Gold Standard for the Global Goals

TEMPLATE

KEY PROJECT INFORMATION & VPA DESIGN DOCUMENT (VPA DD)

PUBLICATION DATE **29.06.2023**

VERSION **v.2.3**

RELATED SUPPORT

- Programme of Activity requirements
- TEMPLATE GUIDE VPA Design Document

This document contains the following sections

KEY PROJECT INFORMATION

Type of VPA	☒ Real case VPA ☐ Regular VPA
Scale of VPA Note that a VPA can be of one scale. Please select applicable scale accordingly.	☒Microscale ☐Small scale ☐Large scale
Title of corresponding real case VPA (if applicable)	GS1247 VPA 2 Improved Kitchen Regimes: Kole District Borehole Project, Uganda
GS ID of real case VPA (if applicable)	GS1359
GS ID of VPA	GS1359
Title of VPA	GS1247 VPA 2 Improved Kitchen Regimes: Kole District Borehole Project, Uganda
Time of First Submission Date	23/01/2025
Date of Design Certification	01/05/2013
Version number of the VPA-DD	02
Completion date of version	21/03/2025
Coordinating/managing entity	CO2balance UK Ltd
VPA Implementer (s)	CO2balance UK Ltd
Project Participants and any communities involved	N/A
Host Country (ies)	Republic of Uganda
GS ID and Title of applicable Design Certified VPA	GS ID: GS1359 Title: GS1247 VPA 2 Improved Kitchen Regimes: Kole District Borehole Project, Uganda
GS ID and Title of applicable Performance Certified VPA	GS ID: GS1359

	Title: GS1247 VPA 2 Improved Kitchen Regimes: Kole District Borehole Project, Uganda
Activity Requirements applied	☒ Community Services Activities ☐ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A
Other Requirements applied	Programme of Activity Requirements and Procedures v2.1
Methodology (ies) applied and version number	Methodology for Emission Reductions from Safe Drinking Water Supply v1.0
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A
VPA Cycle:	☒ Regular ☐ Retroactive

Table 1 – Estimated Sustainable Development Contributions

SUSTAINABLE DEVELOPMENT GOALS TARGETED	SDG IMPACT (DEFINED IN B.6.)	ESTIMATED ANNUAL AVERAGE	UNITS OR PRODUCTS
1 No Poverty	Additional number of persons with basic access to basic/limited services	55.63%	**Percentage** of the population (additional persons) having access to basic/limited safe water in the project activity compared to the baseline scenario in year y

5 Gender Equality	Time saved collecting water	49.83%	**Percentage** reduction in time spent collecting water for a project activity in a year y (proportion)
7 Affordable and Clean Energy	Increased access to energy (safe water systems)	1,739	**Total number** of project households provided access to safe water in year y
13 Climate Action (mandatory)	Total project emission reductions	4,403	**tCO2e** in year y
15 Life on Land	Total non-renewable firewood saved	2,520	**Tonnes** of non-renewable firewood saved in the project scenario year y

SECTION A. DESCRIPTION OF PROJECT

A.1. Purpose and general description of project

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In Uganda over 48% of the rural population are without access to safe water and rely on unprotected wells, lakes and other open water sources that are highly susceptible to contamination[1]. In rural communities in Uganda, many local people typically use wood or charcoal fuel on traditional three stone fires or cookstoves to purify their water for drinking, cooking and basic personal hygiene. This process results in the release of greenhouse gas emissions from the combustion of fuel during the water purification process.

The project activity provides safe water across rural areas of Kole, Alebtong, Otuke and Dokolo districts within Northern Uganda by rehabilitating, supporting and maintaining non-functional borehole hand pumps. By providing safe water, households no longer consume unsafe water or have the need to boil and treat unsafe water. Reducing the need to boil water for drinking reduces fuel consumption resulting in a reduction of carbon dioxide emissions from the combustion process. Furthermore, providing safe water reduces waterborne illness and lessens the burden on women and girls of collecting water from long distances.

Many existing boreholes are owned by community groups or community-based organisations (CBOs) and have fallen into disrepair because maintenance programmes have been poorly managed or proven too expensive. In this project, CO2balance UK Ltd will work with CBOs and District Water Offices to identify non-functioning waterpoints and rehabilitate them so that they deliver clean, safe water.

CO2balance will implement a long-term maintenance programme to ensure that breakdowns are fixed as soon as possible. In addition, CO2balance will work to build the capacity of local people to carry out minor work themselves to increase the future sustainability of the project. Engagement with project end users will occur through

[1] Access to drinking water - UNICEF DATA

maintenance visits and annual monitoring surveys throughout the crediting period. Hygiene campaigns will be conducted to sensitise project end users on multiple topics relating to Water, Sanitation and Hygiene (WASH), including water point cleanliness, personal hygiene, and cleanliness of water containers.

In total 41 handpumps were rehabilitated as part of this project between 01/05/2013 and 26/10/2014 of which 37 remain active. This VPA-DD covers crediting period (CP) 3 of GS1359 and will amalgamate GS1359 with GS2479, GS2480, GS2481 and GS4260 once they finish their second CP. Following the amalgamation, the 4 remaining VPAs will be discontinued. The CP end dates of these remaining VPAs are:

GS2479: 17/09/2025
GS2480: 29/12/2025
GS2481: 13/01/2026
GS4260: 21/09/2025

This project will transition Gold Standard methodologies from Technologies and Practices to Displace Decentralized Thermal Energy Consumption v.3.1 to Emission Reductions from Safe Drinking Water Supply v.1.0 once each VPA reaches the end of its crediting period (CP)2.

CO2balance will secure confirmation of carbon rights transferal from each project community in return for the rehabilitation of the water point and application of the long-term maintenance programme. This project has been developed under the Gold Standard; this accreditation body will guarantee that the carbon credits from this project are real and accurately being claimed whilst ensuring that CO2balance measures the social, environmental, and economical impact of the project.

A.1.1. Eligibility of the VPA under approved PoA

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This VPA is eligible under PoA GS1247 as it involves the "repair of community wide safe water supply technologies such as hand-pumped boreholes" as listed in section A.1. of the PoA-DD. The Micro-Scale Voluntary Project Activity (VPA) is eligible under the Gold Standard Methodology: Emission reductions from Safe Drinking Water

Supply. By providing safe water through the rehabilitation of non-functional boreholes, the project will ensure that households consume less firewood by displacing the need to boil water for purification. This will result in a reduction of carbon dioxide emissions.
This micro scale VPA is located Uganda, which is eligible under PoA GS1247.

Table 2 Eligibility for VPA inclusion as per PoA requirements

NO.	ELIGIBILITY CRITERION	DESCRIPTION/ REQUIRED CONDITION	DESCRIPTION OF THE VPA IN RELATION TO THE CRITERIA, MEANS OF VERIFICATION AND SUPPORTING EVIDENCE FOR INCLUSION
1	Types of Project	Eligible Projects shall include physical action/implementation on the ground. Pre-identified eligible Project types are identified in the Eligibility Principles and Requirements section.	The Project Technology comes under "Safe Water Source" as the Project Activity involves the rehabilitation of non-functional boreholes in the project area.
2	Location of Project	The host country and location of each VPA will be specified in each VPA-DD, in line with the locations outlined in Section A.3.	The location of the Project is the Republic of Uganda, which is eligible under section A.2 of the PoA-DD for GS1247.

3	Project Area, Project Boundary and Scale	The Project Area and Project Boundary shall be defined. Projects may be developed at any scale although certain rules, requirements and limitations may apply under specific Activity Requirements, Impact Quantification Methodologies and Products Requirements. In order to avoid double counting the Project shall not be included in any other voluntary or compliance standards programme unless approved by Gold Standard (for example through dual certification). Also, if the Project Area overlaps with that of another Gold Standard or other voluntary or compliance standard programme of a similar nature, the project shall demonstrate that there is no double counting of impacts at design and performance certification (for example	The Project area and boundary is defined in section A.2 of VPA-DD. The Project is only included under the Gold Standard and no dual certification will take place. Each water point has a unique location recorded and stored in a Project Database. Each micro-scale VPA included under the PoA will not be included by any other carbon standard and will not exceed the 10,000 VERs per year cap.

		use of similar technology or practices through which the potential arises for double counting or misestimation of impacts amongst projects).	
4	Host Country Requirements	Projects shall be in compliance with applicable host country's legal, environmental, ecological and social regulations.	Each homogeneous VPA in Uganda will comply with Uganda's national policies on water access, rural water infrastructure, community engagement, women's empowerment and climate change action. Relevant Host Country documentation: Uganda's National Development Plan 2020/21 -2024/25 – NDPIII. https://budget.finance.go.ug/sites/default/files/NDPIII.pdf

5	Contact Details	As part of the Project Documentation the Project Developer shall provide (i) name and (ii) contact details of all Project Participants; AND in case of an organisation (iii) the legal registration details and (iv) documentation by the governing jurisdiction that proves that the entity is in good standing (defined as being a legal or other appropriate entity registered in or allowed to operate within the required jurisdiction and with no evidence of insolvency or legal/criminal notices placed against it or any of its Directors). Gold Standard retains the right (at its own discretion) to refuse use of the Standard where reputational concerns are highlighted.	Project Developer information is in appendix 2 of VPA-DD.

6	Legal Ownership	Full and uncontested legal ownership of any Products that are generated under Gold Standard Certification, (for example carbon credits) shall be demonstrated. Where such ownership is transferred from project beneficiaries this must be demonstrated transparently and with full, prior and informed consent (FPIC). Note that for certain Project types there is a requirement for full and uncontested legal land title/tenure to be demonstrated. These are contained within specific Activity or Product Requirements. All projects shall immediately report to Gold Standard any land title/tenure disputes arising.	The Project Developers have full rights over the Products generated from Gold Standard Certification. A representative from each Project community transfers the carbon rights to the Project Developer/Implementer at the time of the installation, through the signature of the Carbon Transfer Form, which exchanges the rights to carbon savings for water point repair and ongoing maintenance.

7	Other Rights	As well as legal title and ownership, the Project Developer shall also demonstrate where required uncontested legal rights and/or permissions concerning changes in use of other resources required to service the Project (for example, access rights, water rights etc.). Any known disputes or contested rights must be declared immediately to Gold Standard by the Project Developer and resolved prior to further Project implementation in affected areas.	The Project Developer will inform Gold Standard of any disputes.

8	Official Development Assistance (ODA) Declaration	All Project Developers applying for project activities located in a country named by the OECD Development Assistance Committee's ODA recipient list and seeking Gold Standard Certification for carbon credits shall declare the Official Development Assistance (ODA) support. The Project Developer shall follow the GHG Emissions Reduction & Sequestration Product Requirements and submit the declaration at the time of Design Certification.	Project Developer has submitted a signed ODA Declaration to state that they understand and agree that the above-referenced project is not eligible for Gold Standard registration if one of the conditions for the Project to receive or benefit from ODA is that some, or all, of the carbon credits (VERs) issued to the Project are transferred to the ODA donor country.
9	Fraction of Non-Renewable Biomass (VR)	Reference from where fNRB shall be calculated for VPAs shall be included in the eligibility criteria to avoid confusion at the time of VPA inclusion and for consistency.	The fNRB will be calculated by the Project Developer, or externally if required, following the UNFCCC updates and Gold Standard guidelines.

10	Test for Wb,y parameter (VR)	The test for fixed parameter Wb,y is based on the water boiling test.	The ERSDWS Gold Standard Methodology does not include parameter Wb,y. Instead, specific energy required to boil water (kJ/L) is applied (Sew,b,y).
11	Water Project Treatment Capacity (VR)	The treatment capacity limits of the project technology/source are required to be monitored to ensure that the water consumption level applied for emission reductions must not be greater than the treatment capacity of the project technology/sources.	The project developer will ensure that user numbers are within the capacity of the water source and the specifications of the technology. Capacity of the water sources will be taken from online specifications for technologies, or calculated using technical specifications.

12	Cookstove Project Theoretical Savings	The theoretical wood savings from a cook stove project shall be estimated on the following- Py = Bb,y * (1-$\hbar$b/$\hbar$p,y) Py - quantity of firewood consumed in project Bb,y - quantity of firewood consumed in baseline $\hbar$b – efficiency of baseline technology $\hbar$p,y – efficiency of project technology	The Project Activity does not involve cookstoves.
13	Double Counting	Conditions to confirm that VPAs are neither registered as CDM project activities, included in another registered PoA, nor project activities that have been deregistered.	The Project Developer can confirm that VPAs are not registered anywhere else.
14	Technical Specification	Specification of the technology/measure, such as the level and type of service, as well as performance specification based on, inter alia, testing/certification.	Technical specifications of the Project Technology are outlined in Section A.3 of VPA-DD.

15	Start Dates	Conditions to check the start dates of VPAs through documentary evidence.	Start dates of the VPAs are confirmed by Carbon Transfer Forms and Repair Confirmation Forms.
16	Applicability	Conditions to ensure compliance with the applicability of the applied methodologies, the applied standardized baselines an d the other applied methodological regulatory documents.	Applicability requirements have been outlined in Section B of the VPA-DD.

17	Additionality	Conditions to ensure that VPAs meet the requirements for demonstration of additionality.	As demonstrated in the Gold Standard for the Global Goals Community Services Activity Requirements section 4.1.9 - Projects that meet **any** of the following criteria are considered as deemed additional and therefore are not required to prove Financial Additionality at the time of Design Certification: 1. (a) Positive list (Annex B) 2. (b) Projects located in LDC, SIDS, LLDC 3. (c) Micro-scale projects This project is deemed additional as Uganda is an LDC and the project is micro-scale.
18	LSC and EIA	Conditions related to undertaking local stakeholder consultation and environmental impact analysis.	LSC and EIA requirements have been outlined in Section E of VPA-DD. An EIA is not required to be carried out for this safe water project.
19	Target Group	Target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/offgrid), and where applicable, distribution mechanisms (e.g. direct installation).	The target groups include households/institutions, largely located in rural areas but some water points could include peri-urban/urban communities.

20	Sampling	Sampling approaches are set out in each VPA and will follow the SDWS v.1 methodology.	The VPAs will follow the sampling approach set out in the ERSDWS Methodology, which takes precedence over CDM methodologies. Sampling approaches are set out in Section B.7.2 of VPA-DD and will follow the applied methodology. Suitable confidence and precision levels are considered to ensure accurate sample sizes are applied and data is representative of the project area.
21	Crediting period	All VPAs submitted for inclusion after the first crediting cycle of such PoA and completion of transition to GS4GG shall follow the GS4GG Certification Cycle (i.e. 5 years renewals.	The crediting period is stated in Section C of the VPA-DD.

22	Eligible Project Types and Scope	All CSA projects shall lead to climate change mitigation and/or adaption by providing or improving access to services/resources at household or community or institution level. Eligible services include electricity and energy, water and sanitation, waste management, housing, etc.	Through this community level Project, end users will have improved access to safe water. There will be a reduction in the quantity of fuel used to boil unsafe water. This reduction in fuel consumption contributes to climate change mitigation.
23	Types of Project (CSAR)	b) End-Use Energy Efficiency: Project activities that reduce energy requirements as compared to baseline scenario without affecting the level and quality of services or products where the end user of the products and services are clearly identified and when the physical intervention is required at the user end. For example, efficient cooking, heating, lighting, etc.	By providing safe water, the Project activities reduce the energy requirements compared to the baseline scenario by removing the need for end users to boil water for purification.

24	Project Area, Boundary and Scale (CSAR)	The Project Area and Project Boundary shall be defined. Projects may be developed at any scale although certain rules, requirements and limitations may apply under specific Activity Requirements, Impact Quantification Methodologies and Products Requirements. In order to avoid double counting the Project shall not be included in any other voluntary or compliance standards programme unless approved by Gold Standard (for example through dual certification). Also, if the Project Area overlaps with that of another Gold Standard or other voluntary or compliance standard programme of a similar nature, the project shall demonstrate that there	The project area and boundary are defined in line with the applicable Methodology, outlined in Section A.2 of the VPA-DD. The project is a micro-scale project issuing emission reductions which will be capped in line with CDM small-scale thresholds: Type (ii) projects 60GWh/yr Type (iii) projects 10,000 tCO2e/yr

	is no double counting of impacts at design and performance certification (for example use of similar technology or practices through which the potential arises for double counting or misestimation of impacts amongst projects).

25	Legal ownership (CSAR)	Full and uncontested legal ownership of any Products that are generated under Gold Standard Certification, (for example carbon credits) shall be demonstrated. Where such ownership is transferred from project beneficiaries this must be demonstrated transparently and with full, prior and informed consent (FPIC). Note that for certain Project types there is a requirement for full and uncontested legal land title/tenure to be demonstrated. These are contained within specific Activity or Product Requirements. All Projects shall immediately report to Gold Standard any land title/tenure disputes arising.	No product ownership or distribution of a large number of devices for services. Legal ownership of carbon rights is outline in Carbon Transfer Forms, which are signed by a representative of each Water Point. Transfer of carbon rights is addressed in the Local Stakeholder Consultation meeting.

Table 3. Community Services Activity Requirements	
Requirements relevant to this VPA	**Demonstration of meeting Requirements**
2. Eligibility Project Types	
2.1.2) All CSA projects shall lead to climate change mitigation and/or adaption by providing or improving access to services/resources at household or community level or institutional level. Eligible services include electricity and energy, water and sanitation, waste management, housing, etc.	Through this community level Project, end users will have improved access to safe water. There will be a reduction in the quantity of fuel used to boil unsafe water. This reduction in fuel consumption contributes to climate change mitigation.
2.1.3) Projects shall conform to the Principles and Requirements.	The project conforms with the Principles and Requirements detailed in the document. The project is eligible under section 4, Principle 1, section (a) of the Principles and Requirements as it follows an established Gold Standard methodology. Concerning point 4.1.7, the project does not support geoengineering or entail energy production from fossil fuels or nuclear. Rather it supports a switch away from polluting technologies to an emissions-free means of accessing safe water.
3 General Eligibility Criteria	
3.1.1 Types of Project b) End-Use Energy Efficiency: Project activities that reduce energy requirements as compared to baseline scenario without affecting the level and quality of services or products where the end user of the products and services are clearly identified and when the physical intervention is required at the user end.	By providing safe water, the project activity reduces the energy requirements compared to the baseline scenario by ensuring that households consume less firewood through no longer needing to purify their water.

3.1.2 Project Area, boundary and scale Project Area and Boundary shall be defined in line with the applicable Impact Quantification Methodologies and Product Requirements. c) For the purpose of applying UNFCCC methodologies for quantification of GHG reductions, 'small-scale' is defined as in CDM Modalities and Procedures for three project types; Renewable Energy, Energy Efficiency and Others.	The project Area and Boundary are defined in line with the applicable Methodology, outlined in Section A.2 of the VPA-DD. The project is micro-scale and is capped at 10,000 tCO2e per year for each VPA.
3.1.3 Suppressed Demand baseline Certain Impact Quantification methodologies allow projects to account Suppressed Demand scenario when establishing a baseline. In such cases, the application of Supressed Demand baseline is limited to Small-Scale and Microscale Projects. Where a Supressed Demand baseline is applied, it is not possible to 'stack' Gold Standard Certified Impact Statements or Products as the definition of the baseline may be contradictory.	The VPA is a micro-scale project, therefore it is eligible to allow for suppressed demand in the baseline scenario. The baseline scenario is assessed in terms of suppressed demand. Supressed demand is determined through a set of questions in the Baseline Project Survey that establish the method that households use to purify their water, if any, and how they would choose to purify if they were not subject to monetary and access barriers. A fixed suppressed demand baseline has been opted for. However, in the event the project surveys show a substantial change in fuel use characteristics, a new baseline shall be conducted. No Gold Standard Certified Impact Statements or Products are intended to be stacked in case of suppressed demand baseline.
3.1.4 Legal ownership a) Projects involving the distribution of a large number of devices for services shall provide a clear description of the ownership of the Products that are generated under	a) It will be clearly communicated that CO2balance is the coordinating/managing entity which communicates with the Gold Standard and the entity that is claiming

Gold Standard Certification all along the investment chain. In line with FPIC requirement, the proofs that end-users are aware of and willing to give up their rights on Products shall be provided. b) The transfer for Product ownership shall be discussed during the local stakeholder consultations for projects.	ownership rights of and selling the emission reductions resulting from the project activity. The project is managed in the host country by CO2balance. CO2balance have legal ownership of the carbon credits produced as result of the project. Water points are managed by communities, who are recognized as the main users of the water points in the project. At the point of technology installation, a Carbon Transfer Form (CTF) will be signed and uploaded to our database stating that the rights to the carbon credits will lie with CO2balance. An elected representative from each water resources committee responsible for a water source will sign a CTF on behalf of all users thereof. b) The transfer of ownership was discussed during the local stakeholder consultation conducted by CO2balance, presenting the details of the project to the local community members, officials and Community Leaders who attended. No issues were raised during the meeting voicing issues regarding the transfer of product ownership.

A.1.2. Legal ownership of products generated by the VPA and legal rights to alter use of resources required to service the project

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In this project CO2balance is the managing entity and is responsible for communication with the Gold Standard. CO2balance country coordinator in Uganda works together with local NGOs and local project field staff who handle all monitoring data and collection and processing. CO2balance own the legal rights to the carbon credits created by the project. A Carbon Transfer Form is signed by a member of the Community Water Resources Management Committee on behalf of the whole community for each borehole. This entitles CO2balance to the rights of any carbon saved by the project in exchange for the rehabilitation and maintenance of the borehole.

The project will ensure that it does not breach any of the Host Country's legal, environmental, ecological, and social regulations. Water sources are managed by communities, who are recognised as the main users of the water sources in the project.

A.2. Location of VPA

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This project is currently located across Kole, Alebtong, Otuke and Dokolo districts in Northern Uganda. The image below shows the geographical location of the project boundary.

The target area and the fuel collection area are defined as being contained within the project boundary. As the majority of beneficiaries collect their wood fuel locally in close proximity to their homesteads, the wood fuel collection area and target area are considered the same.

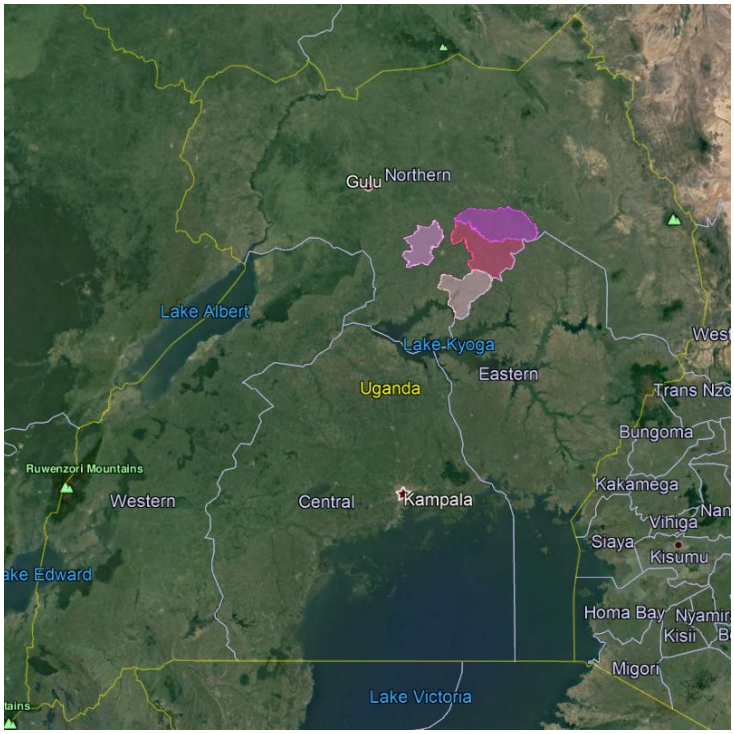

Figure 1. Map of Uganda with districts of Kole, Alebtong, Otuke and Dokolo highlighted.

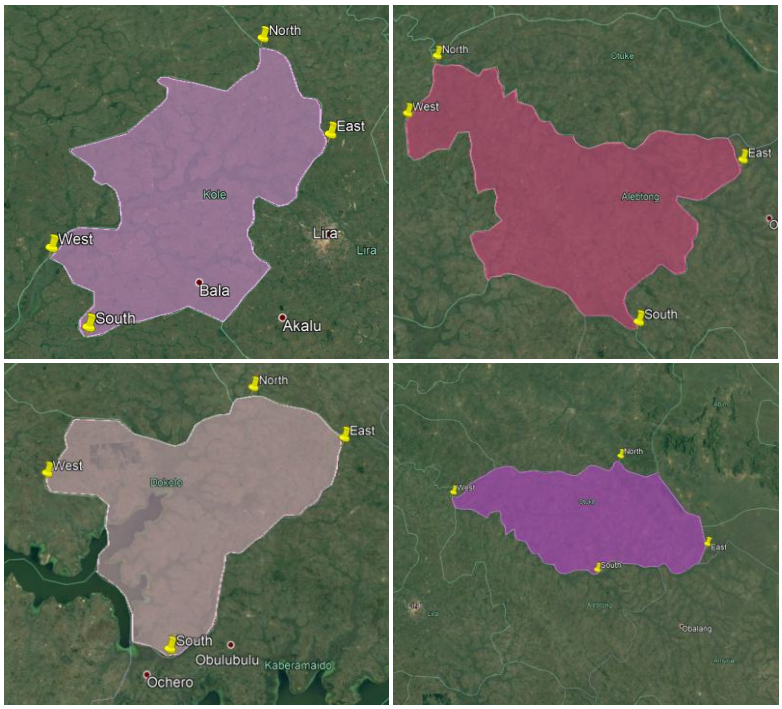

Figure 2 Extremities of each district (Kole - top left, Alebtong - top right, Dokolo - bottom left, Otuke - bottom right)

Table 3. Project Area Coordinates

	Project Area Coordinates (Extremities)			
District	**North**	**South**	**East**	**West**
Kole	2°30'49.70"N 32°49'25.85"E	2°7'33.44"N 32°36'55.60"E	2°22'19.37"N 32°54'17.99"E	2°13'18.53"N 32°33'59.10"E
Alebtong	2°30'19.22"N 33° 0'2.88"E	2°1'8.80"N 33°22'23.72"E	2°17'46.72"N 33°33'20.76"E	2°23'11.36"N 2°57'38.58"E
Otuke	2°37'39.66"N 33°26'3.08"E	2°19'54.40"N 33°22'19.12"E	2°23'55.54"N 33°39'46.13"E	32°59'24.99"E 2°31'56.14"N
Dokolo	32°51'24.96"E 33°9'35.97"E	1°42'19.45"N 33° 2'26.93"E	2° 1'20.31"N 33°17'34.34"E	1°57'53.82"N 32°51'24.96"E

A.3. Technologies and/or measures

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In this project, non-functioning waterpoints, such as boreholes operated by handpump, are rehabilitated so that they deliver clean, safe water for human consumption. Many of these non-functioning waterpoints have fallen into disrepair because maintenance programmes have been ineffectively managed or proven too expensive. The boreholes included under the project are entirely human operated and are fitted with hand pump models that are commonly used in the area such as U3 Modified and India Mark II pumps (specifications given below). The depth of the boreholes is limited to 100m or less.

Figure 2. Components of an uninstalled hand pump (left) and an India Mark II pump in operation (right)

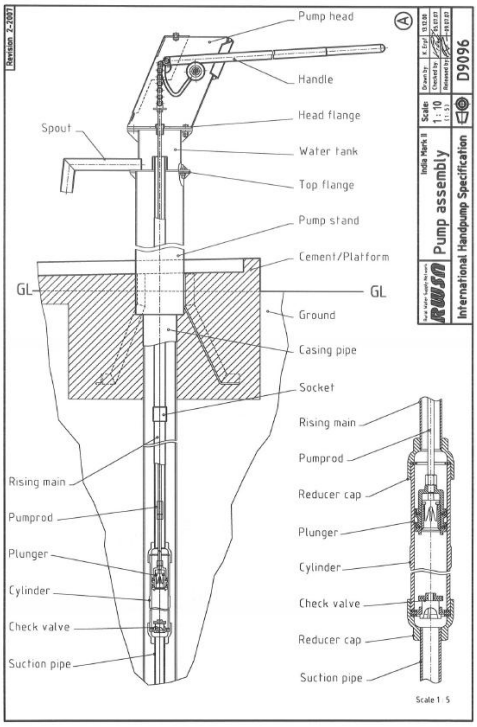
Table 4. Borehole technology specifications

	Borehole technology	
	India Mark II	**U3 Modified**
Cylinder diameter (mm):	50	50
Maximum Stroke (mm):	225	125
Approx. discharge at about 75 watt input m3/h:	at 10 m head 1.8	at 10 m head 1.2
	at 15 m head 1.3	at 15 m head 1.0
	at 20 m head 1.0	at 20 m head 0.8
	at 30 m head 0.8	at 30 m head 0.6
Pumping lift (m):	10-45	20-45
Water consumption (lpcd):	15-20	15-20

India Mark II Specification[2]:

Figure 3. Diagram and specifications of India Mark II hand pump.

[2] Rural Water Supply Network (2018) 'India Mark II' http://www.rural-water-supply.net/en/implementation/public-domain-handpumps/india-mark-ii



A.4. Scale of the VPA

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The project is micro-scale. Each VPA will be capped at 10,000 VERs per year.

A.5. Funding sources of VPA

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There is no public or ODA funding for this project activity, all revenue for the project will be derived from the sales of VERs. Without this revenue, the communities would not be able to fund the project themselves due to the cost of the technology and the water would cease to be provided if major repairs were not covered by the carbon finance revenue.

SECTION B. APPLICATION OF APPROVED GOLD STANDARD METHODOLOGY (IES) AND/OR DEMONSTRATION OF SDG CONTRIBUTIONS

B.1. Reference of approved methodology (ies)

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Gold Standard Methodology: Emission Reductions from Safe Drinking Water Supply v.1.0[3]

B.2. Applicability of methodology (ies)

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Gold Standard Methodology: Emission Reductions from Safe Drinking Water Supply v.1.0, specifically Community Water Supply technologies (CWS)

Table 5. Applicability of methodology

Methodology Requirement	Project
a. Eligible household water treatment technologies (HWT), institutional water treatment technologies (IWT), and community level water treatment technologies (CWT) include bleach/chlorine, water filter (ceramic, sand, composite, membrane, etc.), UV disinfection, etc.	Natural processes are used for filtration in the implemented CWS technology. If necessary, such as a major disease outbreak, interventions will be taken to purify the water. This could include interventions such as chlorination.
b. Eligible community water supply technologies (CWS) include installation of new borehole hand-pumps, borehole hand-pumps rehabilitation, solar powered drinking water pumps, etc. Water pumps powered by fossil-fuel engines are not eligible, with the exception of backup fossil-fuel engines that are used for no more than 10% of operating hours (parameter SDWS 33).	The project activity involves rehabilitating and maintaining non-functional borehole hand pumps. The project does not include water pumps powered by fossil-fuel engines.
c. All projects involving CWT and CWS technologies must also	The project activity involves maintaining non-functional borehole handpumps. Pumps are

[3] https://globalgoals.goldstandard.org/429-ee-sws-emission-reductions-from-safe-drinking-water-supply/

include ongoing maintenance and repair of the project technology	monitored frequently (annually, at a minimum) and reactive repairs are conducted if there is an issue with the technology or parts. Repairs are logged and recorded as non-functioning days, if major. To ensure the water quality meets national standards, household water quality tests are conducted on a sample of Project communities a minimum of annually as per methodological requirements.
d. Where the project involves the rehabilitation of an existing technology, the project developer shall provide evidence that the existing technology is non-operational and that there is no planned maintenance or repair for at least 3 months after the date it became non-operational (parameter SWDS 2).	If the Project involves rehabilitations during its lifecycle, technical assessments of existing technologies, engagement with the District Water Officer (if accessible) and the community determine the period of non-functionality. Photographs of field assessments and non-functional technologies are taken prior to rehabilitations, alongside CTFs that act as an agreement between the CME/Project Developer and Water Resource Committee Member that the technology needed repair.
e. This methodology allows for project activities to include safe water treatment and/or supply technologies implemented for end-users in households, and/or commercial premises such as shops or institutional premises including half or full day/boarding schools, prisons, army camps & refugee camps.	The project activity could include institutional premises such as schools or health centres. The applied methodology caps relating to household and institutional premises are applied.
f. In cases where the safe water is retrieved at the CWT or CWS location, the water in its improved form shall be available within a distance of 1km or less from the end-users, as demonstrated by satellite	Following the methodological requirements, the Project only includes end users that live within 1km of the water point (tap). The distance that each household is from the CWS is collected in the user lists, and the GPS coordinates are recorded for each CWS.

imaging or GPS coordinates of each CWT or CWS location. Alternatively, as a proxy, a total collection time of 30 minutes or less for a round trip, including queuing, using the travel modes of walking or pedalling may be demonstrated (parameter SDWS 1).	
g. Project technology performance level (HWT and IWT): It shall be demonstrated based on report of laboratory testing or official notification that the project technology or equipment achieves either (i) the performance target classification 3-star or 2-star level, meaning "Comprehensive Protection", as per the WHO International Scheme to Evaluate Household Water Treatment Technologies (World Health Organization, 2011) or (ii) compliance with the national standard or guideline for household drinking water technology; if no national guideline or standard is available, then the project technology shall comply with the WHO International Scheme requirements as per (i) (parameter SDWS 2).	Not applicable as project activity relates to CWS only.
h. Project technology performance level (CWT and CWS): For each individual CWT or CWS, it shall be demonstrated at the start of each crediting period with water quality testing reports that the water directly	Microbial and physiochemical Water Quality Tests (Full WQTs) will be conducted at the start of the crediting period at all the project water sources. The selected in-country Laboratory will certify each water supply in line with national standards (or WHO, if no national standards).

supplied by the project water technology/source achieves both: i. microbial quality in line with either (i) national standards or guidelines for microbial quality of drinking water, or in the absence of such requirements, (ii) the guideline values for verification of microbial quality from the Guidelines for drinking-water quality (Table 7.10, WHO, 2017) ii. compliance with (i) national standards or guidelines on priority chemical contamination and physical and aesthetic aspects, or in the absence of such requirements, (ii) international standards or guidelines on priority chemical contamination and physical and aesthetic aspects. (parameter SWDS 3).	

i. The project must conduct annual water hygiene education campaigns for the end-users (parameter SDWS 20).	Hygiene Campaigns are conducted annually in the Project. The training involves sensitisation on principles of Water, Sanitation, and Hygiene (WASH), cleanliness of transport containers, and preventing contamination of the groundwater. The annual surveys are guided by the core questions set out by the Joint Monitoring Programme. (https://washdata.org/monitoring/methods/core-questions)
j. A project applying this methodology may make SDG claims if relevant monitoring parameter(s) is included in the monitoring plan to demonstrate and confirm the project's contributions to SDGs. See parameter SDWS 19.	SDG 1, 5, 7, 13 & 15 are monitored in this Project. SDG impacts are summarised in the Ex-ante Calculations.

B.3. VPA boundary

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Table 6. Emissions within VPA boundary.

Source		GHGs	Included?	Justification/ Explanation
Baseline scenario	Emissions from wood fuels utilised for obtaining safe drinking water displaced due to project activity	CO_2	Yes	Major source of emissions
		CH_4	Yes	Minor source of emissions
		N_2O	Yes	Minor source of emissions
	Emissions from fossil fuels utilised for obtaining drinking water	CO_2	Yes	Major source of emissions
		CH_4	No	Excluded for simplification

	displaced due to project activity	N_2O	No	Excluded for simplification
Project scenario	Emissions from electricity for operating project water supply/treatment technology	CO_2	Yes	Important source of emissions
		CH_4	No	Excluded for simplification
		N_2O	No	Excluded for simplification
	Emissions from fossil fuels for operating project water supply/treatment technology	CO_2	Yes	Limited fuel energy may be required
		CH_4	No	Excluded for simplification
		N_2O	No	Excluded for simplification

B.4. Establishment and description of baseline scenario

>>

In the baseline scenario local people typically use wood fuel on inefficient three stone fires for cooking and water purification. This process results in the release of greenhouse gas emissions from the combustion of the wood. This can be avoided if local communities have access to safe water and therefore do not need to boil water as a treatment method.

Out of its population of over 50 million people including 34 million of these residing rurally[4], 41% of thepopulation are without access to basic safe drinking water services[5]. These residents are therefore reliable on unimproved water sources such as unprotected wells, rivers and other open water sources that are highly susceptible to contamination. Many depend on boiling as the only treatment method available or are

[4] https://worldpopulationreview.com/countries/uganda#density-by-city
[5] https://data.unicef.org/country/uga/#water

forced to drink dirty water due to suppressed demand factors such as lack of access to fuel, time and financial resources.

The Project shall consult national, regional and local regulatory framework for provision of safe drinking water in the project boundary, in line with parameter SDWS 4. The Project shall not undermine or conflict with any national, sub-national and local regulations or guidance for safe drinking water supply, operation and maintenance, including any tariff requirements. The work conducted in this project directly aligns with the Uganda's commitment to achieve the Third National Development Plan (NDPIII)[6] goal to increase access to safe and clean water to achieve 85% coverage in rural areas and 100% coverage in urban areas by 2025[7].

The baseline situation is not expected to change significantly during the next years considering the current situation in Uganda, its economic development of the last years and predictions for the future. Uganda is a Less Developed Country with a Human Development Index ranking of 166 out of 191 countries[8].

Figure 4. Examples of baseline water sources used when improved sources are not available

Baseline Project Surveys

[6] https://budget.finance.go.ug/sites/default/files/NDPIII.pdf
[7] UNICEF-Uganda-WASH-Budget-Brief-2023-2024.pdf
[8] https://countryeconomy.com/hdi/uganda

In line with Gold Standard requirements, the Baseline Project Survey provides critical information on target population characteristics, water and fuel consumption needed to purify water, suppressed demand and leakage.

A total of 122 Baseline Project Surveys were conducted within the Kole, Alebtong, Otuke and Dokolo districts of Northern Uganda between 30/10/2024 and 07/12/2024. The survey comprised of questions covering broad topic areas such as household characteristics, fuel use, sources that respondents would be using if the project did not exist, and what methods would be used to treat this water.

Information collected to inform the baseline includes household information, household characteristics, where drinking water would be obtained in the absence of the project and whether it would have to be treated to be safe for consumption. Further questions inquire about cooking methods and fuel types used, how these are acquired and the time that is spent on these tasks.

The survey found that without the project 10.38% of respondents would consume safe water either through an improved water source or through a treatment method that isn't boiling. The improved water sources respondents said they would use in the baseline survey were boreholes or tubewells, protected wells and protected springs. The unimproved sources were unprotected springs, unprotected wells and surface water.

61.48% of people in the baseline survey would boil their unsafe water as a means of purification in absence of the project.

28.14% of people in the baseline survey would drink unsafe water and are therefore considered as suppressed demand in the project. Suppressed demand users drink unsafe water and do not have the means to purify this due to energy poverty, as per paragraph 3.4.3 of the methodology.

Baseline results show that the total time that would be spent collecting water and fuel in absence of the project is 2.99 hours per household per day. The burden of water collection falls primarily on women, with 92% of primary collectors being female adults and female children under 15 years.

92.62% of respondents use a traditional wood stove or three stone fire as their main cooking technology (10% efficiency), 4.92% use a basic improved stove (defined as other conventional system in the methodology – 20% efficiency), and 2.46% use an improved woodfuel stove (30% efficiency). 95.08% of respondents use wood as their primary fuel and 4.92% use charcoal.

Table 7. Baseline Parameters from Baseline Study

C_b	Expressed as a percentage, proportion of project households who in the baseline were already using a safe water supply that did not require boiling it	10.38%

$P_{b,\ boil}$	Percentage of persons boiling water for purification in the baseline scenario	61.48%
Supressed demand users	Percentage of persons not boiling water for purification in the baseline scenario and not using a safe water supply ($1-C_b - P_{b,\ boil}$)	28.14%
fNRB	Fraction of non-renewable biomass	0.85
$T_{b,y}$	Time spent collecting water and fuel per household per day prior to project (hours)	2.99 hours
X_f	Proportion of fuel *f* used in the baseline	Wood fuel: 95.08% Charcoal: 4.92%

B.5. Table 8. Demonstration of additionality

>>

Specify the methodology, activity requirement or product requirement that establishes deemed additionality for the proposed project (including the version number and the specific paragraph, if applicable).	As demonstrated in the Gold Standard for the Global Goals Community Services Activity Requirements section 4.1.9 - Projects that meet **any** of the following criteria are considered as deemed additional and therefore are not required to prove Financial Additionality at the time of Design Certification: 1. (a) Positive list (Annex B) 2. (b) Projects located in LDC, SIDS, LLDC 3. (c) Micro-scale projects
Describe how the proposed VPA meets the criteria for deemed additionality.	This VPA is micro scale, and Uganda is an LDC, so is therefore deemed additional by the relevant activity requirement.

>>

B.5.1. Prior Consideration

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Projects won't be retroactive, so this section does not apply.

B.5.2. Ongoing Financial Need

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As per Community Service Activity Requirements v1.2, Principle 5, Section 4.1.9, the project is automatically additional. VPA-DD guidelines state ongoing financial need is only to be included "…for those projects that are required to demonstrate financial additionality".

The Project does not generate any income other than from the sale of carbon credits. If the funding from such sales were to cease, the Project would not be able to continue in its entirety.

B.6. Table 9. Sustainable Development Goals (SDG) outcomes

Relevant Target/Indicator for each of the three SDGs

		SDG IMPACT
SUSTAINABLE DEVELOPMENT GOALS TARGETED	MOST RELEVANT SDG TARGET	**INDICATOR (PROPOSED OR SDG INDICATOR)**
SDG 1 – No Poverty	1.4 By 2030, ensure that all men and women, in particular the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	Additional number of persons with access to basic/limited services 1.4.1 Proportion of population living in households with access to basic services

SDG 5 – Gender Equality	5.4 Recognize and value unpaid care and domestic work through the provision of public services, infrastructure and social protection policies and the promotion of shared responsibility within the household and the family as nationally appropriate	Time saved collecting water and fuel **Percentage** reduction in time spent collecting water and fuel for project activity in year y
SDG 7 – Clean & Affordable Energy	7.1 By 2030, ensure universal access to affordable, reliable and modern energy services	7.1 Total number of households with access to Safe Water from a clean treatment technology
SDG 13 - Climate Action (mandatory)	13.2 Integrate climate change measures into national policies, strategies and planning	Total project emissions reductions
SDG 15 – Life on Land	15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements	Total non-renewable wood fuel saved

B.6.1. Explanation of methodological choices/approaches for estimating the SDG Impact

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Outcomes for SDG 1 (No Poverty) are calculated as follows:

The outcome for SDG 1 (specifically target 1.4.1; Proportion of population living in households with access to basic services) is quantified as the additional number of persons having access to basic/limited safe water in the project activity compared to the baseline scenario (P_{access}).

The number of persons is determined either in the Baseline Survey for the purpose of the PDD or in the Project Survey for monitoring reports. People (%) are separated into Joint Monitoring Programme (JMP) Service ladder categories:

Safely Managed Service – people who drink water from an improved water source that is located on premises, available when needed and free from faecal and priority chemical contamination.

Basic Service – people who drink water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing.

Limited Service – people who drink water from an improved source for which collection time exceeds 30 minutes for a round trip, including queuing.

Unimproved Service – people who drink water from an unprotected dug well or unprotected spring.

Surface Water – people who drink water directly from a river, dam, lake, pond, stream, canal or irrigation canal

Positive impact to SDG1 is determined by the difference in the proportion of people with access to improved water source, provided collection time is not more than 30 minutes for a round trip, including queuing.

P_{access} = Basic access (baseline) – Basic access (project)

Where:

P_{access} Number of additional persons having access to basic/limited safe water in the project activity compared to the baseline scenario.

Basic access (baseline): Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing

Basic access (project): Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing

Outcomes for SDG 5 (Gender Equality) are calculated as follows:

Globally, women and girls are responsible for the majority of unpaid domestic work[9]. This leaves them with less time to rest, study and realise their economic potential, and as a result is a cause of 'time poverty'. As part of these domestic duties, women are largely responsible for the collection of firewood and water[10]. Therefore, reducing the amount of firewood required by households has the potential to reduce the time poverty of women as it will reduce the amount of time spent on collecting water and firewood. Having safe water sources located centrally within communities will reduce the time spent travelling to collect water and will reduce the need for firewood to purify water. The average percentage decrease per household in time spent gathering firewood will be taken as a proxy contribution towards the SDG target.

The overall percentage reduction in time spent collecting water and firewood by the project activity is calculated as follows:

$$TR_y = (T_{b,y} - T_{p,y}) / T_{b,y}$$

Where:

TR_y Total reduction time spent collecting water and fuel for project activity in year y (%)

$T_{b,y}$ Time spent collecting water and fuel per household per day prior to project (hours)

$T_{p,y}$ Time spent collecting water and fuel per household per day in project (hours)

It is predicted that time spent collecting water and firewood will be reduced because of the project. To infer what project participants are doing with their time saved from

[9]UN (2017), 'Progress towards the Sustainable Development Goals (E/2017/66)'. Available at https://unstats.un.org/sdgs/files/report/2017/secretary-general-sdg-report-2017--EN.pdf

[10] Asaba, R.B., Fagan, H., Kabonesa, C. and Mugumya, F., (2013) Beyond distance and time: gender and the burden of water collection in rural Uganda. wH2O: Journal of Gender and Water, 2(1), pp.31-38.

the project, qualitative questions will be included in the monitoring surveys which ask respondents how they spend their time saved and answers will be divided into designated time use categories. In some circumstances, it may be the case where respondents comment on the tasks they undertook in their spare time and these are recorded by field staff.

Outcomes for SDG 7 (Affordable and Clean energy) are calculated as follows:

The outcome for SDG 7 is quantified as the total number of households with access to safe water from a clean treatment technology.

The number of persons using each safe water source point is determined during the sensitisation process during the installation, possible drop off rates in future will be taken into account in monitoring surveys. The percentage of users who were already consuming safe water in the baseline without boiling it (Cb) will be determined through the baseline survey(s). This is multiplied by the usage rate (U_{py}) in the project scenario. Calculations are as follows (parameters from sections B.6.3 and B.7.1 of the VPA-DD will be applied):

$$HH_{access} = HH_{p,y} * (1 - C_b) * U_{p,y}$$

Where:

HH_{access}	Total number of households with access to safe water from a clean treatment technology.
$HH_{p,y}$	Number of households with access to safe water from a clean treatment technology in the project scenario
C_b	Expressed as a percentage, proportion of project end users who in the baseline were already using a safe water supply that did not require boiling.
U_{py}	Usage rate in project scenario p during year y

Outcomes for SDG 13 (Climate Action) are calculated as follows:

CO_2 emission reductions are the indicator to demonstrate that the project has raised capacity for effective climate change related planning and management. This outcome is measured by using the VPA's emission reduction calculations.

Baseline Emissions

CO_2 Emission Reductions are the indicator to demonstrate that the project has raised capacity for effective climate change-related planning and management. This outcome is measured using the project's emission reductions calculations. The baseline emission factor shall be calculated as follows:

Baseline Emissions

Equation 1

$$EF_b = SE_{w,b,y} * \Sigma (xf * (EF_{b,f,co2} * fNRB * EF_{b,f,\ nonCO2})) \div 10^9$$

Where:

EF_b	Emission factor for the use of fuel to obtain safe water in the baseline (tCO_2e/L)
$SE_{w,b,y}$	Specific energy required to boil water (kJ/L), to be calculated as per the paragraph below
xf	Proportion of fuel f used in the baseline (fraction)
$EF_{b,f,CO2}$	CO_2 emission factor from use of fuel f (tCO2e/TJ)
$EF_{b,f,non\text{-}CO2}$	Non-CO_2 emission factor arising from use of fuel f, when the baseline fuel f is biomass or charcoal (tCO_2e/TJ)
f_{NRB}	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

Equation 2

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 losses16, taking into account default or measured stove efficiency.

$SE_{w,b,y} = 360.83/\eta_{wb}$

Where:

360.83	Default amount of energy required to obtain 1 L of water after 5 minutes of boiling from a first principles approach kJ/l
η_{wb}	3 stone fire – efficiency of the baseline water boiling (%). Weighted average of the baseline stove types
η_{wb}	Charcoal – efficiency of the baseline water boiling (%). Weighted average of the baseline stove types

Equation 3

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

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

Equation 4

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

$Q_y = \min(Q_{m,y}, Q_{pop,y})$

Where:

$Q_{m,y}$	Monitored quantity of safe water provided by the project in year y (L)
$Q_{pop,y}$	Quantity of safe drinking water that could be consumed by project end-users in year y (L)

Quantity of safe drinking water shall be calculated as follows:

Equation 5

$Q_{pop,y} = \Sigma_p HH_{p,y} * HN_{p,y} * QPW_P * DO_{p,y}$

Where:

$HH_{p,y}$	Number of premises type p served by the project in year y
$HN_{p,y}$	Number of individuals per premises type p (e.g. household, school) in year y
QPW_p	Volume of drinking water per person per day for premises type p (L). Apply the default value or monitored value through water consumption field tests in the project scenario, capped at 5.5 litres per person per day.
$DO_{p,y}$	Days the project technology is operational for end-users in premises p in year y

Project Emissions

Project emissions may result from the operation of new low-emission water treatment technologies. Project emissions (*PE_y)* shall be calculated as follows:

Equation 8

$PE_y = PE_{ff,p,y} + PE_{ec,p,y}$

Where:

PE_y	Project emissions in year y (tCO_2)
$PE_{ff,p,y}$	Project emissions from fossil fuel use in year y (tCO_2)
$PE_{ec,p,y}$	Project emissions from electricity use in year y (tCO_2)

Equation 9

Project emissions from fossil fuel use are determined as follows.

$PE_{ff,p,y} = \Sigma P_{p,f,y} * NCV_f * EF_f$

Where:

$P_{p,f,y}$	Quantity of fossil fuel f that is consumed in the project during year y (mass or volume units)
NCV_f	Net calorific value of fossil fuels f (TJ/fuel units)
EF_f	Emission factor of fossil fuel f (tCO2/TJ)

Equation 10

Project emissions from electricity use are estimated as follows.

$PE_{ec,p,y} = \Sigma EC_{p,y} * EF_{ec} * (1 + TDL_{ec})$

Where:

$EC_{p,y}$	Quantity of electricity that is used in the project during year y (kWh)
EF_{ec}	Emission factor associated with the electricity use (tCO_2/kWh)
TDL_{ec}	Transmission and distribution losses associated with the electricity use (%)

Leakage:

Leakage emissions, LE_y, shall be calculated as follows:

First, the project developer must evaluate, ex-ante, the following potential sources of leakage and provide an evidence-based description and preliminary quantification of each potential source and its relevance for the project:

a. Members of the population who do not participate in the project, and previously used lower emitting energy sources, instead use the non-renewable biomass saved under the project activity

b. The project significantly reduced the NRB fraction within an area where other GHG mitigation project activities account for NRB fraction in their baseline

scenario

c. The project population compensates 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.

Leakage risks deemed very low can be ignored as long as the case for their insignificance is substantiated.

Second, for each source for which the leakage assessment expects an increase in non-renewable biomass fuel consumption by non-project households/users attributable to the project activity, then calculations must be undertaken to account for the leakage from this source. Leakage is either calculated as a quantitative emissions volume (tCO2e) or as a percentage of total emission reductions. The project documentation shall include a projection of leakage emissions based on available data and information. The monitoring plan must include monitoring parameters to be registered during the leakage investigation every two years to populate the leakage calculation.

Third, the project developer must conduct a leakage investigation every two years using relevant methods. For example, surveys to determine parameters for the leakage calculation may be combined with project monitoring surveys, as is applicable.

If the ex-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. In this case, the sources and magnitude of leakage emissions must be reassessed at the time of crediting period renewal.

Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y	Emission reductions in year y (tCO_2e/yr)
BE_y	Baseline emissions in year y (tCO_2e/yr)
PE_y	Project emissions in year y (tCO_2e/yr)

LE_y	Leakage emissions in year y (tCO_2e/yr)

Outcomes for SDG 15 (Life on Land) are calculated as follows:

The outcomes of SDG 15 are quantified the Total non-renewable firewood saved (tons) in the project scenario compared to the baseline scenario.

Baseline scenario calculations:

Equation 1

$W_{b,\,NRB} = W_{b,n} * f_{NRB,f,y}$

Where:

$W_{b,\,NRB}$	Baseline non-renewable firewood usage (tonnes/year)
$W_{b,n}$	Baseline average firewood usage for boiling water (tonnes/year)
$f_{NRB,f,y}$	Fractional non-renewability status of woody biomass furing year y (fraction)

Equation 2

Where:

$W_{b,n} = N_{p,y} * P_{b,y} * D_{a,y}$

Where:

$W_{b,n}$	Baseline average firewood usage for boiling water (tonnes/year)
$N_{p,y}$	Number of people served by the project in year y
$P_{b,y}$	Quantity of fuel that is consumed in the baseline scenario b during year y (kg/person-day)
$DO_{p,y}$	Days the project technology is operational for end-users in premises p in year y

Equation 3

Where:

$P_{b,y} = QP_{w,p} * W_{b,y}$

Where:

$P_{b,y}$	Quantity of fuel that is consumed in the baseline scenario b during year y (kg/person-day)
$QP_{w,p}$	Quantity of safe water supplied in the project scenario p during year y, using the "zero or low" emissions clean water supply technology
$W_{b,y}$	Average firewood suage (tonnes) for boiling 1 litre of water

Equation 4

Where:

$$W_{b,y} = SE_{w,b,y} \div ((NVC_{wood} * xf_{wood}) + (NCV_{charcoal} * xf_{charcoal}))$$

Where:

$W_{b,y}$	Average firewood suage (tonnes) for boiling 1 litre of water
$SE_{w,b,y}$	Specific energy required to boil water (kJ/L), based on baseline fuel/technology use
NCV_{wood}	IPCC default net calorific value for wood (KJ/kg)
$NCV_{charcoal}$	IPCC default net calorific value for charcoal (KJ/kg)
xf_{wood}	Proportion of wood fuel *f* used in the baseline
$xf_{charcoal}$	Proportion of charcoal fuel *f* used in the baseline

Project savings calculations:

Equation 5

$$W_{p,NRB} = W_{p,n} * f_{NRB,f,y}$$

Where:

$W_{p,NRB}$	Total non-renewable firewood saved (tonnes) in the project scenario in year y
$W_{p,n}$	Tonnes of firewood per year saved through the project
$f_{NRB,f,y}$	Fractional non-renewability status of woody biomass during year y (fraction)

Equation 6

Where:

$$W_{p,n} = N_{p,y} * P_{b,y} * D_{a,y} * U_{p,y} * (1- C_b)$$

Where:

$W_{p,n}$	Tonnes of firewood per year saved through the project
$N_{p,y}$	Number of people served by the project in year y
$P_{b,y}$	Quantity of fuel that is consumed in the baseline scenario b during year y (kg/person-day)
$DO_{p,y}$	Days the project technology is operational for end-users in premises p in year y
$U_{p,y}$	Usage rate in project scenario p during year y
C_b	Proportion of project households who in the baseline were already using a safe water supply that did not require boiling (%)

B.6.2. Data and parameters fixed ex ante

Parameter ID	**SDWS 1**
Data/parameter	Number of household/institution per CWT/CWS
Unit	Coordinates of CWT/CWS – acceptable formats for GPS coordinates include DMS (degrees, minutes and seconds), DMM (degrees and decimal minutes) and DD (decimal degrees) Number of end-user premises - quantity
Description	End users premises (e.g. households, institutions) within 1km distance of project water source. Recorded for each CWT/CWS installation ex-ante at the time of start of crediting period. In case of progressive installation – for new CWT/CWS units before 1st issuance for new units.
Source of data	GPS coordinates for each individual water point location Number of eligible households/institutions for each water point collected in user lists
Value(s) applied	350 users per water source (estimate)

Choice of data or Measurement methods and procedures	Household lists
Purpose of data	Determine location of water point, number of end-users and distance from water point.
Additional comment	-

SDG 1, 5, 7, 13 & 15

Parameter ID	**SDWS 2**
Data/parameter	Project technology description
Unit	N/A
Description	Detailed description of the planned project technology shall include as a minimum: **CWT and CWS:** - manufacturer name - product name (if applicable) - technology type - capacity (in case of pumps: rated flow rate, or flow-rate calculation) For all technologies, any performance certifications issued by national standard body, or an appropriate certification part recognised by national standards body or recognised International Organisation agency also shall be provided. **Rehabilitated technologies:** In case the project technology (CWT and CWS) is rehabilitated, the following is also required as part of technology description: - Evidence of Non-operational time prior to proposed rehabilitation (at minimum with evidence letter from local representative or government, etc.); - Evidence of lack of an existing maintenance or repair plan (at minimum with evidence letter from local representative or government, etc.);

	- Original installation date/month (approximate month/year); and - Information/evidence to confirm the details of rehabilitation activity (e.g. parts replaced, specifications followed, personnel conducting the repairs and date of retrofitting) Carbon Transfer Forms and Rehabilitation Confirmation Forms demonstrate evidence of such project details.
Source of data	**CWT and CWS:** any of the following sources shall be used: - Manufacturer specifications - Commercial guarantee - Technical reports from the installer - Third party certification by a qualified entity, for example recognised certification agency by National/International Standard body **Rehabilitated technologies:** - Sources mentioned for CWT and CWS above - Technical reports from a qualified entity that undertakes the rehabilitation Professional opinion or expert opinion is not accepted as a source for this parameter.
Value(s) applied	N/A
Choice of data or Measurement methods and procedures	Carbon Rights will be addressed in the Carbon Transfer Forms and rehabilitations in the Rehabilitation Confirmation Form.
Purpose of data	Outline project details
Additional comment	-

SDG 1, 7 & 15

Parameter ID	**SDWS 3**
Data/parameter	Project technology performance level
Unit	N/A

Description	The water directly supplied by the water source (CWS or from the CWT) must comply with: i. Microbial quality in line with (i) national standards or guideline for microbial quality of drinking water, or in their absence, (ii) the guideline values for verification of microbial quality from the Guidelines for drinking-water quality, 4th edition (Table 7.10, WHO, 2017); and ii. Chemical quality (i) national standards or guidelines on priority chemical contamination and physical and aesthetic aspects, or in the absence of such requirements, (ii) international standards or guidelines on priority chemical contamination and physical and aesthetic aspects. Once at the start of the crediting period, and microbial quality at the CWS and CWT location must be retested following an event that could lead to the contamination of the source water (e.g. flooding).
Source of data	Water quality test report
Value(s) applied	Laboratories used for water quality testing must be approved by local health authorities and/or have quality accreditation; and The laboratory used shall have evidence to demonstrate that it has an adequate quality management plan in place which addresses both quality assurance and quality control test procedures. Table 4.6 Checklist for effective analytical quality assurance of WHO Guidelines, 1997 may be used as a guideline for laboratory compliance with quality assurance practices.
Choice of data or Measurement methods and procedures	Water quality laboratory analysis
Purpose of data	Determine water quality

Additional comment	-

SDG 1, 7 & 15

Parameter ID	**SDWS 4**
Data/parameter	Regulatory framework for safe water supply
Unit	N/A
Description	List and provide a summary of any national, sub-national and local regulations or guidance for safe drinking water supply, operation and maintenance, including any tariff requirements. Describe how the project complies with the regulatory framework.
Source of data	National, sub-national and local authorities.
Value(s) applied	The work conducted in this project directly aligns with the Uganda's commitment to achieve the Third National Development Plan (NDPIII)[11] goal to increase access to safe and clean water to achieve 85% coverage in rural areas and 100% coverage in urban areas by 2025[12].
Choice of data or Measurement methods and procedures	National water policy will be used to guide the project and meet safe water supply guidelines.
Purpose of data	Adhere to regulatory framework for safe water supply
Additional comment	The project shall not undermine or conflict with any national, subnational and local regulations or guidance for safe drinking water supply, operation and maintenance, including any tariff requirements

[11] https://budget.finance.go.ug/sites/default/files/NDPIII.pdf
[12] UNICEF-Uganda-WASH-Budget-Brief-2023-2024.pdf

SDG 1, 7 & 15

Parameter ID	SDWS 5
Data/parameter	Water sources in the project boundary
Unit	N/A
Description	Identify the water sources in the project boundary, and identify whether they are used for drinking water, and for all that are used for drinking water, classify them as improved or unimproved water source, in line with water source definition in ERDSWD v1 methodology.
Source of data	Baseline study
Value(s) applied	9.56% Improved 90.44% Unimproved
Choice of data or Measurement methods and procedures	Baseline Survey results demonstrate water sources used for drinking in the project. Results are categorised in line with Annex 2 of ERSDWS v1 methodology as improved or unimproved.
Purpose of data	Determine water sources in the project boundary
Additional comment	

SDG 13 & 15

Parameter ID	SDWS 6
Data/parameter	Stove technologies used in the project boundary
Unit	N/A
Description	The proportion of different stove types used in premises in the geographical area of the project. The baseline survey will determine what stove type is dominant in the project area.
Source of data	Baseline survey

Value(s) applied	Three-stone fire/traditional woodfuel stove (92.62%) Other conventional system (4.92%) Improved woodfuel stove (2.46%)
Choice of data or Measurement methods and procedures	Baseline survey
Purpose of data	Calculation of baseline scenario
Additional comment	-

SDG 13

Parameter ID	**SDWS 7**
Data/parameter	Expected technical life of project technology
Unit	Treatment volume or operational hours or time period
Description	The expected technical life of an individual project technology shall be defined in the VPA-DD. The details include both technology/device life and filter life, if a filter is used and it is replaceable.
Source of data	**CWS/CWT:** Any one of the following sources shall be used: - Manufacturer specifications - Guarantee from the installer - Third-party certification by a qualified entity, for example recognised certification agency by National/International Standard body If none of the required sources mentioned above are available, report of representative and robust field study results may be acceptable. **Rehabilitated technologies:** - Guarantee from a qualified entity that undertakes the rehabilitation

	Professional opinion or expert opinion is not accepted as a source for this parameter
Value(s) applied	Water sources are designed to last for up to 20-50 years with adequate maintenance
Choice of data or Measurement methods and procedures	N/A
Purpose of data	Determine technical life of project technology
Additional comment	The project shall ensure that the units are replaced with systems of comparable quality or retrofitted at the end of their technical life in order to continue claiming emission reductions. If no replacement or retrofitting is provided, emission reduction claims are limited to the expected technical life.

SDG 7, 13 & 15

Parameter ID	**SDWS 8**
Data/parameter	X_f
Unit	Percentages 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. For example, the target population either use wood or charcoal - 60% end users use wood and 40% charcoal. - Weighted average on energy basis, if multifuel situation exists within premise. For example, a household that uses 1000 kg fuelwood per year and 500 kg charcoal per year for cooking and water boiling uses 51.4% fuelwood and 48.6% charcoal on an energy basis. If the project covers different types of end-users 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. Undertake assessment at the start of each crediting period.

Source of data	Baseline survey
Value(s) applied	xf – Wood fuel use (95.08%) xf – Charcoal use (4.92%)
Choice of data or Measurement methods and procedures	Baseline Survey
Purpose of data	Determine the proportion of each different cooking fuel *f* used in the project boundary by end users
Additional comment	-

SDG 13

Parameter ID	**SDWS 9**
Data/parameter	$EF_{b,f,CO2}$
Unit	tCO_2/TJ
Description	CO2 emission factor from use of fuels SDG 13 (Climate Action), 13B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries and small island developing States, including focusing on women, youth and local and marginalized communities.
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) IPCC defaults; Volume 2: 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Chapter 2, Table 2.5; https://www.ipccnggip.iges.or.jp/public/2006gl/pdf/2_Volume2/V2_2_Ch2_Stationary_Combustion.pdf

Value(s) applied	Wood: 112 tCO_2/TJ Charcoal: 165.22 tCO_2/TJ
Choice of data or Measurement methods and procedures	Deemed valid by methodology
Purpose of data	Calculation of baseline emissions
Additional comment	-

SDG 13

Parameter ID	**SDWS 10**
Data/parameter	$EF_{b,f,nonCO2}$
Unit	tCO_2e/TJ
Description	Non-CO2 emission factor from use of fuels, in case the baseline fuel is biomass or charcoal
Source of data	IPCC defaults: Non-CO2 Emissions from Stationary Combustion. Annex 1, Table 2 and Table 3. https://www.ipccnggip.iges.or.jp/public/gp/bgp/2_2_Non CO2_Stationary_Combustion.pdf Global Warming Potential: http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch 2s2-10-2.html#table2-14
Value(s) applied	Wood: 9.46 tCO_2e/TJ Charcoal: 44.83 tCO_2e/TJ
Choice of data or Measurement methods and procedures	Deemed valid by methodology
Purpose of data	Calculation of baseline emissions
Additional comment	-

SDG 13 & 15

Parameter ID	SDWS 11
Data/parameter	n_{wb}
Unit	Percentage
Description	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	**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% **Fossil fuel combusting system:** manufacturer specification, or if not available, following the testing procedure described below. In case other types of stoves are found in the project area, or if significant efficiency differences from the default values are expected, standard Water Boiling Tests may be undertaken to determine stove efficiency using representative sampling methods, following the most recent WBT protocol or when sampling is used, follow sampling requirements in the ERSDWS v1
Value(s) applied	10% * 92.62% 20% * 4.92% 30% * 2.46% Weighted average = 10.98%

Choice of data or Measurement methods and procedures	Baseline Survey results
Purpose of data	Determine the efficiency of baseline water boiling.
Additional comment	-

SDG 7, 13 & 15

Parameter ID	**SDWS 12**
Data/parameter	C_b
Unit	Percentage
Description	Proportion of project households who in the baseline were already using a safe water supply that did not require boiling it (%)
Source of data	Baseline Survey
Value(s) applied	10.38%
Choice of data or Measurement methods and procedures	Established through questions in the baseline on a representative sample of the end users.
Purpose of data	To calculate the additional number of persons having access to safe water in the project activity compared to the baseline scenario.
Additional comment	-

SDG 13 & 15

Parameter ID	**SDWS 14**
Data/parameter	NCV_f
Unit	TJ/fuel units, i.e. mass or volume units
Description	Net calorific value of fossil fuel f

Source of data	IPCC defaults
Value(s) applied	Wood: 0.0156 TJ/ton Charcoal: 0.0295 TJ/ton
Choice of data or Measurement methods and procedures	IPCC defaults
Purpose of data	Applied to Emission Reduction Calculations
Additional comment	-

SDG 13

Parameter ID	**SDWS 15**
Data/parameter	EF_f
Unit	tCO_2/TJ
Description	Emission factor of fossil fuel *f*
Source of data	Methodological default derived from IPCC.
Value(s) applied	Wood: 112 tCO_2/TJ Charcoal: 165.22 112 tCO_2/TJ
Choice of data or Measurement methods and procedures	Methodological default derived from IPCC.
Purpose of data	Calculation of project scenario
Additional comment	-

SDG 13

Parameter ID	**SDWS 16**
Data/parameter	EF_{ec}
Unit	tCO_2/kWh

Description	Emission factor associated with the electricity use.
Source of data	Methodological default
Value(s) applied	N/A
Choice of data or Measurement methods and procedures	N/A
Purpose of data	N/A
Additional comment	-

SDG 13

Parameter ID	**SDWS 17**
Data/parameter	TDL_{ec}
Unit	%
Description	Transmission and distribution losses associated with the electricity use
Source of data	N/A
Value(s) applied	N/A
Choice of data or Measurement methods and procedures	N/A
Purpose of data	N/A
Additional comment	-

SDG 13 & 15

Parameter ID	**N/A**
Data/parameter	$Se_{w,b,y}$
Unit	kJ/L

Description	Specific energy required to boil water
Source of data	Methodological default and Baseline Survey
Value(s) applied	3285.1
Choice of data or Measurement methods and procedures	Value calculated in line with Section 3.6.2 of SWDS Methodology: $360.83/\eta_{wb}$
Purpose of data	Calculation of baseline emissions
Additional comment	-

SDG 5

Parameter ID	**N/A**
Data/parameter	$T_{b,y}$
Unit	Hours
Description	Time spent collecting water and fuel per household per day prior to project
Source of data	Baseline Survey
Value(s) applied	2.99 hours
Choice of data or Measurement methods and procedures	Baseline Survey
Monitoring frequency	Calculating time saved by project
QA/QC procedures	
Purpose of data	Calculation total reduction of time spent collecting water and fuel per household per day
Additional comment	-

SDG 15

Parameter ID	N/A
Data/parameter	$P_{b,boil}$
Unit	Percentage
Description	Percentage of persons boiling water in the baseline
Source of data	Baseline Survey
Value(s) applied	61.48%
Choice of data or Measurement methods and procedures	The percentage of people stating that they used to boil their water for purification in the baseline scenario, evaluated through the baseline survey.
Purpose of data	Determine number of persons boiling water in the baseline
Additional comment	-

SDG 13 & 15

Parameter ID	SDWS 21
Data/parameter	*fNRB*
Unit	Percentage
Description	Fractional non-renewability status of woody biomass fuel during year y, in case the baseline fuel is biomass or charcoal
Source of data	Determined by: fNRB assessment calculated in house following guidance from CDM Tool 30 EB 115 Annex 22 v4.0 2022 https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-30-v4.0.pdf
Value(s) applied	0.85
Choice of data or Measurement	Deemed valid by methodology

methods and procedures	
Purpose of data	To calculate baseline emissions
Additional comment	-

SDG 1

Parameter ID	**N/A**
Data/parameter	*Baseline Basic Service*
Unit	Percentage
Description	Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing
Source of data	Baseline Survey
Value(s) applied	4.37%
Choice of data or Measurement methods and procedures	Established through questions in the baseline on a representative sample of the end users
Purpose of data	To calculate P_{access}
Additional comment	This is calculated to include proportional use of people who are unable to access the water source every day. See baseline survey for more information.

B.6.3. Ex ante estimation of SDG Impact

>>

SDG 1 (No Poverty)

P_{access} = % Project Basic Service - % Baseline Basic Service

= 60% – 4.37% = 55.63%

Where:

P_{access} Proportion of population living in HHs with access to basic service

Baseline Basic Service (Baselines survey): Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing

Project Basic Service (assumed in advance of project data): Drinking water from an improved source, provided collection time is not more than 30 minutes for a round trip, including queuing

SDG 5 (Gender Equality)

$TR_y = (T_{b,y} - T_{p,y}) / T_{b,y}$

$TR_y = (2.99 – 1.5) / 2.99 = 49.83\%$

Where:

TR_y Total reduction time spent collecting water and fuel for project activity in year y (%)

$T_{b,y}$ Time spent collecting water and fuel per household per week prior to project (hours)

$T_{p,y}$ Time spent collecting water and fuel per household per week in project (hours)

SDG 7 (Affordable and Clean energy):

This is calculated per individual water point.

$HH_{access} = HH_{p,y} * (1 – C_b) * U_{py}$

$HH_{access} = 59 * (1 – 0.1038) * 90\% = 47$

SDG 13

CO2 emission reductions are the indicator to demonstrate that the project has raised capacity for effective climate change related planning and management. These are calculated according to the description in Section B of the VPA-DD.

This is calculated per individual water point.

Per Unit

Emission Factor calculation:

$EF_b = SE_{w,b,y} * \Sigma(X_f * (EF_{b,f,co2} * f_{NRB,f,y} + EF_{b,f,nonCO2})) \div 10^9$

$= 3285 * (((0.9508 * (112 * 0.85 + 9.46)) + ((0.0492 * (165.22 * 0.85 + 44.83)) \div 10^9 = 0.0003568$

Where:

EF_b	Emission factor for the use of fuel to obtain safe water in the baseline (tCO_2e/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)
$EF_{b,f,CO2}$	CO_2 emission factor from use of fuel f (tCO_2/TJ)
$EF_{b,f,nonCO2}$	Non-CO_2 emission factor arising from use of fuel f, when the baseline fuel f is biomass or charcoal (tCO_2e/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

Where:

$SE_{w,b,y} = 360.83/\eta_{wb}$

= 360.83/ ((0.1 * 92.62) + (0.2 * 4.92) + (0.3 * 2.46) = 3285.1

Where:

360.83	Default amount of energy required to obtain 1L of water after 5 minutes of boiling from a first principles approach, KJ/l
η_{wb}	Efficiency of the stoves for baseline water boiling (%). Weighted average of baseline stove types

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

= 0.0003568 * (1 – 0.1038 – 0) x 436,905 * 0.9 = 125

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

Equation 4

$Q_y = \min(Q_{m,y}, Q_{pop,y})$

= min(693,500:436,905)

Where:

$Q_{m,y}$	Monitored quantity of safe water provided by the project in year y
Q_{pop}	Quantity of safe drinking water that could be consumed by project end-users in year y (L)

Quantity of safe drinking water shall be calculated as follows:

Equation 5

$Q_{pop} = \Sigma_p HH_{p,y} * HN_{p,y} * QPW_P * DO_{p,y}$

= 59 * 5.32 * 4 * 347 = 436,905

Where:

$HH_{p,y}$	Number of premises type p served by the project in year y

$HN_{p,y}$	Number of individuals per premises type p (e.g. household, school) in year y
QPW_p	Volume of drinking water per person per day for premises type p (L). Apply the default value or monitored value through water consumption field tests in the project scenario, capped at 5.5 L per day.
$DO_{p,y}$	Days the project technology is operational for end-users in premises p in year y

$Q_{m,y}$ = metered value (estimated value) = 693,500

Project Scenario

Equation 8

$PE_y = PE_{ff,p,y} + PE_{ec,p,y}$

$PE_y = 0 + 0 = 0\ tCO_2$

Where:

PE_y	Project emissions in year y(tCO_2)
$PE_{ff,p,y}$	Project emissions from fossil fuel use in year y (tCO_2)
$PE_{ec,p,y}$	Project emissions from electricity use in year y (tCO_2)

Equation 9

$PE_{ff,p,y} = \Sigma P_{f,p,y} * NCV_f * EF_f$

Wood:

= 0 * 0.0156 * 112 = 0

Charcoal:

= 0 * 0.0295 * 165.22 = 0

Where:

$P_{f,p,y}$	Quantity of fossil fuel f that is consumed in the project during year y (mass or volume units)
NCV_f	Net calorific value of fossil fuels f (TJ/fuel units)
EF_f	Emission factor of fossil fuel f

Equation 10

$$PE_{ec,p,y} = \Sigma EC_{p,y} * EF_{ec} * (1 + TDL_{ec})$$

$$= 0 * 0.0008 * (1 + 0.2) = 0$$

Where:

$EC_{p,y}$	Quantity of electricity that is used in the project during year y (kWh)
EF_{ec}	Emission factor associated with the electricity use (tCO_2e/kWh)
TDL_{ec}	Transmission and distribution losses associated with the electricity use (%)

Leakage

Leakage emissions, LE_y, shall be calculated as follows:

First, the project developer must evaluate, ex-ante, the following potential sources of leakage and provide an evidence-based description and preliminary quantification of each potential source and its relevance for the
project:

a. Members of the population who do not participate in the project, and previously used lower emitting energy sources, instead use the non-renewable biomass saved under the project activity

   There is a low risk of this occurring in the project. There is very little evidence of low-emitting energy sources in the area.

b. The project significantly reduced the NRB fraction within an area where other GHG mitigation project activities account for NRB fraction in their baseline scenario

The baseline survey shows that 72% of respondents collect their fuel from close to the farm fields near the project, therefore as this is a concentrated area this will not impact other GHG mitigation projects.

c. The project population compensates 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.

The average minimum temperature for Kole, Alebtong, Otuke and Dokolo is 17.2 degrees Celsius with climate trends showing these temperatures are set to increase[13], therefore compensation for loss of space heating effect by retaining baseline wood-fuel burning practices is deemed low risk.

Leakage risks deemed very low can be ignored as long as the case for their insignificance is substantiated.

Second, for each source for which the leakage assessment expects an increase in non-renewable biomass fuel consumption by non-project households/users attributable to the project activity, then calculations must be undertaken to account for the leakage from this source. Leakage is either calculated as a quantitative emissions volume (tCO2e) or as a percentage of total emission reductions. The project documentation shall include a projection of leakage emissions based on available data and information. The monitoring plan must include monitoring parameters to be registered during the leakage investigation every two years to populate the leakage calculation.

Third, the project developer must conduct a leakage investigation every two years using relevant methods. For example, surveys to determine parameters for the leakage calculation may be combined with project monitoring surveys, as is applicable.

If the ex-ante evaluation shows that leakage emissions are less than 5% of total emission reductions, then no monitoring is needed, and emission reductions simply

[13] https://climateknowledgeportal.worldbank.org/country/uganda/climate-data-historical

shall be adjusted 5% down. In this case, the sources and magnitude of leakage emissions must be reassessed at the time of crediting period renewal.

$LE_y = ER_y * 0.05$ (5% default applied)

$= 119 * 0.05 = 6$

$ER_y = BE_y – PE_y - LE_y$

$= 125 – 0 – 6 = 119\ tCO2_e$

SDG 15 (Life on Land)

This is calculated per individual water point.

Baseline scenario calculations:

Equation 1

$W_{b,\ NRB} = W_{b,n} * f_{NRB,f,y}$

$= 99 * 0.85 = 84$

Where:

$W_{b,\ NRB}$	Baseline non-renewable firewood usage (tonnes/year)
$W_{b,n}$	Baseline average firewood usage for boiling water (tonnes/year)
$f_{NRB,f,y}$	Fractional non-renewability status of woody biomass furing year y (fraction)

Equation 2

Where: $W_{b,n} = N_{p,y} * P_{b,y} * D_{a,y}$

$= 315 * 0.00091 * 347 = 99$

Where:

$W_{b,n}$	Baseline average firewood usage for boiling water (tonnes/year)
$N_{p,y}$	Number of people served by the project in year y
$P_{b,y}$	Quantity of fuel that is consumed in the baseline scenario b during year y (kg/person-day)

$DO_{p,y}$	Days the project technology is operational for end-users in premises p in year y

Equation 3

Where: $P_{b,y} = QP_{w,p} * W_{b,y}$

$= 4 * 0.00023 = 0.00091$ tonnes/pp/year

Where:

$P_{b,y}$	Quantity of fuel that is consumed in the baseline scenario b during year y (kg/person-day)
$QP_{w,p}$	Quantity of safe water supplied in the project scenario p during year y, using the "zero or low" emissions clean water supply technology
$W_{b,y}$	Average firewood suage (tonnes) for boiling 1 litre of water

Equation 4

Where: $W_{b,y} = SE_{w,b,y} \div ((NVC_{wood} * xf_{wood}) + (NCV_{charcoal} * xf_{charcoal}))$

$= 3285 \div ((15,600 * 0.9508) + (29,500 * 0.0492)) = 0.00023$ tonnes/L

Where:

$W_{b,y}$	Average firewood suage (tonnes) for boiling 1 litre of water
$SE_{w,b,y}$	Specific energy required to boil water (kJ/L), based on baseline fuel/technology use
NCV_{wood}	IPCC default net calorific value for wood (KJ/kg)
$NCV_{charcoal}$	IPCC default net calorific value for charcoal (KJ/kg)
xf_{wood}	Proportion of wood fuel *f* used in the baseline
$xf_{charcoal}$	Proportion of charcoal fuel *f* used in the baseline

Equation 5

Project savings calculations:

$W_{p,NRB} = W_{p,n} * f_{NRB,f,y}$

$= 80 * 0.85 = 68$

Where:

$W_{p,NRB}$	Total non-renewable firewood saved (tonnes) in the project scenario in year y
$W_{p,n}$	Tonnes of firewood per year saved through the project
$f_{NRB,f,y}$ (fraction)	Fractional non-renewability status of woody biomass furing year y

Equation 6

Where:

$W_{p,n} = N_{p,y} * P_{b,y} * DO_{p,y} * U_{p,y} * (1- C_b)$

$= 315 * 0.00091 * 347 * 0.9 * (1 – 0.1038) = 80$ tonnes

Where:

$W_{p,n}$	Tonnes of firewood per year saved through the project
$N_{p,y}$	Number of people served by the project in year y
$P_{b,y}$	Quantity of fuel that is consumed in the baseline scenario b during year y (kg/person-day)
$DO_{p,y}$	Days the project technology is operational for end-users in premises p in year y
$U_{p,y}$	Usage rate in project scenario p during year y
C_b	Proportion of project households who in the baseline were already using a safe water supply that did not require boiling (%)

B.6.4. Summary of ex ante estimates of each SDG outcome

SDG 1

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	4.37% of population living with access to basic service	60% of population living with access to basic service	Additional 55.63% of population living in HHs with access to basic service
Year 2	4.37%	60%	55.63%
Year 2	4.37%	60%	55.63%

Year 4	4.37%	60%	55.63%
Year 5	4.37%	60%	55.63%
Total	4.37%	60%	55.63%
Total number of crediting years	5		
Annual average over the crediting period	4.37%	60%	55.63%

SDG 5

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	2.99 hours spent collecting water and fuel per household per day prior to project	1.5 hours spent collecting water and fuel per household per day during the project	49.83% reduction in time spent collecting water and fuel per household per day during the project
Year 2	2.99 hours	1.5 hours	49.83%
Year 3	2.99 hours	1.5 hours	49.83%
Year 4	2.99 hours	1.5 hours	49.83%
Year 5	2.99 hours	1.5 hours	49.83%
Total	2.99 hours	1.5 hours	49.83%
Total number of crediting years	5		
Annual average over the crediting period	2.99 hours	1.5 hours	49.83%

SDG 7

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	0 households with access to safe water from a clean treatment technology	1,739 households with access to safe water from a clean treatment technology	1,739 households with access to safe water from a clean treatment technology
Year 2	0	1,739	1,739
Year 3	0	1,739	1,739
Year 4	0	1,739	1,739
Year 5	0	1,739	1,739
Total	0	1,739	1,739

Total number of crediting years	5		
Annual average over the crediting period	0	1,739	1,739

SDG 13

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	4,625 tCO2e emitted	0 tCO2e emitted	4,403 tCO2e emission reductions
Year 2	4,625	0	4,403
Year 3	4,625	0	4,403
Year 4	4,625	0	4,403
Year 5	4,625	0	4,403
Total	23,125	0	22,015
Total number of crediting years	5		
Annual average over the crediting period	4625	0	4,403

SDG 15

YEAR	BASELINE ESTIMATE	PROJECT ESTIMATE	NET BENEFIT
Year 1	3,124 tonnes of non-renewable firewood usage	604 tonnes of non-renewable firewood usage	2,520 tonnes of non-renewable biomass saved
Year 2	3,124	604	2,520
Year 2	3,124	604	2,520
Year 4	3,124	604	2,520
Year 5	3,124	604	2,520
Total	15,620	3,021	12,599

Total number of crediting years	5		
Annual average over the crediting period	3,124	604	2,520

B.7. Monitoring plan

B.7.1. Data and parameters to be monitored

SDG 1 & 7

Parameter ID	**SDWS 18**
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	Water quality tests conducted either by a lab or through a field kit at all appliances.
Value(s) applied	0.9 (estimated value)
Measurement methods and procedures	The National Water Quality Reference Laboratory has certified each water supply in line with national standards.
Monitoring frequency	Annual sampling, and the first round of testing shall be conducted at least after six months from the start date.

QA/QC procedures	1. Laboratories used for water quality testing must be approved by local health authorities and/or have quality accreditation; and 2. The laboratory used must demonstrate that it has an adequate quality management plan in place which addresses both quality assurance and quality control test procedures. 3. Field testing kits also are eligible, e.g. based on Colony Forming Unit method or Most Probable Number method. To use the field testing kits the project shall meet the following requirements: a. Testing kits must be approved by national agency or meet standards set by relevant international organisation e.g. US-EPA, and b. Testing kits shall be tested for its accuracy and robustness prior to application for project level monitoring, whereby local or accredited laboratory shall conduct water quality tests using testing kits and a relevant ISO standard or an equivalent standard, in parallel with field testing kits.
Purpose of data	Determine water quality in a year
Additional comment	The water quality tests will be conducted at all CWS appliances rather than at a representative sample of end users in line with the methodology.

SDG 1, 5, 7, 13 & 15

Parameter ID	**SDWS 19**
Data / Parameter	SDG claims
Unit	N/A
Description	The project will transparently include information in the project documents (PDD and monitoring reports) on the following two aspects to make claims on SDG 6.1.1 contributions. i. Level of Service in the baseline/project scenario: The drinking water service levels classified in three categories: limited, basic or

safely managed services. Households using improved drinking water sources which are located on premises, with water available when needed, and free from contamination, are classified as having safely managed services. Households not meeting all of these criteria but using an improved source with water collection times exceeding 30 minutes are classified as limited services.

ii. Project contributions: The project developer shall select water service aspects i.e., Accessibility, Availability and Quality & identify the monitoring indicator(s) to monitor the project contributions. The project may use relevant monitoring indicators and information available in this methodology, for example SDWS 18 for Water Quality. The project may have contributions to one or all three aspects. The project developer shall only make claims on aspects that project is contributing to.

The project addressed point i under SDG 6 monitoring, determining the number of persons who drink from the 5 JMP Service categories (safely managed, basic, limited, unimproved, surface water).

The monitoring indicators for Accessibility, Availability and Quality are:

Accessibility – addressed in SDG 6 parameter by determining the distance of safe water sources

Availability – addressed in non-functionality calculations in ERs

Quality – addressed in water quality testing procedures

All 3 contributions will also be addressed in a detailed Project Survey which includes JMP WASH questions regarding drinking water and hygiene. Results will be outlined in an annual hygiene. Results will be outlined in an annual hygiene report.

Source of data	Annual surveys
Value(s) applied	N/A
Measurement methods and procedures	-
Monitoring frequency	Annual
QA/QC procedures	N/A
Purpose of data	Determine SDG claims
Additional comment	-

SDG 1 & 7

Parameter ID	**SDWS 20**
Data / Parameter	Water hygiene education campaigns
Unit	N/A
Description	Hygiene campaigns carried out among project safe water end users. The following guidelines apply for conducting these campaigns: - Hygiene refers to access to sanitation amenities, equipment and infrastructure, as well as to the behaviour in respect to regular and correct use of such amenities. It also refers to behaviour that prevents infections from water-related diseases. - The project developer shall report the activities conducted each year in a detailed "Report of annual hygiene campaigns results" and summarize the results in the project monitoring reports. - Any major changes in the health status of the water users as a result of contaminated water (e.g. an outbreak of water related disease) must be reported and, if relevant, a strategy put in place to address it through the subsequent hygiene campaign. - The detailed method used to assess hygienic handling of clean water must be provided with the PDD and verified by the VVB. - The details of the method should be adjusted to suit the circumstances of each project and also to suit learning year on year.

	The impacts of the hygiene campaign shall be assessed using the WHO/UNICEF Joint Monitoring Programme Core questions for drinking water and hygiene to determine the fraction of the households and institutions where Safe Water and hygiene practices are found to fulfil "safely managed" or "basic" requirements. In-person or telephone or by messaging (e.g. text, app) based survey shall be conduct covering all the JMP core questions for drinking water and core questions for hygiene. For sampling requirements, follow section 4.2 |General requirements for sampling, below. The JMP core questions for households, schools and health care facilities are available at https://washdata.org/monitoring/methods/core-questions
Source of data	Report annual hygiene campaign results
Value(s) applied	N/A
Measurement methods and procedures	WASH training activities
Monitoring frequency	Annually
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	Determine community WASH understanding.
Additional comment	-

SDG 13

Parameter ID	**SDWS 22**
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	0
Measurement methods and procedures	-
Monitoring frequency	Annually
QA/QC procedures	-
Purpose of data	Calculation of baseline emissions
Additional comment	-

SDG 1 & 6

Parameter ID	**SDWS 23**
Data / Parameter	$Q_{m,y}$
Unit	Litres/year
Description	Monitored quantity of safe water provided by the project in year y
Source of data	1. Flow meter measures water volume directly or; 2. Operation sensor measures directly operation time or pump stroke count, and the volume is calculated as capacity multiplied by operation time or pump strokes, depending on the sensor type. This may be measured on a sampling basis, following ERSDWS sampling requirements
Value(s) applied	693,500 (estimated ex-ante)
Measurement methods and procedures	Water meter or sensor, depending on the availability and suitability of technology Water meter or sensor
Monitoring frequency	Continuously

QA/QC procedures	Follow manufacturer, sector, national or international standards or guidelines for calibration and maintenance of the measurement device.
Purpose of data	Determine quantity of safe water provided by the project in year
Additional comment	-

SDG 1 & 13

Parameter ID	**SDWS 24**
Data / Parameter	QPW_p
Unit	Litres/person/day
Description	Volume of drinking water per person per day for premises type p
Source of data	Water Consumption Field Tests or default value (4L)
Value(s) applied	Option 1: Default value per person Full-day premises: 4 L/person/day Half-time premises: 3 L/person/day
Measurement methods and procedures	Deemed valid by methodology
Monitoring frequency	Biennial
QA/QC procedures	-
Purpose of data	Determine volume of drinking for quantity of safe drinking water calculations
Additional comment	-

SDG 13

Parameter ID	**SDWS 25**
Data / Parameter	$HN_{p,y}$
Unit	Number
Description	Number of individuals per premises type p in the project boundary in year y

Source of data	Project Survey
Value(s) applied	5.32 people per household
Measurement methods and procedures	Household size questions asked in annual monitoring surveys
Monitoring frequency	Annually
QA/QC procedures	The value 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.
Purpose of data	Determine number of individuals for quantity of safe drinking water calculations.
Additional comment	-

SDG 7 & 13

Parameter ID	**SDWS 26**
Data / Parameter	$HH_{p,y}$
Unit	Number
Description	Number of premises type *p* served by the project in year *y*
Source of data	Survey of the premises (e.g. households, schools) within 1 km distance of project water source to check how often the premises used the project water source during the year. This survey may be part of the project survey and may be performed in person, by telephone, by messaging (e.g. text, app), appropriate to the context. Premises that report at least every-two-days use may be counted.
Value(s) applied	59 premises per water point – estimated ex-ante
Measurement methods and procedures	User lists and usage of project water source questions in survey
Monitoring frequency	Annually
QA/QC procedures	-

Purpose of data	Determine number of premises type for quantity of safe drinking water calculations
Additional comment	-

SDG 13 & 15

Parameter ID	**SDWS 27**
Data / Parameter	$DO_{p,y}$
Unit	Days
Description	Days the project technology is operational for end-users in premises p in year y.
Source of data	1. Measure directly using operation sensor, or 2. Demonstrate from log of operation and maintenance system.
Value(s) applied	347 days (to be monitored), estimated ex-ante based on 95% functionality
Measurement methods and procedures	Maintenance log
Monitoring frequency	Annually
QA/QC procedures	Values higher than 347 days may only be applied when option 1 is used. 347 days is 95% of days, in line with pump-maintenance in the literature.
Purpose of data	Determine number of days for quantity of safe drinking water calculations
Additional comment	-

SDG 1 & 5

Parameter ID	**N/A**
Data / Parameter	$T_{p,y}$
Unit	Hours
Description	Time spent collecting water and fuel per household per day in project.
Source of data	Project Survey

Value(s) applied	1.50 (to be monitored), estimated ex-ante
Measurement methods and procedures	Survey
Monitoring frequency	Annually
QA/QC procedures	-
Purpose of data	Calculate time saved for women by the project
Additional comment	-

SDG 1

Parameter ID	**N/A**
Data / Parameter	P_{access}
Unit	Percentage
Description	Proportion of population living in households with access to basic service (safe water)
Source of data	Project Survey
Value(s) applied	55.63% (to be monitored), estimated ex-ante
Measurement methods and procedures	Proportion of access in the project compared to the baselines.
Monitoring frequency	Annual
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	To calculate proportion of population living in householdss with access to basic service (safe water) in the project activity compared to the baseline scenario
Additional comment	-

SDG 1 & 5

Parameter ID	**N/A**
Data / Parameter	TR_y
Unit	Percentage
Description	Total reduction time spent collecting water and fuel for project

	activity in year y (%).
Source of data	Project Survey
Value(s) applied	49.83% (to be monitored), estimated ex-ante
Measurement methods and procedures	Calculate the average amount of time spent collecting water in the project scenario and compare to the pre-project scenario.
Monitoring frequency	Annual
QA/QC procedures	Transparent data analysis and reporting
Purpose of data	To quantify whether the project has contributed to a reduction in the amount of time spent collecting water compared to the pre-project scenario.
Additional comment	-

SDG 13

Parameter ID	**SDWS 35**
Data / Parameter	LE_y
Unit	Percentage
Description	Leakage emissions during year y
Source of data	Sources established by following leakage emissions section.
Value(s) applied	5%
Measurement methods and procedures	Assessed every two years using baseline and monitoring surveys.
Monitoring frequency	Biennial
QA/QC procedures	Compliance with the general requirements for sampling and general requirements for data and information sources.
Purpose of data	Emission reduction calculations
Additional comment	-

B.7.2. Sampling plan

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The number of boreholes that will need to be sampled for a 90/10 confidence/precision will be determined. Out of those boreholes, households will be randomly sampled, complying with the minimum sample size for the particular
survey/test. Individual participants will be selected from the borehole user database using the random selection process outlined in the monitoring plan. Sample sizes will be in line with the Gold Standard requirements. The surveys below will be monitored under the cross-sampling approach.

The following parameters monitored in section B.7.1 will be determined on a sampled basis.

$M_{q,y}$
90/10 confidence/precision random sampling used to determine the sample size, using the CDM tool "Guideline: Sampling and surveys for CDM project activities and programmes of activities, Version 04.0". The number of samples is based on the pass rate required for the year as the expected proportion. Sample is conducted on randomly selected end-users.

Water Hygiene Education Campaigns
For JMP core questions, 90/10 confidence/precision random sampling is used to determine the sample size, using the CDM tool "Guideline: Sampling and surveys for CDM project activities and programmes of activities, Version 04.0" in line with the methodology. Sample is conducted on randomly selected end-users.

$X_{cleanboil,y}$
Determined from the Project Survey. Project Survey follows paragraph 4.2.3 of the methodology, with a minimum of 100 respondents sampled. Sample is conducted on randomly selected end-users.

$Q_{m,y}$
90/10 confidence/precision random sampling used to determine sample size as per paragraph 4.2.2 of the methodology. The number of project technologies requiring monitored quantity of safe water is determined using CDM tool "Guideline: Sampling and surveys for CDM project activities and programmes of activities, Version 04.0".

Project: Basic
Determined from the Project Survey. Project Survey will be sampled using a minimum sample size of 100. This is as per paragraph 4.2.3 of the methodology. Sample is conducted on randomly selected end-users.

$T_{p,y}$
Determined from the Project Survey. Project Survey follows paragraph 4.2.3 of the methodology, with a minimum of 100 respondents sampled. Sample is conducted on randomly selected end-users.

$DO_{p,y}$ (if sensors/meters are installed on technologies)
90/10 confidence/precision random sampling used to determine sample size as per paragraph 4.2.2 of the methodology. The number of project technologies requiring monitored quantity of safe water is determined using CDM tool "Guideline: Sampling and surveys for CDM project activities and programmes of activities, Version 04.0".

Other monitoring information collected during the crediting period:

Water Point installation/rehabilitation record
This includes the following information:

- Date of installation/rehabilitation
- GPS location of the water point
- Model of the water point
- Quantity of water points installed
- The total number of people obtaining their water from each water source and their distance from the source
- Mode of use: commercial/domestic

The total number of households using each water point has been determined through the lists supplied by the in-country partner.

Project Survey

Conducted on a minimum sample size of 100 households, surveying end users currently using project technologies to explore changes in project scenario over time. This is as per paragraph 4.2.3 of the methodology.

WASH Reporting

Annual WASH training takes place once a year, involving each waterpoint. The training involves sensitisation on principles of WASH, household water management and preventing pollution of the ground water. A report will be produced annually in line with SDWS 20.

B.7.3. Other elements of monitoring plan

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Monitoring data is collected by field officers associated with the in-country partner, who are trained by CO2balance on how to conduct the data collection. Information is checked by the partner and sent to CO2balance, who perform further cross-checks. Clarifications and corrections are provided by the partner if requested by CO2balance.

Data is sent to CO2balance via several mediums: electronic scans of certificates and excel sheets; or submission on online mobile monitoring software. Data is stored electronically by CO2balance and archived when no longer required.

SECTION C. DURATION AND CREDITING PERIOD

C.1. Duration of project

C.1.1. Start date of VPA

>>

GS1359:

01/05/2013

Discontinued VPAs:

GS2479: 18/09/2013

GS2480: 30/12/2013

GS2481: 14/01/2014

GS4260: 22/09/2013

C.1.2. Expected operational lifetime of VPA

>>

17 years

C.2. Crediting period of project

C.2.1. Start date of crediting period

>>

GS1359:

CP1: 01/05/2013

CP2: 01/05/2020

CP3: 01/05/2025

Discontinued VPAs:

GS2479

CP1: 18/09/2013

CP2: 18/09/2020

CP3: 18/09/2025

GS2480

CP1: 30/12/2013

CP2: 30/12/2020

CP3: 30/12/2025

GS2481
CP1: 14/01/2014
CP2: 14/01/2021
CP3: 14/01/2026

GS4260
CP1: 22/09/2013
CP2: 22/09/2020
CP3: 22/09/2025

These 4 VPAs will be amalgamated with GS1359 at the end of their CP2 date. Following this process, they will be discontinued and no longer be active for CP3.

C.2.2. Total length of crediting period

>>
CP1: 7 years
CP2: 5 years
CP3: 5 years
Total: 17 years

SECTION D. SUMMARY OF SAFEGUARDING PRINCIPLES AND GENDER SENSITIVE ASSESSMENT

D.1. Safeguarding Principles that will be monitored

A completed Safeguarding Principles Assessment is in Appendix 1, ongoing monitoring is summarised below.

PRINCIPLES	MITIGATION MEASURES ADDED TO THE MONITORING PLAN
Principle 1: Human Rights	During all trainings, it will be emphasised that project beneficiaries should support vulnerable or less mobile community members to access water.
Principle 2: Gender Equality and Women's Empowerment	SDG 5 Tp,y TR,y The time spent collecting water and fuel is monitored in the project survey. The project aims to reduce the burden on the whole community of traveling far to collect water and in particular to women who perform the majority of unpaid domestic work.
Principle 3: Community Health and Safety	Incidences of water borne illnesses are monitored through the annual Monitoring Project Survey. A Hygiene campaign is conducted annually to address community health and safety topics, such as water point cleanliness and personal hygiene.
Principle 4: Cultural Heritage, Indigenous Peoples, Displacement and Resettlement	N/A The project has no negative impact on Principle 4.

Principle 5: Corruption	Project beneficiaries are able to contact the project developer and implementer through the continuous grievance mechanism to report any form of corruption.
Principle 6: Economic Impacts	To ensure long term sustainability of the water points, and avoid unexpected breakdowns and spending, training was conducted at the beginning of the project on conducting minor maintenance. The project is expected to benefit all members of the community.
Principle 7: Climate and Energy	SDG 13 The Emission Reductions and leakage aspects of the project are monitored during the Monitoring Period.
Principle 8: Water	The project technology involves pumping groundwater, therefore there is a risk of altering groundwater levels if the pump is overused. Ongoing monitoring of water flow is conducted in the project and the community is educated on the threat to water supply.
Principle 9: Environment, Ecology and Land Use	N/A The project has no negative impact on Principle 9.

D.2. Assessment that project complies with GS4GG Gender Sensitive requirements

Question 1 - Explain how the project reflects the key issues and requirements of Gender Sensitive design and implementation as outlined in the Gender Policy?	The project increases women's access to resources such as water by making safe water available in the community. The burden on the whole community of travelling far to collect water and gather firewood for water purification is reduced. This also helps to mitigate the social

isolation of spending a long time collecting these resources.

Equal participation of women and men in decision making is encouraged by promoting their equal membership on Water Committees. The Water Committees are trained to facilitate the participation of members depending on their specific circumstances. They also assist all community members to provide feedback on the project, regardless of their situation.
Both women and men benefit from the project activities, no group is excluded from participating in the project activities and the water sources are open to the whole community.

The project decreases the workload of women in collecting water and firewood, thereby allowing more time to engage in other activities.

The project increases women's ability to use, develop, and protect natural resources by making safe water more readily available and enabling women to participate in project decision-making.

Uganda's official National Gender Policy was released by the Ministry of Gender, Labor, and Social Development in 2007 with a 10-year time frame (2007-2017). A mid-term evaluation was to be carried out in the fifth year of implementation (2012) but there is no documentation to distinguish whether this happened or not. As of now there is no updated Gender Policy since the last document expired in 2017. However, given this was the last official gender documentation released, it was used to align the projects with National Gender Policy.

Question 2 - Explain how the project aligns with existing country policies, strategies and best practices

According to the National Development Plan 2020/21 -2024/25, a Uganda Gender Policy Action Plan is to be developed and implemented. However, this has not yet been released.

The current Gender Policy outlines several main objectives, including the following which the project is aiming to meet:

1. To reduce gender inequalities so that all women and men, girls and boys, are able to move out of poverty and to achieve improved and sustainable livelihoods – the projects actively seek to reduce equalities along the lines of gender and age discrimination. In providing clean water, the projects are allowing communities to

develop and lead more sustainable lives without the need to boil water for purification. The projects will help to close community and household gender gaps through the provision of clean water, regardless of existing social structures.

2. To increase knowledge and understanding of human rights among women and men so that they can identify violations, demand, access, seek redress and enjoy their rights – the project seeks to educate and empower participants to realise adopted social norms which may be damaging to development and the empowerment of women and girls. Once educated, men and women can begin to facilitate a more equitable living environment in households and in the community that delivers agency for men and women to make their own choices and demands and exercise their rights without discrimination.

To strengthen women's presence and capacities in decision making for their meaningful participation in administrative and political processes – as part of the projects, women will be encouraged to take part in community groups, particularly local WRCs, including presence in leadership roles where their

	contribution to decisions will be followed through to the projects in order to improve access for project beneficiaries.
Question 3 - Is an Expert required for the Gender Safeguarding Principles & Requirements?	No
Question 4 - Is an Expert required to assist with Gender issues at the Stakeholder Consultation?	No

SECTION E. SUMMARY OF LOCAL STAKEHOLDER CONSULTATION

The below is a summary of the 2 step GS4GG Consultation for monitoring purposes. Please refer to the separate Stakeholder Consultation Report for a complete report on the initial consultation and stakeholder feedback round.

E.1. Summary of stakeholder mitigation measures

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The stakeholder consultation was conducted before transition to GS4GG.

E.2. Final continuous input / grievance mechanism

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)	Grievance expression process book (logbook) located within the home of a representative of each community. Users also have the opportunity to express grievances during in-person visits.
GS Contact (mandatory)	help@goldstandard.org
Telephone Access	Community members have been provided access to a toll free phone line to report any issues.
Other	CO2balance UK Ltd +44 (0)1823 332233

SECTION F. Eligibility and inclusion criteria for VPAs inclusion

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The below table shall be completed for all VPAs.

The CME shall provide clear description on how eligibility criteria set at real case VPAs are complied with for each real case and regular VPAs submitted for inclusion.

The CME shall not change the eligibility criteria and required condition set at real case VPAs. At the time of inclusion of regular VPAs, the CME shall only describe how the regular VPAs comply with the eligibility criterion.

NO.	ELIGIBILITY CRITERION	DESCRIPTION/ REQUIRED CONDITION	DESCRIPTION OF THE VPA IN RELATION TO THE CRITERIA, MEANS OF VERIFICATION/SUPPORTING EVIDENCE FOR INCLUSION
1	Types of Project	Eligible Projects shall include physical action/implementation on the ground. Pre-identified eligible Project types are identified in the Eligibility Principles and Requirements section.	The Project Technology comes under "Safe Water Source" as the Project Activity involves the rehabilitation of water sources such as handpumps in the project area.
2	Location of Project	The host country and location of each VPA will be specified in each VPA-DD, in line with the locations outlined in Section A.3.	The location of the Project is Uganda. Uganda is eligible under sA.2 of the PoA-DD for GS1247

3	Project Area, Project Boundary and Scale	The Project Area and Project Boundary shall be defined. Projects may be developed at any scale although certain rules, requirements and limitations may apply under specific Activity Requirements, Impact Quantification Methodologies and Products Requirements. In order to avoid double counting the Project shall not be included in any other voluntary or compliance standards programme unless approved by Gold Standard (for example through dual certification). Also, if the Project Area overlaps with that of another Gold Standard or other voluntary or compliance standard programme of a similar nature, the project shall demonstrate that there is no double counting of impacts at design and performance certification (for example	The Project area and boundary is defined in section A.2 The Project is only included under the Gold Standard and no dual certification will take place. Each water point has a unique location recorded and stored in the Project Database. Each micro-scale VPA included under this PoA will not be included by any other carbon standard and will not exceed the 10,000 VERs per year cap.

		use of similar technology or practices through which the potential arises for double counting or misestimation of impacts amongst projects).	
...	Host Country Requirements	Projects shall be in compliance with applicable Host Country's legal, environmental, ecological and social regulations.	Each homogeneous VPA included in this project will comply with Uganda's national policies around water access, rural water infrastructure, community engagement, women empowerment and climate change action. Uganda's National Development Plan 2020/21 -2024/25 – NDPIII.[14]

[14] https://budget.finance.go.ug/sites/default/files/NDPIII.pdf

Contact Details	As part of the Project Documentation the Project Developer shall provide (i) name and (ii) contact details of all Project Participants; AND in case of an organisation (iii) the legal registration details and (iv) documentation by the governing jurisdiction that proves that the entity is in good standing (defined as being a legal or other appropriate entity registered in or allowed to operate within the required jurisdiction and with no evidence of insolvency or legal/criminal notices placed against it or any of its Directors). Gold Standard retains the right (at its own discretion) to refuse use of the Standard where reputational concerns are highlighted.	Project Developer information is in appendix 2 of the VPA-DD.

Legal Ownership	Full and uncontested legal ownership of any Products that are generated under Gold Standard Certification, (for example carbon credits) shall be demonstrated. Where such ownership is transferred from project beneficiaries this must be demonstrated transparently and with full, prior and informed consent (FPIC). Note that for certain Project types there is a requirement for full and uncontested legal land title/tenure to be demonstrated. These are contained within specific Activity or Product Requirements. All projects shall immediately report to Gold Standard any land title/tenure disputes arising.	The Project Implementer has full rights over the Products generated from GS Certification. A representative from each 'system' signs an agreement at the time of the rehabilitation, which exchanges the rights to carbon savings for repair and ongoing maintenance of the waterpoint.

Other Rights	As well as legal title and ownership, the Project Developer shall also demonstrate where required uncontested legal rights and/or permissions concerning changes in use of other resources required to service the Project (for example, access rights, water rights etc.). Any known disputes or contested rights must be declared immediately to Gold Standard by the Project Developer and resolved prior to further Project implementation in affected areas.	The Project Developer will inform Gold Standard of any disputes.

Official Development Assistance (ODA) Declaration	All Project Developers applying for project activities located in a country named by the OECD Development Assistance Committee's ODA recipient list and seeking Gold Standard Certification for carbon credits shall declare the Official Development Assistance (ODA) support. The Project Developer shall follow the GHG Emissions Reduction & Sequestration Product Requirements and submit the declaration at the time of Design Certification.	The Project Developer has submitted a signed ODA Declaration.
Factor of Non-Renewable Biomass (VR)	Reference from where fNRB shall be calculated for VPAs shall be included in the eligibility criteria to avoid confusion at the time of VPA inclusion and for consistency	The fNRB has been calculated by the Project Developer and included in the key parameter box and ex-ante calculations.

Test for Wb,y parameter (VR)	The test for fixed parameter Wb,y is based on the water boiling test.	The updated SWS Gold Standard Methodology no longer includes parameter Wb,y. Instead, specific energy required to boil water (kJ/L) is used (SEw,b,y)
Water Project Treatment Capacity (VR)	The treatment capacity limits of project technology/source are required to be monitored to ensure that the water consumption level applied for emission reductions must not be greater than the treatment capacity of the project technology/sources.	The Project Developer will ensure that user numbers are within the capacity of the water source and the specifications of the technology.

Cookstove Project Theoretical Savings	The theoretical wood savings from a cook stove project shall be estimated based on following- Py = Bb,y * (1-$\hbar$b/$\hbar$p,y) Py - quantity of firewood consumed in project Bb,y - quantity of firewood consumed in baseline $\hbar$b – efficiency of baseline technology $\hbar$p,y – efficiency of project technology	The Project Activity does not involve cookstoves.
Double Counting	Conditions to confirm that VPAs are neither registered as CDM project activities, included in another registered PoAs, nor the project activities that have been deregistered.	The Project Developer can confirm that VPAs are not registered anywhere else.
Technical Specification	Specification of the technology/measure, such as the level and type of service, as well as performance specification based on, inter alia, testing/certification.	This VPA-DD includes technical specifications of the Project Technology in section A.3.

Start Dates	Conditions to check the start dates of VPAs through documentary evidence.	The start date of project is confirmed by the signing the MoU and/or Installation Confirmation Form
Applicability	Conditions to ensure compliance with the applicability of the applied methodologies, the applied standardized baselines an d the other applied methodological regulatory documents.	This has been set out in Section B.2 of this VPA-DD.
Additionality	Conditions to ensure that VPAs meet the requirements for demonstration of additionality.	This has been set out in Section B.5 of this VPA-DD.
LSC and EIA	Conditions related to undertaking local stakeholder consultation and environmental impact analysis.	This has been set out in Section E of this VPA-DD. An EIA is not required to be carried out for this safe water project.
Target Group	Target group (e.g. domestic/commercia l/industrial, rural/urban, grid-connected/offgrid), and where applicable, distribution mechanisms (e.g. direct installation).	The target group has been set out in Section A.1 of the VPA-DD.

Sampling	Sampling approaches are set out in each VPA and will follow the methodology.	The VPAs will follow the sampling approach set out in the applicable methodologies (Emission Reductions from Safe Drinking Water Supply methodology) which take precedence over CDM methodologies. Sampling approaches are set out in Section B7.2 and will follow the methodology. Confidence and precision levels are considered to ensure suitable sample sizes are applied and data is representative of the project area.
Crediting period	All VPAs submitted for inclusion after the first crediting cycle of such PoA and completion of transition to GS4GG shall follow the GS4GG Certification Cycle (i.e. 5 years renewals.	The crediting period is stated in Section C of the VPA-DD.

Eligible Project Types and Scope (CSAR)	All CSA projects shall lead to climate change mitigation and/or adaption by providing or improving access to services/resources at household or community or institution level. Eligible services include electricity and energy, water and sanitation, waste management, housing, etc	By providing a safe water source in rural communities, the safe water projects will improve access to safe water services/resources at community level. Providing safe water will reduce the quantity of fuel used to boil unsafe water. This reduction in fuel consumption contributes to climate change mitigation.
Types of Project (CSAR)	b) End-Use Energy Efficiency: Project activities that reduce energy requirements as compared to baseline scenario without affecting the level and quality of services or products where the end user of the products and services are clearly identified and when the physical intervention is required at the user end. For example, efficient cooking, heating, lighting, etc	By providing safe water, the safe water project activities reduce the energy requirements compared to the baseline scenario by removing the need for households to boil water for purification.

Project Area, Boundary and Scale (CSAR)	Project Area and Boundary shall be defined in line with the applicable Impact Quantification Methodologies or Product Requirements. For the purpose of applying UNFCCC methodologies for quantification of GHG reductions, 'small scale' is defined as in CDM Modalities and Procedures for three projects types; type (i) Renewable Energy, type (ii) Energy Efficiency and type (iii) Others	The project area and boundary are defined in line with the applicable Methodology, outlined in Section A.2 of the VPA-DD. The project is a micro-scale project issuing emission reductions which will be capped at in line with CDM micro-scale thresholds: Type (iii) projects 10,000tCO2e/yr

Legal ownership (CSAR)	a) Projects involving the distribution of a large number of devices for services such as heating, cooking, lighting, electricity generation, water treatment technology such as water filter etc. shall provide a clear description of the ownership of the Products that are generated under Gold Standard Certification all along the investment chain. In line with FPIC requirement, the proof that end-users are aware of and willing to give up their rights on Products shall be provided. b) The transfer of Product ownership shall be discussed during the local stakeholder consultations for regular cycle projects.	Legal ownership is clearly mentioned in Carbon Transfer Forms (CTF), which are signed by a representative of each water point. End-users give up their rights to the carbon through signing the CTF. This was discussed in the Local Stakeholder Consultation meeting.

	Where Gold Standard methodologies allow for a Suppressed Demand baseline scenario, this shall be limited to Small and Microscale Projects.	The VPA is a micro-scale project, therefore it is eligible for suppressed demand in the baseline scenario.
Stacking (CSAR)	Where a Suppressed Demand baseline is applied, it is not possible to 'stack' Gold Standard Impact Statements or Products as the definition of baseline may be contradictory.	

APPENDIX 1 - SAFEGUARDING PRINCIPLES ASSESSMENT

Complete the Assessment below and copy all Mitigation Measures for each Principle into SECTION D above. Please refer to the instructions in the Guide to Completing this Form below.

SOCIAL SAFEGUARDING PRINCIPLES		
Reference requirement	Question	Response
ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project developer, its representatives and the Project disrespect internationally proclaimed human rights?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Is the project involved or complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Have local communities or individuals raised human rights concerns regarding the project (e.g., during the stakeholder engagement process, grievance processes, public statements)?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Is there a risk that rights-holders (e.g., Project-affected stakeholders) do not have the capacity to claim their rights?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does this project undermine national or regional measures for the realisation of the right to development?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.		
Please add text here…		
Would the project potentially involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalised groups?	☐ YES ☐ POTENTIALLY ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalised or excluded individuals or groups, including persons with disabilities?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalised individuals or groups, including persons with disabilities?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	☐ YES ☐ POTENTIALLY ☒ NO

Briefly describe below how the project incorporates a human rights-based approach.
For example, by describing how the project design:

- is informed by human rights analysis, including from UN human rights mechanisms (human rights treaty bodies, universal periodic review, special procedures)
- includes measures to assist the government to realise (respect, protect and fulfil) human rights under international law and to implement human rights-related standards in national law (whichever is higher)
- enhances the availability, accessibility and quality of benefits and services for potentially marginalised individuals and groups, and to increase their inclusion in decision-making processes that may impact them (consistent with the non-discrimination and equality human rights principle)
- provides reasonable accommodations to strengthen inclusivity and accessibility of project benefits and services to persons with disabilities.

Please add text here….

The project will adhere to all human rights requirements including respecting internationally proclaimed human rights and Universal Declaration of Human Rights and will not discriminate in any way.

ERROR! REFERENCE SOURCE NOT FOUND.**ERROR! REFERENCE SOURCE NOT FOUND.**

ERROR! REFERENCE SOURCE NOT FOUND.	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g., during the stakeholder engagement process, grievance processes, public statements)?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project undermine the principles of non-discrimination, equal treatment, and equal pay for equal work?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project prevent men and women from having equal opportunities to participate in identified tasks and activities, whether through paid work, volunteer work, or community contributions, as appropriate?	☐ YES ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project limit the participation of women or men based on pregnancy, maternity/paternity leave, or marital status?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Is information about project objectives being communicated in a way that is inappropriate for the local context and not tailored to the methods of understanding of both women and men, which could hinder their participation?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Has the project assessed gender risks without referencing the country's gender strategy or equivalent national commitment?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Has expert stakeholder(s) been involved, and has their input been requested for the project design on gender equality and women's empowerment?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.		
There are no identified risks to gender equality and women's empowerment in the project.		
Would the project potentially involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	adverse impacts on gender equality and/or the situation of women and girls?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	exacerbation of risks of gender-based violence? For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well-being.	☐ YES ☐ POTENTIALLY ☒ NO

Briefly describe below how the project is addressing any identified risk to gender equality and women's empowerment.
There are no identified risks to gender equality and women's empowerment in the project. Women are key beneficiaries of the project through reduction in time spent collecting fuel and water. Women are also key members of the WASH management committee and are involved in decision-making.

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ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve potential risks to the health and safety of affected communities during its life cycle?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve any potential risks to the workers' safety and health?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.
Water Quality Tests are conducted as per the methodological requirements to ensure water is safe to consume.

Would the project potentially involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	construction and/or infrastructure development (e.g., roads, buildings, dams)?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	harm or losses due to failure of structural elements of the project (e.g., collapse of buildings or infrastructure)?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	risks of water-borne or other vector-borne diseases (e.g., temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	☐ YES ☐ POTENTIALLY ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g., explosives, fuel and other chemicals during construction and operation)?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g., food, surface water purification, natural buffers from flooding)?	☐ YES ☐ POTENTIALLY ☒ NO

Briefly describe below how the project is addressing any identified risk related to community health and safety.

No community health and safety risks are identified.

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ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve altering, damaging, or removing sites, objects, or structures of significant cultural heritage?	☐ YES ☒ NO

If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

No cultural risks are identified.

Would the project potentially involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	activities adjacent to or within a cultural heritage site?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	alterations to landscapes and natural features with cultural significance?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations,	☐ YES ☐ POTENTIALLY

NOT FOUND.	practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	utilisation of tangible and/or intangible forms (e.g., practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "YES" or "POTENTIALLY" - are the communities made aware of their right under the law, scope and nature of proposed development and its potential consequences?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "YES" - does the project provide equitable sharing of benefits from commercialisation of such knowledge, innovation, or practice, consistent with their customs and traditions?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "YES" - are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "YES", has project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

No cultural heritage risks are identified.

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ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve any risks related to involuntary relocation of people?	☐ YES ☒ NO

If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

The project does not involved involuntarily relocating people.

Would the project potentially involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	risk of forced evictions or involuntary relocation of people?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	temporary or permanent and full or partial physical displacement (including people without legally recognisable claims to land)?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	economic displacement (e.g., loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "YES" or "POTENTIALLY", - has the project developed Resettlement Action Plan or Livelihood Action Plan in consultation and agreement with affected individual, group or community? - has the project integrated Resettlement Action Plan or Livelihood Action Plan into the Project design?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "YES" - are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "YES", have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

The project does not lead to any displacement of people or assets.

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve any risks related to identifying and managing legitimate tenure rights that may be affected by the project?	☐ YES ☒ NO

If the answer to question above is "yes," please explain the reason and how the project will ensure compliance with applicable requirements.

The project does not involve any risks to legitimate tensure rights.

Would the project potentially involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	impacts on or changes to land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	uncertainties with regards to land tenure, access rights, usage rights or land ownership? Examples include, but are not limited to water access rights, community-based property rights and customary rights.	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Changes in legal arrangements, if yes, are the changes done in line with relevant laws and regulations?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Changes in legal arrangements, if yes, are these changes agree with free, prior and informed consent of the involved stakeholders?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Does some other entity (other than the project developer) hold uncontested land title for the entire Project Boundary?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is “YES”, have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Have project developer in consultation with stakeholders established a functioning mechanism to receive, process, resolve, communicate and record grievances?	☐ YES ☐ NO ☒ NA
If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.		
No risks to land tenure rights were identified.		

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve Indigenous People within the Project area of influence who may be affected directly or indirectly by the Project?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
Please add text here….		
Would the project potentially involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	affect areas where indigenous peoples are present (including project area of influence)	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	affect areas, land and territory claimed by indigenous peoples?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above questions is ''YES'' or "POTENTIALLY", - Is it determined that the proposed project may affect the rights, lands, resources, or territories of indigenous people? - Has an "Indigenous People Plan" (IPP) or "Indigenous People Plan Framework" been elaborated and included in the project documentation? - Was the plan developed in accordance with the effective and meaningful participation of indigenous peoples and in accordance with UNDP Guidelines?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	risk of forcibly removing indigenous people from their lands and territories?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	utilisation and/or commercial development of natural resources on lands and territories claimed by indigenous peoples? Consider, and where appropriate ensure, consistency with the answers under Principle 4.1 above	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "YES" or "POTENTIALLY" - Did the project obtain free, prior and informed consent from indigenous people before taking their cultural, intellectual, religious, and/or spiritual property?	☐ YES ☐ NO ☒ NA

ERROR! REFERENCE SOURCE NOT FOUND.	- Does the project ensure that the indigenous people receive an equitable sharing of benefits resulting from the use of their traditional knowledge and practices? ? - Does the project ensure that the sharing of benefits resulting from the use of indigenous peoples' traditional knowledge and practices is culturally appropriate and inclusive? - Does the project ensure that the provision of equitable sharing of benefits does not impede land rights or equal access to basic services including health services, clean water, energy, education, safe and decent working conditions, and housing?	
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project lack appropriate feedback and grievance channels for Indigenous Peoples and their representatives?	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Has a grievance mechanism not been established at the beginning of programme or project implementation with due consideration given to customary dispute settlement mechanisms among the Indigenous Peoples concerned and will it remain operational throughout the project cycle?	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is “YES”, have project design been changed, modified, updated considering opinions and recommendations of an Expert Stakeholder?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Although indigenous people can freely use the project technology, there is no risk or impact to their land, rights, or resources.

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ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve, or is it complicit in, contributing to or reinforcing corruption or corrupt projects?	☐ YES ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have a risk of encouraging bribery, kickbacks, or other unethical behavior?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

There is no corruption present in the project. Grievance mechanisms are in place as a means of being informed of corruption within the project.

ECONOMIC SAFEGUARDING PRINCIPLES

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ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve, facilitate, or condone forced labor, or pose a potential risk of forced labor?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project violate any labor or health and safety laws, international obligations, or ILO conventions?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project violate the principles of equal opportunity and fair treatment in its employment decisions?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project violate national laws, if available regarding non-discrimination in employment?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND. ERROR! REFERENCE SOURCE NOT FOUND.	Does the project allow child labor?	☐ YES ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND. ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have insufficient processes and measures in place to ensure the safety and health of project workers?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have insufficient measures to safeguard and support vulnerable project workers, such as women, people with disabilities, migrant workers, and young workers, and to prevent any kind of harassment, abuse, bullying, or exploitation, including gender-based violence (GBV)?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have no grievance mechanism available for workers to voice workplace concerns? Is information about this mechanism not provided to workers at the time of recruitment, or is it not easily accessible?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
Grievance mechanisms are in place as a means of reporting labour rights and working conditions concerns.		
Would the project potentially involve or lead to: (NOTE: APPLIES TO BOTH PROJECT AND CONTRACTOR WORKERS)		
ERROR! REFERENCE SOURCE NOT FOUND.	use of forced labour?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	working conditions that do not meet national labour laws and international commitments?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	working conditions that may deny freedom of association and collective bargaining?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	absence of documented working agreements with all individual workers *if such agreements do not exist, or do not address working conditions and terms of employment, the project developer shall provide reasonable working conditions and terms of employment.*	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE	use of migrant workers?	☐ YES

SOURCE NOT FOUND.	*if engaged, the developer shall ensure that they are engaged substantially equivalent terms and conditions to non-migrant workers carrying out similar work.*	☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	having no arrangements for basic services[15] for workers? *the project developer shall put in place and implement policies on the quality and management of the accommodation and provision of basic services in a manner consistent with the principles of non-discrimination and equal opportunity. Workers' accommodation arrangements should not restrict workers' freedom of movement or of association*	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	any form of discrimination or harassment based on factors unrelated to job requirements, such as gender, race, nationality, ethnicity, social or indigenous origin, religion or belief, disability, age, or sexual orientation?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	any form of discrimination in any aspect of employment, such as recruitment, compensation, working conditions, training, job assignment, promotion, termination, or discipline?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	harassment, intimidation, and/or exploitation, especially in regard to women?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	discriminatory working conditions and/or lack of equal opportunity where national law provides provision to address non-discrimination in employment?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	use of child labour? (including third-party engaged workers)	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	inadequate and verifiable mechanisms for age verification?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE	no processes and measures in place for the safety and health of project workers?	☐ YES ☒ NO

[15] Basic services requirements refer to minimum space, supply of water, adequate sewage and garbage disposal system, appropriate protection against heat, cold, damp, noise, fire, and disease-carrying animals, adequate sanitary and washing facilities, ventilation, cooking and storage facilities and natural and artificial lighting, and in some cases basic medical services.

NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	No provision of safety and health training provisions, including on the proper use and maintenance of personal protective equipment conducted by competent persons and the maintenance of training records?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	No provision to record and document accidents, diseases, incidents, and any resulting injuries, illnesses, or deaths?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	No measures to protect vulnerable project workers from harassment, exploitation, and gender-based violence (GBV)? This includes women, people with disabilities, migrant workers, and young workers.	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	No grievance mechanism available for workers to voice workplace concerns.	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	No measures for due diligence and the establishment of policies and procedures to manage and monitor the performance of third-party employees in the project?	☐ YES ☒ NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Grievance mechanisms are in place as a means of reporting labour rights and working conditions concerns.

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ERROR! REFERENCE SOURCE NOT FOUND.	Is there a risk of project failure during implementation or after project certification due to a lack of financial resources?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have potential negative impacts or pose a risk to the local economy?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Are there any potential risks or negative impacts this project may have on vulnerable or marginalised social groups, despite the benefits it may bring?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.
Please add text here…

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	economic impacts (negative/detrimental) to the local economy?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	negative economic consequences during and after project implementation, e.g., for vulnerable and marginalised social groups in targeted communities?	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.
Please add text here….

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ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have a risk of increasing greenhouse gas emissions over the Baseline Scenario?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.
Please add text here….

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	increase greenhouse gas emissions over the Baseline Scenario?	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.
Please add text here….

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project pose a risk to the availability and reliability of energy supply to other users?	☐ YES ☒ NO
If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
Please add text here….		
Would the project involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	negative impact on the availability and reliability of energy supply to other users?	☐ YES ☐ POTENTIALLY ☒ NO
If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.		
Please add text here….		
ERROR! REFERENCE SOURCE NOT FOUND.**ERROR! REFERENCE SOURCE NOT FOUND.**		
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ERROR! REFERENCE SOURCE NOT FOUND.	Does the project increase water usage to a level that will not allow for the maintenance of environmental flows?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project result in the discharge of wastewater that does not meet the required standard for beneficial reuse and could therefore negatively impact the environmental flow?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have the potential risk to exceed the rate of recharge for the groundwater source?	☐ YES ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve any processes or activities that could contaminate the groundwater and render it unsuitable for use?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here….

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	affect the natural or pre-existing pattern of watercourses, groundwater and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Wastewater discharge of quality that does not meet the required standard for beneficial reuse?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	significant extraction, diversion of ground water? For example, construction of dams, reservoirs, river basin developments, groundwater extraction	☒ YES ☐ POTENTIALLY ☐ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☒ YES ☐ NO ☐ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

The project utilises groundwater for community water supply. However, there is no excess extraction of ground water and the appropriate pump is selected to not exceed this capacity.

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have a risk of negatively impacting the catchment and has it been assessed and addressed?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here….

Would the project involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND. - ERROR! REFERENCE SOURCE NOT FOUND.	negatively impact on the catchment area? *If yes, Erosion prevention measures, including soil and slope protection measures, must be implemented before project commencement. These measures should involve natural terracing, infiltration strips, permanent ground cover, hedge and tree rows, and effective slope length assessment. Regular reassessment of these measures is necessary.*	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA
If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.		
Please add text here….		
ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND. - ERROR! REFERENCE SOURCE NOT FOUND.	Is there any risk of soil resource degradation or loss of ecosystem services provided by soils in the project? *If yes, the project shall maintain healthy soils by minimising negative impacts on soil health, productivity, structure, and water retention. Steps to minimise soil degradation include crop rotation, composting, using N-fixing plants, and reducing tillage and ecologically harmful substances.*	☐ YES ☒ NO
If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
Please add text here….		

Would the project involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	production, harvesting, and/or management of living natural resources by small-scale landholders and/or local communities?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	if answer to above question "yes" or "potentially", does project adopt appropriate and culturally sensitive sustainable resource management practices?	☐ YES ☐ NO ☒ NA
If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.		
Please add text here….		

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have any risks associated with natural or man-made hazards that could result from land use changes due to the project?	☐ YES ☒ NO
If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
Please add text here….		

Would the project involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	any potential risks that require emergency preparedness and response planning?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	if answer to above question "yes" or "potentially", did the project developer disclose appropriate information about emergency preparedness and response to affected communities?	☐ YES ☐ NO ☒ NA
If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.		
Please add text here….		

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the transfer, handling, and use of genetically modified organisms/living modified organisms that may result in adverse effects on biological diversity?	☐ YES ☒ NO
If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
Please add text here….		
Would the project involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	the transfer, handling and use of genetically modified organisms/living modified organisms (GMOs/LMOs) that result from modern biotechnology	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "yes" has a risk assessment by a competent Expert stakeholder been carried out in accordance with Annex iii of the Cartagena protocol on biosafety to the convention on biological diversity?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "yes" has any risks identified in the risk assessment?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Forestry (for example Afforestation/Reforestation) involving GMO planting? *Note - Forestry projects (for example Afforestation/ Reforestation) involving GMO planting are not eligible for Certification under Gold Standard for the Global Goals.*	☐ YES ☐ NO ☒ NA
If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.		
Please add text here….		

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have a risk of releasing pollutants to air, water, and land in routine, non-routine, or accidental circumstances?	☐ YES ☒ NO
If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		

Water quality tests are conducted as per the methodological requirements to determine if pollutants are present in the water.

Would the project involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	any potential risk of pollutant release that cannot be avoided?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "Yes" or "potentially", has the project identified all potential pollution sources that may degrade the quality of soil, air, surface, and groundwater in the project area?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "Yes" or "potentially", do the pollution prevention and control technologies and practices applied during the project life cycle align with national regulations or international best practices?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "Yes", is there a monitoring plan to ensure that mitigation measures are implemented, and resources are protected?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.
Please add text here….

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the generation of waste materials (both hazardous and non-hazardous)?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the use of any chemicals or materials subject to international bans or phase-outs?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.
Please add text here….

Would the project involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	the generation and management of waste materials?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	treatment, destruction, or disposal of waste material?	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "Yes", does the project involve an environmentally friendly method that includes appropriate control of emissions and residues resulting from the handling and processing of waste material?	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND.	risk of release of hazardous materials resulting from their production, transportation, handling, storage, or use?	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "yes", does project has measures in place to address health risks?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Involve manufacture, trade, and use of chemicals and hazardous materials subject to international bans or phase-outs due to their high toxicity to living organisms, environmental persistence, potential for bioaccumulation, or potential for depletion of the ozone layer	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.
Please add text here….

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.		
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the use of chemical pesticides?	☐ YES ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve purchase, store, manufacture, trade or use products that fall in Classes IA (extremely hazardous) and IB (highly hazardous)	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project use fertilisers, and if so, are measures being taken to minimise their use and nutrient losses to the environment?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here….

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	chemical pesticides use for pest management?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "yes" or "potentially", does project has documented Chemical Pesticides Policy in place?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	purchase, store, use, manufacture, or trade in Class II (moderately hazardous) pesticides?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to question above is "yes" or "potentially", does project has appropriate controls on manufacture, procurement, or distribution and/or use of these chemicals?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above questions, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here….

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have a risk of unsustainable forest management, including timber harvesting?	☐ YES ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project pose a risk of depleting biodiversity and ecosystem functionality in areas where improved forest management is undertaken?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project risk not meeting requirements for environment-friendly, socially beneficial, and economically viable plantations using native species whenever possible?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here….

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the risk of negatively influencing access to and availability of food for people affected?	☐ YES ☒ NO

If the answer to the question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here….

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	modification of the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here….

ERROR! REFERENCE SOURCE NOT FOUND. ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve any risks to animal welfare? Animal welfare shall be ensured by providing access to water and food, appropriate environment, humane treatment, and staff training. Evidence of mistreatment will be treated as an immediate non-conformity.	☐ YES ☒ NO

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve any potential risk of excessive or inadequate use of veterinary medicines?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project involve the risk of administering synthetic growth promoters, including hormones?	☐ YES ☒ NO
If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.		
Please add text here….		
Would the project involve or lead to:		
ERROR! REFERENCE SOURCE NOT FOUND.	animal husbandry or harvesting of fish populations or other aquatic species?[16]	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND.	limiting access for animals to basic needs like drinking water, adequate food, daylight, appropriate shelter etc.?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	inadequate measures to isolate sick animals and control the spread of disease, especially zoonotic diseases?	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND.	inadequate low-stress methods, equipment, and facilities that facilitate calm animal movement.	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND.	inadequate measures to ensure that animals are exposed to the least stress possible during transportation and slaughtering?	☐ YES ☒ NO ☐ NA

[16] 'Involve' means if the project mechanism and/or impact(s) are achieved via changing animal husbandry practices in some way.

ERROR! REFERENCE SOURCE NOT FOUND.	inappropriate spacing per animal and stocking rates per land unit?	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND.	inadequate measures to address the specific needs of aquatic animals?	☐ YES ☒ NO ☐ NA
ERROR! REFERENCE SOURCE NOT FOUND. ERROR! REFERENCE SOURCE NOT FOUND.	primary production of living natural resources such as animal husbandry, aquaculture, and fisheries? If the answer is yes, implement industry-standard sustainable management practices in line with to one or more relevant and credible standards and utilise available technologies.	☐ YES ☒ NO ☐ NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here….

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project have the risk of negatively impacting HCV areas and/or critical habitats?	☐ YES ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project in the project area or area of downstream impacts have risks to the following: native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells), habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?	☐ YES ☒ NO

If the answer to any of the questions above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here….

Would the project involve or lead to:

ERROR! REFERENCE	identified habitats as HCV areas and or Critical habitats?	☐ YES ☐ POTENTIALLY

ERROR! REFERENCE SOURCE NOT FOUND.		☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "yes", does the project have any risks that could negatively impact the catchment, project success, and surrounding HCV and ecological assets, as well as any measurable adverse impacts on the criteria or biodiversity values for which the critical habitat was designated, and on the ecological processes supporting that biodiversity?	☐ YES ☐ NO ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to above question is "yes", is a robust, appropriately designed, and long-term Habitats and Biodiversity Action Plan absent which will make the project unable to achieve net gains of those biodiversity values for which the critical habitat was designated?	☐ YES ☐ NO ☒ N/A
ERROR! REFERENCE SOURCE NOT FOUND.	Does the project area or area of downstream impacts have native tree patches, individual native trees, freshwater resources (including rivers, lakes, swamps, temporary water bodies, and wells), habitats of rare, threatened, and endangered species, and biodiversity-enhancing areas?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	If the answer to the above question is "yes", will the project have any adverse effects on these areas?	☐ YES ☐ No ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If the answer to above question is "yes", does the project has opportunities to minimise unwarranted conversion or degradation of the habitat and to enhance the habitat as part of its development?	☐ YES ☐ No ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Is the project applying Land Use & Forest Activity Requirements and managing a minimum 10% of the project area to protect or enhance the biological diversity of native ecosystems following HCV approach as per the given requirements?	☐ YES ☐ No ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here….

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does the project lead to the reduction or negative impact on any recognised Endangered, Vulnerable or Critically Endangered species?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here….

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	distortion of habitats of endangered species?	☐ YES ☐ POTENTIALLY ☒ NA
ERROR! REFERENCE SOURCE NOT FOUND.	If answer to the above question is “yes”, does the project plan to protect and enhance them?	☐ YES ☐ POTENTIALLY ☐ NO ☒ N/A
ERROR! REFERENCE SOURCE NOT FOUND.	Are opinions and recommendations of an Expert Stakeholder(s) not sought and demonstrated as being included in the project design?	☐ YES ☐ NO ☒ NA

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here….

ERROR! REFERENCE SOURCE NOT FOUND.ERROR! REFERENCE SOURCE NOT FOUND.

ERROR! REFERENCE SOURCE NOT FOUND.	Does project introduce any alien species (not currently established in the country or region of the project) into new environments?	☐ YES ☒ NO

If the answer to question above is "yes," please explain project situation and how the project will ensure compliance with applicable requirements.

Please add text here….

Would the project involve or lead to:

ERROR! REFERENCE SOURCE NOT FOUND.	risk of introducing any alien species with a high risk of invasive behaviour regardless of whether such introductions are permitted under the existing regulatory framework?	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	risk of potential accidental or unintended introductions including the transportation of substrates and vectors (such as soil, ballast, and plant materials) that may harbour alien species.	☐ YES ☐ POTENTIALLY ☒ NO
ERROR! REFERENCE SOURCE NOT FOUND.	risk of spreading alien species into areas in which they have not already been established?	☐ YES ☐ POTENTIALLY ☒ NO

If the answer is "yes" or "potentially" to any of the above question, please provide a brief description of the project situation below. Also, provide justification and/or evidence as necessary to demonstrate compliance with applicable requirements.

Please add text here….

APPENDIX 2- CONTACT INFORMATION OF VPA IMPLEMENTER

Organisation name	CO2balance UK Ltd
Registration number with relevant authority	4889958 (UK company registration number)
Street/P.O. Box	Cook Way
Building	1 Discovery House
City	Taunton
State/Region	Somerset
Postcode	TA2 6BJ
Country	United Kingdom
Telephone	+44 (0) 1823 332233
E-mail	enquiries@co2balance.com
Website	www.co2balance.com
Contact person	Charlotte Gadd
Title	Project Manager
Salutation	Miss
Last name	Gadd
Middle name	Lillian
First name	Charlotte
Department	Projects
Mobile	
Direct tel.	+44 (0) 1823 332233
Personal e-mail	Charlotte.Gadd@co2balance.com

APPENDIX 3- LUF ADDITIONAL INFORMATION

Risk of change to the Project Area during Project Certification Period:	
Risk of change to the Project activities during Project Certification Period:	
Land-use history and current status of Project Area:	
Socio-Economic history:	
Forest management applied (past and future)	
Forest characteristics (including main tree species planted)	
Main social impacts (risks and benefits)	
Main environmental impacts (risks and benefits)	
Financial structure	
Infrastructure (roads/houses etc):	
Water bodies:	
Sites with special significance for indigenous people and local communities - resulting from the Stakeholder Consultation:	
Where indigenous people and local communities are situated:	
Where indigenous people and local communities have legal rights, customary rights or sites with special cultural, ecological, economic, religious or spiritual significance:	

APPENDIX 4 - DESIGN CHANGES

A4.1. Details of proposed or actual design change

>>

A4.2. Describe the Impacts of Design Change on the following

a. Additionality

>>

b. Applicability of methodology and other methodological regulatory documents with which the project activity has been certified

>>

c. Compliance with the monitoring plan of the applied methodology

>>

d. Level of accuracy and completeness in the monitoring of the project activity compared with the requirements contained in the registered monitoring plan

>>

e. Scale of the project activity

>>

f. Stakeholder consultation

>>

g. Sustainable development criteria

>>

h. Safeguarding Assessment

>>

i. Compliance with applicable legislation

>>

Revision History

Version	Date	Remarks
2.3	Dd/mm/yyyy	Editorial changes in line with V2.1 of the Safeguarding Principles and Requirements
2.2	21 June 2023	Editorial changes in line with V2.0 of the Safeguarding Principles and Requirements
2.1	14 April 2023	Integrated the design change memo as annex of the document.
2.0	4 May 2022	
1.1	7 October 2020	Hyperlinked section summary to enable quick access to key sections Improved clarity on Key Project Information Inclusion criteria table added Gender sensitive requirements added Prior consideration (1 yr rule) and Ongoing Financial Need added Safeguard Principles Assessment as annex and a new section to include applicable safeguards for clarity Improved Clarity on SDG contribution/SDG Impact term used throughout Clarity on Stakeholder Consultation information required Provision of an accompanying Guide to help the user understand detailed rules and requirements
1.0	10 July 2017	Initial adoption