



**Verification and certification report form for
CDM project activities
(Version 03.0)**

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

BASIC INFORMATION

Title and UNFCCC reference number of the project activity	Water for Climate Rwanda (GS 6598_GS4GG)
Scale of the project activity	☒ Large-scale ☐ Small-scale
Version number of the verification and certification report	02
Completion date of the verification and certification report	08/05/2020
Monitoring period number and duration of this monitoring period	01/03/2019 to 31/10/2019
Version number of the monitoring report to which this report applies	2
Crediting period of the project activity corresponding to this monitoring period	01/03/2019 to 29/02/2024
Project participants	Water Access Rwanda (WAR) mkaarbon safari CO2logic
Host Party	Rwanda
Applied methodologies and standardized baselines	Technologies and practices to displace decentralized thermal energy consumption (TPDDTEC), version 3.1
Mandatory sectoral scopes	03
Conditional sectoral scopes, if applicable	-
Estimated amount of GHG emission reductions or GHG removals for this monitoring duration in the registered PDD	39,631 tCO _{2e}
Certified amount of GHG emission reductions or GHG removals for this monitoring period	7,194 tCO _{2e}
SDG Impacts:	1 – SDG 1: No Poverty 2 – SDG 3: Good Health and Well-Being 3 – SDG 5: Gender 4 – SDG 6: Clean Water and Sanitation 5 – SDG 13: Climate
Name and UNFCCC reference number of the DOE	E-0052: Carbon Check (India) Private Ltd.

Name, position and signature of the approver of the verification and certification report	Amit Anand, CEO 
--	--

SECTION A. Executive summary

>>

The Project Participant, CO2logic has appointed the Validation & verification body (VVB), Carbon Check (India) Private Ltd. (CCIPL) to perform an independent 1st verification of the GS Project Activity “Water for Climate Rwanda Project” in Rwanda (hereafter referred to as “Project Activity”). The project activity “Water for Climate Rwanda Project” involves Water Access Rwanda (WAR) together with CO2logic and mkaarbon safari implementation of a project to provide safe drinking water to communities in the districts of Rusizi, Ngoma, Rwamagana and Bugesera.

The project consists of the repair of damaged and defunct boreholes, the drilling of new boreholes and new water points belonging to a stand-pipe system. The rehabilitation of boreholes or provision of new safe water supply points reduces the need for households to boil water as a means of purification or to consume unsafe water being the scenario prior to implementation of the project activity. Boreholes consists of only one water point (being at the location of the borehole) or several water points if a stand-pipe system is connected to a borehole.

This report summarises the findings of the verification of the project, performed on the basis of Gold standard for global goals (GS4GG), as well as criteria given to provide for consistent project operations, monitoring and reporting and the subsequent decisions by the Gold Standard. Verification is required for all registered GS project activities intending to confirm their achieved emission reductions and proceed with request for issuance of ERs. This report contains the findings and resolutions from the verification and a certification statement for the verified emission reductions.

Verification is the periodic independent review and ex-post determination of both quantitative and qualitative information by a Validation & verification body (VVB) of the monitored reductions in GHG emissions that have occurred as a result of the registered CDM project activity during a defined monitoring period.

Certification is the written assurance by a Validation & verification body (VVB) that, during a specific period, a project activity achieved the emission reductions as verified.

The objective of this verification was to verify and certify emission reductions reported for the “Water for Climate Rwanda Project” in the host country “Rwanda” for the period 01/03/2019 to 31/10/2019 (including both the days).

The purpose of verification is to review the monitoring results and verify that the monitoring methodology was implemented according to the monitoring plan and monitoring data and used to confirm the reductions in anthropogenic emissions by sources, is sufficient, definitive and presented in a concise and transparent manner. CCIPL’s objective is to perform a thorough, independent assessment of the registered project activity.

In particular, the monitoring plan, monitoring report and the project’s compliance with relevant GS and host Party criteria are verified in order to confirm that the component project/s has/have been implemented in accordance with the previously registered project design and conservative assumptions, as documented. It is also confirmed if the monitoring plan is in compliance with the registered PDD and the approved monitoring methodology.

Scope:

The scope of the verification is:

- To verify the project implementation and operation with respect to the registered PDD
- To verify the implemented monitoring plan with the registered PDD and applied baseline and monitoring methodology.
- To verify that the actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan.

- To evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement.
- To verify that reported GHG emission data is sufficiently supported by evidence.

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

Verification process:

The verification comprises a review of the monitoring report over the monitoring period from 01/03/2019 to 31/10/2019 and based on the revised/registered PDD in part of the monitoring parameters and monitoring plan, emission reduction calculation spreadsheet, monitoring methodology and all related evidence provided by project participant.

On-site visit and stakeholders' interviews are also performed as part of the verification process.

Conclusion:

The verification team assigned by the Validation & verification body (VVB) concludes that the monitoring report (Version 2.0, dated 04/05/2020) /1/, meet all relevant requirements of the Gold Standard as per the requirements of GS4GG. The verification has been conducted in-line with the GS4GG requirements.

The project activity was correctly implemented according to the selected monitoring methodology, monitoring plan and the registered PDD /02/,/B05/. The monitoring system was installed, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the review and on site visit the verification team confirms that the project activity has resulted in the 7,194 tCO₂e SDG impact (as per approved methodology) achieved in this monitoring period.

CC IPL as a Validation & verification body (VVB) is therefore pleased to issue a positive verification opinion expressed in the attached Certification statement.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Verification findings
1.	Team Leader / Verifier / Technical Expert	IR	Singh	Vikash Kumar	CC IPL	X	X	X	X
2.	Local Expert	IR	Muganga	Rogers	CC IPL		X	X	

B.2. Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Anand	Amit	CCIPL
2.	Approver	IR	Anand	Amit	CCIPL

SECTION C. Means of verification**C.1. Desk/document review**

>>

The verification was performed primarily based on the review of the Monitoring report /1/ and the supporting documentation. This process included review of data and information presented to verify their completeness and review of the monitoring plan and monitoring methodology. Documents reviewed or referenced during the verification are listed in Appendix 3 below.

C.2. On-site inspection

Duration of on-site inspection: 02/02/2020 to 05/02/2020				
No.	Activity performed on-site	Site location	Date	Team member
1.	An assessment of the implementation and operation of the registered project activity as per the registered PDD	WAR office in Kigali	02/02/2020 to 05/02/2020	Vikash Kumar Singh, Rogers Muganga
2.	A review of information flows for generating, aggregating and reporting the monitoring parameters	WAR office in Kigali	02/02/2020 to 05/02/2020	Vikash Kumar Singh, Rogers Muganga
3.	Interviews with relevant personnel to determine whether the operational and data collection procedures are implemented in accordance with the monitoring plan in the PDD	WAR office in Kigali	02/02/2020 to 05/02/2020	Vikash Kumar Singh, Rogers Muganga
4.	A cross check between information provided in the monitoring report and data from other sources such as plant logbooks, inventories, purchase records or similar data sources	WAR office in Kigali	02/02/2020 to 05/02/2020	Vikash Kumar Singh, Rogers Muganga
5.	A check of the monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PDD and the selected methodology and corresponding tool(s), where applicable	WAR office in Kigali	02/02/2020 to 05/02/2020	Vikash Kumar Singh, Rogers Muganga
6.	A review of calculations and assumptions made in determining the GHG data and emission reductions	WAR office in Kigali	02/02/2020 to 05/02/2020	Vikash Kumar Singh, Rogers Muganga
7.	An identification of quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters	WAR office in Kigali	02/02/2020 to 05/02/2020	Vikash Kumar Singh, Rogers Muganga

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Thaler	Johann	mkaarbon safari GmbH, consultant	02/02/2020 to 05/02/2020	Project implementation and operation, monitoring procedure, data and information flow, CER calculation and completeness of monitoring report, QA/QC Procedures, Quality Assurance – Management and operating system	Vikash Kumar Singh, Rogers Muganga
2.	Noppen	Herman	CO2 logic	02/02/2020 to 05/02/2020	Project implementation and operation,	Vikash Kumar Singh, Rogers Muganga

					monitoring procedure, data and information flow	
--	--	--	--	--	--	--

3.	Hirwa	Christian	Water Access Rwanda	02/02/2020 to 05/02/2020	Project implementation and operation, monitoring procedure, data and information flow	Vikash Kumar Singh, Rogers Muganga
4.	Kwizera	Christelle	Water Access Rwanda	05/02/2020	Project implementation and operation, monitoring procedure, data and information flow	Vikash Kumar Singh, Rogers Muganga
5.	Uwase	Delphine	Water Access Rwanda	02/02/2020 to 05/02/2020	Project implementation and operation, monitoring procedure, data and information flow	Vikash Kumar Singh, Rogers Muganga
6.	Iragena	Aurore	Water Access Rwanda	02/02/2020 to 05/02/2020	Project implementation and operation, monitoring procedure, data and information flow	Vikash Kumar Singh, Rogers Muganga
7.	Nkundabagenzi	Chazale	Water Access Rwanda	02/02/2020 to 05/02/2020	Project implementation and operation, monitoring procedure, data and information flow	Vikash Kumar Singh, Rogers Muganga
8.	Medirtitrice	Muhrenimana	Wash Committee	03/02/2020	Project operation, monitoring procedure, data and information flow	Vikash Kumar Singh, Rogers Muganga
9.	Beatrice	Musabirema	Wash Committee	04/02/2020	Project operation, monitoring procedure, data and information flow	Vikash Kumar Singh, Rogers Muganga
10.	Pacaia	Mukangioje	Technician	04/02/2020	Project survey and project's SD impacts	Vikash Kumar Singh, Rogers Muganga
11.	Ernestine	Uwneza	Technician	04/02/2020	Project survey and project's SD impacts	Vikash Kumar Singh, Rogers Muganga

12.	Specioza	Mukankusa	Household Survey ID: 79830467	03/02/2020	Project survey and project's SD impacts	Vikash Kumar Singh, Rogers Muganga
13.	Charles	Karasanyi	Household Survey ID: 97290559	03/02/2020	Project survey and project's SD impacts	Vikash Kumar Singh, Rogers Muganga
14.	Jean	Nabimva	Household Survey ID: 79830216	04/02/2020	Project survey and project's SD impacts	Vikash Kumar Singh, Rogers Muganga
15.	Uwurukundo	Tereza	Household Survey ID: 97290339	04/02/2020	Project survey and project's SD impacts	Vikash Kumar Singh, Rogers Muganga
16.	Fredrick	Nzmurambo	Household Survey ID: 97290353	04/02/2020	Project survey and project's SD impacts	Vikash Kumar Singh, Rogers Muganga
17.	Felix	Mazimpaka	Household Survey ID: 95149565	04/02/2020	Project survey and project's SD impacts	Vikash Kumar Singh, Rogers Muganga
18.	mukarurshema	Angelique	Household Survey ID: 95149596	04/02/2020	Project survey and project's SD impacts	Vikash Kumar Singh, Rogers Muganga
19.	Kabera	Drocelle	Household Survey ID: 95149606	04/02/2020	Project survey and project's SD impacts	Vikash Kumar Singh, Rogers Muganga
20.	rozerv	Mukagakwaiya	Household Survey ID: 95149699	04/02/2020	Project survey and project's SD impacts	Vikash Kumar Singh, Rogers Muganga

C.4. Sampling approach

The Project proponent has conducted 100 random samples for the usage and impact survey. From the distribution of samples, Verification team noted the following pattern among the districts of project implementation:

Bugesera	49%
Ngoma	16%
Rusizi	12%
Rwamagana	23%

VVB has used sampling during verification for checking the Usage Survey and Impact Parameters. Considering that Rwanda is a Least Developed Country (LDC), applying §39 (c) of the sampling standard (version 08.0) /B07/, a sample size for 8 households was chosen (with no non-responses) for the project activity. A sample size of 8 was required, based on an AQL of 0.5 % and UQL of 20 %, the producer risk used is 10 % and consumer risk used was 20 %. Acceptance number (c) thus determined for the sample is 0.

The sample size for VVB's acceptance sampling based on above is 8. Verification team in order to get the required number of samples, applied over sampling and has chosen 11 samples together

from each of the district. The below samples (with survey id) were chosen by verification team for acceptance sampling as disclosed during the opening meeting with the PP:

1. 95149565,
2. 95149596,
3. 97290267,
4. 97290339,
5. 97290353,
6. 97290559,
7. 79830467,
8. 79830216,
9. 79830247,
10. 95149833,
11. 79830522

Out of the above samples, verification team could not find few of the respondents at home and hence they were considered non-response. During the interim meeting/s with PP, Verification team has chosen some additional samples to meet the sample size of 8. Verification team could able to interview a total 09 samples and the final list of sample (from PP's sample), which has been finally visited/interviewed are as below:

1. 79830467
2. 97290559
3. 79830216
4. 97290339
5. 97290353
6. 95149565
7. 95149596
8. 95149606
9. 95149699

The details of the sample interview are listed in section C.3 (under the list of interviewed person). No discrepancy was found in any of the 9 samples and thus $c=0$, i.e. no discrepant records were observed. Thus, PP's set of records has been accepted in line with §33 of the sampling standard (version 08.0) /B07/. For the impact parameters questionnaire were prepared and was used during the survey by the PP. Verification team has cross verified these sample documents during the on-site visit and for the impact parameters as well no discrepancies could be identified.

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

The VVB has raised 03 clarifications and 03 corrective action requests and 03 forward Action Request.

SECTION D. Verification findings

D.1. Remaining forward action requests from validation and/or previous verifications

>>

There was no forward action requests from the validation.

D.2. Compliance of the project implementation and operation with the registered project design document

Means of verification	Document Review, Interview
Findings	CAR 01, CAR 02, CAR 03 has been raised. Please refer to Appendix 4 for further details.

Conclusion	CC IPL by means of an on-site inspection and document review, assessed that all the features (technology, project equipment and monitoring) of the revised/registered PDD /02/, /B03/ are in place and that the project participants have operated the project as per the revised/registered PDD /02/, /B03/. The location of the project activity is clearly defined in the revised/registered PDD /02/, /B03/. Water Access Rwanda (WAR) together with CO2logic and mkaarbon safari has implemented a project to provide safe drinking water to communities in the districts of Rusizi, Ngoma, Rwamagana and Bugesera. The company SPADEL has provided the funding for the project. The project consists of the repair of damaged and defunct boreholes, the drilling of new boreholes and new water points belonging to a stand-pipe system. The rehabilitation of boreholes or provision of new safe water supply points reduces the need for households to boil water as a means of purification or to consume unsafe water being the scenario prior to implementation of the project activity. Boreholes consists of only one water point (being at the location of the borehole) or several water points if a stand-pipe system is connected to a borehole. In case of a standpipe system water is pumped from the borehole to different water points using solar energy. No grid electricity or diesel fuel have been used during this monitoring period. The project has implemented 31 /04/ water points out of which 11 water points belong to 2 stand-pipe systems, one with 5 water points (Mugesera stand-pipe system in Ngoma) and the other one with 7 water points (Rukoronko stand-pipe system in Bugesera). Based on review of the documents and on-site inspection, verification team confirms that during reported monitoring period, PP has implemented/rehabilitated /04/ 31 water points. These water points consists of either boreholes or stand pipe system. The stand pipe system is operated by Solar PV during the reported monitored period and the same was confirmed by physical inspection during the on-site visit. Thus, there is no grid electricity or diesel fuel have been consumed by the project and hence no project emission on account of same. The start date of the project activity is 03/10/2018, that is the date on which the first borehole has been rehabilitated /19/ under this project activity. This is the real action taken by the PP in accordance with the "Glossary of CDM term". As verified during the on-site visit, the project implementation and operation, all physical features of the project complies with the project design document /B05/. Verification team has checked the information in the monitoring report/02/ and compared against the registered/revised PDD /02/,/B05/ and found consistent. During the on-site inspection, the verification team has checked the project location, implementation, technology applied, project equipment, physical features and monitoring system against the information in the registered/revised PDD /02/,/B05/. The verification team based on the site visit and document review, was able to conclude that the project activity has been commissioned and implemented as per the registered/revised PDD /02/,/B05/ and that physical features of the project are in place. Verification team confirms that: a) The project activity is implemented as per registered PDD/B05/. b) The actual operation of the proposed CDM project activity is in line with the registered/revised PDD /02/,/B05/. c) It has reviewed the registered/revised PDD /02/,/B05/ including the monitoring plan, the applied monitoring methodology, relevant decisions from CMP and the
-------------------	--

	CDM EB and found that the final MR/01/ for this monitoring period is in line with all the above mentioned documents. Verification team of CCIPL has also reviewed the following documents, which confirms that a robust and effective grievance addressal mechanism is in place and the same is being followed by the PD and also during the reported monitoring period: 1. Grievance Register /14-1/ which includes summary of grievance received/recorded during the monitoring period. 2. Records of Grievance handled during the monitoring period /14-2/. The addressal of Grievance is being done in a way to resolve any technical issue such as digging a new and deeper borehole to address low discharge for e.g. Water Point Customer ID BG-01-7208609-Gatwe-NN. The technical improvements at the water points to address any Grievance was also checked during on-site inspection of the sample water points. In summary, the monitoring period is reasonable, and the operation of the project activity is in accordance with the registered/revised PDD /02/,/B05/.
--	--

D.3. Post-registration changes

D.3.1. Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents¹

>>

- During the course of verification, it was found that the E.coli test of some of the water points were delayed. Based on review of monitoring report /01/ and ER spread sheet /02/, verification team confirms that PP has followed a conservative approach for the period of delay. The approach involves that in cases of delay, the project technology days have been only considered if the two consecutive tests were E.coli negative. Verification team noted that no project technology days (hence no emission reductions) have been accounted for the period between a negative and a subsequent positive test or a positive and a subsequent negative test. The proposed deviation is a conservative approach and thus acceptable to the verification team.
- PP has considered the default value of (4 l/p/day) as indicated in the applied methodology for the parameter $Q_{p,y}$ for this monitoring period. Furthermore, verification team noted that as per the applied methodology /B01/ (page 49 of 92), If the default values are used then $(Q_{p,y} + Q_{p,rawboil,y})$ in equation 11 of the methodology can be replaced with the default value i.e. 4 and thus the value for the parameter " $Q_{p,y, rawboil,y}$ " becomes "0".

The value of $Q_{p, cleanboil,y}$ has been calculated as 0.615 l and has been checked by the VVB, refer the assessment below:

VVB noted that in usage/monitoring survey, 13 households out of 65 households (equivalent to 20%) using the project water point have indicated during that all or some part of the water from the project water point is being purified. Out of those 13 households, 10 indicated to boil it, whereas the remaining 3 households use filter or purification tablets.

10 out of 65 households is equivalent to 15.38%. Subsequently, PP has calculated the $Q_{p, cleanboil,y}$ in the following way: 4 l/p/day (default value for $Q_{py}+Q_{p,raw,y}$) * 15.38% = 0.615 l/p/day. The value of 0.615 l/p/day is deemed to be very conservative and thus acceptable to the VVB.

D.3.2. Corrections

>>

Not applicable

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

D.3.3. Changes to the start date of the crediting period

>>

Not applicable

D.3.4. Inclusion of a monitoring plan

>>

Not applicable

D.3.5. Permanent changes from registered monitoring plan, or permanent deviation of monitoring from the applied methodologies, standardized baselines or other methodological regulatory documents

>>

- The project participant has added diesel generators as additional back-up option besides grid electricity. Any emissions from diesel consumption would be taken into account in the ER calculation as soon as they are material, i.e. consist of more than 5% of the overall project emissions. VVB has verified this permanent change at the time of 1st issuance. No GSTAC approval or GS Design Change is needed. Since the change is not considered to be material. Furthermore, as per the review of monitoring report/01/, revised PDD/02/ emission reduction spreadsheet/03/ and response received from GS/B08/ on this clarification it can be verified that project emission from diesel generator cannot be considered as project emission since it is expected to be lower than 5%.
- All water points were commissioned within 1.5 years, i.e. from 03/10/2018 (1st water point) until 29/03/2020 (last water points). And crediting period started on 01/03/2019 only. Hence, all water points are considered being part of one age group (0-1) for monitoring surveys/tests.

D.3.6. Changes to the project design

>>

The project participant has added diesel generators as additional back-up option besides grid electricity. Any emissions from diesel consumption would be taken into account in the ER calculation as soon as they are material, i.e. consist of more than 5% of the overall project emissions. VVB has verified this permanent change at the time of 1st issuance. No GSTAC approval or GS Design Change is needed. Since this design change is not considered to be material. Furthermore, as per the review of monitoring report/01/, revised PDD/02/ emission reduction spreadsheet/03/ and response received from GS/B08/ on this clarification it can be verified that project emission from diesel generator cannot be considered as design change since it is expected to be lower than 5%.

D.3.7. Changes specific to afforestation and reforestation project activities

>>

Not applicable

D.4. Compliance of the registered monitoring plan with applied methodologies, applied standardized baselines, and other applied methodological regulatory documents

Means of verification	Document Review, Interview
Findings	-
Conclusion	The verification team has checked the actual monitoring plan against the registered monitoring plan and monitoring methodology and applicable tools. Furthermore, the verification team has checked monitoring system during the onsite inspection by means of comparison with the information given in the monitoring plan and monitoring methodology. The monitoring plan is completely in accordance with the approved methodology /B01/ applied by the

registered/revised PDD /02/,/B05/.

D.5. Compliance of monitoring activities with the registered monitoring plan**D.5.1. Data and parameters fixed ex ante or at renewal of crediting period**

Means of verification	Document Review, Interview
Findings	--
Conclusion	Verification team confirms that the data and parameters fixed ex ante are in compliance with the registered/revised PDD /02/,/B05/ and monitoring plan /B05a/. Please refer to the Annex 1 for assessment of each parameter.

D.5.2. Data and parameters monitored

Means of verification	Document Review, Interview
Findings	CL 01, CL 02, CL 03, FAR 01, FAR 02 and FAR 03 has been raised. Please refer to Appendix 4 for further details.
Conclusion	The verification team confirms that the data and parameters monitored are in compliance with the registered/revised PDD /02/,/B05/ and the monitoring plan/B03/. It is confirmed that the verification team assessed the data / information flow from the point of monitoring to emission reduction calculation and found no gap in the same. Detailed assessment of each parameter has been provided in Annex 2.

D.5.3. Implementation of sampling plan

Means of verification	Document Review, Interview
Findings	-
Conclusion	Verification team has noted that as per the registered monitoring plan the following sampling is involved. The assessment for each of the parameter has been provided below. <u>Usage/Monitoring Survey</u> As per the applied methodology/registered monitoring plan, the minimum total sample size for Usage/Monitoring Survey is 100, with at least 30 samples for project technologies of each age being credited. Verification team confirms that PP has conducted simple random survey for 100 selected households. Furthermore, since all project water points have been implemented within one year, only one age group is involved, hence the requirement of having 30 samples for project technologies of each age is not applicable. The same is also acceptable and confirmed by SustainCert vide their email /B11/ dated 04/10/2019. Usage survey has been conducted together with the monitoring survey. Verification team based on review of sample list confirms that the samples were randomly selected by the PP. The sampling frame consisted of all the households which were recorded in end-user lists by the WASH committees using the project water points. The 3 water points Gihaya (15255826), Mutimasi 1 (15255819) and Mutimasi 2 (15255675) were not making part of the sampling frame. Since no VER credits are claimed for these 3 water points for the 1st monitoring period. This approach in the opinion of verification team is justified and thus acceptable. The survey conducted by the PP has been verified using acceptance sampling as explained in section C.4 of this report. Furthermore, verification team interviewed those who conducted the survey as well as checked the training records and it is based on this confirms the following:

	- Enumerators were trained by the carbon consultants, both in form of a theoretical and practical training - A QA/QC system is in place to check for plausibility and consistency after the raw data had been received from the Enumerators. Please also refer to appendix 5 of this report. <u>Water Consumption Field Test (WCFT)</u> Please refer to appendix 5 of this report. <u>Water quality testing</u> Verification team noted that all project water points have been systematically tested for E.coli, hence sampling is not applicable for water quality testing for this monitoring period. Please refer to appendix 5 of this report.
--	---

D.6. Compliance with the calibration frequency requirements for measuring instruments

Means of verification	Document Review, Interview
Findings	-
Conclusion	N/A since there is no monitoring equipment which require calibration.

D.7. Assessment of data and calculation of emission reductions or net removals

D.7.1. Calculation of baseline GHG emissions or baseline net GHG removals by sinks

Means of verification	Document Review, Interview														
Findings	--														
Conclusion	The equations for baseline emissions, as provided in the monitoring report /2/ and confirmed with the registered/revised PDD /02/,/B05/, the methodology Technologies and practices to displace decentralized thermal energy consumption (TPDDTEC), version 3.1/B01/ and supporting tools are: Calculation of baseline value for SDG 13 outcome The equation used to calculate the baseline fuel consumption is calculated in line with the applied methodology and registered PDD and is as follows: $B_{b,y} = (1 - X_{boil}) * (1 - C_j) * N_{p,y} * W_{b,y} * (Q_{p,y} + Q_{p,rawboil,y})$ Where: <table> <tr> <td>$B_{b,y}$</td><td>Quantity of fuel consumed in baseline scenario b during the year in tonnes (L/p/d)</td></tr> <tr> <td>X_{boil}</td><td>Percentage of premises that in the absence of the project activity would have used non-GHG emitting technologies like chlorine treatment techniques (if available) in the project boundary</td></tr> <tr> <td>C_j</td><td>Percentage of users of project safe water supply who were already in baseline using a non boiling safe water supply</td></tr> <tr> <td>$N_{p,y}$</td><td>Number of person.days consuming water supplied by project scenario p through year y</td></tr> <tr> <td>$W_{b,y}$</td><td>Quantity of fuel in tonnes required to treat 1 litre of water using technologies representative of baseline scenario b in year y as per Baseline Water Boiling Test.</td></tr> <tr> <td>$Q_{p,y}$</td><td>Quantity of safe water in litres consumed in the project scenario p and supplied by project technology per person per day in year y</td></tr> <tr> <td>$Q_{p,rawboil,y}$</td><td>Quantity of raw water boiled in the project scenario p per person per day</td></tr> </table>	$B_{b,y}$	Quantity of fuel consumed in baseline scenario b during the year in tonnes (L/p/d)	X_{boil}	Percentage of premises that in the absence of the project activity would have used non-GHG emitting technologies like chlorine treatment techniques (if available) in the project boundary	C_j	Percentage of users of project safe water supply who were already in baseline using a non boiling safe water supply	$N_{p,y}$	Number of person.days consuming water supplied by project scenario p through year y	$W_{b,y}$	Quantity of fuel in tonnes required to treat 1 litre of water using technologies representative of baseline scenario b in year y as per Baseline Water Boiling Test.	$Q_{p,y}$	Quantity of safe water in litres consumed in the project scenario p and supplied by project technology per person per day in year y	$Q_{p,rawboil,y}$	Quantity of raw water boiled in the project scenario p per person per day
$B_{b,y}$	Quantity of fuel consumed in baseline scenario b during the year in tonnes (L/p/d)														
X_{boil}	Percentage of premises that in the absence of the project activity would have used non-GHG emitting technologies like chlorine treatment techniques (if available) in the project boundary														
C_j	Percentage of users of project safe water supply who were already in baseline using a non boiling safe water supply														
$N_{p,y}$	Number of person.days consuming water supplied by project scenario p through year y														
$W_{b,y}$	Quantity of fuel in tonnes required to treat 1 litre of water using technologies representative of baseline scenario b in year y as per Baseline Water Boiling Test.														
$Q_{p,y}$	Quantity of safe water in litres consumed in the project scenario p and supplied by project technology per person per day in year y														
$Q_{p,rawboil,y}$	Quantity of raw water boiled in the project scenario p per person per day														

D.7.2. Calculation of project GHG emissions or actual net anthropogenic GHG removals by sinks

Means of verification	Document Review, Interview
Findings	--
Conclusion	The equations for project emissions, as provided in the monitoring report /2/ and confirmed with the registered/revised PDD /02/,/B05/.the methodology /B01/ are: A.1. Calculation of project value or estimation of project situation of each SDG outcome The equation used to calculate the project fuel consumption is calculated in line with the applied methodology and registered PDD and is as follows: $B_{p,y} = (1 - C_j) * N_{p,y} * W_{p,y} * (Q_{p,rawboil,y} + Q_{p,cleannoil,y})$ Where : $B_{p,y}$ Quantity of fuel f consumed in project scenario p during the year y in tonnes C_j Percentage of users of project safe water supply who were already in baseline using a non boiling safe water supply $N_{p,y}$ Number of person.days consuming water supplied by project scenario p through year y $W_{b,y}$ Quantity of fuel in tonnes required to treat 1 litre of water using technologies representative of baseline scenario b in year y as per Baseline Water Boiling Test. $Q_{p,rawboil,y}$ Quantity of raw water boiled in the project scenario p per person per day $Q_{p,cleannoil,y}$ Quantity of safe water boiled in the project scenario p per person per day in year y Project emissions from possible grid electricity consumption $PE_{EC,y} = EF_{grid,y} \times EC_y$ PE_{EC} Project emissions from grid electricity consumption during year y in tCO₂e $EF_{grid,y}$ CO₂ emission factor of the grid electricity in year y EC_y Quantity of grid electricity consumed for pumping water in a standpipe system to the different water points in year y Project emissions from possible diesel consumption $PE_{FC,y} = EF_{CO_2,diesel,y} \times F_{Cdiesel,y} \times NCV_{diesel,y} \times Density_{diesel}$ $PE_{FC,y}$ Project emissions from diesel consumption during year y in tCO₂e $EF_{CO_2,diesel,y}$ CO₂ emission coefficient of diesel in year y $F_{Cdiesel,y}$ Quantity of diesel consumed for pumping water in a standpipe system to the different water points or any other water point in year y $NCV_{diesel,y}$ Net calorific value of diesel in year y

	Density_{diesel} Density of diesel in year y (only relevant in case that volume of diesel consumption is measured) The transparent calculations of the outcome of SDG 13 (i.e. CO₂e reductions) are provided in a separate excel spreadsheet uploaded to GS Registry. For the used data/parameters, see the sections D.1 and D.2. in this monitoring report.
--	---

D.7.3. Calculation of leakage GHG emissions

Means of verification	Document Review, Interview
Findings	-
Conclusion	No leakage emission has been accounted for the monitoring period, since a leakage assessment has been carried out at the time of elaborating the PDD, and such a leakage assessment is necessary only every two years, such a leakage assessment is not necessary for this monitoring period.

D.7.4. Summary calculation of GHG emission reductions or net anthropogenic GHG removals by sinks

Means of verification	Document Review, Interview			
Findings	-			
Conclusion	According to the applied methodology, the emission reductions are calculated as:			
	Item	Baseline estimate	Project estimate	Net benefit
	SDG 13	7,194 tCO ₂ e	0 tCO ₂ e	7,194 tCO ₂ e
	SDG 1	Consumption of unsafe/unclean water leads to more poverty. Since money has to be spent for e.g. medicine/hospital and loss of productive working hours	N/A	9,088,592 litres of clean (safe) water has been provided during the monitoring period.
	SDG 3	People consume unsafe/unclean water resulting in water borne diseases.	N/A	Less people (80%) suffering of diarrhea and other water-borne diseases in the project scenario compared to the baseline scenario.
	SDG 5	Women spend significant amount of time for collecting water and wood fuel to boil unsafe/unclean water.	N/A	A significant part of the women needs less time and efforts to collect water (74%) and wood fuel (48%).

	SDG 6	Prior to the project the local communities received no regular training on water, sanitation and health related issues.	N/A	Hygiene campaigns/training provided for more than 6,000 people and 200 trainers 2018: 2,926 people and 106 trainers trained 2019: 3,226 people and 94 trainers trained
--	-------	---	-----	--

D.7.5. Comparison of actual GHG emission reductions or net anthropogenic GHG removals by sinks with estimates in registered PDD

Means of verification	Document Review, Interview		
Findings	-		
Conclusion	The ex-ante estimate value of the emission reductions for the monitoring period as per the PDD /B05a/ is 39,631 tCO ₂ e and the actual emission reductions achieved for the monitoring period is 7,194 tCO ₂ e. Actual emission reductions are 21% of the estimated one for the current monitoring period.		

D.7.6. Remarks on difference from estimated value in registered PDD

Means of verification	Document Review, Interview
Findings	--
Conclusion	The ex-ante estimate value of the emission reductions for the monitoring period as per the registered/revised PDD /02/,/B05/is 39,631 tCO₂e and the actual emission reductions achieved for the monitoring period is 7,194 tCO₂e. For SDG 13, since actual emission reduction is lower than the estimated value and hence it is acceptable to the verification team. The monitoring report provides reason for decrease in the actual emission reduction and the same was confirmed by the verification team by interviewing the representatives of PP and by reviewing the actual implementation status of the project. For other SDG parameters, PP has provided justification in the Monitoring report and assessment of the same is provided below: SDG 1: Verification team noted that only around 20% of clean (safe) water of the initially expected amount has been provided during the monitoring

² The annual amount of 59,447 tCO₂e indicated in the PDD for 2019-2020 has been extrapolated to 8 months (monitoring period), resulting in 39,631 tCO₂e.

³ It was foreseen to conduct one campaign per water point.

	period. • SDG 3: The actual value corresponds to the estimated value. • SDG 5: Verification team noted that even though the actual value is lower than the estimated value, around ¾ of the women indicate to invest less time to collect water and almost half indicate to need less time to collect wood fuel indicating the project's positive contribution to this SDG. The same was confirmed by the verification team by interviewing the households during the acceptance sampling and thus acceptable to the verification team. • SDG 6: Verification team based on review of documents and interview with PP confirms that the actual value of this SDG exceeds the estimated value taking into account the sum of WASH campaigns carried out for communities and trainers and thus acceptable to the verification team.
--	--

SECTION E. Internal quality control

>>

The final verification report passed a technical review before being submitted to the Gold Standard. The technical review is performed by a technical reviewer qualified in accordance with CCIPL's qualification scheme for CDM validation and verification.

SECTION F. Verification/Certification opinion

>>

Carbon Check (India) Private Ltd. (CC IPL) has performed the 1st periodic verification of the registered CDM Project Activity "Water for Climate Rwanda Project" GS 6598.

The verification team assigned by the VVB concludes that the project activity as described in the PDD (Version 5.2, date 04/05/2020) /02/ and the Monitoring report (version 2.0, dated 04/05/2020) /1/, meets all relevant requirements of the Gold Standard. The verification has been conducted in-line with the GS4GG requirements project activities.

Verification methodology and process

The Verification team confirms the contractual relationship signed on 12/12/2018 between the VVB, Carbon Check (India) Private Ltd. And the Project Participant Water for Climate Rwanda Project. The team assigned to the verification meets the CCIPL's internal procedures including the UNFCCC/GS requirements for the team composition and competence. The verification team has conducted a thorough contract review as per UNFCCC and CCIPL's procedures and requirements.

The verification has been performed as per the requirements described in the GS4GG and constitutes the review and completion of the following steps:

- Reviewing the revised PDD (Version 5.2 dated 04/04/2020) /02/, including the monitoring plan and the corresponding validation report/B03/;
- Desk review of the validation report /B03/, MR /1/ and other relevant documents including documents related to the project activities in emission reductions;
- Review of the applied monitoring methodology (Technologies and practices to displace decentralized thermal energy consumption (TPDDTEC), version 3.1 /B01/;
- On-site assessment (02/02/2020- 05/02/2020)
- Resolution of CARs and CLs raised during verification
- Issuance of Verification Report

The project activity was correctly implemented according to selected monitoring methodology, monitoring plan and the registered PDD. The monitoring system was installed, maintained in a proper manner, while collected monitoring data allowed for the verification of the amount of achieved GHG emission reductions. Through the review and on-site visit, the verification team confirms that the project activity has resulted in the 7,194 tCO₂e emission reductions during the 1st monitoring period.

This statement covers verification period from 01/03/2019 to 31/10/2019 (including both the dates).

The VVB has raised 03 clarifications and 03 corrective action requests, all of which are close. Furthermore, VVB has also raised 03 Forward action request.

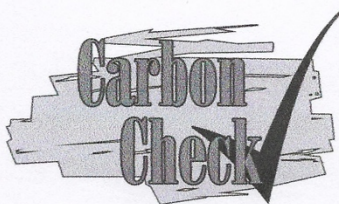
The VVB considers necessary to give reasonable assurance that reported GHG emission reductions were calculated correctly on the basis of the approved baseline and monitoring methodology and the monitoring plan contained in the registered PDD are fairly stated.

The VVB, hereby certifies that the project activity, achieved emission reductions by sources of GHG equal to 7,194 tCO₂e equivalent and all monitoring requirements have been fulfilled and is substantiated by an audit trail that contains evidence and records.

Appendix 1. Abbreviations

Abbreviations	Full texts
BE	Baseline Emissions
CA	Corrective Action/ Clarification Action
CER	Certified Emission Reduction
CAR	Corrective Action Request
CC IPL	Carbon Check (India) Private Ltd.
CDM	Clean Development Mechanism
CH ₄	Methane
CL	Clarification Request
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
DVR	Draft Verification Report
EB	CDM Executive Board
EF	Emission Factor
FA	Final Approval
FAR	Forward Action Request
FVR	Final Validation Report
GHG	Greenhouse gas(es)
GWh	Giga Watt Hour
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
LE	Leakage Emissions
MP	Monitoring Period
MR	Monitoring Report
MWh	Mega Watt Hour
OSV	On Site Visit
PE	Project Emissions
PP(s)	Project Participant(s)
PRC	Post registration change
QC/QA	Quality Control/ Quality Assurance
TA	Technical Area
TR	Technical Review
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard
VVB	Validation & verification body

Appendix 2. Competence of team members and technical reviewers



Carbon Check (India) Private Ltd.

Vikash Kumar Singh

has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator	☒	Team Leader	☒	Technical reviewer	☒
Verifier	☒	Technical Expert	☒	Local Expert ¹	☒

In the following Technical Areas:

TA 1.1	☒	TA 3.1	☒	TA 5.2	☐	TA 9.2	☐	TA 13.2	☒
TA 1.2	☒	TA 4.1	☒	TA 8.1	☐	TA 10.1	☐	TA 14.1	☐
TA 2.1	☐	TA 5.1	☐	TA 9.1	☐	TA 13.1	☒		

Mr. Amit Anand
CEO

Date of Approval
24/12/2019

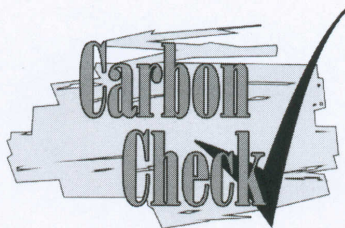
Valid Till
23/12/2020

Revision History of the Document

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2016	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision
24/12/2019	Annual Revision

¹ India, South Africa

CARBON CHECK (INDIA) PRIVATE LIMITED
Registered in India: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: G 49 & 50, 3rd Floor, Sector - 3, NOIDA (Uttar Pradesh) - 201301
Tel: +91 120 4373114 | URL: www.carboncheck.co.in
e-mail: info@carboncheck.co.in



Carbon Check (India) Private Ltd.

Amit Anand

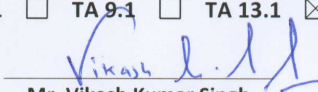
has been qualified as per CCIPL's internal qualification procedures, in accordance with requirements of Accreditation Standard (version 07.0):

For following functions:

Validator	☒	Team Leader	☒	Technical reviewer	☒
Verifier	☒	Technical Expert	☒	Local Expert ¹	☒

In the following Technical Areas:

TA 1.1	☒	TA 3.1	☒	TA 5.2	☐	TA 9.2	☐	TA 13.2	☐
TA 1.2	☒	TA 4.1	☐	TA 8.1	☒	TA 10.1	☐	TA 14.1	☒
TA 2.1	☐	TA 5.1	☐	TA 9.1	☐	TA 13.1	☒		


Mr. Vikash Kumar Singh
Compliance Officer

Date of Approval
24/12/2019

Valid Till
23/12/2020

Revision History of the Document

26/12/2014	Initial Adoption
24/12/2015	Annual Revision
20/01/2016	Interim Revision for office address change
23/12/2016	Annual Revision
24/12/2017	Annual Revision
24/12/2018	Annual Revision
24/12/2019	Annual Revision

¹ India, South Africa

CARBON CHECK (INDIA) PRIVATE LIMITED
Registered in India: U74930DL2012PTC232495
Regd. Off: 2071/38, 2nd Floor, Naiwala, Karol Bagh, New Delhi - 110005
Corporate off: G 49 & 50, 3rd Floor, Sector - 3, NOIDA (Uttar Pradesh) - 201301
Tel: +91 120 4373114 | URL: www.carboncheck.co.in
e-mail: info@carboncheck.co.in

Appendix 3. Documents reviewed or referenced

Ref no.	Reference Document
/01/	Monitoring Report Version 2.0, Dated: 04/05/2020
/02/	Revised PDD Version 5.2, Dated: 04/05/2020
/03/	Emission reduction spread sheet corresponding to /01/ version 1.1
/04/	Job Card for each boreholes rehabilitated.
/05/	Borehole Rehabilitation forms for each boreholes including the well details.
/06/	Carbon waiver rights signed by the head of WASH committee for each of the borehole in presence of community member
/07/	Manual of E-coli test conduction
/08/	E-coli test report with photographic evidence for each of the sample.
/09/	Confirmation from government health authority witnessing the E-coli test for each of the sample
/10/	Details of each wash committee
/11/	Evidence/attendance sheet of each WASH training conducted by the wash committee
/12/	List of borehole water point users with signature for each Borehole
/13/	Survey records for the usage rate and impact parameters
/14/	1. Records of grievance register 2. Records of Grievance handled during the monitoring period- Sample work completion checklist of the water points
/15/	Training records of personnel who performed the surveys and E-Coli Test
/16/	a) Preventive/scheduled maintenance calendar of the rehabilitated boreholes b) Preventive_maintenance_Protocol_Vers2
/17/	Records of Borehole/Standpipe water point breakdown records as available in m-water database – On site inspection checks
/18/	20200316_W4C Project Water Point Database_v1.0

/19/	Records of mWater database platform
------	-------------------------------------

Background Documents

Ref no.	Reference Document
/B01/	Technologies and practices to displace decentralized thermal energy consumption (TPDDTEC), version 3.1
/B02/	Community Services Activity Requirements (version 1.1) under GS4GG https://globalgoals.goldstandard.org/200-gs4gg-community-services-activity-requirements/
/B03/	Registered PDD and Validation Report
/B04/	GS6598 GS4GG Design Certification Review
/B05/	LSC Report
/B06/	Deviation-Request-Form-v3.0_GS6598 FINAL
/B07/	Standards a) CDM Sampling Standard, version 08.0 b) CDM validation and verification standard for project activities, version 02.0
/B08/	Evidence from the GS on clarification of addition of diesel generators
/B09/	IPCC 2006, volume 2, chapter 1
/B10/	Second National Communication under the UNFCCC by Republic of Rwanda (Ministry of Natural Resources)
/B11/	SustainCert email dated 04/10/2019 on clarification of age groups.

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

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

FAR ID	xx	Section no.	E.2	Date: DD/MM/YYYY
Description of FAR				
-				
Project participant response				Date: DD/MM/YYYY
-				
Documentation provided by project participant				
-				
DOE assessment				Date: DD/MM/YYYY
-				

Table 2. CL from this verification

CL ID	01	Section no.		Date: 05/02/2020
Description of CL				
Review of records of E-coli test reveals that the tests were delayed. The reason for such delay should be provided.				
Project participant response				Date: 16/03/2020
There was some internal confusion if the e.coli tests should be done within the implementation year or wait till the start of the monitoring period. Once clarified all tests took place with some of course being delayed. Now all tests are scheduled in task scheduling software to ensure no tests are missed.				
Documentation provided by project participant				
--				
DOE assessment				Date: 24/03/2020
Verification team based on the justification provided by PP and on-site inspection interviews accepts the reason of delay. Furthermore, in order to avoid delay in future verification, PP proposes to schedule the tests in task scheduling software to ensure no tests are missed. FAR-01 has been raised to check such process of task scheduling software. CL is closed.				

CL ID	02	Section no.		Date: 05/02/2020
Description of CL				
During the on-site inspection, verification team has reviewed web-based database (Mwater) of WAR. This review reveals that for few of the boreholes (for e.g. 7208609), the m-water id has been changed. Project Proponent is requested to clarify reason for such changes.				
Project participant response				Date: 16/03/2020
Within low-internet connectivity times, mWater software was not able to locate the correct ID of a nearby water point. This made technicians create new ones thinking one was not already there. No IDs were changed but all IDs for the same water point were merged within the software. Thus inputting the current IDs of a water point or any previous one will redirect the user to the correct record displaying the dominant ID. This was done so as to recover surveys done using a newly created ID or the wrong record. The problem was also prevented from re-happening by providing offline records to technicians of the official ID records.				
Documentation provided by project participant				
--				
DOE assessment				Date: 24/03/2020
Verification team based on above responses and the fact that none of the above findings has material impact, closes the CL. FAR-01 has been raised to check improvement in the QA/QC process of the data registration process during the next periodic verification.				

CL ID	03	Section no.		Date: 05/02/2020
Description of CL				
During the on-site inspection interview with the wash committee member, it was clarified that registration of the households/end user was done based on all the households in the region and not the one who is using it.				
Project proponent is requested to clarify the approach, while doing so please also clarify reason for low usage rate in the first year for project crediting period.				
Project participant response				Date: 16/03/2020

Our approach in collecting users list was to ask WASH committees to record users of the water points. Due to details needed of the households (name of head, ID number, Phone number, etc). this was not an activity they could do by standing at the water point where often only the kid or a house helper is sent instead of the head of household. Thus the activity took place at the homes where it was made easy to record the end-user details.

These WASH committee members were elected and tend to also be the same local authorities where we operated (Village heads, Community Health Workers, etc). The initial message to record the users was well communicated, but we don't think the recording process emphasized enough the user part as being different from the expected beneficiaries of the water point. The message of recording only users was lost over time and WASH committees resolved to just write down the list of all residents.

It will be ensured for the future that those recording the data (like the WASH committees) will be properly sensitized to register only users of the water points. Any residents not using the water points will not be included in the end-user lists anymore.

Documentation provided by project participant

DOE assessment

Date: 24/03/2020

Verification team based on above responses and the fact that none of the above findings has material impact, closes the CL. FAR-02 has been raised to check improvement in the process of registration of users of water points, to be checked during the next periodic verification.

Table 3. CAR from this verification

CAR ID	01	Section no.	--	Date:	05/02/2020
Description of CAR					
During the on-site inspection, verification team has reviewed web-based database (Mwater) of WAR and also the mobile registration process. During this review, it was found that boreholes are registered to the database without identifying the project and it includes other boreholes which is not part of the project (since WAR has non-carbon credit projects other than the subject GS registered project). Further interview with WAR, it was clarified that the database is manually extracted from this web-based database to identify boreholes of Project. The web-based database does not have a function to extract database separately for the all implemented boreholes which is related to the project only. This manual intervention raises concern on potential double counting and error during the data/information flow.					
Furthermore, verification team noted that for few of the boreholes, the details are not up-to date. For e.g. Stand pipe system 46078386, the maintenance as well as outage details are not up-to date on the M-Water database.					
Project participant response					Date: 16/03/2020
We acknowledge that some details were not updated correctly and we have taken measures to address it, moving the update to happen during weekly calls.					
In regards to separating the water points, as all the points are managed by the same company, albeit under different projects, a Dashboard specific to each project is created with filters in the dashboard to separate the different water points. This is easily visible when looking at the dashboard and portal side of the application. It is also possible to identify a GS project borehole due to the completed surveys relating to that borehole, all surveys are started with the acronym W4C or labelled as "Water for Climate." However when looking at the "surveyor" side of the application it is not quickly evident. We have resolved to create Custom IDs to move this visibility to the surveyor side as well.					
Documentation provided by project participant					
DOE assessment					Date: 24/03/2020
Verification team based on above responses and the fact that none of the above findings has material impact, closes the CL. FAR-01 has been raised to check improvement in the QA/QC process of the data registration process during the next periodic verification.					
CAR ID	02	Section no.	--	Date:	05/02/2020
Description of CAR					

As per section A.5 of the PDD, “The rehabilitated/new boreholes will be properly maintained in form of both preventive and corrective maintenance”. Furthermore, as per section D.1 of the PDD, “The boreholes will be protected from potential run-off bacteria/pollution through the following measures:

- 1) Fence around each borehole;
- 2) Boreholes will not be established in areas that are prone to flooding;
- 3) Cement foundation around the borehole pump;
- 4) WASH committees help to ensure that surroundings of the boreholes are kept clean and protected against animals or vandalism and notify the hand-pump mechanic immediately in case any problem with the borehole occurs.”.

During on-site inspection of one of borehole, it was observed that cement foundation around the borehole pump was ruptured and some water was leaking out of the bore-hole which could trigger contamination to the water source and thus does not confirm with the requirements of the PDD.

Project participant response	Date: 16/03/2020
This was an oversight on our side and has since been fixed. The Preventive maintenance forms does now correctly require the technicians to look for cracks in the cement to avoid the contamination.	
Documentation provided by project participant	
DOE assessment	Date: 24/03/2020
Verification team based on above responses and the fact that none of the above findings has material impact, closes the CL. FAR-03 has been raised to check improvement in the preventive and corrective maintenance in the next periodic verification.	

CAR ID	03	Section no.	--	Date: 05/02/2020
Description of CAR				
As per section E.2 of the registered LSC report, “A continuous input and grievance books will be provided in the District Office. The book gives access to a large number and wide range of stakeholders. Those ones who do not have access to the books, can provide their comments or other queries through telephone or Email”.				
Verification team during the on-site inspection interview and observation can confirm that an effective grievance mechanism is in place which can be evidenced from one sample grievance for stand pipe system, where the end-users had complained for water containing hardness and the Project proponent has installed a water softness to act on this grievance. However, verification team could not able to retrieve the following in order to confirm that a grievance mechanism is systematically followed:				
Record/information flow of the above cited grievance as it is not categorically recorded on Mwater database.				
Furthermore, the involvement of WASH committees for grievance mechanism is also unclear to the verification team. Project Proponent is requested to provide summary of grievances for all 31 implemented boreholes of the project and the action taken on each of them.				
Project participant response				Date: 16/03/2020
The grievance books located at the district offices do not have any entries and can be corroborated by the DOE.				
The summary of grievances received through the WASH committees have been listed in section F.2 of the MR.				
Documentation provided by project participant				
MR, version 1.1, dated 16/03/2020				
DOE assessment				Date:
The required correction as pointed out in the finding has been done in the section F.2 of the MR checked and confirmed by the verification team. CAR-03 is closed.				

Table 3. FARs from this verification

FAR ID	01	Section no.		Date: 24/03/2020
Description of CAR				
PP proposes to schedule the tests (such as E-Coli) in task scheduling software to ensure no tests are missed. Such process of task scheduling software shall be checked in next periodic verification. Furthermore, in view of CL-01, CL-02 and CAR-01, the proposed improvement in QA/QC system of the data registration process in Mwater shall be checked in next periodic verification.				
CME response				Date:
Documentation provided by the CME				
DOE assessment				Date: DD/MM/YYYY

FAR ID	02	Section no.		Date: 24/03/2020
Description of CAR				
In response to CL-03, PP has proposed that It will be ensured for the future that those recording the data (like the WASH committees) will be properly sensitized to register only users of the water points. Any residents not using the water points will not be included in the end-user lists anymore.				
CME response				Date:
Documentation provided by the CME				
DOE assessment				Date: DD/MM/YYYY

FAR ID	03	Section no.		Date: 24/03/2020
Description of CAR				
In view of CAR-02, the proposed improvement in the system of preventive and corrective maintenances shall be checked in next periodic verification.				
CME response				Date:
Documentation provided by the CME				
DOE assessment				Date: DD/MM/YYYY

Annex 1: Assessment of data and parameters fixed ex-ante at the time of validation

Relevant SDG Indicator	SDG 13, Climate action
Parameter	Cj
Data unit	Percentage
Default values used	18.8 %
Purpose of data	Estimation of emission reductions
Source of verification of the source	Baseline survey records

Relevant SDG Indicator	SDG 13, Climate action
Parameter	Xboil
Data unit	Percentage
Default values used	6.5%
Purpose of data	Estimation of baseline emissions
Source of verification of the source	Baseline survey records

Relevant SDG Indicator	SDG 13, Climate action
Parameter	Wb,y
Data unit	Tonnes/Litre
Default values used	0.00073277
Purpose of data	Estimation of baseline emissions
Source of verification of the source	Baseline Water Boiling Test (BWBT)

Relevant SDG Indicator	SDG 13, Climate action
Parameter	Wp,y
Data unit	Tonnes/Litre
Default values used	0.00073277
Purpose of data	Estimation of project emissions
Source of verification of the source	Baseline Water Boiling Test (BWBT)

Relevant SDG Indicator	SDG 13, Climate action
Parameter	EFb,CO2
Data unit	tCO2/TJ
Default values used	112
Purpose of data	Estimation of baseline emissions
Source of verification of the source	IPCC default value for wood

Relevant SDG Indicator	SDG 13, Climate action
Parameter	EF _{b,non-CO2}
Data unit	tCO2/TJ
Default values used	8.692
Purpose of data	Estimation of baseline emissions
Source of verification of the source	IPCC default value for wood

Relevant SDG Indicator	SDG 13, Climate action
Parameter	EFp,CO2
Data unit	tCO2/TJ
Default values used	112
Purpose of data	Estimation of baseline emissions
Source of verification of the source	IPCC default value for wood

Relevant SDG Indicator	SDG 13, Climate action
Parameter	EF _{p,non-CO2}
Data unit	tCO ₂ /TJ
Default values used	8.692
Purpose of data	Estimation of project emissions
Source of verification of the source	IPCC default value for wood

Relevant SDG Indicator	SDG 13, Climate action
Parameter	f _{NRB,i,y}
Data unit	tCO ₂ /TJ
Default values used	0.8968
Purpose of data	Estimation of emission reductions
Source of verification of the source	MINIRENA (Ministry of Natural Resources of Rwanda, 2016): Projection Scenario of Supply/Demand of Woody Biomass in Rwanda from 2015 to 2026. Department of Forestry and Nature Conservation (DFNC), Rwanda Natural Resources Authority (RNRA), MINIRENA, Kigali

Relevant SDG Indicator	SDG 13, Climate action
Parameter	NCV _{b,fuel}
Data unit	TJ/tonne
Default values used	0.0156
Purpose of data	Estimation of baseline emissions
Source of verification of the source	IPCC default value for wood

Relevant SDG Indicator	SDG 13, Climate action
Parameter	NCV _{p,fuel}
Data unit	TJ/tonne
Default values used	0.0156
Purpose of data	Estimation of project emissions
Source of verification of the source	IPCC default value for wood

Relevant SDG Indicator	SDG 13, Climate action
Parameter	EFCO _{2,diesel,y}
Data unit	tCO ₂ /TJ
Default values used	74.1
Purpose of data	Estimation of project emissions
Source of verification of the source	The value has been verified by reviewing IPCC 2006, volume 2, chapter 1, Table 1.4 /B09/

Relevant SDG Indicator	SDG 13, Climate action
Parameter	Density _{diesel}
Data unit	kg/l
Default values used	0.84
Purpose of data	Estimation of project emissions
Source of verification of the source	The value has been verified by reviewing second National Communication under the UNFCCC by Republic of Rwanda (Ministry of Natural Resources), page 40 /B10/.

Relevant SDG Indicator	SDG 13, Climate action
Parameter	NCV _{diesel,y}
Data unit	TJ/tonne
Default values used	0.043
Purpose of data	Estimation of project emissions
Source of verification of the source	The value has been verified by reviewing IPCC 2006, volume 2, chapter 1, Table 1.2/B09/

Annex 2: Assessment of data and parameters monitored

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	Np,y Number of person.days consuming water supplied by project scenario p through year y
Measuring frequency/Time Interval:	At least biennially
Reported value & Unit:	2,272,148, Persons.days
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: • End-user lists supplied by the WASH committee responsible for the water supply and treatment system /12/ • Borehole/Standpipe water point breakdown records /17/ • E.coli test results /08/ • mWater database platform/19/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the parameter is calculated. It was checked by the verification team that the parameter have been calculated multiplying the technology days by the number of people indicated in the end-user list /12/ for the respective water point. The technology days again have been calculated taking into account the start and end date of the monitoring period, any days the water point was down /16/ and the days for which the water could not be ensured to be E.coli /08/ free or during which the E.coli tests were on delay. In the opinion of verification team the approach used for the calculation of the parameter is appropriate as well conservative.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	$Q_{p,y}$ Liters per person per day (l/person/day)
Measuring frequency/Time Interval:	At least biennially
Reported value & Unit:	4, Liters per person per day (l/person/day)
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: The value is based on default as provided in the applied methodology /B01/.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the parameter is based on default provided in the applied methodology /B01/ and the same is deemed acceptable to the verification team.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	$Q_{p,y, \text{rawboil},y}$ Liters per person per day (l/person/day)
Measuring frequency/Time Interval:	At least biennially
Reported value & Unit:	0, Liters per person per day (l/person/day)
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: The value of the parameter " $Q_{p,y}$ " is based on default as provided in the applied methodology /B01/. As per the applied methodology /B01/ (page 49 of 92), If the default values are used then ($Q_{p,y} + Q_{p, \text{rawboil},y}$) in equation 11 of the methodology can be replaced with the default value i.e. 4 and thus the value of parameter " $Q_{p,y, \text{rawboil},y}$ " becomes "0".
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, refer assessment above.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.

In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA
--	----

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	$Q_{p, \text{cleanboil}, y}$ Liters per person per day (l/person/day)
Measuring frequency/Time Interval:	At least biennially
Reported value & Unit:	0.615, Liters per person per day (l/person/day)
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: The value of the parameter "$Q_{p, y}$" is based on default as provided in the applied methodology /B01/. The value of $Q_{p, \text{cleanboil}, y}$ has been calculated as 0.615 l and has been checked by the VVB, refer the assessment below: VVB noted that in usage/monitoring survey, 13 households out of 65 households (equivalent to 20%) using the project water point have indicated during that all or some part of the water from the project water point is being purified. Out of those 13 households, 10 indicated to boil it, whereas the remaining 3 households use filter or purification tablets. 10 out of 65 households is equivalent to 15.38%. Subsequently, PP has calculated the $Q_{p, \text{cleanboil}, y}$ in the following way: $4 \text{ l/p/day (default value for } Q_{py} + Q_{p, \text{raw}, y}) * 15.38\% = 0.615 \text{ l/p/day}$. The value of 0.615 l/p/day is deemed to be very conservative and thus acceptable to the VVB.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, refer assessment above.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	$U_{p,y}$ Usage rate in project scenario p during year y
Measuring frequency/Time Interval:	Annual
Reported value & Unit:	58.56, Percentage
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: Survey records for the usage rate and Impact parameters /13/. This survey has been verified through acceptance sampling during the on site inspection, please refer to the assessment in section C.4 of this report.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, refer assessment above.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	$LE_{p,y}$ Leakage in project scenario p during year y
Measuring frequency/Time Interval:	Every two years
Reported value & Unit:	0, tCO ₂ e /year
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: Since, the leakage assessment at the time of validation is still valid, the parameter is not required to be monitored during this verification,
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, refer assessment above.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available	NA

because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	
--	--

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	Quality of the treated water
Measuring frequency/Time Interval:	The first test within 6 months of the stated project start date, afterwards quarterly
Reported value & Unit:	Positive or Negative based on the test results, E.Coli / 100 ml
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: 1. Manual of E.Coli test /07/ 2. E.Coli test /08/ records for each water points 3. Confirmation from government health authority about the witnessing the above test /09/ 4. Project Water Point Database/18/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	There are few delays while conducting the E.Coli test and in this context CL-01 has been raised.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	mWater E.coli test kits
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	Hygiene campaigns
Measuring frequency/Time Interval:	Annual hygiene campaigns results
Reported value & Unit:	42 Community campaigns and 16 Train of Trainers campaigns have been carried out by end of 2019
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: Records of wash trainings /11/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Refer assessment above
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data	Yes, the data management ensures correct transfer

generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	Treatment capacity of the project technology/improved sources
Measuring frequency/Time Interval:	Once at the time of registration or at inclusion of new technology
Reported value & Unit:	Liters per day
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: 200123_W4C Project Water Point Database _v1.0.xlsx /17/ mWater database platform/19/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Refer assessment above
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	EF _{grid,y} CO ₂ emission factor of the grid electricity in year y
Measuring frequency/Time Interval:	At the time of issuance
Reported value & Unit:	0.676, tCO ₂ e/MWh
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: https://pub.iges.or.jp/pub/iges-list-grid-emission-factors Furthermore, verification team has noted that no grid electricity has been consumed for pumping water in a standpipe system to the different water points. It was found during the on site inspection that standpipe

	system was running on Solar electricity during the reported monitoring period.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Refer assessment above
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	EC _y Quantity of grid electricity consumed for pumping water in a standpipe system to the different water points in year y.
Measuring frequency/Time Interval:	Continuous monitoring and at least monthly recording (provided that there is consumption of grid electricity)
Reported value & Unit:	0, MWh
Verified Source of Data	Verification team has noted that no grid electricity has been consumed for pumping water in a standpipe system to the different water points. It was found during the on site inspection that standpipe system was running on Solar electricity during the reported monitoring period.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Refer assessment above
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 13, Climate action
Data / Parameter: (as in monitoring plan of PDD):	FC _{diesel,y} Quantity of diesel consumed for pumping water in a standpipe system to the different water points or any other water point in year y

Measuring frequency/Time Interval:	Continuous monitoring and at least monthly recording (provided that there is diesel consumption)
Reported value & Unit:	0, MWh
Verified Source of Data	Verification team has noted that no diesel has been consumed for pumping water in a standpipe system to the different water points. It was found during the on site inspection that standpipe system was running on Solar electricity during the reported monitoring period.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Refer assessment above
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 1, No poverty
Data / Parameter: (as in monitoring plan of PDD):	$Q_{tot,p,y}$ Total quantity of safe water in litres per year supplied by the rehabilitated/newly drilled boreholes of the project to the communities in year y
Measuring frequency/Time Interval:	At least biennially
Reported value & Unit:	9,088,592 l/monitoring period
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: Lists supplied by the WASH committee responsible for the water points /12/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Calculated as: $Q_{tot,p,y} = N_{p,y} * Q_{p,y}$ Where $N_{p,y}$ = Number of person.days consuming water supplied by project scenario p through year y $Q_{p,y}$ = Quantity of safe water supplied in the project scenario p during the year y, using the “zero or low” emissions’ clean water supply technology $Q_{tot,p,y} = 2,272,148 * 4 = 9,088,592$ l/monitoring period
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A

Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 3, Good health and well-being
Data / Parameter: (as in monitoring plan of PDD):	$P_{IWB, y}$ Good health and well-being
Measuring frequency/Time Interval:	Annual
Reported value & Unit:	Amongst the households using the project water point: 80% reported a decrease 20% reported no change
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: Survey records for the usage rate and Impact parameters /13/. This survey has been verified through acceptance sampling during the on site inspection, please refer to the assessment in section C.4 of this report.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, refer assessment above.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 5, Gender equality
Data / Parameter: (as in monitoring plan of PDD):	PIEC, y Gender equality
Measuring frequency/Time Interval:	Annual
Reported value & Unit:	using the project water point: 74% reported a decrease 14% reported no change 12% reported an increase

	In terms of time and effort spent for collecting wood fuel, amongst the households using the project water point: 48% reported a decrease 46% reported no change 6% reported an increase
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: Survey records for the usage rate and Impact parameters /13/. This survey has been verified through acceptance sampling during the on site inspection, please refer to the assessment in section C.4 of this report.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, refer assessment above.
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	N/A
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	NA

Monitoring Parameter Requirement	Assessment/ Observation by the DOE
Relevant SDG Indicator	SDG 6, Clean water and sanitation
Data / Parameter: (as in monitoring plan of PDD):	N _{WASH, y}
Measuring frequency/Time Interval:	Annual hygiene campaigns results
Reported value & Unit:	42 Community campaigns and 16 Train of Trainers campaigns have been carried out by end of 2019
Verified Source of Data	Verification team has cross checked the following documents during the on-site inspection: Records of wash trainings /11/
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Refer assessment above
Assessment of details of monitoring equipment, its specification and calibration as per the requirements of registered PDD:	NA
Does the data management (from data generation to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, the data management ensures correct transfer of data and reporting of emission reductions and all necessary QA/QC processes are in place.
In case only partial data are available because activity levels or non-activity parameters have not been monitored in	NA

accordance with the registered monitoring plan, has the most conservative assumption theoretically possible been applied or has a request for deviation been approved?	
--	--

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	31 May 2019	Revision to: • Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN); • Make structural and editorial improvements.
02.1	11 January 2018	Editorial revision to correct the numbering of appendices in the instructions.
02.0	31 October 2017	Revision to align with the requirements of the “CDM validation and verification standard for project activities” (version 01.0).
01.0	23 March 2015	Initial publication.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: project activities, verifying and certifying		