

GOLD STANDARD VERIFICATION REPORT

For: Carbonsink Group S.r.l

REPORT NO.: GS6752-GS10784VER01,
02&03



Prepared/changed by: Eric Tolcach	Approved by: Javier Castro	Page 1 of 41
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Abbreviations used in this Report

CAR	Corrective Action Request
CL	Clarification request
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DR	Document Review
EF	Emission Factor
ERPA	Emission Reduction Purchase Agreement
ER	Emission Reductions
FAR	Forward Action Request
GWP	Global Warming Potential
GS	Gold Standard
GHG	Greenhouse gas(es)
IPCC	Intergovernmental Panel on Climate Change
kWh	Kilo Watt Hour
MW	Mega Watt
NC	Non-Conformity
NCV	Net Calorific Value
NGO	Non-governmental Organisation
ODA	Official Development Assistance
PDD	Project Design Document
PD	Project Developer
tCO ₂ e	Tonnes of CO ₂ equivalents
UNFCCC	United Nations Framework Convention on Climate Change
GS4GG	Gold Standard for the Global Goals
ICS	Improved Cookstove
MWh	MegaWattHour
MR	Monitoring Report
POA	Programme of Activity
SGP	Safeguarding Principles
SDG	Sustainable Development Goal
SC	SustainCERT
TPDDTEC	Technologies and Practices to Displace Decentralised Thermal Energy Consumption
UN	United Nations
VVB	Validation and Verification Body
VER	Verified Emission Reduction
VPA	Voluntary Project Activity

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1 OBJECTIVE AND CRITERIA

1.1 Objective

Gold Standard projects must undergo independent verification of emission reductions and overall compliance with Gold Standard rules as the basis for issuance of Gold Standard Voluntary Emission Reductions (GS VERs).

The objective of this verification is to determine if the GHG statement and other reporting information is accurate and conforms with the criteria defined in Gold Standard rules.

This report details the objectives, scope, criteria, methodology and findings of this process and a final opinion.

The Gold Standard requires that the final version of this report is published in the public domain. The client to whom this report is addressed therefore acknowledges that the final version of this report will be published unless SustainCERT (SC) are informed in writing within 1 business day following issuance of the final version to the client.

1.2 SCOPE

GHG related activity	Verification
Project Title (s)	GS5658 VPA 7: Water is Life, Madagascar GS5658 VPA 9: Water is Life - Phase II, Madagascar GS5658 VPA 13: Water is Life, Madagascar GS5658 VPA 14: Water is Life, Madagascar GS5658 VPA 16: Water is Life, Madagascar GS5658 VPA 17: Water is Life, Madagascar GS5658 VPA 18: Water is Life, Madagascar GS5658 VPA 23: Water is Life, Madagascar GS5658 VPA 24: Water is Life, Madagascar
GS ID (s)	GS6752 GS7311 GS7567 GS7566 GS10657 GS10658 GS10659 GS10783 GS10784
GS Project Type	SWS
PoA Title (if applicable)	PoA – Climate Finance for Sustainable Development

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POA ID (if applicable)	GS5658
Responsible Party	SustainCERT

The scope of verification covers the emissions reductions project in that is prepared in accordance with the Monitoring Report of the GS6752, GS7311, GS7567, GS7566, GS10657, GS10658, GS10659, GS10783 and GS10784 listed above.

Consistent with Gold Standard requirements, only the following GHGs are considered within the scope of the assessment: CO₂ CH₄ N₂O.

1.3 Criteria

The criteria for this verification are defined in the following documents stated in the Monitoring Report (MR)

- GS4GG Principles & Requirements
- GS4GG Stakeholder Consultation Requirements & Guidelines
- GS4GG Safeguarding Principles & Requirements
- GS4GG GHG-Emissions-Reduction-Sequestration-Product-Requirements
- Design Certified PDD (s) version 06

Optional Requirements

- 100-GS4GG-Programme-of-Activity-Requirements-
- Applied methodology Technologies and Practices to Displace Decentralized Thermal Energy Consumption Version 3.1

2 TEAM COMPOSITION

Verification Team

Name	Qualification	Coverage of sectoral/technical area	Host country experience	Conducted Site visit / Remote Audit
ANURAG JUYAL	TL	☒ (Energy)	☒	
Shivraj Sharma	TL	☒ (Energy)	☒	☒
INDRAPAL PARMAR	Expert	☒ (Energy)	☒	

Independent Review team and approver

Name	Role	Coverage of technical area
Neha Rao	Independent R	☒ (All)
Neha Rao	Approver	☒ (All)

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3 PROJECT INFORMATION

3.1 Monitoring Period

Start of Monitoring Period	GS6752: 09/10/2020-30/08/2021 GS7311: 09/10/2020-30/08/2021 GS7566: 09/10/2020-30/08/2021 GS7567: 01/09/2020-30/08/2021 GS10657: 09/10/2020-30/08/2021 GS10658: 09/10/2020-30/08/2021 GS10659: 09/10/2020-30/08/2021 GS10783: 01/09/2020-30/08/2021 GS10784: 01/09/2020-30/08/2021																													
End of Monitoring period	Same as above																													
Total Emission Reductions	GS6752: 2,251 GS7311: 1,648 GS7566: 9,014 GS7567: 8,372 GS10657: 9,020 GS10658: 7,651 GS10659: 9,012 GS10783: 10,000 GS10784: 9,911																													
Total SDG 3	Additional persons using safe water in the project activity compared to the baseline scenario <table><tr><td>VPA</td><td>GS6752</td><td>GS7311</td><td>GS7566</td><td>GS7567</td><td>GS10657</td></tr><tr><td>Households</td><td>1,126</td><td>901</td><td>4,509</td><td>4,508</td><td>9,020</td></tr><tr><td>VPA</td><td>GS10658</td><td>GS10659</td><td>GS10783</td><td>GS10784</td><td></td></tr><tr><td>Households</td><td>3,827</td><td>9,012</td><td>5,091</td><td>9,911</td><td></td></tr></table>						VPA	GS6752	GS7311	GS7566	GS7567	GS10657	Households	1,126	901	4,509	4,508	9,020	VPA	GS10658	GS10659	GS10783	GS10784		Households	3,827	9,012	5,091	9,911	
VPA	GS6752	GS7311	GS7566	GS7567	GS10657																									
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VPA	GS10658	GS10659	GS10783	GS10784																										
Households	3,827	9,012	5,091	9,911																										
Total SDG 6	Additional persons having access to a safe water source in the project activity compared to the baseline scenario <table><tr><td>VPA</td><td>GS6752</td><td>GS7311</td><td>GS7566</td><td>GS7567</td><td>GS10657</td></tr><tr><td>Households</td><td>1,251</td><td>1,011</td><td>5,010</td><td>5,009</td><td>5,013</td></tr><tr><td>VPA</td><td>GS10658</td><td>GS10659</td><td>GS10783</td><td>GS10784</td><td></td></tr><tr><td>Households</td><td>4,252</td><td>5,009</td><td>5,657</td><td>5,057</td><td></td></tr></table>						VPA	GS6752	GS7311	GS7566	GS7567	GS10657	Households	1,251	1,011	5,010	5,009	5,013	VPA	GS10658	GS10659	GS10783	GS10784		Households	4,252	5,009	5,657	5,057	
VPA	GS6752	GS7311	GS7566	GS7567	GS10657																									
Households	1,251	1,011	5,010	5,009	5,013																									
VPA	GS10658	GS10659	GS10783	GS10784																										
Households	4,252	5,009	5,657	5,057																										
Total SDG 8	Hygiene campaign on water, sanitation and health related issues made in the project area – 1 for each VPA																													
Date of MR Report	02/08/2022																													
Version of MR Report	05																													

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3.2 Annual projections

Annual Average Emission Reductions (SDG 13)	N/A because it's an internal verification
Total SDG x	N/A because it's an internal verification
Total SDG y	N/A because it's an internal verification
Total SDG z	N/A because it's an internal verification

4 VERIFICATION OPINION

Unmodified Opinion	☒
Modified Opinion (see reasons below)	☐ N/A
Adverse Opinion (see reasons below)	☐ N/A
Disclaimer of Opinion	☐ N/A

The project representative to whom this report is addressed is responsible for the preparation and fair presentation of GHG and other reporting information in accordance with Gold Standard rules.

SustainCERT is responsible for expressing this verification opinion on the GHG and other reporting information based on the evidence gathering procedures documented in this report. The GHG verification was planned and carried out in accordance with ISO 14064-3 (Specification with guidance for the verification of greenhouse gas statements) to provide a reasonable level of assurance that the information is accurate.

Reason for Modified Opinion (if applicable)	N/A
Reason for Adverse Opinion (if applicable)	N/A
Reason for Disclaimer (not issuing) of Opinion (if applicable)	N/A

Conclusion:

SustainCERT (SC) concludes that:

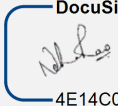
The GHG emission reductions are calculated without material misstatements for the aforementioned monitoring period and has been prepared in accordance with the verification criteria and is a materially correct and fair representation of GHG other reporting information.

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Our opinion refers to reported project's information on GHG emissions and resulting reductions, which were determined using the valid and certified baseline, monitoring plan and other relevant documents.

Based on the information we have assessed; we can confirm that the implementation of the project resulted in the aforementioned emission reductions during the corresponding monitoring period.

Authorised Signatory Name:	Neha Rao – Deputy Head of Certification
Signature	 4E14C0A23A4744E...
Date of this report approval	16/08/2022
Version of this report	01
Office Location	Luxembourg

The verification of the GHG statement was conducted in accordance with ISO 14064-3 and corresponding GHG scheme.

The responsible party is responsible for the preparation and fair presentation of the GHG statement in accordance with the criteria.

5 METHODOLOGY

5.1 Desk Review

An initial verification documentary review was conducted by SustainCERT involving

- A review of the data and information presented in the MR to verify their completeness.
- A review of the approved monitoring plan and monitoring methodology
- An evaluation of data management and quality control system used in the generation and reporting of data and information

A Protocol was used to assess each requirement during the execution of assessment activities and is explained below.

Whenever the assessment question does not immediately lead to a conclusion, clarifications (CLs) and corrective action requests (CARs) are issued as Findings/Comments against the relevant Rule and Assessment Question.

If a Findings is closed, it will result in a conclusion of either OK, a Forward Action Request (FAR) or an Observation (OBS). If a Finding cannot be closed and a requirement cannot be shown to be met, an NC (Non-conformity) is issued.

OK, CARs, CLs, FARs, OBS and NC are further explained below:

- OK - issued when a requirement has been met.
- CAR (Corrective Action Request) - issued if one of the following occurs:

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- There is a risk that emission reductions cannot be monitored or calculated
 - Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions
 - Gold Standard requirements have not been shown to be met
- Clarification request (CL) - issued if information is insufficient or not clear enough to determine whether a requirement has been met
 - Forward Action Requests (FARs) – issued to highlight issues related to implementation that require review at the next verification
 - Observations (OBS) - issued where there may be a possible future non-conformity against a requirement.
 - Non-Conformity (NC) – issued if a requirement has not been met and cannot be met.

To demonstrate transparency, all Findings are transferred to a separate Review Feedback table (shown below) to provide a written record of how they are discussed and how the conclusion was reached. A transcript of the Review Feedback is available as Appendix 1, which also includes a list of the Supporting Document (s) provided and reviewed.

5.2 Site Visit

during this verification, considering the COVID-19 Interim guidelines, No site visit was therefore undertaken and instead remote audit calls were conducted on 17/02/2022, 28/04/2022 and 25/07/2022 to do the following:

1. Assess the design/operation of the Project
2. Interview personnel and stakeholders regarding the Project operation and data collection procedures.
3. Cross check reported information with evidence observed on site.

Additionally, due to the findings raised, PD contracted an external agency – local university to conduct an additional survey to confirm project implementation related details. The survey was conducted in June 2022 and the report has been assessed by SustainCERT and found to be okay.

FAR 01 has been raised to ensure that a physical site visit would be conducted during the next MP.

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Appendix: 1- CLARIFICATION REQUESTS, CORRECTIVE ACTION REQUESTS

Internal Verification Form for GS Micro Scale Projects and Micro VPAs under Gold Standard for the Global Goals

<u>Project summary</u>	
Project Type:	Energy Efficiency-Domestic
Micro Scale Limit:	10000
Project Location:	Madagascar
Impact Methodology Applied:	Technologies and practices to displace decentralized thermal energy consumption (TPDDTEC), version 3.1
Date of Project Design Certification:	GS6752: 16/04/2019 GS7311: 17/04/2019 GS7567: 24/03/2020 GS7566: 24/03/2020 GS10657: 30/07/2020 GS10658: 30/07/2020 GS10659: 30/07/2020 GS10783: 15/10/2020 GS10784: 15/10/2020
Start Date of Crediting Period:	GS6752: 18/11/2018 GS7311: 26/11/2018 GS7567: 01/09/2020 GS7566: 22/09/2019 GS10657: 22/09/2019 GS10658: 23/11/2019 GS10659: 22/09/2019 GS10783: 01/09/2020 GS10784: 01/09/2020

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Date of Last OO visit	n/a
PoA Title and GS ID (for Micro VPA):	PoA – Climate Finance for Sustainable Development (GS 5658)
Project details: The micro-scale voluntary Project Activities (VPA) “Water is Life, Madagascar” and “Water is Life – Phase II, Madagascar” are developed by an Italian Associazione Mondobimbi Veneto Onlus in collaboration with Carbonsink. The project activity includes the construction and securing of a network of wells for increase accessibility to safe and clean drinking water for local families living in the surroundings of the city of Tulear located in the Region of Atsimo-Andreafana, in Toliara Province, Madagascar. In targeted areas, many families do not have access to safe and clean drinking water and, moreover, long daily journeys are needed to reach the water sources in these semi-desert areas. Many health problems are linked to the use of unsafe drinking water: a high incidence of diseases such as diarrhea, intestinal infections, and parasites. Local people typically use boiling with firewood or charcoal to purify their drinking water. This process results in the release of greenhouse gas emissions from the wood combustion. The project is addressed to supply safe drinking water for domestic use and consequently to improve the hygiene, social, economic and environmental issues related to the water consume. Moreover, verifiable Carbon Dioxide (CO₂) emission reductions are achieved through the reduced wood/charcoal combustion and the need for water purification through boiling is reduced. The project will also raise awareness among population regarding hygiene and contribute to sustainable development. The water supply systems of the projects GS6752 and GS 7311 are equipped with manual pumps and all the other projects involve boreholes with solar powered pumps (GS6752, GS7311, GS7567, GS7566, GS10657, GS10658, GS10659, GS10783 and GS10784).	

Monitoring Period Information	
Duration of this monitoring period:	GS6752: 09/10/2020-30/08/2021 GS7311: 09/10/2020-30/08/2021 GS7567: 01/09/2020-30/08/2021 GS7566: 09/10/2020-30/08/2021 GS10657: 09/10/2020-30/08/2021 GS10658: 09/10/2020-30/08/2021 GS10659: 09/10/2020-30/08/2021 GS10783: 01/09/2020-30/08/2021 GS10784: 01/09/2020-30/08/2021
Crediting Period Sequence Number:	1 st

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Monitoring Period Sequence Number:	GS6752: 3 GS7311: 3 GS7567: 1 GS7566: 2 GS10657: 2 GS10658: 2 GS10659: 2 GS10783: 1 GS10784: 1									
SDG Impacts (min 3):										
SDG 3 – Good Health and Well-being	VPA	GS6752	GS7311	GS7567	GS7566	GS10657	GS10658	GS10659	GS10783	GS10784
	Households	1,126	901	4508	4509	9020	3827	9012	5091	9911
SDG 6 – Clean Water and Sanitation	VPA	GS6752	GS7311	GS7567	GS7566	GS10657	GS10658	GS10659	GS10783	GS10784
	Households	1,251	1,001	5,009	5,010	5,013	4,252	5,009	5,657	5,057
SDG 12 – Responsible Consumption and Production	VPA	GS6752	GS7311	GS7567	GS7566	GS10657	GS10658	GS10659	GS10783	GS10784
	Hygiene campaign	1	1	1	1	1	1	1	1	1
SDG 13 – Climate Action	VPA	GS6752	GS7311	GS7567	GS7566	GS10657	GS10658	GS10659	GS10783	GS10784
	VERs	2,251	1,648	8,372	9,014	9,020	7,651	9,012	10,000	9,911
Product Totals:										
Vintage Break (GS 6752)										
09/10/2020 - 31/12/2020	575 VERs									
01/01/2021 - 30/08/2021	1676 VERs									
Vintage Break (GS 7311)										

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09/10/2020 - 31/12/2020	421 VERs
01/01/2021 - 30/08/2021	1227 VERs
Vintage Break (GS 7567)	
09/10/2020 - 31/12/2020	1688 VERs
01/01/2021 - 30/08/2021	6684 VERs
Vintage Break (GS 7566)	
09/10/2020 - 31/12/2020	2301 VERs
01/01/2021 - 30/08/2021	6713 VERs
Vintage Break (GS 10657)	
09/10/2020 - 31/12/2020	2302 VERs
01/01/2021 - 30/08/2021	6717 VERs
Vintage Break (GS 10658)	
09/10/2020 - 31/12/2020	1953 VERs
01/01/2021 - 30/08/2021	5698 VERs
Vintage Break (GS 10659)	
09/10/2020 - 31/12/2020	2300 VERs
01/01/2021 - 30/08/2021	6712 VERs
Vintage Break (GS 10783)	
09/10/2020 - 31/12/2020	2575 VERs
01/01/2021 - 30/08/2021	6749 VERs
Vintage Break (GS 10784)	
09/10/2020 - 31/12/2020	3162 VERs
01/01/2021 - 30/08/2021	6749 VERs

OO Assigned	Yes ☐	No ☒
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Version number of the MR	01
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Supporting Document (s) provided and Reviewed (round 1)	• Monitoring Report (<i>Monitoring-Report_ver01.docx</i>) • GS Appraisal Report Verification Stage () • ER Calculation Sheet (<i>GS6752 - Ex post ER calculation_ver01.xlsx</i>) • Supporting documents: ○ <i>GS5658_VPA 7,9 (2nd MP), 14,16-18 (1st MP)_Int Ver_Final round@17092021.docx</i> ○ <i>GS6752 - Report on hygiene campaign - Betsingilo.pdf</i> ○ <i>GS6752_GS7311_Verification_MP1_Final round@26052020.pdf</i> ○ <i>GS6752Internal_Validation_Final_08082019.pdf</i> ○ <i>Maintenance Plan 2021.xlsx</i> ○ <i>Report of Training to Interviewers2021.pdf</i> ○ <i>Sample plan_randomly selection_2021.xlsx</i> ○ <i>Total end-users list.xlsx</i> ○ <i>Usage Survey 2021.xlsx</i> ○ <i>WCFT 2021 raw data and analysis.xlsx</i> ○ <i>WCFT 2021 Report.docx</i> ○ <i>water tests.pdf</i>

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Completion date of version	16/11/2021
Supporting Document (s) provided and Reviewed (round 2)	- Monitoring Report (<i>Monitoring-Report_ver02.docx</i>) - ER Calculation Sheet: <i>GS6752 - Ex post ER calculation_ver02.xlsx</i> <i>GS7311 - Ex post ER calculation_ver02.xlsx</i> <i>GS7566_ Ex post ER calculation_ver02.xlsx</i> <i>GS7567_ Ex post ER calculations_ver02.xlsx</i> <i>GS10657_ Ex post ER calculation_ver02.xlsx</i> <i>GS10658_ Ex post ER calculation_ver02.xlsx</i> <i>GS10659_ Ex post ER calculation_ver02.xlsx</i> <i>GS10783_ Ex post ER calculation_ver02.xlsx</i> <i>GS10784_ Ex post ER calculation_ver02.xlsx</i> - Supporting documents: <i>End-users lists.pdf</i> <i>grievance book.pdf</i> <i>Monitoring-Report_ver6_clean.pdf</i>

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Version number of the MR	05
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Supporting Document (s) provided and Reviewed (round 2)	- Monitoring Report - ER Calculation Sheet: <i>GS6752 - Ex post ER calculation_ver04.xlsx</i> <i>GS7311 - Ex post ER calculation_ver04.xlsx</i>

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Decision:

Rejected	☐
Request for clarifications and /or corrective action	☐
To be submitted for external verification	☐
Verified	☒

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Review Results: Please respond to the following comments and/or requests for additional information and update your project documentation where needed.

Sections	Clarifications and/or corrective action needed	Response by Project Representative
Key Project Information	1. The PP is requested to submit the mentioned Annual Report dated 16/09/2021 The PP shall update and resubmit the updated documents in track-change mode	Please refer to "Monitoring-Report_ver6_clean" uploaded to SC App.
	Internal review – round II: Please note that the Annual report (https://globalgoals.goldstandard.org/t-perfcert-annual-report/) is different to the Monitoring report. The PP shall mention that N/A if it is not required for this MP. Comment/Request is closed	
B.1.1	2. The PP is requested to further clarify the FAR from previous verification: GS6752 <u>Forward Action Request # 1:</u> <u>The PP shall provide the comprehensive list of all users of all VPAs in the region for checking the double counting during the next verifications.</u> The GPS locations of many users in the list of users are duplicated. Please clarify. <u>Forward Action Request # 2:</u> <i>The PP shall make sure that during WCFT the total water used for all purposes (including bathing, dishes, clothes washing, animal use, etc.) by users from the project technology must be measured – along with crediting liters. If the values are observed to be non-conservative compared to current MP, then ERs shall be adjusted in the next MP.</i> The WCFT 2021 report has been reviewed by SC, however there is no description about water used for different purposes (including bathing,	<u>Forward Action Request # 1:</u> During the field activities, the data were collected with electronic devices (tablet/mobile) by the local personnel hired and trained for this purpose. For due to the low connection, in some case the interviewers recorded the information using offline mode and then upload all the data to the server when they had the better connection (i.e., in the same location). Even when recording have been made using on-line mode, it is to be considered that the GPS coordinates were recorded using local sim signal which is not resulting very accurate. Moreover, equal, or very similar GPS coordinates can be also recorded in case multiple households are living very near-by to each other sharing and for example sharing common spaces. <u>Forward Action Request # 2:</u>

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Sections	Clarifications and/or corrective action needed	Response by Project Representative
	dishes, clothes washing, animal use, etc.) by users from the project technology and how they were measured during the WCFT. Please clarify. Forward Action Request # 3: During the next OO visit, the average number of people/household shall be cross-checked by the OO.	The assessment of the water used for different purposes has been carried during the annual usage survey through several detailed questions. More precisely, questions from 19a to 19d refer to the water sources for non-drinking purposes. All the interviewees had to answer the questions considering a numerous list of all the water sources of the area taking into account both frequency (i.e., daily and weekly basis) and seasonality (i.e., rainy and dry seasons). Almost all the respondents declared to use other sources than the project technology, in fact, 99% of the households responded to use unprotected wells on daily basis. Hence, the water used for non-drinking purposes can be excluded from the project technology service. <i>Forward Action Request # 3:</i> There is no OO assigned for this review. During the next OO visit, the average number of people/households will be cross-checked by the OO.
	<u>Internal review – round II:</u> Accepted. During the next OO visit, the average number of people/households will be cross-checked by the OO. (FAR#1) Comment/Request is closed	
C	3. B. Project Survey (PS): the date of PS “during 14/09/2020 – 25/09/2020” is incorrect.	Relative section has been corrected. Please refer to “Monitoring-Report_ver02” uploaded to SC App.
	<u>Internal review – round II:</u> Comment/Request is closed	
	4. The name of third party who conduct the water test is inconsistent with the submitted documents.	Relative section has been corrected. Please refer to “Monitoring-Report_ver02” uploaded to SC App.

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Sections	Clarifications and/or corrective action needed	Response by Project Representative
	Internal review – round II: Comment/Request is closed	
D.1	5. EFb,non CO2: According to the GS rules, the period starting 01 January 2021 shall use the AR5 GWP value	Relative section of the MR and ERs spreadsheets have been updated.
	Internal review – round II: Comment/Request is closed	
D.2	6. Np,y: The PP shall provide the original evidence, monitoring records from monitoring officers for the number of people using each borehole in the project as required in the monitoring plan.	The data were collected using a mobile application implemented on electronic devices (tablet/mobile) and designed for field activities such as surveys. Relative evidence has been provided. Please refer to “End-users lists” uploaded to SC app.
	Internal review – round II: The finding is closed based on the response to CAR 16. Comment/Request is closed	Please refer to CAR 16.
	7. The Value(s) applied for Project Technology Days should be 0.05 or 5% instead of 0.05%.	Relative section has been updated.
	Internal review – round II: Comment/Request is closed	
	8. The PP is requested to clarify why the monitored percentage of fuel type (wood and charcoal) of the project situation is applied while the percentage of fuel consumption in the baseline situation is fixed at beginning of the crediting period instead of a monitoring parameter. Besides, the PP is requested to clarify how the percentage of fuel for <u>boiling water</u> could be monitored while the PP claim that there is no fuel consumption for <u>water boiling</u> in the project situation? The PP has been claiming the higher charcoal usage rate of 98% (while in the baseline survey, it was 72.7%) in calculating the baseline fuel consumption which is not conservative.	In line with the approved VPA-DDs, the “Percentage of user per used fuel” is a parameter to be monitored using the monitoring survey as source of data (i.e., question number 17 of the survey). Please note that question number 17 of the monitoring questionnaire rerefers to the fuel that households generally use in daily life and furthermore, the question number 30 is related to the purification method used before the project “30. <i>Comment purifiez-vous l'eau avant l'activité du projet ?</i> ” with is: “How did you purify the water before the project activity?”. During the baseline survey, 87% of the households declared to use charcoal as their main fuel. Moreover, all the respondents of the

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Sections	Clarifications and/or corrective action needed	Response by Project Representative
		usage survey conducted in 2020 affirmed to use charcoal as main fuel and 6 families stated to use both charcoal and wood. The outcome of the last usage survey (i.e., 2021) is in line with the trend of the previous investigations.
	Internal review – round II: As the email from Carbonsink dated 28/04.2022, PD has updated ER calculations by applying Ex-ante values regarding the Wb,y and Wp,y This approach is accepted. Comment/Request is closed	
D.3	9. Please explain the increase of usage rate from 90% to 99% from the previous MP to this MP.	In this MP there are three new projects. The usage survey is unique and comprehensive of the newest boreholes. Please consider also that this is an annual monitored parameter, and the outcome can be updated. All the users declared to use on daily basis the water point both during the rainy season and dry season for drinking purposes. Only one respondent stated to use both the water point and packaged water for drinking purposes. For conservativeness, this user has been considered as a consumer of packaged water only.
	Internal review – round II: As the discussion with Carbonsink dated 28/04.2022, they have updated usage rate calculations applying 90% regarding the Up,y This approach is accepted. Comment/Request is closed	
	10. With some VPAs, this is the first MP, please clarify the sources for the data in the column “Value obtained in this monitoring period”	Please note that the table in Section D.3 is filled in with the information relative to the VPAs that are current under the second or third Internal Verification (i.e., 6 out of 9 VPAs). A footnote has been added for clarity

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Sections	Clarifications and/or corrective action needed	Response by Project Representative
	<u>Internal review – round II:</u> Comment/Request is closed	
E.1 and E.2	11. As required by the MR template, under a heading for each SDG, the PP shall provide sample calculations for all formulae used to calculate/estimate baseline/project values (SDG 13 – emissions or net baseline removals), applying actual values. Clearly reference the spreadsheets used (including sheet names as necessary) and supply them as supporting evidence to the monitoring report.	Relative sections have been updated on the MR.
	<u>Internal review – round II:</u> Comment/Request is closed	
G	12. The PP is requested to provide the photos of grievance expression process books placed at sites.	Please refer to “Grievance book” uploaded to SC App.
	<u>Internal review – round II:</u> Comment/Request is closed	
ER spreadsheets	13. Please clarify how the distance to the boreholes from users were measured. It is noted that with many households, the GPS location were the same but the distances are varying significantly (e.g. 100 m to 420 m.	The data were collected with electronic devices (tablet/mobile) by the local personnel hired and trained for the purpose. For due to low connection, in some case the field team recorded the information using offline mode and then upload all the data to the server when they had the better connection (i.e., in the same location). Even when recording have been made using on-line mode, it is to be considered that the GPS coordinates were recorded using local sim signal which is not resulting very accurate. Moreover, equal or very similar GPS coordinates can be also recorded in case multiple households are living very near-by to each other sharing and for example sharing common spaces.

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Sections	Clarifications and/or corrective action needed	Response by Project Representative
		In addition, the distances from the households to the borehole can be tricky to estimate as we are referring to the LDCs context where distances are often not linear. Moreover, PD can ensure that the distance radius is never greater than the maximum allowed by the methodology.
	<u>Internal review – round II:</u> Comment/Request is closed	
Usage survey	14. Question 22: Please report clearly how many times a household fetch water per day.	On average (weighted average of the number of times over the number of respondents) a household use to fetch water 5 times per day.
	<u>Internal review – round II:</u> Accepted. Comment/Request is closed	
Maintenance plan	15. The PP is requested to clarify how the number of monitored failure days were considered in the Np,y calculation in the ER spreadsheet.	The number of “Operational days” of each water system is reported in the maintenance plan. Furthermore, these values have been capped to the 95% of the total number of days in compliance with GS recommendations. Therefore, Np,y is calculated using the capped value and the number of persons. For further details, please refer to Column E within the Tab “Ers”. For clarity here is an example Number of days= 327 Operational days= 327 * 0.95 = 311 Estimated nro of persons = 1,500 Np,y=1,500 * 311= 465,975 persons.days Hence, the failure days are considered indirectly using the actual operational days for the calculation.

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Sections	Clarifications and/or corrective action needed	Response by Project Representative
	Internal review – round II: The finding is closed based on the response to CAR 16. Comment/Request is closed	Please refer to CAR 16.
Capacity/water demand issue and number of beneficiaries	16. Regarding the capacity/water demand issue and number of beneficiaries, Carbonsink shall proceed with a survey made with external entity – the local University and Share details of the analysis summary along with relevant evidence.	External entity (University) has performed an additional survey to confirm the issues related to the capacity/water demand and number of beneficiaries. The summary of the made survey and its results together with the supporting documents have been shared with SC. Please refer to the summary document uploaded to SC App named “Summary on the additional survey”. The additional external survey included 70 randomly selected families. Moreover, the external entity video recordings were made in totally 7 villages to covering 4 hours of continues recording borehole usage together with counting of the number of persons visiting the borehole. As per the summary document and the supporting documents the capacity and end-user numbers stated by the PD in the MR has been confirmed.
	Internal review – round III: The PD has conducted additional survey through a third party i.e., Institute of Superior Education of Toliara, Department of Superior Education and Scientific Research of Atsimo-andreaafana region, Madagascar, to confirm the technology outreach and number of persons which is accepted. Further, the PD has also submitted declarations signed by respective Village Chiefs to confirm the village population to support the claim of number of persons which is also accepted. Comment/Request is closed	

Conclusion

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The project can be Verified after the above Clarifications and/or Corrective Actions have been resolved.

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Appendix: 2 – FORWARD ACTION REQUESTS

Summary of Forward Action Requests (FARs):

Forward Action Request # 1: During the next OO visit, the average number of people/households will be cross-checked by the OO.

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Appendix: 3 – Additional discussion on findings

CAR 1:

1. As per the microscale project requirements *“If the annual emission reductions achieved are limited to a maximum of 10,000 tonnes of CO₂eq in each and every year of the crediting period. Whenever actual emission reductions, as per the verification report, exceed the upper threshold, the project can still request for issuance, but the claimable emission reductions are capped at 10,000 tonnes of CO₂eq per year”* 108 V1.2 PAR Microscale Project Requirements (goldstandard.org)
 - a. 1st MP: 22/09/2019-08/10/2020 (26pprox.. 13 months/ 382 days) – 11,618 ER (11,101 ER for 12 months)
 - b. 2nd MP: 09/10/2020-30/08/2021 (10-11 months) – 10,217 ER
2. The percentage of families using charcoal has significantly increased after the inclusion of VPA. As per the applied meth TPDDTEC, V3.1, Section A3.4 (Page 53), Wb,y and Wp,y are ex-ante parameters which are fixed for the crediting period. Therefore, values applied during the validation are to be used. The monitoring of percentage of families using wood/ charcoal is only a crosscheck measure.

Based on these points above, PP needs to correct the calculations for the current verification to the values fixed ex-ante.

Carbonsink:

To clarify the situation, we are using here the project GS7566 as example as it is the one referred within the SC's above observation. The table blow summarizes the total number calculated Ers and highlights the exact quantity in tCO₂ that have been capped, in line with Microscale Project Requirements, at 10,000 tCO₂/year.

As can be seen from the table, for this monitoring period (MP 2) the quantity of Ers exceeding the 10,000 tCO₂ limit are 734 tCO₂ i.e. there is 7% variation. The reference period (22/09/2020-30/03/2021) against which the capping of 10,000 for this verification is made is including 334 days. The remaining 17 day will be included within the MP 3 and no Ers will be claimed against them.

Table 1. Calculated and capped Ers for the MP1 (already issued) and for the MP2 (Current MP under verification) regarding GS7566 *

Monitoring period	Project year	Calender period		Nro days	Calculate d ERs (tCO ₂)	Capped ERs (tCO ₂)	Differenc e (tCO ₂)	Differenc e (%)
MP1 (alredy issued)	Total Year 1	22/09/2019	21/09/2020	365	11.101	10.000	1.101	11%
MP1 (already issued)	Year 2	22/09/2020	08/10/2020	17	517			
MP2 (under verifiaton)	Year 2	09/10/2020	30/08/2021	327	10.217			
	Total Year 2	22/09/2020	30/08/2021	344	10734	10.000	734	7%

* The reference period (22/09/2020-30/03/2021) against which the capping of 10,000 is made is including 334 days. For the remaining 17 day which will be included within the next monitoring period (MP3), no further ER can be claimed.

PD considers that some variation between the ex-ante and ex-post estimations are normal and shall not to change the approach of determining Wb,y and Wp,y.

PD wants to highlight, that the monitoring of the “percentage of families using wood/charcoal” was included with the VPA-DDs following SC feedback received during validation process: “PD shall also note that the baseline values shall be fixed for both fuels separately. However, the total value shall not be fixed due to the fact that % user of each fuel types may change. The project developer shall monitor % user per fuel and accordingly apply the ratio to determine the total fuel consumption at project level. This shall be added as a monitored parameter in VPA (see GS 7566-7567_8th round@08032021). This approach (i.e. which leads eventual annual updated of Wb,y and Wp,y), was in consequence approved by GS during the Design Change and further approved by SC and GS during the last verification and performance review. Please refer the Annex 4 which summarizes through screenshot the same.

We will update ER calculations applying Ex-ante values regarding the Wb,y and Wp,y

Review II:

As the email from Carbonsink dated 28/04.2022, they have updated ER calculations applying Ex-ante values regarding the Wb,y and Wp,y

This approach is accepted.

Comment/Request is closed

CAR 2:

In the absence of a site visit, explain the following with evidence:

- A. Your baseline assessments i.e., BA 7566 and BA 10657-59 indicate that water demand is 20 lpcd hence this total water demand should be used to check the technology outreach and the technology can cater to. For ex. If the total capacity of the technology is 30,000 lpd as per the tech specs, then on a conservative basis it cannot cater to more than 1,500 users.
- B. The operational hours are set for 12 hours to operate the borehole technology at the time of validation. Since the service hours have reduced due to pipe change, the technology outreach needs to be recalculated. Also, since the project is in semi-desert area leading to further exploitation of ground water source, can lead to water crisis in medium to long term as well as it would be a violation of SDG principles.

Carbonsink:

- A. PD considers that there is no need to revise the number of end-users. In fact, the issues related to the capacity of the solar-powered water systems in respect of the water demand of the end-users was discussed in a very detailed way with SC already during the last verification, and thus, PD consider to be able to provide all the necessary information to clarify the situation in a transparent way.

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First, the estimation of the 20 l/person/day of total water consumption indicated in the Baseline Report is based on the self-estimation of the interviewed persons (Please refer to Section 2.3.2 of the Baseline Survey Report). The same survey found that the water consumed for drinking, cooking (including food preparation), and handwashing purposes was estimated to be 11 litres/day/person, i.e., around 55% of the total estimated water consumption. PD want to highlight that these values are deriving from the self-estimations of the interviewed person, and they are thus to be considered only as indicative values.

In line with the applied TPDDTEC methodology ver 3.1, the target population characteristics are to be studied annually. PD has used a combined project and usage survey questionnaire which was pre-approved by SC before performing the survey in the project area (Please refer to Annex 3 below). Based on the results of this survey, most of the end-users are using other sources than the project water system for non-drinking purposes. Only two persons out of 110 persons (corresponding 1.8%) stated to use the project water point for fetching water for non-drinking purposes. For easy reference, the assessment of water sourcing for non-drinking purposes is described in the table 1 below, the full survey results have been shared with SC earlier and are available "Usage Survey 2021" Excel uploaded to SC App.

The same survey also gathered end-users evaluation on the water availability from the project water points for cross-checking purposes and no indications of any lack of water from project water points were found to have occurred. In fact, the continuous availability of water from the water systems was confirmed through the survey as all the respondents stated to have found water available when they needed it (Cell "A179" in tab "Analysis" within "Usage Survey 2021"). Thus demonstrating that project Boreholes have adequate capacity to cover user needs.

Based on the above-described monitoring results it can be concluded that the project water systems are principally used only for drinking purposes. In consequence, the approach of basing the water system capacity on the target population's drinking water needs (which have been measured through WCFT) is to be considered justifiable. Similarly, the value of 10 l/p/d is to be considered appropriate as it is conservative with respect to the WCFT results; 8.6 liters/person/day obtained from the WCFT carried out 2021 i.e. during this monitoring period. This value is also confirmed by the WCFT carried out in 2020 where the mean water consumption demand of the project boreholes was 8.8 liters/person/day.

Table 1. Results from the combined project/usage survey made 2021 with 110 persons (Cells E96 to I107 in tab "Analysis" within "Usage Survey 2021")

End-users using each water source for non-drinking purposes

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Water sources	Daily basis		Weekly basis	
	Dur in g rainy seaso n	During dry season	During rainy season	During dry season
Piped water				
Water point	2			
Protected well		1	2	3
Unprotected well	108	109	106	107
Unprotected spring			2	
Rainwater collection				
Delivered water				
Packaged water				
River/stream				

Here below a further description on the 30,000 l/d capacity estimation.

According to the approved VPA-DD, the capacity calculation is based on:

- Capacity of water pump (2,500 litres/hour)
- Capacity of the battery (extra 4,5 hours of functionality in absence of sunlight)
- Number of water taps (9 taps per water system)
- Flow rate of each water tap (0.23 l/s)
- Peak demand simulation (with the taps running for about 4/5 hours a day, the well can meet the users' needs)
- Capacity of the tank (3,000 litres of storage)

The technical specifications for all the solar-powered systems are the same and the number of users is always around 3,000 or less as reported in the table below. For this reason, the total water demand of 30,000 l/d (3,000 l* 10 lpd) reported in the capacity simulation spreadsheet is an indicative value for explanatory purposes. The value of 10 l/p/d can be considered appropriate as the result of the WCFT is of 8.6 liters/person/day.

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Borehole ID (i.e. name of the village)	Total number of people obtaining water
GS7567	
Anketrake Andranogadra	3,010
Ankatsaky	2,996
GS7566	
Belemboky Androvakely	2,989
Andranomena	3,024
GS10657	
Ankilimarovahatse	2,993
Antanamikodoy	3,018
GS10658	
Antobe	2,085
Ankoronga Angara	3,014
GS10659	
Miary Ville	3,012
Miary Ankoronga	2,994
GS10783	
Mandrosoa	2,358
Mandrosoa Antaikoaki	2,254
Ankotsahobihia	2,171
GS10784	
Maromiandra	3,083
Maromiandra Antevamena	2,981

B. As a result of these manufacturer's specifications, each borehole can work up to 14.5 hours per day.

(10h sun lights hours (the shortest day in 2020 has 10h 42min of daylight.

<https://weatherspark.com/y/102576/Average-Weather-in-Toliara-Madagascar-Year-Round> and 4.5 hours of battery storage) battery can discharge up to 80%, but we assume 50 %).

Each solar water system is equipped with technology that allows the borehole to work up to a maximum of 14.5 hours per day. However, households' water needs are already reached after 5/4 hours of system activity per day.

The above assumption of 12 operational hours is incorrect as it refers to "GS7566_Ex ante ER calculations_ver04" which is not the last version of the ex-ante calculation. Please refer to "GS7566_Ex ante ER calculations_ver05" approved during the design review.

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The analysis of social, economic, and environmental impacts had been carried out in line with GS4GG Safeguarding Principles and Requirements as described in Section D of the approved VPA-DD. More precisely the Environmental & Ecological Safeguarding Principles point 2: “the water systems are using groundwater but they are not affecting negatively natural or pre-existing patterns of watercourses, groundwater, and/or watersheds”.

The construction of the boreholes was carried out by Zanaray Enterprise, which signed a work program (Annex 1) and also a performance contract for each water system (Annex 2).

Each construction is preceded by a geological study of the various soil layers in order to determine the suitability of the excavation site. The Ministry of Water approved all the excavations before the works began.

Please refer to the translation from Annex 1:

**DESCRIPTIONS OF CONSTRUCTION WORKS OF WATER POINTS WITH PUMP
INSTALLATION**

SOLAR AND WATER TANK

1. SURVEY AND IMPLEMENTATION

Survey to determine the nature of different geological layers information as well as the quality and the amount of water at each depth.

Elaboration of a technical sheet (Kitting).

Installation of the site and start of the construction work.

The suggested capped values do not reflect the actual service provided by the water systems to the communities. The usage rate has been monitored through a specific usage survey not only aimed at Usage Rate calculations but also with additional questions related to baseline water sources still present in the project area. This survey has been pre-approved by Sustaincert as reported in Annex 3). During this monitoring period, all the users declared to use on daily basis the water point both during the rainy season and dry season for drinking purposes. Only one respondent stated to use both the water point and packaged water for drinking purposes. For conservativeness, this user has been considered a consumer of packaged water only.

Table 2. Results from the combined project/usage survey made 2021 with 110 persons (Cells E82 to I93 in tab “Analysis” within “Usage Survey 2021”)

End-users using each water source for <u>drinking</u> purposes (Usage Rate of Project Technology)				
Water sources	Daily basis		Weekly basis	
	During rainy season	During dry season	During rainy season	During dry season
Piped water				
Water point	110	110	110	110
Protected well				

Unprotected well				
Unprotected spring				
Rainwater collection				
Delivered water				
Packaged water	1			
River/stream				

The applied usage rate of 90% is in line with the latest “Methodology for Emission Reduction from Safe Drinking Water Supply” since the survey has been performed through in-person interviews according to Option 1 of the parameter Up,y (page 37 of the methodology).

Regarding the operational days, a cautional approach has already been taken as the value of technology days has been capped at 347 days as per GS recommendations in line with page 36 of the latest “Methodology for Emission Reduction from Safe Drinking Water Supply”.

Annex 1. Work program signed By Zanaray Enterprise

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ENTREPRISE ZANARAY

Construction de bâtiments, puits et forages manuelles, ouvrage d'art.

Tél : 034 48 832 57, 032 89 120 07

Mail : mbelosoniose@gmail.com

BETANIA TOLARA,

DESCRIPTIFS DES TRAVAUX DE CONSTRUCTION DES POINTS D'EAUX AVEC INSTALLATION DE POMPE SOLAIRE ET RESERVOIR D'EAU

1- SONDAGE ET IMPLANTATION

Sondage pour déterminer la nature de différentes couches géologiques en formation ainsi que la qualité et la quantité de l'eau à chaque profondeur.

Elaboration d'une fiche technique (Kitting).

Installation du chantier et début du travail de construction.

2- TRAVAIL DE FONCAGE

Fouille jusqu'à l'obtention de source d'eau potable au niveau d'une nappe d'eau.

3- EQUIPEMENT PUIITS ET DEVELOPPEMENT

Fourniture et pose des buses, des dalles (une perforée pour permettre à l'eau de remplir le puits),

Fourniture et pose des graviers filtrants au fond et tout autour du puits pour filtrer les sables et les particules organiques contenues dans la source,

Evacuation des eaux contenant dans le puits à l'aide d'un groupe électrogène et de la pompe solaire immergée pour purifier l'eau.

4- FONDATION ET AIRE D'ASSAINISSEMENT

Fouille pour fondation du support du réservoir et mure de sécurité,

Coulage de béton de propriété,

Fourniture et pose fer semelle à la base de la fondation, permettant de supporter les charges,

Coulage béton semelle avec fer poteau d'attente,

Pose moellon pour fondation,

Pose chaînage bas pour affermir la fondation et supporter les charges,

Fourniture et coulage de béton de formes pour consolidation de la fondation,

5- TRAVAUX DE CONSTRUCTION DU SUPPORT DE RESERVOIR

Fourniture de parpaings de 15 et élévation mure qui assure la protection du point d'eau,

Fourniture et pose coffrage destiné à couler le support du réservoir d'eau,

Coulage béton du poteau du support de réservoir avec dalle supérieure sur laquelle sera posé le réservoir,

Fourniture de parpaings de 15 et construction de regard pour évacuation des eaux usées 0.60m x 0.60m x 0.70m avec dalle de couvercle mobile,

Finition murale et poteau du support de réservoir d'eau : enduit,

Finition d'aire d'assainissement : dallage,

6- TRAVAUX D'INSTALLATION DE RESERVOIR

Fourniture et pose de réservoir d'eau au-dessus de la dalle supérieure,

7- TRAVAUX D'INSTALLATION DES KITS SOLAIRES

Fournitures des kits solaires (panneau solaires, batteries solaires, pompes solaires, convertisseur, régulateur, lampe LED, prises, interrupteur, fils électriques et autres accessoires)

Pose de pompe solaire qui permet de remonter l'eau du puits vers le réservoir,



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Pose de panneau solaire qui générera de l'énergie à l'aide de la lumière du soleil en vue d'alimenter toute l'installation électrique,
 Pose des batteries qui accumulera toutes les charges électriques générées par le panneau solaire à titre de réserve pour la nuit et les temps brumeux,
 Pose de convertisseur pour convertir l'énergie électrique de 12V à 220V ou 240V,
 Pose de régulateur pour contrôler les charges retenue dans la batterie solaire,
 Installation de lampes pour éclairer le point d'eau la nuit contre les voleurs,
 Pose de l'interrupteur pour allumer et éteindre les lampes et d'une prise pour brancher quelconque appareil, si besoin.

8- TRAVAUX D'INSTALLATION DE PLOMBERIE

Fourniture et pose tuyau pvc 0.40 et accessoires pour recharger le réservoir d'eau et tuyau pvc 0.17 pour la borne fontaine,
 Fourniture et pose robinet d'arrêt et robinet de la borne fontaine laquelle l'eau sera recueilli.
 Fourniture et pose de tuyau pvc pour vidange du réservoir à chaque nettoyage,
 Fourniture et pose tuyau pvc 0.40 pour évacuation des eaux sales,
 Essaie de pompage et de débit d'eau et vérification des installations plomberies et électriques accompagnée de rectification,

9- TRAVAUX DE CONSTRUCTION DE BARRIERE DE SECURITE

Fourniture et pose de porte métallique à l'entrée de la barrière de sécurité,

10- TRAVAUX DE PEINTURE ET DE FINITION

Fourniture et pose de toiture en ferme métallique accompagnée du cadre métallique à laquelle le panneau solaire sera attaché avec sécurité,
 Fourniture de peintures (à l'eau, à l'huile) pour les travaux de bâtiment et peinture antirouille pour les charpenteries métalliques,

11- TRAVAUX D'ECRITURE SUR UNE PLAQUE D'IDENTIFICATION

Fourniture de peinture et travaux d'écriture sur une plaque d'identification sur chaque point d'eau.



Handwritten signature of MBELOSON José

MBELOSON José

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Annex 2 Example of start date contract

CONTRAT DE PRESTATION

OBJET	TRAVAUX DE CONSTRUCTION DE POINTS D'EAU
ENTREPRISE	ZANARAY
MAITRE D'OUVRAGE	Mbeloson José
TITULAIRE	Programme AID4MADA Toliara By Mondobimbi Veneto
MONTANT DU CONTRAT	114.999.200 Ariary
DELAIS D'EXECUTION	90 Jours.
DATE DE SIGNATURE	15 Mai 2019
RÉFÉRENCE	N° 002/AID4MD/2019

CONTRAT

Entre :

Le Programme **AID4MADA** Toliara, ayant son siège social au **Logement 528 GA1, Andaboly**, représenté par **Madame NICOLE ZENGIARO**, née à **Vicenza le 23-10-1977** et résident à **Via Giovanni Battista 19/A-36057 Arcugnano (VI)**, agissant en qualité de présidente de **l'ONG MONDOBIMBI VENETO ONLUS**.

Désigné propriétaire,
D'une part,

Et

Monsieur **MBELOSON José**, titulaire de la carte d'Identité Nationale Malgache n° **501/091/001/923** délivré le **07 Juin 1990** à **Toliara**, Directeur de l'entreprise **ZANARAY**, spécialiste en travaux de construction d'entretien et de réhabilitation pour tout travaux, INSTAT n° **41002 51 2005 0 00078**, NIF : **4003352754**. Désigné ici par le Titulaire d'autre part,

Il a été arrêté et convenu ce qui suit :

ARTICLE 1 : OBJET DU CONTRAT

Le présent contrat a pour objet l'exécution travaux de construction de **huit (08)** points d'eau munis de support de réservoir d'eau et des équipements solaires pour remplir le réservoir, dans ces communes rurales.

COMMUNES	VILLAGES	NOMBRE DE POINTS D'EAU
MIARY	Miary Ville et Ambohibola	1
	Ankoronga - Belembohy Tanindraza	1
BETSINJAKY	Motombe Est - Ankilimarovahatse	1
	Antanimikodoy	1
	Andranomena	1
	Ankaiaasy	1
	Ankoronga - Angara	1
MITSINJO BETANIMENA	Belembohy Androvakely	1

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ARTICLE 2 : FORME DU CONTRAT

Le présent contrat est un contrat à prix globale, englobant tout dans le cout total :

- o L'acquisition et la fourniture des matériels de construction,
- o Les frais de prestation,
- o Les frais de transport des matériaux, frais de communication et de déplacement des personnels,
- o Location des machines et outils nécessaire à la réalisation du travail, si besoin et carburant
- o Nourritures des personnels et leur couverture sociale, médicale et assurance....

ARTICLE 3 : DOCUMENTS CONTRACTUELS

Le Titulaire s'engage à exécuter le présent contrat conformément aux dispositions des documents énumérés ci-après auxquels il reconnaît un caractère contractuel :

- o Le présent contrat,
- o Annexe 1 : Descriptif des travaux,
- o Annexe 2 : Devis Estimatif (DE)
- o Annexe 3 : Les plans autorisés officiellement,
- o Annexe 4 : Planning d'avancement des travaux et le calendrier de paiement,

ARTICLE 4 : CONSISTANCE DES TRAVAUX,

Les travaux qui doivent être exécuté par le Titulaire dans les conditions prévue par le présent contrat sont:

N°	DESIGNATION	UNITE	QUANT.
A	SONDAGE ET IMPLANTATION	Unité	8
B	TRAVAIL DE FONCAGE	Unité	8
C	EQUIPEMENT PUITs 1-Fourniture et pose buses, gravier filtrant 1 sacs, 2 Dalles de diamètre 1 m	Unité	8
D	FONDATION ET AIRE D'ASSAINISSEMENT (3m x 3m x 1m) 1- Fondation (2m x 2m) 2- Coulage béton fondation (2m x 0.70 x 4) 3- Aire d'assainissement (2m x 2m) 4- Développement et essaie de débit et chloration	Unité Unité Unité	8 8 8
E	TRAVAUX DE CONSTRUCTION DU SUPPORT DE RESERVOIR 1- Support de réservoir d'eau, avec dalles 2- Confection de support des panneaux solaires (1,5 m x 1m) 3- Confection de dalle avec trappe pour couvercle de diamètre 1m 4- Construction de toiture pour protection de réservoir	Unité Unité Unité Unité	8 8 8 8
F	TRAVAUX D'INSTALLATION DE RESERVOIR 1- Fourniture et installation de réservoir plastique 2.5 m3 2- Fourniture et installation de skimmer ou diffuseur pour chlore	Unité Unité	8 8
G	TRAVAUX D'INSTALLATION DES KITS SOLAIRES 1- Fourniture et installation panneau solaire de 12 V 200W. 2- Fourniture et installation batterie solaire 12V 150Ah, régulateur et convertisseur de même référence, 3- Fourniture et installation de 24 lampes LED, 16 prises, 16 interrupteur, 4- Fourniture de flotteur électrique, 5- Fourniture et installation de pompe solaire LSPI-12-20-2.5-200-1, 2500L/h, 12 V, 20 A, 200Wt	Unité Unité Unité Unité Unité	8 8 16 8
H	TRAVAUX D'INSTALLATION PLOMBERIE 1- Fourniture et installation des équipements de plomberie 2- Fourniture et installation des vannes d'arrêts, 3- Fourniture et installation de 9 robinets pour chaque point d'eau et autres accessoires de plomberie	Unité Unité Unité	8 8 72
I	TRAVAUX DE CONSTRUCTION DE BARRIERE DE SECURITE 1- Travaux d'élévation mure de (2m x 2m x 4.5m) 2- Fourniture et pose porte métallique (0.90m x 2.10 m)	Unité Unité	8 8
J	TRAVAUX DE PEINTURE ET FINITION 1- Finition dallage et pose des couvercles diam 1m 2- Travaux de peinture	Unité Unité	8 8

Annex 3 Survey questionnaire Approval mail

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Gianluca Persia

From: Richard iliffe <richard.iliffe@sustain-cert.com>
Sent: 24 February 2021 15:39
To: Gianluca Persia
Cc: anurag juyal; Ulla Mauno
Subject: Re: Example of Monitoring Survey & List of VPAs to be monitored (2021)

Hi Gianluca – looks fine to me, if you can add the definition in your MR for transparency that would be great, many thanks!

Richard

From: Gianluca Persia <gianluca.persia@carbonsink.it>
Date: Friday, 19 February 2021 at 13:34
To: Richard iliffe <richard.iliffe@sustain-cert.com>
Cc: anurag juyal <anurag.juyal@sustain-cert.com>, Ulla Mauno <ulla.mauno@carbonsink.it>
Subject: RE: Example of Monitoring Survey & List of VPAs to be monitored (2021)

Hi Richard,

In our previous ER calculations formats we used to calculate the Usage Rate as the percentage of people declaring to using project technology i.e. responding “Yes” to question “Do you use the project borehole”?
 We acknowledge that references of Calculations parameters were not clearly tracked throughout the Spreadsheet Calculations. We will take actions to address this issue at time of next verification.

We’d like to discuss the most suitable option for Usage Rate calculations in order to facilitate both our and your interpretation of survey results, but also in order to make data collection efficient.
 The following is the latest format you’ve been reviewing:

USAGE RATE OF PROJECT TECHNOLOGY			
1. How often do you use each of the following water sources, in each season?		Rainy season	Dry Season
	a. Piped water	daily/weekly/never	daily/weekly/never
	b. Water point	daily/weekly/never	daily/weekly/never
	c. Protected well	daily/weekly/never	daily/weekly/never
	d. Unprotected well	daily/weekly/never	daily/weekly/never
	e. Protected spring	daily/weekly/never	daily/weekly/never
	f. Unprotected spring	daily/weekly/never	daily/weekly/never
	g. Rainwater collection	daily/weekly/never	daily/weekly/never
	h. Delivered water	daily/weekly/never	daily/weekly/never
	i. Packaged water	daily/weekly/never	daily/weekly/never
	j. River/stream	daily/weekly/never	daily/weekly/never
	k. Other (specify)	daily/weekly/never	daily/weekly/never
2. Please list the water sources you use for the following purposes in each season (refer to answers in		Rainy season	Dry Season
	1. Drinking	a/b/c/d/e/f/g/h/i/j	a/b/c/d/e/f/g/h/i/j
	2. Basic Personal Hygiene	a/b/c/d/e/f/g/h/i/j	a/b/c/d/e/f/g/h/i/j
	3. Food preparation	a/b/c/d/e/f/g/h/i/j	a/b/c/d/e/f/g/h/i/j
	4. Water for crops	a/b/c/d/e/f/g/h/i/j	a/b/c/d/e/f/g/h/i/j

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	5. Water for animals	a/b/c/d/e/f/g/h/i/j	a/b/c/d/e/f/g/h/i/j
	6. Washing clothes	a/b/c/d/e/f/g/h/i/j	a/b/c/d/e/f/g/h/i/j
	7. Washing utensils	a/b/c/d/e/f/g/h/i/j	a/b/c/d/e/f/g/h/i/j
	8. Other (specify)	a/b/c/d/e/f/g/h/i/j	a/b/c/d/e/f/g/h/i/j
3. Please provide the names of all water points you use	1. I don't use any water point at all 2. Water point #_, #_, #_ 3. Other (specify)		

Annex 4

GS7566_VPA-DD_ver08_Clean

B.6.3. Data and parameters fixed ex ante for monitoring contribution to each of the three SDGs

Gold Standard

Relevant SDG Indicator	SDG 13 / Climate Change Mitigation measured as reduced rCO ₂ e
Data/parameter	Specific fuel consumption
Unit	Kg/Litre
Description	Quantity of wood fuel or fossil fuel required to boil 1 litre of water using technologies representatives of baseline scenario b during year y
Source of data	BAMG report
Value(s) applied	Default values used for ex-ante calculations: 0.40 for wood 0.10 for charcoal (In compliance with BAMG report, these values may be updated in the first verification up to cap values due to a BWBT carried out in the field. Hence, the resulted value will be used in all crediting period)
Choice of data or Measurement methods and procedures	Default values from BAMG report. Eventually, the values may be updated up the cap values according to a BWBT carried in the field. Hence, the resulted value will be used for all verifications.
Purpose of data	Estimation of CO ₂ e emission reductions
Additional comment	Transparent data analysis and reporting. Baseline only; Should be updated if ongoing monitoring surveys show that baseline water boiling technologies change over time. The values of specific fuel consumption will be used of calculating W _{bio} . For example, for ex-ante W _{bio} is calculated as follows: $W_{bio} = \text{household using charcoal (\%)} * \text{charcoal consumption converted as woody biomass consumption (Kg/Litre)} + \text{households using wood (\%)} * \text{woody biomass consumption (Kg/Litre)}$ $= 0.727 * (0.1 * 6) \text{ Kg/Litre} + 0.274 * 0.4 \text{ Kg/Litre}$ $= 0.0005 \text{ Tons/Litre}$

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B.7.1. Data and parameters to be monitored**Gold Standard[®]**

Relevant SDG Indicator	SDG 13 / Climate Change Mitigation measured as reduced tCO ₂ e
Data/parameter	Percentage of user per used fuel
Unit	%
Description	Percentage of user that are using firewood or charcoal
Source of data	Monitoring survey
Value(s) applied	Ex ante: 0.73 charcoal; 0.23 firewood To be updated ex-post
Choice of data or Measurement methods and procedures	This parameter will be used to calculate $W_{b,y}$ and $W_{p,y}$ Ex ante assumption is that the same water boiling technologies are prevalent in the baseline and project scenarios and therefore $W_{b,y}$ and $W_{p,y}$ are equal.
Purpose of data	Estimation of CO ₂ e emission reductions
Additional comment	Transparent data analysis and reporting. The value will be updated during monitoring activities.

From the previous verification "Monitoring-Report_ver6_clean"

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

Data/parameter:	Specific fuel consumption
Unit	Kg/Litre
Description	Quantity of wood fuel or fossil fuel required to boil 1 litre of water using technologies representatives of baseline scenario b during year y
Source of data	BAMG report BWBT ¹³
Value(s) applied	0.40 for wood (default value, BAMG report) 0.125 for charcoal (capped value, BWBT)

¹² See the document "GS8752_GES111 Baseline Survey Report_2018", uploaded to SC application
¹³ BWBT Madagascar 2021

Choice of data or measurement methods and procedures	Default value for wood (from BAMG report) A separate baseline water boiling test (BWBT) for charcoal fuel consumption has been conducted in Spring 2021 in line the indications of the applied methodology and the BAMG report. The value obtained from the field measurement has been selected to be conservatively capped at 0.125 Kg/litre
Purpose of data	Estimation of CO ₂ e emission reductions
Additional comments	

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From the previous verification “Monitoring-
Report_ver6_clean”

D.2 Data and parameters monitored

Data/parameter	Percentage of users per used fuel
Unit	%
Description	Percentage of user that are using firewood or charcoal
Source of data	Monitoring survey
Value(s) applied	0.94 charcoal; 0.06 firewood
Measurement methods and procedures	This parameter is used to calculate $W_{b,y}$ and $W_{p,y}$

¹⁵ Please refer to the relative spreadsheet in the Ex-post calculation documents uploaded to SC Application. “GS6752 - Ex post calculation_ver02”, “GS7311 - Ex post calculation_ver02”, “GS7566 - Ex post calculation_ver02”, “GS10657 - Ex post calculation_ver02”, “GS10658 - Ex post calculation_ver02” and “GS10659 - Ex post calculation_ver02”

¹⁶ The number of operation days (“Technology days”) has been monitored for each supply systems, please refer to “maintenance plan” uploaded to SC Application. To be conservative the value of technology days has been capped at 347 days as per GS recommendations.

Gold Standard

Climate Security and Sustainable Development

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TEMPLATE- Monitoring Report

Monitoring frequency	Annually
QA/QC procedures:	Transparent data analysis and reporting
Purpose of data:	Estimation of CO ₂ e emission reductions
Additional comments:	

From the previous verification “Monitoring-
Report_ver6_clean”

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

Data/Parameter	Value obtained in this monitoring period	Value obtained last monitoring period
$N_{p,y}$	GS6752: 461,700 GS7311: 369,360	GS6752: 1,534,250 GS7311: 1,227,400
Percentage of users per used fuel	Charcoal: 0.96 Firewood: 0.06	Charcoal: 0.73 Firewood: 0.27

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We proceed with a survey made with external entity – the local University and share necessary details to confirm the capacity/water demand issue and number of beneficiaries.
Review II: The finding is closed based on the response to CAR 16. Comment/Request is closed

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