

TEMPLATE

VERIFICATION REPORT FOR PROGRAMME OF ACTIVITIES AND VOLUNTARY PROJECT ACTIVITIES (POA AND VPA(S))

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Version **1.0**

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SUMMARY

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KEY PROJECT INFORMATION

GS ID of PoA and VPA included in the verification	GS1247 Improved Kitchen Regimes Multi-Country PoA (GS1247) Version 9 VPA 122 – GS 5951 VPA 123 – GS 5952 VPA 124 – GS 5953 VPA 125 – GS 5954 VPA 126 – GS 5955 VPA 129 - GS 6041 VPA 130 – GS 6042
Title of PoA and VPAs	VPA 122 – GS 5951 VPA 123 – GS 5952 VPA 124 – GS 5953 VPA 125 – GS 5954 VPA 126 – GS 5955 VPA 129 - GS 6041 VPA 130 – GS 6042 GS1247 VPA 122 Zoba Anseba Community Safe Water (GS5951) GS1247 VPA 123 Zoba Anseba Community Safe Water (GS5952) GS1247 VPA 124 Zoba Anseba Community Safe Water (GS5953) GS1247 VPA 125 Zoba Anseba Community Safe Water (GS5954)

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	GS1247 VPA 126 Zoba Anseba Community Safe Water (GS5955) GS1247 VPA 129 Zoba Anseba Community Safe Water (GS6041) GS1247 VPA 130 Zoba Anseba Community Safe Water (GS6042)	
Version number of the verification Report	02	
Completion Date of verification Report	02/10/2024	
Version number and completion date of the PoA-DD and VPA-DD to which this report applies	Version 2 (All VPAs)	
Date of listing	04/04/2018	
Coordinating and Managing Entity (CME) / Project Developer (PD)	Johanna Grosssteinbeck Rebecca Barton CO2balance UK Ltd	
Project Representative	CO2balance UK Ltd	
Project Participants and any communities involved	CO2balance UK Ltd	
Host Country (ies)	Eritrea	
Activity Requirements applied	☐ Renewable Energy Activity Requirements ☒ Community Services Activity Requirements ☐ Land-Use & Forests Activity Requirements ☐ New project types ☐ Others (<i>rules and requirements available in Principles and Requirements apply</i>)	
Scale of the project activity	☒ Microscale ☐ Small scale ☐ Large scale ☐ Others	
Methodology (ies) applied and version number	☒ Gold Standard approved methodology, including any specific Gold Standard applicability criteria. ☐ A project-specific methodology (Applicable to Microscale Project only) Please refer to SDG Impact Quantification Methodologies webpage for GS approved methodologies. Many CDM methodologies are also approved for use in GS - they may have additional rules that apply. Please refer to the list of applicable CDM methodologies here on GS website.	
	<i>Title(s) of methodology (ies)</i>	TPDDTEC - 'Technologies and Practices to Displace Decentralized Thermal Energy Consumption V.01'.

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	<i>The version number of the methodology (ies)</i>	v.01
Product Requirements applied	☐ GHG Emissions Reductions & Sequestration ☐ Renewable Energy Label ☒ Others <i>For all other Certification Statements, Certified SDG Impact Statements or Products.</i> Please specify: Community Services Activities ☐ N/A	
Project cycle	☒ Regular ☐ Retroactive	
Deviation applicable to the project (accepted and rejected both)	Deviation ID:242 approved by GS 13/06/2022 Applicable section of validation report:Section 4.4.1	

GS accreditation expiry date	19/03/2027
Is the VVB accredited for the applicable sectoral scope?	Yes
Name, position of the approver of the validation report	Kaushal Goyal
Signature (Final version only)	 Managing Director, KBS Certification Services Limited

Table 1 – Verified Sustainable Development Contributions (for each VPA separately)

SUSTAINABLE DEVELOPMENT GOALS TARGETED	SDG IMPACT	ESTIMATED ANNUAL AVERAGE	UNITS OR PRODUCTS
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SDG 13 Climate Action (mandatory)	Emission Reductions	SDG 13: tCO ₂ e/y per VPA GS5951: 4,227 GS5952: 3,681 GS5953: 3,439 GS5954: 3,735 GS5955: 3,183 GS6041: 7,418 GS6042: 6,555 Total: 32,238	GS-VERs
SDG 3 Good Health and Well-being	Variation in household smoke (All VPAs)	95.00% decrease in household smoke (All VPAs)	Percentage
SDG 5 Gender Equality	Variation of time spent on firewood collection	0.47 decrease in hours spent collecting firewood per household per day (All VPAs)	Hours
SDG 6 Clean Water and Sanitation	People gain access to safe water	Additional people gain access to safe water: GS 5951: 2,382 GS 5952: 2,074 GS 5953: 1,938 GS 5954: 2,106 GS 5955: 1,794 GS 6041: 4,180 GS 6042: 3,694 Total: 18,168	Number of people

PART I – EXECUTIVE SUMMARY

The project activity includes verification of the following VPA' s- VPA 122,123,124,125,126,129,130 under the POA GS 1247 Improved Kitchen Regimes Multi-Country PoA (GS1247). The proposed project activity is the verification of the above mentioned VPA's following the Gold Standard Methodology 'Technologies and Practices to Displace Decentralized Thermal Energy Consumption V.01. The project activity is a micro-scale POA with 32,238 tCO₂e emissions inclusive of all the above mentioned VPA's ie., 7 VPAs each having emission reductions less than 10,000tCO₂e/year under Improved Kitchen Regimes Multi-Country PoA (GS1247). The verification activity follows section 3 of the GS4GG Programme of Activity Requirements /1/

Background and Context:

Eritrea, post its annexation from Ethiopia in 1992, faces severe water access issues, particularly in rural areas. Over 45% of the rural population lacks access to safe water¹, relying instead on unprotected wells, lakes, and other open water sources that are highly susceptible to contamination. This situation is accentuated by the country's history of armed conflict, conscription, and external migration, which have led to a significant number of female-headed households. These households, often led by widows, face multiple disadvantages including limited land cultivation and fewer assets, while bearing the dual burden of food production and family care, including the arduous task of water collection.

This report details an extensive water access improvement project implemented in rural Eritrea, with a specific focus on the rehabilitation of boreholes in the Zoba Anseba district by the project CME, CO₂ balance and project partner Vita. They had worked to identify broken down boreholes, renovate them and supply a maintenance programme to ensure that clean, safe water is delivered because of this project. The boreholes included under the project are entirely human operated and fitted with hand pump models that are commonly used in the area such as Afridev, U3 Modified and India Mark II pumps. The initiative addresses critical issues of water scarcity, environmental degradation, and complex socio-economic challenges faced by rural communities in a region marked by historical conflict and ongoing tensions.

The project activity is undergoing verification for the following vintages

GS 5951-1/12/2022 to 30/11/2023, MP 6

GS 5952-1/12/2022 to 30/11/2023, MP 6

GS 5953-1/12/2022 to 30/11/2023, MP 6

GS 5954-1/12/2022 to 30/11/2023, MP 6

GS 5955-1/12/2022 to 30/11/2023, MP 6

GS 6041-1/12/2022 to 30/11/2023, MP 4

GS 6042-1/12/2022 to 30/11/2023, MP 4

All PoAs and VPAs shall undergo validation, inclusion and verification by a Gold Standard-approved Validation/Verification Body, as per the procedure and requirements described in Programme of Activity Requirements. In line with the requirement of KBS Certification Services Limited following GS4GG rules viz., Principles and Requirements/1/, stakeholder consultation and engagement requirements/2/, safeguarding principles and requirements/3/, Design Change Requirements/4/, Validation and Verification Standard/5/, Site visit and remote audit requirements and procedures/6/, VVB requirements/7/, the project is eligible under section 3 of the GS4GG Programme of Activity requirements as it follows the established GS4GG methodology. The project is now eligible under the Gold Standard Methodology: Technologies and Practices to Displace Decentralized Thermal Energy Consumption V.01y.

¹ <https://www.fortunejournals.com/articles/community-knowledge-and-practice-on-sanitation-hygiene-and-household-water-utilization-in-afabet-city-northern-red-sea-zone-of-eri.html>

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The KBS Certification Limited verified the project activity based on Global Standard for Global Goals (GS4GG) standards and based on PAR_PoA (Programme of Activities) requirements and Procedures, to ensure credible, transparent verification of all the VPA's under each POA (Programme of Activities). The CME is responsible for monitoring the project activities at project site included under each VPA's under a single POA. The project assessment is done following the requirements of validation and verification standard/5/.

Key aspects of the implementation include:

1. Renovation of existing boreholes using locally appropriate technology.
2. Installation of human-operated hand pumps, including models such as Afridev, U3 Modified, and India Mark II, which are familiar to local communities.
3. Establishment of a robust maintenance program to ensure long-term functionality and sustainability of the water sources.

Environmental Impact:

The project significantly contributes to environmental conservation efforts by:

1. Reducing reliance on wood fuel for water purification, thereby decreasing deforestation rates.
2. Lowering greenhouse gas emissions associated with wood combustion.
3. Promoting sustainable water management practices in the region.

Socio-economic Benefits:

The initiative delivers multiple socio-economic advantages:

1. Improved access to clean, safe water for rural communities, enhancing overall health and sanitation.
2. Reduction in time and labor burden on women and children, who are primarily responsible for water collection.
3. Increased capacity for food production and other economic activities due to time saved and improved health.
4. Empowerment of female-headed households by alleviating one of their primary daily challenges.

Project Scope and Documentation:

The project's impact is documented in a comprehensive database that includes by the CME:

- Rehabilitation dates for each borehole.
- Specific locations of rehabilitated boreholes.
- Number of end users served by each water point.

The borehole rehabilitation project represents a significant and multifaceted approach to improving water security, environmental sustainability, and quality of life for rural communities in Zoba Anseba, Eritrea. By addressing both immediate water needs and long-term sustainability concerns, the initiative promises lasting positive impacts on the region's population and ecosystem. The project not only provides essential access to clean water but also contributes to broader goals of environmental conservation, gender equality, and economic development in a challenging geographical and socio-political context.

All boreholes undergo annual water quality testing to ensure the water is safe for human consumption as WHO drinking water standards. The water quality is approved by the Ministry of Land, Water and Environment in Zoba Anseba. Monitoring surveys are conducted in compliance with the latest available sampling and monitoring guidelines, according to TPDDTEC v1 methodology. It is a micro-scale project which replaces

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anthropogenic emissions of greenhouse gases (GHG's) total 32,238 tCO₂e/year from all VPAs whereas each VPAs have annual emissions reductions of 10,000tCO₂e/year complying with the micro scale requirements.

PART II – VERIFICATION TEAM, TECHNICAL REVIEWER AND APPROVER

2.1| Verification team member(s)

S.NO.	FULL NAME	ROLE(S)	TYPE OF RESOURCE	TYPE OF ACTIVITY(IES) CARRIED OUT
	Sanjay Kumar K	Team leader and Technical Area Expert TA 3.1	External Resource	Verification Assessment
	Yonas Tesfamichael Haile	Local Expert	External Resource	Onsite Visit and Interviews

2.2| Technical Reviewer(s) and approver(s) of the verification report

S.NO.	FULL NAME	ROLE(S)	TYPE OF RESOURCE	TYPE OF ACTIVITY(IES) CARRIED OUT
01	Bharath S	Team leader and Technical Area Expert TA 3.1	Internal Resource	Technical Review
02	Margaret Francis	Manager-T&C	Internal Resource	Final Review
03	Kaushal Goyal	Authorizer	Internal Resource	Final Recommendation

PART III – MEANS OF VERIFICATION

The project activity is verified for the given monitoring period for transparent conservative emissions comprising the monitoring period, 1/12/2022 to 30/11/2023 (inclusive of both the dates) following the Gold Standard for the Global Goals (GS4GG) and PAR Programme of Activity Requirement /9/.The project underwent verification process by following:

- Applying the most recent applicable decisions and guidance provided by the Board
- Determine whether each project activity meets all applicable rules and requirements, including those specified in the GS project standards, the selected methodologies, the selected standardized baselines and any other standards, methodologies, methodological tools and guidelines in accordance with the selected(applied) methodologies” are collectively referred to as the other (applied) methodological regulatory documents);
- Assessed with the accuracy, conservativeness, relevance, completeness, consistency and transparency of the information provided by the project developers;
- The information provided by the project developers are reliable and credible

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- Applied consistent verification criteria
- Identifying the list of parameters required by the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents by means of document review;

4.1 | Desk review/Planning

A review of data and information, based on the selected methodologies and related documents (like standardized baselines, tools and guidelines); employing appropriateness of formulae and accuracy of all calculations; Follow-up actions (e.g., on-site inspection and telephone or e-mail interviews); Interviews with relevant stakeholders in the host country, such as personnel with knowledge of the activity design and implementation; Cross checks between information provided by interviewed personnel (i.e., by checking sources or other interviews) to ensure that no relevant information has been omitted; and assessing the Sampling approach in accordance with the applied methodology(ies) and/or latest version of "Standard: Sampling and surveys for CDM project activities and programme of activities" version 09/10/.

The desk review of the following activities happened

- Analysis of the previous year Monitoring report, verification report and Emission Reduction sheet
- Analysis of the present monitoring report of the VPA's
- Establishing conservative Emission Reductions for the project activity through transparent back up documents, ER spreadsheet and the necessary grid emission factor, CO2 emission factors of the various parameters included under the project activity
- To study the QA/QC procedure adopted for the monitoring report.
- To undergo compliance, check up with the local laws and guidelines

The VVB analyses or identified any gap, to be rectified and submitted for the project progress in achieving emission reductions.

- Applied statistical and analytical techniques to evaluate GHG emission reduction data
- Employed a reasonable assurance framework to assess the absence of material misstatements
- Verified the sufficiency and appropriateness of evidence supporting emission reduction claims
- Conducted cross-checks with independent data sources where available and ensured completeness and precision in all reported emission reductions
- Implemented multi-layer verification processes to maintain the highest standards of data quality
- Conducted thorough reviews of calculation methodologies and emission factor applications
- Error analysis and rectification
- Compiled comprehensive documentation to support the certification process
- Prepared detailed reports outlining verification findings and methodologies
- The project database is listed below where the date, location and number of end users served in each borehole is mentioned. It also forms the database for the project. All the borehole used are of Mark II model.

TABLE 01: Borehole Summary with Coordinates

VP A ID	GS ID	Borehole ID	Village name	Latitude	Longitude	Date of rehab	Number of end users	Cappe d numbe rs of users
122	5951	ZA002	Etharew yata t	16.26033	38.40542	02/11/2017	310	310
		ZA003	Kedhat	16.1703 0	38.421 63	03/11/20 17	318	318
		ZA012	Balwa	15.6737 4	38.698 65	10/11/20 17	541	400
		ZA020	Bekushe mn uk	15.5946 2	38.645 77	18/11/20 17	196	196
		ZA021	Wasdem ba 1	15.6596 3	38.578 62	21/11/20 17	242	242
		ZA035	Kush	16.1495 0	38.053 49	08/12/20 17	104	104
		ZA037	Orota	16.1762 4	37.955 90	12/12/20 17	369	369
		ZA039	Shirara 2	15.8178 6	38.863 57	16/12/20 17	282	282
		ZA041	Weledte shi m	16.1575 0	38.072 94	19/12/20 17	287	287
123	5952	ZA005	Karibosa	15.8071 6	38.383 65	04/11/20 17	210	210
		ZA010	Jertem	15.6812 9	38.614 30	09/11/20 17	276	276
		ZA027	Gherghe r	15.7742 7	38.683 05	26/11/20 17	588	400
		ZA030	Deghed eg	15.5826 8	38.770 90	28/11/20 17	103	103
		ZA031	Glass	15.7186 0	38.313 57	30/11/20 17	232	232
		ZA033	Asmat	16.1572 5	38.072 92	08/12/20 17	319	319

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		ZA038	Shirara 1	15.8180 0	38.863 59	16/12/20 17	304	304
		ZA042	Dighi	15.7536 9	38.489 91	21/12/20 17	340	340
124	5953	ZA004	Guluy	16.1903 0	38.415 42	03/11/20 17	241	241
		ZA006	Robto	15.7402 9	38.663 24	07/11/20 17	134	134
		ZA007	Garaleb u	15.7306 2	38.676 74	07/11/20 17	135	135
		ZA009	Jembere k	15.7528 4	38.662 17	08/11/20 17	198	198
		ZA015	Hamreh ama reb 1	15.6231 8	38.622 06	17/11/20 17	1349	400
		ZA019	Firkutu	15.628	38.654 69	18/11/20 17	271	271
		ZA029	Marat	15.8681 2	38.671 13	27/11/20 17	199	199
		ZA036	Embelda y	16.3393 5	37.787 53	09/12/20 17	109	109
		ZA040	Shindwa	15.6152 8	38.713 35	18/12/20 17	360	354
125	5954	ZA013	Haddish adi 1	15.6493 7	38.576 20	11/11/20 17	729	360
		ZA018	Tuumkof a	15.6277 3	38.624 45	17/11/20 17	322	322
		ZA024	Iratahtai 2	15.6922	38.734 72	22/11/20 17	144	144
		ZA025	Hashisha y 1	15.7861 2	38.142 42	24/11/20 17	259	259
		ZA028	Gherbet	15.8353 1	38.742 89	27/11/20 17	370	370
		ZA032	Golagul	15.5788 1	38.794 42	05/12/20 17	451	400
		ZA034	Hawish	16.1993 7	38.067 88	08/12/20 17	362	362

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126	5955	ZA008	Adkom	15.7530 6	38.646 42	08/11/20 17	334	334
		ZA011	Habrenk eka	15.6480 8	38.709 81	09/11/20 17	110	110
		ZA014	Haddish adi 2	15.6499 2	38.623 21	13/11/20 17	618	360
		ZA016	Hamreha ma reb 2	15.6240 1	38.622 31	17/11/20 17	1339	400
		ZA022	Wasdem ba 2	15.6661 5	38.577 17	21/11/20 17	248	248
		ZA023	Iratahtai 1	15.6923 1	38.735 12	22/11/20 17	149	149
		ZA026	Hashisha y 2	15.7860 1	38.135 48	24/11/20 17	288	288
129	6041	ZA044	Kerecha	15.6956 5	38.708 27	17/02/20 20	1400	400
		ZA045	Derkuno q	15.6742 2	38.471 46	19/02/20 20	486	400
		ZA046	Libena	15.8816	38.369 62	20/02/20 20	248	248
		ZA047	Shirarwa	15.8631	38.378 06	20/02/20 20	1968	400
		ZA048	Habena	15.8259	38.753 15	25/02/20 20	713	400
		ZA049	Bosa- Begu	15.7287 8	38.464 33	26/02/20 20	229	229
		ZA050	Ferhen	15.8018 8	38.561 08	26/02/20 20	434	354
		ZA053	Enchinaq	15.7332 4	38.326 82	28/02/20 20	696	400
		ZA059	Jengenai t	15.9387 7	38.279 81	05/03/20 20	613	400
		ZA064	Yigar	15.7326 4	38.607 12	11/03/20 20	1444	400
		ZA065	Jufa	15.7523	38.468	14/03/20	185	185

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				7	88	20		
		ZA066	Abdura	15.8613 4	38.384 72	16/03/20 20	312	312
		ZA067	Caedakir ak	15.8613 3	38.384 85	17/03/20 20	272	272
130	6042	ZA043	Habrenk eka	15.6488 7	38.711 66	17/02/20 20	126	126
		ZA051	Dobiat	15.7067 7	38.324 15	27/02/20 20	304	304
		ZA052	Adialemi n	15.7292 5	38.464 41	27/02/20 20	341	341
		ZA054	Hawatsi	16.1394 1	38.135 91	01/03/20 20	357	357
		ZA055	Embelda y	16.3504 4	37.967 32	01/03/20 20	118	118
		ZA056	Forto	15.7523 7	38.468 88	03/03/20 20	334	334
		ZA057	Kertset	16.1273	38.223 51	03/03/20 20	2297	400
		ZA058	Gebeyale bu	15.9463	38.217 62	05/03/20 20	1405	370
		ZA060	Gerbet	16.0040 2	38.258 26	05/03/20 20	1270	400
		ZA061	Hilet	16.0143 3	38.219 15	05/03/20 20	1500	400
		ZA062	Gam	15.9110 61	38.496 87	09/03/20 20	1028	339
		ZA063	Bambi	15.7877 2	38.486 68	11/03/20 20	449	400

4.2| On-site inspection

>> The Questionnaire used as part of the site visit was to understand the usage rate and baseline condition of the project intervention on the end beneficiaries. It was observed that all the interviewed stakeholders had positive view on the project except few that resulted in FAR 02 being raised as part of improved monitoring and implementation. They in general do not collect firewood for boiling water, and are not frequently visiting hospitals for water borne diseases viz., diahorrea, cholera after the installation of the borehole.

Regarding complaints mechanism the usual practice is to raise the grievance with borewell president who is responsible to coordinate with, the local partner of the CME in Eritrea. The president then depending on the severity of the problem either contacts the Local NGO partner for resolution or rectifies/repairs the pump locally if the issue is minor using community help.

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As part of the assessment the local expert of KBS, drank the water from all the boreholes he visited to get firsthand experience of the water quality along with flow/accessibility of water from the borewell. The observations are as follows:

Water from the boreholes is clean and of good quality. This view was shared with the same satisfaction with all stakeholders. He observed that all the Borewells had the ID of the borewell. It was observed and understood through interviews that water is important to the community and this is seen by the ways in which they store water. Stakeholders store water in the jerrycans and other vessels. The place where the containers are kept is clean considering that they don't separate water for drink, wash and cook.. One stakeholder has a different place for drinking water and other place for cooking and washing. The place for storing water is clean and well organized..

The local expert through interview with local president also observed that the CTFs were signed and consent was given by the local stakeholders towards the implementation of the project. The site offices of the project partner Vita had all the information related to the project and had good record keeping practices.

In conclusion it is observed that the implementation of the project has impacted the local communities in a positive manner considering that water is valued by the local communities and it is reflected in the way they store water and use it.

TABLE 01: QUESTIONNAIRE USED DURING THE SITE VISIT

The coordinates of the borewell and the household were photographed using the GPS camera in order to cross check the values with the beneficiary database shared by the CME. It was observed that the difference between the coordinates given in the database and the one recorded at site were within 50-70 m. In the absence of any guidelines on the minimum difference observed between database and the observed coordinates, VVB based on the collective experience and discussion internally concluded that < 50 m is acceptable considering that the position of taking photos varies at site.

DURATION OF ON-SITE INSPECTION: 24/04/2024 to 26/04/2024 (both dates inclusive)

NAME	ROLE	LOCATION OF VISIT	ACTIVITY PERFORMED ON-SITE
Names of the Borehole stakeholders and Committee members are withheld as part of the safeguarding principles (clause 3.8.4 of stakeholder consultation and engagement guidelines) and concerns.	Borehole Member	Hilet Village/Zoba Anseba – ZA061	The stakeholders identified were asked questions as per the questionnaire as listed in the table below.
	Village Administrator	Kerecha-ZA044	
	Farmer and Housewife	Kerecha-ZA044	
	Borehole Committee Member	Bambi Village/Zoba Anseba ZA063	
	Village BH Water Committee Chairman	Libena-ZA046	

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Farmer (conducted over phone) Bambi-ZA063

Farmer (conducted over phone) Hilet-ZA061

Farmer (conducted over phone) Bambi – ZA063

Borehole Committee Member Hilet Village/Zoba
Anseba – ZA061

S.N O	INTERVIEWEE		DATE	SUBJECT	TEAM MEMBER INVOLVED
	Name	Affiliation			
01	Names of the stakeholders and community members are withheld as part of the safeguarding principles (clause 3.8.4 of stakeholder consultation and engagement guidelines) and concerns related to their privacy raised by the CME.	Libena Assistant Chairman of BH Water Committee	24/04/2024	About BH use, maintenance, breakdown, contributions, complaints and general summary of the people's request and comments. Receiving people's comments, storage in the house, sickness due to BH water usage. People's contribution and follow ups, Frequency of WCFT, WQTs, household and beneficiary identification, field visits and the systems involved in collecting and recording data and submission to Village Water, WASH training schedule and follow up on the implementation of the WASH at household, selection of the members	Sanjay Kumar K(supporting local expert remotely) Yonas Tesfamicarl Haile(on site)
02		Libena BH Water Committee- Technical Support	24/04/2024		
03		Bambi BH Committee- Health and Hygeine	25/04/2024		
04		Hilet Committee Member- Maintenance and Guarding Details	25/04/2024		
05		Kerecha Village Administrator	26/04/2024		
06		Kerecha BH supervisor	26/04/2024		
07		Kerecha BH Committee- Surveyor and Field Staff	26/04/2024		

Questionnaire used during sampling surveys

1. What is the main source of water in current scenario? How far it is located from your house?	
2. What are different uses of water collected?	
3. No. of persons at home	
4. Total water consumed in each household per day?	
5. Do you still fetch water from another well/other source in the project scenario?	
6. What was source of water in pre project scenario?	
7. How does the water look and taste from the water bore hole?	
8. How far was this source from your house?	
9. Did you boil the water in pre project condition? Why?	
10. If water boiled in pre project scenario, what was the source of fire wood?	
11. What is time spent initially for collecting firewood and water per household per day (hours)	
12. Project time spent initially for collecting firewood and/or water per household per day (hours)	
13. Do you still boil the water from boreholes?	
14. Boreholes Breakdown details/ Maintenance Frequency	
15. When was the last visit by the maintenance/project team?	
16. Do you receive call from the project team? if yes, when was the last time?	
17. Alternative source during project bore well shutdown period	
18. How many visits to hospital were made for breathing related illnesses or symptoms-before and after installation of water bore holes? To understand the smoke related illness when using biomass for boiling water.	
19. How many visits to hospital was made for gastro or stomach related illnesses or symptoms-before and after the installation of water bore holes?	
20. How to register complaints or grievance with respect to usage or availability of bore holes at site?	
21. Experience with the borehole?	
22. Any other Comments	

4.3| Remote audit (if applicable)**DURATION OF REMOTE INSPECTION: DD/MM/YYYY TO DD/MM/YYYY**

NAME	ROLE	REMOTE AUDITING MEANS/METHOD S	TOPICS COVERED
NA			
NA			

4.4| Sampling approach

The VVB followed the "Standard for Sampling and Surveys for CDM Project Activities and Programme Activities"/10/ version 09 for the sample size selection from the identified CMEs for the re validation. As per the sampling approach, the **VVB used** acceptance sampling as described in the "Standard for sampling and surveys for CDM project activities and programme of activities".

The VVB therefore has set up, using their own professional judgement, criteria for deciding what constitutes a discrepancy. The VVB had audited based on professional knowledge and judgement (a) The proportion of discrepancies between the PP's data and VVB's data that can be considered acceptable in their sample. This is referred to as the AQL (Acceptable Quality Level); (b) The proportion of discrepancies between the PP's data and VVB's data that would be considered unacceptable in their sample. This is the UQL (Unacceptable Quality Level).

Verification Team had adopted the acceptance sampling approach to verify the sampling result of the PP for the applied re-validation process

For the determination of VVB's acceptance sample size, Verification Team assumed the following factors based on para 39 (c) of the Sampling standard version 9.0.

1. Acceptable quality level (AQL) - 1%
2. Unacceptable Quality Level (UQL) – 20%
3. Producer risk- 10%
4. Consumer risk- 20 %

The para 39 (c) was chosen since the project is located in Eritrea which is a LDC as per United Nations Department of Economic and Social Affairs: Economic Analysis². Hence adopting a lenient AQL and UQL as well as higher consumer risk allowed by the Table 2 of the standard acceptance sample size of 8 was chosen with acceptance number (c) of 0 was chosen.

Verification Team has determined acceptance sample size for all the sample survey parameters based on the "Table. Sample size and acceptance number based on AQL, UQL, and producer and consumer risks" of standard "Sampling and surveys for CDM project activities and programme of activities" version 09.0., for which producer risk is 10% and consumer risk is 20%

² <https://www.un.org/development/desa/dpad/least-developed-country-category-eritrea.html>

ACTIVITIES (POA AND VPA(S))

As per the sample size calculation the sample size considered is 8 nos and $c=0$, beyond which the set of samplers are unacceptable for assumed risk % of 10%. Hence for more accuracy, the project developer has chosen acceptance number c as 0 and the minimum sample size (n) as 08.

4.5| Application of materiality

During site visit/interviews, local expert of the Verification Team visited the boreholes and beneficiaries connected, applying the random selection to cross check the baseline scenario, project fuel consumption etc. The assessment team has verified sufficient appropriate audit evidences, to reduce audit risk to an acceptably low level as requisite to achieve reasonable level of assurance for the current validation.

The validation and verification body (VVB) adhered to the general requirements and considerations of materiality in planning and conducting the verification, as outlined in the GS4GG validation and verification standard v1.0/5/. For determining the materiality threshold, the VVB referred to paragraph 9.6.3 of the validation verification standard v1.0 and paragraph 306 point (d) of the CDM validation and verification standard for programme of activities. Consequently, a 2% materiality threshold was applied to the total emission reduction actually achieved by the project. In accordance with section 9.6 of the GS4GG validation verification standard version 1.0, the verification report provides reasonable assurance regarding material errors, omissions, and misrepresentations. The verification team confirms that, as per paragraph 9.6.8 of GS4GG version 1.0, the materiality threshold applies to the total emissions actually achieved. This approach ensures a comprehensive and adaptable verification process, maintaining the integrity of the assessment while accommodating necessary revisions in project outcomes.

PART IV – VERIFICATION ASSESSMENT

4.1| General

ASSESSMENT QUESTIONS

1. Did the audit team confirm that the person interviewed was a legitimate stakeholder?	☐ Yes ☐ ~~No~~ ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The Audit team consisting of the local expert assisted by Team Leader remotely ascertained the functioning of the borewell hand pumps like Afridev, India II under the following VPA's. The identification of the stakeholder was done through interview and cross checking with the database of the end users. GS 5951-1/12/2022 to 30/11/2023, MP 6 GS 5952-1/12/2022 to 30/11/2023, MP 6 GS 5953-1/12/2022 to 30/11/2023, MP 6 GS 5954-1/12/2022 to 30/11/2023, MP 6 GS 5955-1/12/2022 to 30/11/2023, MP 6 GS 6041-1/12/2022 to 30/11/2023, MP 4 GS 6042-1/12/2022 to 30/11/2023, MP 4 The project activity is located in the district Zoba Anseba, Eritrea; The KBS has followed the sampling procedure to establish the nos of people that need to be interviewed and sampled to assess the condition of the hand-pump and its operation status.

ACTIVITIES (POA AND VPA(S))

	The field team checked the coordinates at site, interviewed and confirmed the names as mentioned in the sampled list.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The identified stakeholders are cross-verified from the project database /27/ submitted by the CME. The VVB team had collected the project database with unique id marked independently in all the hand-pumps with the respective address and the recipient details. The auditing team has used acceptance sampling to establish the sampling numbers and interviewed the concerned stakeholders and the status of the project pumps during on-site visit.
2. Did the audit team confirm that the anonymity of the person interviewed does not introduce a bias to the information provided?	☐ ~~Yes~~ ☐ ~~No~~ ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	Not Applicable as none of the stakeholders withheld their names during the field visit. Thus, eliminating any biases related to anonymity such as lack of accountability, selective discourse, difficulty in verifying claims, contextual information loss, exaggeration or fabrication, skewed perspective as well as reduced follow up opportunities.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	There is no bias in the interviewed person as the sampling procedure is established as per the guidelines, with selection of stakeholders for interview and the records were transparently submitted to avoid faulty information.

Findings

☐ CL	No CLs were raised
☐ CAR	No CARs were raised
☐ FAR	No FAR was raised

Means of verification and assertion statement

« The Assessment Team have followed section 12.3.2 of the Validation and verification standard to use, "Sampling and Survey of the CDM project activities in choosing the producer and consumer risk at 10% and 20% in obtaining the samples from homogenous population at the project site. The same is verified from the submitted Monitoring report / 11/ and project survey sheet submitted by the CME on the sampled surveys specific to the project activity.

4.2| Key Project Information

ASSESSMENT QUESTIONS

1. Is the key project information of the project accurate, complete, and consistent with the applicable VPA-DD?	
Including but not limited to: - Title of the project - VPA-DD applicable version - Project scale - Project Developer	☐ Yes ☐ ~~No~~ ☐ ~~N/A~~

ACTIVITIES (POA AND VPA(S))

• Project Participant • Methodology (ies) and version (s) • Activity and Product requirements • SDGs ex-ante values	
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	• Title of the project-The title of the PoA and the VPAs(regular) are mentioned as per the project web page of GS4GG. • VPA-DD applicable version-Version 02 • Project scale- Micro Scale • Project Developer-CO2Balance UK Ltd • Project Participant-NA • Methodology (ies) and version (s)-TPDDTEC version v.1-Technologies and Practices to Displace Decentralised Thermal Energy Consumption • Activity and Product requirements – Community Services Activities, GS-VERs. • SDGs ex-ante values – Mentioned as per the registered VPA-DD The VVB has accessed the submitted documents like the Monitoring report /14/, Emission Reduction sheet /15/; Methodology TPDDTEC Applicability /13/ and the attendant evidences to assess the general description of the project activity, project type and scale for the given Monitoring period 2022- 2023.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The project documents like Monitoring report, ER sheet, supporting documents like project database on type of pumps (i.e.) Afridev pump installed are reviewed to assess the project type and scale.
2. Does <i>Table 1 – "Sustainable Development Contributions Achieved"</i> in the monitoring report clearly summarize what GS Products and Certified Impact Statements requested for issuance as per the monitoring plan in the Design Certified VPA-DD?	☐ Yes ☒ ~~No~~ ☒ ~~N/A~~
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The CME has summarised the Sustainable Development Goal Contributions achieved clearly by the project activity as a requirement of GS products and Certified Impact Statements for issuance in the monitoring plan. The following SDGs are clearly depicted in the monitoring table of the monitoring report Good health and well-being in terms of reduction in household smoke; Gender Equality; Increase in percentage of the Clean Water and Sanitation; climate action in tCO2e /Annum. This was checked in the ER sheet, monitoring survey reports, WQT reports.

Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The following SDGs and its contributions make the project a GS product with SDG impacts and supplying clean energy for drinking ensures good health and well-being to the rural community. SDG contributions achieved is demonstrated through documentations viz., monitoring surveys, WQTs, ER sheets which was cross checked for consistency, appropriateness. Thus the MOV is in line with the requirements.														
3. Does Table 2 – "Product Vintages" in the monitoring report clearly divide the monitoring period into calendar years and calculate the number of products generated in each calendar year?		☐ Yes ☒ ~~No~~ ☒ ~~N/A~~													
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	<table border="1"> <tr> <td data-bbox="635 667 935 909">SDG 3 95.00% decrease in exposure to household air pollution due to no longer boiling water</td> <td data-bbox="935 667 1193 909">95% in smoke reduction</td> <td data-bbox="1193 667 1377 909">Percentage (%)</td> </tr> <tr> <td data-bbox="635 909 935 1151">SDG 5 Gender Equality (Variation in time spent on firewood collection</td> <td data-bbox="935 909 1193 1151"><u>0.47 decrease in hours spent collecting firewood per household per day (All VPAs)</u></td> <td data-bbox="1193 909 1377 1151">Hours</td> </tr> <tr> <td data-bbox="635 1151 935 1317">SDG 6 Clean Water and Sanitation</td> <td data-bbox="935 1151 1193 1317">Additional people gain access to safe water:</td> <td data-bbox="1193 1151 1377 1317">Number of people</td> </tr> <tr> <td data-bbox="635 1317 935 1523">SDG 13 Climate Action</td> <td data-bbox="935 1317 1193 1523">SDG 13 Climate Action 32,238</td> <td data-bbox="1193 1317 1377 1523">SDG 13: tCO2e/y per VPA</td> </tr> </table>			SDG 3 95.00% decrease in exposure to household air pollution due to no longer boiling water	95% in smoke reduction	Percentage (%)	SDG 5 Gender Equality (Variation in time spent on firewood collection	<u>0.47 decrease in hours spent collecting firewood per household per day (All VPAs)</u>	Hours	SDG 6 Clean Water and Sanitation	Additional people gain access to safe water:	Number of people	SDG 13 Climate Action	SDG 13 Climate Action 32,238	SDG 13: tCO2e/y per VPA
SDG 3 95.00% decrease in exposure to household air pollution due to no longer boiling water	95% in smoke reduction	Percentage (%)													
SDG 5 Gender Equality (Variation in time spent on firewood collection	<u>0.47 decrease in hours spent collecting firewood per household per day (All VPAs)</u>	Hours													
SDG 6 Clean Water and Sanitation	Additional people gain access to safe water:	Number of people													
SDG 13 Climate Action	SDG 13 Climate Action 32,238	SDG 13: tCO2e/y per VPA													
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The following SDGs and its contributions make the project a GS product with SDG impacts and supplying clean energy for drinking ensures good health and well-being to the rural community. SDG contributions achieved is demonstrated through documentations viz., monitoring surveys, WQTs, ER sheets which was cross checked for consistency, appropriateness. Thus the MOV is in line with the requirements.														
4. For micro and small-scale projects when emission reductions in a calendar year or in a monitoring year exceed the cap based on the scale, are emission reductions claimed capped according to the scale of the project?		☐ Yes ☒ ~~No~~ ☒ ~~N/A~~													
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The CME has considered following Capping factors in calculation of the Emission Reduction Calculation for obtaining ER's which is conservative, credible and non- faulty and as per														

	the scale ie. Micro scale limit of 10,000 tCO₂e/year per VPAs. The following capping parameters are used in the Emission Reduction Sheet: 1. Percentage of Usage rate -1 2. Percentage of suppressed demand-98% 3. Percentage of non-suppressed demand users-2% Hence the total ERs obtained for the project activity is conservatively obtained.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	As per the submitted Emission Reduction sheet, the VVB has assessed and found that the most important capping factor in calculating the ER is assumed as 95%. The monitoring days are capped on the given condition with number of beneficiaries capped at maximum 400 nos. The Baseline Emissions are calculated based on the same basis with non-suppressed demand arrived at 2%, who get benefited when compared to baseline to arrive Emission Reduction. The same can be studied in detail in the ER sheet. The total Emission Reduction (tCO₂e) is 32,238 tCO₂e/year across all the VPAs, where GS5951,5952,5953, 5954 and 5955 are into their 6th MP while the GS 6041 and 6042 are into their 4th MP.
5. Does the project activity demonstrate no double counting and no overlaps with that of another Gold Standard or other voluntary or compliance standard programme? Please refer to section 14 of the GHG Emissions Reductions & Sequestration Product Requirements	☐ Yes ☒ ~~No~~ ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The project CME who is responsible for the installation of Afridev pump in the project site is CO₂ balance UK Limited. The CME is functioning with Local NGO partner. Many existing boreholes in Eritrea have fallen into repair because maintenance programmes have been poorly managed, or proven too expensive. CO₂balance's project partner Vita has worked to identify broken down boreholes, renovate them and supply a maintenance programme to ensure that clean, safe water is delivered as a result of this project. The CME is only responsible for the project activity and the project did not claim any other form of GHG credits
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The VVB has checked the project with other GHG certification like CDM, VERRA, GCC, ICR, CERCarbano, Biocarbon, Social Carbon to find whether the project is registered under any programme. The project is not registered in any of the above programme apart from Gold Standard Registry. The website used for cross-verification are given below: Different Registries: • http://cdm.unfccc.int/

	• http://www.goldstandard.org/ • https://www.ucarbonregistry.io/ • https://projects.globalcarboncouncil.com/ • International Carbon Registry - International Carbon Registry • VCU Issuance Record • Cercarbono – Certified Carbon Standard • Biocarbon • Social Carbon Moreover the CME has submitted no double counting undertaking/29/ stating that the emissions generated from this project activity will not be used in another program or registry.
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Findings

☐ CL	CL 01 was raised and closed satisfactorily
☐ CAR	No CARs were raised
☐ FAR	No FARs were raised.

Means of verification and assertion statement

The VVB has referred to the paragraphs 15.4.5 | -15.4.9 | of validation and verification standard in ascertaining any changes in the project implementation phase through hybrid on-site inspection (where conducted) and a review of the revised POA-DD or VPA-DD submitted by the Coordinating and Managing Entity that describes the nature and extent of the actual changes. As per the raised CL 01, there is no major changes in the project implementation and only editorial mistake were identified, which is resolved. Secondly the CME has submitted no double counting letter and proposed the project does not avail any other form of environmental credits.

4.3| Description of Project**4.3.1| General description of project****ASSESSMENT QUESTIONS**

1. Does the general description of the project include a summary of the location of the project, the technologies/measures implemented, the project boundary, the baseline scenario; and aligns to the information presented in the applicable VPA-DD?	☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The VVB audited the presented information with most factual information with valid facts and figures related to the technologies implemented in the Eritrea. The CME has re installed the broken-down boreholes, renovate them and supply a maintenance programme to ensure that clean, safe water is delivered as a result of this project. By installing hand pump models that are commonly used in the area such as Afridev, U3 Modified and India Mark II pumps.

	Many households in the largely rural district of Zoba Anseba typically use wood fuel on inefficient three stone fires to purify their drinking, cleaning, and washing water. This process releases greenhouse gas emissions from wood combustion, which households can avoid if they use a technology that supplies clean water without requiring fuel (wood or fossil). By providing safe water, this project ensures that households consume less firewood during water purification and therefore reduce greenhouse gas emissions from the combustion process. The project team rehabilitated a total of 66 boreholes between 02/11/2017 and 17/03/2020. However, they have not included borehole ZA017 in this monitoring period due to non-functionality. Thus the total borehole rehabilitated from this project activity is 65. The project database, presented in the table was checked by the assessment, mentions the date, location, and number of end users served by each borehole. The following evidences were checked viz., monitoring surveys, usage surveys, project surveys during dry days and rainy days, WQTs as well as the stakeholder response forms along with MR,ERs. The borehole ZA017 was found to be located in a lake or a water body as per Google earth pro map based on the coordinates provided. Subsequently that borehole was removed from the project activity, due to non identification. For Boreholes ZA033, ZA041, ZA038 and ZA039 the coordinates showed overlap upon checking in google earth pro. CAR 01 was raised for this and subsequently closed. The details of the discussions are mentioned in Appendix 04.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The VVB has been presented with the technical specification of the borewell that is rehabilitated; The firewood (Kg) consumption is used in the baseline for boiling water for clean water supply in the absence of bore holes. The water samples are tested for microbial infections present following WASH method to ascertain the % of chlorine and suspended matter present that makes water not suitable for drinking. The quality of the treated water was assessed to ensure that it is fit for human consumption. The parameters used to assess the water quality will be in line with Eritrean standards for potable water and all parameters will be shown to be within levels considered acceptable for domestic human consumption. The Water Resource Department from the Ministry of Land, Water & Environment has certified each water supply as in line with national standards. The Eritrean standards are based on the WHO standards. The project follows stringent guidelines while implementation and it is a part of implementation schedule.

Findings

☐ CL	No CL was raised
☐ CAR	CAR 01 was raised and closed.
☐ FAR	FAR 01 was raised.

Means of verification and assertion statement

The VVB has assessed the general description of project and concluded that the project is implemented along with the annual water quality field test as per the designed POA during initial registration and all the non-conformities identified has been closed satisfactorily. CAR 01 was raised and closed.

4.3.2| Location of project**ASSESSMENT QUESTIONS**

1. Are details of the physical/geographical location of the project activity provided (physical address, map, GPS coordinates if necessary)?		☐ Yes ☐ No ☐ N/A																					
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The submitted VPA-DD has provided the extent of the geographical boundary of the Eritrea. The coordinates were checked with the help of google earth pro and found to be correct. This was further cross checked with the GPS photo app of the sample’s boreholes and the respective households.																						
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The district Zoba Anseba, Eritrea is the project boundary. The target area and the fuel collection area are defined as being contained within project boundary, with the outer limits of the project boundary being clearly defined below. As most beneficiaries collect their wood fuel locally near their homesteads, with GPS coordinates of the project boundary are presented below: <table><tr><td></td><td>Latitude</td><td>Longitude</td></tr><tr><td>GPS1</td><td>17°33'14.79"N</td><td>38° 0'28.27"E</td></tr><tr><td>GPS2</td><td>16°39'54.06"N</td><td>37°58'31.30"E</td></tr><tr><td>GPS3</td><td>15°35'2.36"N</td><td>38°53'15.55"E</td></tr><tr><td>GPS4</td><td>15°31'10.73"N</td><td>38°45'57.03"E</td></tr><tr><td>GPS5</td><td>16°33'6.39"N</td><td>36°53'18.85"E</td></tr><tr><td>GPS6</td><td>17° 2'46.75"N</td><td>37°23'56.05"E</td></tr></table> The details of the boreholes used in this project are mentioned in Table 01 along with coordinates, village name, date of rehab, number of end users and capped users.			Latitude	Longitude	GPS1	17°33'14.79"N	38° 0'28.27"E	GPS2	16°39'54.06"N	37°58'31.30"E	GPS3	15°35'2.36"N	38°53'15.55"E	GPS4	15°31'10.73"N	38°45'57.03"E	GPS5	16°33'6.39"N	36°53'18.85"E	GPS6	17° 2'46.75"N	37°23'56.05"E
	Latitude	Longitude																					
GPS1	17°33'14.79"N	38° 0'28.27"E																					
GPS2	16°39'54.06"N	37°58'31.30"E																					
GPS3	15°35'2.36"N	38°53'15.55"E																					
GPS4	15°31'10.73"N	38°45'57.03"E																					
GPS5	16°33'6.39"N	36°53'18.85"E																					
GPS6	17° 2'46.75"N	37°23'56.05"E																					

Findings

☐ CL	No CL was raised
☐ CAR	CAR 01 was raised and closed.
☐ FAR	No FAR was raised.

Means of verification and assertion statement

- 1) The VVB has done assessment on the boreholes and the represented end use and its location and distance. Corrective Action is raised on the location (ZA017) of the borehole location being found in a water body while coordinates of the 29 BHs upon checking the google earth pro showed no settlements or in isolated places. At the same time coordinates ZA033, ZA041, ZA038 and ZA039 showed minimal distance or overlapping. The CME has demonstrated that the GPS signal is poor and not reachable at the project area leading to manual error in Borehole identification. Even though the error is through instrument usage, the faulty borewell points were removed for conservative and actual non-biased emission reduction calculation and the VVB accepted the same following GS rules and guidelines. For boreholes showing no settlements nearby the CME clarified that settlements are within 1 km based on google map. Regards the overlapping of the 4 boreholes the CME provided google maps with the distances between the borehole points and found to be between 11 m and 28.25 m. The detailed discussions are mentioned in Appendix 4 of this report. Additionally, CME ensured that all the households in the project were within 1 km from the nearest borehole. The AT analysed the 'Sales_Record_Confidential_2023_v2' sheet and checked all the distances of the HHs from the borehole IDs. All the distances of the HHs from the boreholes in the VPAs are less than 1 km. The average distance for the boreholes in the VPAs was 418 m with a standard deviation of 86.82 m indicating that the boreholes were located within 1 km as per the methodology and the monitoring plan. The maximum distance that a household was located from the borehole was 750 m (borehole ID ZA025 in Hashishay 1 village) and the shortest being 300 m (borehole ID ZA 030 Aditekelezezan village).

2)

4.3.3| Reference of applied methodology

ASSESSMENT QUESTIONS

1. Does the project demonstrate compliance with all the applicable methodology (ies), tool (s), and guideline (s)?		☐ Yes ☒ ~~No~~ ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The project activity is in compliance with the methodology Gold Standard Methodology 'Technologies and Practices to Displace Decentralized Thermal Energy Consumption V.01'/13/ .and required tools and guidelines for the Project Emission Reduction calculation and Leakage Emission calculations. The project is in compliance with the CDM Sampling tool for the project documentation and conservative calculation purposes	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The assessment team assessed across all the applicability criteria as per the methodology specific to the project scenario and baseline identification; The project activity is rehabilitation of bore holes, that provides clean drinking water, which in the absence of the project activity, would have used firewood to boil water each day; Hence in the absence of the project activity, the equivalent amount of firewood used for boiling water leads to emission reduction (baseline determination). Hence the project activity results in achieving the targets of SDG3 ,5,6, and 13.	
2. Does the project provide justification of the applicable tool (s) or guideline (s) that are not used?		☐ Yes ☒ ~~No~~ ☐ N/A

Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The project activity is in compliance with the methodology Gold Standard Methodology 'Technologies and Practices to Displace Decentralized Thermal Energy Consumption V.01'.and required tools and guidelines for the Project Emission Reduction calculation and Leakage Emission calculations. The project survey, usage survey and the emission reduction calculations and the attendant evidences were provided to support the ER calculations. The assessment team cross checked and found the claims as per the methodology and the monitoring plan.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The assessment team detailed across all the applicability criteria as per the methodology specific to the project scenario and baseline identification; The project activity is rehabilitation of bore holes, that provides clean drinking water, which in the absence of the project activity, would have used firewood to boil water each day; Hence in the absence of the project activity, the equivalent amount of firewood used for boiling water leads to emission reduction (baseline determination). Hence the project activity achieves the targets SDG 3 ,5,6, and 13.
3. Does the project meet the requirements of micro, small or large scale, according to the methodologies or other rules specified in the Gold Standard?	☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	Yes, the project activity is micro-scale POA with each VPA having emission reductions of not greater than 10,000tCO₂e/year in-line with the methodology and GS4GG PAR. The project activity is in compliance with the methodology Gold Standard Methodology 'Technologies and Practices to Displace Decentralized Thermal Energy Consumption V.01'.and required tools and guidelines for the Project Emission Reduction calculation and Leakage Emission calculations. The project follows the CDM Sampling tool for the project documentation and conservative calculation purposes. The monitoring or usage surveys are complied with the methodological requirements. Monitoring Surveys or the usage surveys are conducted annually post registration as per 3.1.C of the methodology. A Random Sample Group (RSG) was generated with the size of the sample group satisfying 90/30 precision. The AT checked the RSG and found the application of this rule in line with the methodology. All the usage surveys took place between 17/07/2023 and 19/07/2023 and sample sizes (6 from BH aged 3-4 years and 7 BH aged 5-6 years) matching borehole ages were selected. AT checked the dates with the field notes shared by the CME and found that the monitoring surveys were conducted as per section 3.1.C of the methodology. The minimum sample size should be 100 as per the methodology

	however the CME chose 120 samples which exceeds the sampling requirements. Since the sampling was performed randomly, the same was accepted by the assessment team. Further the CME performed the WCFT between 15/08/2022 to 18/08/2022 (both dates inclusive) with 40 samples during the previous monitoring period. The sampling requirements as per the methodology is 20 as per 90/30 rule and hence number of samples exceeds the requirements. The dates were chosen as it shows normal consumption pattern as it was conducted for 4 consecutive days without public holidays and is conservative and representative of the consumption pattern of the end users using boreholes. Grievance register was also placed at site for receiving complaints and feedback near all boreholes. This was checked as part of the site visit conducted by the local expert.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The assessment team checked field notes, the sampling results, WCFT procedures applied at site, ER and sampling calculations sheet together with monitoring report as well as the methodology. Since the calculation sheets were corroborated with on site field feedback the AT found the calculations in line with the methodology and conservative. Further no complaints was found mentioned in the grievance book while checking the checking the same as part of the site visit.

Findings

☐ CL	No CLs were raised
☐ CAR	CAR 02 was raised and converted into FAR 01
☐ FAR	FAR 01 were raised.

Means of verification and assertion statement

The PoA is a micro scale project activity with a usage cap of 400 per borehole (with less than 400 taken at actuals and higher values capped at 400) for the VPAs

- VPA 122 – GS 5951
- VPA 123 – GS 5952
- VPA 124 – GS 5953
- VPA 125 – GS 5954
- VPA 126 – GS 5955
- VPA 129 - GS 6041
- VPA 130 – GS 6042

The VPA 122-126 is into its 6th monitoring period while VPA 129-130 are into their 4th MP for the present project activity's monitoring period. The cumulative VERs achieved from the 6 VPAs is 32,238t CO₂e/year. The individual VERs from each VPAs is mentioned below:

- VPA 122 – GS 5951 – 4,227 tCO₂e/year
- VPA 123 – GS 5952 – 3,681 tCO₂e/year
- VPA 124 – GS 5953 – 3,439 tCO₂e/year
- VPA 125 – GS 5954 – 3,735 tCO₂e/year
- VPA 126 – GS 5955 – 3.183 tCO₂e/year

- VPA 129 - GS 6041 – 7,418 tCO₂e/year
- VPA 130 – GS 6042 – 6,555 tCO₂e/year

The project activity follows the methodology, "Technologies and Practices to Displace Decentralized Thermal Energy Consumption V.01 and the relevant tools and guidelines and a CAR 02 was raised and was converted into FAR 01. The monitoring surveys or usage surveys, WCFT and project surveys are conducted in line with the section 3.1.C of the methodology and the sampling sizes, procedures were in line with the monitoring plan and the methodology. Hence the scale of the project meets the criteria for micro scale project as assessed by the assessment team.

4.3.4| Crediting period of project

ASSESSMENT QUESTIONS

1. Is the start date, end date, and length of the crediting period given as in the VPA-DD and specified in DD/MM/YYYY format?	☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The date of rehabilitation was used as the start date of operation. It was conservatively assumed that the first day of crediting period is not counted and the crediting period begins the following day after the borehole is rehabilitated. The length of the crediting period is to be 7 years, twice renewable totalling 21 years as per the design approved VPA. The individual project technology days for each borehole were totalled to give the total number of project technology days for this monitoring period. The assessment team verified the following: 1. The borehole rehabilitation date was accurately recorded and used as the start date of the project activity. 2. The crediting period start date was correctly set to the day following rehabilitation, in line with the conservative approach of not counting the rehabilitation day itself. 3. AT confirmed the crediting period duration aligns with the approved VPA design: 7 years, renewable twice, for a total of 21 years. 4. We reviewed the calculation method for project technology days, verifying that: a) Individual project technology days were correctly determined for each borehole. b) These individual days were accurately summed to derive the total project technology days for the monitoring period. 5. AT cross-checked all the rehabilitation dates given in the ER sheets, crediting period start dates, and project technology day calculations to ensure consistency and accuracy and found to be conservatively applied. The start date of the 6 VPAs are mentioned below and the dates are in the format DD/MM/YYYY in the monitoring report:

	<table><tr><th>Project ID</th><th>Start Date</th><th>Crediting period start date</th><th>Crediting period end date</th></tr><tr><td>59517</td><td>02/11/2017</td><td>03/11/2017</td><td>02/11/2024</td></tr><tr><td>59527</td><td>04/11/2017</td><td>05/11/2017</td><td>04/11/2024</td></tr><tr><td>59537</td><td>03/11/2017</td><td>04/11/2017</td><td>03/11/2024</td></tr><tr><td>59547</td><td>11/11/2017</td><td>12/11/2017</td><td>11/11/2024</td></tr><tr><td>59557</td><td>08/11/2017</td><td>09/11/2017</td><td>08/11/2024</td></tr><tr><td>60410</td><td>17/02/2020</td><td>18/02/2020</td><td>17/02/2027</td></tr><tr><td>60420</td><td>17/02/2020</td><td>18/02/2020</td><td>17/02/2027</td></tr></table>	Project ID	Start Date	Crediting period start date	Crediting period end date	59517	02/11/2017	03/11/2017	02/11/2024	59527	04/11/2017	05/11/2017	04/11/2024	59537	03/11/2017	04/11/2017	03/11/2024	59547	11/11/2017	12/11/2017	11/11/2024	59557	08/11/2017	09/11/2017	08/11/2024	60410	17/02/2020	18/02/2020	17/02/2027	60420	17/02/2020	18/02/2020	17/02/2027
Project ID	Start Date	Crediting period start date	Crediting period end date																														
59517	02/11/2017	03/11/2017	02/11/2024																														
59527	04/11/2017	05/11/2017	04/11/2024																														
59537	03/11/2017	04/11/2017	03/11/2024																														
59547	11/11/2017	12/11/2017	11/11/2024																														
59557	08/11/2017	09/11/2017	08/11/2024																														
60410	17/02/2020	18/02/2020	17/02/2027																														
60420	17/02/2020	18/02/2020	17/02/2027																														
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The crediting period of the project is conservatively applied as mentioned in the table above. This was cross checked in the MR, ER calculation sheets and found to be appropriate to the assessment team.																																
2. If not, does the update complies with the standard requirements and includes evidence when necessary?		☐ Yes ☐ No ☐ N/A																															
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	N/A																																
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	N/A																																
Findings																																	
☐ CL	No CL was raised																																
☐ CAR	No CAR was raised																																
☐ FAR	No FAR was raised																																
Means of verification and assertion statement																																	

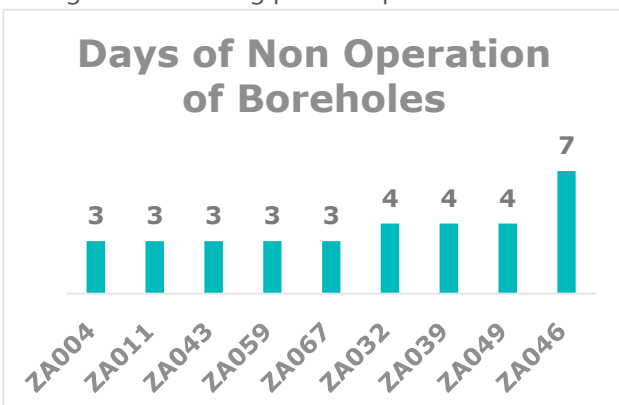
There is no change in the start of crediting period and the start date of the project date is conservatively applied. Thus the AT confirms that the start date of the project activity is in line with GS4GG requirements.

4.4| Implementation of Project

4.4.1| Description of implemented project

ASSESSMENT QUESTIONS

1. Is the information on the project implementation and actual operation accurate, complete, and consistent (including relevant dates of construction, commissioning, and start of operation)?	☐ Yes ☒ No ☐ N/A
--	--

Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The implementation status of the project activity: Zoba Anseba is a largely rural district in which many households typically use wood fuel on inefficient three stone fires to purify their drinking, cleaning and washing water. This process results in the release of greenhouse gas emissions from the combustion of wood which can be avoided if a technology that does not require fuel (wood or fossil) supplies clean water desired by households., However borehole ZA017 has not been included in this monitoring period due to non-functionality. In total there was 34 days of non-operation of the boreholes. The distribution of non-operation of boreholes during the monitoring period is presented below: Days of Non Operation of Boreholes <table border="1"><thead><tr><th>Borehole ID</th><th>Days of Non Operation</th></tr></thead><tbody><tr><td>ZA004</td><td>3</td></tr><tr><td>ZA011</td><td>3</td></tr><tr><td>ZA043</td><td>3</td></tr><tr><td>ZA059</td><td>3</td></tr><tr><td>ZA067</td><td>3</td></tr><tr><td>ZA032</td><td>4</td></tr><tr><td>ZA039</td><td>4</td></tr><tr><td>ZA049</td><td>4</td></tr><tr><td>ZA046</td><td>7</td></tr></tbody></table> Similarly the distribution of non-operational days of the boreholes VPA wise is provided in the table below: <table><tr><th>VPA</th><th>Number of Non Operational days</th></tr><tr><td>124</td><td>3</td></tr><tr><td>126</td><td>3</td></tr><tr><td>130</td><td>3</td></tr><tr><td>122</td><td>4</td></tr><tr><td>125</td><td>4</td></tr><tr><td>129</td><td>17</td></tr></table>	Borehole ID	Days of Non Operation	ZA004	3	ZA011	3	ZA043	3	ZA059	3	ZA067	3	ZA032	4	ZA039	4	ZA049	4	ZA046	7	VPA	Number of Non Operational days	124	3	126	3	130	3	122	4	125	4	129	17
Borehole ID	Days of Non Operation																																		
ZA004	3																																		
ZA011	3																																		
ZA043	3																																		
ZA059	3																																		
ZA067	3																																		
ZA032	4																																		
ZA039	4																																		
ZA049	4																																		
ZA046	7																																		
VPA	Number of Non Operational days																																		
124	3																																		
126	3																																		
130	3																																		
122	4																																		
125	4																																		
129	17																																		

	The necessary surveys were conducted viz., usage or surveys, project surveys and WCFT (conducted biennially and the latest survey was conducted between 15/08/2022 – 18/08/2022) were performed as per methodology. The same has been mentioned above. By providing safe water this project ensures that households consume less firewood during the process of water purification and therefore reduce greenhouse gas emissions from the combustion process.																				
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The non-operation of the boreholes has been checked via the field notes provided by the CME and verified to be true. This was randomly cross checked via interviews with the stakeholders also.																				
2. Is the status of implementation, start date of operation, and progress achieved for each VPA in each implemented phase?	☐ Yes ☒ No ☐ N/A																				
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The project activity consists of the following VPA's- VPA 122 – GS 5951, VPA 123 – GS 5952, VPA 124 – GS 5953, VPA 125 – GS 5954, VPA 126 – GS 5955, VPA 129 - GS 6041 and VPA 130 – GS 6042, which involves rehabilitation of bore holes at the Zoba Anseba that is a largely rural district of Eritrea. The operational status of the project was confirmed through site visits and field notes as well as the surveys conducted by the CME partner, Vita viz., usage surveys, project surveys and WCFT(conducted biennially and the latest WCFT was conducted between 15/08/2022 to 18/08/2022). All the VPAs are implemented in a single phase, however VPA129(GS6041) and VPA 130 (GS6042) have a different start date and accordingly have their 4th MP for the present monitoring period while the rest have their 6th monitoring period.																				
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The VVB has assessed the project implementation and found that it is as per the schedule mentioned below, as per the design approved VPAs as follows: <table><tr><th>Project ID</th><th>Start Date</th><th>Monitoring Period</th><th>Crediting period start date</th><th>Crediting period end date</th></tr><tr><td>5951</td><td>02/11/2017</td><td>6</td><td>03/11/2017</td><td>02/11/2024</td></tr><tr><td>5952</td><td>04/11/2017</td><td>6</td><td>05/11/2017</td><td>04/11/2024</td></tr><tr><td>5953</td><td>03/11/2017</td><td>6</td><td>04/11/2017</td><td>03/11/2024</td></tr></table>	Project ID	Start Date	Monitoring Period	Crediting period start date	Crediting period end date	5951	02/11/2017	6	03/11/2017	02/11/2024	5952	04/11/2017	6	05/11/2017	04/11/2024	5953	03/11/2017	6	04/11/2017	03/11/2024
Project ID	Start Date	Monitoring Period	Crediting period start date	Crediting period end date																	
5951	02/11/2017	6	03/11/2017	02/11/2024																	
5952	04/11/2017	6	05/11/2017	04/11/2024																	
5953	03/11/2017	6	04/11/2017	03/11/2024																	

	5954	11/11/2017	6	12/11/2017	11/11/2024
	5955	08/11/2017	6	09/11/2017	08/11/2024
	6041	17/02/2020	4	18/02/2020	17/02/2027
	6042	17/02/2020	4	18/02/2020	17/02/2027

3. Does the project clearly state any change (s) to the project design from the approved Design Certified VPA-DD?

☐ Yes
☐ No
☒ N/A

Means of verification (MOV)
Mention the means of verification (MoV) used to verify this information

No. there is no change to the project design from approved design certified VPA-DD. However a deviation request was approved by GS on 13/06/2022. As per this approved deviation, CME was allowed a cap of 300 users per borehole or tap or water source as option 01, while in option 02 a procedure to estimating the technical output capacity was provided. This was checked by referring the approval file: CO2b User Numbers Deviation-Request-Form v1_Final decision_Clean.pdf and cross checked in the website: https://globalgoals.goldstandard.org/standards/DEV_242.pdf

Justification of the MOV
Justify how the used MoV was appropriate for the aspect verified.

The MR was checked with the project web page in GS4GG and it was found that there is no design change for the regular VPAs under this project under real case VPA 7591. The webpage references are taken from the GS4GG website. Hence the MOV applied was found to be appropriate for the aspect viz., design change under discussion.

Findings

☐ CL	No CLs were raised
☐ CAR	CAR 02 and CAR 04 were raised and converted to FAR 01 and FAR 02 respectively
☐ FAR	FAR 01 and FAR 02 were raised.

Means of verification and assertion statement

The implementation of the project and its actual scenario is clearly mentioned in the monitoring report and as visualized through on-site visit. However CAR 02 regarding the borehole ZA017 and CAR 04 were raised as part of the implementation status of the project and converted into FAR 01 and FAR 02 respectively. The discussions are available in annex 4 of this report. There is no major design change except for a deviation request under DEV_242 which happened post registration for the project activity as verified from the online documents submitted to the registry.

4.4.2| Forward Action Requests

ASSESSMENT QUESTIONS

1. If any, were FARs from the Design Certification and/or Previous Performance certification addressed by Project developer?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	NA	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	NA	
Findings		
☐ CL	NA	
☐ CAR	NA	
☐ FAR	NA	
Means of verification and assertion statement		
NA		

4.5| Post-Design Certification Changes – IF APPLY

Post-Design Certification changes summary
NA
Design change submitted in issuance track
NA

4.5.1| Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline

The following questions apply when there is a temporary deviation/change to a certified VPA - which include changes from the registered monitoring plan, the applied methodologies, or other standard documents - that are expected not to occur beyond a given monitoring period.

ASSESSMENT QUESTIONS

1. Does the explanation on temporary deviation describe the nature, extent, and its applicable duration?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	NA	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	NA.	
2. Are there conservative assumptions or discount factors applied to the calculations ensuring SDG Impacts will not be overestimated?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	NA	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	NA	
Temporary deviation history of the VPA and deviation submitted in issuance track		
NA		
Findings		
☐ CL	No CL was raised	
☐ CAR	No CAR was raised	
☐ FAR	No FAR was raised	
Means of verification and assertion statement		
NA		

4.5.2| Corrections

ASSESSMENT QUESTIONS

1. Are there any corrections to project information or parameters fixed at validation; and are these properly justified and described?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	N/A	
Corrections history of the VPA and changes submitted in issuance track		
NA		

Findings	
☐ CL	NA
☐ CAR	NA
☐ FAR	NA
Means of verification and assertion statement	
NA	

4.5.3| Changes to start date of crediting period

ASSESSMENT QUESTIONS

1. Is there a change to the start date of the crediting period that is relevant for this monitoring period?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	N/A	

Changes to the start date of crediting period history of the project

NA	
Findings	
☐ CL	NA
☐ CAR	NA
☐ FAR	NA
Means of verification and assertion statement	
NA	

4.5.4| Permanent changes from the Design Certified monitoring plan, applied methodology or applied standardized baseline

Examples of Permanent changes listed, but not limited to additionality, scale of the project, validity/applicability of the applied methodology, stakeholder consultation, sustainable development criteria and monitoring.

ASSESSMENT QUESTIONS

1. Are any material and permanent change to the design of the project properly indicated and supporting documentation been provided (e.g., version number and completion date of the revised design certified PDD for each, copy of the approved Deviation Request Form or Design Change approval form)?	☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The following deviations are approved by the Gold Standard 1. As per the deviation request, Dev_242, approved on 13/06/2022, PP introduced a 5 Minute Stroke Test for this. The Deviation request and field methodology have been included in the MR. 2. The other being conduct annual usage or monitoring surveys for the number of users – a cap of 300 per tap or water source shall be applied. 3. The MR applies a functionality cap of 95% for conservativeness and total number of users per borehole is limited to 400 for conservatives.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The deviation request was checked from the GS4GG website: https://globalgoals.goldstandard.org/standards/DEV_242.pdf and found to be authentic and applicable for the present project activity. The deviation approval was for the real case VPA 7591 which is applicable for the regular VPAs GS5951-55 and GS6041-42. As per deviation request 242 approved by GS4GG on 13/06/2022 a cap of 400 users is applied to the project activity. This is based on the 5MST wherein a minimum of 50 litres is collected in the 5-minute stroke test and a flow rate of 10 L per minute is achieved throughout the 5 minute stroke test. Since this is approved by GS4GG and is a primary source, no additional third-party source was required towards cross checking the values.
2. If this is the first submission/request for Design Change approval to include new technology/measures, has this been done within one year of the Design Change start date?	☒ Yes ☐ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	NA
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	NA
Permanent change history of the project and changes submitted in issuance track	
Deviation request 242 is already approved by GS4GG on 13/06/2022.	
Findings	

ACTIVITIES (POA AND VPA(S))

☐ CL	No CL was raised
☐ CAR	No CAR was raised
☐ FAR	No FAR was raised

Means of verification and assertion statement

Since the deviation request_242 was accepted and approved by the GS4GG on 13/06/2022, the conservative use of 400 users per borehole is applied by the CME towards its SDG impacts. The deviation request 242 and its content was checked by the assessment team and accepted by the AT for its authenticity and source of origin (refer link in footnote 3). Further the CME has applied a functionality cap of 95% to further estimate SDG impacts in a conservative manner. Thus the AT accepted to the conservative value used by the CME.

4.5.5| Changes to project design of approved project

ASSESSMENT QUESTIONS

1. Are the project design changes reported appropriately and completely?	☐ Yes ☐ No ☐ N/A
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Project design change history of the project

NA

Findings

☐ CL	NA
☐ CAR	NA
☐ FAR	NA

Means of verification and assertion statement

NA

4.6| Description of monitoring system applied by the project

ASSESSMENT QUESTIONS

1. Does description provided about the monitoring system is aligned with the monitoring plan in the design certified VPA-DD?	☐ Yes ☐ No ☐ N/A
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Means of verification (MOV)
Mention the means of verification (MoV) used to verify this information

The assessment team upon review of the monitoring system at site and as per the field interviews, the following observations and assessments was made regarding the survey conduct and data management processes:
Survey Conduct:
Surveys are conducted by local staff trained in the area's dialects.

	This approach mitigates regional language biases and ensure response consistency, which was also confirmed by the local expert at site. Participants received a briefing on the survey's purpose and assured of anonymity in analysis, which was checked based on the training records submitted to the assessment team Data Management: Survey results are collated in Excel spreadsheets by at least two Eritrea Vita staff members. Data entry and cross-checking procedures were cross verified by the AT through field interviews and checking the field documentation provided by the CME Electronic storage on a central server and transmission to the UK head office for analysis is done. A documentation procedure is in place to minimize data loss risk as stated in subsequent points Original documentation is retained in the Eritrean office, with scanned copies available upon request. UK staff conduct data input checks and quality control before verification submission. Sampling Methodology: The sampling is in compliance with the Gold Standard methodology for Technologies and Practices to Displace Decentralized Thermal Energy Consumption. Random selection from borehole user records is done. Sample size is determined based on the methodological requirements and parameter variance. The process ensures 90/30 precision (90% confidence interval, 30% precision). Sample reselection is done for each monitoring period to maintain randomness. The monitoring system were confirmed through interviews at Eritrea field offices, Vitta field team as well as the CME team as well as the supporting documents provided by the CME. The audit team has conducted a thorough review of the project's monitoring and data collection processes. The following aspects were checked and found appropriate Comprehensive borehole installation/rehabilitation records are maintained, including installation dates, quantity of boreholes, and the total number of end users for each borehole. This was checked by the field notes as well as the ER sheets. A robust method for determining the total number of households using each borehole has been implemented, utilizing lists supplied by community groups and district water officers. This was confirmed as part of the site interviews and checking field records Ongoing monitoring studies are being conducted as per requirements: a. Water consumption field tests are performed
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	biennially after the first verification. b. Water quality assessments are carried out to ensure compliance with Eritrean standards for potable water, which are based on WHO standards. c. Annual usage surveys are conducted with an appropriate sample size of at least 100 participants. d. Comprehensive project surveys are performed on 120 households to track changes in the project scenario over time. The sample lists were checked and the same was confirmed. The leakage assessment was conducted, addressing all potential sources of leakage as outlined in the methodology. The computation in ER sheet was performed accordingly. The assessment team checked the potential impacts on non-renewable biomass (NRB) fraction and the reuse of displaced baseline technologies. Hygiene campaigns are conducted by the CME from time to time ie., at least once a year. For the current monitoring period one each for 2022 and 2023 was conducted. 72 people attended a campaign between 08/12/2022 and 09/12/2022 whereas another was conducted on 07/09/2023 where 65 people attended. The meeting was attended by both males and females including members from community and water committee members, who represented their respective communities. The topics of discussion apart from WASH themes were: financial management, minor borehole maintenance, establishment and role of water committees, rules and regulations of WASH facilities. In addition to the above, CME performs the cross sampling across all homogenous borehole VPAs located within Zoba Anseba province, Eritrea. Random Sample Group (RSG) was chosen from the project database with the minimum sample size requirements as per methodology. This was checked in the calculations under ER spreadsheet.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The assessment team checked the relevant documents viz., field notes, demographic database, borehole maintenance records, field interviews (as part of stakeholder interviews) and found the data in line with the monitoring systems as per design approved VPA-DD. The calculations in the ER sheet too were consistent with the data points collected. The WASH programs and the summary along with photographic evidence along with the attendance was shared by the CME to the assessment team of VVB. The summary of the activities performed as part of WASH programs conducted between 8th/9th December 2022 and 7th September 2023 are mentioned. Hence the assessment team is reasonably assured about the robustness of the monitoring system at site.

ACTIVITIES (POA AND VPA(S))

2. Does monitoring systems used ensure data integrity and reliability?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The systems viz., data collection through usage surveys, project surveys and WCFT (conducted biennially) in place ensure that the data collected from field is successfully reproduced and used towards calculation of ERs as per the registered VPA-DD and methodology.	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	Through document review and interviews.	
3. Are monitoring procedures well documented/stablished?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The systems viz., data collection through usage surveys, project surveys and WCFT (conducted biennially) in place ensure that the data collected from field is successfully reproduced and used towards calculation of ERs as per the registered VPA-DD and methodology.	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	Through document review and interviews.	
4. Are monitoring procedures paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures?		☒ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	N/A	

Findings

☐ CL	NA
☐ CAR	CAR 04 was raised and converted into FAR 02.
☐ FAR	FAR 02 was raised.

Means of verification and assertion statement

Based on the justification of the MOV and field visit it is confirmed that the monitoring systems are in place as per the registered VPA-DD.

4.7| Data and parameters

4.7.1| Data and parameters fixed ex ante or at renewal of crediting period

ASSESSMENT QUESTIONS

1. Does the table used for each parameter include all the rows and columns required as per the monitoring report template?	☐ Yes ☒ No ☐ N/A
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Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The VVB has assessed the Monitoring report and compared with the registered POA and VPA -DD on the type of monitoring parameters fixed Ex-ante for the project activity 1. Quantity of fuel used in the baseline scenario, $P_{b,y}$ (=2.8 kg/person) 2. Time spent for collecting the firewood, $T_{b,y}$ (=2.26 Hours) 3. Non suppressed demand X_{boil} (=2%) 4. Quantity of wood fuel that is used to treat 1 litre of water in the baseline scenario, $W_{b,y}$ (=0.0004 T/litre)[0.000577 original) 5. Quantity of wood fuel that is used to treat 1 litre of water in the project scenario, $W_{p,y}$ (=0.0004 T/litre)[0.000577 original) 6. Non-renewability status of woody biomass fuel in scenario i during year y (fNRB=0.97 no units) 7. Net calorific value of the wood fuel used in the Baseline, NCV_b (=0.0156 TJ/ton) 8. Net calorific value of the wood fuel used in the project, NCV_p (=0.0156 TJ/ton) 9. Non-CO2 (CH4 and N2O) emission factor arising from use of wood fuel in baseline scenario- $EF_{p, non-CO2}$ (=9.46 tCO2e/TJ) 10.CO2 emission factor arising from use of fuels in baseline scenario-$EF_{b, CO2}$ (=112 tCO2e/TJ) 11.CO2 emission factor arising from use of fuels in project scenario-$EF_{p, CO2}$ (=112 tCO2e/TJ) 12.Portion of users of project safe water supply who were already in baseline using a non-boiling safe water supply. C_j (=0) no units
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The VVB has reviewed the monitoring report and found that there is no exclusion, deviation in the parameters that were fixed Ex-ante in the project documentation and the values, units were transparently maintained in the project documentation. The values were in line with the VPA-DD except for $W_{b,y}, W_{p,y}$ which are revised based on the GS4GG notification.
2. Is value applied consistent with the one described in the design certified VPA-DD?	☐ Yes ☒ ~~No~~ ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	Yes, the values are consistent with the VPA-DD
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	Yes, the values are consistent with the VPA-DD
3. Do all fixed parameters match with the ones described in the PDD?	☐ Yes ☐ No ☐ N/A

ACTIVITIES (POA AND VPA(S))

Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	Yes, the values are consistent with the VPA-DD
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	Yes, the values are consistent with the VPA-DD

Findings

☐ CL	No CL was raised
☐ CAR	No CAR was raised
☐ FAR	No FAR was raised

Means of verification and assertion statement

There are no major queries raised on the parameters that were monitored and fixed ex-ante except missing units and hence the Monitoring report is drafted more cohesively with respect to the previous MR and VPA-DD submissions.

4.7.2| Data and parameters monitored

ASSESSMENT QUESTIONS

1. Does the table used for each parameter include all the rows required as per the monitoring report template?	☐ Yes ☒ No ☐ N/A
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Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The VVB has assessed the Monitoring report and compared with the registered POA and VPA -DD on the type of monitoring parameters, monitored in the project activity is mentioned below: 1. Number of persons having access to safe water in the project activity, $P_{p,y}$(=19,128 persons across VPAs) 2. Number of additional persons having access to safe water in the project activity compared to the baseline scenario, P_{access}(=18,168 persons across VPAs) 3. Quantity of fuel that is consumed in the project scenario p during year y (kg/person-day), $P_{p,y}$(=0 kg/person) 4. Total reduction in Household Air Pollution for project activity in year y (%), $HAPR_{p,y}$(=95%) 5. Total reduction in time spent collecting firewood per day for project activity in year, y, TR_y(=0.47 hours) 6. Project time spent collecting firewood per household per day (hours), $T_{p,y}$(=1.79 hours) 7. Leakage in project scenario p during year y, $LE_{p,y}$(=0tCO₂e per year) 8. Quality of Treated Water, various as per test report 9. Quantity of safe water boiled in the project scenario p during the year y using the zero or low emissions clean water supply technology, $Q_{p,rawboil}$(=0 litres per person) 10. Quantity of safe water supplied in the project scenario p during the year y using the zero or low emissions clean water supply technology, $Q_{p,cleanboil,y}$(=0 liters per person per day)
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	11. Quantity of safe water supplied in the project scenario p during the year y using the zero or low emissions clean water supply technology, $Q_{p,y}$(=7.09 litres per person per day) 12. Usage rate- SDG 13.B.1 (Climate Action)-$U_{p,y}$(=95.00%) 13. $N_{p,y}$=6,632,634 days (capped) , uncapped-11,189,276 days (uncapped) Project Technology Days
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The VVB has reviewed the monitoring report and found that there is no exclusion, deviation in the parameters that were fixed Ex-ante in the project documentation and the values, units were transparently maintained in the project documentation. A summary of the PTDs calculation with how non-functional days were estimated are discussed below. (i) The CME has adopted a self imposed cap for the usage @ 95%. It means that the number of crediting days taken for calculation is 95%. Eg if MP has 30 days in 2022, then 0.95 of 30 days is taken for calculation ie, 29. (ii) Similarly usage rate ie., number of persons per HH is capped at 400. So if the number of persons per HH is less than 400, then actual values are taken while for persons who are above 400, a cap of 400 is applied. This was part of the deviation request DEV_242 approved on 13/06/2022 which allowed upto 400 users per boreholes. (iii) The number of days in 2022 and 2023 is determined as per the explanation in (i) Thus the operating days taken for the year 2022 is 29 while for the year 2023 it is 334. (iv) There is a tab in the ER sheet (GS5951-55 6041-42_ERs_calcs_v1.xls) named "VPA XXX³ downdays". This gives the details about the non operational days of all the BHs in the VPA. Again a functionality cap and a test is applied on the operational days. If the number of downdays in each year comes to less than 5%, then a cap of 5% is applied on the functional days for conservativeness. If not actual values are used. (v) In point (iv) it must be remembered that the operational days is calculated as total days in a calendar year multiplied by the number of boreholes in the VPA. For example in VPA 130, there are 12 boreholes. The available days is 31 days (refer C28 of the tab "VPA 130 PTDs" of the excel file: "<u>GS5951-55 6041-42_ERs_calcs_v1.xlsx</u>") The potential days in this MP in 2022 is $31 \times 12 = 372$. Then downdays are calculated as percentage ie., (downdays/potential days). If it is less than 5%, then 95% is applied to

³ XXX refers to VPA number

ACTIVITIES (POA AND VPA(S))

	determine the net crediting days. Or else actual percentage is used to arrive at the crediting days. (vi) To determine PTDs one needs to multiply the number of capped persons per HH and the crediting days available per year. As per step (ii) the capped persons was determined per HH while as per steps (iii) and (v), the capped crediting days was determined. Hence multiplying the two we get the PTDs per VPA. This has been elaborated in the ER sheet and found to be correct and conservative.
2. Is the heading for each SDG included correctly and grouped the respective parameters accurately?	☐ Yes ☒ ~~No~~ ☐ ~~N/A~~
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	Yes, the SDGs are clearly defined in the project monitoring report preparation.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	Yes, the SDGs are clearly defined in the project monitoring report preparation.
3. Is the source of data indicated with sufficient level of detail?	☐ Yes ☒ ~~No~~ ☐ ~~N/A~~
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	Yes, the data are included sufficiently in detail in the project documentation
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	Yes, the data are included sufficiently in detail in the project documentation
4. Are the QA/QC procedures described with sufficient level of detail?	☐ Yes ☐ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	Yes, the QA/QC procedure are included sufficiently in detail in the project documentation
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	Yes, the QA/QC procedure are included sufficiently in detail in the project documentation
5. Are the measurement methods and procedures described with sufficient level of detail, and calculations provided (wherever relevant)?	☐ Yes ☒ ~~No~~ ☐ ~~N/A~~
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	Yes, the data are included sufficiently in detail in the project documentation
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	Yes, the data are included sufficiently in detail in the project documentation
6. Does monitoring frequency align with the monitoring plan?	☐ Yes ☒ ~~No~~ ☐ ~~N/A~~
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	Yes, the monitoring frequency are included sufficiently in detail in the project documentation

ACTIVITIES (POA AND VPA(S))

Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	Yes, the monitoring frequency are included sufficiently in detail in the project documentation	
7. Is the equipment correctly calibrated?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	N/A	
8. Does calibration align with manufacturer specification?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	N/A	
9. Does serial number of equipment is consistent with calibration certificates and previous equipment records?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	N/A	
10. Is the data compilation traceable e.g., raw data from measurement device to the emission reduction sheet?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	N/A	
Findings		
☐ CL	CL 01 was raised and closed	
☐ CAR	CAR 03, was raised and closed. CAR 04 was raised and converted into FAR 02	
☐ FAR	FAR 02 was raised	
Means of verification and assertion statement		
There are no major queries raised on the parameters that were monitored and fixed ex-ante except errors identified as part of ER calculations mentioned in MR and hence the Monitoring report is drafted more cohesively with respect to the previous MR and VPA-DD submissions.		

4.7.3| Comparison of monitored parameters with last monitoring period**ASSESSMENT QUESTIONS**

1. Is the table used for comparing "Values obtained in this monitoring period" against "Value obtained last monitoring period" complete?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The VVB has reviewed the monitoring report and found that there is no exclusion, deviation in the parameters when compared with the previous monitoring report preparations. The table was used towards comparing values obtained in this monitoring period vs values obtained in last monitoring period	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	Checked the ER sheet, MR, previous MP verification report.	
2. Is an explanation for any values that have increased/ or are less conservative provided and is it justified? <i>Question applicable for Community Service Activities</i>		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	No significant differences were identified between the present MP and the previous MP; hence explanation was not applicable	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The VVB has reviewed the current monitoring report, previous verification report, ER sheets	

Findings

☐ CL	CL 01 was raised and closed successfully
☐ CAR	CAR 03 was raised and closed successfully
☐ FAR	No FAR was raised.

Means of verification and assertion statement

The VVB has cross checked the monitoring report with previous submission documents and found that there is no significant change in the monitoring parameter and no clarifications/corrective actions are raised upon the same.

4.7.4| Implementation of sampling plan**ASSESSMENT QUESTIONS**

1. Is the description of how the sampling was implemented in accordance with the sampling plan in the design certified PDD?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	For the surveys, households were selected at random from the household lists. First, the hand pumps were randomly selected for monitoring; secondly, households served by those hand pumps were randomly selected for surveying. WATER CONSUMPTION FIELD TEST:	

	The test over a period of four days (1 day preparation and 3 days measurement) following a similar method as the Kitchen Performance Test, and all tests were conducted between 15/08/2022 – 18/08/2022 (previous monitoring period) for over 3 consecutive days and an overall average per household was calculated. The results showed that on average 7.09 litres of non-boiled clean water used only for drinking, hand washing and food preparation and 0 litres of boiled clean water is consumed per person per day. USAGE Survey Results: The total number of households- 45 households using 3–4-year aged technologies and 75 households using 5–6-year-old technologies were randomly selected. Therefore, the annual usage survey has been conducted using a minimum sample size of 120 is selected for the KPT survey.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	Sample sizes are chosen to meet the minimum requirements set in the methodology requirements. As per usage survey requirements, the random sample contains a there are a minimum of 100 samples for each group 45 households using 3-4 year aged technologies and 75 households using 5-6 year old technologies (actual 120)in total for both the surveys is obtained as per the Guidelines on CDM Sampling requirement .The simple random sampling is considered appropriately by the CME as the population being studied is relatively homogeneous with respect to the parameter being studied; Specifically with respect to POA- required sample size for this parameter is dependent on: (a) The expected mean- 0.20; (b) The expected standard deviation-0.05; (c) The level of precision and confidence in that precision (95/10 reliability criterion for a single sampling plan).
2. Is sampling approach aligned with the CDM’s “Standard: Sampling and surveys for CDM project activities and programme of activities”?	☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	For the surveys, households were selected at random from the household lists. First, the hand pumps were randomly selected for monitoring; secondly, households served by those hand pumps were randomly selected for surveying. The sampling are established as per GS4GG sampling requirements of 90/30 (90% confidence and 30% precision) for usage and project surveys. Sample sizes are chosen to meet the minimum requirements set in the methodology requirements. As per usage survey requirements, the random

	sample contains a minimum of 100 samples(actual 120) in total for different groups(45 households using 3-4 year aged technologies and 75 households using 5-6 year old technologies) both the surveys as per the Guidelines on CDM Sampling requirement .The simple random sampling is considered appropriately by the CME as the population being studied is relatively homogeneous with respect to the parameter being studied; Specifically with respect to POA-required sample size for this parameter is dependent on: (a) The expected mean- 0.20; (b) The expected standard deviation-0.05; (c) The level of precision and confidence in that precision.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	Monitoring Report, Emission Report, Methodology and CDM standards for sampling
3. Is the sampling approach followed (simple, stratified, multi-stage, etc.) clearly explained and justified?	☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	Yes, the type of sampling is explained as simple random sampling for the project activity
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	ER sheets, 5 MST, MR
4. Were the samples randomly selected by the project developer and are representative of the population?	☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	Yes. The following samples were taken for the 5 minute stroke test 50 numbers 120 households (45 from 3-4 aged technologies and 75 using 5-6 aged technologies) for usage surveys.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	MR,ER,project survey results, usage survey results, 5 MST
5. Is sample size clearly explained and justified (especially when the methodology applied indicates minimum sample size)?	☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	Yes, the type of sampling and sampling size is clearly explained for the project activity
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	MR,ER,project survey results, usage survey results, 5 MST
6. Are emission reduction spreadsheets provided with full set of traceable information?	☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	Yes, the emission reduction spreadsheets are calculated with all traceable input data source; The calculation of baseline emission, project emission and emission reductions in terms

ACTIVITIES (POA AND VPA(S))

	of tCO ₂ e is done in detail with adequate input parameters; The Emission reductions are calculated with real term value for all the MR /11/ in most conservative approach as established by the CME and the summary of the achieved Emission Reductions in t CO ₂ is provided for all the VPA's.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	MR,ER,project survey results, usage survey results, 5MST
7. Is data collection traceable and ensures data integrity?	
☐ Yes ☒ No ☐ N/A	
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	Yes, the data are collected with transparency and adequacy
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	MR,ER,project survey results, usage survey results, 5MST
8. Are the confidence/precision levels met (including traceable analysis)?	
☐ Yes ☒ No ☐ N/A	
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	Yes. The samples were taken additional than the required hence the achieved precision is less than 30%.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	MR,ER,project survey results, usage survey results,5MST

Findings

☐ CL	No CL was raised
☐ CAR	CAR 02 was raised and converted into FAR 01
☐ FAR	FAR 01 was raised

Means of verification and assertion statement

The number of samples taken for the project and usage surveys (combined sampling) are of 120 wherein the project surveys was conducted to understand the applicability of the baseline while the usage surveys were conducted to know the proportion of beneficiaries that use boreholes. Apart from these two test 5 minute stroke test was performed to ascertain the minimum flow rate of 10L per minute (achieved 12.3 L per minute) and 63.8 L per five minutes collection of water. The average of the dry and wet seasons showed 61.6L which is > than 50 L as per the deviation request. The sample size of 50 was chosen based wherein 15 samples were conducted on wet season and the remaining on dry season. The field report and through interviews with the village president the dates of tests and the sampling procedures was cross checked. Thus the requirements of the deviation request was met through the field tests.

4.8| Calculation of SDG Impacts

ASSESSMENT QUESTIONS

1. Does SDGs impact demonstrate a positive contribution from the project?	☐ Yes ☒ No ☐ N/A
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ACTIVITIES (POA AND VPA(S))

Means of verification (MOV) Mention the means of verification (MoV) used to validate this information	The project activity creates good health and well- being, Gender Equality, clean health and sanitation and GHG emission reductions in terms of tCO2e emissions. The procedure for calculation is provided in the PDD and have positive impact due to the implementation of the project activity.				
Justification of the MOV Justify how the used MoV was appropriate for the aspect validated.	The tabulated values of the baseline and project activity gives the impact that arise due to the project initiation of boreholes rehabilitation when compared with the baseline				
	SDG Impact	Valu es (Bas eline)	Values (Projec t)	Unit	Impact
	SDG 3 Good Health	0%	95.00 % decrease in household smoke	%	Positive with improves health and well -being
	SDG 5- Gender equality	2.26	Variati on of time spent on firewo od collecti on 1.79 hours decrea se in time spent collecti ng firewo od per house	hours	Reduction in terms of time spent (0.47 hours) for both men and woman in collecting firewood

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			hold per day (All VPAs)		
	SDG 6 Clean Water and Sanitatio n	0	Additi onal people gain access to safe water: 19,128	Num ber of peopl e	18,168 nos of end users who got benefitted by the project activity
	SDG 13 Climate Action	0	tCO2e /year	GSVE Rs	32,238 tCO2e/year emission reductions

2. Does achieved SDGs in the monitoring report align to each SDG impact from the applicable PDD?	☐ Yes ☒ ~~No~~ ☐ N/A
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Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	The tabulated values of the baseline and project activity gives the impact that arise due to the project initiation of boreholes rehabilitation when compared with the baseline				
	SDG Impact	Valu es (Bas eline)	Values (Projec t)	Unit	Impact
	SDG 3 Good Health	0%	95.00 % decrea se in house hold smoke	%	Positive with improves health and well -being

ACTIVITIES (POA AND VPA(S))

	SDG 5- Gender equality	2.26	Variati on of time spent on firewo od collecti on 0.28 hours decrea se in time spent collecti ng firewo od per house hold per day (All VPAs)	hours	Reduction in terms of time spent (0.47hours) for both men and woman in collecting firewood
	SDG 6 Clean Water and Sanitation	0	Additi onal people gain access to safe water:	Num ber of peopl e	18,168 nos of end users who get benefitted by the project activity
	SDG 13 Climate Action	0	32,238	GSVE Rs	32,238tCO2e/year emission reductions
Justification of the MOV	The VVB has analysed the SDG impacts and found that the Monitoring report /12/ of the project activities are drafted with				

ACTIVITIES (POA AND VPA(S))

Justify how the used MoV was appropriate for the aspect validated.	respect to the registered POA and VPA DD guidelines and Appendix 1 of the social safeguard standards.	
3. Have the monitoring values for each of the achieved SDGs been defined, and are they appropriately identifiable throughout the document? The annual average should be used to calculate the values.	☐ Yes ☒ ~~No~~ ☒ ~~N/A~~	
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	Yes, the SDGs are identified appropriately throughout the document	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	Yes, the SDGs are identified appropriately throughout the document	
4. Are the values reported for the SDG impact coherent with the SDG Impact Tool submitted?	☐ Yes ☒ ~~No~~ ☒ ~~N/A~~	
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	Yes, the SDGs are identified appropriately throughout the document	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	Yes, the SDGs are identified appropriately throughout the document	
5. Are the opinions and recommendations from expert stakeholders provided for SDGs that defined these requirements?	☐ Yes ☒ ~~No~~ ☐ N/A	
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	N/A	
Findings		
☐ CL	No CL was raised	
☐ CAR	No CAR was raised	
☐ FAR	No FAR was raised	
Means of verification and assertion statement		
As per the monitoring report, submitted ER sheet, the relevant SDG indicator chosen for the project activity and baseline is SDG3, SDG 5, SDG 6, SDG 13. The selected SDGs and its contribution in baseline, project activity and additional claims are mentioned transparently in the monitoring report and no queries raised on the same .		

4.8.1 | Calculation of baseline value or estimation of baseline situation of each SDG Impact

ASSESSMENT QUESTIONS

1. Are the calculations of each estimated SDG <u>baseline</u> value provided in a clear and transparent manner? Sample calculations for all formulae used applying actual values, references to spreadsheets, and supporting evidence shall be listed and provided.	☐ Yes ☒ ~~No~~ ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The project activity creates good health and well- being, Gender Equality, clean health and sanitation and GHG emission reductions in terms of tCO2 emissions. The procedure for calculation is provided in the PDD.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The VVB has cross checked the input parameters and found that the following calculations are made through detailed formulae as per the methodology on SDG 3(Good Health and Wellbeing) monitored as 2.8kg/person/day ,SDG 06(Gender Equality) in terms of spending quality time at home by reducing the hours of time spent in firewood collection that is 2.26 hours/trip/households ,SDG 13(GHG emission reductions accounting as 10,000 t CO2e/year/VPA) and SDG 06(Clean water and sanitation to 13,746 numbers) for the baseline activity. For the project activity the SDGs arrived are on SDG 03 (Good Health and Wellbeing) monitored as 95% with 0 kg fire wood consumption in the project case ,SDG 05(Gender Equality) in terms of spending quality time at home by reducing the hours of time spent in firewood collection that is 0.47 hours ,SDG 13(GHG emission reductions accounting as 32,238t CO2e/year) and SDG 06(Clean water and sanitation to 18,168 numbers) comparing with baseline estimates like SDG 03

Findings

☐ CL	No CL was raised
☐ CAR	CAR 03 was raised and closed.
☐ FAR	No FAR was raised

Means of verification and assertion statement

As per the monitoring report , submitted ER sheet, the relevant SDG indicator chosen for the project activity and baseline is SDG3,SDG 5,SDG 6,SDG 13.The selected SDGs and its contribution in baseline, project activity and additional claims are mentioned transparently in the monitoring report and no queries raised on the same .

4.8.2| Calculation of project value or estimation of project situation of each SDG Impact

ASSESSMENT QUESTIONS

1. Are the calculations of each achieved SDG <u>project</u> value provided in a clear and transparent manner? Sample calculations for all formulae used applying actual values, references to spreadsheets, and supporting evidence shall be listed and provided.	☐ Yes ☒ ~~No~~ ☒ ~~N/A~~														
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	All the parameters are calculated clearly in the Monitoring report. Clear depict of formulae for calculation of SDG3,SDG 5,SDG 6 and SDG 13. In the calculation of SDG 13, The project emission reductions are calculated transparently, accurately with following parameters as presented in the Emission Reduction sheet, as per the Gold Standard methodology. The parameters are analysed from the Emission Reduction sheet for all the VPA's included in this Monitoring report. The Baseline emission is calculated product of baseline fuel used along with the emission factor of the baseline fuel selected; The Leakage remains 0 and the Project emissions remains 0 per annum <table border="1" data-bbox="635 965 1375 1364"> <thead> <tr> <th colspan="2">Parameters used for calculations</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Portion using safe water</td> </tr> <tr> <td>2</td> <td>Person Days</td> </tr> <tr> <td>3</td> <td>Fuel to treat 1 litre of water using baseline technology</td> </tr> <tr> <td>4</td> <td>Quantity safe water litres consumed in project scenario supplied by project technology</td> </tr> <tr> <td>5</td> <td>Quantity of raw water boiled in addition to project technology water</td> </tr> <tr> <td>6</td> <td>Quantity fuel consumed in baseline scenario</td> </tr> </tbody> </table>	Parameters used for calculations		1	Portion using safe water	2	Person Days	3	Fuel to treat 1 litre of water using baseline technology	4	Quantity safe water litres consumed in project scenario supplied by project technology	5	Quantity of raw water boiled in addition to project technology water	6	Quantity fuel consumed in baseline scenario
Parameters used for calculations															
1	Portion using safe water														
2	Person Days														
3	Fuel to treat 1 litre of water using baseline technology														
4	Quantity safe water litres consumed in project scenario supplied by project technology														
5	Quantity of raw water boiled in addition to project technology water														
6	Quantity fuel consumed in baseline scenario														
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The important parameters like Fuel to treat 1 litre of water using baseline and project; Quantity safe water in litres consumed in both baseline and project scenario; Quantity of raw water boiled in addition if any, along with the capping factor is used for the calculation of baseline emission and the project emissions and their net benefits are calculated to obtain the emission reduction. The 0.95 capping factor and number people capped at 400 nos are used to get conservative emissions of 32,238 t CO2e/year.														
Findings															
☐ CL	No CL was raised														
☐ CAR	No CAR was raised and closed.														
☐ FAR	No FAR was raised														
Means of verification and assertion statement															

As per the monitoring report , submitted ER sheet, the relevant SDG indicator chosen for the project activity and baseline is SDG3,SDG 5,SDG 6,SDG 13.The selected SDGs and its contribution in baseline, project activity and additional claims are mentioned transparently in the monitoring report and no queries raised on the same.

4.8.3| Calculation of leakage

ASSESSMENT QUESTIONS

1. Only for SDG 13 – Are the calculations of <u>leakage</u> provided in a clear and transparent manner? Sample calculations for all formulae used applying actual values, references to spreadsheets, and supporting evidence shall be listed and provided.	☐ Yes ☒ ~~No~~ ☒ ~~N/A~~
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Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	There is no leakage emission accounted and hence it is N/A
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	There is no leakage emission accounted and hence it is N/A

Findings

☐ CL	No CL was raised
☐ CAR	CAR was raised.
☐ FAR	No FAR was raised

Means of verification and assertion statement

As per the monitoring report , submitted ER sheet, the relevant SDG indicator chosen for the project activity and baseline is SDG3,SDG 5,SDG 6,SDG 13.The selected SDGs and its contribution in baseline, project activity and additional claims are mentioned transparently in the monitoring report and no queries raised on the same.

4.8.4| Calculation of net benefits or direct calculation for each SDG Impact

ASSESSMENT QUESTIONS

1. Are Baseline, Project, and Net benefit values listed for each estimated SDG impact, starting with SDG 13? Values should be based on annual average.	☐ Yes ☒ ~~No~~ ☒ ~~N/A~~
--	---

Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The project activity creates good health and well- being, Gender Equality, clean health and sanitation and GHG emission reductions in terms of tCO2e emissions. The procedure for calculation is provided in the PDD.
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The VVB has cross checked the input parameters and found that the following calculations are made through detailed formulae as per the methodology on SDG 3 (Good Health and Wellbeing) monitored as 2.8 kgs of firewood usage that cause health

	problem ,SDG 05(Gender Equality) in terms of spending quality time at home by reducing the hours of time spent in firewood collection that is 2.26 hours/trip/households ,SDG 13(GHG emission reductions accounting as 10,000 t CO2e/year/VPA) and SDG 06(Clean water and sanitation to 13,746 numbers) for the baseline activity and for the project activity the SDGs arrived are on SDG 03 (Good Health and Wellbeing) monitored as 95% with 0 kg of firewood consumption that cause health defects ,SDG 05(Gender Equality) in terms of spending quality time at home by reducing the hours of time spent in firewood collection that is 0.47 hours ,SDG 13(GHG emission reductions accounting as 32,238t CO2e/year) and SDG 06(Clean water and sanitation to 18,168 numbers) comparing with annual average baseline estimates
--	---

2. Are the net benefit values also presented in Table 1 – Sustainable Development Contribution Achieved? Values shall match.

☐ Yes
☒ ~~No~~
☒ N/A

Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The VVB has assessed the Table 1, Sustainable Development Contributions achieved from the MR report /12/ and the following values are reported:			
	SDG Impact	Values (Baseline)	Values (Project)	Unit
	SDG 3 Good Health	0% with 2.8 kg firewood consumption	95.00% decrease in household smoke with 0 kg firewood consumption	%
	SDG 5- Gender equality	2.26	Variation of time spent on firewood collection 0.47 hours decrease in time spent collecting firewood per household per day (All VPAs).	hours

ACTIVITIES (POA AND VPA(S))

	SDG 6 Clean Water and Sanitation	0	18,168 people gain access to safe water:	Number of people
	SDG 13 Climate Action	0	32,238	GSVERs

Justification of the MOV

Justify how the used MoV was appropriate for the aspect verified.

- 1) The VVB has assessed the table 1 of the SDG contributions and cross-checked with the calculations presented in the section B-6 on SDG contributions and the values are tabulated below. It is well evident from the project database that the SDG impacts are null in baseline and had a value added to it after project initiation, that leads to social, economic and environmental well-being as required by the GS rules, guidelines and procedure. Further to reiterate the assessment performed earlier by the AT and mentioned above, a combination of factors has played a role in lower values of emission reductions even if the users per VPAs has increased. The factors are: using a higher self-imposed cap of 95% than the 80% used in the ex ante calculations, second being the cap per household ie., 400 based on the deviation request Dev_242 of 400 per household and lastly higher users in the monitoring period as compared to baseline due to higher number of boreholes being rehabilitated (65) over the baseline of 41. Moreover due to update in the methodology the (Wby = amount of firewood used to treat 1 L of water in the baseline scenario b during year y, from 0.000577 to 0.0004). This was done based on BAMG report. Thus the positives which pushed users due to higher usage rate of 95% over 80% and number of boreholes to 65 from 41 was pulled down by the other factors on the net emission factors due to lowering of Wb,y, cap of users per household to 400. The explanation of the PP and the impacts of SDG sheet was further cross checked by the AT and found to be in line with the ER estimation sheet and in line with the monitoring plan and methodology.

Findings

☐ CL	No CL was raised
☐ CAR	No CAR was raised
☐ FAR	No FAR was raised

Means of verification and assertion statement

As per the monitoring report , submitted ER sheet, the relevant SDG indicator chosen for the project activity and baseline is SDG3,SDG 5,SDG 6,SDG 13.The selected SDGs and its contribution in baseline, project activity and additional claims are mentioned transparently in the monitoring report and no queries raised on the same

4.8.5| Comparison of actual SDG Impacts with estimates in approved VPA-DD

ASSESSMENT QUESTIONS

1. Does the comparison between SDGs impacts achieved during the monitoring period and the verified estimated ex-ante SDG impacts provide a like for like comparison?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The project activity creates good health and well-being, Gender Equality, clean health and sanitation and GHG emission reductions in terms of t CO2 emissions. The procedure for calculation is provided in the PDD and its comparison with ex ante baseline calculations.	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	The VVB has cross checked the input parameters and found that the following calculations are made through detailed formulae as per the methodology on SDG 03 (Good Health and Wellbeing) monitored as 95% ,SDG 05(Gender Equality) in terms of spending quality time at home by reducing the hours of time spent in firewood collection that is 0.47 (from 2.26 hours to 1.79 hours) hours ,SDG 13(GHG emission reductions accounting as 32,238t CO2e/year) and SDG 06(Clean water and sanitation to 18,374 numbers) comparing with baseline estimates like SDG 03	
2. If emission reductions are capped, are both (original and capped) values reported? Original values must be reported in brackets.		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	No	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	No	
Findings		
☐ CL	No CL was raised	
☐ CAR	No CL was raised.	
☐ FAR	No FAR was raised	
Means of verification and assertion statement		
As per the monitoring report , submitted ER sheet, the relevant SDG indicator chosen for the project activity and baseline is SDG3,SDG 5,SDG 6,SDG 13.The selected SDGs and its contribution in baseline, project activity and additional claims are mentioned transparently in the monitoring report and no queries raised on the same.		

4.8.6| Explanation of calculation of value estimated ex ante calculation of approved VPA-DD for this monitoring period

ASSESSMENT QUESTIONS

1. Is there an explanation provided for the calculation of ex-ante SDG impacts? Is the explanation appropriate and justifiable?	☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	The project has appropriately addressed the ex-ante estimations for Sustainable Development Goals (SDGs) 3, 5, and 6. The following observations support this assessment: The CME has demonstrated due diligence by referencing the Transition Annex (101.5-Transition-Annex-Eritrea_Boreholes_20180403_v.3_CLEAN.pdf) for these estimations, which is in line with proper documentation practices. As the project was design certified before the implementation of Gold Standard for the Global Goals (GS4GG). Hence absence of individual SDG calculations for each Voluntary Project Activity (VPA) at the project's outset. The ex-ante estimations provided in the Transition Annex are clear, quantifiable, and relevant to the project's objectives: a. SDG 3 (Good Health and Well-being): The projected 80% reduction in exposure to Household Air Pollution due to reduced water boiling is a significant positive impact. b. SDG 5 (Gender Equality): The estimated time saving of 0.5 hours per trip per household indicates a potential improvement in time management for household members, which often benefits women and girls disproportionately. c. SDG 6 (Clean Water and Sanitation): The provision of access to safe water for an additional 4,404 persons (ex ante estimations 13,764 nos and beneficiary in project scenario 18,168 nos) represents a significant contribution to improved water access in the project area. The CME has appropriately acknowledged the design certification timeline, predating the transition to Gold Standard for the Global Goals. It is noteworthy that all ex-ante estimates of SDG outcomes were derived from the relevant transition annex, showing adherence to the applicable standards at the time of project design. The project has successfully met or exceeded all SDG targets, resulting in positive impacts across multiple dimensions of sustainable development: a. SDG 3 (Good Health and Well-being): The project achieved 95% reduction in exposure to Household Air Pollution, surpassing the ex-ante estimate of 80%. This significant improvement contributes to better health outcomes, particularly for women and children. b. SDG 5 (Gender Equality): Time saved in collecting firewood (0.47 hours) is closer to the ex-ante estimate of 0.5 hours. This achievement positively impacts gender equality by reducing the time burden typically placed on women and girls. c. SDG 6 (Clean Water and Sanitation): The project has successfully provided access to safe water for all participants, with a 95% usage rate.

	This represents a significant improvement from the baseline scenario where unsafe water sources were prevalent. d. SDG 13 (Climate Action): The emission reductions per VPA did not reach the ex-ante estimate of 10,000 tCO2-e/year. The lower-than-expected results are due to capping of users per borehole and adjustment of the Wby parameter, demonstrating a commitment to accuracy and conservativeness in calculations. The CME detailed reporting on each SDG outcome reveals adherence to monitoring systems in the VPA-DD towards monitoring, evaluation, and transparency. The transparent reporting of both achievements and areas where targets were not fully met was done by the CME																														
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	MR,ER,project survey results, usage survey results, 5MST. For SDG 6, higher users were evaluated in this MP over ex ante, it is attributed to three factors viz., higher users than the ex-ante estimations, adopting self-imposed usage cap of 95%(in the project) over 80% (in baseline scenario) as well as higher number of boreholes rehabilitated between ex ante and project activity. In the baseline scenario and project activity the users estimated and benefitted were respectively as follows: <table><tr><th>VPA ID</th><th>Number of Users in Project</th><th>Number of Users in Ex ante estimates $P_{access} = P_y * (1 - C_j) * U_{p,y}$</th></tr><tr><td></td><td></td><td>$C_j = 0, U_{p,y} = 0.8$</td></tr><tr><td>GS 5951</td><td>2,382</td><td>$= 2,399 * (1 - 0) * 0.8 = 1,919$</td></tr><tr><td>GS 5952</td><td>2,074</td><td>$= 1,929 * (1 - 0) * 0.8 = 1,543$</td></tr><tr><td>GS 5953</td><td>1,938</td><td>$= 1,851 * (1 - 0) * 0.8 = 1,481$</td></tr><tr><td>GS 5954</td><td>2,106</td><td>$= 1,923 * (1 - 0) * 0.8 = 1,538$</td></tr><tr><td>GS 5955</td><td>1,794</td><td>$= 1,848 * (1 - 0) * 0.8 = 1,478$</td></tr><tr><td>GS 6041</td><td>4,180</td><td>$= 3,665 * (1 - 0) * 0.8 = 2,932$</td></tr><tr><td>GS 6042</td><td>3,694</td><td>$= 3,569 * (1 - 0) * 0.8 = 2,855$</td></tr><tr><td>Total</td><td>18,374 (25% higher)</td><td>13,746</td></tr></table>	VPA ID	Number of Users in Project	Number of Users in Ex ante estimates $P_{access} = P_y * (1 - C_j) * U_{p,y}$			$C_j = 0, U_{p,y} = 0.8$	GS 5951	2,382	$= 2,399 * (1 - 0) * 0.8 = 1,919$	GS 5952	2,074	$= 1,929 * (1 - 0) * 0.8 = 1,543$	GS 5953	1,938	$= 1,851 * (1 - 0) * 0.8 = 1,481$	GS 5954	2,106	$= 1,923 * (1 - 0) * 0.8 = 1,538$	GS 5955	1,794	$= 1,848 * (1 - 0) * 0.8 = 1,478$	GS 6041	4,180	$= 3,665 * (1 - 0) * 0.8 = 2,932$	GS 6042	3,694	$= 3,569 * (1 - 0) * 0.8 = 2,855$	Total	18,374 (25% higher)	13,746
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<table><tr><th>GS 5951-55, Project Scenario</th><th>Ex-Ante (nos)</th></tr><tr><td>GS 6041-42 (nos)</td><td></td></tr><tr><td>No of boreholes rehabilitated</td><td>65</td></tr><tr><td>Usage rate cap applied</td><td>95%</td></tr><tr><td></td><td>41</td></tr><tr><td></td><td>80%</td></tr></table>	GS 5951-55, Project Scenario	Ex-Ante (nos)	GS 6041-42 (nos)		No of boreholes rehabilitated	65	Usage rate cap applied	95%		41		80%																			
GS 5951-55, Project Scenario	Ex-Ante (nos)																														
GS 6041-42 (nos)																															
No of boreholes rehabilitated	65																														
Usage rate cap applied	95%																														
	41																														
	80%																														

ACTIVITIES (POA AND VPA(S))

	It should be noted that Paccess parameter is determined by the multiplication of number of end users using the borehole according to the household lists for each VPA and multiplying by the usage rate. Due to higher number of boreholes used in the project than estimated in the ex-ante estimates, the users are 25% higher.
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Findings

☐ CL	No CL was raised
☐ CAR	CAR 03 was raised and closed
☐ FAR	No FAR was raised.

Means of verification and assertion statement

The increased SDG impact gives positive impact to SDGs and social safeguards when analysed from the data given in the monitoring report.

4.8.7| Remarks on increase in achieved SDG Impacts from estimated value in approved VPA-DD

ASSESSMENT QUESTIONS

1. When achieved SDG impacts are greater than the ex-ante estimated, is there a clear explanation provided in the Monitoring Report? This does not apply to afforestation and reforestation (A/R) projects.	☐ Yes ☒ No ☐ N/A
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Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	There is increase in SDG impacts when compared with the estimated SDGs and it is clearly mentioned with calculations and the transparency is maintained by the CME
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	The VVB has studied the SDGs compared transparently and found that there is increase in SDG impact when compared with the estimated one, that adds positive impact to the project activity,

Findings

☐ CL	No CL was raised
☐ CAR	CAR 03 was raised and closed
☐ FAR	No FAR was raised

Means of verification and assertion statement

The increased SDG impact gives positive impact to SDGs and social safeguards when analysed from the data given in the monitoring report.

4.9| Safeguarding principles reporting

ASSESSMENT QUESTIONS

ACTIVITIES (POA AND VPA(S))

1. Has information on the implementation of improvements to proposed mitigation measures been included?		☐ Yes ☒ ~~No~~ ☒ ~~N/A~~
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	The safeguarding principle is revised as per the guidelines in and revised MR /11/ is submitted. The Verification Team had thoroughly studied the safeguarding principle submitted during project initiation and found it most appropriate with the revised one, as mentioned in the MR report /11/.	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	All the parameters have been filled and the Verification Team has re-assessed during renewal stage and there is no requirement for any specific requirements for safeguarding the project activity.	
2. Does progress on the mitigation measures proposed be considered adequate??		☐ Yes ☒ ~~No~~ ☒ ~~N/A~~
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	Yes the evaluation of the Safeguarding Principles (SFGi)s as per the data and the results relevant to the measures that will be monitored. This has been presented in the Appendix of the Monitoring report and it is filled as per the safeguarding principles and requirements. The project scenario SFG (Safe guarding principles) has been filled with suitable responses. It is inferred that None of the section involved expert opinion. Thus, the PD has ensured the section filled as per paragraph 2.1.11 of the SFG requirements.	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	The SFG requirements ⁴ is the standard that the PD has to fulfill to complete the MR as per the GS requirement. There are few queries that were responded by the Project Proponent on Gender Equality, exposure to water borne diseases and GHG emission reductions, but no major expertise is required to be followed. Hence the MOV applied is appropriate	
3. Is evidence provided for mitigation measures considered adequate and complete?		☐ Yes ☒ ~~No~~ ☒ ~~N/A~~
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	N/A	
4. Is information on monitoring and reporting on any key indicators identified, including against pre-set values?		☐ Yes ☒ No ☒ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	N/A	

⁴ <https://globalgoals.goldstandard.org/103-par-safeguarding-principles-requirements/>

ACTIVITIES (POA AND VPA(S))

Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	N/A
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5. Is information on any assessment questions answered 'Potentially' or where requirements call for regular re-assessment included?

☐ Yes
☐ No
☐ N/A

Means of verification (MOV)
Mention the means of verification (MoV) used to validate this information

N/A

Justification of the MOV
Justify how the used MoV was appropriate for the aspect validated.

N/A

Findings

☐ CL	No CL was raised
☐ CAR	No CAR was raised
☐ FAR	No FAR was raised.

Means of verification and assertion statement

As per the justification given by the CME in the submitted monitoring report, there is no requirement of expert stakeholders requirement and no clarification is required from the CME on the same.

4.10| Stakeholder inputs and legal disputes

4.10.1| List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.

ASSESSMENT QUESTIONS

1. Is outcome of continuous inputs and grievance mechanisms provided?	☐ Yes ☒ No ☐ N/A
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Means of verification (MOV)
Mention the means of verification (MoV) used to validate this information

Grievance feedback books are placed at each borehole. This is the mechanism adopted at site for receiving continuous stakeholder feedback.

Justification of the MOV
Justify how the used MoV was appropriate for the aspect validated.

Field grievance book, sampling surveys conducted by local expert

2. Are the procedures for continuous inputs and grievance mechanisms considered adequate?

☐ Yes
☒ No
☐ N/A

Means of verification (MOV)
Mention the means of verification (MoV) used to validate this information

Yes. As any instance of non working of boreholes is raised as complaint in the register.

Justification of the MOV
Justify how the used MoV was appropriate for the aspect validated.

Field grievance book, sampling surveys conducted by local expert

ACTIVITIES (POA AND VPA(S))

3. Is the evidence provided as part of the inputs and grievance mechanisms considered reliable?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	Yes. Based on the local expertise in the region the local expert attests to it	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	Field grievance book, sampling surveys conducted by local expert	
4. Are responses to comments received considered adequate?		☐ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	The responses to the comments are adequately recorded and monitored. There is request for the installation of the solar pump by the local stakeholders and it is recorded by the CME.	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	Field grievance book, sampling surveys conducted by local expert	
5. Does information include disputes raised against the project?		☒ Yes ☐ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	No	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	Field grievance book, sampling surveys conducted by local expert	
6. Is the progress on solving disputes considered appropriate and transparent?		☒ Yes ☐ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	Yes. The general feedback has been positive in resolution of repairs or non working	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	Field grievance book, sampling surveys conducted by local expert	
7. Does items (responses/mitigation/disputes) not fully addressed include a detail on required follow up action?		☒ Yes ☒ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	N/A	
Findings		
☐ CL	No CL was raised	

ACTIVITIES (POA AND VPA(S))

☐ CAR	CAR 04 was raised and converted into FAR 02
☐ FAR	FAR 02 was raised.

Means of verification and assertion statement

As per the onsite visit and reviewal of the grievance register, there is no negative comments raised by the stakeholders and the project in fact provide good quality water for drinking; and reduced hour spent for fire wood collection with gender equality benefits.

4.10.2| Report on any stakeholder mitigations that were agreed to be monitored.

ASSESSMENT QUESTIONS

1. Are updates provided to stakeholders on mitigations proposed and accepted to be monitored??	☐ Yes ☐ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	No mitigations proposed for the project activity
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	No mitigations proposed for the project activity

Findings

☐ CL	No CL was raised
☐ CAR	CAR 04 was raised and converted into FAR02
☐ FAR	FAR 02 was raised.

Means of verification and assertion statement

The Means of verification and assertion statement is a confirmation of requirements fulfilment by the project that includes the verified information, means of validation/verification, summary document and evidence checked, and cross-checks made including site-visit and interviews.

4.10.3| Provide details of any legal contest that has arisen with the project during the monitoring period.

ASSESSMENT QUESTIONS

ACTIVITIES (POA AND VPA(S))

1. Is project still in compliance with Host's Country's legal, environmental, ecological, and social regulations? <i>Projects should transparently declare any legal challenge arisen</i>		☐ Yes ☒ ~~No~~ ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to verify this information</i>	Yes.	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect verified.</i>	Local expertise of the local expert	
Findings		
☐ CL	No CL was raised	
☐ CAR	No CAR was raised	
☐ FAR	NO FAR was raised.	
Means of verification and assertion statement		
Based on the local expertise of the local expert it can be stated that the project is in line with host country's legal environmental, ecological and social regulations.		

4.11 | Annual Reports

ASSESSMENT QUESTIONS

1. Does date when annual report has submitted is provided?		☐ Yes ☐ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	N/A	
2. Does the annual report include the complete content of the template?		☐ Yes ☐ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	N/A	
3. Is the status of implementation/operation described in the annual report consistent with the status of the project?		☐ Yes ☐ No ☐ N/A
Means of verification (MOV) <i>Mention the means of verification (MoV) used to validate this information</i>	N/A	
Justification of the MOV <i>Justify how the used MoV was appropriate for the aspect validated.</i>	N/A	
Findings		

ACTIVITIES (POA AND VPA(S))

☐ CL	No CL was raised
☐ CAR	No CAR was raised
☐ FAR	No FAR was raised

Means of verification and assertion statement

N/A

PART V – VERIFICATION OPINION AND REPORT

>>

GHG emissions reductions and removals verified according to the design document (VPA-DD):

YEAR	BASELINE ANNUAL GHG EMISSIONS. (tCO ₂ e)	PROJECT ANNUAL GHG EMISSIONS. (tCO ₂ e)	AMOUNT OF ANNUAL GHG EMISSION REDUCTIONS OR GHG REMOVALS (tCO ₂ e)
01/12/2022-30/11/2023	32,238	0	32,238
Total ERs	32,238	0	32,238
Total number of monitoring years	1		
Annual average over the monitoring period	32,238	0	32,238

APPENDIX 1: ABBREVIATIONS

S.NO	ABBREVIATIONS	FULL TEXTS
1.	MR	Monitoring report
2.	CDM	Clean development mechanism
3.	VPA-DD	Project activity Design Document
4.	PD	Project developer
5.	CME	Coordination Management Entity

ACTIVITIES (POA AND VPA(S))

6.	ER sheet	Emission Reduction sheet
7.	GS4GG	Gold Standard for Global Goals
8	WCFT	Water Consumption field test

APPENDIX 2: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

>>

Personnel Name		Mr. Sanjay Kumar Krishnan Kutty			
Schemes	☒ CDM	☒ GCC	☒ GS	☒ VCS	☐ Other GHG Schemes (mention here)
Qualified to work as					
Team Leader			☒	Technical Expert	☒
Validator/Verifier			☒	Financial Expert	☐
Technical Reviewer			☒	Local Expert (India)	☒
Area(s) of Technical Expertise					
Sectoral Scope			Technical Area		
SS 1: Energy industries (renewable/nonrenewable sources)			TA 1.2. Renewables		
SS 3: Energy demand			TA 3.1. Energy demand		
SS 13: Waste handling and disposal			TA 13.1. Solid waste and wastewater		
Approved by (Manager Competence)			Dr. Rajesh Monga		
Approval date			14-08-2023		

Personnel Name		Yonas Tesfamicael Haile			
Schemes	☐ CDM	☐ GCC	☐ GS	☐ VCS	☐ Other GHG Schemes (mention here)

ACTIVITIES (POA AND VPA(S))

Qualified to work as			
Team Leader	☐	Technical Expert	☐
Validator/Verifier	☐	Financial Expert	☐
Technical Reviewer	☐	Local Expert (Eritrea)	☒
Area(s) of Technical Expertise			
Sectoral Scope		Technical Area	
Approved by (Manager Competence)		Dr. Rajesh Monga	
Approval date		27-03-2024	

Personnel Name		Bharath S.			
Schemes	☐ CDM	☒ GCC	☒ GS	☒ VCS	☐ Other GHG Schemes (mention here)
Qualified to work as					
Team Leader		☒	Technical Expert		☒
Validator/Verifier		☒	Financial Expert		☐
Technical Reviewer		☒	Local Expert (USA)		☒
Area(s) of Technical Expertise					
Sectoral Scope			Technical Area		
SS 3: Energy Demand			TA 3.1: Energy Demand		
Approved by (Manager Competence & Training)			Dushyant Parashar		
Approval date			28-05-2024		

APPENDIX 3: DOCUMENTS/EVIDENCE REVIEWED OR REFERENCED

S.NO	AUTHOR	TITLE	REFERENCE TO THE DOCUMENT	PROVIDER
1.	Gold Standard	Principles and Requirements	Version 1.2	GS Public document
2.	Gold Standard	Stakeholder consultation and engagement requirements	Version 2.1	GS Public document
3.	Gold Standard	Safeguarding principles & requirements	Version 2.1	GS Public document
4.	Gold Standard	Design change requirements	NA	GS Public document
5.	Gold Standard	Validation and verification standard	Version 2.0	GS Public document
6.	Gold Standard	Site visit and remote audit requirements and procedures	Version 2.0	GS Public document
7.	Gold Standard	Validation & verification body requirements	Version 2.1	GS Public document
8.	Gold Standard	Community services activity requirements	Version 1.2	GS Public document
9.	Gold Standard	Principles and Requirements of PoA requirements	Version 2.1	GS Public document
10.	Gold Standard	Standard for Sampling and Surveys for CDM Project Activities and Programme Activities	Version 9.0	CDM Website
11.	Gold Standard	Monitoring report	Version 1.0	Project Developer
12.	Gold Standard	ER sheet	Version 1.0	Project Developer
13.	Gold Standard	TPDDTEC	Version 1.0	GS Public document
14.	CME	Monitoring Report	Version 1.0 Version 2.0 Version 3.0 dated 07/06/2024 Version 4.0 dated 01/08/2024 Version 5.0 dated 20/09/2024	Project Developer
15.	CME	Emission Reduction	GS5951-55 6041-42_ERs_calcs_v1 GS5951-55 6041-42_ERs_calcs_v2 GS5951-55 6041-42_ERs_calcs_v3	Project Developer

ACTIVITIES (POA AND VPA(S))

16.	CME	5MST_Anseba_dry_23	Version 1.0 19/01/2024 Version 2.0 11/03/2024	Project Developer
17.	CME	5MST_Anseba_rainy_23_	Version 1.0 19/01/2024 Version 2.0 11/03/2024 Version 3.0 10/07/2024	Project Developer
18.	CME	Anseba Staff training 2023	Version 1.0 10/01/2024	Project Developer
19.	CME	Anseba_US_Scans	Version 1.0 10/01/2024	Project Developer
20.	CME	CO2b User Numbers Deviation-Request-Form v1_Final decision_Clean	13/06/2022	Project Developer
21.	CME	Technical Brief: How to conduct the test	NA	Project Developer
22.	CME	MS, PS, ZA_Field Survey Notes	Version 1.0 10/01/2024	Project Developer
23.	CME	RCF, 2023,	Version 1.0 10/01/2024	Project Developer
24.	CME	WASH Dec. 2022 Training Program	Version 1.0 10/01/2024	Project Developer
25.	CME	ZA_WQT_2023	Version 1.0 10/01/2024	Project Developer
26.	CME	Sales_Record_Confidential_2023_v1	Version 1.0 10/07/2024	Project Developer
27.	CME	RS_AM_2023- Age wise BH rehabilitation	Version 1.0 05/03/2024	Project Developer
28.	CME	1. Anseba 2023 Original Logbooks 2. Translated logbook 1 2023 Anseba 3. Translated logbooks 2 2023 Anseba	Version 1.0 26/06/2024	Project Developer
29.	CME Field Partner Vita Eritrea	No Double counting undertaking	Dated: 14/08/2023	WRD of Zeba Anseba abd Debub regions
30.	CME	SDG Impact Calculations	Dated 20/09/2024	Justifications for higher users in the monitoring period over the ex ante estimates

APPENDIX 4: FINDINGS

Summary of findings	CL	CAR	FAR
	01	04	02

Table 2. Remaining FAR from validation and/or previous verifications (Applicable for verification)

FAR ID	xx	Section no.	Date: DD/MM/YYYY
Description of FAR			
NA			
Project participant response		Date: : DD/MM/YYYY <i>(please mention the date of your response to KBS)</i>	
<i>Please mention the response in this box.</i>			
Documentation provided by project participant			
<i>Please mention the document provided to KBS along with the above response.</i>			
DOE assessment		Date: : DD/MM/YYYY	

Table 3. CL from this validation/verification

CL ID	CL 01.	Section no.	4.2,4.4, 4.6, 4.7,4.8 of the Verification Report	Date: 10/03/2024
Description of CL				
• Computation (totalling) error under SDG 6 clean water and sanitation • Vintage wise ER summation as well as ERs for the entire monitoring period is not provided under product vintages. • Supporting documents are required to substantiate the statement that there are no other CDM or VER project in the area. • Units are not mentioned against the parameter in section D.3 of the MR. • CME is to maintain the integrity of the template viz., font size or font type. • CME to use dignified terms to refer the stakeholders instead of seemingly pejorative terms like people. • The units of the parameters are not used as per the methodology viz., SDG 13 • The columns in many tables of the MR is left blank.				
Project participant response		Date: 04/04/2024 <i>(Please mention the date of your response to KBS)</i>		
1. PD has updated. 2. Table 2 is for product vintages only. The total ER's are provided just above in Table 1. Table 2 is just for the breakdown of the ER's for each calendar year, and Table 1 is for the total of the monitoring period. 3. PD has shared 'Declaration of non-double counting' 4. PD has added. 5. PD has updated. 6. PD has replaced the word 'people' in many places with alternatives such as 'end users'. However, in some cases, PD has left the word 'people' eg for definitions or when other terms do not accurately communicate the sentence meaning. 7. PD has updated. 8. MR has been updated.				
Documentation provided by project participant				

ACTIVITIES (POA AND VPA(S))

1. Zoba Anseba Baseline Survey Final.xlsx 2. 5MST Anseba Rainy 23_v1.xlsx 3. MR v2 4. Declaration of non double counting 5. ER sheet 6. Water Quality standards 7. WCFT Anseba BH
DOE assessment
Date: 17/04/2024
1. Computation (totalling) error under SDG 6 clean water and sanitation is updated.CLOSED 2. Now updated.CLOSED 3. Declaration of no double counting was shared. CLOSED 4. Units are now mentioned against the parameter in section D.3 of the MR. CLOSED 5. CME has ensured the integrity of the template viz., font size or font type. CLOSED 6. MR now updated. CLOSED. 7. The units of the parameters against the parameter SDG 13 is now appropriately updated. CLOSED 8. MR is now updated. CLOSED

Table 4. CAR from this validation/verification

CAR ID	CAR 01	Section no.	4.3 of the Verification Report	Date: 10/03/2024
Description of CAR				
- CME to provide the least transit distances of the borehole with the nearest settlement/hutment or coordinates of the nearest settlement for cross checking purposes. - Upon checking the coordinates in google earth pro of the boreholes, it was observed that 33 out of 66 boreholes are located with no "visible" nearest settlement (nearest as in at 350 m pan elevation in google earth pro). One ZA0017 was found in the lake and some like ZA0014 showed buildings which appears non residential and in close proximity to the borehole. Clarify the same. The sheet (Location of Survey.xlsx) is attached for reference.				
				
The coordinates of ZA033, ZA038, ZA041,ZA039 are presented below				
SI No	Borehole ID	Latitude	Longitude	Distance (in km) between two points

ACTIVITIES (POA AND VPA(S))

01	ZA033	16.15725	38.07292	
02	ZA041	16.15750	38.07294	0
03	ZA038	15.8180	38.8636	
04	ZA039	15.8179	38.8636	0

The coordinates indicate that 2 boreholes have been used to represent 4 boreholes.

0Project participant response

Date: 04/04/2024 (Please mention the date of your response to KBS)

1. PD has checked and there are HH within 1km. Google Earth images show settlements within 1km of boreholes.
2. "Upon checking the coordinates in google earth pro of the boreholes, it was observed that 33 out of 66 boreholes are located with no "visible" nearest settlement (nearest as in at 350 m pan elevation in google earth pro)." - PD has checked Google Earth for the Boreholes identified by the VVB as having no settlement nearby and found that there are easily identifiable settlements within 1km.
"One ZA0017 was found in the lake" - Satellite coverage is poor in Eritrea and therefore GPS coordinates may not be completely accurate.
"and some like ZA0014 showed buildings which appears non residential and in close proximity to the borehole." - PP only claims emission reductions for water consumed for domestic purposes. The claims are based on the user lists (domestic), usage survey and WCFT. There are also caps in all of these to ensure conservativeness. Google Earth also shows domestic buildings near to ZA0017.
3. Their may have been a delay is getting the GPS coordinates due the satellite signal in the country. The boreholes have different pictures as seen in the MR. The bottom 2, ZA038 and ZA039, are in the same village of Shirara. The household lists are not duplicated. ZA033 and ZA041, PD has done a duplicate check on the HH lists and there are no duplicates. Likely GPS error.

Documentation provided by project participant

1. Screenshots of the google images regarding the shortest distance
2. Updated MR

DOE assessment

Date: 10/05/2024

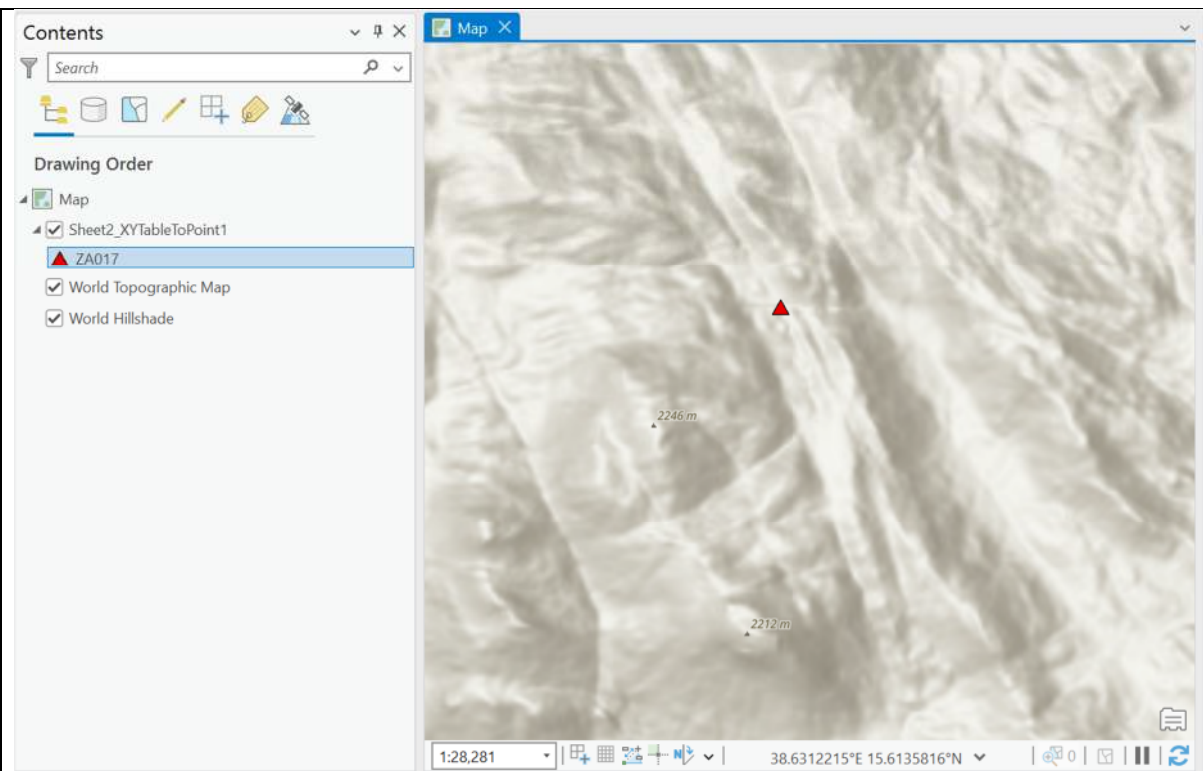
1. Accepted based on the supporting documents given. CLOSED
2. Accepted except for the claim that ZA0017 showing up in lake. PD is requested to clarify on the same, since poor connectivity reason can be used selectively. Since by that token, rest of the coordinates should also be faulty. OPEN
3. The coordinates in the MR when transposing in Google earth pro clearly show overlap. The evidence to that effect already given. Besides the coordinates differ from each other at between 0.0001 to 0.0025 at northing while in the easting coordinates they differ between 0.0000 to 0.0002. In other words in practical terms there is an overlap confirmed by google earth pro. PD is requested to ensure that all boreholes have unique coordinates. OPEN
4. Hence CAR is open.

Project participant response

Date: 07/06/2024

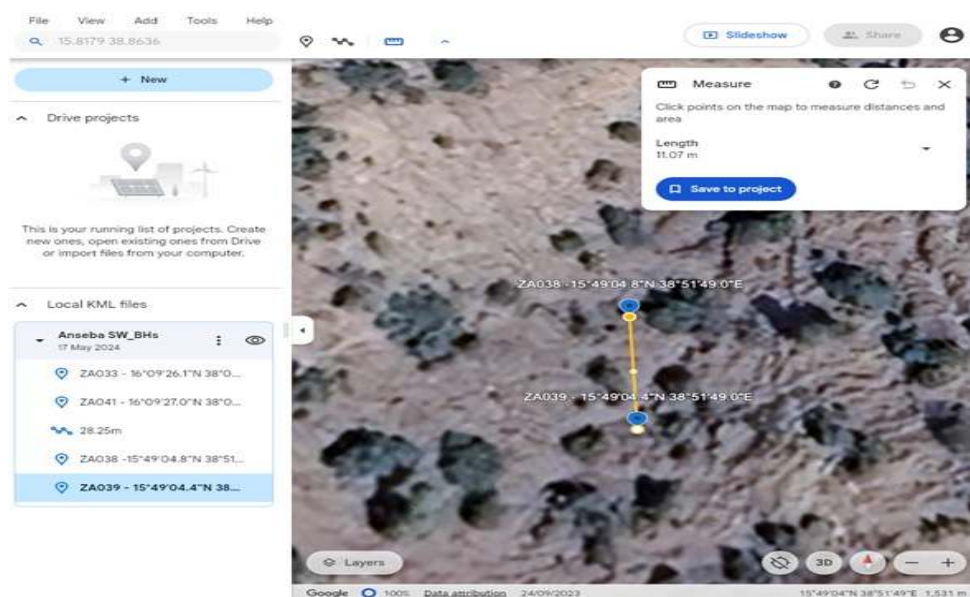
2. PD would like to emphasize that the coordinates are not to be considered faulty but not highly accurate. Eritrea is dominated by extensions of Ethiopian north-south trending highlands, descending on the east to a coastal desert plain, on the northwest to hilly terrain and on the southwest to flat plains. The country has a high central plateau that varies from 1,800 to 3,000 meters, the area of BH ZA017 falls into this mountainous region and is found to be closely located near mountain peaks 2246m and 2212m (please see image for reference). According to Satomura, M. et al. (2005) GPS results in mountain areas are usually found to be less accurate than those in flat areas due to terrain obstructing satellite signals, which can reduce reception and thus accuracy of GPS navigation. Additionally, steep slopes can cause signal reflection and multi-path errors, further reducing the accuracy of GPS navigation.

ACTIVITIES (POA AND VPA(S))

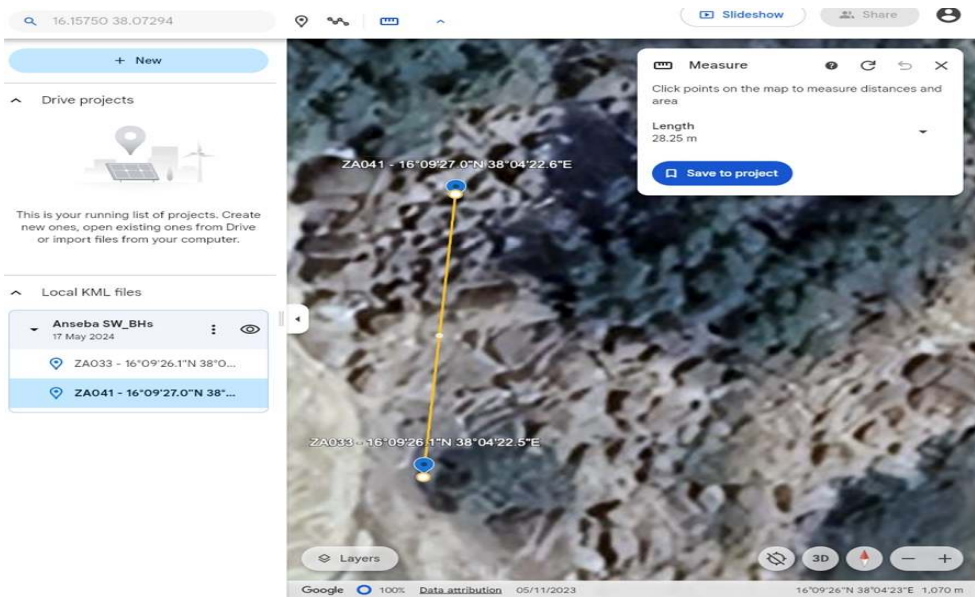


However, PD has now removed BH ZA017 from the project, as in this case it has been found that it is not functional currently due to flooding, so as we cannot be certain to differentiate the borehole from the satellite imagery in the lake, we have decided to be conservative and remove it from the project. The ER's and MR have been updated to reflect this.

3. When plotting the coordinates of the above outlined BHs on Google earth as per suggestion of the VVB, it is evident that these are not directly overlapping. In the case of ZA033 and ZA041, a distance of 28.25m is found between the respective BHs, whilst in the case of ZA038 and ZA039 a distance of 11m is seen (please see pictures for reference). These BHs can thus be said to both be found in the same village however are not to be said to be overlapping. Furthermore, PD has received confirmation that the WRD has checked the locations of the boreholes and independently confirmed that they are very close together, with distances comparable to those found using Google Earth.



ACTIVITIES (POA AND VPA(S))

	
Documentation provided by project participant	
MR, Google earth pro coordinates screenshot, ER sheet.	
DOE assessment	Date: 29/06/2024
CME has removed the ZA017 from the project list. The same has been accepted by the verification team. However the CAR is converted into FAR 01 wherein the verification team in the subsequent verification should ensure that ZA017 is not included in the borehole list under this VPA.	

CAR ID	CAR 02	Section no.	4.4 of the Verification Report	Date: 10/03/2024
Description of CAR				
• The evidence to support the claim that 15/08/2022 to 18/08/2022 are the appropriate time where “normal” practices could be observed is not provided. • Margin of error and precision is being used interchangeably which is not as per CDM sampling standards and guidelines. This is not consistent with standard definitions MoE/precision or normative practices. • Is the usage one BH per household or otherwise? If yes, how is the water consumption in project scenario for each household compared against the avoided biomass in the baseline. • Under usage survey the basis for choosing 30 samples is not given in section D.4 of the MR.				
Project participant response		Date: DD/MM/YYYY (Please mention the date of your response to KBS)		
1. It is normal practices due to the fact that it was conducted over 4 consecutive weekdays with no observed national holidays. Therefore, it will reflect the usual day to day water use patterns. 2. PD has changed to precision. 3. Please see excel ‘GS5951-55 6041-42_ERs_calcs_v2’ sheet ‘VPA 122 ER Calcs’, cell E10 for an example of the calculation. 4. PD has updated MR.				
Documentation provided by project participant				
1. MR 2. ER sheet				

ACTIVITIES (POA AND VPA(S))

DOE assessment	Date: 10/05/2024
- Based on the checking of dates, the finding is CLOSED. - The PD has rectified and used the correct term precision instead of MoE. CLOSED - The calculation in the spreadsheet checked and found appropriate. CLOSED - The basis for choosing 30 samples is given in section D.4 of the the MR. CLOSED.	

CAR ID	CAR 03	Section no.	4.7,4.8 of the Verification Report	Date: 10/03/2024
Description of CAR				
1. Values are rounded up for the parameter Paccess. This is not conservative. 2. The RHS uses fraction while the LHS is using percentage under SDG 3 parameter. Hence inconsistent. 3. Computation error under evaluation of Pb,y. 4. Under SDG 13 parameter, in baseline estimate column the basis for the estimates is not provided.				
Project participant response		Date: DD/MM/YYYY (Please mention the date of your response to KBS)		
1. PD has updated. 2. PD has updated. 3. PD has updated. 4. PD has updated.				
Documentation provided by project participant				
MR ER				
DOE assessment				Date: 10/05/2024
1. MR has updated now to ensure Paccess to be conservative by rounding down. CLOSED 2. Now made consistent. CLOSED 3. The error is now rectified. CLOSED 4. MR is now updated to include the BL estimate column is now updated. CLOSED				

CAR ID	CAR 04	Section no.		Date: 04/06/2024
Description of CAR				
i. Upon reviewing the responses from the stakeholder as part of usage survey and WCFT, the following was observed: (Bambi, Hilet, Libena, Kerecha) In one site ie., Hilet, it was stated that the water depth ie., 4.0 m was not sufficient for their needs although they opined that 6-7 m would be ideal for their needs-Again this contradicts the statement in MR that the yield and quality of water from the wells was satisfactory. OPEN				
Project participant response		Date: 07/06/2024 (Please mention the date of your response to KBS)		
The project procedure with these kinds of issues is that they get raised and assessed by the village water committees, who will then inform the Water Resource Department (WRD) if it is something that needs to be resolved. A grievance mechanism is in place for all BHs, and the logbooks placed with each water committee of each BH allow documentation and monitoring of ongoing issues. See previously submitted documents ‘Translated logbooks 1 2023 Anseba’ and ‘Translated logbooks 2 2023 Anseba’ for the logbook comments that were collected for the monitoring period related to this verification. The MR does not state ‘the yield and quality of water from the wells was satisfactory’. The MR does say ‘Furthermore, grievance expression process books placed at all boreholes have received only positive feedback...’. The comment raised in the stakeholder interviews was not recorded in the logbook for the monitoring period in				

ACTIVITIES (POA AND VPA(S))

question. See 'Translated logbook 1 2023 Anseba' for the logbook comments from Hilet. However, PD will follow up on the comment raised to ensure borehole functionality.	
Documentation provided by project participant	
'Translated logbooks 1 2023 Anseba' and 'Translated logbooks 2 2023 Anseba'	
DOE assessment	Date: 29/06/2024
Based on the assessment of the grievance logbooks, and assurance of the CME on the CAR has been converted into FAR 02. It is requested that the during the next verification assessment, the verification team needs to confirm that the CME ensures borehole functionality across all the VPAs in this current project activity.	

Table 5. FAR from this verification

FAR ID	FAR 01	Section no.	4.3 of the VR	Date: 29/06/2024
Description of FAR				
The verification team in the subsequent verification should ensure that ZA017 is not included in the borehole list under this VPA 129 (GS5951)				
Project participant response				Date: DD/MM/YYYY
NA.				
Documentation provided by project participant				
NA.				
DOE assessment				Date: DD/MM/YYYY
NA.				

FAR ID	FAR 02	Section no.		Date: 29/06/2024
Description of FAR				
It is requested that the during the next verification assessment, the verification team needs to confirm that the CME ensures borehole functionality across all the VPAs included in the current project activity.				
Project participant response				Date: DD/MM/YYYY
NA.				
Documentation provided by project participant				
NA.				
DOE assessment				Date: DD/MM/YYYY
NA.				

FINDINGS FROM TR ROUND

CL ID	CL 01	Section no.		Date: 25/07/2024
Description of Clarification Request				
- The font size and formatting are not uniform throughout the text. Please clarify. - The final report is not updated to 65 boreholes after removal of ZA017. Please clarify.				

ACTIVITIES (POA AND VPA(S))

Project participant response	Date: 30/07/2024 <i>(Please mention the date of your response to KBS)</i>
i. MR has updated	
ii. MR has updated	
Documentation provided by project participant	
MR version 4.0	
DOE assessment	Date: 03/08/2024
i. The font and formatting are now made uniform throughout the report. CLOSED.	
ii. The MR v4.0 now has references to 65 boreholes instead of 66 after the removal of ZA017. CLOSED	

CAR ID	CAR 01	Section no.		Date: 25/07/2024
Description of Corrective Action Request				
There is a temporary deviation applied due to the assessment. However that is not updated in section B.2.1 of the MR.				
Project participant response		Date: 29/07/2024 (Please mention the date of your response to KBS)		
PD has updated section B.2.1 of MR v4.0				
Documentation provided by project participant				
MR version 4.0				
DOE assessment				Date: 05/08/2024
The section B.2.1 of the MR v4.0 now updated. CLOSED.				

CAR ID	CAR 02	Section no.		Date: 25/07/2024
Description of Corrective Action Request				
Under section C, it is stated, "...the primary purpose of these three rocks is for cooking so they will not be replaced/displaced in their entirety as a result of this project – which means they will not be reused outside the project boundary. This leakage source can therefore be discounted". PD to clarify the contradiction with assertion and statement viz., with respect to 3 stone cooking stove not being replaced and hence no leakage.				
Project participant response		Date: 30/07/2024 (Please mention the date of your response to KBS)		
In the baseline people used 3 stones fires for boiling water, consisting of 3 stones. The statement is saying that the introduction of the safe water points will not cause leakage in the sense that once project participants have a safe water source and no longer boil the water, these stones won't be used by others outside of the project boundary.				
Documentation provided by project participant				
MR version 4.0				
DOE assessment				Date: 05/08/2024
The leakage due to use of three stone stoves being outside the project boundary due to lower or no use of three stone stoves does not arise, as these devices (or rather stones) even if used outside the project boundary is not directly related to project activity. Since the stones are abundant in project areas, any use of 3 stone stoves does is not result of project activity does not lead to leakage attributable to the project activity. CLOSED.				

ACTIVITIES (POA AND VPA(S))

CAR ID	CAR 03	Section no.		Date: 25/07/2024
Description of Corrective Action Request				
The basis for values used in Paccess under SDG 6.1.1 is not matching with the PS,US and HH list provided for assessment. Please clarify Similarly, for values used in P.y. Please clarify				
Project participant response		Date: 30/07/2024 (Please mention the date of your response to KBS)		
i. Please see 'GS5951-55 6041-42_ERs_calcs_v3'. Eg for GS 5951, see cell C17 in sheet 'VPA 122 SDGs calcs'. Also see Section E.2, page 58 of this document to see the calculation. The numbers will not match the sale record document as that shows the uncapped numbers. Please see example GS 5951 sheet 'VPA 122 PTDs' in 'GS5951-55 6041-42_ERs_calcs_v3' to see how the number of people per borehole have been capped. ii. Similar explanation to above. Please see 'GS5951-55 6041-42_ERs_calcs_v3'. Eg for GS 5951, see cell C18 in sheet 'VPA 122 SDGs calcs'. The numbers will not match the sale record document as that shows the uncapped numbers. Please see example GS 5951 sheet 'VPA 122 PTDs' in 'GS5951-55 6041-42_ERs_calcs_v3' to see how the number of people per borehole have been capped.				
Documentation provided by project participant				
GS5951-55 6041-42_ERs_calcs_v3 MR version 4.0				
DOE assessment				Date: 05/08/2024
i. The inconsistency in the sales record is explained due to the capping applied on the users per borehole as per the deviation request 242 submitted to GS4GG and subsequently approved. Thus the Paccess is taken as per the capped value. CLOSED ii. Similarly the same explanation is applicable for Pv parameter as well. CLOSED				

R ID	CAR 04	Section no.		Date: 25/07/2024
Description of Corrective Action Request				
i. The units used in D.3 under N,p,y is not consistent with the parameter used. Please clarify ii. The reduction in time spent between the previous and present MP is substantial. Please clarify. iii. Net benefit mentioned in section E.4 is not filled. Please clarify iv. Under E.5 the value under hours reduction is not clear ie., whether it is savings time or collection time. Please clarify. v. Under safeguarding principle in under section 6.2 and 7.1 the responses are contradictory. Please clarify.				
Project participant response		Date: 01/08/2024 (Please mention the date of your response to KBS)		
i. MR has updated ii. MR has updated the value so that the calculations are in line with the previous verifications. This value is also more conservative. See 'Anseba_PS_23_v2' and 'GS5951-55 6041-42_ERs_calcs_v4'. iii. It is filled it. See screenshot below.				

E.4. Calculation of net benefits or direct calculation for each SDG Impact

SDG	SDG Impact	Baseline Estimate	Project estimate	Net benefit
SDG 3 Good health and well-being	Variation in household smoke(All VPAs)	0% reduction in exposure to household air pollution due to boiling water	95% reduction in exposure to household air pollution due to boiling water	95% reduction in exposure to household air pollution due to boiling water
SDG 5 Gender Equality	Variation of time spent in firewood collection	2.26 hours spent collecting firewood per household per day	1.79 hours spent collecting firewood per household per day	0.47 decrease in hours spent collecting firewood per

- iv.
- v. This is time savings. MR has updated to clarify.
- vi. MR has updated.

Documentation provided by project participant

Anseba_PS_23_v2' and 'GS5951-55 6041-42_ERs_calcs_v4'.

DOE assessment

Date: 05/08/2024

- i. The units used in D.3 under N,p,y is now updated. CLOSED
- ii. The time savings estimated is now in line with the previous MP, hence conservative and revised. CLOSED.
- iii. MR is now updated in section E.4. CLOSED.
- iv. The section E.5 the MR is now updated to state the time mentioned is time saved. CLOSED.
- v. The units under section E.5 is now updated. CLOSED.
- vi. The section 6.2 and 7.1 of the MR is now updated. CLOSED.

DOCUMENT HISTORY

Version	Date	Description
1.0	DD/MM/YYYY	Initial adoption