. harm or losses due to failure of structural elements of the project (e.g., collapse of buildings or infrastructure)? 4. risks of water-borne or other vector-borne diseases (e.g., temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health? 5. transport, storage, and	No	Safe Water Provision: The project's primary focus on distributing water purification systems (WPS) to schools and institutions directly addresses the risk of unsafe drinking water. By providing a reliable and efficient means of purifying water, the project reduces the potential for waterborne diseases, contributing to improved community health. Indoor Air Quality Improvement: The project's emphasis on replacing the use of non-renewable biomass/fossil fuel for boiling water helps improve indoor air quality. Traditional cooking practices using solid biomass fuel often result in indoor air pollution, which can lead to respiratory illnesses. By reducing the reliance on such practices, the project contributes to a healthier indoor environment. Reducing Respiratory Illnesses: The project's shift away from inefficient cookstoves and solid biomass/fossil fuel-based water boiling practices reduces exposure to harmful pollutants that contribute to respiratory	The VPAs involves the distribution of the WPS systems to the targeted population in Kenya. The project activities do not pose risks to the health of the community. The VPA will reduce the risk of illness in communities caused by unsafe drinking water. Also, the distributed WPS technology will help in improving the indoor air quality caused by the burning of biomass/ fossil fuel.

use and/or disposal of hazardous or dangerous materials (e.g., explosives, fuel and other chemicals during construction and operation)? 6. adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g., food, surface water purification, natural buffers from flooding)?	illnesses. This reduction in pollution helps mitigate health risks and enhances overall community well-being. Health Awareness and Education: The project may include components of health awareness and education, informing communities about the importance of clean water, proper hygiene practices, and the risks associated with unsafe water sources. This knowledge empowers community members to make informed decisions about their health and safety. Technology Training: As part of the project, training may be provided on the proper use and maintenance of the water purification technologies. Ensuring that community members understand how to operate and care for the systems helps maximize their benefits and minimizes potential risks. Environmental Impact: By eliminating the use of non-renewable biomass and fossil fuels, the project contributes to mitigating environmental risks associated with deforestation, air pollution, and greenhouse gas emissions, which can have long-term health implications for communities.	
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		In summary, the project's focus on safe water provision, indoor air quality improvement, respiratory illness reduction, health education, and proper technology training collectively addresses identified risks to community health and safety. These measures work together to create healthier and safer living conditions for the communities benefiting from the project.	
Principle 4.1 Sites of Cultural and Historical Heritage			
Does the project involve altering, damaging, or removing sites, objects, or structures of significant cultural heritage?	No	The project's focus on the dissemination of WPS to schools and institutions in Kenya emphasizes addressing water purification needs. This does not involve activities adjacent to or within cultural heritage sites without adversely affecting historical, cultural, or religious values. The implementation does not require significant excavations, demolitions, or drastic environmental changes.	The project involves the dissemination of the WPS technology to the targeted population in Kenya. The WPS dissemination doesn't involve anything which can lead to alteration, damage or removal of any critical cultural heritage as confirmed through remote audit.
Principle 4.2 Forced Eviction and Displacement			
Does the project involve any risks related to involuntary relocation of people?	No	The project emphasizes working closely with local communities, schools, and institutions to ensure that all activities are carried out with their full involvement and consent avoiding forced evictions, involuntary relocations, or economic displacement.	Not Applicable
Principle 4.3 Land Tenure and Other Rights			
Does the project involve any risks related to identifying and managing legitimate tenure rights that may be affected by the project?	No	The project is designed to focus on water purification systems (WPS) distribution to schools and institutions in Kenya, with the primary objective of	Not Applicable

		providing safe and clean drinking water. The target beneficiaries are schools and institutions, which are generally established entities with established land arrangements. This reduces the likelihood of conflicting with existing land tenure and property rights. Also, the project does not involve activities that would require extensive land use, such as infrastructure development or resource extraction, and therefore less likely to be associated with uncertainties in land tenure.	
Principle 4.4 Indigenous People			
Does the project involve Indigenous People within the Project area of influence who may be affected directly or indirectly by the Project?	No	The project is designed to minimize the potential involvement or negative impacts on areas inhabited by indigenous peoples and their rights. Several justifications support this: • Targeted Distribution: The project explicitly focuses on distributing water purification systems (WPS) to schools and institutions in Kenya. These target areas are distinct from indigenous territories, which reduces the likelihood of affecting or encroaching upon indigenous lands and territories. • Geographical Scope: The project's geographic scope is centered on schools and institutions within Kenya, with a focus on water purification. This localized approach is not aimed at areas specifically inhabited by indigenous peoples,	The project activity involves the dissemination of WPS technology to the targeted population in Kenya. It has been conformed through remote audit that target areas are distinct from indigenous territories. The technology involved doesn't have direct or indirect negative impacts on indigenous lands, natural resources, and territories.

		minimizing the risk of encroachment or disruption to their traditional livelihoods. • Non-Invasive Technology: The project involves the distribution of water purification technologies, which do not entail large-scale infrastructure development or resource extraction. These technologies are less likely to have direct negative impacts on indigenous lands, natural resources, and territories. • Human Rights Consideration: The project explicitly acknowledges and integrates a human rights-based approach, ensuring that access to safe drinking water is a fundamental right. While not specifically targeted at indigenous peoples, this approach underscores the project's commitment to equitable access to clean water, which aligns with the broader principles of human rights.	
Principle 5 Corruption			
1. Does the project involve, or is it complicit in, contributing to or reinforcing corruption or corrupt projects? 2. Does the project have a risk of encouraging bribery, kickbacks, or other unethical behavior?	No	-	Not applicable
Principle 6.1 Labour Rights and Working conditions			
1. Does the project	No	The project is designed to	The VPA follows the national and international

involve, facilitate, or condone forced labor, or pose a potential risk of forced labor?		uphold ethical and fair labor practices, prioritizing the well-being and rights of all workers involved, and aligns with Sustainable Development Goal 8 (Decent Work and Economic Growth).	labour laws and policies. HR policy and has been reviewed and is found to be appropriate. VPA employment contracts will be provided at the time of verification.
2. Does the project violate any labor or health and safety laws, international obligations, or ILO conventions?		The project:	
3. Does the project violate the principles of equal opportunity and fair treatment in its employment decisions?		ensures that all workers are engaged voluntarily, with transparent terms and conditions of employment.	
4. Does the project violate national laws, if available regarding non-discrimination in employment?		is committed to complying with both national labor laws and international labor standards, ensuring that working conditions and terms of employment meet or exceed legal requirements.	
5. Does the project allow child labor?		respects the right to freedom of association and collective bargaining, enabling workers to voice their concerns and negotiate collectively promoting effective labor rights and empowering workers.	
6. Does the project have insufficient processes and measures in place to ensure the safety and health of project workers?		ensures that documented working agreements are in place for all workers, which comprehensively address working conditions and terms of employment promoting decent work and fair treatment.	
7. Does the project have insufficient measures to safeguard and support vulnerable project workers, such as women, people with disabilities, migrant workers, and young workers, and to prevent any kind of harassment, abuse, bullying, or exploitation, including gender-based violence (GBV)?		implements policies to provide quality	
8. Does the project have			

no grievance mechanism available for workers to voice workplace concerns? Is information about this mechanism not provided to workers at the time of recruitment, or is it not easily accessible?		accommodation and basic services, ensuring non-discrimination and equal opportunity promoting safe and inclusive working environments. • strictly prohibits discrimination or harassment based on any factors unrelated to job requirements, fostering a respectful and inclusive workplace. • has a zero-tolerance policy for child labor, adhering to national and international standards. This aligns with SDG 8's commitment to eradicating child labor and protecting the rights of children. • places a strong emphasis on worker safety and health, providing training, protective equipment, and maintaining thorough records of accidents and incidents. This approach supports SDG 8's goal of promoting safe and secure working environments. • takes measures to protect vulnerable workers, including women, people with disabilities, migrant workers, and young workers, from harassment, exploitation, and gender-based	
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		violence. This approach aligns with SDG 8's aspiration to promote inclusivity and equal treatment. ensures due diligence in managing third-party employees, establishing clear policies and procedures to monitor their performance.	
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Principle 6.2 Negative Economic Consequences

1. Is there a risk of project failure during implementation or after project certification due to a lack of financial resources? 2. Is there a risk of project failure during implementation or after project certification due to a lack of financial resources? 3. Are there any potential risks or negative impacts this project may have on vulnerable or marginalised social groups, despite the benefits it may bring?	No	The project design incorporates a robust financial framework that includes the utilization of carbon finance to support local partners engaged in the production, distribution, and maintenance of water purification systems (WPS) technologies. The involvement of Impact Water LLC as the VPA implementer and Impact Carbon LLC as the CME provides a structured management system, reducing the risk of project failure due to financial constraints thus contributing positively to the local economy by creating opportunities for training and employment.	The VPA involves the dissemination of WPS technology to the targeted population in Kenya. No Negative impacts or risks has been identified through the implementation of the project technology. The VPA provides job opportunity to the locals, which has been checked during the remote audit and employment contracts.
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Principle 7.1 GHG Emissions

Does the project have a risk of increasing greenhouse gas emissions over the Baseline Scenario?	No	The project aims to replace the use of non-renewable biomass and fossil fuels for boiling water with clean water purification technologies with a clear emphasis on reducing greenhouse gas (GHG) emissions compared to the baseline scenario.	The VPA minimises GHG emissions in comparison to the baseline scenario.
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Principle 7.2 Energy Supply

Does the project pose a risk to the availability and reliability of energy supply to other users?	No	The energy requirements of the water purification systems (WPS) distributed to schools and institutions are zero and therefore shall not exert any pressure on the overall energy supply available to other users.	The VPAs involves the dissemination of WPS technology, and the distributed technology doesn't utilize or consume any electricity.
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Principle 8.1 Impact on Natural Water Patterns/Flows

1. Does the project increase water usage to a level that will not allow for the maintenance of environmental flows? 2. Does the project result in the discharge of wastewater that does not meet the required standard for beneficial reuse and could therefore negatively impact the environmental flow? 3. Does the project have the potential risk to exceed the rate of recharge for the groundwater source? 4. Does the project involve any processes or activities that could contaminate the groundwater and render it unsuitable for use?	No	The project's core objective is to enhance the quality of drinking water by providing water purification technologies. It does not entail any significant alteration or manipulation of natural watercourses, as the activities are centered around improving water quality within schools and institutions, rather than modifying watercourses. Additionally, the project does not involve significant extraction or diversion of groundwater and the underlying activities do not involve large-scale developments like dams, reservoirs, or river basin alterations that could impact groundwater resources.	Not Applicable
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Principle 8.2 Erosion and/or Water Body Instability

Does the project have a risk of negatively impacting the catchment and has it been assessed and addressed?	No	The project's aim is to disseminate water purification systems (WPS) to schools and institutions thus contributing to the reduction in deforestation and therefore is not expected to adversely affect the catchment area.	Not applicable
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Principle 9.1 Landscape Modification and Soil

Is there any risk of soil resource degradation or loss of ecosystem services provided by soils in the	No	The project is centered around enhancing community health, safety, and well-being by	Not Applicable
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project? If yes, the project shall maintain healthy soils by minimising negative impacts on soil health, productivity, structure, and water retention. Steps to minimise soil degradation include crop rotation, composting, using N-fixing plants, and reducing tillage and ecologically harmful substances.		improving access to clean drinking water and reducing indoor air pollution. This focus underscores its supportive role in positively impacting the communities' living conditions, health, and sustainability, without indicating any significant engagement in the management of living natural resources.	
Principle 9.2 Vulnerability to Natural Disaster			
Does the project have any risks associated with natural or man-made hazards that could result from land use changes due to the project?	No	The project involves distribution of water purification systems (WPS) within established settings like schools and institutions and is free from any possibility of large-scale and uncontrolled land use changes that could lead to hazards.	Not Applicable
Principle 9.3 Biosafety and Genetic Resources			
Does the project involve the transfer, handling, and use of genetically modified organisms/living modified organisms that may result in adverse effects on biological diversity?	No	The project's core objective is to distribute water purification systems (WPS) to schools and institutions in Kenya, with a clear emphasis on low-GHG water purification technologies. The involvement of genetically modified organisms (GMOs) or living modified organisms (LMOs) is extremely unanticipated throughout the project cycle. Also, the project does not engage in the transfer, handling, or use of GMOs/LMOs resulting from modern biotechnology.	Not Applicable
Principle 9.4 Release of pollutants			
Does the project have a risk of releasing pollutants to air, water, and land in routine, non-routine, or accidental circumstances?	No	The project is designed to minimize the risk of releasing pollutants to air, water, and land in routine, non-routine, or accidental circumstances.	Not Applicable

		The focus on distributing water purification systems (WPS) and promoting clean cooking practices reduces reliance on traditional solid biomass and fossil fuel-based methods, significantly lowering air pollutants. Additionally, by enhancing water safety, the project contributes to reducing waterborne pollutants.	
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Principle 9.5 Hazardous and Non-hazardous Waste

1. Does the project involve the generation of waste materials (both hazardous and non-hazardous)? 2. Does the project involve risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use? 3. Does the project involve the use of any chemicals or materials subject to international bans or phase-outs?	No	The project implementation centers on distributing and utilizing water purification systems (WPS) in schools and institutions. These technologies are intentionally designed to function without presenting risks of hazardous material release. Furthermore, any waste produced is subject to diligent disposal practices, minimizing the potential for hazardous material release throughout the project's lifecycle – from production and transportation to handling, storage, and usage. Importantly, the project maintains strict adherence to international regulations, ensuring that no chemicals or materials subject to bans or phase-outs are utilized.	The VPA involves the dissemination of WPS technology to the schools and institutions in Kenya and doesn't have any risk for the hazardous material. The VPA distributes a consumable based technology, and doesn't produce any hazardous material as a waste.
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Principle 9.6 Pesticide and Fertilizers

1. Does the project involve the use of chemical pesticides? 2. Does the project involve purchase, store, manufacture, trade or use products that fall in Classes IA (extremely hazardous) and IB (highly hazardous) 3. Does the project use fertilisers, and if so, are	No	• The project focuses on water purification technologies (WPS) and does not have a direct connection to pest management activities. • Its primary goal is to provide safe drinking water to schools and institutions, which does not require to involve pest control	Not Applicable
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measures being taken to minimise their use and nutrient losses to the environment?		measures.	
Principle 9.7 Harvesting of Forests			
1. Does the project have a risk of unsustainable forest management, including timber harvesting? 2. Does the project pose a risk of depleting biodiversity and ecosystem functionality in areas where improved forest management is undertaken? 3. Does the project risk not meeting requirements for environment-friendly, socially beneficial, and economically viable plantations using native species whenever possible?	No	The project is supportive of sustainable forest management by promoting the use of water purification systems (WPS) and reducing the demand for non-renewable biomass and fossil fuels. This will rather mitigate the risk of unsustainable timber harvesting.	The VPAs involves the dissemination of WPS. There is no harvesting of forest involved.
Principle 9.8 Food Security			
Does the project involve the risk of negatively influencing access to and availability of food for people affected?	No	The project would not potentially involve or lead to modification of the quantity or nutritional quality of food available. Instead, it is focused on improving access to safe drinking water through water purification systems, thereby supporting community health without altering food crops, regimes, exports, or economic incentives.	Not Applicable
Principle 9.9 Animal Husbandry			
1. Does the project involve any risks to animal welfare? Animal welfare shall be ensured by	No	The project's focus on distributing water purification systems (WPS) to schools and institutions in Kenya is aimed at improving	Not Applicable

providing access to water and food, appropriate environment, humane treatment, and staff training. Evidence of mistreatment will be treated as an immediate non-conformity. 2. Does the project involve any potential risk of excessive or inadequate use of veterinary medicines? 3. Does the project involve the risk of administering synthetic growth promoters, including hormones?		access to safe drinking water for human consumption. This effort does not directly involve or lead to limitations on animals' access to basic needs. Instead, the project's goal to enhance water purification primarily benefits human communities, ensuring better access to clean water. It does not negatively impact animals' access to water, food, shelter, or other essential resources, as its scope is primarily centered on human welfare and environmental sustainability.	
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Principle 9.10 High Conservation Value Areas and Critical Habitats

1. Does the project have the risk of negatively impacting HCV areas and/or critical habitats? 2. Does the project in the project area or area of downstream impacts have risks to the following: native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells),	No	The project's scope primarily involves the distribution of water purification systems to schools and institutions in Kenya, focusing on safe water provision and reducing the use of non-renewable biomass for water boiling. Therefore, it is unlikely to have direct impacts on native tree patches, individual native trees, or habitats of rare, threatened, and endangered species. The project's indirect positive effects on reducing air pollution and greenhouse gas emissions can, instead, be supportive of native tree patches, freshwater resources, and	Not Applicable
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habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?		biodiversity-enhancing areas. By decreasing the reliance on solid biomass fuel and fossil fuels, the project contributes to improved environmental conditions, which can benefit local ecosystems, water resources, and biodiversity.	
Principle 9.11 Endangered Species			
Does the project lead to the reduction or negative impact on any recognised Endangered, Vulnerable or Critically Endangered species?	No	The project focus is targeted only to the schools and institutions for distributing water purification systems (WPS) and does not involve direct habitat disturbance or distortion of habitats of endangered species.	Not Applicable
Principle 9.12 Invasive Alien Species			
Does project introduce any alien species (not currently established in the country or region of the project) into new environments?		The project's scope is not expected to cause unintended Introductions/spread of alien species or establishment of new ecosystems. The project focusses on water purification systems (WPS) primarily using chemical disinfection and does not involve the introduction of plant materials or organisms that could become invasive.	Not Applicable

E.2. Gender Sensitive requirements

Means of validation	Question	Justification provided by CME	VVB Assessment
	Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	The VPA aims to be gender sensitive in design without excluding marginalized members of society. The VPA seeks to promote gender equality at all levels. The implemented activities including the stakeholder consultation as well as the future implementation of the project activities take into the account gender	The VPAs involve implementation of clean drinking water. The VPAs will abide by the national gender strategy. The VPAs include women at every step and do not promote gender disparity in any manner. The WPS maintenance will reduce the time

		roles and the abilities of women and men to participate in the decision/designs of the project activities. For the majority of institutions in Kenya, water fetching, fuel collection and purification activities are handled by women. In fact, the availability of clean water in a reasonable distance is foreseen to reduce women's workload related to water purification, collection of fuel needed for boiling water and caring activities as the risk for water borne diseases. It can be further expected that sexual harassment and violence happening during fuel collection and water fetching activities may be reduced. Hence, largely women will benefit from the project activity.	and effort required by women to fetch and purify the water for their families. The WPS are going to impact the overall health of both the gender. So, the VPAs do not involve and is not complicit in any form of discrimination based on gender difference and in line with the National Women Development Policy.
	Question 2 - Explain how the project aligns with existing country policies, strategies and best practices	Project activities are in line with the goals of Kenya national policies. Kenya has ratified an Equal Rights into their respective constitution (National Women's Development Policy), which guarantees equal gender rights. The project activities take into the account national policies, in fact the aim is to improve the conditions of the local women and girls by providing access to clean and safe water.	The VPAs align with the goals of Kenya with respect to equal rights and they also align with the National Women Development Policy which eliminates gender disparity.
	Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?	Members of women organizations were invited to attend the stakeholder consultation including discussion on Safeguarding Principles & Requirements. No other expert is required for the Safeguarding	It has been confirmed from the Stakeholder consultation report that several women from women organizations were invited to attend the stakeholder

		Principles & Requirements.	consultation meeting/42/.
	Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?	Members of women organizations were invited to attend the stakeholder consultation. No other expert is required to assist with Gender issues at the Stakeholder Consultation.	It was confirmed from the Stakeholder Consultation report/42/ that members of the women organizations were invited to the meeting and no other expert's opinion was needed.
Findings	No findings.		
Conclusion	The Validation team confirms that the VPAs comply with the GS4GG Gender Equality guidelines and requirements.		

SECTION F. Internal quality control

A draft inclusion report prepared by validation team is reviewed by an independent technical review team (one or more members) to confirm whether all the internal procedures established and implemented by ESPL were duly complied with and such opinion/conclusion was reached in an objective manner that complies with the applicable GS4GG rules/requirements. The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of the technical review team are independent of the validation team.

During the technical review process, additional findings may be identified, or the closed-out findings may be opened, which needs to be satisfactorily resolved before the request for issuance is submitted to Gold Standard. The independent technical reviewer may either approve the report as such or reject/return the same in such case providing the comments/findings/issues that need to be resolved by the validation team. The decision taken by the Technical Reviewer is final and is authorized by the Managing Director on behalf of Earthood Services Private Limited.

SECTION G. Validation opinion

Earthood Services Private Limited (Earthood) has performed a Gold Standard (GS4GG) validation and inclusion of the VPAs under PoA "GS11189- Improved Cookstove and Safe Water Programme". The validation and inclusion were performed on the basis of rules and requirements defined by Gold Standard and UNFCCC, as appropriate.

The review of the PoA-DD, VPA-DD, supporting documents and subsequent follow-up actions (independent research of information) has provided Earthood with sufficient evidence to determine the fulfilment of stated criteria.

The VPAs will lead to access of safe water to the people of Kenya. The project results in reduction of CO₂e emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario and the emission reductions attributable to the project are, hence, additional to any that would occur in the absence of the proposed GS programme of activities.

The VPAs aims at reducing the GHG emissions over the selected 5 years of renewable crediting period. The emission reduction forecast has been checked, and it is deemed likely that the stated amount is achievable given that the underlying assumptions do not change.

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The monitoring plan explained in VPA-DDs is in compliance with the registered PoA DD, Version 5.0 dated 25/05/2022. It adequately provides for the ex-post monitoring of the project's emission reductions and sustainable indicators as defined in GS PoA-DD. The monitoring arrangements described in the monitoring plan are feasible within the project design and it is Earthood's opinion that Impact Carbon shall be able to implement the monitoring plan.

In summary, "Improved Cookstove and Safe Water Programme – Kenya- VPA49 to "Improved Cookstove and Safe Water Programme – Kenya- VPA 73" as described in the VPA-DD – 49 to VPA-DD 73, meets all relevant GS requirements and correctly applies the baseline and monitoring methodology Emissions reduction from Safe Drinking Water Supply, Version 1.0. Therefore, Earthood requests the inclusion of the "Improved Cookstove and Safe Water Programme – Kenya- VPA49 to "Improved Cookstove and Safe Water Programme – Kenya- VPA 73" under the registered PoA Improved Cookstove and Safe Water Programme as a GS PoA.

Appendix 1. Abbreviations

Abbreviations	Full Texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CME	Coordinating / Managing Entity
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
VPA	Voluntary Project Activity
VPA DD	Voluntary Project Activity Design Document
DNA	Designated National Authority
DO	Distribution Organisation
DRB	Demonstrably renewable woody biomass
EB	CDM Executive Board
EIA	Environmental Impact Assessment
FAO	Food and Agriculture organization
FAR	Forward Action Request
GHG	Greenhouse gas(es)
IPCC	Intergovernmental Panel on Climate Change
LAF	Leakage Adjustment Factor
LSC	Local Stakeholder Consultation
NRB	Non-Renewable Biomass
PA	Project Activity
PoA	Programme of Activities
PoA DD	CDM Programme of Activities Design Document
UID	Unique Identification number
ISO	Indian Standard Organization

Appendix 2. Competence of team members and technical reviewers

Competence Statement	
Name	Divij Varshney
Education	M.Tech. Renewable energy systems B.Tech. Electrical Engineering
Experience	1.5 years
Field	Climate Change & Environment / Industry
Approved Roles	
Team Leader	Yes (VM)
Validator	Yes (VM)
Verifier	Yes (VM)
Local expert	Yes (India)
Financial Expert	NO

Technical Reviewer	NO		
TA Expert (X.X)	Yes (VM TA 1.2, 3.1)		
Reviewed by	Shifali Guleria, Quality Manager	Date	18/09/2023
Approved by	Deepika Mahala, Technical Manager	Date	18/09/2023

Competence Statement			
Name	Virginia Njeri		
Country	Kenya		
Education	Diploma (Business Management)		
Experience	10+ Years		
Field	Administration		
Approved Roles			
Team Leader	No		
Validator	Yes		
Verifier	Yes		
Methodology Expert	No		
Local expert	Kenya		
Financial Expert	No		
Technical Reviewer	No		
TA Expert	No		
Reviewed by	Shifali Guleria	Date	14/12/2022
Approved by	Deepika Mahala	Date	14/12/2022

Competence Statement			
Name	Deepika Mahala		
Country	India		
Education	M. Sc. (Environment Management), GGSIP University B.Sc. Hons. (Chemistry), Sri Venkateshwar College, DU		
Experience	6 Years +		
Field	Climate Change		
Approved Roles			
Team Leader	YES		
Validator	YES		
Verifier	YES		
Methodology Expert	ACM0002, AMS.I.D., AMS.I.A, AMS.III.AV, AMS.II.G, AMS-II.C		
Local expert	YES (India, Bangladesh)		
Financial Expert	NO		
Technical Reviewer	YES		
TA Expert	YES (TA 1.2 & TA 3.1)		
Reviewed by	Shifali Guleria (QM)	Date	28/04/2022
Approved by	Kaviraj Singh (MD)	Date	28/04/2022

Appendix 3. Documents reviewed or referenced

S.No.	Author	Title	References to the document	Provider
1.	UNFCCC	Standard: CDM PS for PoA	Ver. 3.0	Others
2.	UNFCCC	Standard: CDM PCP for PoA	Ver. 3.0	Others
3.	UNFCCC	Standard: CDM VVS for PoA	Ver. 3.0	Others
4.	Impact Carbon	PoA-DD	Version 5.0 dated 25/05/2022	CME
5.	Gold standard	Applied methodology: Emissions reduction from Safe Drinking Water Supply	Version 1.0	Others
6.	GS4GG	GS4GG Stakeholder consultation and engagement requirements	Version 1.2 Dated Oct 2019	Others
7.	GS4GG	Community Services Activity Requirements	Version 1.2 Dated Oct 2019	Others
8.	GS4GG	GHG Product Requirements	Version 2.0	CME
9.	Impact Carbon	VPA-DDs GS12251 (VPA 49) to GS 12275 (VPA 73)	Version 5.0 Dated: 22/11/2023	CME
10.	GS4GG	GS4GG VPA-DD Template	Version 2.3	Others
11.	GS4GG	Gold Standard Programme of Activities Requirements,	Version 2	Others
12.	GS4GG	Installation database	-	CME
13.	UNFCCC	Standard for Sampling and surveys for CDM project Activities and programmes of activities	Version: 9.0	CME
14.	GS4GG	Principles and requirements for GS4GG	Version 1.2	Others
15.	Impact Carbon	ODA Declaration	-	CME
16.	UNFCCC	Standard for Sampling and surveys for CDM project Activities	Version: 9.0	Others

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17.	Impact Carbon	CME approval Letter	-	CME
18.	Impact Carbon	Sample carbon transfer agreement	-	CME
19.	Impact Carbon	Baseline survey sheet	-	CME
20.	IPCC	2006 IPCC default values	2006	Others
21.	ESPL	Remote audit files	-	Others
22.	Impact Carbon	Double counting Declaration	-	CME
23.	Impact Carbon	Declaration showing this project as no new registration	-	CME
24.	Impact Carbon	Declaration showing this project is implemented independently.	-	CME
25.	Impact Carbon	Confirmation letter for performance level of the technologies	-	CME
26.	Government of Kenya	Kenya DHS survey report	2014	Others
27.	Gold Standard	GHG emissions reductions sequestration and product requirements	Version 2.0 Dated April 2021	Others
28.	Impact Carbon	Ex-ante ER sheets	Pertaining to the latest VPA-DDs	CME
29.	Impact Carbon	Data recording sheet for baseline survey	-	CME
30.	Impact Carbon	Baseline survey Forms	Several	CME
31.	WHO	WHO Water Standard	2017	CME
32.	UNFCCC	Guidelines for Sampling and surveys for CDM project activities and programmes of activities	Version 4.0	Others
33.	Impact Carbon	Manufacturer's specifications	Several	CME
34.	Impact Carbon	C4 Ecolutions report and fNRB sheet	-	CME
35.	IPCC	IPCC 2006 Guidelines for National Greenhouse gas for inventories	2006	Other
36.	GS4GG	GS4GG Template guidelines	V2.2	Others
37.	ESPL	<u>VVB Remote survey check list</u>	-	Others
38.	ILO	Kenya Labor Act	2006	Others
39.	UN	UN Convention against corruption	2003	Others
40.	UN	UN Declaration on the rights of Indigenous people	2001	Others
41.	Government of Kenya	National Women Development Policy	2011	Others

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42.	Impact Carbon	Stakeholder Consultation report	V2.0, dated 31/10/2023	CME
43.	UN	UN Human Rights Conventions	2006	Others
44.	Impact Carbon	First installation End-user Agreements for VPA 49 to 64	-	CME
45.	Impact Carbon	Delivery Note	-	CME
46.	-	School Academic calendar	-	CME
47.	CME	Employment Records	-	CME
48.	CDM	Tool 30	Version 4.0	Others
49.	-	http://data.un.org/Data.aspx?d=EDATA&f=cID%3aFW	-	Others
50.	-	Global Forest Resources Assessment 2015, Country Report Kenya	2015	Others
51.	-	2nd Schedule of Environmental Management and coordination Act (EMCA) 1999 (Amended 2012)	2012	Others

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

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

FAR ID	01	Section no.	D.8, E.1	Date	: 23-10-2023
Description of FAR					
FARs Raised during the Preliminary review of VPAs:					
1. PD shall identify the potential SDG Impacts provided by comparing the Project Scenario to the Baseline Scenario. SDG Impacts listed in the Stakeholder Consultation Report does not clearly demonstrate the direct contribution to sustainable development with verifiable data. VVB shall assess the same during verification. 2. Section B of LSC Report does not have Category B in the invitation list. Kindly check and clarify during assessment. 3. VVB shall verify during assessment regarding the safeguarding assessment questions to identify potential risks and adverse outcomes of the project and determine how the requirements are met for each Principle.					
Project participant response					Date
1. PD has listed all potential SDG impact in baseline scenario in section B.6.2 of the VPA-DD. Also, the SDG impact in case of project scenario and its monitoring plan has also been mentioned in section B.7.1 of the VPA-DD. For comparison of SDG impact in baseline and project scenario, refer to section B.6.3 of the VPA-DD. 2. As per para 3.3.1(b) of the Stakeholder Consultation and Engagement Requirements, Ver .2.0, "Category B" belongs to "Stakeholders with Land-tenure rights within or adjacent to the project and marginalized individuals and groups". The project's technology/measure, has no relevance, perceived potential risk and/or adverse outcome for stakeholders belonging to category B from the project activity. Hence, Stakeholders belonging to Category B are not deemed applicable for project. 3. Refer Appendix 1 of the VPA-DD for safeguarding principles assessment					: 31/10/2023
Documentation provided by project participant					
DOE assessment					Date
1. The VPA-DDs has been reviewed. CME has listed all potential SDG Impact in baseline scenario and project scenario along with the relevant monitoring plan for the SDG impacts. The impacts have been assessed and found to be appropriately mentioned. CLOSED 2. The information provided by the CME has been reviewed and is found to be appropriate. Since, the project is the implementation of the improved water technology in schools and institutions and has no relevance, perceived potential risk for category B. CLOSED 3. The safeguarding principles as specified in Appendix 1 of the VPA-DDs has been reviewed and found to be meeting the requirements based on the assessment questions provided for each principle. CLOSED					: 04/11/2023
Thus, FAR#01 is CLOSED.					

Table 2. CL from this verification

CL ID	01	Section no.	D.3.4	Date	: 23-10-2023
Description of CL					

Following clarifications are requested in section A.1 of VPA-DD:	
1. It has been observed that as per the Kenya DHS 2022, Table 16.4, 65.3% of population in Kenya has improved water source. However, as per section A.1, it has been stated that In Kenya, only 36.2% of the population have access to piped water, with only 21.3% population having access to piped water within their homes. PP is requested to clarify the source of the information as reported in section A.1 and justify the appropriateness of information in order to establish the baseline scenario for the proposed VPAs. 2. It has been observed that PP has described the baseline scenario in terms of cooking in the host country i.e., Kenya. However, PP is also requested to describe the baseline via literature review for the improved and unimproved water sources in the host country.	
Project participant response	Date : 31/10/2023
1. The Kenya DHS, table 16.4, page 610 provides information related to type of water source for households, whereas the VPA pertain to institutional systems targeting host country schools. Hospitals and other institutions. Thus, DHS does not represent the relevant scenario wrt to project service level. The CME had conducted a baseline study for VPAs 31-47 (already design certified under the master PoA GS11189) in Aug-Sep 2021, establishing the baseline scenario in host country and determined ex-ante parameter values accordingly. The concerned VPAs (49-74) include the same technology/measure as that in the already included VPAs as well as being implemented in the same geographical boundary. Hence, the baseline in the concerned VPA-DDs has been established as per GS design certified VPAs (31-47). Lastly, to avoid any confusion, reference of DHS data has now been removed from the revised VPA-DDs. 2. Please refer response above. There are no national / regional level studies available that provide the information on source of water, water boiling/treatment and fuel practices in schools/institutions in Kenya. The CME had conducted a baseline survey to establish baseline scenario and values of ex-ante fixed parameters for VPA 31-47, which has been duly design certified by GS already. Reference to DHS has been removed from the VPA-DDs.	
Documentation provided by project participant	
DOE assessment	
Date: 04/11/2023	
1. The revised VPA-DDs and Kenya DHS Report has been reviewed. It has been observed that Kenya DHS report provides the more relevant scenario for the households in Kenya and not for the targeted population i.e. schools and other institutions in the host country Kenya. Also, no relevant study is available for the targeted population. Hence, CME has removed the information from the VPA-DDs. To provide the baseline scenarios in the institutional settings in Kenya, a baseline survey has been conducted by the CME in Aug – Sept 2021 (which has been verified for the VPAs 31-47). The same has been provided by the CME and has been reviewed and found to be appropriate. Hence, the approach used by the CME to define the baseline scenario is found to be appropriate and in line with the applied methodology. CLOSED 2. The revised VPA-DDs and Kenya DHS Report has been reviewed. It has been observed that Kenya DHS report provides the more relevant scenario for the households in Kenya and not for the targeted population i.e. schools and other institutions in the host country Kenya. Also, no relevant study is available for the targeted population. Hence, CME has removed the information from the VPA-DDs. To provide the baseline scenarios in the institutional settings in Kenya, a baseline survey has been conducted by the CME in Aug – Sept 2021 (which has been verified for the VPAs 31-47). The same has been provided by the CME and has been reviewed and found to be appropriate. Hence, the approach used by the CME to define the baseline scenario is found to be appropriate and in line with the applied methodology. CLOSED	
Thus, CL#01 is CLOSED.	

CL ID	02	Section no.	D.3.1	Date : 23-10-2023
Description of CL				
Section A.1.1, Point 15 'VER Ownership', column 'Description/ Required Condition' states that Each VPA will assure ownership of the VERs is secured by the CME (Impact Carbon). However, the justification of the same includes the name of the VPA implementor (Impact Water) as well. PP is requested to clarify how the eligibility criteria is found to be met.				
Project participant response				Date : 31/10/2023

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As mentioned by the eligibility conditions, the ownership of VERs is duly secured by the CME. This is achieved through a structured process wherein the rights to VERs are initially transferred from beneficiaries to the VPA implementer via purchase order. Subsequently, these rights are then formally transferred to the CME via a contractual agreement, thus confirming the final VERs rights are reserved with the CME. The VPA-DD has been revised to reflect the same.

Documentation provided by project participant**DOE assessment****Date:** 04/11/2023

The revised VPA-DDs has been reviewed. CME has revised Point 15 'VER Ownership' and it is now clearly specified that the VERs will be transferred to the CME 'Impact Carbon', which is found to be inline with the eligibility criteria established in the PoA and hence, found to be appropriate. However, CME is requested to provide the contractual agreement between the CME (Impact Carbon) and VPA implementor (Impact Water), where the final VERs rights are reserved/ transferred to the CME.

CL#02 is still OPEN.

Project participant response**Date :** 08/11/2023

The contractual agreement between the CME (Impact Carbon) and VPA implementor (Impact Water) is being provided.

Documentation provided by project participant

VER Project Agreement - GS PoA 11189 (executed)

DOE assessment**Date:** 13/11/2023

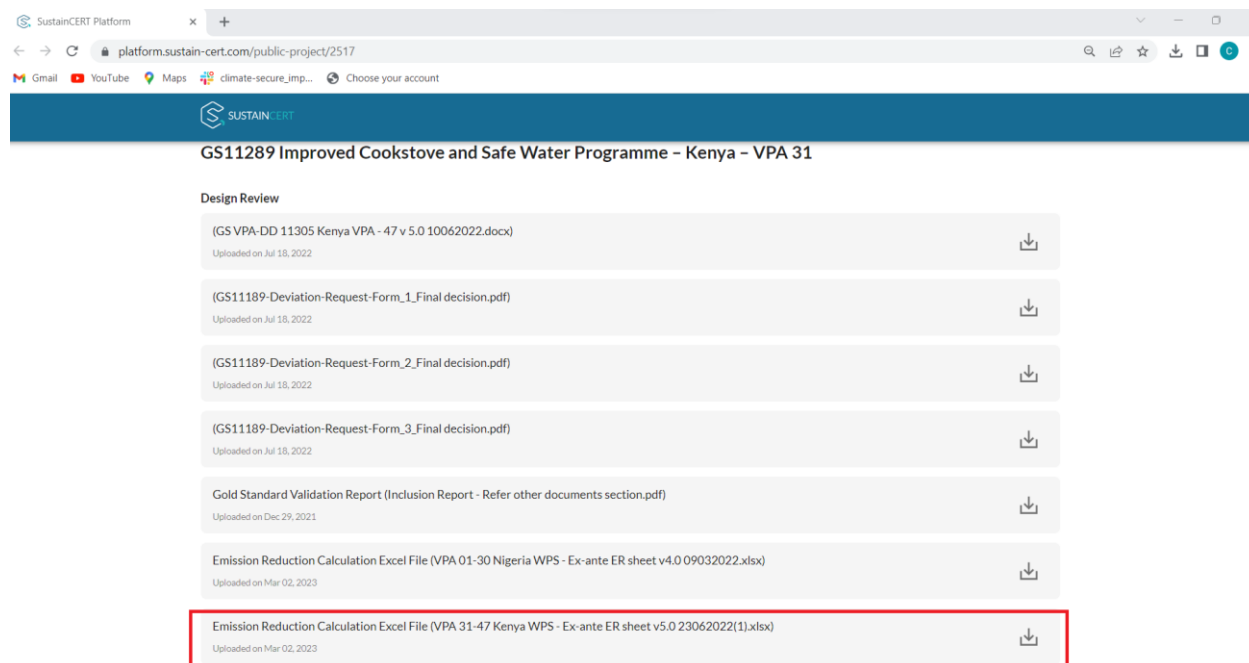
The contractual agreement has been provided by the CME and it is now clear that VERs generated through the PoA and its VPAs are being secured by the CME (Impact Carbon).

Thus, CL#02 is CLOSED.

CL ID	03	Section no.	D.4.2	Date : 23-10-2023
Description of CL				
In Section B.4, CME has applied the condition for suppressed demand (section 3.4.3 of the applied methodology), request to clarify how the condition related to currently drinking unsafe water because e.g., energy poverty barriers result in less than the minimum required amount of safe drinking water has been satisfied for the same.				
Project participant response				Date : 31/10/2023

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During the baseline surveys conducted in Aug-Sep 2021 for VPAs 31-47, the suppressed demand was duly captured considering the conditions under which water treatment was constrained. The baseline surveys clearly demonstrated that sampled schools/institutions were prevented from treating unsafe water due to lack of funds, or non-availability of any treatment technology in the region (both of which substantiate energy poverty). The baseline survey data has been duly validated and design certified for VPAs 31-47 (refer design certification workflow on SustainCert registry <https://platform.sustain-cert.com/public-project/2517>)



The concerned VPAs (49-74) use the same baseline results as that in already design certified VPAs (#1-47), given the concerned VPAs include the same technology/measure and service level. Further, the baseline surveys being conducted in Aug-Sep 2021, is not older than 3 years and hence applicable to the concerned VPAs.

A revalidation of the baseline survey established is therefore not necessitated.

Documentation provided by project participant

DOE assessment

Date: 04/11/2023

The revised VPA-DDs has been reviewed. The suppressed demand scenario as per section 3.4.3 and 3.4.2 of the applied methodology, has been provided by the CME through the baseline survey conducted in Aug – Sept 2021, which is less than 3 years and hence, found to be appropriate. The baseline survey has been validated and found to be meeting the requirements of the suppressed demand. However, no description of the baseline survey and its results has been provided in section B.4 of the VPA-DDs. CME is requested to take corrective action.

Thus, CL#03 is OPEN

Project participant response

08/11/2023

The description of the baseline survey and its results has been updated in section B.4 of the VPA-DDs

Documentation provided by project participant

VPA-DDs Ver4.0

DOE assessment

Date: 13/11/2023

The revised VPA-DDs has been reviewed. The baseline survey and its results have been provided in section B.4 of the VPA-DDs and are found to be appropriate. The baseline survey results are found to be meeting the criteria for suppressed demand, and hence, found to be appropriate.

Thus, CL#03 is CLOSED.

CL ID	04	Section no.	D.5.3	Date : 23-10-2023
Description of CL				

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In Section B.6.2, for parameters 'Water sources in the project boundary', 'Stove technologies used in the project boundary', 'Expected technical life of project technology', 'Percentage of fuel use in target population', ' η_{wb} ', ' C_b ', CME has mentioned source of data as 'Registered VPA-DD of VPA31-47'. However, as per the applied methodology, source of data could be: Baseline study, Credible published literature for project region, Studies by academia, NGOs or multilateral institutions, or Official government publications or statistics. CME is requested to justify how the adopted source is appropriate.

Project participant response	Date : 31/10/2023
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The source of data for 'Expected technical life of project technology' has been specified as manufacturer specifications in the concerned VPA-DDs. For other parameter referred above, the following substantiates the approach adopted in the concerned VPA-DDs.

The concerned VPAs (49-74) apply the same baseline parameter values as established in the design certified VPAs (VPA31-47) under master PoA GS11189. The values for referred parameters in VVB question above, were duly established in VPA 31-47, via comprehensive baseline study conducted in Aug-Sep 2021, in compliance with the applied methodology.

The concerned VPAs (49-74) have the same technology/measure, service level and project boundary as that of the design certified VPAs 31-47. Additionally, the baseline surveys having been conducted in Aug-Sep 2021 complies with methodological requirement of data source's vintage (not older than three years) used to establish parameter values.

Thus, based on aforesaid, given, the parameter values are being sourced directly from design certified VPA-DDs as a credible option, the concerned VPA-DDs refer to "Source of data" as "Design Certified VPA-DD of VPA31-47".

Documentation provided by project participant
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DOE assessment	Date: 04/11/2023
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The revised VPA-DDs has been reviewed. CME has conducted the baseline survey to determine the baseline scenario for the implementation of the improved water technology in schools and institutions in Kenya in Aug – Sept 2021 (which is less than 3 years) for the concerned VPAs 31 – 47, which has been validated and accepted by GS for the GS design certified VPAs 31 – 47. The results of the same has been shared by the CME and is found to be appropriate. Hence, the source of data adopted for the same is found to be appropriate and valid for the inclusion of the concerned VPAs.

Thus, CL#04 is CLOSED.

CL ID	05	Section no.	ER Sheet	Date : 23-10-2023
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Description of CL

In ER Sheet, Tab: Assumptions & ER Values, parameter '% full day premises', Cell E19: AC19, CME has considered the value to be 15%. Kindly clarify the basis of assumption of the assumed value.

Project participant response	Date : 31/10/2023
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The "% full day premises" mentioned in Cell E19: AC19 of the tab "Assumption & ER Values" of ER sheet has been assumed for ex-ante calculation of parameter QPW_p.

The value has been determined based on project developer's experience, knowledge and professional judgement, gained from having successfully implemented multiple identical VPAs in Kenya (VPA 31-47).

Documentation provided by project participant
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DOE assessment	Date: 13/11/2023
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The information provided has been reviewed. The CME and VPA implementors has successfully implemented other VPAs with similar technologies under the same PoA, and has gained experience and knowledge for the same. The CME has assumed the parameter based on the same experience. Also, the value applied has been reviewed through the ex-ante ER sheet of VPA 31 – 47, which has implemented same technology in Kenya, and is found to be the same.

CL#05 is CLOSED.

CL ID	06	Section no.	D.8	Date : 21-11-2023
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Description of CL	
Following observations has been made during the TR Round:	
1. It has been observed that all VPAs (VPA 49 to 73) covers entire boundary of Kenya as project geographic location. However, it is not clear how CME ensured participation of all stakeholders in the meeting which was conducted only in Nairobi.	
Project participant response	Date : 22/11/2023
1. PP organized a physical meeting in Nairobi on May 30, 2023, with provisions for an inclusive and broader stakeholder participation. The meeting was designed to accommodate both in-person and virtual attendance. Invitations were disseminated through multiple channels, via email, phone calls, physical letters, public notices and newspaper advertisements. The stakeholders were also provided with a a non-technical project summary and a feedback form, encouraging their feedback and comments. Recognizing the geographical expanse of the project, PP leveraged technology to simultaneously host the stakeholder meeting virtually. Stakeholders' invitations included a free virtual meeting link to allow participation in the meeting if physical participation was constrained by time / logistics. This, approach resulted in a broader and seamless inclusion of wide variety of stakeholders in the event. Lastly, those who could not attend either physically / virtually, were also offered an option of sharing their feedback via email / letter. In addition, contact details of the regional office were shared in the invitations and the non-technical summary, facilitating stakeholders to provide feedback in person or over the phone, in case of offline communication. Thus, by offering the aforesaid multiple channels for engagement, PD ensured inclusivity of a wider range of stakeholders from different part of Kenya in the stakeholder consultation and provide their valuable feedback.	
Documentation provided by project participant	
DOE assessment	
Date: 25-11-2023	
1. The information provided has been reviewed. CME has conducted the physical meeting in Nairobi along with the option for the participants to join remotely, via Teams, which is evident from the invitation evidence where the link to the teams meeting was also shared by the CME. The approach taken by the CME has resulted in a broader participation, throughout the geographical boundary of Kenya even though the physical meeting was only conducted in Nairobi. The participation in both physical and online meeting was confirmed through photographs and attendance sheets.	
Thus, CL#06 is CLOSED.	

Table 3. CAR from this verification

CAR ID	01	Section no.	D.3	Date : 23-10-2023
Description of CAR				
Table 1, SDG 6, Column 'SDG Impact', Indicator is found to be missing as per the registered PoA-DD Section A.4, where the indicator for SDG 6 are "Total Number of WPS distributed/installed under the project and % of WPS distributed/installed provide safe drinking water quality". CME is requested to take corrective action.				
Project participant response				Date : 31/10/2023
The indicator for SDG 6 has been revised now to be in line with registered PoA-DD				
Documentation provided by project participant				
DOE assessment				Date: DD/MM/YYYY
The revised VPA-DDs has been reviewed. CME has revised SDG indicator to also reflect the "Total Number of WPS distributed/installed under the project", which is found to be inline with the PoA-DD and hence, appropriate. The value taken has also been checked and found to be correct.				
Thus, CAR#01 is CLOSED.				

CAR ID	02	Section no.	D.3.1	Date : 23-10-2023
Description of CAR				

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Section A.1.1, Point 12 'Target Group', CME is requested to write the condition applicable for the WPS "those that prior to the implementation of the PoA either used or would have used, fossil fuels and/or non-renewable biomass to boil and purify water for drinking." And provide the justification for the same.

Project participant response **Date : 31/10/2023**

The description for eligibility criteria#12 has now been added in the revised VPA-DD to be in line with registered PoA-DD. the justification provided is already in line with design certified PoA-DD.

The VVB during the audit visit conducted interviews on samples randomly selected from the installation database (applying acceptance sampling). Each of the sampled beneficiary school representative interviewed by VVB, confirmed their baseline treatment technology/method as boiling using fossil fuels and/or non-renewable biomass.

Documentation provided by project participant

DOE assessment **Date: 04/11/2023**

The revised VPA-DDs has been reviewed. CME has added the applicable condition for the WPS in Point 12, Section A.1.1 in line with the registered PoA-DD and hence, appropriate. The justification provided has also been reviewed and found to be appropriate. Same has been reviewed through the remote site visit and confirms that the target population is schools or institutions (also confirmed through the distribution database) and those institutions or schools used fossil fuels and/or non-renewable biomass to boil and purify water for drinking. Hence, eligibility condition are found to be met.

Thus, CAR#02 is CLOSED.

CAR ID 03 **Section no.** D.4.6 **Date : 23-10-2023**

Description of CAR

In section B.5, CME is requested to transparently clarify how the CSA requirements has been met for the VPA to be deemed automatically additional.

Project participant response **Date : 31/10/2023**

The criteria for demonstrating additionality and how the project activity aligns with the CSA requirement has now been clearly outlined in the revised VPA-DD.

Documentation provided by project participant

DOE assessment **Date: 04/11/2023**

The revised VPA-DDs and ER sheet has been reviewed. CME has now referred ER sheet in section B.5 to demonstrate additionality based on the CSA Requirements, Annex B - Positive list, where, 'Each project unit shall result in emission reductions less than 600 tCO₂e per annum'. The calculation presented in the ER sheet for the same has been reviewed and found to be correct. Hence, VPAs are found to be additional in line with the CSA Requirements.

Thus, CAR#03 is CLOSED.

Table 4. FAR from this verification

FAR ID XX **Section No.** **Date : DD/MM/YYYY**

Description of FAR

XX

Project participant response **Date : DD/MM/YYYY**

XX

Documentation provided by project participant

XX

DOE assessment **Date: DD/MM/YYYY**

XX

e.g., there is no FAR from this verification.

History of the document						
Version	Date	Nature of Revision	Prepared by		Reviewed by	
			Name	Date	Name	Date
2.0	16/10/2015	In line to UN reports	Abhishek Mahawar	16/10/2015	Ashok Gautam	16/10/2015
1.0	10/11/2014	Editorial	Abhishek Mahawar	10/11/2014	Ashok Gautam	11/11/2014
0	01/07/2013	Initial adoption	Abhishek Mahawar	28/06/2013	Kaviraj Singh	01/07/2013