# GS VERIFICATION AND CERTIFICATION REPORT

## - 3RD PERIODIC VERIFICATION

## PEOPLE'S REPUBLIC OF BANGLADESH

## GHG EMISSION REDUCTION THROUGH USE OF BONDHU CHULA (IMPROVED COOK STOVES) IN BANGLADESH

## POA GS REF. NO.: GS 3112

**Report No: 800345209 -22/034**

**Date: 01/10/2022**

TÜV NORD CERT GmbH
JI/CDM Certification Program
Am TÜV 1
45307 Essen, Germany
Phone: +49-201-825-3335
Fax: +49-201-825-2139
www.tuev-nord.de

| **Verification Report:** | ***Report No.*** | | ***Rev. No.*** | ***Date of 1st issue:*** | ***Date of this rev.*** |
|---|---|---|---|---|---|
| | 8003045209 -22/034 | | 2.0 | 26/05/2022 | 01/10/2022 |
| **Programme of Activities:** | ***PoA Title:*** | | | ***Project design certification*** | ***GS No.:*** |
| | GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | | 01/04/2014 | GS 3112 |
| | **PoA Scale** | | | ***Verification No.:*** | |
| | ☐ Large Scale | ☒ Small Scale | | 3rd periodic verification | |
| | ***Duration of the PoA:*** | | | ***From:*** | ***To:*** |
| | *20 years 00 months* | | | 01/04/2014 | 31/03/2034 |
| | ***Crediting period:*** | | | ***From:*** | ***To:*** |
| | ☒ *Renewable (5y)* ☐ *Fixed (10y)* | | | 01/04/2014 | 31/03/2034 |
| | ***VPA title:*** | | | ***Crediting Period Start Date*** | ***GS No.:*** |
| | VPA 01 | VPA 1 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | 01/04/2014 | GS 3544 |
| | VPA 02 | VPA 2 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | 05/05/2014 | GS 3482 |
| | VPA 04 | VPA 4 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | 15/09/2014 | GS 3619 |
| | VPA 05 | VPA 5 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | 15/09/2014 | GS 3620 |
| | VPA 06 | VPA 6 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | 28/10/2014 | GS 3618 |
| | VPA 07 | VPA 7 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | 01/08/2014 | GS 4372 |
| | VPA 08 | VPA 8 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | 15/08/2014 | GS 4373 |
| | VPA 09 | VPA 9 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | 27/08/2014 | GS 4374 |
| | VPA 10 | VPA 10 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | 15/09/2014 | GS 4375 |
| | VPA 11 | VPA 11 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | 27/09/2014 | GS 4376 |
| | VPA 12 | VPA 12 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | | 08/10/2014 | GS 4377 |

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|---|---|---|---|---|
| | VPA 13 | VPA 13 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 21/10/2014 | GS 4378 |
| | VPA 14 | VPA 14 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 02/11/2014 | GS 4379 |
| | VPA 15 | VPA 15 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 15/11/2014 | GS 4380 |
| | VPA 16 | VPA 16 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 26/11/2014 | GS 4381 |
| | VPA 17 | VPA 17 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 04/12/2014 | GS 4382 |
| | VPA 18 | VPA 18 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 15/12/2014 | GS 4384 |
| | VPA 19 | VPA 19 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 19/12/2014 | GS 4383 |
| | VPA 20 | VPA 20 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 28/12/2014 | GS 4385 |
| | VPA 21 | VPA 21 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 07/01/2015 | GS 4386 |
| | VPA 22 | VPA 22 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 15/01/2015 | GS 4387 |
| | VPA 23 | VPA 23 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 24/01/2015 | GS 4388 |
| | VPA 24 | VPA 24 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 14/02/2015 | GS 4389 |
| | VPA 25 | VPA 25 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 21/02/2015 | GS 4390 |
| | VPA 26 | VPA 26 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 21/02/2015 | GS 4391 |
| | VPA 27 | VPA 27 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 15/03/2015 | GS 4392 |
| | VPA 28 | VPA 28 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 15/03/2015 | GS 4393 |

| | | | | |
|---|---|---|---|---|
| | VPA 29 | VPA 29 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 24/03/2015 | GS 4394 |
| | VPA 30 | VPA 30 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 15/04/2015 | GS 4395 |
| | VPA 31 | VPA 31 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 26/04/2015 | GS 4396 |
| | VPA 32 | VPA 32 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 30/04/2015 | GS 4397 |
| | VPA 33 | VPA 33 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 23/05/2015 | GS 4398 |
| | VPA 34 | VPA 34 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 30/05/2015 | GS 4399 |
| | VPA 35 | VPA 35 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 30/05/2015 | GS 4400 |
| | VPA 36 | VPA 36 - GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh | 23/06/2015 | GS 4401 |

| | | | | |
|---|---|---|---|---|
| **Project Participant(s):** | ***Non-Annex 1 country:*** | | ***Annex 1 country:*** | |
| | People's Republic of Bangladesh | | - | |
| | ***PP from non-Annex 1 country:*** | | ***PP from Annex 1 country:*** | |
| | Bangladesh Bondhu Foundation | | - | |
| **Applied methodology/ies:** | ***Title:*** | | ***No.:*** | ***Scope(s) / TA(s)*** |
| | The Gold Standard Simplified Methodology for Efficient Cookstoves | | version 1.0 | 3 / 3.1 |
| **Monitoring period and monitoring report[1]** | ***Monitoring period (MP):*** | | ***Monitoring Report (final):*** | |
| | **VPA 1-2 and 4-6[2]**<br>MS1 - VPA 01-02 and 04-06: 2016-02-22 to 2017-02-28<br>MS2 – VPA 01-02 and 04-06: 2017-03-01 to 2018-02-28<br>**VPA 7-36**<br>MS1 – VPA 07-36: 2016-08-01 to 2017-02-28<br>MS 2 - VPA 07-36: 2017-03-01 to 2018-02-28 | | 2022-09-26 v 5.0 | |
| **Verification team:** | ***Verification Team:*** | ***Technical review:*** | | ***Final approval:*** |
| | Prakash Kumar Mishra – TL/T | David Lubanga, Christina Stöhr | | Stefan Winter |
| **Key dates of verification:** | ***Publication of the workplan:*** | ***Remote audit*** | | |
| | 2022-04-04 | 2022-04-05 | | 2022-04-06 |

[1] The claim of the ER's are restricted to 02 years inline with maximum allowable period to be verified remotely, refer CL 01 of this report

[2] VPA3 is not covered in this monitoring period and verification

<table>
<tr><td>Summary of Verification opinion</td><td colspan="3">Bangladesh Bondhu Foundation has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 3rd periodic verification of first crediting period of the VPA titled: “GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh”, with regard to the relevant GS requirements for project activities.<br><br>As a result of this verification, the verifier confirms that:<br>☒ all operations of the project are implemented and installed as planned and described in the validated project design document,<br>☒ the monitoring plan is in accordance with the applied approved GS methodology,<br>☒ the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately,<br>☒ the monitoring system is in place and functional. The project has generated GHG emission reductions, and<br>☒ the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner.<br>☒ the project has contributed to sustainable development.<br><br>TÜV NORD JI/CDM CP herewith confirms that the project has achieved emission reductions in the above-mentioned reporting period as listed below (verified amount).</td></tr>
<tr><td>Emission reductions: [$tCO_2e$]</td><td>Total verified amount[3]<br><table><tr><td>MS#1</td><td>128,393</td></tr><tr><td>MS#2</td><td>184,321</td></tr><tr><td>Total</td><td>312,714</td></tr></table></td><td colspan="2">As per VPA-DD[4]<br><table><tr><td colspan="2">MS#1 and MS#2</td></tr><tr><td>Total</td><td>542,572[5]</td></tr></table></td></tr>
<tr><td>Document information:</td><td>Filename:<br>22-034_FVerR-GSPoA3112_26052022_wist (2).docx</td><td colspan="2">No. of pages:<br>96</td></tr>
</table>

[3] For VPA wise breakup, please refer section 5.14 of this FVR
[4] For VPA wise breakup, please refer section 5.14 of this FVR
[5] Value adjusted inline with the 02 years, refer CL 01

## Abbreviations:

| | |
|---|---|
| **BBF** | **Bangladesh Bondhu Foundation** |
| **CA** | **Corrective Action / Clarification Action** |
| **CAR** | **Corrective Action Request** |
| **CDM** | **Clean Development Mechanism** |
| **CER** | **Certified Emission Reduction** |
| **CL** | **Clarification Request** |
| **$CO_2$** | **Carbon dioxide** |
| **$CO_{2eq}$** | **Carbon dioxide equivalent** |
| **DVerR** | **Draft Verification Report** |
| **ER** | **Emission Reduction** |
| **FAR** | **Forward Action Request** |
| **GHG** | **Greenhouse gas(es)** |
| **MP** | **Monitoring Plan** |
| **MR** | **Monitoring Report** |
| **PA** | **Project Activity** |
| **PoA-DD** | **Programme of Activities Design Document** |
| **PP** | **Project Participant** |
| **QA/QC** | **Quality Assurance / Quality Control** |
| **UNFCCC** | **United Nations Framework Convention on Climate Change** |
| **VPA-DD** | **Component Project Activity Design Document** |
| **VVS** | **Validation and Verification Standard** |

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# 1. INTRODUCTION

Bangladesh Bondhu Foundation has commissioned the TÜV NORD JI/CDM Certification Program (CP) to carry out the 3rd periodic verification of the POA titled:

**"GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh"**

under corresponding Programme of Activities ID GS 3112 with regard to the relevant requirements for GS project activities. The verifiers have reviewed the implementation of the monitoring plan(s) (MP) as described in the registered PoA-DD and VPA-DD.

GHG data for this monitoring period was verified in detailed manner applying the set of requirements, audit practices and principles as required under the GS regulations and the applied methodology.

Sustainable Development Indicators for this monitoring period were verified in detailed manner as required under the GS requirements/GSR/, relevant GS Annexes, and GS4GG Requirements/GS4GG TA/.

This report summarizes the findings and conclusions of this 3rd periodic verification of the above-mentioned GS project activity.

## Objective

The objective of the verification is the review and ex-post determination by an independent entity of the GHG emission reductions. It includes the verification of the:

- implementation and operation of the project activity as given in the respective VPA-DD,
- compliance of the actual monitoring system and procedures with the provisions of the monitoring plan as a part of registered VPA-DD, GS SDG monitoring matrix and the applied approved monitoring methodology,
- data given in the monitoring report by checking the monitoring records, the emissions reduction calculation and supporting evidence,
- accuracy of the monitoring equipment,
- quality of evidence,
- significance of reporting risks and risks of material misstatements.

## Scope

The verification of VPA-DD is based on the validated Programme of Activities design document/GSPoA-DD/, the validated GS PoA / VPA Documents, the monitoring report(s)/MR/, emission reduction calculation spreadsheet/XLS/, GS4GG Requirements/GS4GG TA/, supporting documents made available to the verifier and information collected through performing interviews and during the remote assessments. Furthermore, publicly available information was considered as far as available and required.

The verification is carried out on the basis of the following requirements, applicable for this Programme of Activities:

- Article 12 of the Kyoto Protocol /KP/,
- guidelines for the implementation of Article 12 of the Kyoto Protocol as presented in the Marrakech Accords under decision 3/CMP.1 /MA/, and subsequent decisions made by the Executive Board and COP/MOP,
- other relevant rules, including the host country legislation,
- CDM Validation and Verification Standard /VVS/,
- Monitoring plan as given in the registered PoA-DD and VPA-DD(s) /GSPoA-DD/
- Approved GS Methodology/GSM/
- GS4GG Requirements/GS4GG TA/

# 2. GHG PROJECT DESCRIPTION

## Technical Project Description of the Programme of Activities

The purpose of PoA is dissemination of efficient, improved cooking stoves (ICS) in Bangladesh. The PoA is already registered under GS Principles and requirements, applied methodology and other relevant rules and requirements established for GS4GG PoA.

The VPAs under the PoA promote installation of ICS (based on service levels):

• Domestic ICS

The replacement of traditional stoves by ICS improves heat transfer, hence reducing the total amount of wood-fuel required for cooking and reducing amount of GHG emitted into the atmosphere. This VPAs included in this report use the same technology / measure.

The improvement in efficiency is achieved by properly adjusting the dimensions of the combustion chamber and ensuring effective air flow during cooking. In comparison to traditional stoves, the ICS provide a fuel savings of ~50% to cook the same amount of food.

## Technical Description of the Voluntary Project Activities (VPAs)

The Programme of Activities consists of VPA briefly as below:

GHG Emission Reduction through use of Bondhu Chula (Improved Cook Stoves) in Bangladesh – VPA No.01-02 and 04 to 36.

The technology implemented under this project is improved cookstoves.

**The key parameters of the project are given in Table 2-1.1:**

**Table 2-1.1:** Technical data of the VPA

| **Description (Technical specification)** | **Domestic** |
|---|---|
| Portable/Fixed | Fixed |
| Fuel grate present (yes/No) | Yes |
| Chimney present (Yes/No) | Yes |
| Fuel Type | Wood-fuel |
| Fabrication Material | Cement concrete |
| Design Operational Lifetime | More than 6 years |

## Project Location

The details of the VPA locations are given in Table 2-2:

**Table 2-2: VPA(s) Location**

| VPA No.: 1-36 | Project Location |
|---|---|
| Host Country | Bangladesh Small Scale |
| Region: | All across Bangladesh |
| Project location address: | All cities and towns in Bangladesh |
| Latitude / longitude of program provinces: | Bangladesh lies between 20° 34' to 26° 38' north latitude and between 88° 01' to 92° 41' east longitude |

## Project Verification History

Essential events since the registration of the PoA are presented in the following Table 2-3.

**Table 2-3:** Status of previous Monitoring Periods

| # | Item | Time | Status |
|---|---|---|---|
| i. | PoA validation (GS) based on Design Certification Review | 01/04/2014 | Registered |
| ii. | 1st Monitoring period | VPA 1 - 01/04/2014 - 30/04/2015<br>VPA 2 - 05/05/2014 - 30/04/2015<br>VPA 4 - 15/09/2014 - 30/04/2015<br>VPA 5 - 15/09/2014 - 30/04/2015<br>VPA 6 - 28/10/2014 - 30/04/2015<br>VPA 7 - 01/08/2014 - 31/07/2016<br>VPA 8 - 15/08/2014 - 31/07/2016<br>VPA 9 - 27/08/2014 - 31/07/2016<br>VPA 10 - 15/09/2014 - 31/07/2016<br>VPA 11 - 27/09/2014 - 31/07/2016<br>VPA 12 - 08/10/2014 - 31/07/2016<br>VPA 13 - 21/10/2014 - 31/07/2016<br>VPA 14 - 02/11/2014 - 31/07/2016<br>VPA 15 - 15/11/2014 - 31/07/2016<br>VPA 16 - 26/11/2014 - 31/07/2016 | Issued |

| # | Item | Time | Status |
|---|---|---|---|
| | | VPA 17 - 04/12/2014 - 31/07/2016<br>VPA 18 - 15/12/2014 - 31/07/2016<br>VPA 19 - 19/12/2014 - 31/07/2016<br>VPA 20 - 28/12/2014 - 31/07/2016<br>VPA 21 - 07/01/2015 - 31/07/2016<br>VPA 22 - 15/01/2015 - 31/07/2016<br>VPA 23 - 24/01/2015 - 31/07/2016<br>VPA 24 - 14/02/2015 - 31/07/2016<br>VPA 25 - 21/02/2015 - 31/07/2016<br>VPA 26 - 21/02/2015 - 31/07/2016<br>VPA 27 - 15/03/2015 - 31/07/2016<br>VPA 28 - 15/03/2015 - 31/07/2016<br>VPA 29 - 24/03/2015 - 31/07/2016<br>VPA 30 - 15/04/2015 - 31/07/2016<br>VPA 31 - 26/04/2015 - 31/07/2016<br>VPA 32 - 30/04/2015 - 31/07/2016<br>VPA 33 - 23/05/2015 - 31/07/2016<br>VPA 34 - 30/05/2015 - 31/07/2016<br>VPA 35 - 30/05/2015 - 31/07/2016<br>VPA 36 - 23/06/2015 - 31/07/2016 | |
| iii. | 2nd Monitoring period | VPA 1 - 01/05/2015 - 21/02/2016<br>VPA 2 - 01/05/2015 - 21/02/2016<br>VPA 4 - 01/05/2015 - 21/02/2016 | Issued |

| # | Item | Time | Status |
|---|---|---|---|
| | | VPA 5 - 01/05/2015 - 21/02/2016<br>VPA 6 - 01/05/2015 - 21/02/2016 | |
| iv. | 3rd Monitoring period | VPA 1 - 22/02/2016 - 28/02/2018<br>VPA 2 - 22/02/2016 - 28/02/2018<br>VPA 4 - 22/02/2016 - 28/02/2018<br>VPA 5 - 22/02/2016 - 28/02/2018<br>VPA 6 - 22/02/2016 - 28/02/2018<br>VPA 7 - 01/08/2016 - 28/02/2018<br>VPA 8 - 01/08/2016 - 28/02/2018<br>VPA 9 - 01/08/2016 - 28/02/2018<br>VPA 10 - 01/08/2016 - 28/02/2018<br>VPA 11 - 01/08/2016 - 28/02/2018<br>VPA 12 - 01/08/2016 - 28/02/2018<br>VPA 13 - 01/08/2016 - 28/02/2018<br>VPA 14 - 01/08/2016 - 28/02/2018<br>VPA 15 - 01/08/2016 - 28/02/2018<br>VPA 16 - 01/08/2016 - 28/02/2018<br>VPA 17 - 01/08/2016 - 28/02/2018<br>VPA 18 - 01/08/2016 - 28/02/2018<br>VPA 19 - 01/08/2016 - 28/02/2018<br>VPA 20 - 01/08/2016 - 28/02/2018<br>VPA 21 - 01/08/2016 - 28/02/2018<br>VPA 22 - 01/08/2016 - 28/02/2018 | Under issuance |

| # | Item | Time | Status |
|---|---|---|---|
| | | VPA 23 - 01/08/2016 - 28/02/2018<br>VPA 24 - 01/08/2016 - 28/02/2018<br>VPA 25 - 01/08/2016 - 28/02/2018<br>VPA 26 - 01/08/2016 - 28/02/2018<br>VPA 27 - 01/08/2016 - 28/02/2018<br>VPA 28 - 01/08/2016 - 28/02/2018<br>VPA 29 - 01/08/2016 - 28/02/2018<br>VPA 30 - 01/08/2016 - 28/02/2018<br>VPA 31 - 01/08/2016 - 28/02/2018<br>VPA 32 - 01/08/2016 - 28/02/2018<br>VPA 33 - 01/08/2016 - 28/02/2018<br>VPA 34 - 01/08/2016 - 28/02/2018<br>VPA 35 - 01/08/2016 - 28/02/2018<br>VPA 36 - 01/08/2016 - 28/02/2018 | |

An overview of all Post Registration Changes is given in the following table.

**Table 2-4:** Overview Post Registration Changes

| # | Changes on PoA-DD/VPA-DD | Applicable from – to / as of | MP | Type of post registration change [1)] | Description | Status[2)] / Date |
|---|---|---|---|---|---|---|
| | N.A. | | | | | |

1) IVPAiPoA : Inclusion of component project activities in programme of activities
TDfrMP : Temporary deviation from registered monitoring plan
TDfMM : Temporary deviation from the monitoring methodology
CrVPADD : Corrections to the registered VPA-DD
PCfrMP : Permanent changes from registered Monitoring Plan
PCfMM : Permanent changes from Monitoring Methodology
CoPD : Changes to the project design of a registered PoA, or generic or specific VPA

2) Approval (by Accreditation Body) or Acceptance (by DOE)

# 3. METHODOLOGY AND VERIFICATION SEQUENCE

## Verification Steps

The verification consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- A desk review of the carbon and SD Monitoring Reports /MR/ submitted by the client and additional supporting documents with the use of customized verification protocol /CPM/ according to the Validation and Verification Standards /VVS/
- Verification planning,
- On-Site assessment,
- Background investigation and follow-up interviews with personnel of the project developer and its contractors,
- Draft verification reporting
- Resolution of corrective actions (if any)
- Final verification reporting
- Technical review
- Final approval of the verification.

## Contract review

To assure that

- the project falls within the scopes for which accreditation is held,
- the necessary competences to carry out the verification can be provided,
- Impartiality issues are clear and in line with the CDM accreditation requirements

a contract review was carried out before the contract was signed.

## Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities a verification team, consisting of one team leader was appointed.

The list of involved personnel, the tasks assigned, and the qualification status are summarized in the Table 3-1 below.

**Table 3-1:** Involved Personnel

| | Name | Company | Function [1] | Qualification Status [2] | Scheme competence [3] | Technical competence [4] | Verification competence [5] | Host country Competence | On-site visit[6] |
|---|---|---|---|---|---|---|---|---|---|
| ☒ Mr. ☐ Ms. | Prakash Kumar Mishra | TN CERT GmbH | TL | SA | ☒ | 3.1 | ☒ | ☒ | ☒ |
| ☒ Mr. ☐ Ms. | Lubanga, David | - | TR | SA | ☒ | 3.1 | ☒ | ☐ | ☐ |
| ☒ Mr. ☐ Ms. | Winter, Stefan | TN CERT GmbH | FA[B)] | SA | ☒ | 3.1 | ☒ | ☐ | ☐ |

1) TL: Team Leader; TM: Team Member, TR: Technical review; OT: Observer-Team, OR: Observer-TR; FA: Final approval
2) GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert
3) GHG auditor status (at least Assessor)
4) As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, …)
5) In case of verification projects

A) Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE
B) No team member

All team members contributed to the review of documents, the assessment of the component project activities and to the preparation of this report under the leadership of the team leader.

Technical experts contributed to the assessment of special aspects of the project activity, e.g., technical or host country aspects.

Statements of competence for the above-mentioned team members are enclosed in annex 2 of this report.

All above stated auditors are Gold Standard approved auditors as per https://www.goldstandard.org/resources/approved-auditors.

## Verification Planning

In order to ensure a complete, transparent and timely execution of the verification task the team leader has planned the complete sequence of events necessary to arrive at a substantiated final verification opinion.

Various tools have been established in order to ensure an effective verification planning.

Risk analysis and detailed audit testing planning

For the identification of potential reporting risks and the necessary detailed audit testing procedures for residual risk areas table A-1 is used. The structure and content of this table is given in Table 3-2 below.

[6] Remote Audit was performed. Justification is furnished below

**Table 3-2:** Table A-1; Identification of verification risk areas

| ***Table A-1: GHG calculation procedures and management control testing / Detailed audit testing of residual risk areas and random testing*** | | | | |
|---|---|---|---|---|
| **Identification of potential reporting risk** | **Identification, assessment and testing of management controls** | **Areas of residual risks** | **Additional verification testing performed** | **Conclusions and Areas Requiring Improvement (including *Forward Action Requests*)** |
| *The following potential risks were identified and divided and structured according to the possible areas of occurrence.* | *The potential risks of raw data generation have been identified in the course of the monitoring system implementation.*<br>*The following measures were taken in order to minimize the corresponding risks.*<br>*The following measures are implemented:* | *Despite the measures implemented in order to reduce the occurrence probability the following residual risks remain and have to be addressed in the course of every verification.* | *The additional verification testing performed is described. Testing may include:*<br>- *Sample cross checking of manual transfers of data*<br>- *Recalculation*<br>- *Spreadsheet 'walk throughs' to check links and equations*<br>- *Inspection of calibration and maintenance records for key equipment*<br>- *Check sampling analysis results*<br>*Discussions with process engineers who have detailed knowledge of process uncertainty/error bands.* | *Having investigated the residual risks, the conclusions should be noted here. Errors and uncertainties are highlighted.* |

The completed table A-1 is enclosed in Annex 1 (table A-1) to this report.

Project specific periodic verification checklist

In order to ensure transparency and consideration of all relevant assessment criteria, a project specific verification protocol has been developed. The protocol shows, in a transparent manner, criteria and requirements, means and results of the verification. The verification protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM/GS project is expected to meet for verification
- It ensures a transparent verification process where the verifying DOE documents how a particular requirement has been proved and the result of the verification.

The basic structure of this project specific verification protocol for the periodic verification is described in Table 3-3.

**Table 3-3:** Table A-2; Structure of the project specific periodic verification checklist

| ***Table A-2: Periodic verification checklist*** | | | | |
|---|---|---|---|---|
| ***Checklist Item*** | ***Reference*** | ***Verification Team Comments*** | ***Draft Conclusion*** | ***Final Conclusion*** |
| *The checklist items in Table A-2 are linked to the various requirements the monitoring of the project should meet. The checklist is organized in various sections as per the requirements of the topic and the individual project activity. It further includes guidance for the verification team.* | *Gives reference to the information source on which the assessment is based on.* | *The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the verification team and how the assessment was carried out. The reporting requirements of the VVS shall be covered in this section.* | *Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment refers to the draft verification stage.* | *In case of a corrective action or a clarification the final assessment at the final verification stage is given.* |

The periodic verification checklist (verification protocol) is the backbone of the complete verification starting from the desk review until final assessment. Detailed assessments and findings are discussed within this checklist and not necessarily repeated in the main text of this report.

The completed verification protocol is enclosed in Annex 1 (table A-2) to this report.

## Desk review

During the desk review all documents initially provided by the client and documents relevant for the verification were reviewed. The main documents are listed below:

- the last revision of the PoA-DD and VPA-DD including the monitoring plan/GSPoA-DD//VPA/,
- the last revision of the validation report/VAL/,
- documentation of previous verifications/VER/
- the monitoring report(s), including the claimed emission reductions for the project/MR/,
- the emission reduction calculation spreadsheet/XLS/.
- The SD monitoring report
- Usage Survey Records/S1/,/S2/
- GS4GG Requirements/GS4GG TA/

Other supporting documents, such as publicly available information on the UNFCCC website and background information were also reviewed.

## On-site assessment

As most essential part of the verification exercise, it is indispensable to carry out an inspection on site in order to verify that the project is implemented in accordance with the applicable criteria and applied methodology and registered PoA-DD and VPA-DD. Furthermore, the on-site assessment is necessary to check the monitoring data with respect to accuracy of the calculation of emission reductions. Changes to the key SDG Impact indicators and the achievement and implementation of mitigation / compensation measures are other integral parts of the on-site assessment. For this verification, "Other Means of Verification were availed" main tasks covered during the remote audit include, but are not limited to:

- an investigation of whether all relevant equipment is installed and works as anticipated.
- The operating staff was interviewed and observed in order to check the risks of inappropriate operation and data collection procedures.
- Information processes for generating, aggregating and reporting the selected monitored parameters were reviewed.
- The monitoring processes, routines and documentations were audited to check their proper application.
- The monitoring data and monitoring/usage survey data were checked.
- The data aggregation trails were checked via spot sample down to the level of the data generation.
- Competency check of the ground personnel who conducts the monitoring survey.
- Appropriateness of the data collection, sampling and reliability test for the monitored sampling parameter.
- Possibility of leakage emissions were also checked.

During the remote audit scheduled on dates 05/04/2022 to 06/04/2022, the verification team performed telephonic interviews with the project participants to confirm selected information. and to resolve issues identified in the document review.

Representatives of Bangladesh Bondhu Foundation including the operational staff of the plant were interviewed. The main topics of the interviews are summarized in Table 3-4.

**Table 3-4:** Interviewed persons and interview topics

| Interviewed Persons / Entities | Interview topics |
|---|---|
| 1. Projects & Operations Personnel Bangladesh Bondhu Foundation | - General aspects of the project<br>- Technical equipment and operation<br>- Changes since validation / previous verification<br>- Monitoring and measurement equipment<br>- Remaining issues from validation / previous verification<br>- Calibrations<br>- Quality management system<br>- Involved personnel and responsibilities<br>- Training and practice of the operational personnel<br>- Implementation of the monitoring plan<br>- Monitoring data management |

| Interviewed Persons / Entities | Interview topics |
|---|---|
| | - Data uncertainty and residual risks<br>- GHG emission reduction calculation<br>- Implementation of SD indicators<br>- Contribution to Sustainable Development<br>- Procedural aspects of the verification<br>- Maintenance<br>- Environmental aspects<br>- SD Indicators monitoring/S1/,/S2/,/SD1/<br>- Sampling approach<br>- Usage survey/S1/,/S2/<br>- ER calculations |
| 2. Monitoring Agency | - Implementation of the monitoring plan<br>- Monitoring data management<br>- Data uncertainty and residual risks<br>- GS monitoring parameters<br>- GS Usage rate Guidelines<br>- Monitoring team competency and skills |
| 3. ICS users | - Warranty extensions<br>- Transfer of ownership of credits VERs to PP |

The list of interviewees is included in chapter 7.4.

### Remote audit assessment:

The Verification Team is following the recommendations and COVID 19: INTERIM MEASURES of the GS Board published on 06/04/2020, which allows GS-VVB's to exempt onsite audit due to COVID-19 Pandemic and related worldwide travel restrictions. As per interim measures vide RULE UPDATE: COVID 19: INTERIM MEASURES published on 06/04/2020 which sets provision to exempt mandatory onsite audit by VVB for the period up to 30 June 2022. This version 05 of the COVID 19: INTERIM MEASURES, dated 21/12/2021 extended the validity till 30/06/2022.

| Sr. No | Requirement (RULE UPDATE: COVID 19: INTERIM MEASURES) | Assessment |
|---|---|---|
| § 4 | MANDATORY SITE VISITS BY VVBs:<br>The Validation and Verification bodies & SustainCERT may apply following interim measures in cases where on-site inspections cannot reasonably be performed due to COVID-19 and travel restrictions. | Assessment is presented below: |
| 4.1.1 a. | Alternative Measures relating to mandatory on-site visits for VVBs audits<br>include:<br>A VVB may postpone site visits for on-site inspections, taking into account the rules of relevant national and local authorities (local to the VVB offices as well as to | VVB has applied the remote audit techniques, as the site visit could not be postponed due to the GS VER delivery commitments by PP. |

| Sr. No | Requirement<br>(RULE UPDATE: COVID 19: INTERIM MEASURES) | Assessment |
|---|---|---|
| | locality of the site visits), World Health Organization (WHO) recommendations, policies of the VVB (if any) and other relevant travel restrictions and guidance (for example, a requirement to self-isolation upon return from specific countries). | Thus, VVB has conducted assessment using other means of verification such as Telephonic Calls and Skype Calls. |
| 4.1.1 b. | If site visit cannot be postponed due to significant impact of delaying the site visit on VVB and/or project developer due to timeline/commitment as per validation/verification or GS-VERs delivery agreement, VVB may replace mandatory on-site visits with remote audits. The audit may include but not limited to validation, verification, the inclusion of VPAs, design change review etc. | |
| 4.2.1 | In case of 4.1.1 a, the VVB shall complete the on-site inspection as normal when the COVID-19 situation eases. | Not applicable. |
| 4.2.2 i. | In case of 4.1.1 b, the VVB shall:<br>Use validation/verification techniques and advanced communication technology solutions to validate/verify information and compliance with applicable requirements to the extent possible, to ensure the completeness and credibility of the audit; | Please refer the above explanation on the techniques and mode of communication used to appropriately assess the implementation of the project together with credibility of the monitoring result. |
| 4.2.2 ii. | Use means such as, but not limited to, tele/video meetings; interviews with relevant stakeholders, local authorities, project participants, persons responsible for data collections, end user and/or beneficiaries of the project; photographic evidence, video recordings; data collection. For microscale project/PoAs/VPAs using drones, satellite image (where possible); relevant documents;<br>and other publicly available information. | |
| 4.2.2 iii. | Transparently disclose in the audit report that<br>- The audit is undertaken remotely and<br>- Describe the alternative means used and justification that they are sufficient for the audit | This Verification Report has been provided with a transparent disclosure on remote site assessment including explanation on other means utilized/ applied to verify the onsite information. Please refer Annex A.1 Verification Protocol of this report.<br>The submission of this performance review is within relaxation period. |
| 4.2.2 iv. | Must submit the audit report requesting design certification and/or performance certification within Six (6) months of the declared end date of the Interim Measures. | Refer above explanation |
| 4.3.1 | The maximum monitoring period that VVB can verify based on remote audit (paragraph 4.1.1 b) is two years. | Refer closure of CL 01 |

## Applied Other Credible means of verification:

The credible other means of verification is applied to cross check on-ground information as described below

**Telephonic Call:** During the telephonic assessment, the selected end users were interviewed and records for individual end user records, submitted by PP, were verified. The telephonic calls were recorded, stored and maintained so that the assessments of the Verification Team are traceable and reproducible if required.

**Skype Calls:** This tool has allowed connecting multiple stakeholders such as PP, project developer/ consultant, relevant personnel from Usage survey team and all other relevant persons as per the organogram of the PDD including QA/ QC key personnel. The VT could virtually verify the implementation of the project against the requirements in the most recent version of PDD and interviews with all the above-mentioned parties including sampled end users using this tool.

Furthermore, the data collected during the above steps are further utilized for assessments which is described in relevant parts of the Verification Report

The sampling approach conducted is in accordance with “Guidelines for Sampling and Surveys for CDM Project Activities and Programme Activities” version 04.0 and the “Standard for Sampling and Surveys for CDM Project Activities and Programme Activities version 08.0”. As the population is relatively homogeneous (for a given stove type) with respect to the object of the sampling effort, simple random sampling method is adopted for verification of the parameters.

## Draft verification reporting

On the basis of the desk review, the remote-site assessment, follow-up interviews and further background investigation the verification protocol is completed. This protocol together with a general project and procedural description of the verification and a detailed list of the verification findings form the draft verification report. This report is sent to the client for resolution of raised CARs, CLs and FARs.

## Resolution of CARs, CLs and FARs

Nonconformities raised during the verification can either be seen as a non-fulfilment of criteria ensuring the proper implementation of a project or where a risk to deliver high quality emission reductions is identified.

Corrective Action Requests (CARs) are issued, if:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions which will impair the estimate of emission reductions;
- Issues identified in a FAR during validation or previous verifications requiring actions by the project participants to be verified during verification have not been resolved.

The verification team uses the term Clarification Request (CL), which is be issued if:

- information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

Forward Action Requests (FAR) indicate essential risks for further periodic verifications. Forward Action Requests are issued, if:

- the monitoring and reporting require attention and / or adjustment for the next verification period.

For a detailed list of all CARs, CLs and FARs raised in the course of the verification pl. refer to chapter 4.

## Final reporting

Upon successful closure of all raised CARs and CLs the final verification report including a positive verification opinion can be issued. In case not all essential issues could finally be resolved, a final report including a negative verification opinion is issued.

The final report summarizes the final assessments w.r.t. all applicable criteria.

## Technical review

Before submission of the final verification report a technical review of the whole verification procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the verification team and thus not involved in the decision-making process up to the technical review.

As a result of the technical review process the verification opinion and the topic specific assessments as prepared by the verification team leader may be confirmed or revised. Furthermore, reporting improvements might be achieved.

## Final approval

After successful technical review an overall (esp. procedural) assessment of the complete verification will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

After this step the request for issuance can be started.

# 4. VERIFICATION FINDINGS

In the following paragraphs the findings from the desk review of the monitoring report/MR/, the calculation spreadsheet/ER/, PDD/PDD/, the Validation Report/VAL/ and other supporting documents, as well as from the on-site assessment and the interviews are summarised.

The summary of CAR, CL and FAR issued are shown in Table 4.1:

**Table 4.1:** Summary of CAR, CL and FAR

| Verification topic | No. of CAR | No. of CL | No. of FAR |
|---|---|---|---|
| A – Description of project activity | 0 | 0 | 1 |
| B – Implementation of project activity | 0 | 2 | 1 |
| C – Description of Monitoring System | 0 | 1 | 1 |
| D – Carbon Data and Parameters | 1 | 0 | 0 |
| E - Calculation of Emission Reductions | 1 | 0 | 0 |
| F – Sustainability Monitoring Parameters | 2 | 0 | 1 |
| **SUM** | **04** | **03** | **04** |

The preliminary findings of the verification process based on desk review are summarized in the tables below.

**Table 4.2 : Remaining FAR from validation and/or previous verification**

**GS Review-2nd Monitoring period: 01 May 2015–21 February 2016 (both days included) for VPA 01 to 06**

| **FAR ID** | 01 | **Section no.** | D2, E1, E2, E4, E5, E6 | **Date: 18/04/2022** |
|---|---|---|---|---|
| **Description of FAR** | | | | |
| The PP shall revise the indicators for the SD parameter 'Quality of Employment' and select relevant indicators in line with the GS guidance for the next verification. | | | | |
| **CME response (2nd round)** | | | | **Date: 20/04/2022** |
| Monitoring Indicator for the SD parameter 'Quality of Employment' have been revised in the section D2 in line with the GS guidance document **ANNEX I - Guidance on SD Indicators** section 2, Table I.2. (see table below). | | | | |

| Indicator | Description | Possible parameters |
|---|---|---|
| Quality of employment | Quality of employment refers to changes compared to the baseline in:<br>· Labour conditions, such as job-related health and safety Labour conditions Qualitative value of employment, such as whether the jobs resulting from the project | Training, workshops etc. Labour conditions |

| | | |
|---|---|---|
| | activity are highly or poorly qualified, temporary, or permanent etc. | |

The applied indicator as reported in the registered VPA-DDs and monitoring report refers to number of trainings, workshops conducted for field officers, monitoring officers to increase their capacity towards skilled job improving quality of their employment.

**Documentation provided by CME (1st round)**

| | | |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☐ Changes in MR | Section(s): | New version No.: |
| ☐ Changes in XLS | Section(s): | New version No.: |
| ☐ Other: | | |

**DOE assessment (1st round)** **Date: 22/04/2022**

The parameter has been appropriately reported under the MR. The VVB performed the interviews and noted that trainings are performed. The following sample attendance sheets of training were assessed as evidence of the training,

- MS1_21.12.2016.pdf
- MS1_22.12.2016.pdf
- MS2_26.12.2017.pdf
- MS2_27.12.2017.pdf
- Declaration of Employment MP3-MS1.pdf
- Declaration of Employment MP3-MS1.pdf

Thus, it is concluded that the requirement against the raised FAR are met. FAR has been CLOSED.

| | |
|---|---|
| **Conclusion** *Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open) ☒ The finding is closed |

**GS Review-1st GS Monitoring Period, VPA 07 to 18**

| | | | | |
|---|---|---|---|---|
| **FAR ID** | 01 | **Section no.** | | **Date: 18/04/2022** |

**Description of FAR**

The PP shall also note that the incentive mechanism to discontinue the baseline stove is one of the applicability requirements of the methodology. This requirement shall be demonstrated prior to next verification

**CME response (2nd round)** **Date: 22/04/2022**

The discontinuation of baseline stove is ensured in the PoA through the following incentivization system:

1. Removal of traditional stove at time of Bondhu Chulha installation - The partner organization staff involved in installation of Bondhu Chula is mandated to dismantle / remove the traditional stove and install Bondhu Chulha at the same location in the user's kitchen as occupied by traditional stove, as a standard operating procedure. Please refer the partner training manual (and English translation of page 5) confirming the responsibilities of partner staff engaged in Bondhu Chulha installation to dismantle the traditional stove. The subsidy offered by BBF to the partner organization is conditional to them following the standard operating procedure thereby ensuring discontinuation of baseline stoves in the PoA.

2. Offering discount on Bondhu Chula - Additionally, Bangladesh Bondhu Foundation provides subsidy on the Bondhu Chulha to encourage adoption of efficient Bondhu Chulha and discontinuation of traditional baseline stove. Please refer the sample end user agreement submitted, that specifies the subsidy being offered on the Bondhu Chulha being installed.

**Documentation provided by CME (1st round)**

| | | |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☐ Changes in MR | Section(s): | New version No.: |
| ☐ Changes in XLS | Section(s): | New version No.: |
| ☐ Other: | | |

| **DOE assessment (1st round)** | **Date: 22/04/2022** |
|---|---|
| Bangladesh Bondhu Foundation provides subsidy on the Bondhu Chulha to encourage adoption of efficient Bondhu Chulha and discontinuation of traditional baseline stove. The VVB has verified sample end user agreement which confirms the subsidy being offered on the Bondhu Chulha which were installed availing the subsidy.<br><br>During the interviews with the CME, the VVB noted that the subsidy offered by BBF to the partner organization is conditional and confirms through a standard operating procedure that the baseline stoves are discontinued. The VVB also verified the partner training manual (and English translation of page 5) which clearly states the responsibilities of partner staff engaged in Bondhu Chulha installation to dismantle the traditional stove.<br><br>Thus, the mechanism of incentivize the end users over the discontinuation of traditional baseline stove and adoption of ICS could be verified, FAR has been CLOSED. | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |

**VPA 21-36 for the 1st monitoring period from 01/08/2014 to 31/07/2016**

| **FAR ID** | 01 | **Section no.** | | **Date: 18/04/2022** |
|---|---|---|---|---|
| **Description of FAR** | | | | |
| As per GS4GG approved deviation request dated 11/01/2021, CME is allowed to claim emissions reduction occurring from 01/08/2016 to 28/02/2018 by following all relevant requirements of the GS version currently under use (i.e.,GSv2.2). The deviation approval is subject to the following conditions being met–<br>i. For carrying out activities listed in the point above, the PD shall demonstrate compliance with all standard/methodological requirements documented in the registered PoA/VPA-DD(s), and where gap(s) exist, justify that conservative approach(es) have been applied in line with the GS principles. The verifying VVB shall assess PD's compliance with this condition and provide their opinion in the Verification Report. SustainCert shall subsequently review both the PD's compliance and VVB's assessment and opinion. | | | | |
| **CME response (1st round)** | | | | **Date: 22/04/2022** |
| The project has duly adhered to all standard/methodological requirements documented in the registered PoA/VPA-DD(s) in the concerned verification and no gaps exist. The same has been duly assessed by the VVB team. | | | | |
| **Documentation provided by CME (1st round)** | | | | |
| ☐ Changes in the PDD | | Section(s): | New version No.: | |
| ☐ Changes in MR | | Section(s): | New version No.: | |
| ☐ Changes in XLS | | Section(s): | New version No.: | |
| ☐ Other: | | | | |
| **DOE assessment (1st round)** | | | | **Date: 22/04/2022** |
| No gaps were identified. The compliance against the requirements has been transparently assessed under the FVR. | | | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed | | | |

| **FAR ID** | 02 | **Section no.** | | **Date: 22/04/2022** |
|---|---|---|---|---|
| **Description of FAR** | | | | |
| As per GS4GG approved deviation request dated 11/01/2021,For claiming emissions reduction occurring from 01/03/2018 onwards, the CME shall first transition the PoA from GSv2.2 to the current version of GS4GG by following the Transition Requirements (v1.1 dated March 2018) available on the GS website and subsequently undergo verification and performance review by following the established performance certification/issuance procedure. | | | | |
| **CME response (2nd round)** | | | | **Date:** |

| | | | |
|---|---|---|---|
| The project has been duly transitioned from GSv2.2 to the current version of GS4GG by following Transition Requirements (v1.1 dated March 2018). All the transition related documents have been submitted already. | | | |
| **Documentation provided by CME (1st round)** | | | |
| ☐ | Changes in the PDD | Section(s): | New version No.: |
| ☐ | Changes in MR | Section(s): | New version No.: |
| ☐ | Changes in XLS | Section(s): | New version No.: |
| ☐ | Other: | | |
| **DOE assessment (1st round)** | | | **Date: 22/04/2022** |
| The VVB is in receipt of the GS Transition Annex for PoA and VPA 1-46 and the corresponding Transition Review under Gold Standard for the Global Goal for PoA and VPA-DD titled "GHG Emission Reduction through use of Bondhu Chula (Improved Cook Stoves) in Bangladesh" applicable to PoA(GS3112) VPA 1-46. The Transition Review is performed against the PoA and VPA 1-46 and approved. Thus, it is safely concluded that the the project has transitioned to GS4GG. The present verification is however covering the period corresponding to the GSv2.2.<br>FAR has been CLOSED. | | | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed | | |

**Table 4.3: CL from this verification**

| **CL ID** | 01 | **Section no.** | Key project information | **Date: 30/03/2022** |
|---|---|---|---|---|
| **Description of CL** | | | | |
| Separated duration of the monitoring period are applied under the same MR, clarification/ correction is requested<br>• VPA 01-06: 22/02/2016-28/02/2018<br>• VPA 07-36: 01/08/2016-28/02/2018<br>Furthermore, the VVB also requests justification/correction for application of more than 02 years of monitoring period by availing other means of Verification (refer para 4.3.1, version 05 of the COVID 19: INTERIM MEASURES, dated 21/12/2021 extended the validity till 30/06/2022). | | | | |
| **CME response (1st round)** | | | | **Date: 25/05/2022** |

The duration of last monitoring period, for VPAs covered under the concerned verification is as follows:

| VPA number | Last Monitoring Period duration |
|---|---|
| VPA 01-06 | 01/05/2015-21/02/2016 |
| VPA 07-36 | 01/08/2014-31/07/2016 |

Therefore, the subsequent monitoring period has been started after the end date of last monitoring period of the respective VPAs as specified above.

VVB is requested to consider the deviation approved by Gold Standard (reference Dev_163) allowing CME to claim emissions reductions up till 28 Feb 2018 under GS version 2.2. All emission reductions 01 March 2018 onwards, must be claimed under GS4GG as per the approved deviation.

The Covid Interim Measures renders the monitoring period to end on 21 Feb 2018 for remote assessments. This shall leave 7 days' worth of monitoring period under GS version 2.2 unverified. Executing a separate verification for 7 days' monitoring period is not feasible due to cost constraints. Also, these 7 days cannot be covered under subsequent monitoring period as that same shall be subjected to audit against GS4GG requirements.

Thus, the CME had no other option but to slightly extend the monitoring period by 7 days beyond the two year limit (for VPA 01-06) to cover the entire pre GS4GG period under the concerned verification. Although the monitoring period for VPAs 01-06 mentioned above is 22/02/2016 - 28/02/2018, the

effective monitoring period start date being considered is 01/03/2016. This has been conservatively applied in accordance with the Para 4.3.1 of the COVID 19: INTERIM MEASURE v5, (21.12.2021) to limit the length of the monitoring period, being assessed remotely, to two years (from 01/03/2016 to 28/02/2018). Thus, VPAs 01-06 are claiming zero ERs for the period 22/02/2016 – 29/02/2016.

| **Documentation provided by CME (1st round)** | | |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☐ Changes in MR | Section(s): | New version No.: |
| ☐ Changes in XLS | Section(s): | New version No.: |
| ☐ Other: | | |

| **DOE assessment (1st round)** | **Date: 26/05/2022** |
|---|---|

Ok. The VT has verified the submitted documents from previous MP and found it appropriate. It is confirmed that the applied MP is following the end date of the previous MP.

Furthermore, the guideline mentioned in para 4.3.1 of COVID INTERIM MEASURE is being duly assessed by the VVB. The VVB also noted that, a deviation has been granted by Gold Standard (reference Dev_163) allowing CME to claim emissions reductions up till 28 Feb 2018 under GS version 2.2. All emission reductions 01 March 2018 onwards, must be claimed under GS4GG as per the approved deviation. The two year monitoring period limit renders the monitoring period to end on 21 Feb 2018. However, the VVB has accepted the PP's response of capping the claimed ER's upto 02 years. The revised monitoring report and corresponding revised ER calculation spreadsheet submitted by CME were assessed with regards to removal of number of days beyond 02 years period and observed that no ER's are claimed for the period 22/02/2016 – 29/02/2016 which is acceptable to the VVB.
Thus the VVB confirms that the claim of ER's follows the stipulations as laid by the GS para 4.3.1 of COVID INTERIM MEASURE requirements.

| **Conclusion** *Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |
|---|---|

| **CL ID** | 02 | **Section no.** | | **Date: 30/03/2022** |
|---|---|---|---|---|

**Description of CL**

It is observed from the assessment and comparison between master sales record and Monitoring Usage Survey forms that many of the end users names especially with regards to spelling is inconsistent.

| **CME response (1st round)** | **Date: 07/04/2022** |
|---|---|

The Name in database is sourced from the end user agreement which is filled in Bangla script. While entering the same in the database, it is translated into English script using phonetics, by the database team. Similarly, at the time of monitoring surveys, the field surveyors fill the name in the survey form in English. It is likely that in some cases, the name spelling does not match with that in the database due to translation loss while translating from vernacular (Bengali) to English language, by either the database team or the surveyor at the time of data entry.

Please note that the ICS serial number and location for such users' match with that in the database, thus concerns on double counting do not prevail.

| **Documentation provided by CME (1st round)** | | |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☐ Changes in MR | Section(s): | New version No.: |
| ☐ Changes in XLS | Section(s): | New version No.: |
| ☐ Other: | | |

| **DOE assessment (1st round)** | **Date: 18/04/2022** |
|---|---|

As per the clarification given by the PP, there is a possibility of different pronunciations during the translation of names from Bengali to English. So, the clarification is accepted.

| **Conclusion** *Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |
|---|---|

| **CL ID** | 03 | **Section no.** | | **Date: 30/03/2022** |
|---|---|---|---|---|
| **Description of CL** | | | | |
| PP is requested to clarify/substantiate that how the cross effect and double counting is avoided where CME/PD BBF and SZ Consultancies has 2 more CDM PoAs (PoA 4791 and PoA 10431) with same service and project technologies / measures in the same geographical area. | | | | |
| **CME response (1st round)** | | | | **Date: 07/04/2022** |

BBF/SZCSL have a comprehensive and water-tight system to uniquely identify each ICS under respective programs ensuring zero cross effects or double counting risks. The important virtues via which the aforesaid risks are avoided are discussed below:

- The ICS vintages in the three concerned programs is mutually exclusive and not concurrent (refer the following table)

| Project ID | Stove Installation Period |
|---|---|
| **CDM 4791** | Jan 2013 – Apr 2014 |
| **GS 3112** | Apr 2014 – Jun 2015 |
| **CDM 10431** | Feb 2018 onwards |

- Unique ID assigned to each ICS helps in ensuring that it gets counted only once and is not counted under multiple programs. The installation databases of all three PoAs are unique individually as well as amongst themselves with no serial number repeating even once.
- Another characteristic of these PoAs is that concerned ICS are fixed cement concrete stoves and cannot physically transfer from one place to another. Further, for each stove, the end username, address and location is available to uniquely identify each ICS under these programs.

| **Documentation provided by CME (1st round)** | | |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☐ Changes in MR | Section(s): | New version No.: |
| ☐ Changes in XLS | Section(s): | New version No.: |
| ☐ Other: | | |

| **DOE assessment (1st round)** | **Date: 18/04/2022** |
|---|---|

Ok. The VT has verified the following documents:

- CDM 4791 – from https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/SE7XIMKF8NYVOTL16BW3U45C9ZDGAP/view?cp=1
- GS 3112 – GS 3112 MP#3 ER calculator v 2.0 07042022.xls
- CDM 10431 – from https://cdm.unfccc.int/PoAIssuance/iss_db/poaiss810944337/view

The VT has verified the ER worksheet of the CDM 4791, GS 3112 and CDM 10431. The same DOE and the same Team Leader is engaged in the Verification. The unique numbering system of each stove has been assessed during the verification. The VVB is thus conceived with the above response from the PP and deems the explanation as acceptable.

| **Conclusion** *Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |
|---|---|

**Table 4.4: CAR from this verification**

| **CAR ID** | 01 | **Section no.** | Section B1, D.2, D3, D.4, E4, E5 | **Date: 30/03/2022** |
|---|---|---|---|---|
| **Description of CAR** | | | | |

1. Following inconsistency observed between submitted MR (section D.2 and D.4) and ER worksheet (tab: Sample Size cal and results)

| **Parameter** | **Values reported in MR** | **Values reported in ER** |
|---|---|---|

| | | | | |
|---|---|---|---|---|
| $DF_{b,Stove,y}$ | 1-2 years | 0.0126 | 1-2 years | 0.0131 |
| | 2-3 years | 0.0187 | 2-3 years | 0.0196 |
| | 2-3 years | 0.0195 | 2-3 years | 0.0195 |
| | 3-4 years | 0.0242 | 3-4 years | 0.0244 |

2. Net benefit values under section E.4 of MR were compared with the ER worksheet. The values for MS1 and MS2 under baseline estimate and net benefit are found internally inconsistent (though the total value remains the same) (refer ER worksheet- tab : "Inst summary and ER calculation" and MR section E.4).

3. In monitoring report under table 2, emission reduction values for MS1 (129,395) and total value (313,732) reported is inconsistent within MR (See section E.4, D.3 and B.1 part (d) and section E.5, D.3 and B.1 part (d) respectively.

**CME response (1st round)** | **Date: 07/04/2022**

1. The values for parameter $DF_{b,Stove,y}$ have been revised in section D.2, D.4 of the MR to be consistent with the values reported in the ER sheet.
2. Net benefit values under section E.4 of MR have been revised to be consistent with the values reported in tab "Inst summary and ER calculation" of the ER sheet.
3. The emission reduction values for MS1 & MS2, in sections B.1 part (d), D.3, E.4, E.5 have been rectified in the revised MR to remove the cited inconsistencies.

**Documentation provided by CME**

| | | | |
|---|---|---|---|
| ☐ | Changes in the PDD | Section(s): | New version No.: |
| ☒ | Changes in MR | Section(s): B.1, D.2, D.4, E.4, E.5 | New version No.: 2.0 |
| ☒ | Changes in XLS | Worksheet(s): • Inst summary and ER calculation Monitoring report tables | New version No.: 2.0 |
| ☐ | Other: | | |

**DOE assessment** | **Date: 18/04/2022**

1. The VT confirms that the values of parameter $DF_{b,Stove,y}$ in Monitoring Report is now consistent and in line with the ER Worksheet. The finding is closed.
2. Net benefit values under section E.4 of MR are now consistent with the ER Worksheet. The finding is closed.
3. The emission reduction for MS 1 and total Emission Reduction is updated by the PP. These values are now consistent throughout the Monitoring Report. The finding is closed.

**Conclusion** *Tick the appropriate checkbox*

☐ Additional action should be taken (finding remains open)
☒ The finding is closed

| **CAR ID** | 02 | **Section no.** | Installation Database, ER Worksheet | **Date: 30/03/2022** |
|---|---|---|---|---|

**Description of CAR**

1. 33,645 users have blank cell as phone number
2. 2776 users have "0" as their phone number
3. 67 users have "1" as their phone number
4. 1 user has 173 as his phone number
5. 6259 users have NO, Not Use, N0, N/A, O, No Use, NIA, NILL, NIL as their phone number

For MS1 samples,

6. 3 users had spelling mistake in their name (compared with Installation Database)

7. 59 respondents name was not matching with the owner's name Installation Database.

For MS2 samples,

8. 3 users had spelling mistake in their name (compared with Installation Database)
9. 65 respondents name was not matching with the owner's name Installation Database.
10. In Installation database worksheet, "JS-SAT-KOL-HEL-D-310" was not marked "Yes" for "MS1 Samples". The sample was not used in ER Calculation worksheet either.

**CME response (1st round)** **Date: 07/04/2022**

1. These users don't own or carry a contact number; hence the corresponding cells are blank.
2. These are typographical errors, which now stand corrected in the revised database being submitted.
3. Same as point "2" above.
4. Same as point "2" above.
5. Same as point "2" above
6. The spelling mistakes in the name of user / respondent (compared to that specified Installation Database) in case of 3 users (MS1) are explained as follows:

| Name In Survey Form | Name In Database | Explanation |
|---|---|---|
| Mohammad Sikder | Md. Mohomad Shikder | The Name in database is sourced from the end user agreement which is filled in Bangla script. While entering the same in the database, it is translated into English script using phonetics, by the database team. Similarly, at the time of monitoring surveys, the field surveyors fill the name in the survey form in English. It is likely that in some cases, the spelling does not match with that in the database due to translation loss while translating from vernacular (Bengali) to English language, by either the database team or the surveyor at the time of data entry.<br>Please note that the ICS serial number and location for such users' match with that in the database, thus any concern on double counting does not prevail. |
| Mst. Shanta Khatun | Mst Santa Khatun | -do- |
| Mrs. Sefali Begum | Sali Begum | Mrs. Sefali Begum was the respondent at the time of monitoring survey. She is the Aunt of ICS's owner (Sali Begum) listed in the database as verified with the DSM. |

7. Q. No 3 of the monitoring survey questionnaire seeks the name of User / Respondent who is answering the survey questions and is the primary ICS user. The user / respondent can be different from the ICS owner listed in the database. Usually, the ICS owner is the head of the family / owner of the property, who may not be available at home at the time of survey or otherwise, may not be suitable choice for collecting usage feedback (based on involvement in cooking activities).

   Further, please note that each ICS is uniquely identifiable with its serial number as well is fixed ICS. The address of each of the ICS samples monitored (reported in survey form) matches with that mentioned in the database. Thus, there double counting risks don't exist and substantiates that the surveyed respondent was directly associated with the sampled ICS.

8. The spelling mistakes in the name of user / respondent (compared to that specified Installation Database) in case of 3 users (MS1) are explained as follows:

| Name In Survey Form | Name In Database | Corrective action/explanation |
|---|---|---|

| | | |
|---|---|---|
| Mst. Sabina Yesmin | Most: Sabina Yesmin | The Name in database is sourced from the end user agreement which is filled in Bangla script. While entering the same in the database, it is translated into English script using phonetics, by the database team. Similarly, at the time of monitoring surveys, the field surveyors fill the name in the survey form in English. It is likely that in some cases, the spelling does not match with that in the database due to translation loss while translating from vernacular (Bengali) to English language, by either the database team or the surveyor at the time of data entry.<br>Please note that the ICS serial number and location for such users' match with that in the database, thus concerns on double counting do not prevail. |
| Shahinur Begum | Sahinur Begum | -do- |
| Tuhina Begum | Tuhina Begom | -do- |

9. Same as 7 above.

Usually, some over-sampling is followed while selecting the samples from database. These extra samples serve as buffer covering for outliers, non-responses or incorrect / incomplete surveys. The samples marked as "yes" in the database only reflect the samples that have been monitored and not the additional samples that serve as buffer. The sample bearing ID "JS-SAT-KOL-HEL-D-310" is a buffer samples hence has not been marked in the database, neither has been monitored.

**Documentation provided by CME**

| | | | |
|---|---|---|---|
| ☐ | Changes in the PDD | Section(s): | New version No.: |
| ☐ | Changes in MR | Section(s): | New version No.: |
| ☒ | Changes in XLS | Worksheet(s): Installation Database | New version No.: 2.0 |
| ☐ | Other: | | |

**DOE assessment** **Date: 18/04/2022**

1. The VT interviewed the CME who argued that every end user may not have a personal phone a number. Therefore, the clarification is accepted. Finding is closed.
2. The VT confirms that there may be typographical errors. So, the clarification is accepted. The finding is closed.
3. Same as above. The finding is closed.
4. Refer above. Typo was corrected. The finding is closed.
5. Refer above. Typo was corrected. The finding is closed.
6. The typo related the spelling was corrected. The finding is closed.
7. The VT accepts the clarification given by the PP. As the respondent answering the survey can be different from the ICS owner. Therefore, the finding is closed.
8. The VT confirms that there may be typographical errors. So, the clarification is accepted. The finding is closed.
9. The VT accepts the clarification given by the PP. As the respondent answering the survey can be different from the ICS owner. Therefore, the finding is closed.

   The VT accepts the clarification given by the PP that some samples can be kept as buffer samples. So, the finding is closed.

| | |
|---|---|
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |

| | | | | |
|---|---|---|---|---|
| **CAR ID** | 03 | **Section no.** | Different sections of MR | **Date: 30/03/2022** |

**Description of CAR**

1. Tables under section D.2. Data and parameters monitored for monitored parameter is not in line with GS filling guideline.

2. Sample calculations for all formulae used to calculate/estimate baseline/project values/leakage are missing under section E.1 of MR (Refer GS filling guideline). Also, spreadsheet references are not provided.
3. Though SDG monitoring parameters are reported under section D.2 of MR but the same SDGs (for ex. SDG 3 or 7) are missing under table 1 (Sustainable Development Contributions Achieved) of MR.
4. Sampling tables are not provided under section D.4 of MR. Kindly, refer GS filling guideline (Attach to the monitoring report any spreadsheets to present full calculations or detailed information....)
5. The ER worksheet lacks the VPA wise ex-ante emissions reductions for the MS1 and MS2.

**CME response (1st round)** | **Date: 07/04/2022**

1. The tables in section D.2. (Data and parameters monitored) have been revised as per the GS MR filling guideline.
2. Screenshots of the ER calculation sheet have been added to demonstrate a sample calculation in section E.1. of the MR.
3. As specified on cover page of the monitoring report, the concerned monitoring period pertains to GS version 2.2. Under GS version 2.2, the PoA only reported SD impacts / benefits from the PoA and did not categorize the SD impacts under the UN SDGs. Thus, only SDG13 pertaining to climate change has been reported and reporting of other SDG benefits is not deemed required.
4. The sampling related tables are now included in section D.4 of the revised MR.

**Documentation provided by CME**

| | | |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☒ Changes in MR | Section(s): D.2., E.1., D.4. | New version No.: 2.0 |
| ☒ Changes in XLS | Worksheet(s): Usage Data | New version No.: 2.0 |
| ☐ Other: | | |

**DOE assessment** | **Date: 18/04/2022**

1. Ok. The VT has reviewed the same and found the MR consistent with GS MR filling guideline.
2. the spreadsheet screenshots have been provided by PP is assessed to be okay.
3. It is already mentioned in the previous response that the PP shall revise the indicators for the SD parameter 'Quality of Employment' and select relevant indicators in line with the GS guidance for the next verification. This is also referred in FAR 1 of this report. Ok. The VT has reviewed the same and found the MR consistent with GS MR filling guideline.

| | |
|---|---|
| **Conclusion** *Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |

| **CAR ID** | 04 | **Section no.** | Different sections | **Date: 30/03/2022** |
|---|---|---|---|---|

**Description of CAR**

Below Documentary evidences are requested

1. Sales Statement confirming monthly sales during this monitoring period
2. Sample warranty activation certificate against incentive mechanism
3. The documents pertaining to the immediate pervious MP are requested from the PP. Additional findings will be raised based on the document review of documents.

**CME response (1st round)** | **Date: 07/04/2022**

Documents are submitted

**Documentation provided by CME**

| | | |
|---|---|---|
| ☐ Changes in the PDD | Section(s): | New version No.: |
| ☐ Changes in MR | Section(s): | New version No.: |
| ☐ Changes in XLS | Worksheet(s): | New version No.: |
| ☐ Other: | | |

**DOE assessment** | **Date: 18/04/2022**

1. Ok. Accepted.

| | |
|---|---|
| 2. Ok. The VT has reviewed the Clauses 5,6 and 7 of the "Bondhu Chula Customer's Agreement" and found it appropriate.<br>3. Ok. The following list of documents has been submitted by the PP:<br>• GS 3112 MP2 VPA 01-06 3 week issuance review final feedback form.pdf<br>• GS 3112 MP2 VPA 01-06 Monitoring Report.pdf<br>• GS 3112 MP2 VPA 01-06 Verification Report.pdf<br>• GS 3112 MP2 VPA 07-18 3 week issuance review final feedback form.pdf<br>• GS 3112 MP2 VPA 07-20 Monitoring Report.pdf<br>• GS 3112 MP2 VPA 07-36 Verification Report.pdf<br>• GS 3112 MP2 VPA 19-20 3 week issuance review final feedback form.pdf<br>• GS 3112 MP2 VPA 21-36 3 week issuance review final feedback form.pdf<br>• GS 3112 MP2 VPA 21-36 Monitoring Report.pdf | |
| **Conclusion**<br>*Tick the appropriate checkbox* | ☐ Additional action should be taken (finding remains open)<br>☒ The finding is closed |

**Table 4.5: FAR from this verification**

N/A

# 5. SUMMARY OF VERIFICATION ASSESSMENTS

The following paragraphs include the summary of the final verification assessments after all CARs and CLs are closed out. For details of the assessments pl. refer to the discussion of the verification findings in chapter 4 and the verification protocol (Annex 1).

## 5.1. Involved Parties and Project Participants

The following parties to the Kyoto Protocol and project participants are involved in this project activity.

**Table 5-1:** Project Parties and project participants

| Characteristic | Party | Project Participant |
|---|---|---|
| Non-Annex 1 | Bangladesh | Bangladesh Bondhu Foundation |
| Annex 1 | NA | NA |

## 5.2. Implementation of the project

During the applied verification, a remote site visit was carried out from 05/04/2022-06/04/2022 covering the monitoring period of

**VPA 1-2 and 4-6**

MS1 – VPA 01-02 and 04-06: 22/02/2016 to 28/02/2017

MS2 – VPA 01-02 and 04-06: 01/03/2017 to 28/02/2018

**VPA 7-36**

MS1 – VPA 07-36: 01/08/2016 to 28/02/2017

MS2 – VPA 07-36: 01/03/2017 to 28/02/2018

The VVB confirms that the applied MP is limited to 02 years inline with the provisions of the para 4.3.1 of COVID 19: INTERIM MEASURE v5. The detailed assessment is tabulated below:

| **VPA** | **End date of last MP** | **Start date of MP** | **Effective date of claim of ER** | **ER can be claimed upto** |
|---|---|---|---|---|
| VPA 01-02 and 04 - 06 | 21/02/2016 | 22/02/2016 (Refer ER calculator, Tab: "Inst summary and ER calculation") | 01/03/2016 | 28/02/2018 |
| VPA 07-36 | 31/07/2016 | 01/08/2016 (Refer ER calculator, Tab: "Inst summary and ER calculation") | 01/08/2016 | 28/02/2018 |

The footnote-1 of MR clearly states the provisions of application of MP inline with the para 4.3.1 of COVID 19: INTERIM MEASURE v5.

Based on this remote site visit and the reviewed project documentation, it can be confirmed that w.r.t. the realized technology, the project has been implemented and operated as described in the registered PoA-DD, VPA-DD.

This 3rd monitoring period is covering MS1 and MS2 for VPA 1-2 and 4-36 as stated above.

All the VPAs included in the monitoring report are micro-scale VPAs and have been implemented by the Bangladesh Bondhu Foundation. All VPAs involve installation and maintenance of domestic improved cooking stoves ("ICS" branded as Bondhu Chula) in Bangladesh. Till the end of the applied monitoring period 183,882 domestic units are installed/DB1,DB2/. Details of ICSs as stated in section B.1 of MR/MR/ are verified and cross checked with spreadsheet data (tab: "Inst summary and ER calculation")/ER/ and found as deemed appropriate.

The verification team was able to confirm that the project is implemented in accordance with the project description contained in the registered GS PDD/GSPoA-DD/. The verified sales breakdown is tabulated below:

| CPA | Total number of domestic ICS |
|---|---|
| VPA 01 – GS 3544 | 9,029 |
| VPA 02 – GS 3482 | 8,623 |
| VPA 04 – GS 3619 | 9,083 |
| VPA 05 – GS 3620 | 8,837 |
| VPA 06 – GS 3618 | 8,656 |
| VPA 07 – GS 4372 | 3,425 |
| VPA 08 – GS 4373 | 4,354 |
| VPA 09 – GS 4374 | 2,943 |
| VPA 10 – GS 4375 | 3,424 |
| VPA 11 – GS 4376 | 2,350 |
| VPA 12 – GS 4377 | 4,507 |
| VPA 13 – GS 4378 | 3,744 |
| VPA 14 – GS 4379 | 6,266 |
| VPA 15 – GS 4380 | 3,882 |
| VPA 16 – GS 4381 | 3,082 |
| VPA 17 – GS 4382 | 4,705 |
| VPA 18 – GS 4384 | 2,843 |
| VPA 19 – GS 4383 | 4,330 |
| VPA 20 – GS 4385 | 3,801 |
| VPA 21 – GS 4386 | 7,622 |
| VPA 22 – GS 4387 | 5,332 |
| VPA 23 – GS 4388 | 5,799 |
| VPA 24 – GS 4389 | 4,793 |
| VPA 25 – GS 4390 | 619 |
| VPA 26 – GS 4391 | 5,968 |
| VPA 27 – GS 4392 | 1,642 |
| VPA 28 – GS 4393 | 3,966 |
| VPA 29 – GS 4394 | 8,834 |
| VPA 30 – GS 4395 | 5,211 |
| VPA 31 – GS 4396 | 6,449 |
| VPA 32 – GS 4397 | 9,038 |
| VPA 33 – GS 4398 | 2,027 |
| VPA 34 – GS 4399 | 287 |
| VPA 35 – GS 4400 | 9,192 |

| | |
|---|---|
| VPA 36 – GS 4401 | 9,219 |
| **Total** | **183,882** |

The verification team can thus confirm the accuracy of the stated values in the emission reduction calculations. It is also worth noting that no new ICS have been installed in the current monitoring period. Since no new ICS has been installed during applied MP, thus the requirement of dismantling of the baseline stove or removal of the baseline stove is not applicable for applied MP. Additionally, the survey results also confirm that the continuation of the baseline stove is less than 5% sampled households only 19 of the 411 (from both MS1 and MS2).

As per the ex-ante calculation by VPA-DD, estimated emission reduction equivalent to the monitoring period **542,572 $tCO_2e$** (for applied monitoring period). However, the actual occurred emission reduction as per the MR/MR/ submitted for verification are **312,714 $tCO_2e$**.

### 5.3. Project history

During the validation, the validating DOE might have raised issues that could not be closed or resolved during the validation stage. For this purpose, FARs might have been raised. All FARs raised during the validation (under GS)/VAL/ have been addressed by the verifying DOE during the 1st verification.

## GS review of previous MP:

Based on the review of the validation report and GS Design review report/GSPoA-DD/, the VVB assessed the pending FAR applicable to this verification.

## 5.4. Post registration changes

No post registration changes applicable for this monitoring period have been observed.

## 5.5. Compliance with the monitoring plan

The monitoring system and all applied procedures are in compliance to monitoring plan of the registered PoA-DD/VPA/, VPA-DD/GSPoA-DD/. Evidence was available to the verification team to check the compliance of the monitoring plan.

The reporting procedures reflect the requirements of the monitoring plan for the carbon monitoring and sustainability development criteria. All relevant data stored is for the whole monitoring period and traceable to the computer server at the PP office and database records.

## 5.6. Compliance with the monitoring methodology

The monitoring system is in compliance with the applied monitoring methodology “The Gold Standard Simplified Methodology for Efficient Cookstoves, Version 1.0”/GSM/.

## 5.7. Carbon Monitoring parameters

During the verification all relevant monitoring parameters have been verified with regard to the appropriateness of the applied measurement / determination method, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures. The results as well as the verification procedure are described parameter-wise in the project specific verification checklist.

**Data and parameters monitored:**

<table>
<tr><th>Parameter</th><th>Monitored Value</th><th>Verification Opinion</th></tr>
<tr><td>$U_{p,y}$ (Usage rate in project scenario p during year y)</td><td>
<table>
<tr><th colspan="2">MS1</th><th colspan="2">MS2</th></tr>
<tr><td>1-2 years</td><td>2-3 years</td><td>2-3 years</td><td>3-4 years</td></tr>
<tr><td>0.9804</td><td>0.9709</td><td>0.9703</td><td>0.9619</td></tr>
</table>
</td><td>The Usage rate of ICS was determined by conducting monitoring survey, in line with applied version of methodology and the registered monitoring plan. The survey is conducted with the help of monitoring forms. The VVB has verified the form entries with the Usage rate calculation and assessed the calculations. Values applied in ER calculator and MR are consistent. The parameter is monitored and recorded annually. The measuring frequency is as per the monitoring plan and monitoring methodology. The calculation of the Usage Survey was found inline (refer ER worksheet, tab: “Sample Size cal and results”).<br><br>The key personnel of monitoring survey were interviewed on procedures and associated training.</td></tr>
<tr><td>$N_{p,y}$ (Cookstove in the project database for project scenario p through year y)</td><td>
<table>
<tr><th colspan="2">MS1</th><th colspan="2">MS2</th></tr>
<tr><td>1-2 years</td><td>2-3 years</td><td>2-3 years</td><td>3-4 years</td></tr>
<tr><td>59,438</td><td>124,444</td><td>59,438</td><td>124,444</td></tr>
</table>
</td><td>The parameter is monitored for calculation of baseline emissions or baseline net GHG removals by sinks. The number of ICS installed is tracked through ICS Installation Database and recorded appropriately by</td></tr>
</table>

<table>
<tr><th>Parameter</th><th>Monitored Value</th><th>Verification Opinion</th></tr>
<tr><td></td><td></td><td>Climate Secure India Private Limited. The monitoring (at time of installation) involves the recording ICS type, ICS unique serial number, Date of installation, End user details, address, location etc. The CPA implementer excludes the subsequent ICS from the ER calculations, in case an existing Bondhu Chulha is found at the household, thus ensuring that only one project device is credited per household. For the applied monitoring period no ICS were eliminated from the ER calculation on account of this. This is verified by the Assessment Team. The verification team remotely pulled the end user agreement records and compared the details with the information in the provided ICS installation database. Furthermore, the team randomly selected households from the database to compare the40erify40tion in the database with the actual stoves being used. The way of recording all stoves data (including end user detail) complies with the registered monitoring plan. Besides, the date of sampled end users (interviewed during the remote assessment) was also compared with the ICS database. No inconsistency was identified.</td></tr>
<tr><td>$DF_{b,stove,y}$ (Discount factor to account for the baseline</td><td><table><tr><th colspan="2">MS1</th><th colspan="2">MS2</th></tr><tr><td>1-2 years</td><td>2-3 years</td><td>2-3 years</td><td>3-4 years</td></tr></table></td><td>This parameter is used for the calculation of baseline emissions or baseline net GHG removals by sinks. It</td></tr>
</table>

| Parameter | Monitored Value | | | | Verification Opinion |
|---|---|---|---|---|---|
| stove use in project scenario during the year y) | 0.0131 | 0.0196 | 0.0195 | 0.0244 | is calculated on the basis of survey calculated annually, with measuring frequency as per the monitoring plan. The parameter is calculated by taking proportion of number of meals cooked using the baseline stove/ total number of meals.<br><br>The parameter has been monitored appropriately, in accordance with the registered monitoring plan (as per measurement methods and procedures to be applied). The survey forms were verified by the Verification Team and deemed as complete and relevant with respect to the monitoring requirements.<br><br>Some inconsistencies were observed, refer CAR 1 in Section 4.4. |

After appropriate corrections were made by the project participant, it can be confirmed that all monitoring parameters have been measured / determined without material misstatements and in line with all applicable standards and relevant requirements.

Refer CAR 01 raised.

### Data and parameters not monitored:

The ex-ante parameters stated in under section D.1 of MR[/MR/] are derived from the registered VPA-DD. The ex-ante data will be applicable for the respective crediting periods for each VPA. The ex-ante fixed parameters have been correctly applied in the emission reductions calculation for this monitoring period.

## 5.8. Monitoring report(s)

A GS Monitoring Report[/MR/] along with relevant supporting documents was submitted to the verification team by the project participants. These documents form the basis for the verification opinion of TÜV NORD.

During the verification, mistakes and needs for clarification were identified. The PP has carried out the requested corrections so that it can be confirmed that the Monitoring report is complete and transparent and accordance with the registered VPA-DD[/VPA/], the GS PoA [/GSPoA-DD/] and relevant GS requirements.

## 5.9. Sampling

## 5.10. Implementation of the sampling plan

The PP's sampling plan for determining various monitoring parameters is based on the requirements in the applied methodology "The Gold Standard Simplified Methodology for Efficient Cookstoves, Version 1.0, dated February 2013 and Guideline for sampling and survey which prescribes the desired level of confidence / precision (95/10 for single sample tests) for ex-post monitoring. The sample size for monitoring parameters were appropriately calculated as described below:

PP has monitored the parameters of interest under the project activity through a Random Sample Group (RSG). The size of the sample group was selected to ensure the parameters measured satisfy 95/10 precision (95% confidence interval and 10% margin of error), adhering to the requirements under the applied methodology.

Project has a large number of technology units, huge distribution area and many numbers of years coupled with the project. Along with data captured in Sales Record, further contact details are compiled for a subset of stove customers in a Customer Sampling Record. The Customer Sampling Record is used for customer follow-up and sampling for monitoring surveys.

**Monitoring Usage Survey**

The "The Gold Standard Simplified Methodology for Efficient Cookstoves, Version 1.0, dated February 2013 states that monitoring surveys should be carried out annually, beginning one year after project registration. The monitoring survey has the same sample size requirements as the baseline survey;

For determining the usage rate of the project technology (ies) via usage surveys, PP followed the sampling size requirements as given by the methodology on page 10[7].

The sample size for usage survey were determined, applying the following approach;

- Group size < 300: Minimum size 30 or population size, whichever smaller
- Group size 300-1000: Minimum sample size 10% of group size
- Group size > 1000: Minimum sample size 100

Besides, as required by the methodology (page 24) and as recommended by GS via the approved deviation, the PP ensured that minimum 205 samples for MS 1 and 206 samples for MS2 are covered for monitoring. If there is any shortfall from the minimum number of samples for any age category (40 samples), the shortfall sample gap has been considered as non-operational for that category as a conservative measure. This approach is deemed acceptable as conservative. The reliability assessment of the survey results shows that the precision attained is within the required level of 10% and is deemed statistically acceptable.

| | **Monitoring results and Reliability Check – Usage** | | | |
|---|---|---|---|---|
| | **MS1** | | **MS2** | |
| | **1-2 years** | **2-3 years** | **2-3 years** | **3-4 years** |
| **Usage Measured** | 0.9804 | 0.9709 | 0.9703 | 0.9619 |

[7] The project monitoring survey has the same sample size requirements as given for the baseline survey in the methodology.

| | | | | |
|---|---|---|---|---|
| **Standard Error of Usage** | 1.37% | 1.66% | 1.69% | 1.87% |
| **Relative Precision** | 2.74 | 3.34 | 3.41 | 3.80 |
| **Result** | Ok passed | Ok passed | Ok passed | Ok passed |

Usage survey respondents were selected as mentioned above. All the interviews were conducted following the other means of verification at respondent's home. Responses were then analyzed based on averages, allowing population trends to be established and reported on. A total of 411 surveys were conducted and have been used for the results.

**Usage Survey**

As stipulated in the methodology and that recommended by GS via the approved deviation a Usage Survey needs to be conducted on a minimum sample size of 100, with at least 40 samples for project technologies of each age being credited. Minimum requirement of 40 project stoves from each age group under crediting were attempted and included usage parameter is weighted based on the proportion of technologies in the total sales records of each age group and result in the emission reduction calculation spreadsheet (tab: Monitoring Summary MS1, Monitoring Summary MS2) assessed to appropriately presented.

Usage Survey was conducted on a total of 205 (102 stoves for 1-2 years and 103 stoves for 2-3 years) stoves covering each age groups of stoves under crediting for MS1 and 206 (101 stoves for 2-3 years and 105 stoves for 3-4 years) stoves covering each age groups of stoves under crediting for MS2. The total population under the survey are:

183,882 (59,438 stoves for 1-2 years and 124,444 stoves for 2-3 years) for MS1 and 183,882 (59,438 stoves for 2-3 years and 124,444 stoves for 3-4 years) for MS2 and achieved usage rate for the monitoring period for MS1 (1-2 years is 98.04% and 2-3 years is 97.09%) and for MS2 (2-3 years is 97.03% and 3-4 years is 96.19%) as verified from the GS 3112 MP#3 ER calculator v1.0 22 Feb 2022.xlsx spreadsheet (integrated into ER Worksheet under Tab "Sample Size cal and results"). The detailed calculation is presented in GS 3112 MP#3 ER calculator v1.0 22 Feb 2022.xlsx spreadsheet (integrated into ER Worksheet under Tab "Sample Size cal and results") which was assessed to be appropriate by the verification team. The VVB noted that the PP selected the lowest "Usage Rate Fraction" between the MP#1, MP#2 and MP#3. The arrived Usage Fraction for MS1 and MS2 is most conservative.

Furthermore, the reliability test conducted for the parameters monitored and were assessed to be appropriately conducted and found to be complying with the precision requirement (95/10) and in accordance with applied methodology and Guidelines for sampling and survey version 04.0.

Based on above and sectoral and local expertise, verification team can confirm that the sampling approach is in accordance with the requirements of applied methodology and Standard for sampling and surveys for GS Project Activity and VPA-DD version 09 and "Guidelines for sampling and surveys for GS project activities and programme of activities (version 04.0). Furthermore, based on review of the ex-post monitoring survey records verification team confirms that the sampling surveys appropriately covered end users of improved cook stoves technologies in household's purposes in the host country of Bangladesh. Thus, the survey design covers the regional distribution of the population (within the geographical boundary) and is representative of actual population for improved cookstoves technologies in household user groups.

## 5.11. Sampling approaches during verification

The verification team followed the "Standard for Sampling and Surveys for GS Project Activities and Programme Activities" version 09, para 29 to 32 and 39, esp. for taking sample out of the CME's sample. Verification team has adopted the acceptance sampling approach (AS) in accordance with § 29, 30, 31 to 32 and 39 of the Sampling Standard. The verification Team checked provisions of the para 39 of the applied standard to apply the producer risk and consumer risk following the provision of para 39 as assessed below:

| Statement of para 39:<br>*A DOE may select a different sample size than the one indicated in paragraph 32 above, either by choosing a different value for the consumer risk and producer risk (e.g. 20 per cent for the consumer risk) when applying acceptance sampling or by using another approach, if any of the following conditions apply* | | |
|---|---|---|
| **Sr. No.** | **Requirement of para** | **DOE Assessment** |
| a) | The estimated volume of annual GHG emission reductions of the project activity or the PoA being verified is equal to or less than 100,000 t $CO_2$ eq.; | Not Applicable. |
| b) | The project activity or the PoA is located in a least developed country or a host Party with 10 or fewer registered CDM project activities at the end of the monitoring period being verified | The PoA is located in the LDC i.e. Host Country Bangladesh as per https://unfccc.int/topics/resilience/workstreams/national-adaptation-programmes-of-action/ldc-country-information |

Following the provisions stipulated under of § 39 of "Standard for Sampling and Surveys for CDM Project Activities and Programme Activities" version 09, the VT is considering AQL 0.5 % and UQL 20%, Producer risk of 10% and consumer risk of 20% for determination of the sample size to be verified for remote audit assessment. Considering the above § under applied sampling standard, the VVB should have verified 8 samples under the acceptance sampling approach with acceptancIc) number 0. The verification team has verified total of 9 sampled end users for MS1 and 9 sampled users for MS2 from user sample, which were over and above to further verify the project implementation on ground across the entire vintage under crediting during current monitoring period. Project usage survey samples were randomly selected (from PP samples) by Verification Team. The sampled end users and other documentary evidences demonstrating implementation of the project ICS, continuous use of baseline stove (if any), and also confirmation on the usage rate of project and baseline devices have been reconfirmed during telephonic/ skype call/ interview with the end user. The list of the end users verified through video recording and telephonic/ skype call is presented under section above (section D.3).

During the remote assessment, TÜV NORD selected the following approach:

From the observations / results from MS1 – 9, MS2 – 9 verified ICS, the following could be confirmed:

1. The usage rate of cook stoves technologies in households (domestic use);
2. Living conditions with improved stoves over conventional unimproved stoves;
3. Reduce usage of wood/charcoal;
4. SD aspect as per the registered GS project Passport;

| | |
|---|---|
| AQL | 0.5% |

| | |
|---|---|
| UQL | 20% |
| Producer risk | 10% |
| Consumer risk | 20% |
| Required Minimum Sample size | 08 |
| Acceptance Number | 0 |
| Total samples covered | MS1 – 9, MS2 – 9 (from Usage survey) (18) |

No PP sampling-based monitoring records/data results were found discrepant during the VVB verification remote onsite audit. All the 09 verified samples remotely interviewed were found to be in compliance and adherence with the PP's monitoring. Based on the assessment of 09 remotely assessed samples, telephonically interviewed end users, it could be confirmed that the result presented for continuous use of baseline stoves (CU), usage survey, are reproducible and thus, sampling result is deemed acceptable. Further, the verification team reviewed all the primary monitoring records during remote audit assessment to assess the consistency of information with ER calculation spreadsheet and found the monitoring data to be correctly transcribed into the ER sheet and MR. Based on that, verification team concludes that sampling results and values presented by CME in the MR and ER calculation spread sheet and results of survey are consistent with the onsite observation and interview with the end users.

The number of installed units, eligible for crediting during the current monitoring period are 183,882 (59,438 stoves for 1-2 years and 124,444 stoves for 2-3 years) for MS1 and 183,882 (59,438 stoves for 2-3 years and 124,444 stoves for 3-4 years) for MS2.

The details of the sampled domestic users (usage survey) assessed to confirm the project implementation and other monitoring aspects are presented in table 7-4 of this report.

## 5.12. ER Calculation

The methodology directly provides equation for emission reductions (without separate baseline, projector leakage emission reduction equations). As per the methodology, and the PoA-DD, emission reductions are calculated as:

$$ER_y = \sum_{0to1}^{xtoy} N_{P,y} * P_y * U_{P,y} * (f_{NRB,y} * EF_{b,fuel,CO2} + EF_{b,fuel,non\_CO2}) * (1 - DF_{b,Stove,y})$$

Where,

| | |
|---|---|
| $N_{P,y}$ | Number of project cook stoves of each age group operational in the year y |
| $P_y$ | Quantity of firewood that is saved in the year y (tons per household in year y) |
| $U_{P,y}$ | Usage rate for project cook stoves in year y, based on adoption rate and drop off rate revealed by usage surveys (fraction) |
| $f_{NRB,b,y}$ | Fraction of biomass, used in year y for baseline scenario, which can be established as non-renewable. The project proponents shall estimate project specific national/ regional value or apply the default $f_{NRB}$ value provided by the CDM Executive Board and endorsed by the host country DNA. |
| $EF_{b,fuel,CO2}$ | $CO_2$ emission factor of firewood that is substituted or reduced. (Default value for wood fuel 1.747 $tCO_2$/ton of wood |

| | |
|---|---|
| $EF_{b,fuel,non\_CO2}$ | Non-$CO_2$ emission factor of firewood that is substituted or reduced. (Default value for wood fuel 0.533 $tCO_2$/ton of wood) |
| $DF_{b,Stove,y}$ | Usage of baseline cook stove during the year y (fraction) in project scenario |
| x | y – 1 |
| y | Year of the crediting period |

**Determination of quantity of biomass saved ($P_y$):**
Quantity of firewood that is saved ($P_y$)is estimated as follows:

$$P_y = B_{b,y} * (1-\eta_b/\eta_{p,y}) \times LAF$$

| | |
|---|---|
| $B_{b,y}$ | Quantity of firewood consumed in baseline scenario during year y (tones per household per year) |
| $\eta_{p,y}$ | Efficiency of project cook stove in year y (fraction) |
| $\eta_b$ | Efficiency of the baseline cook stove being replaced (fraction). A default value of 10% shall be used if the replaced cook stove is a three stone fire, or a conventional device without a grate or a chimney i.e. with no improved combustion air supply or flue gas ventilation |
| LAF | Default leakage adjustment factor = 0.95 to account for leakages related to non-renewable biomass saved by the project activity |

**Determination of quantity of firewood consume in the baseline ($B_{b,y}$):**
The firewood consumed is the estimated average annual consumption of firewood per household (tons/year), which may be derived using option (a) of the methodology, i.e. historical data. Accordingly, $B_{b,y}$ is referenced from historical data as available in published literature. As per table 2.2 of the World Bank Study, Restoring Balance: Bangladesh's Rural Energy Realities, March 2009, the fuel wood usage per household for cooking is 1.06484 tons per annum.

**Determination of project cook stove efficiency ($\eta_{p,y}$ ):**
Efficiency of project cook stove in year y ($\eta_{p,y}$) is estimated as follows:

$$\eta_{p,y} = \eta_p * (DF_\eta)^{y-1} * 0.94.$$

Where,

| | |
|---|---|
| $\eta_{p,y}$ | Efficiency of project cook stove in year y (fraction) |
| $\eta_p$ | Efficiency of project cook stove (fraction) determined at the start of the project activity. |
| $DF_\eta$ | Discount factor to account for efficiency loss of project cook stove per year of operation (Fraction). The default value for this parameter is 0.99 i.e. 1% efficiency loss/year. |
| 0.94 | Adjustment factor to account for uncertainty related to project cook stove efficiency test |

## 5.13. Quality Management

Quality Management procedures for measurements, collection and compilation of data, data storage and archiving, calibration, maintenance and training of personnel in the framework of this GS PoA-DD have been defined. The procedures defined can be assessed as appropriate for the purpose. No significant deviations thereof have been observed during the verification.

## 5.14. Actual emission reductions during the first commitment period and the period from 1 January 2013 onwards

The MR(s) include(s) actual ER values achieved from 1 January 2013 onwards as follows:

**Table 5-2:** Emission reductions before and after the end of 2012

| | until 2012-12-31 | from 2016-02-22 to 2018-02-28 | Sum |
|---|---|---|---|
| **Emission reductions [$tCO_2e$]** | **-** | **312,714** | **312,714** |

[1)] Both days included

## 5.15. Comparison with ex-ante estimated emission reductions

The MR includes a comparison of the calculated actual emission reductions with the ex-ante calculated values in the registered VPA-DD.

| CPA | Amount estimated ex ante for this monitoring period ($tCO_2e$) | Actual values achieved during this monitoring period ($tCO_2e$) |
|---|---|---|
| GS 3544 | 18,664 | 18,154 |
| GS 3482 | 18,664 | 17,338 |
| GS 3619 | 18,664 | 18,262 |
| GS 3620 | 18,664 | 17,768 |
| GS 3618 | 18,664 | 17,403 |
| GS 4372 | 14,776 | 5,433 |
| GS 4373 | 14,794 | 6,907 |
| GS 4374 | 14,807 | 4,668 |
| GS 4375 | 14,833 | 5,432 |
| GS 4376 | 14,844 | 3,727 |
| GS 4377 | 14,860 | 7,150 |
| GS 4378 | 14,875 | 5,939 |
| GS 4379 | 14,893 | 9,941 |
| GS 4380 | 14,895 | 6,159 |
| GS 4381 | 14,912 | 4,889 |
| GS 4382 | 14,929 | 7,464 |
| GS 4384 | 14,934 | 4,510 |
| GS 4383 | 14,944 | 6,869 |
| GS 4385 | 14,950 | 6,030 |
| GS 4386 | 14,966 | 12,092 |
| GS 4387 | 14,975 | 8,459 |
| GS 4388 | 14,988 | 9,199 |
| GS 4389 | 15,011 | 7,603 |
| GS 4390 | 15,013 | 981 |

| | | |
|---|---|---|
| GS 4391 | 15,029 | 9,603 |
| GS 4392 | 15,041 | 2,666 |
| GS 4393 | 15,041 | 6,441 |
| GS 4394 | 15,069 | 14,348 |
| GS 4395 | 15,085 | 8,463 |
| GS 4396 | 15,095 | 10,475 |
| GS 4397 | 15,112 | 14,680 |
| GS 4398 | 15,132 | 3,292 |
| GS 4399 | 15,133 | 466 |
| GS 4400 | 15,151 | 14,929 |
| GS 4401 | 15,169 | 14,974 |
| **Total** | **542,572** | **312,714** |

Ex-Ante Ers: **542,572** $tCO_2e$

Ex-Post ERs: **312,714** $tCO_2e$

Difference: **229,858** $tCO_2e$

The ex-post value is found to be lower than the ex-ante determined value.

Product vintages are as follows:

| Start Dates | End Dates | VERs (tCO2e) |
|---|---|---|
| 22/02/2016 | 31/12/2016 | 97,883 |
| 01/01/2017 | 31/12/2017 | 185,019 |
| 01/01/2018 | 28/02/2018 | 29,812 |

## 5.16. Contribution to Sustainable Development

The SD indicators as outlined in the sustainability monitoring plan of the GS PoA / VPA Documents are monitored and reported appropriately and cross-verified by means of desk review of survey reports, interviews with the CME operation personnel and selected households. The monitoring system and all applied procedures are in compliance to the sustainability monitoring plan in the registered GS VPA-DD and the Gold Standard principles.

**Table 5-1: Assessment of monitored SD Indicators**

| Indicator | Chosen Parameter | Situation as at 28/02/2018 | Verification Opinion |
|---|---|---|---|
| **SDG 3: Good Health and Well Being**<br><br>**SDG 7: Affordable** | Air Quality (Visible Reduction in smoke, soot deposition on utensils) | All respondents mentioned reduction in smoke and soot while cooking with project cook stoves | During the survey, the PP has enquired about reduction in smoke/PM emissions while cooking on improved stove. All of the end users have confirmed that there was certain decrease in the indoor emissions. The VVB has verified the parameter by comparing the |

| Indicator | Chosen Parameter | Situation as at 28/02/2018 | Verification Opinion |
|---|---|---|---|
| **and Clean Energy** | | | requirements of monitoring under PoA PDD and respective VPA-DD.<br>The data was based on the Project survey results conducted. The data is derived from the monitoring survey. The monitoring survey results confirmed reduction in the smoke levels which in turn confirms good health and wellbeing.<br>The VVB confirms that the applied values are accurate and best represent the monitored parameter under the perspective of meeting the SDG goal for the PoA. |
| **SDG 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all** | | | |

1. Human and Institutional capacity (Number of end-user awareness initiatives/ events/workshops)

| | | |
|---|---|---|
| 2. 2. Quality of Employment (Number of Trainings, Workshops for training of POs and Field Officers)– '0' - no new installations<br>During the monitoring period and 425 and 445 jobs created during | 1. '0' as there were no new installations<br>2. The VVB performed the interviews and noted that trainings are performed. IThe following sample attendance sheets of training were assessed as evidence of the training,<br>• MS1_21.12.2016.pdf | 1. '0' as there were no new installations<br>2. The VVB performed the interviews and noted that trainings are performed. The following sample attendance sheets of training were assessed as evidence of the training,<br>• MS1_21.12.2016.pdf<br>• MS1_22.12.2016.pdf<br>• MS2_26.12.2017.pdf<br>• MS2_27.12.2017.pdf<br>• Declaration of Employment MP3-MS1.pdf<br>• Declaration of Employment MP3-MS1.pdf |

<table>
<tr>
<td>MS1 and MS2 respectively. Various trainings were also conducted during the applied MP. The evidences of the MP were verified based on the sample verification of training records.</td>
<td>• MS1_22.12.2016.pdf<br>• MS2_26.12.2017.pdf<br>• MS2_27.12.2017.pdf<br>• Declaration of Employment MP3-MS1.pdf<br>• Declaration of Employment MP3-MS1.pdf<br>.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SDG 7: Affordable and Clean Energy</td>
<td>Access to affordable and clean energy services (Number of ICS sold under the VPA)</td>
<td>
<table>
<tr><th>VPA number</th><th>No. of ICS installed</th></tr>
<tr><td>VPA 01</td><td>9,029</td></tr>
<tr><td>VPA 02</td><td>8,623</td></tr>
<tr><td>VPA 03</td><td>0</td></tr>
<tr><td>VPA 04</td><td>9,083</td></tr>
<tr><td>VPA 05</td><td>8,837</td></tr>
<tr><td>VPA 06</td><td>8,656</td></tr>
<tr><td>VPA 07</td><td>3,425</td></tr>
<tr><td>VPA 08</td><td>4,354</td></tr>
<tr><td>VPA 09</td><td>2,943</td></tr>
<tr><td>VPA 10</td><td>3,424</td></tr>
<tr><td>VPA 11</td><td>2,350</td></tr>
<tr><td>VPA 12</td><td>4,507</td></tr>
<tr><td>VPA 13</td><td>3,744</td></tr>
<tr><td>VPA 14</td><td>6,266</td></tr>
<tr><td>VPA 15</td><td>3,882</td></tr>
<tr><td>VPA 16</td><td>3,082</td></tr>
<tr><td>VPA 17</td><td>4,705</td></tr>
<tr><td>VPA 18</td><td>2,843</td></tr>
<tr><td>VPA 19</td><td>4,330</td></tr>
<tr><td>VPA 20</td><td>3,801</td></tr>
<tr><td>VPA 21</td><td>7,622</td></tr>
<tr><td>VPA 22</td><td>5,332</td></tr>
<tr><td>VPA 23</td><td>5,799</td></tr>
<tr><td>VPA 24</td><td>4,793</td></tr>
<tr><td>VPA 25</td><td>619</td></tr>
<tr><td>VPA 26</td><td>5,968</td></tr>
<tr><td>VPA 27</td><td>1,642</td></tr>
<tr><td>VPA 28</td><td>3,966</td></tr>
</table>
</td>
<td>The parameter “Access to affordable and clean energy services” indicates the access to the basic services, in this case clean and efficient cooking device (ICS). The program is developed with the objective to make efficient, economic (fuel economy), healthy devices to all the strata of community including the poor people. The end users were also surveyed to confirm if the ICs saved fuel. Based on survey results, it was confirmed that ICS reduced the fuel consumption as well time for cooking and hence led to savings which was utilize for other expenses.<br><br>The parameter is therefore represented based on number of ICS disseminated. The VVB has verified the dissemination record of ICS during the CDM verification and also during the applied verification. The VVB confirms that the applied values are accurate and best represent the monitored parameter under the perspective of meeting the SDG goal for the PoA.</td>
</tr>
</table>

| | | | |
|---|---|---|---|
| | | <table><tr><td>VPA 29</td><td>8,834</td></tr><tr><td>VPA 30</td><td>5,211</td></tr><tr><td>VPA 31</td><td>6,449</td></tr><tr><td>VPA 32</td><td>9,038</td></tr><tr><td>VPA 33</td><td>2,027</td></tr><tr><td>VPA 34</td><td>287</td></tr><tr><td>VPA 35</td><td>9,192</td></tr><tr><td>VPA 36</td><td>9,219</td></tr><tr><td>**Total**</td><td>**183,882**</td></tr></table> | |
| **SDG 8: Decent Work and Economic Growth** | Quantitative employment and Income Generation (Number of Jobs Created) | 200<br>Refer ER calculator for detailed list of employees | The employment database was reviewed to cross check the number of direct jobs created by the project activity.<br>Based on the review of "Declaration of Employment MP3-MS1.pdf" and "Declaration of Employment MP3-MS2.pdf". For MS1 425 employees were employed, and for MS2 445 employees were employed. The VVB confirm that the wages were at par with the industrial standard and meeting the requirements of minimum wages (applicable to the host country Bangladesh) /SD1/.<br>The reported parameter is deemed accurate. |
| **SDG 9: Industry, Innovation and Infrastructure** | 1. Stove Condition (Inspection of physical condition of project)<br><br>2. Stove Replacement (Replacements of project ICS with new project ICS, if applicable) | 1. Stove Condition:<br>All the stoves were found in good condition. Refer ER calculator for detail on each sample<br><br>2. Stove Replacement<br><table><tr><td>MS1</td><td>MS2</td></tr><tr><td>0</td><td>0</td></tr></table> | The parameter is monitored based on the monitoring survey. The VVB has verified the submitted survey records and confirms the reported statement as accurate |
| **SDG 12: Responsible consumption and production**<br><br>**And** | Livelihood of poor (Reduction in fuel expenditure/reduction in fuel collection time) | Refer VER calculation workbook.<br><br>All respondents mentioned either reduction in fuel expenditure or reduction in fuel collection time after they have started using Bondhu Chulha. | The parameter is monitored based on the ICS database. Monitoring surveys were verified with remote assessment. The end users confirmed that there was reduction in the fuel wood consumption thereby reducing the time to collect wood or savings equivalent to the cost of the wood. The statement of |

| | | | |
|---|---|---|---|
| **SDG 15: Life on Land** | | | the reduction in the fuel cost is backed by monitoring surveys which confirm the reduction in fuel expenditure, thus monitoring of this parameter is deemed as appropriate. |

The verification team confirmed that no changes to the registered SD parameters have occurred that may have an impact on Gold Standard qualification of this project activity.

## 5.17. Overall Aspects of the Verification

All necessary and requested documentation was provided by the project participants so that a complete verification of all relevant issues could be carried out.

Access was granted to all installed domestic and non-domestic which are relevant for the project performance and the monitoring activities.

The verification team has checked on the agreement between the manufacturer and users (domestic and non-domestic) which is basically the part of the purchase receipt where users of ICS surrender the carbon credits generated due to their use.

Users agreed to give up the right to the use the carbon emission reductions to Bangladesh Bondhu Foundation.

No issues have been identified indicating that the implementation of the project activity and the steps to claim emission reductions are compliant with the GS requirements.

## 5.18. Grievances

The verification team has interviewed the operational personnel, reviewed the survey report and there are no complaints and grievances raised by the householders.

The verification team has interviewed the domestic and non-domestic during the remote onsite inspection and observed that there were no complaints as regards to the CME personnel and the other involved parties.

## 5.19. Hints for next periodic Verification

Not applicable. FARs were raised during CP renewal, all FARs from MP#1 and MP#2 GS verification were already closed. No new FAR were raised during the current verification.

# 6. VERIFICATION AND CERTIFICATION STATEMENT

Bangladesh Bondhu Foundation has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 3rd periodic verification of the PoA:

"***"GHG Emission Reduction Through Use of Bondhu Chula (Improved Cook Stoves) in Bangladesh"***,

with regard to the relevant requirements for GS project activities. The PoA reduces GHG emissions by reducing the use of non-renewable biomass or fossil fuel for cooking. Technologies disseminated under the PoA are more efficient than baseline. This verification covers the emission reductions achieved by VPAs in its corresponding monitoring periods:

| ***VPA No.*** | ***Monitoring period (MP): ER's claimed from 01/03/2016 to 28/02/2018 as applicable*** | | | | | |
|---|---|---|---|---|---|---|
| **1-2 and 4 to 36** | ***From:*** | | | ***To:*** | | |
| | | MS1 | MS2 | | MS1 | MS2 |
| | VPA 01-02 and 04-06 | 22/02/2016 | 01/03/2017 | VPA 01-02 and 04-06 | 28/02/2017 | 28/02/2018 |
| | VPA 07-36 | 01/08/2016 | 01/03/2017 | VPA 07-36 | 28/02/2017 | 28/02/2018 |

In the course of the verification 04 Corrective Action Requests (CAR), 03 Clarification Requests (CL) and 04 FAR from previous verification were raised/assessed and successfully closed. Besides, no Forward Action Request (FAR) has been raised to be considered during next subsequent verification. The verification is based on the draft monitoring report(s), revised monitoring report(s), the monitoring plan as set out in the registered VPA-DD(s), the validation report, emission reduction calculation spreadsheet and supporting documents made available to the TÜV NORD JI/CDM CP by the project participant.

As a result of this verification, the verifier confirms that:

- all operations of the project are implemented and installed as planned and described in the validated project design document.
- the monitoring plan is in accordance with the applied approved GS methodology.
- the installed equipment essential for measuring parameters required for calculating emission reductions are calibrated appropriately.
- the monitoring system is in place and functional. The project has generated GHG emission reductions.
- the project contributes to sustainability development

As the result of the 3rd periodic verification, the verifier confirms that the GHG emission reductions are calculated without material misstatements in a conservative and appropriate manner. TÜV NORD JI/CDM CP herewith confirms that the PoA has achieved emission reductions in the above-mentioned reporting period as follows:

Emission reductions: **312,714 $tCO_2e$**

New Delhi, 01/10/2022

Prakash

Prakash Kumar Mishra
TÜV NORD JI/CDM Certification Program
Verification Team Leader

Essen, 01/10/2022

Winter, Stefan
TÜV NORD JI/CDM Certification Program
Final Approval

# 7. REFERENCES

**Table 7-1:** Documents provided by the project participant(s)

| Reference | Document |
|---|---|
| **Monitoring Report** | |
| **/MR/** | 1. Monitoring Report dated 2022-01-10 v 1.0<br>2. Monitoring Report dated 2022-04-08 v 2.0<br>3. Monitoring Report dated 2022-05-05 v 3.0<br>4. Monitoring Report dated 2022-05-25 v 4.0<br>5. Monitoring Report dated 2022-09-26 v 4.0 |
| **ER Spreadsheet** | |
| **/ER1/** | 1. Emission reduction worksheet for Monitoring Report dated 2022-02-22 v 1.0<br>2. Emission reduction worksheet for Monitoring Report dated 2022-04-07 v 2.0<br>3. Emission reduction worksheet for Monitoring Report dated 2022-09-26 v 4.0 |
| **Database** | |
| **/DB1/** | ICS installation database<br>GS 3112 MP#3 Installation Database v1.0 22 Feb 2022<br>GS 3112 MP#3 Installation Database v2.0 07042022 |
| **/DB2/** | • Sample Bondhu Chula Customer Agreement Form for MS#1 and MS#2<br>• Random Number Evidence<br>  ○ MS1 (1-2yr) Random number evidence.pdf<br>  ○ MS1 (2-3yr) Random number evidence.pdf<br>  ○ MS2 (2-3yr) Random number evidence.pdf<br>  ○ MS2 (3-4yr) Random number evidence.pdf |
| **/DB3/ /RC/** | • Sample Monitoring Survey Forms in form of questionnaire<br>• Reliability Check<br>• Sample size and Reliability check for WBT integrated into the ER worksheet |
| **/TRG/** | • BBF Local Partner Training Manual:<br>  ○ Partner responsibilities.pdf<br>  ○ Partner Training Manual.pdf<br>• Monitoring Survey Team Attendance sheet<br>  ○ MS1_21.12.2016.pdf<br>  ○ MS1_22.12.2016.pdf<br>  ○ MS2_26.12.2017.pdf<br>  ○ MS2_27.12.2017.pdf |

| Reference | Document |
|---|---|
| **Survey and monitoring records** | |
| **/S1/** | Monitoring Survey Form<br>• Monitoring Survey Records for MS#1<br>• Total Sale– Record - GS 3112 MP#3 Installation Database v1.0 22 Feb 2022.xlsx<br>• Sample Bondhu Chulhas Photos |
| **/S2/** | Monitoring Survey Form<br>• Monitoring Survey Records for MS#2<br>• Total Sale– Record - GS 3112 MP#3 Installation Database v1.0 22 Feb 2022.xlsx<br>• Sample Bondhu Chulhas Photos |
| **Sustainability Development Indicator** | |
| **/SD1/** | • HR Records<br>○ Declaration of Employment MP3-MS1.pdf<br>○ Declaration of Employment MP3-MS2.pdf |
| **/S1/, /S2/** | Refer description above |
| **Training** | |
| **/TECH/** | • Test report– of ICS - Bondhu Chula (ICS) Test Report.jpg.pdf<br>• Specification– of ICS -–GS 3112 - Bondhu Chula Specifications.pdf<br>• Lifespan certificate– of ICS -–GS 3112 - Lifespan Certificate by SZCSL (stove designer).pdf |

**Table 7-2:** Background investigation and assessment documents

| Reference | Document |
|---|---|
| **/CPM/** | TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms) |
| **/GS4GG TA/** | GS4GG Requirements |
| **/GSM/** | The Gold Standard Simplified Methodology for Efficient Cookstoves, version 1 |
| **/GSS/ /SSP/** | Guidelines for Sampling and Surveys for CDM Project Activities and Programme Of Activities, EB 67, Annex 22 |
| **/IPCC/** | Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories:<br>1. Non-$CO_2$ Stationery Combustion |

| Reference | Document |
|---|---|
| | 2. Emissions from Livestock and Manure Management (Chapter 10)<br>3. IPCC Second Assessment Report – Climate Change 1995: A Report of the Intergovernmental Panel on Climate Change |
| **/KP/** | Kyoto Protocol (1997) |
| **/MA/** | Decision 3/CMP. 1 (Marrakesh – Accords) |
| **/GSPoA-DD/** | PoA GS 3112 Ver–ion 4.0 - GS 3112 PoA-DD SZSCL Bondhu Chulha Program v4.0 20012015.pdf |
| **/PS/** | CDM Project Standard (Version 3.0) |
| **/SSS/** | Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities, version 09 |
| **/TRAN/** | Transition Annex for PoA "GHG Emission Reduction through use of Bondhu Chula (Improved CookStoves) in Bangladesh" and<br>and the VPA 1-46<br><br>Transition Review under Gold Standard for the Global Goals for PoA and VPA 1-46 |
| **/VER/** | Documents of previous verification (Monitoring report, verification report, ER calculation sheet available on the project page)<br>https://cdm.unfccc.int/ProgrammeOfActivities/poa_db/SE7XIMKF8NYVOTL16BW3U45C9ZDGAP/view?cp=1 |
| **/VPA/** | 1. VPA 1 GS 3544 - GS 3544 VPA01 VPA-DD ver 07.0 17032015 clean.pdf<br>2. VPA 2 GS 3482 - GS 3482 VPA02 VPA-DD ver 04.0 15042015 clean.pdf<br>3. VPA 4 GS 3619 - GS 3619 VPA04 VPA-DD ver 03.0 15042015 clean.pdf<br>4. VPA 5 GS 3620 - GS 3620 VPA05 VPA-DD ver 03.0 15042015 clean.pdf<br>5. VPA 6 GS 3618 - GS 3618 VPA06 VPA-DD ver 03.0 15042015 clean.pdf<br>6. VPA 7 GS 4372 - GS 4372 VPA 7 VPA-DD ver 03.0 03062016.pdf<br>7. VPA 8 GS 4373 - GS 4373 VPA 8 VPA-DD ver 03.0 03062016.pdf<br>8. VPA 9 GS 4374 - GS 4374 VPA 9 VPA-DD ver 03.0 03062016.pdf<br>9. VPA 10 GS 4375 - GS 4375 VPA 10 VPA-DD ver 03.0 21092016.pdf<br>10. VPA 11 GS 4376 - GS 4376 VPA 11 VPA-DD ver 03.0 21092016.pdf<br>11. VPA 12 GS 4377 - GS 4377 VPA 12 VPA-DD ver 03.0 21092016.pdf<br>12. VPA 13 GS 4378 - GS 4378 VPA 13 VPA-DD ver 03.0 21092016.pdf<br>13. VPA 14 GS 4379 - GS 4379 VPA 14 VPA-DD ver 03.0 21092016.pdf<br>14. VPA 15 GS 4380 - GS 4380 VPA 15 VPA-DD ver 03.0 21092016.pdf<br>15. VPA 16 GS 4381 - GS 4381 VPA 16 VPA-DD ver 03.0 21092016.pdf<br>16. VPA 17 GS 4382 - GS 4382 VPA 17 VPA-DD ver 03.0 21092016.pdf<br>17. VPA 18 GS 4384 - GS 4384 VPA 18 VPA-DD ver 03.0 21092016.pdf<br>18. VPA 19 GS 4383 - GS 4383 VPA 19 VPA-DD ver 03.0 21092016.pdf<br>19. VPA 20 GS 4385 - GS 4385 VPA 20 VPA-DD ver 03.0 21092016.pdf<br>20. VPA 21 GS 4386 - GS 4386 VPA 21 VPA-DD ver 02.0 13012016.docx<br>21. VPA 22 GS 4387 - GS 4387 VPA 22 VPA-DD ver 02.0 13012016.docx |

| Reference | Document |
|---|---|
| | 22. VPA 23 GS 4388 - GS 4388 VPA 23 VPA-DD ver 02.0 13012016.docx<br>23. VPA 24 GS 4389 - GS 4389 VPA 24 VPA-DD ver 02.0 13012016.docx<br>24. VPA 25 GS 4390 - GS 4390 VPA 25 VPA-DD ver 02.0 13012016.docx<br>25. VPA 26 GS 4391 - GS 4391 VPA 26 VPA-DD ver 02.0 13012016.docx<br>26. VPA 27 GS 4392 - GS 4392 VPA 27 VPA-DD ver 02.0 13012016.docx<br>27. VPA 28 GS 4393 - GS 4393 VPA 28 VPA-DD ver 02.0 13012016.docx<br>28. VPA 29 GS 4394 - GS 4394 VPA 29 VPA-DD ver 02.0 13012016.docx<br>29. VPA 30 GS 4395 - GS 4395 VPA 30 VPA-DD ver 02.0 13012016.docx<br>30. VPA 31 GS 4396 - GS 4396 VPA 31 VPA-DD ver 02.0 13012016.docx<br>31. VPA 32 GS 4397 - GS 4397 VPA 32 VPA-DD ver 02.0 13012016.docx<br>32. VPA 33 GS 4398 - GS 4398 VPA 33 VPA-DD ver 02.0 13012016.docx<br>33. VPA 34 GS 4399 - GS 4399 VPA 34 VPA-DD ver 02.0 13012016.docx<br>34. VPA 35 GS 4400 - GS 4400 VPA 35 VPA-DD ver 02.0 13012016.docx<br>35. VPA 36 GS 4401 - GS 4401 VPA 36 VPA-DD ver 02.0 13012016.docx |
| **/VVS/** | CDM Validation and Verification Standard (Version 03.0) |

**Table 7-3:** Websites used

| Reference | Link | Organisation |
|---|---|---|
| **/gs/** | http://www.goldstandard.org/ | CDM Gold Standard |
| **/unfccc/** | http://cdm.unfccc.int | UNFCCC |
| **/ipcc/** | www.ipcc-nggip.iges.or.jp | IPCC publications |
| **/ss/** | http://www.raosoft.com/samplesize.html | Sampling Size |

**Table 7-4:** List of interviewed persons

| | | | |
|---|---|---|---|
| **/IM01/** | T | Khalequzzaman Md. | CPA (SZCSL)<br>Implementer-CME Representative |
| | V | Sirajum Joya Munira | Communication Officer (SZCSL) |
| | V | Atanu Kumar Saha | DGM (SZCSL) |
| | V | Kamal Hossain | DGM (SZCSL) |
| | V | Sonjoy Das | DSM (SZCSL) |
| | V | SM Shah Jaman | DSM (SZCSL) |
| | V | Samsuzzaman | DSM (SZCSL) |

| | | | |
|---|---|---|---|
| | V | Partho Protim Paul | ADM (SZCSL) |
| | V | Shafiqul Islam | DSM (SZCSL) |
| | V | Monawal Hossain | ADM(SZCSL) |
| **/IM02/** | V | Rohit Lohia | Director (CSIPL) |
| | V | Ritesh Kumar | Consultant (CSIPL) |
| | V | Mohit Gupta | Consultant (CSIPL) |
| | V | Saket Shubham | Consultant (CSIPL) |
| **/IM03/** | V | Mst. Asha Akte | Domestic Stove User (MS#1 Survey) |
| **/IM03/** | V | Mohammad Sikder | Domestic Stove User (MS#1 Survey) |
| **/IM03/** | V | Nohid | Domestic Stove User (MS#1 Survey) |
| **/IM03/** | V | Rohima Begum | Domestic Stove User (MS#1 Survey) |
| **/IM03/** | V | Polasi Bain | Domestic Stove User (MS#1 Survey) |
| **/IM03/** | V | Suvas Adhikari / Srabonti | Domestic Stove User (MS#1 Survey) |
| **/IM03/** | V | Minhaz Kazi | Domestic Stove User (MS#1 Survey) |
| **/IM03/** | V | Mr. Razkumar / Shila | Domestic Stove User (MS#1 Survey) |
| **/IM03/** | V | Shumi | Domestic Stove User (MS#1 Survey) |
| **/IM03/** | V | Ranuka Begum | Domestic Stove User (MS#2 Survey) |
| **/IM03/** | V | Tohomina | Domestic Stove User (MS#2 Survey) |
| **/IM03/** | V | Md. Altab Hosen | Domestic Stove User (MS#2 Survey) |
| **/IM03/** | V | Abu Hanif | Domestic Stove User (MS#2 Survey) |
| **/IM03/** | V | Md. Akter Ali | Domestic Stove User (MS#2 Survey) |
| **/IM03/** | V | Bikash Sarker | Domestic Stove User (MS#2 Survey) |
| **/IM03/** | V | Aklima Khatun | Domestic Stove User (MS#2 Survey) |

| | | | |
|---|---|---|---|
| **/IM03/** | V | Shahoria | Domestic Stove User (MS#2 Survey) |
| **/IM03/** | V | Bipul Kumar / Pollob Kumar | Domestic Stove User (MS#2 Survey) |

List of households visited: /LHH/

List of households interviewed by telephone calls:/LHH/

1) Means of Interview: (**T**elephone, **E**-Mail, **V**isit)

# ANNEX

**A1:** Verification Protocol

**A2:** Statements of Competence of involved Personnel

# ANNEX 1: VERIFICATION PROTOCOL

**Table A-1:** GHG calculation procedures and management control testing / detailed audit testing of residual risk areas and random testing

| Identification of potential reporting risk | Identification, assessment and testing of management controls | Areas of residual risks | Additional verification testing | Conclusions and Areas Requiring Improvement (including *Forward Action Requests*) |
|---|---|---|---|---|
| **Raw data generation** | | | | |
| • Installation of measuring equipment<br>• Dysfunction of installed equipment<br>• Maloperation by operational personnel<br>• Downtimes of equipment<br>• Exchange of equipment<br>• Change of measurement equipment characteristic<br>• Insufficient accuracy<br>• Change of technology | • Installation of modern and state of the art equipment<br>• Process control automation<br>• Internal data review<br>• Regular visual inspect-ions of installed equip-ment<br>• Only skilled and trained personnel operates the relevant equipment<br>• Daily raw data checks<br>• Immediate exchange of dysfunctional equipment<br>• Stand-by duty is organized | • Inadequate installation / operation of the monitoring equipment<br>• Inadequate exchange of equipment<br>• Change of personnel<br>• Undetected measurement errors<br>• Inappropriateness of Management system procedures w.r.t. monitoring plan requirements (e.g. substitute value strategies)<br>• Non-application of management system procedures<br>• Insufficient accuracy | • Site – visit<br>• Check of equipment<br>• Check of technical data sheets<br>• Check of suppliers information / guarantees<br>• Check of calibration records, if applicable<br>• Check of maintenance records<br>• Counter-check of raw data and commercial data<br>• Check of CDM management system<br>• Check of CDM related procedures | • **See Table A-2** |

| Identification of potential reporting risk | Identification, assessment and testing of management controls | Areas of residual risks | Additional verification testing | Conclusions and Areas Requiring Improvement (including *Forward Action Requests*) |
|---|---|---|---|---|
| • Accuracy of values supplied by Third Parties | • Training<br>• Internal audit procedures<br>• Internal check of QA/QC measures of involved Third Parties | • Inappropriate QA/QC measures of Third Parties | • Application of CDM management system procedures<br>• Check of trainings<br>• Check of responsibilities<br>• Check of QA/QC documentation / evidences of involved Third Parties | |
| **Raw data collection and data aggregation** | | | | |
| • Wrong data transfer from raw data to daily and monthly aggregated reporting forms<br>• IT Systems<br>• Spread sheet programming<br>• Manual data transmission<br>• Data protection<br>• Responsibilities | • Cross-check of data<br>• Plausibility checks of various parameters.<br>• Appropriate archiving system<br>• Clear allocation of responsibilities<br>• Application of CDM Management system procedures | • Unintended usage of old data that has been revised<br>• Incomplete documentation<br>• Ex-post corrections of records<br>• Ambiguous sources of information<br>• Non-application of management system procedures<br>• Manual data transfer mistakes | • Check of data aggregation steps<br>• Counter-calculation<br>• Data integrity checks by means of graphical data analysis and calculation of specific performance figures<br>• Check of management system certification<br>• Check of data archiving system | • **See Table A-2** |

| Identification of potential reporting risk | Identification, assessment and testing of management controls | Areas of residual risks | Additional verification testing | Conclusions and Areas Requiring Improvement (including *Forward Action Requests*) |
|---|---|---|---|---|
| | • Usage of standard software solutions (Spreadsheets)<br>• Limited access to IT systems<br>• Data protection procedures | • Unintended change of spread sheet programming or data base entries<br>• Problems caused by updating/upgrading or change of applied software | • Check of application of Management system procedures | |
| **Other calculation parameters** | | | | |
| • Emission factors, oxidation factors, coefficients | • The values and data sources applied are defined in the VPA-DD and monitoring plan | • Unintended or intended Modification of calculation parameters<br>• Wrong application of values<br>• Misinterpretations of the applied methodology and/ or the VPA-DD<br>• Missing update of applicable regulatory framework (e.g. IPCC values) | • Update-check of regulatory framework<br>• Countercheck of the applied MP in the MR against the methodology and the VPA-DD | • **See Table A-2** |
| **Calculation Methods** | | | | |

| Identification of potential reporting risk | Identification, assessment and testing of management controls | Areas of residual risks | Additional verification testing | Conclusions and Areas Requiring Improvement (including *Forward Action Requests*) |
|---|---|---|---|---|
| • Applied formulae<br>• Miscalculation<br>• Mistakes in spread-sheet calculation | • Advanced calculation and reporting tools<br>• A CDM coordinator is in charge of the CDM related calculations<br>• Usage of tested / counterchecked Excel spreadsheets<br>• Involvement of external consultants | • The danger of miscal-culation can only be minimized. | • Countercheck on the basis of own calculation.<br>• Spread sheet walk-trough.<br>• Plausibility checks<br>• Check of plots | • **See Table A-2** |
| **Monitoring reporting** | | | | |
| • Data transfer to the author of the monitoring report<br>• Data transfer to the monitoring report<br>• Unintended use of outdated versions | • An experienced CDM consultant is responsible for monitoring reporting.<br>• CDM QMS procedures are defined | • The danger of data transfer mistakes can only be minimized<br>• Inappropriate application of QMS procedures | • Counter check with evidences provided.<br>• Audit of procedure application | • **See Table A-2** |

**Table A-2:** (Project specific) Periodic Verification Checklist

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| ***A. Description of the PoA and its component project activity (-ies)*** | | | | |
| **A.1. Purpose and general description of the PoA and VPA(s)**<br>*Check if section of the MR includes the following:*<br>- *Purpose of the PoA and each VPA and the measures taken to reduce GHG emissions*<br>- *Brief description of the installed technology and equipment*<br>- *Relevant dates for the project activity (e.g. construction, commissioning, continued operation periods etc.)*<br>- *Total emission reductions achieved in this monitoring period* | /MR/<br>/GSPoA-DD/<br>/VPA/ | The verification team has checked section A.1 of the MR and confirms that the information provided is complete and correct with regards to the following:<br>Purpose of the PoA and its VPA(s) and the measures taken to reduce GHG emissions<br>☒ Brief description of the installed technology and equipment's<br>☒ Relevant dates for the VPAs (e.g., construction, commissioning, continued operation periods, VPA inclusion, etc.)<br>☒ Emission reductions achieved in this monitoring period by each VPA and total emission reductions achieved by the PoA<br>In this context the below finding has been identified:<br>NA | ~~CAR 1~~ | OK |
| **A.2. Location of project activity**<br>*Check if section of the MR reflects correctly the following:*<br>- *Host Party(ies)*<br>- *Region / State / Province etc.*<br>- *City / Town / Community etc.*<br>- *Physical / geographical location (e.g., Latitude and Longitude)* | /MR/<br>/VPA/<br>/IM01/<br>/IM03/ | The verification team has checked section A.2 of the MR and confirms by means of comparison with the information given in the VPA-DD and information gathered during the remote site visit that the information provided is complete and correct with regards to the following:<br>☒ Host Party(ies)<br>☒ Region / State / Province<br>☒ City / Town / Community | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | | ☒ Physical / Geographical location | | |
| **A.3. Parties and Project Participants**<br>***(EB 75, Annex 7, A.3)***<br>*Check if section of the MR includes the following:*<br>- *All PPs as displayed on the UNFCCC website*<br>- *A correctly filled table as per the MR template* | /MR/<br>/GS/ | The verification team has checked Appendix of the MR as well as the GS website and confirms that:<br>☒ all PPs as displayed on the project related GS website are correctly listed<br>☒ the table as per the template MR has been correctly filled | OK | OK |
| **A.4. Reference of applied methodology**<br>*Check if section of the MR correctly describes / includes the following:*<br>- *Reference to the applicable version of the methodology*<br>- *Reference to the applicable version(s) of relevant methodological tools*<br>- *Relevant GS/EB decisions, if applicable* | /MR/<br>/VPA/<br>/GS/ | The verification team has checked section A.3 of the MR and confirms by means of comparison with the information given in the VPA-DD and displayed on the GS website that the information provided is complete and correct with regards to the following:<br>☒ Number, title and version of the applicable GS Methodology<br>☒ Name and version of applicable methodological tools<br>☒ Relevant GS decisions<br>In this context no findings have been identified. | OK | OK |
| **A.5. Crediting period of project activity**<br>*Check if section of the MR correctly includes the following:*<br>- *Start date of the crediting period. In this context please check, if applicable, whether post registration changes to the start date have been accepted by the GS.*<br>- *Length and type of the crediting period* | /MR/<br>/GS/ | The verification team has checked section A.4 of the MR(s) and confirms by means of comparison with the information provided in the corresponding VPA DD that the information provided is complete and correct with regards to the following:<br>☒ Start date of the crediting period.<br>☒ Length of the crediting period. | OK | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Refe-rence | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| **A.6. Publication of the Work Plan**<br>*Check if the work plan has been made submitted to GS before the verification commenced.* | /GS/ | The verification team has ensured and confirms by means of checking the respective project information on the GS website that:<br>☒ The work and audit plan, was submitted to GS prior to the start of the verification activities.<br>☒ No comments have been received.<br>In this context no findings have been identified. | OK | OK |
| ***B. Implementation of project activity*** | | | | |
| **B.1. Description of implemented registered programme of activities**<br>*Check if section of the MR correctly describes / includes the following:*<br>- *Implementation status of the PoA and its VPAs*<br>- *Detailed description of installed technology(ies) / technical processes and equipment applied*<br>- *Diagrams (where appropriate)*<br>- *Whether a single report or two MR are prepared; in case of two MR, check that all VPAs are considered in two separate batches* | /MR/<br>/GSPoA-DD/<br>/VPA)<br>/IM01/ | The verification team has checked section 1 of the MR and confirms by means of comparison with the information given in the PoA-DD and VPA-DD, the project standard and information gathered during the remote site visit that:<br>☒ the description of the implementation status of the VPA is in line with the applicable provisions of the Gold standard<br>☒ an appropriate description of the installed technology(ies), technical process and equipment incl. diagrams, where applicable, has been included<br>☒ one single MR has been provided including all VPAs,<br>OR<br>☐ two different MRs are prepared including all VPAs and information on the reference numbers of the VPAs that are included in each batch.<br>In this context no findings have been identified. | OK | OK |
| **B.1.1. Initial project implementation** | /MR/ | The verification team has checked the implemented project activity and the MR and confirms by means of comparison with the | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| *Assess whether the VPA has been implemented and operated as per the registered VPA-DD and are all physical features of the project in place.*<br><br>*Further focus on the potential phase wise implementation and check the reporting on the corresponding status and starting dates accordingly.*<br><br>*Check if the project is still in compliance with the applicability conditions of the methodology.*<br><br>*Also, discuss – if applicable – the necessity of PRC notifications / approvals.* | /VPA/ | information given in the VPA-DD, the applicable Gold Standard Requirements and information gathered during the remote site visit that:<br>☒ the project has been implemented and operated as per the registered VPA-DD and all physical features of the project are in place<br>☒ the project has been implemented phase wise and corresponding evidence has been provided<br>☒ the project is still in compliance with the applied methodology<br>In this context no findings have been identified. | | |
| **B.1.2. Technical equipment changes**<br>***(VVS; § 225 a, 226)***<br><br>*Check if relevant technical equipment of the project activity has been exchanged or modified during the monitoring period. Further ensure that consistent notations of key equipment (meters etc.) in MR and calculation spreadsheet are applied*<br><br>*Consider e.g. interviews with operational personnel, QMS records, maintenance records, instrument specifications.*<br><br>*In case of changes, check whether the project is still in line with the registered VPA-DD and assure that these changes have been considered in the monitoring report and the emission reduction calculation.* | /MR/<br>/VPA/ | The verification team has checked the implemented project activity and the MR and confirms by means of comparison with the information given in the VPA-DD, the applicable GS Requirements and information gathered during the remote site visit and interviews that:<br>☒ no technical equipment has been utilized during the monitoring period<br>In this context no findings have been identified. | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| *In case of post registration changes pl. refer to chapter B.2.* | | | | |
| **B.1.3. Operation of the project activity**<br>***(VVS; § 225 a, 226)***<br>*Check if relevant operation modes of the project activity have been exchanged or modified during the monitoring period.*<br>*Consider e.g. interviews with operational personnel, operation log sheets, data management system records.*<br>*In case of changes, check whether the project is still in line with the registered VPA-DD and assure that these changes have been considered in the monitoring report and the emission reduction calculation.*<br>*In case of post registration changes pl. refer to chapter B.2.* | /MR/<br>/VPA/ | The verification team has checked the implemented project activity and the MR and confirms by means of comparison with the information given in the VPA-DD, the applicable Gold Standard Requirements and information gathered during the remote site visit and interviews that:<br>☒ no relevant operation modes of the project activity have been exchanged or modified during the monitoring period<br>☐ the following changes have been adopted during the monitoring period; however, the project is still in line with the registered PDD: | OK | OK |
| **B.1.4. Incidents**<br>***(VVS; § 225 a, 226)***<br>*Identify if there have been any significant incidents, deviant operation modes and / or downtimes of the equipment?*<br>*Consider e.g. interviews with operational personnel, operational log sheets, analysis of performance data.* | /MR/<br>/VER/ | The verification team has checked the implemented project activity and the MR and confirms by means of comparison with the information given in the VPA-DD, the applicable Gold Standard Requirements and information gathered during the already executed remote site visit and interviews under CDM that:<br>☒ no significant incidents, deviant operation modes and / or downtimes of the equipment happened during the monitoring period | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | | ☐ the following incidents, deviant operation modes and / or downtimes of the equipment happened during the monitoring period | | |
| **B.1.5. Legislation**<br>Find out – esp. in the context of methodological requirements - whether relevant legislation with effect on the project activity in the host country has been changed.<br>Assess, in case of changes, whether consequences for the PA with regard to relevant CDM requirements have been accounted for.<br>In case of changes data sources shall be referenced. | /MR/ | The verification team has checked the host country legislation and confirms by means of comparison with the implemented project that:<br>☒ No relevant legislation with effect on the project activity in the host country has been changed<br>In this context no findings have been identified. | OK | OK |
| **B.1.6. Open issues from validation** ***(VVS; § 213)***<br>*Check (esp. in case of 1st periodic verification) whether there are any open issues indicated in the validation report (e.g. FAR)?* | /VAL/ | ☒ There were no open issues addressed in the validation report<br>☒ All open issues from the validation have been appropriately addressed.<br>☐ The following issues related to the validation have not yet been appropriately addressed: | OK | OK |
| **B.1.7. Open issues from previous verification** ***(VVS; §§ 213; 284 h)***<br>*Check in case of further periodic verifications whether there are any open issues indicated in previous verification reports (FAR) and take into consideration the guidance as specified in VVS.* | /MR/<br>/VER/ | ☐ There were no open issues addressed in the previous verification report<br>☒ All open issues from the previous verification have been appropriately addressed.<br>☐ The following issues related to the previous verification have not yet been appropriately addressed:<br>NA | ~~FAR 01 from GS Review 2nd for VPA 01 to 06~~<br>~~FAR 01 from GS Review 1st GS~~ | OK |

| Checklist Item<br>(incl. guidance for the verification team) | Refe-rence | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| | | | ~~Monitoring Period, VPA 07 to 18~~<br>~~FAR 01 and FAR 02 from VPA 21 36 for the 1st monitoring period~~ | |
| **B.2. Post registration changes** | | | | |
| **B.2.1. Post registration changes applicable to the proposed project activity**<br>*Indicate whether any post registration change already approved or under approval by the GS has been identified.* | /MR/<br>/VPA/ | ☒ No, by means of remote site visit, document check and interview it could be verified that the project is implemented and operated in line with the registered VPA-DD and the applied methodology. (Please proceed with section C)<br>☐ Yes, post registration changes have been identified and are assessed in detail in the subsequent steps. (Please proceed with B.2.2.) | OK | OK |
| **B.2.2. Temporary deviations from the registered monitoring plan or applied methodology (TDfrMP; TDfMM)**<br>***(EB 75, Annex 7, B.2.1; VVS §§ 251 - 256)***<br>*Indicate whether any temporary deviations have been applied during this monitoring period.* | /MR/<br>/VPA/ | ☒ No TDfrMP or TDfMM have been submitted to the GS prior to the current monitoring period<br>☐ The following TDfrMP or TDfMM have been approved or are under approval by the GS<br>1 Title | OK | OK |

| Checklist Item (incl. guidance for the verification team) | Refe-rence | Verification Team Comments (Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *In cases where approval has been sought from the EB please provide reference.*<br>*If applied, provide a description of the deviation(s).*<br>*This should include the reasons for the deviation(s), how it deviates from the monitoring plan and/or applied methodology(ies), the duration for which the deviation(s) is(are) applicable and justification on the conservativeness of the approach. Indicate if the deviation will lead to a reduction in the accuracy and if so, which conservative assumptions and discount factors have been applied.*<br>*For deviation(s) that require prior approval by the Board, include the date of approval and reference number.* | | <table><tr><td></td><td></td><td>Status</td><td>☐ under approval; ☐ approved</td></tr><tr><td></td><td></td><td>Appr.date</td><td></td></tr><tr><td></td><td></td><td>Ref. No.</td><td></td></tr><tr><td></td><td>2</td><td>Title</td><td></td></tr><tr><td></td><td></td><td>Status</td><td>☐ under approval; ☐ approved</td></tr><tr><td></td><td></td><td>Appr.date</td><td></td></tr><tr><td></td><td></td><td>Ref.No.</td><td></td></tr><tr><td>☒</td><td colspan="3">During the verification of the current MP no need for a TDfrMP or TDfMM has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA</td></tr><tr><td>☐</td><td colspan="3">An approval of the following TDfrMP or TDfMM is to be requested from the GS for the current MP as appendix 1 of the project standard does not apply.</td></tr><tr><td></td><td>1</td><td>Issue:</td><td></td></tr><tr><td></td><td>2</td><td>Issue:</td><td></td></tr><tr><td>☐</td><td colspan="3">The following TDfrMP or TDfMM for which appendix 1 of the PS is applicable have been applied:</td></tr><tr><td></td><td>1</td><td>Issue:</td><td></td></tr><tr><td></td><td>2</td><td>Issue:</td><td></td></tr></table>In this context no findings have been identified. | | |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| **B.2.3. Corrections**<br>***(EB 75, Annex 7, B.2.2; VVS; §§ 257 - 259)***<br>*Indicate whether any corrections to project information or parameters fixed at validation have been approved during this monitoring period or submitted with this monitoring report.*<br>*In cases where the correction(s) and the revised VPA-DD are approved prior to the submission of this monitoring report for request for issuance, provide the approval date and reference number. Otherwise, provide the version number and the completion date of the revised VPA-DD.*<br>*Please check and report that the corrected information is an accurate reflection of the actual project information and that the corrected parameters are in accordance with the applied methodology and the monitoring plan.* | /MR/<br>/VPA/ | ☒ During the verification of the current MP no need for corrections has been identified.<br>☐ The following corrections have been applied:<br>1 Issue:<br>2 Issue:<br>In this context no findings have been identified. | OK | OK |
| **B.2.4. Permanent changes from the registered monitoring plan or applied methodology (PCfrMP; PCfMM)**<br>***(EB 75, Annex 7, B.2.3; VVS; §§ 262 - 268)***<br>*Indicate whether any permanent changes from the registered monitoring plan or applied methodologies have been approved during this monitoring period or submitted with this monitoring report.* | /MR/<br>/VPA/ | ☒ No PCfrMP or PCfMM.have been submitted to the GS prior to the current monitoring period<br>☐ The following PCfrMP or PCfMM have been approved or are under approval by the GS<br>1 Title<br>Status ☐ under approval; ☐ approved<br>Appr.date | OK | OK |

| Checklist Item (incl. guidance for the verification team) | Refe-rence | Verification Team Comments (Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *Assure that modifications or additions of technologies/measures respect to the VPA-DD were already included in the originally registered PoA-DD.*<br>*In cases where the change(s) and the revised VPA-DD are approved prior to the submission of this monitoring report for request for issuance, provide the approval date and reference number. Otherwise, provide the version number and the completion date of the revised VPA-DD.* | | Ref. No.<br>2 Title<br>Status ☐ under approval; ☐ approved<br>Appr.date<br>Ref.No.<br>☒ During the verification of the current MP no need for a PCfrMP or PCfMM has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA<br>☐ An approval of the following PCfrMP or PCfMM is to be requested from the GS for the current MP as appendix 1 of the project standard does not apply.<br>1 Issue:<br>2 Issue:<br>☐ The following PCfrMP or PCfMM for which appendix 1 of the PS is applicable have been applied:<br>1 Issue:<br>2 Issue:<br>In this context no findings have been identified. | | |
| **B.2.5. Changes to the project design of the registered PoA / VPA (CoPD)** | /MR/ /VPA/ | ☐ The following CoPD has been approved or are under approval by the GS | OK | OK |

| Checklist Item (incl. guidance for the verification team) | Refe-rence | Verification Team Comments (Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| ***(EB 75, Annex 7, B.2.4; VVS; §§ 269 - 282)***<br>*Indicate whether any changes to the project design of the project activity have been approved during this monitoring period or submitted with this monitoring report.*<br>*Assure that modifications or additions of technologies/measures respect to the VPA-DD were already included in the originally registered PoA-DD*<br>*In cases where the change(s) and the revised VPA-DD are approved prior to the submission of this monitoring report for request for issuance, provide the approval date and reference number. Otherwise, provide the version number and the completion date of the revised VPA-DD.* | | 1 Title<br>Status ☐ under approval; ☐ approved<br>Appr.date<br>Ref. No.<br>2 Title<br>Status ☐ under approval; ☐ approved<br>Appr.date<br>Ref.No.<br>☒ During the verification of the current MP no need for a CoPD has been identified. The monitoring plan is in accordance with the approved methodology applied by the PA<br>☐ An approval of the following CoPD.is to be requested from the GS for the current MP as appendix 1 of the project standard does not apply.<br>1 Issue:<br>2 Issue:<br>☐ The following CoPD for which appendix 1 of the PS is applicable have been applied:<br>1 Issue:<br>2 Issue: | | |

| Checklist Item<br>(incl. guidance for the verification team) | Refe-rence | Verification Team Comments<br>(Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| | | In this context no findings have been identified. | | |
| ***C. Description of monitoring system*** | | | | |
| **C.1. Monitoring Plan – VPA-DD Compliance** ***(VVS, §§ 233-236)***<br>*Check if the monitoring plan is in accordance with the monitoring plan contained in the registered VPA-DD (or any accepted revised MP).*<br>*Please check esp. If:*<br>- *all parameters stated in the MP of the registered VPA-DD have been monitored and updated as applicable*<br>- *the monitoring equipment has been controlled and calibrated as per the MP*<br>- *the monitoring results are consistently recorded as per the approved frequency*<br>- *QA/QC procedures have been applied in accordance with the MP* | /MR/<br>/VPA/<br>/S1/<br>/S2/ | By means of comparison of the MR with the registered VPA-DD (or any revisions thereof) the verification team has checked whether the MP is in compliance with the registered VPA-DD. The outcome is as follows:<br>☒ The MP is completely in accordance with the last registered/approved version of the VPA-DD / MP.<br>In this context no findings have been identified. | OK | OK |
| **C.2. Monitoring Plan – Meth Compliance** ***(VVS, §§ 229-232)***<br>*Check if the monitoring plan is in accordance with the applied methodology.* | /MR/<br>/VPA/<br>/GSM/ | By means of comparison of the MR with the applied GS methodology and related tools the verification team has checked whether the MP is in compliance with the MP related requirements of the applied methodology. The outcome is as follows:<br>☒ The MP is completely in accordance with the approved methodology applied by the GS project (last registered/approved version of the VPA-DD) | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| *In case the methodology references applicable tools it has to be ensured that the MP is also compliant with those tools.*<br><br>*Also please specify if monitoring aspects have been identified that are not specified in the methodology but may enhance the level of accuracy and completeness of the monitoring plan – this esp. applies for SSC VPAs.* | | ☐ The MP is completely in accordance with the applied tools which the methodology references. A breakdown of the referenced tools is as follows:<br>1 Title (of the tool): <br>Version: <br>MP compliance: ☐ full compliance ☐ findings have been raised ☒ N/A (for MP)<br>2 Title (of the tool): <br>Version: <br>MP compliance: ☐ full compliance ☐ findings have been raised ☒ N/A (for MP)<br>3 Title (of the tool): <br>Version: <br>MP compliance: ☐ full compliance ☐ findings have been raised ☒ N/A (for MP)<br>In this context no findings have been identified. | | |
| **C.3. Management System** | /MR/ | *Description:* | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| ***(VVS, § 217 (a) (iii))***<br>*Check if the GHG data monitoring system can be assessed as appropriate.*<br>*In case reference is made to a (certified) company quality management system, check if all GS related monitoring procedures have been fully integrated in the project participant's quality management system.*<br>*In case of a stand-alone system, check how the GHG management system has been implemented and effectiveness is ensured.* | /DB1<br>/S1/<br>/IM01/ | The staff collects necessary data at the time of sale / installation from the customer. This unique data helps to avoid double counting and enables tracking of the units for monitoring purposes. The section D of MR is transparently stating this data.<br>*Verifier´s action:*<br>The project database, survey reports and forms have been assessed by the verification team. | | |
| **C.4. Roles and Responsibilities**<br>***(EB 75, Annex 7, Section C.; PS §196)***<br>*Check if all roles and positions of each person in the GHG data management process are clearly defined and implemented as stated in the monitoring plan. Please consider the complete data trail from raw data generation to submission of the final data.*<br>*Identify, if relevant personnel w.r.t. monitoring has been exchanged?*<br>*If so, have appropriate training measures been carried out.*<br>*In case of changes, assure that the implemented monitoring procedures have not been affected.* | /MR/<br>/DB1/<br>/S1/ | *Description:*<br>Please refer above assessment.<br>*Verifier´s action:*<br>The project database, survey report and forms have been assessed by the verification team. | OK | OK |
| **C.5. Emergency procedures for the monitoring system** | /MR/ | *Description:* | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| ***(EB 75, Annex 7, C; PS §196)***<br>*Check, as appropriate, whether relevant emergency procedures for the monitoring system have been included in the MR and assess whether these procedures have been implemented, when required* | /IM01/<br>/IM03/ | The computer server in the office has the primary back-up data stored and an external back-up at external media which will be used in the event of an emergency.<br>*Verifier´s action:*<br>During the remote on-site visit, the verification team has checked the server to confirm the primary data and records stored are the most recent for the MR.<br>The stored data are password protected and only authorized person could access.<br>The database officer was interviewed to confirm how the data is applied in emergency case.<br>*Conclusion:*<br>By means of remote onsite assessment and checking the stored data, it can be concluded emergency respond plan is in place. | | |
| **C.6. Data archive and data protection**<br>***(PS §56 b)***<br>Check whether all records of monitoring parameters are archived according to the monitoring plan.<br>Assess further whether appropriate measures have been taken in order to avoid unintended or intended manipulation or loss of the measured data. | /MR/<br>/VPA/<br>/IM01/<br>/IM03/ | *Description:*<br>Chapter D.2 of the monitoring report also described how the data is archived and backed up.<br>*Verifier´s action:*<br>The data was kept in a project database at Bangladesh Bondhu Foundation. The data was backed up periodically onto hard disk media.<br>During the remote on-site visit, the verification team has conducted interview and reviewed the records archiving method and procedures for the monitored parameters stated in MR and VPA-DD. | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| | | Furthermore, the data stored at the server is password protected and only authorized personnel can access.<br>*Conclusion:*<br>By means of remote onsite assessment and checking the stored data, it can be concluded data archiving and protection is in place and has been properly implemented. | | |
| ***D. Data and parameters*** | | | | |
| **D.1. Data and Parameters fixed ex ante** | | | | |
| ***a) Compliance with registered VPA-DD***<br>***(EB 75, Annex 7; D1)***<br>*Check whether the value applied is in compliance with the registered VPA-DD.* | /MR/<br>/GSPoA-DD/<br>/VPA/ | By means of comparison of the MR with the registered PDD (or any revisions thereof) the verification team confirms that:<br>☒ all ex-ante data and parameters are in compliance with the registered PoA-PDD, VPA-DD and the applied methodology or any other tool.<br>In this context no findings have been identified. | OK | OK |
| ***b) Compliance with the applied methodology***<br>***(EB 75, Annex 7; D1)***<br>*Check whether the value applied is in compliance with the applied methodology or any other tool.* | /MR/<br>/GSM/ | By means of comparison of the MR with the methodology the verification team confirms that:<br>☒ all ex-post and parameters are in compliance with the applied methodology and any other tool.<br>In this context no findings have been identified. | OK | OK |
| **D.2. Data and Parameters monitored** | | | | |
| **D.2.1. $U_{p,y}$** | | Usage rate in project scenario p during year y | | |
| ***a) Measurement / Determination method*** | /GSPoA-DD/ | *Description:* | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| ***(VVS, §§ 233, 236)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)).*<br>*Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the VPA-DD and the applied methodology.* | /GSVPA/<br>/SSP/<br>/SSS/<br>/MR/<br>/ER/<br>/DB1/<br>/S1/<br>/IM01/ | The parameter was used to determine the usage rate of the ICS, in terms of fraction. It was used for calculation of baseline emissions or baseline net GHG removals by sinks. This parameter was measured by taking the proportion of number of project cookstoves found to be operational during the survey to the total number of samples surveyed.<br>*Verifier´s action:*<br>The key personnel interviewed on procedures, recording calculation and analysis of result and associated training. The usage records have been analyzed.<br>*Conclusion:*<br>The technical specification of the equipment was duly verified by the Verification Team and deemed accurate and acceptable. | | |
| ***b) Accuracy and QA/QC Procedure***<br>***(VVS, §§ 237-243)***<br>*In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.*<br>*Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the* | /GSPoA-DD/<br>/GSVPA/<br>/SSP/<br>/SSS/<br>/MR/<br>/ER/<br>/DB1/<br>/S1/ | *Description:*<br>The parameter is derived from the Usage Survey. The MR is transparent in this regard.<br>*Verifier´s action:*<br>The value applied from the Usage Survey is cross-checked with GS registered VPA DD and ER calculation.<br>QA/QC procedure is implemented. Project personnel and consultants were interviewed.<br>*Conclusion:*<br>Calculations in ER Worksheet were found consistent with MR and VPA DD. | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| *monitoring equipment has been carried out in line with the latest EB guidance.* | /IM01/ | | | |
| ***c) Correctness***<br>***(VVS, §§ 233, 236)***<br>*Determine whether the value given in the monitoring report is correct or determined in a conservative manner.*<br>*In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /GSPoA-DD/<br>/GSVPA/<br>/SSP/<br>/SSS/<br>/MR/<br>/ER/<br>/DB1/<br>/S1/<br>/IM01/ | ☒ Correct ☐ Not correct (initial assessment)<br>*Description:*<br>The Verification Team cross checked the values and deemed accurate and acceptable.<br>*Conclusion:*<br>Applied value is appropriate. | OK | OK |
| **D.2.2. $N_{p,y}$** | | Cookstove in the project database for project scenario p through year y | | |
| ***a) Measurement / Determination method***<br>***(VVS, §§ 233, 236)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)).* | /GSPoA-DD/<br>/GSVPA/<br>/SSP/<br>/SSS/<br>/MR/ | *Description:* The parameter is monitored to determine the baseline emissions. The number of ICS installed is tracked through ICS Installation Database and recorded appropriately by Climate Secure India Private Limited. The monitoring (at time of installation) involves the recording ICS type, ICS unique serial number, Date of installation, End user details, address, location etc. The CPA implementer excludes the subsequent ICS from the ER calculations, in case an existing Bondhu Chulha is found at the | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| *Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the VPA-DD and the applied methodology.* | /DB5/<br>/ER/ | household, thus ensuring that only one project device is credited per household.<br>*Verifier´s action:*<br>For the applied monitoring period no ICS were eliminated from the ER calculation on account of this. This is verified by the Assessment Team. The verification team remotely pulled random end user agreement records and compared the details with the information in the provided ICS installation database.<br>*Conclusion:*<br>The data applied could be verified with the installation database. | | |
| ***b) Accuracy and QA/QC Procedure***<br>***(VVS, §§ 237-243)***<br>*In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.*<br>*Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.* | /GSPoA-DD/<br>/GSVPA/<br>/SSP/<br>/SSS/<br>/MR/<br>/DB5/<br>/ER/ | *Description:*<br>The team randomly selected households from the database to compare the information in the database with the actual stoves being used. The way of recording all stoves data (including end user detail) complies with the registered monitoring plan.<br>*Verifier´s action:*<br>The verification team remotely pulled random end user agreement records and compared the details with the information in the provided ICS installation database. The monitoring (at time of installation) involves the recording ICS type, ICS unique serial number, Date of installation, End user details, address, location etc.<br>*Conclusion:*<br>The data applied could be verified with the installation database | OK | OK |
| ***c) Correctness*** | /GSPoA-DD/ | ☒ Correct ☐ Not correct (initial assessment) | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| ***(VVS, §§ 233, 236)***<br>*Determine whether the value given in the monitoring report is correct or determined in a conservative manner.*<br>*In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /GSVPA/<br>/SSP/<br>/SSS/<br>/MR/<br>/DB5/<br>/ER/ | *Description:*<br>The value is applied correctly.<br>*Verifier´s action:*<br>The CPA implementer excludes the subsequent ICS from the ER calculations, in case an existing Bondhu Chulha is found at the household, thus ensuring that only one project device is credited per household.<br>*Conclusion:*<br>Applied value is correct. | | |
| **D.2.3.** $DF_{b,stove,y}$ | | Discount factor to account for the baseline stove use in project scenario during the year y | | |
| ***a) Measurement / Determination method***<br>***(VVS, §§ 233, 236)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the original data level (ODL) but also describe the applied data aggregation trails (from ODL to data aggregation level zero (DAL0)).*<br>*Check if relevant equipment has been exchanged and if in cases of failures / downtimes of standard equipment other measurement / determination methods have been used. Furthermore, verify the frequency of measurements as per the requirements.* | /MR/<br>/ER/<br>/DB1/<br>/S1/<br>/IM01/ | *Description:*<br>The parameter is applied to determine stoves that are still operating. The parameter is measured ex- post through survey user feedback. The determination is based on survey of samples for all ICS. The sampling frame for the surveys included all ICS (domestic ICS). Simple random sampling was applied to each ICS separately. The ICS were randomly sampled from a list of all the participating ICS.<br>*Verifier´s action:*<br>The survey forms were verified by the Verification Team and deemed as complete and relevant with respect to the monitoring requirements.<br>*Conclusion:* | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| *Assess whether the measurement / determination method is in line with the registered monitoring plan of the VPA-DD and the applied methodology.* | | The measurement method was consistent with the registered monitoring plan of the VPA-DD and the applied methodology | | |
| ***b) Accuracy and QA/QC Procedure***<br>***(VVS, §§ 237-243)***<br>*In case of measured (or estimated) values, check whether the accuracy of equipment used for monitoring is controlled and calibrated in accordance with the monitoring plan or if significant inaccuracies occur; in this case, make sure that the most conservative assumptions theoretically possible have been made for calculating ERs.*<br>*Describe whether all applicable QA/QC procedures are met. Assess further if the calibration of the monitoring equipment has been carried out in line with the latest EB guidance.* | /MR/<br>/ER/<br>/DB1/<br>/S1/<br>/IM01/ | *Description:*<br>Data was collected using survey questionnaire forms to enable surveyors to collect applicable and necessary information during monitoring visit to the sampled user. Procedures for sampling have been duly articulated in the monitoring report, and a sample of survey questionnaires furnished to DOE.<br>*Verifier´s action:*<br>The survey forms were verified by the Verification Team and deemed as complete and relevant with respect to the monitoring requirements.<br>*Conclusion:*<br>All applicable QA/QC procedures were met. | OK | OK |
| ***c) Correctness***<br>***(VVS, §§ 233, 236)***<br>*Determine whether the value given in the monitoring report is correct or determined in a conservative manner.*<br>*In case of conservative approaches used in lieu of the monitoring as per registered MP detailed assessment of the conservativeness of the approach used should be given.* | /MR/<br>/ER/<br>/DB1/<br>/S1/<br>/IM01/ | ☒ Correct ☐ Not correct (initial assessment)<br>*Description:*<br>Procedures for sampling have been duly articulated in the monitoring report, and a sample of survey questionnaires furnished to DOE.<br>*Verifier´s action:*<br>All the survey forms were cross verified with the ER sheet and installation database. The values reported in MR were found inconsistent with values calculated in ER worksheet. | OK | OK |

| Checklist Item (incl. guidance for the verification team) | Refe-rence | Verification Team Comments (Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | | *Conclusion:*<br>Refer CAR 1 under section 4.4. | | |
| **D.3. SD Indicators Monitored** | | | | |
| **D.3.1. SDG 9** — **Industry, Innovation and Infrastructure** | | **Stove Condition (Inspection of physical condition of project)** | | |
| ***a) Measurement / Determination method VVS, §§ 389, 393, GS Annex I, GS Annex AC, GS Annex G)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the registered VPA-DD and GS / VPA Transition Request Documents and check what has been achieved relative to the baseline scenario.*<br>*Furthermore, verify the frequency of measurements as per the requirements.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the VPA-DD and relevant GS Annexes.* | /GSPoA-DD/<br>/GSVPA/<br>/SSP/<br>/SSS/<br>/MR/<br>/S1/<br>/SD1/<br>/DB1/<br>/LHH/ | *Description:*<br>This is being monitored through monitoring surveys.<br>*Verifier´s action:*<br>During the remote assessments, the VVB interviewed to cross-check if the end users have access to the ICS. The VVB confirmed that the distribution of ICS ensures access of basic cooking services to the end user<br>*Conclusion:*<br>The monitoring of this SD indicator is in accordance with the GS VPA DD and the monitoring surveys. | OK | OK |
| ***b) Correctness and Scoring***<br>*Determine whether the monitoring method/value given in the sustainability monitoring report is correct or determined in a conservative manner.*<br>*In case of conservative approaches used in lieu of the monitoring as per registered / VPA Transition Request Documents detailed assessment of the* | /MR/<br>/S1/<br>/SD1/<br>/DB1/ | ☒ Correct ☐ Not correct (initial assessment)<br>*Description:*<br>The value of the data in the monitoring report was based on<br>Monitoring survey.<br>*Verifier´s action:* | OK | OK |

| Checklist Item (incl. guidance for the verification team) | Refe-rence | Verification Team Comments (Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *conservativeness of the approach used should be given.*<br>*Score in accordance to Toolkit Annex I*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /LHH/ | The VVB confirmed that the distribution of ICS ensures access of basic cooking services to the end user, thus the contribution to SDG 9 - Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation<br>*Conclusion:*<br>The data of the survey was found consistent. | | |
| **D.3.2. SDG 9** **Industry, Innovation and Infrastructure** | | **Stove Replacement (Replacements of project ICS with new project ICS, if applicable)** | | |
| ***a) Measurement / Determination method***<br>***VVS, §§ 389, 393, GS Annex I, GS Annex AC, GS Annex G)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the registered VPA-DD and GS / VPA Transition Request Documents and check what has been achieved relative to the baseline scenario.*<br>*Furthermore, verify the frequency of measurements as per the requirements.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the VPA-DD and relevant GS Annexes.* | /MR/<br>/S1/<br>/SD2/<br>/DB1/<br>/IM01/<br>/IM06/ | *Description:*<br>This parameter was monitored by the PP during the survey. No ICS was replaced during the current monitoring period.<br>*Verifier´s action:*<br>The VVB verified the installation database and survey forms and cross verified the same during remote assessment. The data was found consistent.<br>*Conclusion:*<br>The monitoring of this SD indicator is in accordance with the GS VPA DD an surveys. | ~~CAR 5~~ | OK |
| ***b) Correctness and Scoring*** | /MR/<br>/SD2/<br>/IM01/ | ☐ Correct ☒ Not correct (initial assessment)<br>*Description:* | ~~CAR 5~~ | OK |

| Checklist Item (incl. guidance for the verification team) | Refe-rence | Verification Team Comments (Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *Determine whether the monitoring method/value given in the sustainability monitoring report is correct or determined in a conservative manner.*<br>*In case of conservative approaches used in lieu of the monitoring as per registered / VPA Transition Request Documents detailed assessment of the conservativeness of the approach used should be given.*<br>*Score in accordance to Toolkit Annex I*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /IM06/ | The parameter is monitored based on the monitoring survey. The VVB has verified the submitted survey records and confirms the reported statement as accurate. No ICS was replaced during the current monitoring period.<br>*Verifier´s action:*<br>The survey report was reviewed and compared with the results of the remote onsite inspection and telephone interviews conducted by the verification team.<br>*Conclusion:*<br>The monitored value of this SD indicator is in accordance with the GS VPA DD. | | |
| **D.3.3. SDG 3, SDG 7** **Good Health and Well Being** | | **Air Quality (Visible Reduction in smoke, soot deposition on utensils)** | | |
| ***a) Measurement / Determination method***<br>***VVS, §§ 389, 393, GS Annex I, GS Annex AC, GS Annex G)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the registered VPA-DD and GS / VPA Transition Request Documents and check what has been achieved relative to the baseline scenario.*<br>*Furthermore, verify the frequency of measurements as per the requirements.* | /MR/<br>/S1/<br>/ER/<br>/SD3/<br>/LHH/ | *Description:*<br>The data was based on the Project survey results conducted. The data is derived from the monitoring survey. The monitoring survey results confirmed that all of the end user reported reduction in smoke levels which in turn confirms good health and wellbeing.<br>*Verifier´s action:*<br>The VVB also confirms this fact during its interview with randomly selected end-user. All end user confirmed reduction in smoke level while cooking on the ICS.<br>*Conclusion:*<br>The monitoring of the indicator is consistent with the GS VPA DD. | OK | OK |

| Checklist Item (incl. guidance for the verification team) | Refe-rence | Verification Team Comments (Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *Assess whether the measurement / determination method is in line with the registered monitoring plan of the VPA-DD and relevant GS Annexes .* | | | | |
| ***b) Correctness and Scoring***<br>*Determine whether the monitoring method/value given in the sustainability monitoring report is correct or determined in a conservative manner.*<br>*In case of conservative approaches used in lieu of the monitoring as per registered / VPA Transition Request Documents detailed assessment of the conservativeness of the approach used should be given.*<br>*Score in accordance to Toolkit Annex I*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /MR/<br>/S1/<br>/ER/<br>/SD3/<br>/LHH/ | ☒ Correct ☐ Not correct (initial assessment)<br>*Description:*<br>Monitoring survey and associated supportive documents are assessed during remote assessments.<br>*Verifier´s action:*<br>The supportive documents are assessed. The VVB also confirms this fact during its interview with randomly selected end-user. All end user confirmed reduction in smoke level while cooking on the ICS.<br>*Conclusion:*<br>The database was verified and found data correct. | OK | OK |
| **D.3.4. SDG 7** — **Ensure access to affordable, reliable, sustainable and modern energy for all** | | **Access to affordable and clean energy services (Number of ICS sold under the VPA)** | | |
| ***a) Measurement / Determination method***<br>***VVS, §§ 389, 393, GS Annex I, GS Annex AC, GS Annex G)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the* | /MR/<br>/DB1/<br>/S1/<br>/SD4/ | *Description:*<br>Access to affordable and clean energy services is measured by number of ICS sold under the VPA. The data is derived from the installation database. | OK | OK |

| Checklist Item (incl. guidance for the verification team) | Refe-rence | Verification Team Comments (Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *registered VPA-DD and GS / VPA Transition Request Documents and check what has been achieved relative to the baseline scenario.*<br>*Furthermore, verify the frequency of measurements as per the requirements.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the VPA-DD and relevant GS Annexes. .* | /IM02/ | *Verifier´s action:*<br>During the remote assessment, majority of the end user confirmed that ICS promotes affordable and clean energy services.<br>*Conclusion:*<br>The monitoring of the indicator is consistent with the GS VPA DD. | | |
| ***b) Correctness and Scoring***<br>*Determine whether the monitoring method/value given in the sustainability monitoring report is correct or determined in a conservative manner.*<br>*In case of conservative approaches used in lieu of the monitoring as per registered / VPA Transition Request Documents detailed assessment of the conservativeness of the approach used should be given.*<br>*Score in accordance to Toolkit Annex I*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /MR/<br>/DB1/<br>/S1/<br>/SD4/ | ☒ Correct ☐ Not correct (initial assessment)<br>*Description:*<br>During remote assessments the monitoring survey results confirms that the ICS promotes Affordable and clean energy services.<br>*Verifier´s action:*<br>The supportive documents are assessed.<br>*Conclusion:*<br>The database was verified and found appropriate. | OK | OK |
| **D.3.5. SDG 4** **Quality Education** | | **Quality of Employment (Number of Trainings, Workshops for training of POs and Field Officers)** | | |
| ***a) Measurement / Determination method*** | /MR/<br>/DB1/ | *Description:* | OK | OK |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| ***VVS, §§ 389, 393, GS Annex I, GS Annex AC, GS Annex G)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the registered VPA-DD and GS / VPA Transition Request Documents and check what has been achieved relative to the baseline scenario.*<br>*Furthermore, verify the frequency of measurements as per the requirements.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the VPA-DD and relevant GS Annexes. .* | /S1/<br>/SD4/<br>/IM02/ | The training programs were organized for field staff members partner entrepreneurs during the monitoring period.<br>*Verifier´s action:*<br>The verification team has assessed the sample attendance sheets of trainings.<br>*Conclusion:*<br>The monitoring of the indicator is consistent with the GS VPA DD. | | |
| ***b) Correctness and Scoring***<br>*Determine whether the monitoring method/value given in the sustainability monitoring report is correct or determined in a conservative manner.*<br>*In case of conservative approaches used in lieu of the monitoring as per registered / VPA Transition Request Documents detailed assessment of the conservativeness of the approach used should be given.*<br>*Score in accordance to Toolkit Annex I*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /MR/<br>/DB1/<br>/S1/<br>/SD4/ | ☒ Correct ☐ Not correct (initial assessment)<br>*Description:*<br>The training programs were organized for field staff and partner entrepreneurs was conducted during the monitoring period.<br>*Verifier´s action:*<br>The database was verified and found data correct.<br>*Conclusion:*<br>The data was verified and found correct | OK | OK |

| Checklist Item (incl. guidance for the verification team) | | Refe-rence | Verification Team Comments (Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|---|
| **D.3.6. SDG 12, SDG 15** | ***Responsible Consumption and Life on Land*** | | Livelihood of poor (Reduction in fuel expenditure/reduction in fuel collection time) | | |
| ***a) Measurement / Determination method***<br>***VVS, §§ 389, 393, GS Annex I, GS Annex AC, GS Annex G)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the registered VPA-DD and GS / VPA Transition Request Documents and check what has been achieved relative to the baseline scenario.*<br>*Furthermore, verify the frequency of measurements as per the requirements.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the VPA-DD and relevant GS Annexes. .* | | /MR/<br>/DB1/<br>/S1/<br>/SD4/<br>/IM02/ | *Description:*<br>The parameter is monitored based on the ICS database. Monitoring surveys were verified with remote assessment. The end users confirmed that there was reduction in the fuel wood consumption thereby reducing the time to collect woor or savings equivalent to the cost of the wood. The statement of the reduction in the fuel cost is backed by monitoring surveys which confirm the reduction in fuel expenditure, thus monitoring of this parameter is deemed as appropriate.<br>*Verifier´s action:*<br>The VVB has verified the submitted survey records and confirms the reported statement appropriate.<br>*Conclusion:*<br>The monitoring of the indicator is consistent with the GS VPA DD. | OK | OK |
| ***b) Correctness and Scoring***<br>*Determine whether the monitoring method/value given in the sustainability monitoring report is correct or determined in a conservative manner.*<br>*In case of conservative approaches used in lieu of the monitoring as per registered / VPA Transition Request Documents detailed assessment of the* | | /MR/<br>/DB1/<br>/S1/<br>/SD4/ | ☒ Correct ☐ Not correct (initial assessment)<br>*Description:*<br>The data is monitored with the monitoring surveys.<br>*Verifier´s action:*<br>The VVB verified the statement during the remote assessment.<br>*Conclusion:* | OK | OK |

| Checklist Item (incl. guidance for the verification team) | Refe-rence | Verification Team Comments (Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *conservativeness of the approach used should be given.*<br>*Score in accordance to Toolkit Annex I*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | | The statement was verified and found correct | | |
| **D.3.7. SDG 4: Quality Education** | | Human and Institutional capacity (Number of end-user awareness initiatives/ events/workshops) | | |
| ***a) Measurement / Determination method***<br>***VVS, §§ 389, 393, GS Annex I, GS Annex AC, GS Annex G)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the registered VPA-DD and GS / VPA Transition Request Documents and check what has been achieved relative to the baseline scenario.*<br>*Furthermore, verify the frequency of measurements as per the requirements.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the VPA-DD and relevant GS Annexes. .* | /MR/<br>/DB1/<br>/S1/<br>/SD4/<br>/IM02/<br>/TRG/ | *Description:*<br>*No training awareness/ events/ workshop programs were conducted as no new stoves were distributed during the monitoring period.*<br>*Verifier´s action:*<br>*The verification team has assessed the sample attendance sheets of trainings.*<br>*Conclusion:*<br>*The monitoring of the indicator is consistent with the GS VPA DD.* | OK | OK |
| ***b) Correctness and Scoring***<br>*Determine whether the monitoring method/value given in the sustainability monitoring report is correct or determined in a conservative manner.* | /MR/<br>/DB1/<br>/S1/ | ☒ Correct ☐ Not correct (initial assessment)<br>*Description:* | OK | OK |

| Checklist Item (incl. guidance for the verification team) | Refe-rence | Verification Team Comments (Means and results of assessment) | Draft Concl. | Final Concl. |
|---|---|---|---|---|
| *In case of conservative approaches used in lieu of the monitoring as per registered / VPA Transition Request Documents detailed assessment of the conservativeness of the approach used should be given.*<br>*Score in accordance to Toolkit Annex I*<br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /SD4/<br>/TRG/ | *No training awareness/ events/ workshop programs were conducted as no new stoves were distributed during the monitoring period.*<br>*Verifier´s action:*<br>The database was verified and found data correct.<br>*Conclusion:*<br>The data was verified and found correct | | |
| **D.3.8. SDG 8: Decent Work and Economic Growth** | | Quantitative employment and Income Generation (Number of Jobs Created) | | |
| ***a) Measurement / Determination method***<br>***VVS, §§ 389, 393, GS Annex I, GS Annex AC, GS Annex G)***<br>*Describe how the monitoring parameter was measured / determined. Focus primarily on the registered VPA-DD and GS / VPA Transition Request Documents and check what has been achieved relative to the baseline scenario.*<br>*Furthermore, verify the frequency of measurements as per the requirements.*<br>*Assess whether the measurement / determination method is in line with the registered monitoring plan of the VPA-DD and relevant GS Annexes. .* | /MR/<br>/DB1/<br>/S1/<br>/SD4/<br>/IM02/ | *Description:*<br>*The employment database was reviewed to cross check the number of direct jobs created by the project activity.*<br>*Verifier´s action:*<br>*The verification team has assessed the sample Declaration of Employment.*<br>*Conclusion:*<br>*The monitoring of the indicator is consistent with the GS VPA DD.* | | |
| ***b) Correctness and Scoring*** | /MR/ | ☒ Correct ☐ Not correct (initial assessment) | | |

| **Checklist Item**<br>(incl. guidance for the verification team) | **Refe-rence** | **Verification Team Comments**<br>(Means and results of assessment) | **Draft Concl.** | **Final Concl.** |
|---|---|---|---|---|
| *Determine whether the monitoring method/value given in the sustainability monitoring report is correct or determined in a conservative manner.*<br><br>*In case of conservative approaches used in lieu of the monitoring as per registered / VPA Transition Request Documents detailed assessment of the conservativeness of the approach used should be given.*<br><br>*Score in accordance to Toolkit Annex I*<br><br>*In case of mistakes / deviations pl. provide details and descriptions of the CARs raised.* | /DB1/<br>/S1/<br>/SD4/<br>/SD1/ | *Description:*<br><br>Based on the review of Declaration of Employment, for MS1 425 employees were employed, and for MS2 445 employees were employed. The VVB confirm that the wages were at par with the industrial standard and meeting the requirements of minimum wages (applicable to the host country Bangladesh) /SD1/.<br><br>The reported parameter is deemed accurate.<br><br>*Verifier´s action:*<br><br>The number of persons employed as per MR and employment provided to people as per undertaking are not inline.<br><br>*Conclusion:*<br><br>The data was not verified. Please refer CL 02 under section 4.3 | | |

# ANNEX 2: STATEMENTS OF COMPETENCE OF INVOLVED PERSONNEL

TÜV NORD Certification

***Statement of Competence***

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

**Mr. Prakash Kumar Mishra**

| SCHEME | STATUS | VALID UNTIL |
|---|---|---|
| CDM | Senior Assessor (Validation, Verification) | 2023-12-16 |
| VCS / ISO 14064-2 | Senior Assessor | 2023-12-16 |

Authorization status for technical areas within sectoral scopes:

| CODE | TECHNICAL AREA |
|---|---|
| 1.2 | Renewables |
| 3.1 | Energy demand |

146 - Rev. 7, Date: 2020-12-17

146_S01-VA060-F20_2020-12-17_rev7 S01-VA060-F20 rev3 / 2012-10-25

TÜV NORD Certification

***Statement of Competence***

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

**Mr. Stefan Winter**

| SCHEME | STATUS | VALID UNTIL |
|---|---|---|
| CDM | Senior Assessor (Validation, Verification) Technical Reviewer | 2023-07-27 |
| VCS / ISO14064-2 | Senior Assessor (Validation, Verification) Technical Reviewer | 2023-07-27 |

Authorization status for technical areas within sectoral scopes:

| CODE | TECHNICAL AREA |
|---|---|
| 1.1 | Thermal energy generation |
| 1.2 | Renewables |
| 2.1 | Energy distribution |
| 3.1 | Energy demand |
| 4.1 | Cement and lime production |
| 4.2 | Paper |
| 5.2 | Caprolactam, nitric and adipic acid |
| 9.1 | Aluminium and magnesium production |
| 9.2 | Iron, steel and Ferro-alloy production |
| 10.1 | Fugitive emissions from oil and gas |
| 13.1 | Solid waste and wastewater |
| 13.2 | Manure |

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TÜV NORD Certification

***Statement of Competence***

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

**Mr. David Lubanga**

| SCHEME | STATUS | VALID UNTIL |
|---|---|---|
| CDM | Senior Assessor (Validation, Verification) Technical Reviewer | 2022-06-31 |
| VCS / ISO 14064-2 | Senior Assessor Technical Reviewer | 2022-06-31 |

Authorization status for technical areas within sectoral scopes:

| CODE | TECHNICAL AREA |
|---|---|
| 1.2 | Renewables |
| 3.1 | Energy demand |
| 13.2 | Manure |

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