

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

SECTION A - Description of project

SECTION B - Implementation of project

SECTION C - Description of monitoring system applied by the project

SECTION D - Data and parameters

SECTION E - Calculation of SDG Impacts

SECTION F - Safeguards Reporting

SECTION G - Stakeholder inputs and legal disputes

KEY PROJECT INFORMATION

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

GS ID of Programme	GS3698
Title of Programme	Native Energy Clean Water Programme South East Asia (GS 3698)
Version of POA-DD applicable to this monitoring report	Version 05
Name and GS ID of fully Validated CPA/VPAs (i.e. non compliance check)	Native Energy Clean Water Programme South East Asia: NE_VPA 01_IND; GS 3964

Key Project Information

GS ID (s) of Project (s)	GS 3964
Title of the project (s) covered by monitoring report	Native Energy Clean Water Programme South East Asia: NE_VPA 01_IND
Version number of the PDD/VPA-DD (s) applicable to this monitoring report	Version 05
Version number of the monitoring report	Version 03
Completion date of the monitoring report	01/07/2021
Date of project design certification	03/06/2019
Date of Last Annual Report	N/A
Monitoring period number	1 st monitoring period
Duration of this monitoring period	01/05/2019 – 30/04/2020
Project Representative	Native Energy
Host Country	The Republic of India
Activity Requirements applied	☒ Community Services Activities ☐ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A
Methodology (ies) applied and version number	Technologies and Practices to Displace Decentralized Thermal Energy Consumption 11 th February 2011 Version - 2.2

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
SDG 13: climate action	Emission reductions	6,225	tCO2e
	Volume of water consumed.	7	l/p/d
	Number of people trained in water filtration technology	23	Number of people
SDG 3: Ensure healthy lives and promote well-being for all at all ages	Perceived change in air quality	100% reduction in smoke levels, coughing and itchy eyes.	Percentage
	Reduction in water borne diseases.	99% reduction	Percentage
	Number of filters sold	726	Filters
SDG 6: Ensure availability and sustainable management of water and sanitation for all	Number of People trained on water, hygiene and sanitation management	23	Number of people
SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	Income generation	55,000	Rs
	Number of people employed	5	Number of people

Table 2 – Product Vintages

		Amount Achieved		
Start Dates	End Dates	VERs	...	...
01/05/2019	31/12/2019	4,167		
01/01/2020	30/04/2020	2,058		

SECTION A. DESCRIPTION OF PROJECT

A.1. General description of project

>>

NE – VPA 01 – IND herein after referred to as the project activity, is centered on the introduction of zero energy water filters for point of use application to replace the use of wood fuels for water treatment and in the alternative alleviate situations of suppressed demand where raw water is consumed but would have been boiled in the absence of both the project activity and prevailing energy poverty barriers. In so doing the project activity is designed so as to abate greenhouse gas emissions, Indoor air pollution as well as to reduce the pressure on non-renewable biomass resources within the project boundary.

The project activity seeks to distribute approximately 1,629 filters in the specific districts in Jharkhand and West Bengal states in the Republic of India. These districts are East of Medinipur, North 24 Parganas, South 24 Parganas in West Bengal state and Ranchi, Ghumla and Khunti districts in Jharkhand state. The project qualifies as sectoral Scope 03, Type III project activity. As a gold standard micro scale project activity, the VPA shall generate greenhouse gas emissions 9,784 tCO₂e per annum.

(a) Implementation Status of the Project:

1. Start date of the project is 13/01/2018, which is the date when the first filter sale was made.
2. The 1st LSC meeting was conducted on 05/12/2014 and the additional LSC meeting was held on 08/12/2014 during the design change process.

3. Registration Date –03/06/2019
4. This is the 1st periodic monitoring period, and which is from the 01/05/2019 – 30/04/2020.
5. Monitoring survey was conducted between 05/02/2020- 15/02/2021.

(b) Total GHG emission Reductions or net anthropogenic GHG removals by sinks achieved in this monitoring period

The total GHG emission reductions achieved in this monitoring period (between 01/05/2019 to 30/04/2020) is 6,225 tCO₂e.

A.2. Location of project

>>

The VPA will be implemented in the states of West Bengal and Jharkhand, Districts of Ranchi, Khunti, Gumla, Tamluk, North 24 Parganas and South 24 Parganas regions of the Republic of India as shown in the co-ordinates below.

State	District	Coordinates
Jharkhand	Ranchi	23.3500° N, 85.3300° E
	Khunti	23.0140° N, 85.2724° E
	Gumla	23.0000° N, 84.5000° E
West Bengal	Tamluk	22.3000° N, 87.9200° E
	North 24 Parganas	22.1300° N, 88.5000° E
	South 24 Parganas	22.5300° N, 88.3300° E



Figure 1: Map of India highlighting project boundary.

A.3. Reference of applied methodology

>> The project is eligible under the GS methodology: Technologies and Practices to Displace Decentralized Thermal Energy Consumption 2011¹, Version 2.2.

Other Gold Standard tools and annexes included in the project development include:

¹ <https://www.goldstandard.org/resources/energy-requirements>

1. Guidelines for carrying out usage surveys for projects implementing household water filtration technologies ²

A.4. Crediting period of project

>> The fixed 10-year crediting period started on 01/05/2019 and will end on 30/04/2021. The breakdown of this has been provided below:

MP 1 – 01/05/2019 – 30/04/2020

MP 2 – 01/05/2020 – 30/04/2021

MP 3 – 01/05/2021 – 30/04/2022

MP 4 – 01/05/2022 – 30/04/2023

MP 5 – 01/05/2023 – 30/04/2024

MP 6 – 01/05/2024 – 30/04/2025

MP 7 – 01/05/2025 – 30/04/2026

MP 8 – 01/05/2026 – 30/04/2027

MP 9- 01/05/2027 – 30/04/2028

MP 10- 01/05/2028 – 30/04/2029

² <https://www.goldstandard.org/wp-content/uploads/2011/09/Rule-Update-Guidelines-for-carrying-out-water-usage-surveys.pdf>

SECTION B. IMPLEMENTATION OF PROJECT

B.1. Description of implemented project

>> The project activity sold the first filter on 13/01/2018. As of 30/04/2020, a total of 726 filters had been sold. All the filters are installed within the states of West Bengal and Jharkhand in India which is the project boundary and are thus eligible for crediting. The PP shall ensure that the emission reductions for this monitoring period doesn't exceed 10,000 tCO₂e, which is the maximum amount credible in a year for microscale projects. Each filter distributed under NE_VPA 01_IND has a tag/sticker containing a unique number which identifies the filter and can be tracked against other data such as the end username and location. Records of sales were recorded in electronic format by the VPA operator as well as the Carbon Asset developer. At point of the installation of the filter, households were required to relinquish rights to carbon credits by signing VER transfer agreements.

There were filter repairs done for some clients as indicated on the logbook in section G1. For the filters with broken outlet pipes, they were replaced with new ones whereas the filters with cracks were repaired to avoid leakage during filtration. This maintenance activities were minor and hence the households continued using the filters as they awaited repairs.

Description of the Hydrad BioSand Water Filter

The Hydrad BioSand Water Filter is an effective and sustainable point of use water filtration system that provides a family of about 8 – 10 persons in developing countries with enough safe water to meet all their daily domestic water consumption needs.

The project technology is based on patented technology and diligent research. Native Energy, the filter distributor, possesses a global network of partners for installation, education, maintenance and support and has the potential to bring the same health gains seen in US cities in the early 20th century to individuals, families and communities in developing countries, with the potential to save a million or more lives annually.

The water filter consists of enclosed layers of sand, gravel and a biological surface layer that consumes pathogens to clean water. It has no moving parts and is powered by gravity. The water filter has a conservative lifetime of 10 years.

The HydrAid unit offers an affordable, efficient and easy-to-use alternative for water purification within the areas in which the project activity is located.



Figure 2: HydrAid BioSand filter and safe water collection pot

The benefits of the BioSand Water Filter include:

- Proven removal of parasites, viruses and bacteria;
- High user acceptability, due to ease of use and minimal effect on water taste;
- Includes materials that are locally sourced;
- One-time installation with minimal maintenance needed; and
- Long life (10+ years).

NYDHEE is the local implementer, dealing in the local management of the project. NYDHEE employs and trains personnel who are responsible for installation of the filters, conducting follow-up on end users and undertaking monitoring exercises.

B.1.1. Forward Action Requests

>>

FAR 1

The CME shall monitor the wood fuel consumption for boiling water in the project scenario.

As evidenced by monitoring survey summary submitted, during the project scenario, no household has reverted to boiling water hence no wood fuel was measured. PP had sought clarification from the GS as follows and given the response as below;

FAR 1

The CME shall monitor the wood fuel consumption for boiling water in the project scenario.

Clarification

To fulfill this FAR can we only do fuel wood consumption for the households that will be boiling water in project scenario. We can do this during the 1st monitoring survey we conduct and not do this in the subsequent monitoring surveys. Please clarify.

Response from the GS

Both fine to address the FARs but we can only make final decision when receive details.

Based on findings of the monitoring survey exercise, and the previous response received from the GS, GS to advice final decision for this.

Email conversation has been submitted as evidence labelled '*FAR on measuring amount of wood in the project scenario.*'

FAR 2

During monitoring period, PP shall conduct WBT in dry season too to demonstrate that amount of fuel wood to boil one litre of water will not change through season. If any finding on variation through season, conservative value shall be adopted for ER claiming.

PP conducted 10 additional baseline surveys during the dry season. Approval to conduct only 10 survey has been submitted as evidence labelled '*Approval for 10 surveys for BWBT*'. From the results, the amount of wood required during the dry season is 593.9 grams which is higher than 395.3g from the results obtained from 150 households where BWBT was previously conducted. PP has adopted 395.3g which is the conservative figure to calculate Ers.

FAR 3

As per GS's email on 9 July 2014, the water quality tests should show compliance to at least the manufacturer's specifications on performance of the filters.

As per manufacturers specifications, the filter is supposed to remove 98.7% of the bacteria³. Water quality was assessed using Aquagenx kits where the results showed that there was absence of E. coli in 135 out of 136 samples of water collected i.e., 135 households had 0 E. coli in their filtered water. This shows the filters are producing filtered water which meets manufacturers specifications. Only 1 household was not able to meet the specifications as it had presence of E. coli in its filtered water. The results are recorded in water quality tab of the Er Calculations and Monitoring Survey summary_27.03.21 excel sheet.

FAR 4

It's requested to provide supporting documents/excel sheet to demonstrate

$Bb,y=3.94$ during next verification

PP has provided an excel sheet summary 'GS 3964 Validated ERs' tab inputs which demonstrate Bb,y value of 3.940779915. This figure is calculated using both values obtained during baseline survey, and conservative estimates for values which would have to be got from verifications. Values are as follows;

Parameters obtained during baseline survey exercise; GS 3964 Baseline testing has been provided as a support document.

N – average number of persons per household – 5.5- tab 'Baseline Survey Analysis'

Cj – proportion of users who in the baseline were already consuming clean water without boiling it – 0.7 –tab 'baseline cj'.

Wi,y – Quantity of fuel in tons used to boil 1 litre of water tab 'BWBT Analysis'.

³ <https://www.hwts.info/products-technologies/07e65cbc/hydrad-biosand-filter/technical-information>

Conservative Estimates

$Q_{p,y}$ – Quantity of safe water consumed in the project scenario -5/l/p/d

$Q_{p,rawboil,y}$ – Quantity of raw water boiled in the project scenario – 0l/p/d

Therefore;

$$B_{b,y} = (1 - C_j) * N_{j,y} * W_{i,y} * (Q_{p,y} + Q_{p,rawboil,y})$$

$$(1 - 0.7\%) * 2007.5 * 0.000395 * (5 + 0) = 3.940779915$$

B.2. Post-Design Certification changes

>>

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

>>

The PP requested for approval to postpone the monitoring activities for the project for this monitoring period covering from 01/05/2018 to 30/04/2020, and the physical surveys shall be completed before the lapse of the Interim measures in September 2020.

Below is a summary of recommendations given and how they were met;

1. WATER QUALITY TEST:

While all other monitoring parameters can be postponed, Project Developer shall carry remote surveys to assess the water quality of the units distributed. Project Developer shall include the following qualitative criteria for Water Quality–

- Reported incidence of water borne disease in child/members in last 30 days
- User satisfaction
- Level of hygiene including but limited to Hand washing & Safe storage practices being followed.

The above criteria shall be included in the survey questionnaires and the results recorded. If for a particular household/school, the answer to any of the above criteria indicates that the treated water may not be fit for consumption, the household/schools shall be considered not providing safe drinking water and failing the water quality test. For

example, if any incidence of water borne disease is reported in last 30 days the water quality should be assumed as not meeting the requirements and the emission reductions shall be discounted accordingly.

Project Developer shall carry out a Water Quality Test as per the approved monitoring plan within three months of end of the interim measure validity date or earlier, where possible.

All the above requirements were included in the surveys. Below is a summary of the findings.

Parameter		Results	Percentage of samples			Explanation of results	Analysis
Incidence of water borne diseases	Yes	13	10%			There are 13 out of 136 households who have had incidence of water borne diseases	Non-Users
	No	123	90%			There are 123 out of 136 households who have not had any incidence of water borne diseases	Users
	Total	136	100%				

Level of satisfaction	Highly satisfied	128	94%			There are 128 out of 136 households who are highly satisfied with the use of the filter	100% Usage
	Moderately satisfied	7	5%			There are 7 out of 136 households who are moderately satisfied with the use of the filter	
	Not satisfied	1	1%			There are 1 out of 136 households who are moderately satisfied with the use of the filter	Non-Users
	Total	136	100%				

Hygiene practices	Yes	136	100%			There are 136 out of 136 households who reported practicing hygiene practices	Users
	No	0	0%			There are 0 out of 136 households who reported practicing hygiene practices	Non-Users
	Total	136	100%				
Presence or absence of E.Coli	Present	1	1%			1 out of 136 households had presence of Ecoli in their water.	Non-User
	Absent	135	99%			135 out of 136 households had 0.Ecoli in their water	User
	Total	136	100%				

Users/ non- users	Users	123.00	0.904411765	This includes households who have not experienced any water borne diseases related to consumption of contaminated water. All households are highly satisfied and moderately satisfied thus considered as users. All households were practicing hygiene practices. all households with absence of E.Coli.			
	Non-Users	13.00	9.56%	This includes households have experienced water borne diseases, households who reported not satisfied with the filter and households who do not practice hygiene practices and households with E.Coli.			
	Total	136.00	100%				

B.2.2. Corrections

>> None

B.2.3. Changes to start date of crediting period.

>> No Changes

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

>> No changes made.

B.2.5. Changes to project design of approved project

>>No changes

SECTION C. DESCRIPTION OF MONITORING SYSTEM APPLIED BY THE PROJECT

>> The monitoring plan in this project activity includes continuous and periodic updates of the following records:

- a) Total sales Record
- b) VPA Database
- c) Ongoing Monitoring Survey.

a) Total Sales Record

An accurate and complete sales record has been maintained by the project proponent and backed up electronically by ClimateCare Limited, the carbon asset development consultant. As illustrated in the Total Sales record used in this monitoring exercise, which is attached as an appendix to this monitoring report, it is developed in accordance with the selected baseline and monitoring methodology which is required the following data:

- 1) Date of sale
- 2) Geographic area of sale
- 3) Model/type of project technology sold
- 4) Quantity of project technologies sold
- 5) Name and telephone number and address:
- 6) Mode of use: domestic, commercial or other:
- 7) Unique Filter serial number

b) Project Database

The Project Database is a combination of data from the Total Sales Record and on-going Monitoring Surveys. It is divided into Baseline Emission Reductions and Project Emission Reductions, based on the results of the ongoing monitoring studies for the Project Scenario. This is done so that emission reductions can be calculated appropriately section by section. Technologies aged beyond their useful lifetime or no longer in use, as established in the usage survey, are removed from the Project Database and no longer credited.

1. On-going Monitoring Studies

The monitoring exercise was a combination of the usage survey, monitoring survey and the Water consumption field test (WCFT). A total of 137 households were

randomly selected (please refer to the sampling plan detailed under section D4 of this MR) with each vintage year having more than 30 households selected in line with the GS guidelines. This project has only one vintage year where all the 137 samples were selected.

a) Monitoring Survey- Completed annually, beginning 1 year after project registration. It is conducted to investigate changes over time in the Project Scenario by surveying end users with project technologies on an annual basis. The project participant conducted the annual monitoring surveys which were used to investigate annual changes in the project scenario. The monitoring period in this exercise is from 01/05/2019 to 30/04/2020. The parameters assessed in these surveys include:

- i. Usage rate in project scenario
- ii. Quantity of safe water in litres consumed in the project scenario p and supplied by project technology per person per day.
- iii. Quality of the treated water
- iv. The raw or unsafe water that is still boiled after installation of the water treatment technology
- v. Quantity of safe (treated, or from safe supply) water boiled in the project scenario p, after installation of project technology.

b) Usage Survey- Completed annually, or more frequently, and in all cases on time for any request of issuance. The usage survey in this monitoring exercise provides a single usage parameter that is weighted based on drop off rates that are representative of the age distribution for project technologies in the total sales record. The usage parameter in the usage survey shall be based on users who completely abandon use of the filter and those that do not properly use or maintain the filter which could affect the quality of water treated. This survey was carried out using closed questionnaires and spot checks. The usage survey in this monitoring period was held between 05/02/2020- 15/02/2021. Out of 136 samples selected, 135 were deemed as users. Results are as follows;

Usage Survey Analysis	
Users	135
Non-users	1
Sample Size	136
Usage Rate (Up,y)	99.26%

c) Project Field Test Update- This is completed every other year. The project technology will not have any material changes throughout the crediting period and given the fact that it is a zero-energy technology, the PFT will focus primarily on an age test, water quality test and details of increased sales within the crediting period.

d) Water Quality Test - The PP collected samples from each household which had been selected as a sample unit from technology specific sampling frame. Each sample of filtered water was tested for presence or absence of E. coli using the Aquagenx CBT kit. At a central field laboratory, all the samples were tested, and results recorded for each individual sample. This ensured that the PP's water quality testing was representative and robust. Field laboratory testing was selected because it allows for near immediate testing without contamination or any other distortion from the transportation to laboratories. The use of field laboratory tests is approved in the methodology and is a commonly accepted international approach. PP also included qualitative questions on the survey questionnaire to further investigate water quality. Results were as follows;

	Parameter	Results	Percentage of samples		Explanation of results	Analysis
Incidence of water borne diseases	Yes	13	10%		There are 13 out of 136 households who have had incidence of water borne diseases	Non-Users

	No	123	90%		There are 123 out of 136 households who have not had any incidence of water borne diseases	Users
	Total	136	100%			
Level of satisfaction	Highly satisfied	128	94%		There are 128 out of 136 households who are highly satisfied with the use of the filter	100% Usage
	Moderately satisfied	7	5%		There are 7 out of 137 households who are moderately satisfied with the use of the filter	
	Not satisfied	1	1%		There are 1 out of 136 households who are moderately satisfied with the use of the filter	Non-Users
	Total	136	100%			
Hygiene practices	Yes	136	100%		There are 136 out of 136 households who reported practising hygiene practices	Users

	No	0	0%		There are 0 out of 136 households who reported practising hygiene practices	Non-Users
	Total	136	100%			
Presence or absence of E.Coli	Present	1	1%		135 out of 136 households had 0 E.coli in their water	Users
	Absent	135	99%		1 out of 136 households had presence of E.coli in their water	Non-User
	Total	136	100%			
Users/ non-users	Users	90.44 %	This includes households who have not experienced any water borne diseases related to consumption of contaminated water. All households are highly satisfied and moderately satisfied thus considered as users. All households were practising hygiene practices and all households with absence of E. Coli.			
	Non-Users	9.6%	This includes households have experienced water borne diseases, households who reported not satisfied with the filter and households who do not practice hygiene practices and all households with presence of E. Coli.			

e) Leakage Assessment - As demonstrated in section B.3 of the PDD, there are no perceived leakage risks for this parameter.

The core of the methodology prescribes possible parameters that should be evaluated for leakage emissions as below;

Traditional fuel wood consumption was mainly restricted to the domestic setting it is highly unlikely that fuel wood consumption in regions outside the target area will increase.

a) The displaced baseline technologies are reused outside the project boundary in place of lower emitting technology or in a manner suggesting more usage than would have occurred in the absence of the project.

Traditional fuel wood consumption was mainly restricted to the domestic setting it is highly unlikely that fuel wood consumption in regions outside the target area will increase. The project activity will not displace the baseline technology but rather, it seeks to displace the baseline practice of boiling water. Therefore, there is minimal risk of the baseline technologies being reused outside the project boundary.

b) The non-renewable biomass or fossil fuels saved under the project activity are used by non- project users who previously used lower emitting energy sources.

Fuel wood previously used was sourced or obtained individually and domestic fuel wood consumption is a function of market forces of demand and supply. There is no indication that the fuel wood consumption would increase amongst non-project users who previously relied on lower-emitting sources.

c) The project significantly impacts the NRB fraction within an area where other CDM or VER project activities account for NRB fraction in their baseline scenario. This is a micro-scale VPA and will hence have minimal aggregate effect on the total NRB fraction in respective countries in which the VPAs are to be implemented with regards to other CDM or VER project activities baseline scenario.

d) The project population compensates for loss of the space heating effect of inefficient technology by adopting some other form of heating or by retaining some use of inefficient technology.

The project is located in Jharkhand and West Bengal, both locations which are fairly warm and do not need space heating. The average temperature in Jharkhand is 33 degrees⁴ while the average temperature in West Bengal is 31degrees⁵.

⁴ <https://www.worlddata.info/asia/india/climate-jharkhand.php>

⁵ <https://www.worlddata.info/asia/india/climate-west-bengal.php>

Also, this project is a water filtration project and thus baseline stoves are still retained by households to use for other uses like cooking. As a result, the households even with the water filter, will continue using the baseline stove. only the practice of boiling water is replaced so space heating will continue like before during those other activities like cooking.

e) By virtue of promotion and marketing of a new technology with high efficiency, the project stimulates substitution within households who commonly used a technology with relatively lower emissions, in cases where such a trend is not eligible as an evolving baseline.

The Hydrad BioSand Water Filter are zero energy technologies that will provide an alternative to boiling water using fuel wood. Most of the households targeted boiled water using fuel wood. There is no envisioned scenario where these consumers will substitute fuel wood to a technology with lower emissions because of promotion of the BioSand filter.

Leakage = 0

As demonstrated in the registered VPA DD as well as this monitoring report, there are no perceived leakage risks for this parameter.

f) Non-Renewable Biomass Assessment Update - The NRB assessment update will not occur for the project given its fixed baseline and the fact that the project scale is not large enough to affect the national NRB fraction.

g) Registration with other Carbon standards - The project is not registered with any other carbon standard and hence there is no likelihood that double counting would occur. Additionally, each filter is provided with a unique serial number which gives a distinction on the end users to ensures there is no double counting.

h) Hygiene Campaigns –During the monitoring survey exercise, the enumerators sensitized the importance of maintaining hygiene to all the 136 households that were selected on the sample frame.

Water Consumption Field Test Protocol Report:

The WCFT took place over a 3-day period for each household with functional water filters. The WCFT exercise is conducted biennially hence the results used for this monitoring period were for the WCFT exercise for the previous monitoring period done between dates 27/02/2020 to 15/02/2021. The PP limited the water measured to the water used for cooking, personal hygiene (washing hands) and drinking only as per the Gold Standard requirements. The households were instructed to keep this water measured separate from water used for other uses to maintain the integrity of the exercise.

The enumerators used calibrated containers with different capacities to measure the volume of water. The capacities ranged between 5 litres to 20 litres. to measure the volume of water. The water is measured before pouring into the buckets that the households use on their daily routine. Water from the bucket is then poured into the filter.

Day 1: Surveys and Introduction

The PP executed the Usage surveys, SD assessments assessment and other non-field exercise surveys for the same sampling frame as the WCFT per technology. The PP then informed households of the three-day WCFT exercise informing them to purify water as they normally do year-round. Households told the PP on the time which they would be purifying water every day, and specifically for the coming 3 days. The time reported was recorded to allow enumerators to go to households the following day before raw water is treated.

Day 2 – 4: WCFT exercise

Based on the schedule of respective households' water treatment, enumerators conducted a volumetric assessment for raw water before it is added to the HydrAid water filter. The enumerator recorded the value of raw water to be filtered prior to filtration. This assessment was conducted using volumetric container of a known volume. Raw water was measured prior to it either being filtered or boiled. The mean value of the total raw water (the total water filtered per day aggregated over a three-day period) was used to determine parameter $Q_{p,y}$ per household. This parameter was then aggregated (after elimination of outliers) to determine the value used to calculate Emission Reductions for the whole project per technology. The PP has demonstrated the determination of safe water consumed per person per day that is

provided from the filtration of water using the project technology. The parameter $Q_{p,y}$ has been determined to be 8.41 litres per person per day, which has been capped at 7 litres per person per day as recommended by the WHO.

Households that boil water to buffer their safe water supply were also considered. The raw water to be boiled was to be measured just as explained above, only in this case, the water would be measured prior to it being poured into the boiling pot. None of the households surveyed indicated that they boil additional raw water. Parameter $Q_{p,raw,boil}$ was therefore found to be 0 litres per person per day.

The PP also sought to find out households that boil water that has been filtered via the Hydrad water filter. From the findings, there were no households that reported to have this approach to water purification. Therefore, parameter $Q_{p, clean, boil}$ has been found to be 0 litres per person per day.

The WCFT recorded on a day to day basis - the number of people living in the household. This helped in the determination of $N_{p,y}$. The PP found that there was an average of 6.09 people per person per day using water from the Hydrad water filters. The WCFT used questionnaires incorporated into the monitoring surveys to quantify the parameters listed above.

No tests were conducted over the weekends or on public holidays. This is a conservative approach chosen to eliminate the likelihood of recording abnormally high-water consumption behavior common to weekends (children out of school, no work for some, etc.) and/or public holidays.

SECTION D. DATA AND PARAMETERS

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

>>

Relevant SDG Indicator	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Data/parameter:	EF_{b,fuel}, CO₂
Unit	tCO ₂ /TJ
Description	CO ₂ emission factor of the wood fuel

Source of data	2006 IPCC Default emission factors
Value(s) applied)	112
Choice of data or measurement methods and procedures	IPCC default values provide an accurate and conservative estimate of emissions reduction from various fuel sources.
Purpose of data	CO2 emission factor of the wood fuel
Additional comments	N/A

Relevant Indicator	SDG	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Data/parameter		EFb, fuel, CH4
Unit		tCO2/TJ
Description		CH4 emission factor of the wood fuel
Source of data		2006 IPCC Default emission factors
Value(s) applied		0.03
Choice of data or Measurement methods and procedures		IPCC default values provide an accurate and conservative estimate of emissions reduction from various fuel sources.
Purpose of data		Calculation of CH4 emission factor of the wood fuel
Additional comment		N/A

Relevant Indicator	SDG	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Data/parameter		EFb, fuel, N2O
Unit		tCO2/TJ
Description		CO2 emission factor of the wood fuel
Source of data		2006 IPCC Default emission factors
Value(s) applied		0.004
Choice of data or Measurement methods and procedures		IPCC default values provide an accurate and conservative estimate of emissions reduction from various fuel sources.
Purpose of data		Determining CO2 emission factor of the wood fuel
Additional comment		N/A

Relevant Indicator	SDG	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Data/parameter		f NRB,j,
Unit		Fraction
Description		Non-Renewable Biomass
Source of data		Literature Review
Value(s) applied		0.91
Choice of data or Measurement methods and procedures		Baseline Survey
Purpose of data		Non-Renewable Biomass
Additional comment		N/A

Relevant Indicator	SDG	SDG 13: Climate Action Target 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
Data/parameter		Bp
Unit		Tonnes
Description		Quantity of fuel consumed in project scenario p during the year y in tonnes
Source of data		Baseline Survey
Value(s) applied		0
Choice of data or Measurement methods and procedures		Assumed 100% displacement of fuel wood used for boiling water to make it safe for drinking
Purpose of data		Determining Quantity of fuel consumed in project scenario p during the year y in tonnes
Additional comment		N/A

Relevant Indicator	SDG	SDG 6: Clean Water and Sanitation Target 6.1 : By 2030, achieve universal and equitable access to safe and affordable drinking water for all
Data/parameter:	Cj	
Unit	Percentage	
Description	Expressed as a percentage, this is the portion of users of the project technology j or who in the baseline were already consuming safe water without boiling it	
Source of data	Baseline Survey	
Value(s) applied)	0.7%	
Choice of data or measurement methods and procedures	This value represents the percentage of the population within the project boundary that consumed clean water without boiling it in the baseline scenario.	
Purpose of data	Calculation of baseline and project emissions	
Additional comments	N/A	

D.2. Data and parameters monitored

>>

Relevant SDG Indicator	SDG 3: Good health and well being Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
Data / Parameter:	Up, y
Unit:	Percentage
Description:	Usage rate in project scenario p during year y
Measured/ Calculated / Default:	Calculated
Source of data:	Er Calculations and Monitoring Survey summary_27.03.21
Value(s) of monitored parameter:	99%
Monitoring equipment:	None
Measuring/ Reading/ Recording frequency:	Annually

Calculation method (if applicable):	The PP has provided excel based calculations that demonstrate the calculation of a single usage parameter. The PP determined the usage parameter by eliminating the non-users of the project technology from the sample frame and extrapolating to the entire Total sales record population.
QA/QC procedures:	The guidance questions in the usage survey section in the monitoring survey template clearly determined the operational and non-operational filters in the project scenario.
Purpose of data:	Calculations of total Emission reductions
Additional comment:	135 out of 136 filters from the sampled households were found to be users of the project technology.

Relevant SDG Indicator	SDG 6: Clean water and sanitation Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all
Data / Parameter:	Q, p,y
Unit:	Litres per person per day
Description:	Quantity of safe water in litres consumed in the project scenario p and supplied by project technology per person per day
Measured/Calculated Default:	Calculated
Source of data:	Er Calculations and Monitoring Survey summary_27.03.21
Value(s) of monitored parameter:	7.0 litres per person per day (8.41)
Monitoring equipment:	Calibrated measuring containers
Measuring/ Reading/Recording frequency:	Biennially
Calculation method (if applicable):	This was done in accordance to the methodological guidance of the Water. consumption field test. The PP conducted a 3-day assessment of water consumed from the filter. The PP only measured water that was to be used for cooking, drinking and personal hygiene as stipulated in the Gold Standard guidelines. The PP used a calibrated containers to measure the volume of water. The water is measured before pouring into the buckets that the households use on their daily routine. Water from the bucket is the poured into the filter to determine how much water the household would consume per day. The average volume over the 3-day period was used as the conservative estimate of water consumed from the filter per household per day

QA/QC procedures:	Enumerators went through training to ensure they conducted the WCFT in the most accurate way. They were also using calibrated measuring containers to determine how much water a household would use in a day from the Hydrad filter.
Purpose of data:	Calculation of baseline emissions
Additional comment:	The Qp,y was calculated at 8.51 but the PP capped this at 7.0 as recommended by WHO.

Relevant SDG Indicator	SDG 6: Clean water and sanitation Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all
Data / Parameter:	Quality of Treated Water
Unit:	MPN/100ml
Description:	Quality of filtered water
Measured/Calculated / Default:	Measured
Source of data:	Er Calculations and Monitoring Survey summary_27.03.21
Value(s) of monitored parameter:	Presence of E. coli = 1% Absence of E.coli = 99%
Monitoring equipment:	Aquagenx Field test kits
Measuring/ Reading/Recording frequency:	Annually
Calculation method (if applicable):	Using Aquagenx toolkit instructional manual for using the CBT. Of the samples collected, 135/136 (99%) had 0 E.coli and 1/136 of the samples were presence of E.coli. Therefore, the only water which was considered safe was water with less than 0cfu/100ml.
QA/QC procedures:	The monitoring team undergoes extensive training of how to use the Aquagenx CBT.
Purpose of data:	Gold Standards Sustainable Development monitoring.
Additional comment:	The Aquagenx field test kits have been used to determine quality of safe water. The PP has eliminated the 1 household with >0mpn/100ml.

Relevant SDG Indicator	SDG 6: Clean water and sanitation Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all
-------------------------------	--

Data / Parameter:	$Q_{p,rawboil,y}$
Unit:	Litres per person per day
Description:	The raw or unsafe water that is still boiled after installation of the water treatment technology.
Measured/Calculated / Default:	Calculated
Source of data:	Er Calculations and Monitoring Survey summary_27.03.21
Value(s) of monitored parameter:	0
Monitoring equipment:	3-day measurement using calibrated measuring containers.
Measuring/ Reading/Recording frequency:	Biennially
Calculation method (if applicable):	This was done in accordance to the methodological guidance of the Water consumption field test. The PP has provided the protocol followed in this monitoring report. The PP conducted a 3-day assessment of any raw water boiled. None of the households reported that they boil any raw water.
QA/QC procedures:	Measurements of water were based on calibrated containers
Purpose of data:	Calculation of baseline and project emissions.
Additional comment:	None

Relevant SDG Indicator	SDG 6: Clean water and sanitation Target 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all
Data / Parameter:	$Q_{p,cleanboil,y}$
Unit:	Litres per person per day
Description:	Quantity of safe (treated, or from safe supply) water boiled in the project scenario p, after installation of project technology
Measured/Calculated / Default:	Calculated
Source of data:	Er Calculations and Monitoring Survey summary_27.03.21
Value(s) of monitored parameter:	0
Monitoring equipment:	Monitoring surveys
Measuring/Reading/ Recording frequency:	Biennially

Calculation method (if applicable):	The PP had a question in the WCFT survey form seeking to know if the households boiled any water from the Hydrad filter. No Household interviewed boiled water from the Hydrad filter, and as such, the parameter value is 0.
QA/QC procedures:	Measurements of water would have been based on calibrated containers
Purpose of data:	Calculation of project emissions.
Additional comment:	None

Relevant SDG Indicator	SDG 3: Good health and well being Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases.
Data / Parameter:	Np, y
Unit:	Person.days
Description:	Number of persons consuming water supplied by project scenario p through year y
Measured/ Calculated / Default:	Calculated
Source of data:	Er Calculations and Monitoring Survey summary_27.03.21
Value(s) of monitored parameter:	2,224
Monitoring equipment:	Open ended question from the Monitoring surveys
Measuring/Reading/ Recording frequency:	Biennially
Calculation method (if applicable):	The date of installation of the filter shall be ascertained from the Total Sales record this shall be used to quantify the number of days in the crediting period within which the filter has been use. The monitoring survey determined the number of persons per household. The two variables shall be multiplied to get the person.days.
QA/QC procedures:	Clear question in the monitoring survey that sought to find out the number of persons per household.
Purpose of data:	Calculation of project emissions.
Additional comment:	None

Relevant SDG Indicator	SDG 13: Climate Action Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.
Data / Parameter:	Bby
Unit:	Tons

Description:	Quantity of wood fuel consumed in baseline scenario b during the year y in tons
Measured/Calculated / Default:	Calculated
Source of data:	Er Calculations and Monitoring Survey summary_27.03.21
Value(s) of monitored parameter:	6.11
Monitoring equipment:	N/A
Measuring/ Reading/ Recording frequency:	Annually
Calculation method (if applicable):	The parameter is a function of the C_j factor, N_{py} , $W_{ib,y}$, Q_{py} and $Q_{p\text{raw},\text{boil}}$ as shown in the equation below: $B_{by} = (1 - C_j) * W_{ib,y} * N_{p,y} * (Q_{py} + Q_{p\text{raw},\text{boil}})$
QA/QC procedures:	The variables were based on accurate monitored data as well as data fixed ex-ante. Additionally, the formula used is derived from the GS approved methodology "Technologies and practices to Displace Decentralized Thermal Energy Consumption"
Purpose of data:	Calculation of Baseline emissions.
Additional comment:	N/A

Relevant SDG Indicator	SDG 6: Ensure availability and sustainable management of water and sanitation for all Target 6.b.1: Support and strengthen the participation of local communities in improving water and sanitation management
Data / Parameter:	Number of People trained on water, hygiene and sanitation management
Unit:	Numeric figure
Description:	Describes the total number of people trained by the project on water, hygiene and sanitation improvement during the monitoring period.
Measured/Calculated / Default:	Calculated
Source of data:	GS 3864 Training records
Value(s) of monitored parameter:	23
Monitoring equipment:	Training records
Measuring/Reading/Recording frequency:	Annually

Calculation method (if applicable):	N/A
QA/QC procedures:	2 trainings on water, hygiene and sanitation improvement were conducted in this monitoring period. A total of 23 participants were trained on relevant topics on water, hygiene and filter use best practices. The participants included 6 women and 17 men. Training records have been provided as a support document. A refresher training was held through Skype between ClimateCare, Native Energy and the monitoring team. The agenda was to provide support to the team on how to undertake the monitoring survey and water testing.
Purpose of data:	Gold Standard sustainable development monitoring
Additional comment:	The PP has provided the training records as supporting evidence.

Relevant SDG Indicator	Goal 13: Take urgent action to combat climate change and its impacts Target 13.3: Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
Data / Parameter:	Number of filters sold
Unit:	Numeric figure
Description:	Change in Energy use as monitored by the number of water filters sold.
Measured/Calculated / Default:	Calculated
Source of data:	GS 3964TSR and Sample Frame
Value(s) of monitored parameter:	726 filters
Monitoring equipment:	N/A
Measuring/Reading/Recording frequency:	Annually
Calculation method (if applicable):	N/A
QA/QC procedures:	A sales record is maintained for all filters distributed under this project to ensure accuracy of the records, at the time of installation an interview was conducted within the household of the installation to collect user characteristics. This information was entered into a database shortly after the sale is made and the filter installed and was maintained by Native Energy.

Purpose of data:	Gold Standard sustainable development monitoring
Additional comment:	A TSR has been provided to the GS as supporting document.

Relevant SDG Indicator	SDG 8: Decent Work and Economic growth Target 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.
Data / Parameter:	Income Generation
Unit:	Income generated
Description:	To assess the Income generated by employees enrolled in the project activity.
Measured/Calculated / Default:	Calculated
Source of data:	GS 3964 Employment Records
Value(s) of monitored parameter:	A total of 5 employees worked for the project between year 2019 and 2020. Income earned by each employee has been included.
Monitoring equipment:	Employment Records
Measuring/Reading/Recording frequency:	Annually
Calculation method (if applicable):	N/A
QA/QC procedures:	Employment Records are kept electronically and updated frequently to ensure they are up to date.
Purpose of data:	Gold Standard sustainable development monitoring
Additional comment:	4men and 1 woman were employed by the project during this monitoring period. All employees are paid above the minimum wage in India. The minimum wage in India is INPR 176 (\$2.80) per day, which is INPR 4,576 (\$62), per month ⁶ . Employee records have been provided as a support document indicating wages earned.

⁶ <https://www.india-briefing.com/news/guide-minimum-wage-india-2021-19406.html/#:~:text=India%20offers%20the%20most%20competitive,geographical%20areas%20and%20other%20criteria>

Relevant SDG Indicator	SDG 8: Decent Work and Economic growth Target 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.
Data / Parameter:	Number of people employed by the project
Unit:	Number of people
Description:	This parameter will be collected to indicate the project provides decent work for all men and women.
Measured/Calculated / Default:	Calculated
Source of data:	GS 3964 Employment Records
Value(s) of monitored parameter:	A total of 5 employees worked for the project between year 2019 and 2020. This constitutes 4 men and 1 woman. Out of the 5 employees, 1 man and 1 female are considered as a youth (employees under the age of 29 years).
Monitoring equipment:	N/A
Measuring/Reading/Recording frequency:	Annually
Calculation method (if applicable):	N/A
QA/QC procedures:	The employment records shall be up to date and backed up electronically
Purpose of data:	Gold Standards sustainable development monitoring
Additional comment:	In India, a youth is defined as any person between 15 to 29 years. ⁷

Relevant SDG Indicator	SDG 3: Good health and wellbeing. Target 3.9: By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination
Data / Parameter:	Reduced number of water borne diseases (Skin rash, diarrhea, foot sore and parasites) and Indoor Air Pollution related diseases/infections (itchy eyes, eye problems and incidence of coughing)
Unit:	Percentage

⁷ <https://www.youthpolicy.org/factsheets/country/india/>

Description:	Measurement of user perceived change in air quality between the baseline and project scenario: smoke levels, incidence of coughing, incidence of respiratory illness, and incidence of itchy eyes and reduced exposure to water Borne diseases
Measured/Calculated / Default:	Measured
Source of data:	Er Calculations and Monitoring Survey summary_27.03.21
Value(s) of monitored parameter:	<u>Reduced Smoke levels in the House:</u> • Yes: 100% • N/A: 0% • No change: 0% • No: 0% <u>Reduced Incidents of Coughing:</u> • Yes = 87% • No = 0% • No Change = 13% • N/A=0% <u>Reduced incidences of Itchy Eyes:</u> • Yes = 94% • No = 0% • No Change = 6% • N/A=0% Occurrences of water borne diseases. • Yes = 9% • No = 0% • No Change = 1% • N/A=0%
Monitoring equipment:	Monitoring Survey questionnaire
Measuring/Reading/ Recording frequency:	Annually
Calculation method (if applicable):	The number of end users with the perceived outcome e.g. reduced levels of smoke was divided by the total units in the sample frame and multiplied by 100 to get the percentage.
QA/QC procedures:	The questionnaire is asked in an unbiased manner to ensure the respondents are not coerced into any answer by the interviewer
Purpose of data:	Gold Standard sustainable development monitoring
Additional comment:	N/A

Water quality testing procedure

Water quality testing was conducted by use of the Aquagenx Compartment Bag Test. The Compartment Bag Test is a detection-quantification test for E. coli, the WHO recommended faecal indicator, conducted in a compartmentalized plastic bag using a

chromogenic culture medium. The plastic bag contains internal compartments of different volumes, analogous to using a series of bottles or tubes to culture bacteria. The concentration of bacteria in the sample is estimated from the combination of positive/negative compartments, giving a Most Probable Number (MPN) of E. coli per 100mL.

The approach involves 8 basic steps:

1. Sanitize work area with disinfectant cleaning solution, paper towels or wipes.

2. Collect 100 mL water sample with Whirl-Pak™ Thio-Bag™

- Label bag or attach barcode asset tag to Thio-Bag. White tablet in Whirl-Pak™ Thio-Bag™ is sodium thiosulfate, which neutralizes residual chlorine in sample. Do not remove.
- Wearing disposable, thin plastic gloves is recommended. If you don't have gloves, avoid touching inside of Thio-Bag with bare hands.
- Fill Thio-Bag to 100 mL fill mark. Record sample details.

3. Add Aquagenx® EC+TC growth medium to sample in Whirl-Pak™ Thio-Bag™

- Open growth medium packet with scissors and pour powder growth medium into Thio-Bag. Do not touch growth medium with bare fingers or hands. Growth medium should not be added to sample before you are ready to begin test procedure.
- Roll down Whirl-Pak seal and close Thio-Bag shut.
- Dissolve medium in sample. Gently swirl the bag until the medium is completely dissolved. You can squeeze any clumps of powder to help them dissolve more quickly.

4. Incubation Period and Temperatures

- During the incubation period, CBTs can develop an odour. To control odour, place CBTs in another sealed plastic bag or container during the incubation period.
- Ambient temperature incubation works at any temperatures between 25°- 44.5°C for detection of E. coli and/or total coliforms.
- Because the CBT works at variable temperatures, constant temperature control in an incubator is not required.

However, at cooler temperatures, constant temperature incubation is recommended, if available.

- Note: over 40°C, some total coliforms will be inhibited, and the results may not be accurate for total coliform analysis.
- For regulatory compliance purposes, samples must be incubated at 35-37°C for 20-24 hours to detect

E. coli and total coliforms.

- The CBT also can be used to detect thermotolerant (or faecal) coliforms instead of total coliforms, if the CBT samples are incubated at a temperature of 44.5oC (between 44-45oC) throughout an incubation period of 20-24 hours. Strict temperature control is required for this procedure.

Recommended Incubation Periods at Ambient Temperature Conditions:

- 35-37°C: Incubate 20 hours
- 31-34°C: Incubate 24-30 hours
- 25-30°C: Incubate 40-48 hours
- Below 25oC: Incubate in a portable incubator at 35-37°C for 24 hours or put in or near another heat source for up to 48 hours, depending on the temperature.
- Over 40°C: Some coliforms will be inhibited, and the results may not be accurate for total coliforms.

5. Score and record P/A test results

• E. coli:

o Yellow/yellow brown indicates negative (absence) for E. coli.

o Blue/blue green indicates positive (presence) for E. coli. These include:

- Any trace of blue/blsue-green, or just specks of blue/blue-green, or just blue/blue-green sediment at

bottom of Thio-Bag is considered positive.

The results obtained were as follows;

Absence of E.Coli	99.27 %
Presence of E.Coli	0.73 %
Total	100%

• Total Coliforms - shine UV light (365 nm) on Thio-Bag in a dark environment:

o Samples that fluoresce blue are positive for total coliforms. These include:

- Any samples that are yellow/yellow brown in colour that fluoresce blue under UV light.
- Any samples that are blue/blue green in colour are positive for E. coli and by definition are positive for total coliforms.

6. Decontaminate sample

- Add 4 mL of liquid bleach (NaOCl) or sufficient chlorine tablets (calcium hypochlorite or sodium dichloroisocyanurate) to Thio-Bag to provide about 200 milligrams of free chlorine.
- After 30 minutes, pour contents into a sink, toilet or hole in ground and safely dispose the empty Thio-Bag.

Water Quality Results

	Parameter	Results	Percentage of samples		Explanation of results	Analysis
Incidence of water borne diseases	Yes	13	10%		There are 13 out of 136 households who have had incidence of water borne diseases	Non-Users
	No	123	90%		There are 123 out of 136 households who have not had any incidence of water borne diseases	Users

	Total	136	100%			
Level of satisfaction	Highly satisfied	128	94%		There are 128 out of 136 households who are highly satisfied with the use of the filter	100% Usage
	Moderately satisfied	7	5%		There are 7 out of 136 households who are moderately satisfied with the use of the filter	
	Not satisfied	1	1%		There are 1 out of 136 households who are moderately satisfied with the use of the filter	Non-Users
	Total	136	100%			
Hygiene practices	Yes	136	100%		There are 136 out of 136	Users

					households who reported practicing hygiene practices	
	No	0	0%		There are 0 out of 136 households who reported practicing hygiene practices	Non-Users
	Total	136	100%			
Presence or absence of E.Coli	Present	1	1%		135 out of 136 households had 0.Ecoli in their water	Users
	Absent	135	99%		1 out of 136 households had presence of Ecoli in their water	Non-User
	Total	136	100%			
Users/ non-users	Users	90.44 %	This includes households who have not experienced any water borne diseases related to consumption of contaminated water. All households are highly satisfied and moderately			

			satisfied thus considered as users. All households were practicing hygiene practices.
	Non-Users	9.6%	This includes households have experienced water borne diseases, households who reported not satisfied with the filter and households who do not practice hygiene practices

B) 3rd Party endorsements

The Aquagenx Compartment Bag Test provides convenience, simplicity and portability characteristics.

This approach has received the following endorsements:

1. Comparative Study Poster Paper: Demographic and Health Survey, Peru 2011
2. Comparative Study Poster Paper: Detection and Quantification of E. coli in Stored Household Rainwater Samples, Thailand 2011
3. Journal of Microbiological Methods Paper: Evaluation of the Compartment Bag Test for the detection of Escherichia coli in Water
4. Aquagenx CBT: Performance Evaluation Data
5. Michigan State University Poster Paper: Microbial Quality and Safety of Well Water in Rural Nicaragua as determined by Low Cost Bacterial Test (CBT)

C) Appropriateness of Testing Approach:

The CBT testing approach is considered appropriate as it:

- 1) Meets World Health Organization recommended sample size and indicator organism for water quality testing with 100 mL sample for E. coli
- 2) Completes testing in a few simple steps
- 3) Generates easy-to-score, visual, colour change results
- 4) Works in-the-field and on-site in low resource and disaster settings
- 5) Works at variable temperatures
- 6) Enables ambient incubation between 25-44.5°C
- 7) Provides complete supplies and built-in decontamination

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

Data/Parameter	Value obtained in this monitoring period	Value obtained last monitoring period
Up,y	99%	N/A
Qp,y (biennially monitored capped as per WHO guidelines)	7	N/A
Quality of filtered water	90%	N/A
Qp,rawboil,y	0	N/A
Qp,cleanboil,y	0	N/A
Np,y	2,224	N/A
Bb,y	6.11	N/A
Number of People trained on water, hygiene and sanitation management	23	N/A
Number of filters sold	726	N/A
Income generation	Ps 72,000	N/A
Number of people employed	5(4 men and 1woman)	N/A
	Reduction in occurrences of water borne diseases; 100%	Reduction in occurrences of water borne diseases; 96%
	Reduced Smoke levels in the House:	Reduced Smoke levels in the House:
	• Yes: 100% • N/A: 0% • No change: 0% • No: 0%	• Yes: N/A • N/A: N/A • No change: N/A • No: N/A
Air quality parameters	Reduced Incidents of Coughing:	Reduced Incidents of Coughing:
	• Yes = 87% • No = 0% • No Change = 13% • N/A=0%	• Yes = N/A • No = N/A • No Change = N/A • N/A=N/A
	Reduced incidences of Itchy Eyes:	Reduced incidences of Itchy Eyes:
	• Yes = 94% • No = 0% • No Change = 6%	• Yes = N/A • No = N/A • No Change = N/A

•	N/A=0%	•	N/A=N/A
---	--------	---	---------

D.4. Implementation of sampling plan

>> Systematic sampling method was used to determine the random test subjects from the total sales record.

Determination of the Sample size

A total of 137 households were selected in the sampling frame. The following method was used to determine the sample units based on the registered VPA DD:

1. There was a list of all geographical regions (departments) in the total sales records and the number of filters sold was noted.
2. The cumulative sum of all the filters sold, which corresponds to the last number in this series is the total number of filters sold. A total of 726 filters have been sold to date in the project boundary.
3. A sample size of 137 has been determined for the VPA The steps followed are illustrated below:
 1. The total number of filters shall then be divided by the sample size (137). The result shall be used to determine the Sample Interval.
 2. At random a number between 1 and the Sample Interval (SI) shall be chosen this shall be held as the Random Start (RS)
 3. Sample units (SU) shall be identified as follows:
 - a. $SU1 = RS$
 - b. $SU2 = RS + SI$
 - c. $SU3 = RS + 2SI$
 - d. $Sun = RS + (n-1)SI$
 4. The sample units (SU) correspond to an identified household in the cumulative sales in the total sales record.

One household was not available at the time. Since the required sample size of 100 had been attained, there was no need for a replacement for that one household.

SECTION E. CALCULATION OF SDG IMPACTS

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

>> Baseline Emissions are calculated as follows:

In accordance to Gold Standard requirements on Global warming potentials for project activities, all monitoring, verifications and requests for issuance from Gold Standard Certified Emission Reductions (GS CERs) and GS VERs that fall within the second commitment period (from 01/01/2013) will be calculated using the revised GWPs. Projects emission reductions accrued before 01/01/2013 will use the former GWP values.

During this monitoring period, the PP has used the latest version of the GWP values as provided in the Gold standard rules.

SDG 3

The figures given are derived from the baseline estimations as estimated during the baseline surveys.

- Usage: 0% (there was no access to filters)
- $N_{p,y}$: 0 derived from baseline survey (no persons were using the filter in the baseline scenario).
- Quality of treated water: 0% (in the baseline scenario, people had no access to filters hence this parameter is given as 0%)
- Number of filters sold: 0 (no filters had been sold in baseline scenario).
- Reduced number of water borne diseases (Skin rash, diarrhea, foot sore and parasites) and Indoor Air Pollution related diseases/infections (itchy eyes, eye problems and incidence of coughing): 0% (in the baseline scenario, people had no access to filters and hence reduced number of water borne diseases and IAP has been indicated as 0%)

SDG 6

The figures given are derived from the baseline estimations as calculated during the baseline surveys.

- $Q_{p,y}$: 0 (there was no access to filters)
- $Q_{p,raw\ boil}$: 0

- Q_{p,clean boil}: 0
- Quality of treated water: 0% (in the baseline scenario, people had no access to filters)
- Number of people trained on water, hygiene and sanitation management): 0

SDG 8

- Number of persons employed by the project: 0 (no persons were employed by the project in the baseline scenario)
- Income generation from filter distribution: 0 (no income was being generated by the project in the baseline scenario before the implementation of the project)

SDG 13

Fuel used to Treat water (Parameter B_{by})

$$B_{b,y} = (1 - C_j) * N_{j,y} * W_{b,y} * (Q_{j,y} + Q_{j,rawboil,y})$$

Where:

N_{j,y} Number of person. days consuming water supplied by project scenario p through year y

C_j Expressed as a percentage, this is the portion of users of the project technology j who in the baseline were already consuming safe water without boiling it

B_{b,y} Quantity of fuel consumed in baseline scenario b during the year y in tonnes

Q_{p,y} Quantity of safe water in litres consumed in the project scenario p and supplied by project technology per person per day

Q_{p, raw,boil,y} Quantity of raw water boiled in the project scenario p per person per day

W_{b,y} Quantity of fuel in tonnes required to treat 1 litre of water using technologies representative of baseline scenario b during project year y, as per Baseline Water Boiling Test.

Since:

$$N_{j,y} = 2224.0$$

$$C_j = 0.7\%$$

$$W_{by} = 0.0003954 \text{ tonnes}$$

$$Q_{p,y} = 7.0$$

$$Q_{p, rawboil,y} = 0 \text{ litres}$$

$$Q_{p, cleanboil,y} = 0 \text{ litres}$$

B_{b, y} is therefore calculated as:

$$(1 - 0.7\%) * 2224.89 * 0.0003954 * (7.0 + 0)$$

= 6.1145 tonnes

Baseline Emissions in year 2019 per filter per year

$$\begin{aligned} BE &= B_b, y * ((FNRB * EFCO_2) + (EFCH_4 + EFN_2O) * NCV) \\ &= 6.1145 * ((0.91 * 112) + (7.0 + 1.192) * 0.015) \\ &= 9.5260 \text{ tCO}_2\text{e per filter per year} \end{aligned}$$

Baseline Emissions in year 2020 per filter per year

$$\begin{aligned} BE &= B_{by} * ((fNRB * EFCO_2) + (EFCH_4 + EFN_2O) * NCV) \\ &= 6.1145 * ((0.91 * 112) + (7.0 + 1.192) * 0.015) \\ &= 9.5260 \text{ tCO}_2\text{e per filter per year} \end{aligned}$$

Total baseline emissions

Period	Total Project Emissions (tCO ₂ e)
01/05/2019 to 31/12/2019	4,642
01/01/2020 to 30/04/2020	2,292
Total	6935

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

>> SDG 3

The figures given are derived from the monitoring survey calculations.

- Usage: 100% (Please refer to calculations on the "Er Calculations and Monitoring Survey summary_27.03.21 spreadsheet tab Usage Survey)
- N_{p,y}: 2,224 (Please refer to calculations on the "Er Calculations and Monitoring Survey summary_27.03.21 tab inputs
- Number of filters sold: 726 (please refer to GS 3964 TSR and Sample Frame spreadsheet, tab TSR)
- Decrease in Water borne diseases: Yes-99%, No-0% and No change-1% and N/A-0% (Please refer to calculations on the "Er Calculations and Monitoring Survey summary_27.03.21 Spreadsheet Tab Sustainable development)

- Reduced smoke levels: Yes-100%, N/A-0%, No change- 0% and No-0% (Please refer to calculations on the "Er Calculations and Monitoring Survey summary_27.03.21 Spreadsheet Tab Sustainable development)
- Reduced incidences of coughing: Yes- 87%, No- 0%, No change-13% and N/A-0% "Er Calculations and Monitoring Survey summary_27.03.21 Spreadsheet Tab Sustainable development)
- Reduced incidences of itchy eyes: Yes-94%, No-0%, No change-6% and N/A-0%. (Please refer to calculations on the "Er Calculations and Monitoring Survey summary_27.03.21 Spreadsheet Tab Sustainable development)

SDG 6

- Qp,y: 7.0 (8.41) (Please refer to calculations on the "Er Calculations and Monitoring Survey summary_27.03.21 Spreadsheet Tab Qp,y)
- QP,raw boil: 0 (Please refer to calculations on the "Er Calculations and Monitoring Survey summary_27.03.21 Spreadsheet Tab Qp,y)
- QP,clean boil: 0 (Please refer to calculations on the "Er Calculations and Monitoring Survey summary_27.03.21 Spreadsheet Tab Qp,y)
- Quality of treated water: 90% (Please refer to calculations on the "Er Calculations and Monitoring Survey summary_27.03.21 Spreadsheet Tab water quality tests)
- Number of people attending workshops, seminars organized, and trainings on water, hygiene and sanitation improvement: 23 (please refer to the GS 3964training records).

SDG 8

- Number of persons employed by the project: 5 (please refer to the GS 3964 employment records)

- Income generation from filter distribution: 5 people were employed in the filter distribution program. Total income generated for the period was Rs 55,000 (please refer to the GS 3964 employment records)

SDG 13

- Number of people trained on filters installation and maintenance: 23 people underwent training during annual monitoring exercise (please refer to GS 3964 Training records)
 - Project Emissions are calculated as follows:

$$PE_{p,y} = B_{p,y} * ((f_{NRB,p,y} * EF_{p,fuel, CO2}) + EF_{p,fuel, nonCO2}) * NCV_{p, fuel}$$

$$B_{p,y} = (1 - C_j) * N_{p,y} * W_{b,y} * (Q_{p,rawboil,y} + Q_{p,leanboil,y})$$

$B_{p,y}$ = Number of person.days x Project Fuel used to boil water (T/L) x Total volume of water boiled in project scenario (L/p/d)

Where:

Parameter	Description	Value applied
$N_{p,y}$	Number of person. days consuming water supplied by project scenario p through year y	2224
C_j	Expressed as a percentage, this is the portion of users of the project technology j who in the baseline were already consuming safe water without boiling it	0.7%
$B_{p,y}$	Quantity of fuel consumed in project scenario p	0

	during the year y in tonnes	
Qp, rawboil, y	Quantity of raw water boiled in the project scenario p per person per day	0
Qp, cleanboil,y	Quantity of safe water boiled in the project scenario p per person per day	0
Wb,y	Quantity of wood fuel or fossil fuel in tonnes required to treat 1 litre of water using technologies representative of the project scenario p during project year y	0.0003954

Therefore;

$$B_{py} = (1-0.7\%) * 2224 * 0.0003954 * (0+0) \\ = 0 \text{ tonnes}$$

Project emissions year 2018 per filter

$$PE_y = 0 * (0.91 * 112) * (7.0 + 1.192) * 0.015 \\ = 0 \text{ tCO}_2\text{e}$$

Project emissions year 2019 per filter

$$PE_y = 0 * ((0.91 * 112) + (7.0 + 1.192)) * 0.015 \\ = 0 \text{ tCO}_2\text{e}$$

Total project emissions

Period	Total Project Emissions (tCO2e)
01/05/2019to 31/12/2019	0
01/01/2020 to 30/04/2020	0
Total	0

Total Emission Reductions

Overall GHG were calculated as follows:

The overall GHG reductions are calculated as follows:

$$ER_y = (\sum BE_{b,y} - \sum PE_{p,y}) * U_{p,y} - \sum LE_{p,y} \quad (13)$$

Where:

$U_{p,y}$ Cumulative usage rate for technologies in project scenario p during year y, based on cumulative installation rate and drop off rate.

$$\text{Usage Parameter} = 136/136 * 100 = 100\%$$

The difference of the Baseline emissions and the project emissions is multiplied by the usage rate to get the Emission reductions per filter, as shown below:

Year 2019

= (9.5260-0) * 99%*90% - 0 = 8.5520 tCO2e (This figure was then divided by 366 days in a year to get the emission reductions per day (0.02343).

Year 2020

= (9.5260-0) * 99%*90% - 0 = 8.5520 tCO2e (This figure was then divided by 366 days in a year to get the emission reductions per day (0.0234).

Calculation of net benefits as difference of baseline and project values or direct calculation for each SDG outcome

The difference between Baseline emissions per filter per year and project emissions per filter per year.

=8.5520tCO₂e

Total Emission Reductions

Period	Total baseline emissions (tCO ₂ e)	Total Project Emissions (tCO ₂ e)	Leakage (tCO ₂ e)	Total Emissions (tCO ₂ e)
07/07/2019 to 31/12/2019	4,167	0	0	4,167
01/01/2020 to 06/07/2020	2,058	0	0	2,058
Total	6,225	0	0	6,225

E.3. Calculation of leakage

The core of the methodology prescribes possible parameters that should be evaluated for leakage emissions.

a) The displaced baseline technologies are reused outside the project boundary in place of lower emitting technology or in a manner suggesting more usage than would have occurred in the absence of the project.

Traditional fuel wood consumption was mainly restricted to the domestic setting it is highly unlikely that fuel wood consumption in regions outside the target area will increase. The project activity will not displace the baseline technology but rather, it seeks to displace the baseline practice of boiling water. Therefore, there is minimal risk of the baseline technologies being reused outside the project boundary.

b) The non-renewable biomass or fossil fuels saved under the project activity are used by non- project users who previously used lower emitting energy sources.

Fuel wood previously used was sourced or obtained individually and domestic fuel wood consumption is a function of market forces of demand and supply. There is no indication that the fuel wood consumption would increase amongst non-project users who previously relied on lower-emitting sources.

c) The project significantly impacts the NRB fraction within an area where other CDM or VER project activities account for NRB fraction in their baseline scenario. This is a micro-scale VPA and will hence have minimal aggregate effect on the total NRB fraction in respective countries in which the VPAs are to be implemented with regards to other CDM or VER project activities baseline scenario.

d) The project population compensates for loss of the space heating effect of inefficient technology by adopting some other form of heating or by retaining some use of inefficient technology.
Not applicable to the project activity.

e) By virtue of promotion and marketing of a new technology with high efficiency, the project stimulates substitution within households who commonly used a technology with relatively lower emissions, in cases where such a trend is not eligible as an evolving baseline.

The Hydrad BioSand Water Filter are zero energy technologies that will provide an alternative to boiling water using fuel wood. Most of the households targeted boiled water using fuel wood. There is no envisioned scenario where these consumers will substitute fuel wood to a technology with lower emissions because of promotion of the BioSand filter.

Leakage = 0

As demonstrated in the registered VPA DD as well as this monitoring report, there are no perceived leakage risks for this parameter.

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

SDG	SDG Impact	Baseline estimate	Project estimate	Net benefit
13	Take urgent action to combat climate change and its impacts	- Access to water filters: 1,629 - Number of people trained on filter installation and maintenance: 0 1st May – 31st December 2019 = 4,553 (6.1394tCO₂e per filter per year) - Total Emissions 1st January to 30th April 2020 = 3,288.05(6.1394tCO₂e per filter per year)	- Access to water: 726 - Number of people trained on filter installation and maintenance: 23 1st May – 31st December 2019 = 4,167 (8.5520 tCO₂e per filter per year. - Total Emissions 1st January to 30th April 2020 = 2,058(8.5520 tCO₂e per filter per year	- Access to water filters: 726 - Number of people trained on filter installation and maintenance: 23 1st May – 31st December 2019 = 4,167 (8.5520 tCO₂e per filter per year) 1st January to 30th April 2020 = 2,058 (8.5520 tCO₂e per filter per year)
3	Good health and wellbeing	- Usage: 100% - N_{p,y} :1,629 - Reduction in Water borne diseases: N/A - Perceived Change in air Quality - Reduced smoke levels: N/A - Reduced incidences of coughing: N/A - Reduced incidences of itchy eyes: N/A	- Usage: 99% - N_{p,y} : 2,224 - Reduction of Water borne diseases: 100% - Perceived Change in Air Quality - Reduced smoke levels: 100% - Reduced incidences of coughing: 83% - Reduced incidences of itchy eyes: 94%	- Usage: 99% - N_{p,y} : 2,224 - Reduction of Water borne diseases: 100% - Perceived Change in Air Quality - Reduced smoke levels: 100% - Reduced incidences of coughing: 83% - Reduced incidences of itchy eyes: 94%
6	Clean water and sanitation	- Q_{p,y}: 7.5 - Q_{p, raw boil} 0 - Q_{p, clean boil} 0	- Q_{p,y}: 7.0 (8.41) - Q_{p, raw boil} 0 - Q_{p, clean boil} 0	- Q_{p,y}: 7.0 (8.41) - Q_{p, raw boil} 0 - Q_{p, clean boil} 0

		- Quality of treated water: 100% - Number of people attending training on Hygiene water and sanitation: 0	- Quality of treated water: 90% - Number of people trained on water hygiene and sanitation management: 23	- Quality of treated water: 90% - Number of people trained on water hygiene and sanitation management: 23
8	Decent work and economic growth	- Number of jobs: 0 - Income generated: 0	- Number of jobs: 5 - Income Generated: Rs 55,000	- Number of jobs: 5 - Income Generated: Rs 55,000

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 ⁸ achieved during this monitoring period
13	- Access to water filters: 1,629 - Number of people trained on filter installation and maintenance: 0 - Emission Reductions – 7,841	- Access to water filters 726 - Number of people trained on filter installation and maintenance: 23 - Emission Reductions – 6,225
3	- Usage: 100% - Np,y :2,007 - Incidence of Water borne diseases: N/A - Perceived Change in air Quality - Reduced smoke levels: N/A - Reduced incidences of coughing: N/A - Reduced incidences of itchy eyes: N/A	- Usage: 99% - Np,y: 2,224 - Incidence of Water borne diseases:99% - Perceived Change in Air Quality - Reduced smoke levels: 100% - Reduced incidences of coughing: 83% - Reduced incidences of itchy eyes: 94%
6	QP,y: 7.5	Qp,y: 7.0 (8.41)

⁸ Whenever emission reductions are capped, both the original and capped values used for calculations must be transparently reported. Use brackets to denote original values.

	• QP_{raw boil} 0 • QP_{clean boil} 0 • Quality of treated water: 100% Number of people trained on water, hygiene and sanitation management: 0	• QP_{raw boil} 0 • QP_{clean boil} 0 • Quality of treated water: 90% Number of people trained on water, hygiene and sanitation management: 23
8	• Number of jobs: 0 • Income generated: 0	• Number of jobs: 5 • Income Generated: Rs 55,000

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

>> The values estimated in the ex-ante calculations were higher than the actual values achieved during this monitoring period. The reason for this difference the estimated number of filters during the baseline scenario was higher as compared to the current filter sales. The project implementor had estimated to have sold 1,629, by now, however, projects sold to date are 726. Also, during the baseline estimate, parameter Qp,y was capped at 7.5l/p/d as per WHO guidelines whereas during this monitoring period, the same parameter was capped at 7l/p/d as per the current WHO guidelines. These two parameters have contributed to the big difference in the estimated Ers and the actual Ers achieved.

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

>> The only SDG impact that has increased was the average number of persons per household which is under SDG 13. During the baseline estimates, the project developer had estimated that the average number of persons per household would be 5.5, however, during the project implementation, the average number of persons per household was 6.09.

SECTION F. SAFEGUARDS REPORTING

>> As per safeguarding assessment done in section D of the registered VPADD, below is a summary of all questions answered yes or potentially under section 'Assessment of relevance to the project (Yes/potentially/no)' of safeguarding principles assessment and the parameter has been captured in section D2 above of the monitoring plan. Parameters indicated as 'no' in that section have not been included in this section. Though there were no mitigation measures required for all the principles, PP has

included parameter 'Gender equality and women rights' as this parameter is relevant to the project and it will also be monitored throughout the project's crediting period.

Safeguarding Principle	Relevant to the project	Implementation status
Gender equality and women rights	Yes	Both men and women employed by the project i.e. 4men and 1 woman. Both men and women are involved in trainings i.e. 17 men and 6 women trained.

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.

>> **2019-2020**

Native Energy Clean Water Programme South East Asia: NE_VPA 01_IND

Location: West Bengal

Contact Person: Bijoy Mondal

Position of the contact person: Cluster Coordinator

Office phone number: NA

Cell phone number: 9733988944

Email address: mondalbijoy11@gmail.com

Date of comment	Comment	Action required from local implementer	Response from project implementer	Name of the person who handled the issue	Was the issue resolved?	Date issue was resolved
18.05.2019	Outlet pipe	Need to visit household	New Pipe provided	Anirban Das Chakraborty	yes	22.05.2019

	broken (filter no: 10009586)	to solve the case				
01.07.2019	Outlet pipe broken (filter no: 10002570)	Need to visit household to solve the case	New Pipe provided	Anirban Das Chakraborty	yes	06.07.2019
22.08.2019	Crack in filter (filter no: 10001867)	Need to visit household to solve the case	Fixing materials provided	Gobinda Das chakrabarty	yes	26.08.2019
24.10.2019	Crack in filter (filter no: 10002886)	Need to visit household to solve the case	Fixing materials provided	Anirban Das Chakraborty	yes	28.10.2019
10.12.2019	Crack in filter (filter no: 10002857)	Need to visit household to solve the case	Fixing materials provided	Gourirani Giri	yes	13.12.2019
13.01.2020	Crack in filter (filter no: 10002853)	Need to visit household to solve the case	Fixing materials provided	Bholanath Halder	yes	15.01.2020
23.01.2020	Crack in filter (filter no: 10002512)	Need to visit household to solve the case	Fixing materials provided	Bijay Mandal	yes	26.01.2020
03.02.2020	Outlet pipe broken (filter no: 10002563)	Need to visit household to solve the case	New Pipe Provided	Bijay Mandal	yes	06. 02.2020

14.02.2020	Crack in filter (filter no: 10009891)	Need to visit household to solve the case	Fixing materials provided	Gourirani Giri	yes	18.02.2020
12.03.2020	Crack in filter (filter no: 10002530)	Need to visit household to solve the case	Fixing materials provided	Gourirani Giri	yes	15.03.2020

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

>> None

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

>>None

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