Gold Standard for the Global Goals

TEMPLATE

MONITORING REPORT

PUBLICATION DATE **14.10.2020**

VERSION **v. 1.1**

RELATED SUPPORT **- TEMPLATE GUIDE Monitoring Report v. 1.1**

This document contains the following Sections

KEY PROJECT INFORMATION

Programme of Activity Information – (delete below table if N/A)

GS ID of Programme	GS11638
Title of Programme	SPOUTS Water Purifier Programme in Africa
Version of POA-DD applicable to this monitoring report	2.3
Name and GS ID of fully Validated CPA/VPAs (i.e. non-compliance check)	GS11639 and GS11640 1) GS11638 VPA-1 SPOUTS Water Purifier Programme in Africa- WPS in Rwanda- VPA-1 2) GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA-2

Key Project Information

GS ID (s) of Project (s)	GS 11640 and GS 11861
Title of the project (s) covered by monitoring report	GS11638 VPA-2 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 2 GS11638 GS11640 RVPA-1 SPOUTS Water Purifier Programme in Africa- WPS in Uganda by TASC- VPA 3
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	VPA 2- 2.7 VPA 3- 2.1
Version number of the monitoring report	VPA 2- 1.3 VPA 3- 1.3
Completion date of the monitoring report	16/10/2024
Date of project design certification	VPA 2- 03/01/2023 VPA 3- 01/06/2023
Date of Last Annual Report	NA
Monitoring period number	2nd
Duration of this monitoring period	30/03/2023 to 30/04/2024 (both dates included)

Project Representative	SPOUTS International
Host Country	Uganda
Activity Requirements applied	☒ Community Services Activities ☐ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A
Methodology (ies) applied and version number	Methodology for Emission Reductions from Safe Drinking Water Supply (Version 1.0)
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A

Table 1 - Sustainable Development Contributions Achieved

Sustainable Development Goals Targeted	SDG Impact	Amount Achieved	Units/ Products
13 Climate Action (mandatory)	GHG emission reduction	VPA 2- 58,014 VPA 3- 41,500	tCO2/VERs
3 Good Health and Well Being	Reduce Illnesses and Death from Hazardous Chemicals and Pollution. Health quality improvement (qualitative assessment).	VPA 2- 99% VPA 3- 99%	Proportion of population reporting health improvement (qualitative assessment)
5 Gender Equality	Average time saving associated with boiling water and fuel collection	VPA 2- 3.32 VPA 3- 3.32	Hours/week
6 Clean Water and Sanitation	Proportion of household served with safely managed water services	VPA 2- 15,285 VPA 3- 10,932	-

7 Affordable & Clean Energy Target	No. of WPS operational at any time in the VPA	VPA 2- 16,436 VPA 3- 11,755	WPS
8 Decent Work & Economic Growth	Total no of jobs created (During distribution and monitoring & Evaluation)	VPA 2- 45 (26 males and 19 females) VPA 3- 16 (7 males and 9 females)	Jobs

Table 2 – Product Vintages

		Amount Achieved
Start Dates	**End Dates**	**Number of VERs**
30/03/2023 (VPA 2 and VPA 3)	31/12/2023 (both VPA 2 and VPA 3)	VPA 2= 40,377 tCO2 VPA 3= 28,883 tCO2
01/01/2024 (both VPA-2 and VPA-3)	30/04/2024 (both VPA-2 and VPA-3)	VPA 2= 17,637 tCO2 VPA 3= 12,617 tCO2
Total VERs		VPA 2= 58,014 tCO2 VPA 3= 41,500 tCO2

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

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The VPA aims to disseminate safe water supply technology such as the HWT (Household Water Treatment) technologies to the households and communities in the western region of Uganda. The households in the region have been drinking untreated water/ have been using traditional stoves (three stone fire stoves and conventional mud stoves) for boiling water thereby using non-renewable biomass (wood) for boiling water. The VPA involves the distribution of ceramic water filters (Purifaaya Regular) to the households which not only provides the end-users with a safe supply of drinking water but also contributes to drastic reduction in the levels of GHG emissions.

The VPA implementer for the project is SPOUTS International while the Coordinating and Managing (CME) entity for the project is AGS Carbon Advisory. SPOUTS has been supported by TASC (The African Stove Company) during the implementation of the project.

Access to WASH (Water, sanitation and health) facilities is very low in Uganda and as a result of that diseases (caused due to drinking contaminated water) such as diarrhoea kills 33 children on a daily basis in the country[1]. As per the Joint Monitoring Programme (JMP)[2] carried out by the United Nations and WHO (in the year 2020) only 17% of Uganda's population has access to safely managed[3] drinking water. The situation is worse in rural regions of western Uganda. In the Kyenjojo district of Western Uganda, only around 69% of the population has access to water, and most of these water sources are unimproved (shallow wells) which are highly prone to contamination.

[1] https://www.unicef.org/uganda/what-we-do/wash

[2] https://washdata.org/data/household#!/dashboard/new

[3] Safely Managed Services: Households using improved drinking water sources which are located on-premises, with water available when needed, and free from contamination

Baseline Scenario and technology:

Two different kinds of baseline scenarios were observed in western Uganda in the pre-project scenario:

1) Dependence on non-renewable biomass (i.e., firewood) for boiling water using the traditional stoves (three-stone fire stove or conventional mud stoves).
2) Drinking untreated contaminated water (suppressed demand scenario)

Achieved GHG emission reduction

The project involves the use of water purification devices (Purifaaya Regular) that replace the use of inefficient traditional stoves to boil unsafe water. The project is resulting in GHG emission reductions by avoiding the use of non-renewable biomass (firewood) in the inefficient traditional stoves for boiling water.

Implementation schedule

Start date of distribution for VPA-2= 30/03/2022

Year of distribution	Number of devices distributed in VPA-2
2022	17,491
2023	0
2024	0

Start date of distribution for VPA-3= 19/07/2022

Year of distribution	Number of devices distributed in VPA-3
2022	12,510
2023	0
2024	0

Both VPA-2 and VPA-3 have been fully implemented and the VPA implementer does not intend to distribute any further CEPs under the project activities. A monitoring survey

was carried out during the current monitoring period which showed that the percentage of operational WPS is 94% and same has been used for calculating ERs for the VPAs.

Threshold of the VPA

Both the VPAs (VPA-2 and VPA-3) are small-scale project activities under Type 3 therefore the threshold limit for the VPAs is 60,000 tonnes CO_2e/year.

The emission reduction achieved under the current monitoring period (398 days) for VPA-2 is 58,014 tCO2e and for VPA-3 is 41,500 tCO2e. For the current MP pro-rata annual ER achieved for VPA-2 is 53,204 tCO2e/year and for VPA-3 is 38,059 tCO2e/year, which are well within the threshold limit of 60,000 tonnes CO_2e/year.

The actual implemented technology

The project has distributed ceramic water filters to the households in western Uganda. The ceramic water filter distributed under the VPA is the "Purifaaya Regular water filter"[4] that filters, treats and stores water. All the material required for making the "Purifaaya water filter" has been sourced locally. These water filters have been manufactured at the *SPOUTS Water* factory in Nakawuka, Wakiso District by combining permeability abilities of clay and combustible abilities of saw-dust to create micropores. The small micropores of the Purifaaya water filter ensure that the water being provided to the beneficiaries is free of contaminants.

The 'Purifaaya Regular' water filter is easy to use and consists of the following components:

1) Filter Pot- The main component of 'Purifaaya' that contains microscopic pores (which aid in the process of filtration).

[4] The "Purifaaya Regular" has been certified by 'WHO' and 'The Ministry of Water and Environment' of Uganda.

2) Bucket- The bucket performs two functions:
a) Holds the filter pot in position
b) Stores the clean filtered water

3) Lid/Cover- This prevents anything from falling inside the pot, also ensures that no one draws unfiltered water from the top.

4) Tap- The tap is only way to access clean drinking water from the Purifaaya. For ease of operation, the tap has been designed to rotate 360 degrees.

During the current monitoring period no further WPS have been distributed in the VPA-2 and VPA-3, the filters distributed in previous MP have resulted in emission reduction of 58,014 tCO_2e for VPA-2 and 41,500 tCO_2e for VPA-3 in the current Monitoring period, 30/03/2023-30/04/2024.

Declaration

The PD confirms that the project activity is registered only with GS. It is not registered with any other compliance or voluntary market-based mechanism and will not claim VERs for the same vintage in another standard other than GS. Also, there is no double counting with national policies and programs of Uganda. The GHG emissions reductions from the project activity are not accounted for within the relevant system of the host country/ regulator or any voluntary mechanism.

SPOUTS has the legal ownership of the VERs that are generated through the Gold Standard Certification. The carbon title for the product is signed off by end user directly to SPOUTS waiving any claim or rights on carbon credits generated under the VPA. Since SPOUTS itself is the manufacturer of the WPS distributed, therefor no manufacturer's declaration is required.

A.2. Location of project

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The VPA has been carried out in different regions of Western Uganda and only Purifaaya Regular has been distributed under both the VPAs in these regions. Uganda is a landlocked country located in East Africa.

Host Party: Republic of Uganda or Uganda
Region: Western Uganda
District: Kyenjojo
Sub Counties under each VPA:
VPA 2- Nyantungo, Buttiti, Kihuura, Kisojo, Kigaraale, Nyabuharwa and Nyantungo
No. of WPS distributed under VPA 2 sub counties = 17,491
VPA 3- Buttiti, Butunduzi, Kihuura, Kisojo, Kyakatwire, Nyabuharwa and Nyantungo
No. of WPS distributed under VPA 3 sub counties = 12,510

Villages: 285 villages have been covered under both the VPAs (VPA 2 and VPA 3) of the project activity

The geocoordinates of Uganda are as follows:
Latitude: 1°22'24'' N
Longitude: 32°17.417' E

Figure A.2.1: The physical/geographic boundary of the SSC VPA: Western Region in Uganda

Further in order to avoid double counting, the VPA has followed a process to generate the UID- "The Unique Identifier" using a 3rd Party system. The unique identification (numbering and programme logo) of each CEP along with the customer details (name, address) has been stored in the sales database of devices.

The VPA has followed a process to generate the UID- "The Unique Identifier has been generated using a 3rd Party system - TEC-IT Barcode Studio 16.2 and takes the below format:
RTU2022 ######, where RT - Regular Technology (Product Type), U - Uganda (Country of Project), 2022 - Year of Distribution (Changes), ###### - Unique Product Number (Different for every Product). The generated numbers (Serial Codes) have been printed and attached to the product and are verifiable on each beneficiary's visit using a Barcode Scanner. On product distribution, the code has been matched with the Beneficiaries details which could be accessed once the UID was selected in the System."

A.3. Reference of applied methodology

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The VPA has applied the methodology "Emission Reductions from Safe Drinking Water Supply: Version 1.0'.[5]

CDM Tool 30, version 3.0 'Calculation of the fraction of non-renewable biomass' has been used to calculate the fNRB value for Uganda.[6]

A.4. Crediting period of project

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The crediting period of the project is 5 years. The crediting period of the project may be renewed twice in line with the Community Services Activity Guidelines.

For VPA 2 the crediting period is 30/03/2022- 29/03/2027

While for VPA 3 the crediting period is 19/07/2022- 18/07/2027

[5] https://globalgoals.goldstandard.org/standards/429_V1.0_EE_SWS_Emission-reductions-from-Safe-Drinking-Water-Supply.pdf

[6] https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-30-v3.0.pdf

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

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a) Purpose of the VPA and the different baseline scenarios

The VPA implementer for the project is SPOUTS while the Coordinating and Managing entity (CME) for the project is AGS Carbon Advisory. The project aims to provide access to safe drinking water to the households of western Uganda by distributing ceramic water filters for purifying water.[7]

Two kinds of baseline scenarios have been observed in the western region of Uganda:
1) Dependence on non-renewable biomass (i.e., wood) for boiling water using the traditional firewood stoves (three-stone fire cookstove or conventional mud stoves).
2) Drinking untreated contaminated water (suppressed demand baseline)

The first WPS under VPA 2 was distributed on 30/03/2022. Therefore, the start date of VPA-2 is 30th March,2022 which is the date of Purifaaya Regular installation. There was no new installation happened during the current monitoring period under VPA 2.

The first WPS under VPA 3 was distributed on 19/07/2022. Therefore, the start date of the VPA is 19th July 2022 i.e. date of Purifaaya Regular installation. There was no new installation happened during the current monitoring period under VPA 3.

b) Detailed description of technology being employed under the VPAs:

Given below is a further description of 'Purifaaya Regular' water filter technology, employed under the VPAs for providing clean drinking water to the end-users:

[7] This technology qualifies as HWT: Household Water Treatment technology under the 'Safe Water Methodology'

Model	Purifaaya Regular
Total capacity	20 litres container
Storage capacity	~10 litres
Number of people served	Serves up to 6 people at one go (when filled only once to the brim)[8]
Filtration rate	4.5-5.5 litres/hour
Effectiveness	99.99% efficient against germs and bacteria
Recommended Water Type	Any kind of water
Power consumption	No need of any power/electricity
Total quantity of water replaced by filter before replacement of any part	1,75,200 litres[9]

The 'Purifaaya Regular' water filter is easy to use and consists of the following components:

1) Filter Pot- The main component of 'Purifaaya' that contains microscopic pores (which aid in the process of filtration).

2) Bucket- The bucket performs two functions:

a) Holds the filter pot in position

b) Stores the clean filtered water

[8] Households having >6 members can fulfill their water needs by refilling the 'Purifaaya Regular' water filter multiple times in a day. The technology is therefore suitable even for households having a household size of >6 members.

[9] The total quantity of water filtered before replacement of any part:
=Total number of years for which water filter operates without replacement* 365 days* 24 hours* average capacity of water filter
= 4 years* 365 days* 24 hours* 5 litres/hour
=1,75,200 litres

3) Lid/Cover- This prevents anything from falling inside the pot, also ensures that no one draws unfiltered water from the top.

4) Tap- The tap is only way to access clean drinking water from the Purifaaya. For ease of operation, the tap has been designed to rotate 360 degrees.

The lifespan of the water filter is 8 years[10]. The life of the water filter depends on regular maintenance and replacement of the faulty parts.

The VPAs have distributed 'Purifaaya water filter' as per the distribution plan described in the VPA-DDs. There are no changes in the project design and as specified in the VPA-DDs, the technology 'Purifaaya Regular' has been distributed to all the beneficiaries. SPOUTS has distributed 17,491 WPS under VPA-2 and 12,510 under VPA-3 in the rural households of western Uganda.

B.1.1 Forward Action Requests

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There were 2 FARs raised during the design review, which are as follows:

"SPOUTS needs to conduct physical stakeholder meeting and SFR after design review and before performance certification".

"CME shall put in place adequate measures to monitor and to ensure that water sourced from safe water GS borehole projects is discounted from claiming carbon in VPA-2."

[10] After the water filters complete their lifespan, they will be disposed in accordance with the National Environment (Waste Management) Regulations, 2020 (https://nema.go.ug/sites/all/themes/nema/docs/National%20Environment%20(Waste%20Management)%20Regulations%20S.I.%20No.%2049%20of%202020.pdf)

In response to the above mentioned FAR-1, the VPA implementer (SPOUTS International) has conducted an additional grouped stakeholder consultation meeting on 11th May 2023 as per the GS4GG requirements.

In response to the above mentioned FAR-2, the VPA implementer (SPOUTS International) has captured data on end-users drawing water from an improved source (such as borehole) during the combined project and usage survey. The enumerators had been trained to carry out an assessment of the village (while conducting the combined project and usage survey) in order to identify if there were any community based improved source (such as boreholes) located in the vicinity of the respondents.

B.2. Post-Design Certification changes

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No post-design certification changes applicable for the VPA.

B.2.1. Temporary deviations from the approved Monitoring & Reporting Plan, methodology or standardized baseline

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No temporary deviations have been sought for the VPA.

B.2.2. Corrections

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No corrections are applicable for the VPA.

B.2.3. Changes to start date of crediting period

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No changes to start date of crediting period are applicable for the VPA.

B.2.4. Permanent changes from the Design Certified monitoring plan, applied methodology or applied standardized baseline

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No permanent changes are applicable for the VPA.

B.2.5. Changes to project design of approved project

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No changes to project design are applicable for the VPA.

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

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During the monitoring, the following information has been collected

a) Total distribution record: Total distribution record has documented the information listed below. A carbon waiver (along with a warranty card) has been distributed for each technology (HWT) distributed. The total distribution record has been kept electronically (via Survey CTO app) along with supporting evidence from paper records (Carbon Title transfer forms) has been provided to the GS-VVB for verification[11].

The total distribution record contains the following information:

a) VPA ID (VPA to which the system belongs)
b) Unique identification of WPS using WPS serial number (contact details, geographic coordinates)
c) Date of distribution and model/type of project technology distributed
d) Quantity of project technology distributed as evidenced by database

b) Project Database- The VPAs have specific project database that keeps a record of each WPS credited in that VPA. Every WPS listed in the total distribution record has been transferred to the project database of these VPAs as needed to expand the number of WPS deployed until the threshold for the VPA is reached. In addition to the

[11] The SurveyCTO is an advanced software that helps in collecting data offline, real time monitoring of data and instant streaming of the collected data to excel.

information provided in the total distribution record, the VPA-specific project database has recorded user details (enough for end-user identification and follow-up) for all, or a subset of all, appliances deployed. End-user details recorded are as follows:

a) Name
b) Telephone, or address (as available)
c) Baseline technology: whether boiling or no boiling
d) Type of WPS (WPS model) and fuel the WPS is replacing: Example – traditional or improved baseline stoves, or wood fuel.

c) Project Supplied Clean Water Consumption Volumes- The amount of project supplied clean water consumption values have been estimated by a water consumption field test. SPOUTS had conducted the WCFT with the end-users' representative of the project technology and currently using the project technology between 2nd April,2024 and 5th April,2024 as per the guidelines specified by the 'Methodology for Emission Reductions from Safe Drinking Water Supply, version 1.0' as follows:

1) **For Day 1**: SPOUTS team had reached the selected households in the western region of Uganda.

2) The household details (Name of interviewee, contact no., Address) were recorded by the SPOUTS team who further asked the households to fill the water purifier and employed a weighing scale to weigh the water filter.

3) The SPOUTS team dedicated 3 containers (the containers dedicated had been tared earlier by the SPOUTS team) of 20 raw litres of water (SPOUTS had requested households to fill the containers with water which they daily collect from unimproved water sources) for filtering and instructed the households to use water only from the designated containers for filling the water filter.

And the following readings were noted for day 1:

a) Weight of filter+ Storage tank
b) Weight of 1st container (with full water)
c) Weight of 2nd container (with full water)
d) Weight of 3rd container (with full water)

4) **For Day 2:** The SPOUTS team reached the same households next day and noted the following readings:

a) Remaining weight of filter and storage tank
b) Remaining weight of 1st container
c) Remaining weight of 2nd container
d) Remaining weight of 3rd container
e) Number of people who consumed the water during the previous day

The same process was repeated for **Day 3** and on **Day 4**, the SPOUTS team only noted the remaining water in the filter and containers and did not fill the water filter or the containers.

5) The process was carried out for 4 consecutive days and weekends or festivals were avoided to capture the true water consumption pattern of the household without any biases.

6) The enumerators were trained to record the water consumption readings of each household in the presence of the beneficiary. The beneficiaries confirmed that the values reported by the SPOUTS team were recorded in their presence.

d) Combined project and usage survey- The Combined project and usage survey had been conducted between 4nd April 2024 and 16th May 2024. A team of enumerators had been trained by SPOUTS to carry out data collection. The enumerators were trained on various aspects such as: data collection procedure and monitoring/usage requirements specified by the Gold Standard. The training records of the enumerators have been shared with the VVB.

The sample size of combined usage and project survey conducted was 120. As per the methodology, the minimum sample size for project survey is 100 while the minimum sample size for usage survey is 30 but as a combined project and usage survey has

been done therefore a sample size of 100 was required for both[12]. However, to account for non-responses and outliers 120 surveys were conducted. The samples were randomly selected from the project database ensuring to capture samples from both the VPAs.

In order to ease the process of data collection the SPOUTS team had used a software: **SurveyCTO**.[13]The software helped in collecting data offline, real time monitoring of data and instant streaming of collected data to excel.

The usage survey was conducted in the following way:

1) Introductory questions and information about water treatment

Expected Outcome: These questions were asked to establish if the household purifies water and if it is using HWT technology to purify the water. The questions were directed to the primary user of the HWT technology.

2) Questions on the rate of usage of the technology

Expected Outcome: These questions were asked by the enumerator to rule out the households that reported low usage of the project HWT unit.

3) Observing physical signs of usage

Expected Outcome: These questions ruled out users of the project HWT technology that were not storing filtered water.

4) Questions on physical signs of usage

[12] Oversampling has been done for both usage and project survey in order to get accurate results.
[13] https://www.surveycto.com/

Expected Outcome: The observations helped rule out households with HWT unit but not using the HWT unit for purifying water.

5) Question on households drawing water from an improved source (such as borehole)

Expected Outcome: This question helped in identifying the end-users who were drawing water from an improved source (such as a borehole). The households drawing water from an improved source did not qualify as users of the 'Purifaaya Regular' technology.

The enumerators had been trained to carry out an assessment of the village (while conducting the combined project and usage survey) in order to identify if there were any community based improved source (such as boreholes) located in the vicinity of the respondents.

d) Fraction of samples that pass the microbial quality standard requirement ($M_{q,y}$): The testing of water filtered by the 'Purifaaya Regular' water filter was carried out by SPOUTS as per the following guidelines (specified in the Methodology for Emission Reduction from Safe Drinking Water Supply, Version 1.0):

1) The water exiting the 'Purifaaya Regular' water filter was tested.
2) The water samples collected by the SPOUTS team were tested in Chemiphar Laboratory of Uganda (accredited laboratory).
3) The enumerators ensured that the samples were not contaminated during the collection step and the water collected from the purifier was dispatched safely for testing to the laboratory.

The SPOUTS team conducted microbial testing for water samples from 39 different households.

e) Annual Water Hygiene Campaign

As per the methodology 'Emission Reductions from Safe Drinking Water' hygiene refers to access to sanitation amenities, equipment and infrastructure, as well as behavior in respect to regular and correct use of such amenities. Further the definition of hygiene also encompasses the behavior that prevents infections from water related diseases. Therefore, as per the GS definition of hygiene, the surveys carried out by SPOUTS (baseline and monitoring surveys) captured following information from the households:

1) Water Storage facilities in the household

2) Facility available to wash hands in the households

3) Water available to wash hands

4) Availability of soap/detergent within the premises for washing hands

The questions mentioned above were used as a parameter to assess to impact of annual water hygiene campaigns conducted.

f) Continued use of baseline technologies (Stacking): The monitoring surveys also investigated if the households were still using baseline stoves for boiling water. If the households are found to be using baseline stoves, they shall not be eligible for claiming ERs. During the combined project and usage survey it was found that none of the household used only baseline stove for boiling water or both baseline stove and project water purifier.

TECHNICAL FAILURE AND MAINTENANCE PROTOCOL

SPOUTS has a robust aftersales mechanism in place which ensures that the customer complaints are registered and resolved in a timely manner. The mechanism involves various steps:
Step 1: Complaint Registration
Step 2: Lodging complaint
Step 3: Replacement of the water filter by the SPOUTS team
Step 4: Resolution of the complaint
Step 5: Feedback (optional)

Customers can get their complaints registered through either of the following modes:

1) Field staff of the SPOUTS team who visit the customers or

2) Call on the customer support number provided to them

The 'tracker record sheet' maintained by the SPOUTS team keeps a record of all the complaints registered by the end users during the monitoring period. During the current monitoring period the SPOUTS has resolved all the registered complaints within a span 2 days (as evident from the 'tracker record sheet') from the date of receiving the complaint.

Organizational structure of monitoring:

Person	Role
AGS Carbon Programme in-charge	The programme incharge is responsible for overall management of VPAs. The monitored data is assessed and reviewed in line with GS guidelines for preparing the Design Documents, Calculation of ERs and preparing Monitoring Reports.
SPOUTS database administrator	The database administrator was responsible for updating and maintaining all electronic databases related to distribution of the filters. Required competencies included experience with data management systems (e.g. Excel, STATA, or SPSS), minimum 2 years working experience in a similar field, and at minimum a Bachelor's degree from an institution of higher education.
SustainCERT and VVB	VVB and SustainCERT ensure that the project adheres to the requirements set-forth by GS4GG. Both the bodies will ensure that there is no overestimation of emission reduction during the project cycle.
SPOUTS O&M Team	SPOUTS operation and maintenance team is responsible for the installation, replacement and overall maintenance of the water filters and its components. They ensured all the

	replacements were done successfully during the current monitoring period.
SPOUTS Monitoring team	The monitoring team was responsible for data collection and conducting surveys. They were assigned by the SPOUTS to conduct the user interviews and appliance tests and hygiene campaign during the monitoring period. The team reports the results to the database administrator. The skills and experience required for the data collection activities included: Experience on conducting surveys/tests Local language skills (especially important for input to questionnaire design and interviewing of end users) English language skills Cultural awareness Numerical proficiency Data entry skills The enumerators had been trained to: conduct combined project and usage survey, WCFT, collecting samples for microbial contamination analysis (Mq,y), visual assessment of the villages for any improved sources (such as boreholes).

SECTION D. DATA AND PARAMETERS

D.1. Data and parameters fixed ex ante or at renewal of crediting period

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SDG 13

Data/parameter	Project Technology Description
Unit	N/A
Description	The following is the detailed description of the project technology: HWT:

	Manufacturer- SPOUTS International Technology type- Ceramic water filter Product name- Purifaaya Model-Purifaaya Regular The Purifaaya models complies with US 201: 2008 Drinking water Standard class 1 and its performance level as per international scheme to evaluate household water treatment technologies by WHO is 1 star[14].
Source of data	Manufacturer's specifications Performance assessment of the ceramic water filter by National Water Quality Reference Laboratory
Value(s) applied	Please refer to Section B.1 (b) of the MR
Choice of data or Measurement methods and procedures	-
Purpose of data	-
Additional comment	This parameter is fixed ex-ante & shall be updated at CP renewal.

Data/parameter	Regulatory Framework for safe water supply
Unit	N/A
Description	The Uganda standard, US EAS 12:2014, potable water – Specification specifies the Microbiological requirements, Chemical and physical limits for quality of drinking water supplies.
Source of data	The Uganda standard, US EAS 12:2014, potable water - Specification https://ia601901.us.archive.org/10/items/us.201.2008/us.201.2008.html

[14] https://www.who.int/tools/international-scheme-to-evaluate-household-water-treatment-technologies/products-evaluated

<table>
<tr><td>Value(s) applied</td><td>Following gives the maximum Microbiological requirements for drinking water

<table><tr><td></td><td colspan="3">Allowable compliance limits and contribution of samples (%)</td></tr><tr><td></td><td>Minimum 95%</td><td>Maximum of 4% of samples</td><td>Maximum of 1% of samples</td></tr><tr><td>Coliform count per 100 ml</td><td>0</td><td>10</td><td>100</td></tr><tr><td>E. Coli (faecal coliform) count per 100 ml</td><td>0</td><td>0</td><td>1</td></tr><tr><td colspan="4">Note: For each individual sample coliform should be estimated in terms of the "Most Probable Number" in 100 ml of drinking water, which is often designated as MPN index or Coli index. Occurrence of E. coli (faecal coli) in consecutive samples, in less than 100 ml of drinking water is an indication of faecal pollution and hence a dangerous situation needing urgent, rectification.</td></tr></table>
The project doesn’t conflict with host country law. Please refer to Section B.4</td></tr>
<tr><td>Choice of data or Measurement methods and procedures</td><td>SPOUTS shall carry out annual tests of the filtered water from the purifiers which confirms to The Uganda Standard for potable water.</td></tr>
<tr><td>Purpose of data</td><td>-</td></tr>
<tr><td>Additional comment</td><td>This parameter is fixed Ex-ante & shall be updated at CP renewal.</td></tr>
</table>

Data/parameter	Water sources in the project boundary
Unit	N/A
Description	The water sources in the project boundary are identified and if classified to be used for drinking water, then further classified as improved and unimproved water source.
Source of data	Baseline study
Value(s) applied	As per the baseline survey the water sources in project boundary are: • Surface water • Unprotected dug wells

	• Piped water
Choice of data or Measurement methods and procedures	A baseline survey is carried out as detailed in section B.4
Purpose of data	For parameter C_b calculation
Additional comment	This parameter is fixed ex-ante & shall be updated at CP renewal.

Data/parameter	Stove technologies used in the project boundary
Unit	NA
Description	The stove technology used in the project boundary for boiling water is the conventional three-stone fire stove and conventional mud stoves. The three stone fire stoves and conventional mud stoves used lack improved combustion air supply mechanism and flue gas ventilation system.
Source of data	Baseline survey
Value(s) applied	95% use three stone fire stove while 5% use conventional mud stoves for boiling water (both lack improved air supply mechanism and flue gas ventilation system)
Choice of data or Measurement methods and procedures	A baseline survey was conducted to quantify the stove technologies being used in the baseline scenario.
Purpose of data	Calculation of baseline scenario
Additional comment	This parameter is fixed ex-ante & shall be updated at CP renewal.

Data/parameter	Expected technical life of project technology
Unit	Years

Description	The expected technical life of the Purifaaya filter is the average time for which the water filter will continue to operate in a safe manner with minimal loss of performance
Source of data	Manufacturer's specifications
Value(s) applied	8 years[15]
Choice of data or Measurement methods and procedures	NA
Purpose of data	Calculation of project life
Additional comment	SPOUTS has mechanism in place to ensure that the replacement of the product or its parts is provided to the end-users in case the need arises.

Data/parameter	x_f
Unit	Percentage of fuel f use in target population
Description	The proportion of each different cooking fuel f used in the project boundary by end-users: - % among the target population if single fuel is used for water boiling. If the project covers different types of end-user premises (e.g., households, schools), then the fuels used in the geographical area of the project by the same types of end-users are to be determined for each end-user premises type.
Source of data	Baseline survey
Value(s) applied	Wood- 100% by traditional cookstoves
Choice of data or Measurement methods and procedures	A baseline survey as detailed in section B.4 and the sampling plan of using steps under section D.4 has been followed

[15] As specified by the manufacturer, the product's life may exceed 8 years if maintained properly.

Purpose of data	Calculation of baseline scenario
Additional comment	The percentages applied shall be cross-checked against at least one other source on the list. For cross-check purposes, sources applied may be up to 5 years old. Further, cross-check with older sources may be used provided they provide conservative results. In this project the cross-check document is The Uganda National Household Survey Report 2019/2020. This document shows that approx. 88% residences in rural areas use firewood for cooking purposes[16], 9% households use charcoal while rest use kerosene, LPG fuels etc. The use of 100% firewood in project baseline is in line with the cross-check source. This parameter is fixed Ex-ante & shall be updated at CP renewal.

Data/parameter	$EF_{b,f,CO2}$
Unit	tCO_2/TJ
Description	CO_2 emission factor arising from use of fuels in baseline Scenario
Source of data	IPCC defaults for wood and charcoal, the following defaults derived from the IPCC shall be applied: Wood: 112 tCO2/TJ Charcoal: 165.22 tCO2/TJ (includes charcoal production emissions)
Value(s) applied	Wood: 112
Choice of data or Measurement methods and procedures	Default methodology value for fuelwood is applied
Purpose of data	Calculation of baseline scenario

[16] https://opendata-analytics.org/2021/08/ubos-national-house-survey-2020/

Additional comment	-

Data/parameter	$EF_{b,f,non\text{-}CO2}$
Unit	tCO_{2e}/TJ
Description	Non-CO_2 emission factor from use of fuels, in case the baseline fuel is biomass or charcoal
Source of data	IPCC defaults for woody biomass, the following defaults derived from the IPCC shall be applied: AR5 GWP - Wood: 9.46 tCO2e/TJ - Charcoal: 44.83 tCO2e/TJ (includes production emissions of CH4 and N2O)
Value(s) applied	Wood: 9.46
Choice of data or Measurement methods and procedures	Default methodology value for biomass or charcoal is applied
Purpose of data	Calculation of baseline scenario
Additional comment	-

Data/parameter	ηwb
Unit	Percentage
Description	The weighted average efficiency of the baseline water boiling devices. Calculate the weighted average of the water boiling efficiency in the project boundary using the proportion of different stove types used and the stove efficiencies.
Source of data	As per methodology Emission Reductions from Safe drinking water supply version 1.0, the following default values may be applied to calculate the weighted average of the water boiling efficiency in the project boundary:

	- Three-stone fire or a conventional system for woody biomass lacking improved combustion air supply mechanism and flue gas ventilation system, that is without either a grate or a chimney: default efficiency 10%. – Other conventional systems using woody biomass: default efficiency 20%. - Improved cookstoves: manufacturer specification, or if not available, default efficiency 30%.
Value(s) applied	10%
Choice of data or Measurement methods and procedures	The baseline survey showed that the cookstove used in the baseline scenario is three stone fire cookstove and conventional mud stoves As per the methodology Emission Reductions from Safe Drinking Water Supply (version 1.0) both three-stone fire stove and conventional mud stoves qualify to have an efficiency value of 10% as they lack improved combustion air supply mechanism or flue gas ventilation system.
Purpose of data	Calculation of Baseline scenario
Additional comment	This parameter is fixed Ex-ante & shall be updated at CP renewal.

Data/parameter	C_b
Unit	Percentage
Description	Proportion of project end-users who in the baseline were already using safe water, either from an improved water source, or from a water treatment method other than boiling
Source of data	Baseline survey
Value(s) applied	7%
Choice of data or Measurement methods and procedures	The percentage of households who avail safe drinking water before project activity is 7% (8HH/114HH) which includes 62.5% (5HH/8HH) HHs boiling water whereas 37.5% (3HH/8HH) drink unsafe water directly without any treatment.
Purpose of data	Calculation of baseline scenario

Additional comment	The safe water sources and percentages shall be consistent with the information reported for parameter Water sources in the project boundary (SWDS 5). According to the applied methodology, the percentages applied shall be cross-checked against at least one other source on the list. For cross-check purposes, sources applied may be up to 5 years old. In this project the cross-check document is WHO/UNICEF Joint Monitoring Programme for Progress on Household Drinking Water, Sanitation and Hygiene, 2000-2020. The report shows only 17% of the population in Uganda has access to safely managed drinking water services. The literature available is for entire Uganda which includes both rural and urban populations. Therefore, use of 7% for rural population in western Uganda based on baseline survey is appropriate. This parameter is fixed Ex-ante & shall be updated at CP renewal.

Data/parameter	q_i
Unit	Litres per hour
Description	Capacity of the household or institutional water treatment technology
Source of data	Manufacturer specifications/ Design specifications
Value(s) applied	Purifaaya Regular- 5 (average of 4.5-5.5)
Choice of data or Measurement methods and procedures	-
Purpose of data	Calculation of baseline scenario
Additional comment	This depends on water filtration device model and fixed for each model introduced. The capacity of the water treatment technology will help in calculating the amount of water treated. This parameter is fixed Ex-ante & shall be updated at CP renewal.

Data/parameter	$f_{NRB,f,y}$
Unit	Percentage
Description	Fractional non-renewability status of woody biomass fuel during year y, in case the baseline fuel is biomass
Source of data	Assessment based on CDM Methodological tool 30: Calculation of the fraction of non-renewable biomass, Version 03.0
Value(s) applied	90%
Choice of data or Measurement methods and procedures	Assessment based on CDM Methodological tool 30: Calculation of the fraction of non-renewable biomass, Version 03.0 Other reference documents: 2019 Refinement to IPCC 2006 Global Forest Resources Assessment 2020 Uganda Global Forest Resources Assessment 2015 Forest Product Conversion Factors 2020 FAOSTAT on Forest Production and Trade (http://www.fao.org/faostat/en/#data/FO) WWF-Uganda Strategic Plan (2021-2025)[17] Forest Landscape Restoration Opportunity Assessment Report for Uganda (2016)[18]
Purpose of data	Calculation of baseline scenario
Additional comment	The f_{NRB} value will remain fixed during the crediting period.

D.2 Data and parameters monitored

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SDG 13

[17] https://wwfafrica.awsassets.panda.org/downloads/uganda_strategy_final_draft_indd_v3_indd_with_director_s_message__1_.pdf?uNewsID=36742

[18] https://portals.iucn.org/library/sites/library/files/documents/2016-076.pdf

Data/parameter	$X_{cleanboil,y}$
Unit	Percentage
Description	Proportion of project end-users that boil safe (treated, or from safe supply) water after installation of project technology in year y.
Source of data	Project survey
Value(s) applied	VPA 2- 0% VPA 3- 0%
Measurement methods and procedures	A combined project and usage survey has been carried out to determine the value using sampling plan mentioned in Section D.4 of the Design reviewed VPA-DD
Monitoring Frequency	Annual
QA/QC Procedures	-
Purpose of data	Calculation of baseline emissions
Additional comment	For sampling, follow section D.4 of the Design reviewed PDD

Data/parameter	$M_{q,y}$
Unit	Fraction
Description	Ongoing water quality indicated as the fraction of the samples that pass microbial quality standard requirements specified in relevant microbial quality standard for drinking water of the host country. In case a national standard is not available, the water quality shall comply with WHO Guideline values for verification of microbial quality i.e., all water directly intended for drinking must not have detectable E.Coli in any 100 ml sample i.e., less than 1 Colony Forming Unit (CFU) of E.Coli /100 ml
Source of data	Testing of water at the exits of the treatment technology for a representative sample of end-users
Value(s) applied	VPA 2- 1 VPA 3- 1

Measurement methods and procedures	The water samples were tested in an accredited laboratory for microbial contamination. All the samples complied with the Uganda National water Standard
Monitoring Frequency	Annual sampling, and the first round of testing was conducted at least after six months from the start date.
QA/QC Procedures	1. Laboratory used for water quality testing is approved by local health authorities and/or have quality accreditation; and 2. The Chemiphar laboratory is a well-recognized lab and has adequate quality management plan in place which addresses both quality assurance and quality control test procedures. 3. The project Followed 4.2 |General requirements for sampling of the methodology. The sampling results satisfy the minimum 90/10 rule.
Purpose of data	To meet claims under SDG 6.1.1. Level of Service and Project contributions: Water quality
Additional comment	If the proportion of samples not meeting Safe Drinking Water Quality Standards exceeds a threshold, no emission reductions will be claimed for the corresponding monitoring period. Thresholds: - Project or VPA year 1: 20% - Project or VPA year 2: 15% - Project or VPA year 3 or above: 10% When the crediting period is renewed, the year number count continues, i.e. the second crediting period would encompass year 6, year 7, year 8, etc. Additionally, when the threshold is exceeded, the project shall provide an explanation for why this occurred and provide a remediation plan.

Data/parameter	QPW_P
Unit	Liters/person/day
Description	Volume of drinking water per person per day for premises type p
Source of data	Option 2. Water Consumption Field Tests. As per methodological tool: Emission reductions from Safe Drinking Water Supply version 1.0
Value(s) applied	VPA 2- 4.47 VPA 3- 4.47

Measurement methods and procedures	WCFT (Water Consumption Field Tests) have been conducted to measure the project supplied clean water consumption values. All values for WCFT are capped at 5.5 l/person/day The WCFT was conducted with the end-users' representative of the project scenario target population and currently using the project technology. The WCFT was designed in a way to ensure that monitoring is representative of typical technology use practices that: - WCFT was transparent and can be easily replicated - it was evidently conservative - sample were randomly selected so as to not introduce a material bias and, - the impact of daily and seasonal variations on the expected average water consumption was accounted during WCFT. The WCFT was conducted for over a period of 4 days, not including weekends and averaged value (l/person/day) was determined after outliers were excluded. The sample size for WCFT was conducted for 31 different households (minimum sample size for WCFT is 30 households).
Monitoring Frequency	Every two years
QA/QC Procedures	-
Purpose of data	Calculation of baseline scenario
Additional comment	The VPA implementer (SPOUTS International) also captured the source of water (Unimproved/Improved) during the time of WCFT. All the beneficiaries selected for the WCFT (31 samples) were found using unimproved sources on all the 3 WCFT days.

Data/parameter	Replacement of filter pot
Unit	-
Description	Filter pot replacement of the Purifaaya regular water filter
Source of data	SPOUTS database

Value(s) applied	663
Measurement methods and procedures	The project implementer (SPOUTS) has maintained a database regarding the date of distribution of water filters to different households of western Uganda. SPOUTS shall replace the water filter every 4 years in order to ensure that the end-users are supplied with clean drinking water beyond 4 years without disruption.
Monitoring Frequency	Every 4 years
QA/QC Procedures	-
Purpose of data	Ensure that end-users are provided with clean drinking water
Additional comment	In the current monitoring period SPOUTS team has already replaced 663 filter pots of the beneficiaries. These filter pots that got damaged accidentally which were replaced by the SPOUTS team and have been reported under Repair and Maintenance. The SPOUTS team replaced the filter pot in order to ensure that the beneficiaries continue to receive uninterrupted supply of safe drinking water from the water filters.

Data/parameter	$N_{p,y}$
Unit	Number
Description	Accumulated number of premises type p with at least one individual project technology in year y
Source of data	Sales or distribution records
Value(s) applied	VPA 2- 17,491 VPA 3- 12,510
Measurement methods and procedures	The no. of units distributed have been recorded under HWT in the distribution database.
Monitoring Frequency	Annual
QA/QC Procedures	Sales or distribution records to include i. Date of sale/distribution ii. Geographic area of sale iii. Model/type of project technology sold iv. Quantity of project technologies sold

	Name and telephone number, and address (if available) or other traceable indicator of premises identity and location for all end users.
Purpose of data	Calculation of baseline emissions
Additional comment	Units shall not be counted in $N_{p,y}$ after the end of their technical life, unless this is addressed by the measures to manage the cases where the expected technical life of the project technology is shorter than the crediting period, namely replacement or retrofit as described in the parameter SDWS 7.

Data/parameter	$U_{p,y}$
Unit	Percentage
Description	Usage rate of the project technology by premises type p during year y
Source of data	Project Survey of the premises using a project technology to determine the usage rate of the project technology during the year.
Value(s) applied	VPA 2- 94% VPA 3- 94%
Measurement methods and procedures	Option 1: In-person survey of project premises. Households that show at least once-in-two-days use may be counted as users. The resulting fraction is multiplied by 100% to get Up,y. Where project technologies of different ages are being credited, the sample shall be representative of the distribution of project technology ages. The minimum sample size for HWT - for individual technology age group shall be minimum 30 household.
Monitoring Frequency	Annual
QA/QC Procedures	Where a WCFT is undertaken to determine QPW_p, this may be used to cross check the usage percentage.
Purpose of data	Calculation of baseline emissions

Additional comment	The usage survey provides a single usage parameter that is representative for project technologies in the total sales record. Based on visual inspection carried out by the enumerators (during the combined project and usage survey) a non-functional borehole was identified in the vicinity of 6 end-users (living in Nyakahama village of Nyantungo subcounty). Though these beneficiaries reported using unimproved water source during Combined Usage and Project survey, these 6 beneficiaries have been rendered as non-users while estimating the usage fraction (as the borehole is situated near their households) for conservative estimation of emission reductions.

Data/parameter	$DP_{p,y}$
Unit	Days
Description	Average days the project technology is present for end-users in the premises p in year y
Source of data	Sales or distribution records.
Value(s) applied	VPA 2- 398 VPA 3- 398
Measurement methods and procedures	Based on the distribution records and the ex-ante parameter "Expected technical life of project technology" it has been determined for each project device within the premises for how many days of the 365 days of the year it was in the premises and within its technical life. The average for all the project technology by premises type p has been calculated to obtain this parameter.
Monitoring Frequency	Annual
QA/QC Procedures	-
Purpose of data	Calculation of baseline emissions
Additional comment	The non-operational days have been discounted while estimating the average technology days (for the 0 beneficiaries who reported instances of breakages in the current MP) and the crediting start date for each beneficiary is next day of the water filter installation.

Data/parameter	$t_{p,y}$
Unit	Hours per day
Description	Usage time of the project technology by premises type p in year y
Source of data	Project survey
Value(s) applied	VPA 2- 7.57 VPA 3- 7.57
Measurement methods and procedures	Determined via project survey using Option 1: Observational sample-based survey of project household practices.
Monitoring Frequency	Annual
QA/QC Procedures	-
Purpose of data	Calculation of baseline emissions
Additional comment	-

Data/parameter	$DN_{p,y}$
Unit	Number
Description	Average number of individual project technologies in each project premises type p in year y
Source of data	Sales or distribution records.
Value(s) applied	VPA 2- 1 VPA 3- 1
Measurement methods and procedures	Based on the sales or distribution records of "Quantity of project technologies sold" and identifying information of buyer/recipient, the average number of project devices per premises has been calculated. As the project covers many households, the average number must be determined per premises type p.
Monitoring Frequency	Annual
QA/QC Procedures	-

Purpose of data	Estimation of CO_2e emission reductions
Additional comment	Applies to HWT project

Data/parameter	$HN_{p,y}$
Unit	-
Description	Number of individuals per premises type p in the project boundary in year y
Source of data	Published Literature[19]
Value(s) applied	VPA 2- 5.65 VPA 3- 5.65
Measurement methods and procedures	Sampling for project survey has been carried out following the General requirements for sampling as per section D.4 of the MR. In the context of western Uganda, the government sources indicate a household size of 5.65 whereas the combined project and usage survey reports a value of 6.13 for household size. Therefore, in order to be conservative a household size value of 5.65 has been considered.
Monitoring Frequency	Annual
QA/QC Procedures	The value applied has been cross-checked against at least one other source on the list. For cross-check purposes, sources applied are be up to 5 years old. For this project, the value has been cross checked with the project survey results carried out during first monitoring and a conservative value has been applied during Performance review.
Purpose of data	Calculation of baseline emissions
Additional comment	-

[19] Report by Ignosi Research, 2019-2020

Data/parameter	Water hygiene education campaigns
Unit	-
Description	Hygiene campaigns carried out among project safe water end-users.
Source of data	Report of annual hygiene campaigns results
Value(s) applied	2
Measurement methods and procedures	The following guidelines have been applied while conducting the annual water hygiene campaigns -The project developer has reported the activities conducted each year in a detailed "Report of annual hygiene campaigns results" and summarized the results in section D.4 of the MR. - The detailed method used to assess hygienic handling of clean water has been provided with the PDD for verification by the VVB. - The details of the method have been adjusted to suit the circumstances of the project and also to suit learning year on year. The impacts of the hygiene campaign have been assessed using the WHO/UNICEF Joint Monitoring Programme Core questions for drinking water and hygiene to determine the fraction of the households where Safe water and Hygiene practices are found to fulfill "safely managed" or "basic" requirements. In-person or telephone or by messaging (e.g. text, app) based survey shall be conducted covering all the JMP core questions for drinking water and core questions for hygiene. Further details on sampling have been mentioned in Section D.4 of the MR. In the current monitoring period SPOUTS conducted two In-person hygiene campaigns (September 2023 and March 2024) to generate awareness about the importance of washing hands with soap in the western region of Uganda.
Monitoring Frequency	Annual
QA/QC Procedures	The fraction of the households where Safe water and Hygiene practices are found to fulfill "safely managed" or

	"basic" requirements is expected to increase over time as a result of the hygiene campaigns.
Purpose of data	Monitoring of SDG 6
Additional comment	-

SDG 3: Good Health and Well-being

Data/parameter	SDG 3.9
Unit	Percentage
Description	Decrease in number of family members visiting the medical facilities for pollution-related inconveniences like itchy eyes and breathing problems and water borne diseases
Source of data	The benefit has been estimated from project survey with a randomly selected number of beneficiaries
Value(s) applied	VPA 2- 99 % VPA 3- 99 %
Measurement methods and procedures	The value has been established based on Sampling Survey across a randomly selected number of beneficiaries conducted as per details mentioned in Section D.4 of the MR. The result has been applied to all the beneficiaries of the project activity
Monitoring Frequency	Annual
QA/QC Procedures	-
Purpose of data	Monitoring of SDG 3
Additional comment	-

SDG 5: Gender Equality

Data/parameter	SDG 5.4
Unit	Hours/week
Description	Average time saving associated with cooking and fuel collection
Source of data	Monitoring Survey

Value(s) applied	VPA 2- 3.32 VPA 3- 3.32
Measurement methods and procedures	This parameter has been monitored as part of the monitoring survey. Users who have saved time after the project implementation have been asked to participate. This parameter has been calculated from reduction in weekly rounds for collection of firewood and approximate time taken for one round of visit.
Monitoring Frequency	Annual
QA/QC Procedures	Sampling for the survey has been carried out for randomly selected beneficiaries. Further details on sampling are mentioned in section D.4 of the MR.
Purpose of data	Monitoring of SDG 5
Additional comment	The parameter has been measured qualitatively.

SDG 6: Clean Water and Sanitation

Data / Parameter	SDG 6.1
Unit	-
Description	Number of households served with safely managed water services
Source of data	Calculated
Value(s) applied	VPA 2- 15,285 VPA 3- 10,932
Measurement methods and procedures	Using formula, Np,y*(1-Cb)*Up,y*Mq,y
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitoring of SDG 6.1
Additional comment	-

SDG 7: Affordable and Clean Energy

Data / Parameter	SDG 7
Unit	-
Description	No. of operational WPS
Source of data	SPOUTS Database
Value(s) applied	VPA 2- 16,436 VPA 3- 11,755
Measurement methods and procedures	The number of WPS operational ($U_{p,y}$) has been monitored through project survey and results applied to the total WPS distributed under the project activity
Monitoring frequency	Annual
QA/QC procedures	-
Purpose of data	Monitoring of SDG 7
Additional comment	663 WPS have been replaced under the current monitoring period therefore, the VPA implementer (SPOUTS International) has ensured that the beneficiaries received uninterrupted supply of safe drinking water throughout the monitoring period.

SDG 8: Decent Work and Economic Growth

Data / Parameter	SDG 8.5
Unit	-
Description	Total no of jobs created
Source of data	SPOUTS Database
Value(s) applied	VPA 2- 45 (26 males and 19 females) VPA 3- 16 (7 males and 9 females)
Measurement methods and procedures	SPOUTS has maintained a record of jobs created during different phases of the project activity as a result of implementation of this programme in form

	employee/consultant list/ payroll system/ contracts/ pay slips
Monitoring frequency	Annual
QA/QC procedures	Employment created under different categories eg. Full time, part time, consultant etc. will be recorded
Purpose of data	Monitoring of SDG 8
Additional comment	-

D.3. Comparison of monitored parameters with last monitoring period

Data/Parameter	Value obtained in this monitoring period	Value obtained last monitoring period
$X_{cleanboil,y}$	VPA 2- 0% VPA 3- 0%	VPA 2- 0% VPA 3- 0%
$M_{q,y}$	VPA 2- 1 VPA 3- 1	VPA 2- 1 VPA 3- 1
QPW_P	VPA 2- 4.47 VPA 3- 4.47	VPA 2- 4.52 VPA 3- 4.52
$N_{p,y}$	VPA 2- 17,491 VPA 3- 12,510	VPA 2- 17,491 VPA 3- 12,510
$U_{p,y}$	VPA 2- 94% VPA 3- 94%	VPA 2- 94.0% VPA 3- 94.0%
$DP_{p,y}$	VPA 2- 398 VPA 3- 398	VPA 2- 310 VPA 3- 233
$HN_{p,y}$	VPA 2- 5.65 VPA 3- 5.65	VPA 2- 5.65 VPA 3- 5.65
SDG 3.9	VPA 2- 99% VPA 3- 99%	VPA 2- 99.1% VPA 3- 99.1%
SDG 5.4	VPA 2- 3.32 VPA 3- 3.32	VPA 2- 2.46 VPA 3- 2.46
SDG 6.1	VPA 2- 15,285 VPA 3- 10,932	VPA 2- 15,293 VPA 3- 10,938
SDG 8.5	VPA 2- 45	VPA 2- 45

	VPA 3- 16	VPA 3- 16

D.4. Implementation of sampling plan

>> **Sampling Methodology**

Western region of Uganda has a homogeneous distribution of the population over the country with a majority of the population belonging to lower middle class. Due to the homogeneous feature of the programme, the simple random sampling method has been applied throughout both the VPAs. Cross-VPA sampling was applied between the VPAs (VPA-2 and VPA-3) and a 95/10 precision was employed.

Sampling Size

As the population in the western region of Uganda is homogeneous with respect to continued use of the water purifiers therefore simple random sampling has been carried out to estimate the proportion of water purifiers still in operation. A statistically valid sample has been used to determine the parameter values, as per the relevant requirements for sampling in the "Guidelines for sampling and surveys for CDM project activities and programme of activities". Minimum 95% confidence interval and 10% margin of error has been achieved for the sampled parameters. For proportion parameter values, a minimum sample size of 30, or the whole group size if the size is lesser than 30, has been applied.

The following table has been used to arrive at the sample size for the parameters (unless the sample size has been specifically stated by the methodology)

Group Size	Minimum Sample Size
<300	30 or population size, whichever is smaller
300-1000	10% of group size
>1000	100

Sampling frames

Sample frame for the both the VPAs (for selecting samples) to conduct monitoring consists of all the rural households in western Uganda whose end-user details (including the location and phone number) have been recorded in the SPOUTS database.

Justification for Simple Random Sampling

The survey employed simple random sampling approach to randomly choose areas/villages within the districts. Random sampling also ensured that the results captured the diversity of the communities which represent commonly observed fuel choices.

Survey Implementation schedule

The surveys were conducted for collecting details about the monitoring parameters. The overall monitoring and implementation of sampling was coordinated by SPOUTS and the management staff. Further, the survey of representative sample for the parameters was carried out by the distributor together with SPOUTS.

All efforts of sampling have been conducted by qualified personnel who have undergone training as part of the programme. All the persons who carry out sampling plan are required to speak the native language(s) allowing for a full understanding of any responses given by users and any questions therein. The date of monitoring has been recorded in the VPA databases.

Results of Cross-VPA Sampling

The results of cross VPA sampling (VPA-2 and VPA-3) for various parameters/ surveys have been summarized below:

Parameter/ Survey	Sample Requirement (as per the methodology)	Number of samples finally

		surveyed/collected by the enumerator
Combined project and usage survey[20]	**Project Survey**= 100 **Usage Survey**= 30 Total sample requirement = 100	120
WCFT	30	31
$M_{q,y}$	30	39

The samples are meeting the required reliability criteria of 95/10 for cross VPA sampling (for VPA-2 and VPA-3) i.e. 95% confidence and 10% precision.

Oversampling during Monitoring

Oversampling has been done during monitoring. The purpose of doing oversampling is to compensate any attrition, outliers or non-response associated with the sample and to also avoid any situation at the analysis stage where the required reliability is not achieved and additional sampling efforts would be required.

SECTION E. CALCULATION OF SDG IMPACTS

E.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

>>

SDG 13

The transparent ex-post calculations for SDG 13 have been given in the ER sheets uploaded on the GS registry for performance review.

[20]As per the methodology the minimum sample size for usage survey is 30 while the sample size for project survey is 100. During monitoring a combined usage and project survey has been conducted on a sample size of 117 thereby doing an oversampling for both usage as well as project survey.

The baseline emissions have been calculated as follows:

$$BE_y = EF_b \times (1 - C_b - X_{cleanboil,y}) \times Q_y \times M_{q,y}$$

Where:

BE_y	=	Baseline emissions from the use of fuel to obtain safe water in the baseline (tCO_2e)
C_b	=	Proportion of project end-users who in the baseline were already using a safe water supply that did not require boiling (%)
$X_{cleanboil,y}$	=	Proportion of project end-users that boil safe water in the project year y (%)
Q_y	=	Quantity of safe drinking water provided by the project in year y (L)
$M_{q,y}$	=	Modifier for the water quality in year y

The baseline emission factor shall be calculated as

$$EF_b = SE_{w,b,y} * \Sigma(xf * (EF_{b,f,CO2} * f_{NRB,f,y} + EF_{b,f,nonCO2})) \; f \div 10^9$$

Where:

EF_b	=	Emission factor for the use of fuel to obtain safe water in the baseline (tCO2e/L)
$SE_{w,b,y}$	=	Specific energy required to boil water (kJ/L), to be calculated as per the paragraph below
x_f	=	Proportion of fuel f used in the baseline (fraction determined based on an energy basis)
$EF_{b,f,CO2}$	=	CO2 emission factor from use of fuel f (tCO2/TJ)
$EF_{b,f,nonCO2}$	=	Non-CO2 emission factor arising from use of fuel f, when the baseline fuel f is biomass or charcoal (tCO2e/TJ). This parameter is omitted when f is a fossil fuel.
$f_{NRB,f,y}$	=	Fractional non-renewability status of woody biomass fuel during year y (fraction). For biomass, it is the fraction of woody biomass that can be established as non-renewable. This parameter is omitted when f is a fossil fuel.
f	=	Index for baseline fuel types

The specific energy required to boil water using the baseline technology (SEw,b,y) is determined as follows, by calculating the energy input required to obtain 1 L of boiling water, including boiling and vaporization losses, taking into account default or measured stove efficiency.

$SE_{w,b,y}$ = 360.83/ηwb

Where:

360.83 = Default amount of energy required to obtain 1 L of water after 5 minutes of boiling from a first principles approach kJ/l

ηwb = Efficiency of the stoves for baseline water boiling (%). Weighted average of baseline stove types.

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

Where:

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

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

$QPWhh,p,y$ = min $((qi \times tp,y \times DNp,y), (QPWp \times HNp,y))$

Where:

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

Given below are sample baseline calculations for VPA 2 and VPA 3:

Parameter	Description	Units	Value	Equation used/Source

$SE_{w,b,y}$	Specific energy required to boil water	KJ/l	VPA 2: 3608.3 VPA 3: 3608.3	$SEw,b,y = 360.83/\eta w$
n_w	Efficiency of the stoves for baseline water boiling	%	VPA 2:10% VPA 3: 10%	Methodology default value for three stone fire stove and conventional mud stove (lacking improved combustion)
x_f	Proportion of fuel f used in the baseline (fraction determined based on an energy basis)	%	VPA 2:100% wood VPA 3: 100% wood	Baseline survey/Literature
$fNRB_{b,i,y}$	Fraction of biomass used in the year y for baseline scenario b that can be established as non-renewable	Fraction	VPA 2: 0.9 VPA 3: 0.9	Calculated as per CDM Tool 30, version 3.0
$EF_{p,i,CO2}$	CO_2 emission factor of the fuel that is substituted or reduced	tCO2/TJ	VPA 2: 112 VPA 3: 112	Methodology default IPCC value
$EF_{p,i,non\text{-}CO2}$	Non-CO_2 emission factor of the fuel that is reduced	tCO2/TJ	VPA 2: 9.46 VPA 3: 9.46	Methodology Default Value
EF_b	Emission factor for the use of fuel to obtain safe water in the baseline	tCO2/TJ	VPA 2: 0.000398 VPA 3: 0.000398	$EFb = SEw,b,y * \sum(xf * (EFb,f,CO2 * fNRB,f,y + EFb,f,nonCO2)) f \div 10^9$
$U_{p,y}$	Cumulative usage rate for technologies in project scenario p in year y	%	VPA 2: 94.2% VPA 3: 94.2%	Monitored
$N_{p,y}$	Number of premises type p with at least one project technology in year y	-	VPA 2: 17,491 VPA 3: 12,510	Monitored

$DP_{p,y}$	Days the project technology is present for end-users in the premises p in year y		VPA 2: 398 VPA 3: 398	Monitored
$QPW_{hh,p,y}$	Volume of drinking water per person per premises p per day in year y (L)	L/HH/day	VPA 2: 25.24 VPA 3: 25.24	Monitored
QPW_p	Volume of drinking water per person per day for premises type p (L)	L	VPA 2: 4.47 VPA 3: 4.47	Monitored
$HN_{p,y}$	Number of individuals per premises type p in year y		VPA 2: 5.65 VPA 3: 5.65	Literature/ Project Survey
q_i	Capacity of the HWT or IWT individual project technology	L/h	VPA 2: 5 VPA 3: 5	Manufacturer's specification
$t_{p,y}$	Usage time of the project technology by premises type p in year y	h/day	VPA 2: 7.57 VPA 3: 7.57	Monitored
Q_y	Quantity of safe drinking water per provided by the project in year y	L	VPA 2: 165,081,591 VPA 3: 118,070,575	$Qy = \sum Np,y \times Up,y \times QPWhh,p,y \times DPp,y$
C_b	Proportion of project end-users who in the baseline were already using a safe water supply that did not require boiling	%	VPA 2: 7% VPA 3: 7%	Baseline Survey
$X_{cleanboil,y}$	Proportion of end-users that are using safe water in the project year y	%	VPA 2: 0% VPA 3: 0%	Monitored
$M_{q,y}$	Modifier for water quality in year y	Fraction	VPA 2: 1 VPA 3: 1	Monitored

BE	Baseline Emissions	tCO2	VPA 2: 61,068 VPA 3: 43,685	$BE = EF_{b*} (1-C_b-X_{cleanboil,y})*Q_y*M_{q,y}$

Therefore, the emissions in the baseline are 61,068 tCO2e (for VPA 2) and 43,685 tCO2e (VPA 3). Please refer the ex-post ER sheet for detailed calculations.

SDG 3

In the baseline scenario the households are using non-renewable biomass (firewood for boiling water) and drinking untreated water. Therefore, in the baseline scenario the households in the western region of Uganda have reported symptoms of water borne diseases such as diarrhea, vomiting, stomach cramps and nausea due to drinking untreated water and suffering from symptoms such as itchy eyes and breathing problems due to indoor air pollution caused due to burning of fuelwood for boiling water.

SDG 5

In the baseline scenario the households were dependent on firewood for boiling water and the women (primarily women) had to fetch firewood in order to boil water for drinking.

SDG 6

In the baseline scenario, the households did not have access to safe drinking water for drinking purposes. The households were dependent on unimproved water for drinking purposes.

SDG 7

In the baseline scenario the 'Purifaaya Water Filter' had not been distributed. The water filters have been distributed during the project activity therefore none of the households had a water filter before the project was implemented.

SDG 8

No carbon related employment opportunities had been created before the implementation of project activity.

E.2. Calculation of project value or estimation of project situation of each SDG Impact

>>

SDG 13

The 'Purifaaya Regular' water filter does not require any fossil fuel or power consumption for carrying out filtration hence the project emission due to the water filter would be zero (for both VPA-2 and VPA-3)

PE_y= Project Emissions in year y (tCO2/year) =0

SDG 3

After 'Purifaaya Regular' water filter has been distributed, the households are purifying water obtained from unimproved sources. The fine micropores of the 'Purifaaya Regular' filter have been removing the germs present in the unimproved water thereby providing them safe water for drinking. 99.2% households in western region of Uganda have therefore reported a reduction in symptoms of diarrhea, vomiting, stomach cramps and nausea due to drinking safe water and reduction in symptoms such as itchy eyes and breathing problems due to air pollution caused by burning of fuelwood for boiling water.

SDG 5

After the 'Purifaaya Regular' water filter distribution, the households (primarily the women) have reported a drastic reduction in the time spent by the women in collecting firewood for boiling water. Therefore, the households in western region of Uganda have been able to save 1.50 hours/week after the implementation of the project are being utilized for productive activities.

SDG 6

After the 'Purifaaya Regular' water filter distribution, the households have access to safe water for drinking purposes. The number of households that have access to safe drinking water under the VPA has been calculated using the following formula:

SDG 6 contribution =Np,y*(1-Cb)*Up,y*Mq,y

Where:

Np,y = Accumulated number of premises type p with at least one individual project technology in year y

Cb = Proportion of project end-users who in the baseline were already using safe water, either from an improved water source, or from a water treatment method other than boiling

Up,y = Usage rate of the project technology by premises type p during year y

Mq,y = Ongoing water quality indicated as fraction of samples that pass microbial quality standard requirements specified in the relevant microbial quality standard for drinking water of the host country.

The SDG-6 contribution of the VPA has been calculated as follows:

$N_{p,y}$	C_b	$U_{p,y}$	$M_{q,y}$	SDG-6
VPA 2: 17,491 VPA 3: 12,510	VPA 2: 7% VPA 3: 7%	VPA 2: 94.2% VPA 3: 94.2%	VPA 2: 1 VPA 3: 1	VPA 2- 15,285 VPA 3- 10,932

SDG 7

VPA	Number of CEPs disseminated	Usage Rate	Number of active CEPs
VPA -2	17,491	94.2%	16,436
VPA-3	12,510	94.2%	11,755

Therefore, for VPA-2 out of 17,491 CEPs disseminated around 16,436 are active CEPs.

Whereas for VPA-3 out of 12,510 CEPs disseminated around 11,755 are active CEPs.

Please refer 'SDG tab' of the ex-post ER calculation sheet for detailed calculations on the number of active CEPs disseminated under the project (for VPA 2 and VPA 3)

SDG 8

The project implementation has generated various employment opportunities. The SPOUTS database reveals that the project has generated 45 employment opportunities for VPA-2 and 16 employment opportunities under VPA-3.

E.3. Calculation of leakage

>>

The VPAs have assessed the leakage related to non-renewable biomass as follows (other leakages have been excluded for simplification). SPOUTS has evaluated ex-ante the sources of leakage and provided an evidence-based description and preliminary quantification of each leakage source and its relevance for the project:

a) Since the non-renewable biomass is available in abundance in the project geographical area (as evident from fNRB), it was highly unlikely that the use of non-renewable biomass increased among the members of the population who did not participate in the project, and were previously using lower emitting energy sources.

b) The purpose of the project was reducing the use of NRB that was being used in cookstoves for boiling water and is after project implementation, water purifiers are being used which do not require any NRB or any other fuel for its operations. The project actually helped in relatively increasing the NRB fraction in that area. Therefore, the condition that the project involves reducing the NRB fraction within an area where other GHG mitigation project activities account for NRB fraction in their baseline scenario is not applicable, hence no leakage emissions.

c) The project population is in the area where the annual average temperature is above 20°C. Hence there was no requirement to compensate for loss of the space heating effect of water boiling by adopting some other form of space heating or by retaining some baseline wood fuel-burning practices.

Therefore, leakage emissions have been considered nil and ignored for the project activity. per section 3.8.3 of the methodology, "If the ex

Further, as -ante evaluation shows that leakage emissions are less than 5% of total emission reductions, then no monitoring is needed, and emission reductions simply shall be adjusted 5% down." Therefore, the Emission reductions have been adjusted by 5% to account for leakage emissions. The leakage has been accounted in the baseline calculation and there is no separate calculation for leakage.

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

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
SDG 13	Emission Reductions	VPA-2= 58,014 VPA 3= 41,500	-	VPA 2= 58,014 VPA 3= 41,500
SDG 3	Reduce Illnesses and Deaths from Hazardous Chemicals and Pollution. Health Quality Improvement (Qualitative assessment)	-	VPA 2=99.2% VPA 3=99.2%	VPA 2= 99.2% VPA 3= 99.2%
SDG 5	Average time saving associated with boiling water and fuel collection	-	VPA 2: 3.32 VPA 3: 3.32	VPA 2: 3.32 VPA 3: 3.32
SDG 6	Proportion of population served with safely managed water services	-	VPA 2: 15,285 VPA 3: 10,932	VPA 2: 15,285 VPA 3: 10,932
SDG 7	No of WPS operational at any time in the VPA	-	VPA 2: 16,436 VPA 3: 11,755	VPA 2: 16,436 VPA 3: 11,755
SDG 8	Total number of jobs created	-	VPA 2: 45 VPA 3: 16	VPA 2: 45 VPA 3: 16

The values mentioned above can be traced in the 'SDG tab' of the 'Ex-post ER calculation sheet'.

E.5. Comparison of actual SDG Impacts with estimates in approved PDD

SDG	Values estimated in ex ante calculation of approved PDD for this monitoring period	Actual values[21] achieved during this monitoring period
SDG13	VPA 2: 62,045 tCO_2e VPA 3: 62,079 tCO_2e	VPA 2: 58,014 tCO_2e VPA 3: 41,500 tCO_2e
SDG 3	VPA 2: 80% reduction VPA 3:80% reduction	VPA 2: 99% reduction VPA 3: 99% reduction
SDG 5	VPA 2: 1.30 hours/HH/week VPA 3: 1.30 hours/HH/week	VPA 2: 3.32 hours/HH/week VPA 3: 3.32 hours/HH/week
SDG 6	VPA 2: 16,275 VPA 3: 16,275	VPA 2: 15,285 VPA 3: 10,932
SDG 7	VPA 2: 17,500 WPS VPA 3: 17,500 WPS	VPA 2: 16,436 WPS VPA 3: 11,755 WPS
SDG 8	VPA 2: 45 jobs (26 males and 19 females) VPA 3: 16 jobs (9 females and 7 males)	VPA 2: 45 jobs VPA 3: 16 jobs

E.5.1. Explanation of calculation of value estimated ex ante calculation of approved PDD for this monitoring period

>>

The ex-ante estimates were based on a pilot study however, for ex-post purposes, the VPA implementer has carried out a combined project and usage survey to estimate the value of the SDGs.

E.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD

>>

[21] Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

The values for SDG 3 and SDG 5 have increased when compared to the values of the approved PDD

Given below is a table to compare the values for SDG 3 and SDG 5:

SDG	Value during current monitoring period	Value stated in the approved PDD
SDG 3	99%	80%
SDG 5	3.32 hours/week	1.30 hours/week

Reason for increase in value of SDG 3 and SDG 5:
The impact of using a water filter is usually observed after some time. The households were able to clearly observe and report the benefits of the water filter with the passage of time.

The awareness campaigns by SPOUTS also played an important role in bringing about lifestyle changes in the VPA specific region of western Uganda thereby increasing the achieved SDG 3 during the monitoring period as compared to the value listed in the VPA-DD.

The households observed that there is reduction in the time of fuel collection which was required for cooking and boiling of water for drinking in the baseline pre-project scenario. It has been observed that there is an average 1.50 hour/Week reduction in fuel collection time during the current Monitoring period. Since for majority of HH fuel collection is done by the woman of the family, Therefore, it promotes SDG 5.

Further, the samples considered in approved PDD were only few samples selected for pilot study whereas the samples actually monitored during current MP are randomly selected following the "Guidelines for sampling and surveys for CDM project activities and programme of activities" and minimum 95% confidence interval and 10% margin of error has been achieved for the sampled parameters, resulting in more reliable estimates.

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SECTION F. SAFEGUARDS REPORTING

Assessment Questions/ Requirements	Justification of Relevance (Yes/potentially/no)	How Project will achieve Requirements through design, management or risk mitigation.	Mitigation Measures added to the Monitoring Plan (if required)
Principle 1. Human Rights			
1. The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights 2. The Project shall not discriminate with regards to participation and inclusion	Yes	The project will be implemented in collaboration with local partners and SPOUTS will respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Right. The project will not discriminate with regards to participation and inclusion.	Not required

		The end-users have formally agreed that they are voluntarily: participating in the water filter distribution activity, agreeing to transfer the credits generated due to the water filters, providing personal details such as GPS location, photographs and contact details. Therefore, the beneficiaries are willingly receiving products (ceramic water filters from the project implementer) after the information about the benefits of the water filter has been disseminated by the project implementer – SPOUTS. SPOUTS shall follow a systematic approach of identifying beneficiaries based on the baseline survey carried out in the region and it shall be ensured that there is no discrimination in the process of water filter distribution to the beneficiaries	

		Further, as the safeguarding principle is relevant in the context of the project, the CME has sought expert opinion for the same.	
Principle 2. Gender Equality			
1. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women 2. Projects shall apply the principles of nondiscrimination, equal treatment, and equal pay for equal work 3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks 4. (where required) Summary of opinions and recommendations of an Expert Stakeholder(s)	Yes	The project activity doesn't endorse any form of discrimination based on gender. Water Purification Systems (WPS) will be distributed to all willing customers within the project boundary. The project will have a positive impact on women considering that they will spend less time on boiling water for treatment or walking for miles to collect water and fuel. The projects shall apply the principles of non-discrimination and would pay equally to people employed. The Government of Uganda prioritizes gender equality as a cross cutting enabler for socio-economic transformation as mentioned	Not required

		in Uganda Gender Policy (2007) [22] Therefore, the water filter distribution project has a positive impact on the principle of gender equality and it ensures that no form of gender-based discrimination is reinforced. Further, as safeguarding principle 2 is relevant in the context of the project the CME has sought expert opinion for the same.	
Principle 3. Community Health, Safety and Working Conditions			
1. The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community	No	The project doesn't expose the community to increased health risks and is not adversely affecting the health of workers and the community. Use of WPS will contribute in improving the health of users as compared to baseline by	N/A

[22] http://extwprlegs1.fao.org/docs/pdf/uga163564.pdf#:~:text=The%20Uganda%20Gender%20Policy%20%282007%29%20socio-cultural%2C%20economic%20and,agency%20which%20is%20the%20ability%20to%20influence%20outcomes.

		reducing the smoke from baseline stoves used to boil water and decrease in chances of water-borne diseases through an efficient and zero GHG emission device. The workers participating in the project activity are not exposed to unsafe or unhealthy work environments as the sale/distribution of WPS or the monitoring activities of the project will not include any hazardous chemicals or other hazardous material. The water filter distribution project has a positive impact on the health of the community as the end-users are getting safe drinking water due to water filter installation and are no more drinking water directly from unimproved sources. Further, the project implementer is also providing repair and maintenance services to the beneficiaries thereby providing the community with	

		uninterrupted supply of safe drinking water. Further as the safeguarding principle 3 is relevant in the context of the project, the CME has sought expert opinion for the same.	
Principle 4.1 Sites of Cultural and Historical Heritage			
Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture?	No	Since this is a WPS project distributed to households, there is no risk to cultural, historical, traditional or religious values.	N/A
>>			
Principle 4.2 Forced Eviction and Displacement			
Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	No	Since this is a WPS project at household level, there is no risk of forced eviction and displacement.	N/A
>>			
Principle 4.3 Land Tenure and Other Rights			
a. Does the Project require any change, or have any uncertainties related to land	No	Since this is a WPS distribution project, there is	N/A

tenure arrangements and/or access rights, usage rights or land ownership? b. For Projects involving land use tenure, are there any uncertainties with regards to land tenure, access rights, usage rights or land ownership?		no risk of uncertainty due to land rights/ownership.	
>>			
Principle 4.4 - Indigenous people			
Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?	No	Since this is a safe water supply project at household level, there is no risk to land/territory claimed by indigenous people. Safe water devices will be distributed to all willing customers within the project boundary.	N/A
>>			
Principle 5. Corruption			
1. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects	Yes	SPOUTS will ensure that the project doesn't involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects. Further, the CME has sought expert opinion for principle 5.	Not required
Principle 6.1 Labour Rights			

1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions 2. Workers shall be able to establish and join labour organisations 3. Working agreements with all individual workers shall be documented and implemented and include: a) Working hours (must not exceed 48 hours per week on a regular basis), AND b) Duties and tasks, AND c) Remuneration (must include provision for payment of overtime), AND d) Modalities on health insurance, AND	Yes	1. The project is implemented by SPOUTS an Africa based organization in collaboration with other project partners. The project employment will be in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions. 2. The workers employed by SPOUTS for the project are able to establish and join labour organizations. 3. The working agreements with the individual workers will be documented and implemented and the minimum requirements stated will be respected as applicable. 4. No child labour allowed in the project and the minimum age for employed or wages staff is above 18 years.	Not required

e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave. 4. No child labour is allowed (Exceptions for children working on their families' property requires an Expert Stakeholder opinion) 5. The Project Developer shall ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures		All the workers will be provided with appropriate equipment, training documentation and reporting of accidents and incidents, and emergency preparedness and response measures. All the labour hiring will be done on a contractual basis and remuneration will be provided in compliance with the host country's (Uganda) guidelines on labour wages. The water filter distribution project will ensure that there is no forced labour and all employment is in compliance with ILO (International Labour Organization) guidelines. The water filter distribution project will ensure that there is no forced labour and all employment is in compliance with ILO (International Labour Organization) guidelines.	

		Further the safeguarding principle 6.1 is relevant in the context of the project hence the CME has sought expert opinion for the same.	
Principle 6.2 Negative Economic Consequences			
1. Does the project cause negative economic consequences during and after project implementation? >>	No	The project involves sale of WPS to willing customers within the project boundary. Carbon revenues are important for creating awareness among the end users and strengthening the local sales and distribution services.	N/A
Principle 7.1 Emissions			
Will the Project increase greenhouse gas emissions over the Baseline Scenario? >>	No	The project will reduce the GHG emissions which will be monitored and verified in line with the GS4GG.	N/A
Principle 7.2 Energy Supply			
Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood,	No	The project does not use energy from a local grid or power supply. Use	N/A

biomass) that provides for other local users? >>		fuelwood for boiling water in baseline using traditional stoves will be significantly reduced by introducing WPS.	
Principle 8.1 Impact on Natural Water Patterns/Flows			
Will the Project affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity? >>	No	The project is a WPS distribution programme and will not affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity.	N/A
Principle 8.2 Erosion and/or Water Body Instability			
a. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? b. Is the Project's area of influence susceptible to excessive erosion and/or water body instability? >>	No	The project is a WPS distribution programme and will not directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion.	N/A

Principle 9.1 Landscape Modification and Soil			
Does the Project involve the use of land and soil for production of crops or other products? >>	No	The project is a WPS distribution programme and does not involve the use of land and soil for production of crops or other products.	N/A
Principle 9.2 Vulnerability to Natural Disaster			
Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions? >>	No	The project is a WPS distribution programme and will not be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions.	N/A
Principle 9.3 Genetic Resources			
Could the Project be negatively impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)? >>	No	The Project is not negatively impacted by the use of genetically modified organisms or GMOs.	N/A

Principle 9.4 Release of pollutants			
Could the Project potentially result in the release of pollutants to the environment? >>	No	The Project is a WPS distribution programme which result in zero GHG emission products and does not result in the release of pollutants to the environment	N/A
Principle 9.5 Hazardous and Non-hazardous Waste			
Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials? >>	No	The Project does not involve the manufacture, trade, release, and/or use of hazardous chemicals and or materials.	N/A
Principle 9.6 Pesticides & Fertilisers			
Will the Project involve the application of pesticides and/or fertilisers? >>	No	The project does not involve the application of pesticides and/or fertilisers.	N/A
Principle 9.7 Harvesting of Forests			
Will the Project involve the harvesting of forests? >>	No	The project does not involve the harvesting of forests.	N/A
Principle 9.8 Food			
Does the Project modify the quantity or nutritional quality	No	The project does not modify the quantity or nutritional	N/A

of food available such as through crop regime alteration or export or economic incentives? >>		quality of food available such as through crop regime alteration or export or economic incentives.	
Principle 9.9 Animal husbandry			
Will the Project involve animal husbandry? >>	No	The project does not involve animal husbandry.	N/A
Principle 9.10 High Conservation Value Areas and Critical Habitats			
Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified? >>	No	The project is a WPS distribution programme and does not physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified.	N/A
Principle 9.11 Endangered Species			
a. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? b. Does the Project potentially impact other areas where	No	The project boundary is geographical sites of WPS distributed and there are no endangered species identified as potentially being present within the Project boundary.	N/A

endangered species may be present through transboundary affects?			
>>			

TEMPLATE

SECTION G. STAKEHOLDER INPUTS AND LEGAL DISPUTES

G.1. List all Inputs and Grievances which have been received via the Continuous Input and Grievance Mechanism together with their respective responses/mitigations.

>>

Method	Include all details of Chosen Method (s) so that they may be understood and, where relevant, used by readers.
Continuous Input / Grievance Expression Process Book (mandatory)	SPOUTS, the in-country project owner, has been managing the concerns/inputs/support needs as part of the Grievance/Continuous Input Mechanism. The Stakeholders have been reaching out to SPOUTS through the contacts regional offices with designated persons at these offices and, also have a Grievance book which is being used to take note of concerns/inputs/support needs.
GS Contact (mandatory)	help@goldstandard.org Gold Standard's telephone number is: +41 (0) 22 788 7080
Other	To facilitate the flow of information stakeholders the following local phone numbers are being used; Ronald Ampaire, Business Intelligence Specialist (SPOUTS International): +256 (0) 75 775 9533 – Mobile & WhatsApp +256 (0)78 739 2327 – Mobile Email addresses: Ronald Ampaire ronaldampaire@spouts.org Daniel Yin

danyin@spouts.org

G.2. Report on any stakeholder mitigations that were agreed to be monitored.

>>

NA

G.3. Provide details of any legal contest that has arisen with the project during the monitoring period

>>

No legal contest has arisen with the VPA during the current monitoring period.

There were 663 grievance requests related to the replacement of the product received during the current MP which were replaced by the SPOUTS team.

Revision History

Version	Date	Remarks
1.1	14 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Section for POA monitoring Forward action request section Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on safeguard reporting Clarity on design changes Leakage section added for VER/CER projects Addition of Comparison of monitored parameters with last monitoring period Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.0	10 July 2017	Initial adoption