CTI	**Verification and certification report for GS4GG project activities** **(Gold Standard for the Global Goals)**

VERICATION AND CERTIFICATION REPORT	
Title of the project activity	Nanyang Danjiang River Solar Cooker Project Phase I
Reference number of the project activity	GS1378
Version number of the verification and certification report	03
Completion date of the verification and certification report	08/04/2024
Monitoring period number and duration of this monitoring period	MP number: 7th MP dates: 01/01/2021[1] to 01/05/2022 (both days included)
Version number of monitoring report to which this report applies	02
Crediting period of the project activity corresponding to this monitoring period	2nd GS VER crediting period: 02/05/2017 to 01/05/2022 (both days included)
Project Representative	Sirreon Technology & Development (Beijing) Co., Ltd (Project Owner) China Carbon N.V (GS VER Buyer)
Host Party	People's Republic of China
Activity Requirements applied	☒ Community Services Activities ☐ Renewable Energy Activities ☐ Land Use and Forestry Activities/Risks & Capacities ☐ N/A
Methodology (ies) applied and version number	AMS-I.C "Thermal energy production with or without electricity" (Version 22.0)
Product Requirements applied	☒ GHG Emissions Reduction & Sequestration ☐ Renewable Energy Label ☐ N/A
SDG Contributions targeted (as per	Goal 7: Affordable and Clean Energy

[1] Note: The project sought GS CER issuance for 6th monitoring period of this project is from 01/05/2020 to 31/05/2021, however, The request of issuance of CERs of 01/01/2021-31/05/2021 were recorded as 'provisional' which is in accordance with the temporary measures for CDM processes related to the period from 1 January 2021 agreed by the CDM Executive Board at its 108th meeting and pending guidance from the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its sixteenth session. So, the CERs of 01/01/2021-31/05/2021 have not issued by CDM thus not issued as GS CERs. Now, this project has been successfully transferred to GS4GG with the product of GS VER, so the 7th monitoring period can start from 01/01/2021 to 01/05/2022 and the product sought to issue was GS VERs.

approved PDD)	Goal 8: Decent work and economic growth Goal 13: Climate Action
Total amount of certified SDG impact (as per approved methodology) achieved in this monitoring period	SDG 7 - From 01/01/2021 to 31/12/2021, Number of beneficiaries: 42,240 Households From 01/01/2022 to 01/05/2022, Number of beneficiaries: 40,800 Households In the 7th monitoring period from 01/01/2021 to 01/05/2022, Number of beneficiaries: 42,240 and 40,800 Households SDG 8 – From 01/01/2021 to 31/12/2021, 30 full-time jobs created including 16 females and 14 males From 01/01/2022 to 01/05/2022, 30 full-time jobs created including 16 females and 14 males In the 7th monitoring period from 01/01/2021 to 01/05/2022, 30 full-time jobs created including 16 females and 14 males SDG 13 – Amount of GHGs emissions avoided or sequestered (GS VER) 01/01/2021-31/12/2021 : 60,715 tCO_2e 01/01/2022-01/05/2022 : 17,206 tCO_2e Total 7th monitoring period from 01/01/2021 to 01/05/2022: 77,921 tCO_2e
Name of VVB	VVB Name: CTI Certification Co., Ltd (CTI)
Name, position and signature of the approver of the verification and certification report	Wu Lin Lin Wu Technical Reviewer/Approver

SECTION A. Executive summary

The purpose of the project activity is to provide access to clean and affordable energy to the rural households in China. This project activity involves the distribution and installation of 48,000 sets of solar cookers for rural households. The project activity involves dissemination of solar cooker in Xichuan County, Henan Province, China. The total rated installed capacity of the project activity is 37.128 MW_{th}.

The project activity enables rural households to efficiently substitute fossil fuel used in daily cooking and water boiling by solar energy and therewith avoid CO_2 emission that would have been generated by fossil fuel consumption, finally provides the affordable and clean energy to rural households in China.

The first solar cooker equipment contract was signed on 28/05/2011 which is verified via checking the solar cookers sales contract/11/ and the proposed project started full operation on 01/08/2011. This was verified via checking the commissioning confirmation/10/ against the previous CDM verification report/5/.

The project completed the registration of CDM on 02/05/2012 (UNFCCC Reference Number 6125) with a fixed crediting period which is from 02/05/2012 to 01/05/2022. The project completed the registration in GS on 13/08/2013 and the start date of the first crediting period of the project is defined as 02/05/2012. The project has completed the transition to GS4GG with the product of GS VER on 04/09/2023/8/ with the 2nd crediting period is from 02/05/2017 to 01/05/2022. The current monitoring period belongs to the 2nd crediting period.

While for the GS CER issuance, via checking the project dedicated GS webpage and 6th periodical verification report/7/, it is confirmed that the CERs of period from 01/01/2021 to 31/05/2021 (part of 6th GS periodical verification) have were not issued by CDM, so the PD does not make the request for GS labelling for period from 01/01/2021 to 31/05/2021 till now. But after the project completed the transition to GS4GG with the product of GS VER, PD decided to apply the GS VER issuance for the period from 01/01/2021 to 31/05/2021, which is verified as reasonable. Therefore, it is correct and plausible that the start date of this monitoring period is 01/01/2021.

The estimated emission reduction from the project is 81,184 tCO_2e per year during the second 5-year crediting period and the certified emissions reduction for the current monitoring period from 01/01/2021 to 01/05/2022 is 77,921 tCO_2e/2/.

Scope of Verification

This verification is a periodic independent and objective review and ex-post determination of the monitored reductions in GHG emissions by the VVB. The verification addresses the implementation and operation of the GS PA and tests the data and assertions set out in the monitoring report based on the following:

(i) The GS PDD for 2nd crediting period/3/,
(ii) The transition request form to GS4GG/8/,
(iii) The approved methodology mentioned in the PDD, AMS-I.C “Thermal energy production with or without electricity” (Version 22.0)/36/,
(iv) the Gold Standard for the Global Goals Principles and Requirements/41/,
(v) the Gold Standard for the Global Goals Safeguarding Principles & Requirements/42/,
(vi) the Gold Standard for the Global Goals Community Services Activity Requirements/43/,
(vii) the GS4GG GHG Emissions Reduction & Sequestration Product Requirements/46/,
(viii) the Gold Standard for the Global Goals Stakeholder Consultation and Engagement Requirements/45/,
(ix) the Gold Standard for the Global Goals Validation and Verification Standard/47/,
(x) Product requirements and references relevant to the project activity’s reported emission reductions

The verification has considered both quantitative and qualitative aspects on stated/reported emission reductions. The monitoring report (all versions) and corresponding supporting documentation was assessed in accordance with the rules defined by UNFCCC, as appropriate to the PA. The verification is not meant to provide any consulting or recommendations to the PD/others. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the monitoring activities.

Verification process

The verification has been performed as described in the Gold Standard for the Global Goals Principles and Requirements/41/, Gold Standard for the Global Goals Validation and Verification Standard/47/

a) Desk review of the GS MR (version 01 dated 23/10/2023)/1/ and the relevant documents
b) On-site assessment (06/11/2023~10/11/2023)
c) Issuance of draft verification report & verification protocol
d) Desk review of the revised MR and related documents
e) Resolution of the raised CAR, CL
f) Issuance of the final verification report
g) Independent technical review of the draft verification report and final/revised documentation (e.g., Monitoring Report, corresponding ER sheet, SDG impact tool and evidences)
h) Reporting and closure of TR comments/findings and final approval for the decision made
i) Issuance of final verification report to contracted project representative and submission of request for issuance, as appropriate.

Conclusion

CTI has performed the verification of the GS PA "Nanyang Danjiang River Solar Cooker Project Phase I" having GS Ref. Number GS1378 for the monitoring period 01/01/2021 to 01/05/2022. The verified emission reductions amount to 77,921 tCO_2e in the 7^{th} monitoring period.

The technical parameters of the solar cookers are consistent with the GS PDD for 2nd crediting period/3/, also consistent with the solar cookers sales contract/11/ and the testing report of focus type solar cookers/13/.

In CTI's opinion, the SDG Impacts reported for the project in the GS4GG 7th monitoring report are fairly stated. It is confirmed that each SDG Impacts were calculated correctly on the basis of the approved monitoring methodologies AMS-I.C. ver. 22.0/36/, the monitoring plan contained in the PDD/3/ and the SDG monitoring plan in Transition request form to GS4GG/8/.

CTI confirms that each SDG Impacts are calculated without material misstatements. Based on the evidence and information that are considered necessary to guarantee that each SDG Impacts are appropriately calculated, CTI is able to certify that each SDG Impacts from the project **"Nanyang Danjiang River Solar Cooker Project Phase I"** during the indicated monitoring period.

SECTION B. Verification team, technical reviewer and approver

B.1. Verification team member[2]

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Validation findings
1.	Team Leader	IR	Zhang	Lei	CTI	√	√	√	√
2.	Verifier	IR	Li	Ziqi	CTI	√	√	√	√

B.2. Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical reviewer/ Approver	IR	Lin	Wu	CTI

[2] An entirely different team including the lead auditors, auditors from the Crediting period renewal validation has been used.

SECTION C. Application of materiality

C.1. Consideration of materiality in planning the verification

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
1.	Human error in the quantification of emissions	Low	Human error is likely to occur if personnel are unfamiliar with, or not well trained regarding, emissions processes or data recording	Depending on the monitoring period being verified, conduct increased verifying during the months when there is a greater likelihood of errors and issues with data quality control due to project participants' leave schedules
2.	Undue reliance on a poorly designed information system, which may have few effective quality controls	Low	Use of spreadsheets without adequate controls related to data changes/updates, version tracking, traceability, security	Depending on how data is generated, processed, and reported, place greater emphasis on verifying data captured and processed manually and/or in spreadsheets versus those that are generated from an automated system
3.	Omissions and misstatements in data transfer from hand written notes into digital Excel ER spreadsheet	Medium	Ineffective quality control of data transfer due to unclear QA/QC procedure	Check QM procedure/manual. PD may demonstrate how to transfer data and how this is crosschecked. Conduct interview with related personnel whether procedure is actually conducted but not adequately described.
4.	Sample	Medium	Sample size is not suitable; or the surveyed end users are not random	Cross-check the procedure to identify the sample size against the sample guideline/24/ and sample standard/25/ for t_i, and confirm the sample size is calculated correctly, and chose 38 in a standard approach, compared 626(313*2) (calculated result of sample size). Furthermore, the relative error of the 626 sample results is lower and the statistical quality is sufficient. Cross-check the procedure to identify the sample size against the "Requirements and Guidelines for usage rate monitoring"/44/ for $U_{p,y}$, and confirm the sample size is calculated correctly, and chose 38 in a standard approach, compared 100 (calculated result of sample size). Furthermore, the relative error of the 100 sample results is lower and the statistical quality is sufficient. CTI conducted a random sample following the sample standard during site-visit period, visited total 76 end users who are partial sourced from the sample conducted by PD. Based on the result of acceptance sampling, the

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
				monitoring records are deemed acceptable.

On the basis of the risk analysis the verification has been planned. A detailed audit/verification plan has been prepared and submitted to the project participant(s) in due time before the site visit.

C.2. Consideration of materiality in conducting the verification

The errors identified in the project are below the threshold limit of materiality and hence not material. The GHG emission reductions are calculated without material misstatements.

SECTION D. Means of verification

D.1. Desk/document review

Desk review of all documents provided by PD and publicly available documents relevant for the verification including monitoring plan, monitoring report, monitoring methodology, project design document, applicable tools in particular attention to the frequency of measurements, QA/QC procedures and other relevant documents was conducted by CTI.

The main documents are listed below:

(i) the GS4GG Monitoring Report Version 01 dated 23/10/2023/1/,
(ii) the last revision of the PDD for 2nd crediting period including the monitoring plan/3/,
(iii) the registered SDG monitoring plan in the Transition request form to GS4GG of this project/8/,
(iv) SDG impact tool for this monitoring period/4/,
(v) the last revision of the GS validation report for 2nd crediting period/6/,
(vi) the documentation of previous GS verifications/7/,
(vii) the emission reduction calculation spreadsheet for this monitoring period /2/.

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

The list of documents reviewed during the verification is provided under Appendix 3 of this report.

D.2. On-site inspection

Duration of on-site inspection: 06/11/2023 - 10/11/2023[3]				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Opening meeting ➢ Round of introduction ➢ Scope of Audit ➢ Introduction of Verification Process ➢ confirming focus area for the audit ➢ Final confirmation of audit plan ➢ Attendance Register	Guest house conference room of Xichuan County Committee	06/11/2023	Zhang Lei Li Ziqi
2	On-site inspection ➢ Visit randomly selected end users to conduct physical inspection to the household solar cookers in order to verify the monitoring information presented in the monitoring report ➢ Verify whether the project implementation is in line with the description in the GS PDD for 2nd crediting period ➢ Interview with monitoring staff to verify how they manage the end users in project and how to collect the monitoring data by sampling method ➢ Interview with end users, getting relevant information by filling questionnaires to compare with the monitoring data in monitoring report Interview with PD Representative and Local end Users ➢ The local development of this industry and	Jingziguan, Siwan, Xihuang, Maotang, Dashiqiao, Shangji and Jinhe town, Xichuan County, Nanyang City, Henan Province, P. R. China	06/11/2023-08/11/2023	Zhang Lei Li Ziqi

[3] On-site together with Phase II (GS1588), opening meeting, doc check and close meeting conducted together with phase II.

	relevant policy ➢ Technology utilized, Technical equipment and operation ➢ Starting date of project and crediting period ➢ Management Procedure and Method taken by PD ➢ Involved personnel and responsibilities ➢ Emission reduction, Monitoring Plan and implementation of project for this monitoring period ➢ Sampling Plan and implementation of taken by PD for this monitoring period ➢ Training and detailed procedures ➢ Monitoring Data collection and archive procedure and method			
3	Documents check (As provided in the Appendix 3)	Guest house conference room of Xichuan County Committee	10/11/2023	Zhang Lei Li Ziqi
4	Finding Summary	Guest house conference room of Xichuan County Committee	10/11/2023	Zhang Lei Li Ziqi
5	Close Meeting ➢ Presenting audit findings ➢ Introduce following procedures after site visit	Guest house conference room of Xichuan County Committee	10/11/2023	Zhang Lei Li Ziqi

D.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Su	Fanglei	Sirreon Technology & Development (Beijing) Co., Ltd / General Manager	06/11/2023-10/11/2023	- General aspects of the project - Changes since validation / previous verifications - Project implementation status - Quality management system - Involved personnel and responsibilities - Training and practice of the monitoring personnel - Implementation of the monitoring plan - Monitoring data management - Data uncertainty and residual risks - Procedural aspects of the verification - Maintenance - Environmental aspects	Zhang Lei Li Ziqi
2.	Ding	Yunxi	Sirreon Technology & Development (Beijing) Co., Ltd	06/11/2023-08/11/2023	- Monitoring data survey - Monitoring data collection - Monitoring data record - Monitoring data verify	

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
			/ Monitoring Data Surveyor		- Monitoring data check - Monitoring data management	
3.	Mei	Xin	Sirreon Technology & Development (Beijing) Co., Ltd / Monitoring Data Recorder	06/11/2023-08/11/2023		
4.	Yu	Shuyi	Sirreon Technology & Development (Beijing) Co., Ltd / Monitoring Data Verifier	06/11/2023-08/11/2023		
5.	Qiu	Weifu	Sirreon Technology & Development (Beijing) Co., Ltd / Monitoring Staff	06/11/2023-08/11/2023		
6.	Bai	Caijing				
7.	Kang	Hua				
8.	Zhang	Lihua	Staff of Xichuan Bureau of Agriculture & Rural Affairs	06/11/2023	- local stakeholder comments - Benefit to locals - Environmental Impacts	
9.	Li	Jianghai	Local farmers	06/11/2023		
10.	Cheng	Guangzhong		06/11/2023		
11.	Xue	Shan	End users	06/11/2023		
12.	Ding	Yin		06/11/2023		
13.	Fan	Su	Shizigou village/Solar cooker users (ti sample)	07/11/2023	- Project implementation - Project operation - Data collection procedure	
14.	Miao	Xue	Wujiagou Village/Solar cooker users (ti sample)	07/11/2023	- Project implementation - Project operation - Data collection procedure	
15.	Chen	Chun	Dabai village/Solar cooker users (ti sample)	07/11/2023	- Project implementation - Project operation - Data collection procedure	
16.	Yuan	Mingbiao	Xiaosigou village/Solar cooker users (ti sample)	07/11/2023	- Project implementation - Project operation - Data collection procedure	
17.	Sun	Cai	Dianzi village/Solar cooker users (ti sample)	07/11/2023	- Project implementation - Project operation - Data collection procedure	
18.	Gu	Handong	Dahuashan Village/Solar cooker users (ti sample)	07/11/2023	- Project implementation - Project operation - Data collection procedure	
19.	Dong	ChunZhao	Luogang Village/Solar cooker users (ti sample)	07/11/2023	- Project implementation - Project operation - Data collection procedure	
20.	Qi	Xu	Liulinggou Village/Solar	07/11/2023	- Project implementation - Project operation	

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
			cooker users (ti sample)		- Data collection procedure	
21.	Ba	Shu	Yuanlinghuai Village/Solar cooker users (ti sample)	07/11/2023	- Project implementation - Project operation - Data collection procedure	
22.	Fu	Xian	Mujiagou Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
23.	Yuan	DanYi	Maozhuang Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
24.	Bi	Qing	Yawu Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
25.	Teng	Lianxiang	Maozhuang Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
26.	Fan	Ronglin	Guandi Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
27.	Gu	Mada	Liwan Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
28.	Zhu	Chunzhao	Daixing village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
29.	Zou	Baocheng	Daihe Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
30.	Ge	Lan	Liwan Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
31.	Zhan	Shu	Longgang Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
32.	Zhan	Yeqin	Liushu Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
33.	Yu	ZhuXiao	Liuxihe Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
34.	Wei	Zhen	Yaogou village/Solar cooker users (ti sample)	07/11/2023	- Project implementation - Project operation - Data collection procedure	

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
35.	Qin	Dongjie	Shimenguan Village/Solar cooker users (ti sample)	07/11/2023	- Project implementation - Project operation - Data collection procedure	
36.	Wu	Gang	Dangyuan village/Solar cooker users (ti sample)	07/11/2023	- Project implementation - Project operation - Data collection procedure	
37.	Xun	ChenZhong	Liujiaping Village/Solar cooker users (ti sample)	08/11/2023	- Project implementation - Project operation - Data collection procedure	
38.	Feng	QianMei	Dongwan Village/Solar cooker users (ti sample)	08/11/2023	- Project implementation - Project operation - Data collection procedure	
39.	Ding	XiangGuang	Shiyanhe Village/Solar cooker users (ti sample)	08/11/2023	- Project implementation - Project operation - Data collection procedure	
40.	Shao	MaoQun	Dongyuemiao Village/Solar cooker users (ti sample)	08/11/2023	- Project implementation - Project operation - Data collection procedure	
41.	Wei	Guang	Bijiatai Village/Solar cooker users (ti sample)	08/11/2023	- Project implementation - Project operation - Data collection procedure	
42.	Diao	ChengChen	Yangou Village/Solar cooker users (ti sample)	08/11/2023	- Project implementation - Project operation - Data collection procedure	
43.	Wan	Gang	Laofenggou Village/Solar cooker users (ti sample)	08/11/2023	- Project implementation - Project operation - Data collection procedure	
44.	Ji	LanDan	Lishan Village/Solar cooker users (ti sample)	08/11/2023	- Project implementation - Project operation - Data collection procedure	
45.	Yang	Gui	Liuzhuang Village/Solar cooker users (ti sample)	08/11/2023	- Project implementation - Project operation - Data collection procedure	
46.	Ni	YinGuang	Dalong Village/Solar cooker users (ti sample)	08/11/2023	- Project implementation - Project operation - Data collection procedure	
47.	Yuan	SongJun	Lianhua Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
48.	Qi	WanYan	Fenghua Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
49.	Fei	BiYuan	Heishui Village/Solar	06/11/2023	- Project implementation - Project operation	

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
			cooker users (ti sample)		- Data collection procedure	
50.	Bian	ChaoYi	Liwan Village/Solar cooker users (ti sample)	06/11/2023	- Project implementation - Project operation - Data collection procedure	
51.	Wei	Sheng	Chengjiawa Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
52.	LuZhu	XiaoGe	Hanwangping Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
53.	Cao	Heng	Daba village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
54.	An	Yu	Fengying Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
55.	Le	Xin	Shihaogou Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
56.	Zou	Yu	Yaowangmiao Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
57.	Wan	ZhenGuo	Liying Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
58.	Hua	Qing	Douling Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
59.	Qi	MinTao	Shangjie Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
60.	Zhi	QuanSheng	Huanglianshu Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
61.	Qu	Guo	Dujiahe Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
62.	Hou	MeiYun	Sunjiatai Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
63.	Ke	ZheShi	Yuanlinghuai Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
64.	Di	Huan	Luogang Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
65.	Yan	Wan	Bogeyu Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
66.	Lu	YuGuang	Liuxihe Village/Solar cooker users (Up,y sample)	06/11/2023	- Usage time - Users Training - Follow-up interview	
67.	Deng	Shi	Qianwan Village/Solar cooker users (Up,y sample)	06/11/2023	- Usage time - Users Training - Follow-up interview	
68.	Qin	Hai	Qikeshu Village/Solar cooker users (Up,y sample)	06/11/2023	- Usage time - Users Training - Follow-up interview	
69.	Zhi	QuanSheng	Maozhuang Village/Solar cooker users (Up,y sample)	06/11/2023	- Usage time - Users Training - Follow-up interview	
70.	Chen	Li	Liwan Village/Solar cooker users (Up,y sample)	06/11/2023	- Usage time - Users Training - Follow-up interview	
71.	Gao	YuanYu	Laotian Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
72.	Lu	YanXu	Gaogou Village/Solar cooker users (Up,y sample)	07/11/2023	- Usage time - Users Training - Follow-up interview	
73.	Song	QingYi	Liujiagou Village/Solar cooker users (Up,y sample)	08/11/2023	- Usage time - Users Training - Follow-up interview	
74.	Li	Fa	Henggou Village/Solar cooker users (Up,y sample)	08/11/2023	- Usage time - Users Training - Follow-up interview	
75.	Ji	BaoWang	Guantian village/Solar cooker users (Up,y sample)	08/11/2023	- Usage time - Users Training - Follow-up interview	
76.	Fu	ChangJin	Shiyanhe Village/Solar cooker users (Up,y sample)	08/11/2023	- Usage time - Users Training - Follow-up interview	
77.	Hong	Jun	Yaojiawan Village/Solar cooker users (Up,y sample)	08/11/2023	- Usage time - Users Training - Follow-up interview	
78.	Ying	YuanXing	Liujiaping Village/Solar	08/11/2023	- Usage time - Users Training	

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
			cooker users (Up,y sample)		- Follow-up interview	
79.	Wang	Ling	Shizui village/Solar cooker users (Up,y sample)	08/11/2023	- Usage time - Users Training - Follow-up interview	
80.	Qiu	Ying	Zhangying Village/Solar cooker users (Up,y sample)	08/11/2023	- Usage time - Users Training - Follow-up interview	
81.	Tong	Fu	Shuitian village/Solar cooker users (Up,y sample)	08/11/2023	- Usage time - Users Training - Follow-up interview	
82.	Ling	Lian	Zhongguan community/Solar cooker users (Up,y sample)	08/11/2023	- Usage time - Users Training - Follow-up interview	
83.	Yu	Yuan	Xeling community/Solar cooker users (Up,y sample)	08/11/2023	- Usage time - Users Training - Follow-up interview	
84.	Zhan	FeiShu	Tiemiao Village/Solar cooker users (Up,y sample)	08/11/2023	- Usage time - Users Training - Follow-up interview	
85.	Dong	Ling	Weizhuang Village/Solar cooker users (Up,y sample)	06/11/2023	- Usage time - Users Training - Follow-up interview	
86.	Meng	JunRong	Yuanshan Village/Solar cooker users (Up,y sample)	06/11/2023	- Usage time - Users Training - Follow-up interview	
87.	Luo	Yu	Fenghua Village/Solar cooker users (Up,y sample)	06/11/2023	- Usage time - Users Training - Follow-up interview	
88.	Zhen	ShuanZhen	Biaochi Village/Solar cooker users (Up,y sample)	06/11/2023	- Usage time - Users Training - Follow-up interview	
89.	Li	Mengnan	Profit Carbon (Shanghai) Environment Co., Ltd./ Consultant	06/11/2023-10/11/2023	- Monitoring data management - Monitoring data collection - Data uncertainty and residual risks - Monitoring report preparing - GHG emission reduction calculation	

***The site visit was conducted in the Jingziguan Township, Siwan Township, Xihuang Township, Maotang Township, Dashiqiao Township, Shangji Township and Jinhe Township, Xichuan County, Nanyang City, Henan Province, China where the project located**

Type of Questions asked by the team members:

During the site visit, the verifier has randomly selected staffs, field surveyors from project implementer and end users from the PD monitoring survey samples as above table to confirm that the correctness of the project monitoring data and information and sampling method reported by the PD.

The questions asked were basically based on requirements of the GS4GG and MR description.

a. Questions asked to end users with parameter of t_i:

The households who attended the monitoring survey for monitoring the solar cooker using situations and determination of parameter t_i were asked the following questions;

1. General information of households
    a. Interviewee Name
    b. ID No.
    c. Age, Gender
    d. Household location
    e. Mobile No.
2. Solar Cooker using situation
    a. When did you use the solar cooker?
    b. Before using the solar cooker, did you participate in the solar cooker publicity, publicity and how to use training sessions, if yes, time is
    c. After using the solar cooker, did the distributor come to your home to check the use of the solar cooker? if yes, time is
    d. Solar cooker using frequency, boiling times, cooking times and total used time
    e. Do you think the use of solar cookers is affected by the season? if yes, which season less time
    f. Do you think the solar cooker is cleaner than the old stove?
    g. Do you think using a solar cooker saves money compared to using a stove?

Feedback Received for t_i through the Interview:

The feedback from Household interviewees are listed as below:

All the interviewees provided the general information of the households,

For the using of solar cookers, all the households confirmed they used the solar cookers commonly, all the households have provided the general information when they started using the solar cooker and the unique serial No. has been verified by cross-check the User information registration form/14/ and the Solar cookers usage agreements/15/.

All the households confirmed they have participated the solar cooker publicity and how to use training sessions, and they all confirmed that the distributor come to their home to do the follow up checking the use of the solar cooker.

All the households confirmed they use solar cookers very frequently and calculated average time is 3.55 hours.

All the households confirmed that the using of solar cooker is impacted by season reason and less in winter.

All the households confirmed that solar cooker is cleaner than the old stove without smoke and saves money.

b. Questions asked to end users with parameter of Usage Rate $U_{p,y}$:

The households who attended the monitoring survey for monitoring the solar cooker using situations and determination of parameter usage rate were asked the following questions,

1. General information of households
    a. Interviewee Name
    b. ID No.
    c. Age, Gender
    d. Household location
    e. Mobile No.
2. Solar Cooker using situation
    a. Are you the main user of the solar cooker at home?
    b. When did you start using the solar cooker?
    c. Before using the solar cooker, did you participate in the solar cooker publicity, publicity and how to use training sessions, if yes, time is
    d. After using the solar cooker, did the distributor come to your home to check the use of the solar cooker? if yes, time is
    e. Solar cooker using frequency, boiling times, cooking times and total used time
    f. Do you think the solar cooker is cleaner than the old stove?
    g. Do you think using a solar cooker saves money compared to using a stove?

Feedback Received through the Interview:

The feedback from Household interviewees are listed as below:

All the interviewees provided the general information of the households,

All the interviewees confirmed that they are the main users of the solar cooker at home,

All the households have provided the time for start using the solar cooker,

All the households confirmed they have participated the solar cooker publicity and how to use training sessions, and they all confirmed that the distributor come to their home to do the follow up checking the use of the solar cooker.

All the households confirmed they use solar cookers very frequently and average time is from 0.8 to 4.66 hours.

All the households confirmed that solar cooker is cleaner than the old stove without smoke and saves money as solar is no need to pay.

c. Questions asked to staffs

The staff representatives were asked the following questions:

a. General info of interviewee, name, gender, ID No. Age, Education, Location, Mobile, Position
b. When joined the company
c. How to obtain this job
d. What is the main work
e. What about the working condition
f. Salary level, if satisfied

Feedback Received through the Interview

All the staffs provided the general information, position, join time, join method, main work, all the staffs agreed that the working condition is well and satisfied with the salary level.

d. Questions asked to monitoring team members

The staff representatives were asked the following questions:

a. General info of interviewee, name, gender, ID No. Age, Education, Location, Mobile, Position
b. When joined the monitoring team
c. Which team do you belong to
d. What is the main work, do you know your target and purpose of the work
e. Do you have any working instruction manual and procedure documents
f. What did you monitor during the period of Jan 2021 to May 2022
g. Have you attended any training and when, content of the training
h. Please introduce how to use continuous monitoring equipment to monitor the operation time of the solar cooker
i. Whether your work is supervised by the employer
j. On the first day of your monitoring and investigation work, did the someone supervise and guide you on how to do the monitoring and investigation?

Feedback Received through the Interview

All the monitoring team members provided the general information, position, join time, which team, main work.

All the monitoring team members know their work and purpose and all they have instruction manual and attended the training for monitoring. And they all conducted the monitoring and data collection during Jan 2021 to May 2022, and all the members using the measurement device for monitoring the operation of the solar cookers, and their work were under the supervision of employer.

D.4. Sampling approach

PD Sampling Approach for t_i

The sampling design carried out by PD for this project is demonstrated as below:

As per registered CDM PDD/3/, the project activity applies simple random sampling for monitoring the monthly operating time of each solar cooker, t_i, and the sample size is 312.

Each district sample size is thus calculated and determined as following formula in line the "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities", /39/:

$$n_i = \frac{g_i}{N} \times n$$

Where:

n_i is the sample size in the district;
g_i is the number of households in district given solar cooker;
N is the population total, which is 48,000;
n is sample size in the GS PDD for 2nd crediting period, which is 312.

Thus, sample size each district is calculated in the table below:

District	Number of households (g_i)	Calculated sample size (n_i=g_i/48,000*312)	Actual sample size
Jingziguan	6,000	39	39
Siwan	6,000	39	39
Xihuang	8,000	52	52
Maotang	8,000	52	52

Dashiqiao	7,000	45.5	46
Shangji	7,000	45.5	46
Jinhe	6,000	39	39
Total	**48,000**	**312**	**313**

In the GS PDD for 2nd crediting period, simple random sampling size is 312, however, based on the above calculation results, the sample size in district Dashiqiao and Shangji is 45.5. In the MR, the sample size in district Dashiqiao and Shangji is rounded up to 46. Thus 626 sampled solar cookers, 313 for each year respectively are surveyed. This is deemed conservative.

The sample is randomly selected within each district using online number generator at the beginning of each year following the operation start date of 01/08/2011 and deemed representative of the population.

The sample records/16/ have been provided to the verification team. No missing or damaged record is revealed by the verification team. Adequate reason is recorded along with the significantly high data as per the GS PDD for 2nd crediting period/3/. The maintenance is also in place as per the GS PDD for 2nd crediting period.

PD Sampling Approach for $U_{p,y}$

The sampling plan/25/ and monitoring survey records for usage rate/19/ are verified by the verification team, it is confirmed that the sample size determination for determine the parameter $U_{p,y}$ in the monitoring survey is in line with the GS requirement "Requirements and Guidelines for usage rate monitoring"/44/.

PD has employed stratified sampling method and random sample selection methodology to ensure the final sample selected for this parameter monitoring survey was representative. It is verified that the method is in line with GS requirement "Requirements and Guidelines for usage rate monitoring"/44/.

Monitoring parameter of $U_{p,y}$ was determined by conducting Usage Survey which is weighted based on drop off rates that are representative of the age distribution for project solar cookers in the total sales record. It is conducted on annually basis.

The usage survey has been conducted in Jan 2021 to May 2022 by monitoring team from PD.

For sampling survey as requested in the GS requirement "Requirements and Guidelines for usage rate monitoring"/44/, 200 end users of solar cooker have been selected (100 for each vintage year) and visited by monitoring team members during Jan 2021 to May 2022 which has been confirmed by checking the monitoring survey records for usage rate/19/.

Overall, 200 solar cookers with only one age (same age group, due to all 48,000 solar cookers had been completely distributed in May to July in 2011 and no more units will be added into the project with the progress of the project) were monitored. Random sampling approach has been applied for selection of samples. It is confirmed that the sample size fulfils the minimum sample size requirement of continuous use monitoring in the Requirements and Guidelines for usage rate monitoring/44/.

All measurements and interviews in the usage survey have been conducted in person within the household, and questionnaire has also been used to collect responses from interviewees.

Above mentioned evidences were provided to the verification team during site verification. PD conducted the usage survey fulfilled with the level B. Good Practice Monitoring Requirements as requested in the "Requirements and Guidelines for usage rate monitoring"/44/. The assessment is listed as below stepwise,

a. Level A. Mandatory Monitoring Requirements

Step 1. Defining stove use and non-use

All measurements in the usage survey have been conducted in person within the household,

For 2021 vintage, the 100 samples were randomly divided into 3 groups. The 90 days monitoring activity of each group was completed successively, the start date for 90 days monitoring of the 3 groups was 01/02/2021, 02/05/2021 and 01/08/2021 separately.
For 2022 vintage, the 100 samples were randomly divided into 1 group by considering this monitoring period only covers 121 days. The 90 days monitoring activity of each group was completed successively, the start date for 90 days monitoring of the 1 group was 01/02/2022.
Hence, it is verified that the stove use and non-use can be monitored and checked by records of 90 days monitoring of the total 4 groups/19/ which have been conducted on 01/02/2021, 02/05/2021, 01/08/2021 and 01/02/2022 separately.
If the average daily usage times of solar cookers used less than or equal to 2 times in 90 consecutive days, it will be defined as non-use of the solar cookers which is verified as reasonable.

Step 2. Household Usage Survey

Usage Survey targeted 100 solar cookers with only one age (same age group, due to all 48,000 solar cookers had been completely distributed in May to July 2011) during this monitoring period. Hence, it is confirmed that the sample size for the usage survey meets the requirements of the applied methodology (at least 100 samples for project technologies). For each sub-request, the assessment is stated as below,

i. Kitchen observation
   Pictures of the project solar cookers/22/ taken during the field survey by the monitoring team have been provided by PD. Through the pictures, the verifier confirmed that the solar cookers are in good condition and used in open kitchen.
ii. Interview with the primary cook
   Samples of filled monitoring survey questionnaires/21/ and monitoring survey records for usage rate/19/ have been checked, the verifier verified that the Question one is directly asking if you are the primary user of solar cookers in the household, the surveyors have been trained to interview the primary cook who use the stove, the survey with the household should be stopped or delayed if not the right person. And via checking all the answers in the questionnaire samples, it is verified that the all interviewees were the primary user of the solar cookers in their households.
iii. Photos of the cooking area(s)
   Pictures of the project solar cookers used in the kitchen of the households/22/ taken during the field survey by the surveyors have been provided by PD. Through the pictures, it is confirmed that the household allowed them to take photos in their open kitchens.
iv. GSP coordinates
   Monitoring survey records for usage rate/19/ have been checked, it is verified that the GPS coordinates of the households surveyed have been recorded on the records by surveyors, and the photos of the project solar cookers/22/ surveyed have been taken during the field survey by the surveyors too, which is in line with the requirements in the guideline.

Step 3. Verification checks
The record of verification checks/23/ in an excel sheet has been provided to VVB, it is confirmed that the Data Verification Group from PD has conducted the verification checks by end of November 2021 and by the end of May 2022, after the conclusion of the data collection phase of the usage survey and prior to the verification by the VVB. Through the records, it is verified that PD has telephoned a randomly selected 10 surveyed households (account for 10% of total samples) and total 20 surveyed households for two vintage year and several questions were asked which is same to the questions in the questionnaires. Details of the households and their responses have been recorded for the checks. The record of verification checks/23/ in an excel sheet has been cross-checked with filled monitoring survey questionnaires/21/, it is verified that the verification checks records are in line with the responses from the monitoring survey.

In conclusion, the project activity is in compliance with the Level A mandatory requirements.

b. Level B. Good Practice Monitoring Requirements

- Field team training and supervision:

Via checking the monitoring survey records/19/ and the monitoring manual/26/ and interview with the surveyor of the monitoring team, it is confirmed that the GS monitoring team has established by PD. Also through checking the training records including training presentation, surveyors' training photos and attendance lists/29/, it is verified that the two trainings have been provided to the field monitoring team on 07/04/2021 and 07/01/2022 separately.

Furthermore, via interview the surveyors during site visit, it is verified that the local team has traveled in all survey regions to conduct the interviews; and PD has supervised the field survey and conducted quality check on data collected during the visits.

- End-User Training and follow up visits & Awareness campaign:

Via checking the samples of End-user training records/30/ which were provided by PD, it is confirmed that the project owner has provided the end-user training on illustration on use and maintenance of the solar cookers, how to record the usage time, and sustainable development contributions of the project to conduct related awareness campaign.

Furthermore, via site interview with the PD, it is confirmed that they explained and demonstrated how to correctly and efficiently use the solar cookers when the solar cookers were distributed. And the users are trained to record the time of using the solar cookers per day which has been confirmed by checking the training records/30/.

Besides, via checking the Pictures of the project solar cookers checked by PD/22/, it is also verified that the PD has conducted follow up visits during this monitoring period.

The results show that 88% and 85% surveyed solar cookers were in normal use by the households during the monitoring period respectively for 2021 and 2022 vintage by questionnaire survey/21/, and through questionnaire survey results for the number of days that units are not in use/21/, the average share of running time is calculated as 87.18% and 92.68% respectively for 2021 and 2022 vintage, thus the weighted usage rate is calculated as 76.72% (88% * 87.18%) for 2021 and 78.78% (85% * 92.68%) for 2022 which has been checked and confirmed in usage rate calculation sheet/20/ against the original questionnaires filled by sample households/21/ and the monitoring survey record/19/.

Therefore, it is concluded that based on the "Requirements and Guidelines for usage rate monitoring"/44/, the usage survey carried out fulfils the Level A. Mandatory and Level B. Good Practice Monitoring Requirements. Therefore, the final calculation result of 76.72% for 2021 and 78.78% for 2022 usage rates have been used for vintage emission reduction calculation is confirmed as reasonable and correct.

Therefore, based on the Requirements and Guidelines for usage rate monitoring, the usage rate of no higher than 90% as per Level B requirement which is 76.72% for 2021 and 78.78% for 2022 can be claimed for this monitoring period.

Sampling approaches during verification

1) Verifier's Action

Following "Sampling and Surveys for CDM Project Activities and Programme of Activities" version 09.0/38/, the verifier conducted the verification of sampling results with the following steps:

(a) Take a random sample of the project's sample records;

In order to determine the size of the sample for field/onsite check, the acceptable quality level (AQL), i.e. the proportion discrepancies between the PD sample records and the VVB sample records that are acceptable is determined as 0.5% and the proportion of discrepancies between the PD sample records and VVB sample records that are unacceptable (UQL) is determined as 10% according to "Sampling and Surveys for CDM Project Activities and Programme of Activities"

version 09.0/38/.

The maximum errors associated with the determination indicated above should remain at levels indicated below as per “Sampling and Surveys for CDM Project Activities and Programme of Activities” /38/:

(1) A 10% chance that the VVB will wrongly reject the PDs records (producer’s risk);

(2) A 10% chance that the VVB will wrongly accept the PDs records (consumer’s risk).

With the AQL of 0.5%, the UQL of 10%, the producer’s risk of 10% and the consumer’s risk of 10%, the size of the acceptance sampling is determined as 38 and the acceptance number is determined as 1 according to Table 2 of “Sampling and Surveys for CDM Project Activities and Programme of Activities” /38/.

Take a random sample of the PDs sample records, i.e. the monthly operating time of solar cookers sampled by project participants/16/ and the onsite check of the 38 solar cookers sampled by the verifier. The original daily operating hour records of solar cookers for 38 samples selected by verification team/17/ and the monthly operating time of solar cookers sampled by project participants were cross checked by verification team too.

(b) Check the acceptability of the data for each record in the sample records based on the expertise;

The sample records, i.e. the monthly operating time of solar cookers sampled by project participants/16/ is found to be consistent with the original daily operating hour records of solar cookers for 38 samples selected by verification team/17/. Also, no discrepancy is found between the sample records (626 solar cookers, 313 for each year respectively) and the VVB sample records (38 solar cookers).

(c) Based on the number of records where is agreement, determine if the sample records meet the requirements.

As there are no discrepant records, i.e. the discrepant record is less than the acceptance number of 1, the sample records/16/ is accepted as per “Sampling and Surveys for CDM Project Activities and Programme of Activities” /38/.

2) Reliability Check

a. Mean value and standard deviations for strata

Table below summarize the verified results for mean monthly operation hour and standard deviations for each district:

Town / Month	Jingziguan		Siwan		Xihuang		Maotang		Dashiqiao		Shangji		Jinghe	
	Sample mean	Sample standard deviation	Sample mean	Sample standard deviation	Sample mean	Sample standard deviation	Sample mean	Sample standard deviation	Sample mean	Sample standard deviation	Sample mean	Sample standard deviation	Sample mean	Sample standard deviation
	m_i	SD_i	m_i	SD_i	m_i	SD_i	m_i	SD_i	m_i	SD_i	m_i	SD_i	m_i	SD_i
01/2021	77.51	12.98	76.6923	13.2609	83.25	12.4111	81.63	15.6092	78.13	12.3623	78.30	13.8722	78.41	13.5757
02/2021	113.15	17.47	113.6410	16.1791	110.65	14.8283	110.10	16.2858	111.33	16.0790	112.76	16.7693	111.28	16.7943
03/2021	65.03	6.71	64.4103	5.7295	64.33	6.0899	64.02	5.8928	64.72	5.7375	64.43	7.0195	66.03	6.3515
04/2021	98.59	8.04	95.8974	8.2806	102.04	6.9479	100.48	7.9026	99.46	7.3808	97.96	8.0552	98.15	7.2422
05/2021	122.51	11.87	128.4103	8.6897	130.12	6.4736	130.79	6.0011	130.65	6.0890	125.59	11.3814	120.49	12.3967
06/2021	127.23	14.21	126.8205	15.7511	126.75	14.4220	125.56	14.3355	126.83	13.8328	117.11	16.5089	124.82	17.0230
07/2021	122.03	11.20	121.0513	12.3841	126.06	9.9831	123.37	14.0070	123.85	9.9241	123.91	11.2602	121.79	12.3718
08/2021	114.62	15.90	116.7949	13.9796	116.35	12.3842	117.44	13.2301	115.54	16.5041	120.78	11.0351	118.87	10.8850
09/2021	124.31	14.40	122.9231	13.9876	124.48	13.1395	124.23	14.2246	124.11	14.3252	123.78	15.0701	125.85	11.1297
10/2021	115.26	14.24	116.1282	14.6865	114.79	13.7275	114.35	16.4375	114.22	15.3303	119.26	13.6095	117.26	11.1443
11/2021	107.18	11.19	104.3333	11.1103	104.94	12.8298	102.15	11.9597	107.61	12.5193	105.07	12.5245	103.85	10.6883
12/2021	102.46	9.29	101.4359	10.4322	102.62	10.9278	101.10	9.9730	102.74	11.0281	103.09	11.0872	104.85	12.3086
01/2022	105.79	9.65	102.6667	13.6369	103.71	12.6233	103.58	10.0632	103.76	11.4914	102.87	14.3428	105.36	13.4526
02/2022	92.64	11.92	88.5385	9.8056	91.87	12.9978	90.29	10.0690	91.72	11.5425	92.46	8.5497	88.33	9.4014
03/2022	95.62	10.13	93.2564	10.0779	96.62	9.6267	94.48	10.8510	97.74	11.5555	95.13	10.3765	95.97	10.4466
01/04/2022 ~01/05/2022	129.36	13.33	131.6923	12.1442	130.69	9.8230	129.00	13.6209	133.96	11.7831	135.83	10.4036	132.05	10.5630

b. The stratified estimated overall mean:

The sample estimated of the overall mean operation hours is confirmed to be calculated with the equation below as per "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities" (version 04.0) /39/:

$$m_{strat} = \sum_{i=a}^{k} \frac{g_i}{N} \times m_i$$

Where:

m_{stra}	is the stratified estimated overall mean;
g_i	is the size of the i^{th} district where i=a,…,k;
N	is the population total (48,000);
m_i	is the mean of the i^{th} district where i=a,…,k.

c. The standard error of the stratified estimated overall mean:

The standard error of the stratified estimated overall mean is confirmed to be calculated as per "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities" /39/:

$$s.e.(m_{strat}) = \sqrt{\sum_{i=a}^{k} (\frac{g_i}{N})^2 \times (1 - \frac{n_i}{g_i}) \times \frac{SD_i^2}{n_i}}$$

Where:

$s.e.(m_{strat})$	is the standard error of the stratified estimated overall mean;
g_i	is the size of the i^{th} district where i=a,…,k;
N	is the population total (48,000);
n_i	is the number of sampled units the i^{th} district where i=a,…,k;
SD_i^2	is the variance of the ith district where i=a,…,k.

d. t-value:

T-value depends on (i) the level of confidence and (ii) the size of the sample. The t-value associated with 90% confidence and the sample size of 313 is confirmed to be 1.6497 as derived in Microsoft Excel using the TINV function following "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities" /39/.

e. Precision:

The precision associated with an estimate is confirmed to be: t-value × standard error of the mean as per "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities" /39/.

The precision of the mean monthly solar cooker operation hours, assuming 90% confidence, is therefore confirmed to be:

Period	t-value	m_{strat}	$s.e.(m_{strat})$	Precision	Relative Precision
01/01/2021 - 31/01/2021	1.6497	79.37	0.7616	1.2565	1.58%
01/02/2021 - 28/02/2021	1.6497	111.73	0.9183	1.5149	1.36%
01/03/2021 - 31/03/2021	1.6497	64.66	0.3506	0.5783	0.89%
01/04/2021 - 30/04/2021	1.6497	99.12	0.4330	0.7143	0.72%
01/05/2021 - 01/05/2021	1.6497	127.28	0.5149	0.8495	0.67%
01/06/2021 - 30/06/2021	1.6497	124.98	0.8526	1.4066	1.13%
01/07/2021 - 31/07/2021	1.6497	123.31	0.6575	1.0848	0.88%
01/08/2021 - 31/08/2021	1.6497	117.21	0.7622	1.2574	1.07%
01/09/2021 - 30/09/2021	1.6497	124.24	0.7793	1.2856	1.03%
01/10/2021 - 31/10/2021	1.6497	115.82	0.8077	1.3325	1.15%
01/11/2021 - 30/11/2021	1.6497	104.95	0.6721	1.1088	1.06%
01/12/2021 - 31/12/2021	1.6497	102.56	0.6053	0.9987	0.97%
01/01/2022 - 31/01/2022	1.6497	103.91	0.6903	1.1389	1.10%
01/02/2022 - 28/02/2022	1.6497	90.91	0.6068	1.0011	1.10%
01/03/2022 - 31/03/2022	1.6497	95.58	0.5892	0.9721	1.02%

Period	t-value	m_{strat}	s.e.(m_{strat})	Precision	Relative Precision
01/04/2022 - 01/05/2022	1.6497	131.76	0.6611	1.0906	0.83%

The relative precision is less than 10%. The data are within the required specification. Therefore, it is verified that the required confidence/precision has been met.

VVB's Sampling Approach during site visit

1) Verifier's Action

Following "Sampling and Surveys for CDM Project Activities and Programme of Activities" version 09.0/38/ and "Guideline of Sampling and surveys for CDM project activities and programmes of activities" version 04.0/39/, the verifier conducted the verification of sampling results with the following steps:

For parameter t_i and $U_{p,y}$, verification team made the sampling plan for visiting households during this verification using Acceptance Sampling approach as specified in the "Sampling and Surveys for CDM Project Activities and Programme of Activities" version 09.0/38/ with the following steps,

(d) Take a random sample of the project's sample records;

In order to determine the size of the sample household for field/onsite check, the acceptable quality level (AQL), i.e. the proportion discrepancies between the PD sample records and the VVB sample records that are acceptable is determined as 0.5% and the proportion of discrepancies between the PD sample records and VVB sample records that are unacceptable (UQL) is determined as 10% according to "Sampling and Surveys for CDM Project Activities and Programme of Activities" version 09.0/38/.

The maximum errors associated with the determination indicated above should remain at levels indicated below as per "Sampling and Surveys for CDM Project Activities and Programme of Activities"/38/:

(1) A 10% chance that the VVB will wrongly reject the PDs records (producer's risk);

(2) A 10% chance that the VVB will wrongly accept the PDs records (consumer's risk).

With the AQL of 0.5%, the UQL of 10%, the producer's risk of 10% and the consumer's risk of 10%, the size of the acceptance sampling is determined as 38 and the acceptance number is determined as 1 according to Table 1 of "Sampling and Surveys for CDM Project Activities and Programme of Activities"/38/. Therefore, verification team randomly selected 38 from the PD's sample records/19/ for $U_{p,y}$ and also 38 from the PD's sample records/17/,/18/ for t_i. Verifier used online number generator to randomly select 76 samples from PD sample records and the sampling plan of VVB was sent to PD during the opening meeting and after the opening meeting, 76 samples were inspected and interviewed continuously by verifier during site visit.

Took a random sample selection of the PD's sample records/19/,/17/,/18/ using the online number generator, and verifier conducted the interview of the 76 solar cooker end users during site visit by filling with the prepared questionnaires.

(e) Check the acceptability of the data for each record in the sample records based on the expertise;

The sample records in the monitoring survey report/19/ is found to be consistent with the 76 samples selected by verification team from the sampling conducted by the PD. Also, no discrepancy is found between the sample records/19/ and the VVB sample records.

(f) Based on the number of records where is agreement, determine if the sample records meet the requirements.

As there are no discrepant records, i.e. the discrepant record is less than the acceptance number of 1, the sample records/19/ is accepted as per "Sampling and Surveys for CDM Project Activities and Programme of Activities"/38/.

D.5. Clarification requests, corrective action requests and forward action requests raised

Areas of verification findings	No. of CL	No. of CAR	No. of FAR
General Description of Project (E.1)	CL 01	CAR 01	-
Remaining forward action requests from validation and/or previous verification (E.2)	-	-	-
Compliance of the project implementation with the registered project design document (E.3)	-	-	-
Post-registration changes (E.4)	-	-	-
Compliance of the monitoring system applied by the project with the registered monitoring plan (E.5)	CL 02	-	-
Compliance of monitoring activities with the registered monitoring plan (E.6)	-		
SDG Data and parameters fixed ex ante or at renewal of crediting period (E.6.1)	-	-	-
SDG Data and parameters monitored (E.6.2)	-	-	-
Comparison of monitored parameters with last monitoring period (E.6.3)	-	-	-
Compliance of the sampling implementation with the registered sampling plan (E.6.4)	-	-	-
Assessment of data and calculation of SDG Impacts (E.7)	-		
Calculation of baseline value or estimation of baseline situation of each SDG Impact (E.7.1)	-	-	-
Calculation of project value or estimation of project situation of each SDG Impact (E.7.2)	-	-	-
Calculation of leakage (E.7.3)	-	-	
Calculation of net benefits as difference of baseline and project values or direct calculation for each SDG Impact (E.7.4)	-	CAR 02	-
Comparison of actual SDG Impacts with estimates in approved PDD (E.7.5)	-	CAR 03	-
Remarks on increase in achieved SDG Impacts from estimated value in approved PDD (E.7.6)		-	-
Safeguards reporting (E.8)			
Stakeholder inputs and legal disputes (E.9)	-	-	-
Others (please specify)	-	-	-
Total	**2**	**3**	**-**

SECTION E. Verification findings

E.1. General Description of Project

Means of verification

A draft monitoring report was submitted to the verification team by the project participants prior to the start of the verification activities.

It is checked that the appropriate form has been used for compiling the MR as per the Gold Standard for Global Goals Monitoring Report Template version 1.1 in October 2020/40/.

Further every section has been checked against the GS4GG Principles& Requirements/41/.

Via on-site investigation, it is confirmed that the project involves distribution and installation of 48,000 sets of solar cookers for rural households. The project activity involves dissemination of solar cooker in Xichuan County, Henan Province, China. The total rated installed capacity of the project activity is 37.128MW_{th}. The project activity enables rural households to efficiently substitute fossil fuel used in daily cooking and water boiling by solar energy and therewith avoid CO_2 emission that would have been generated by fossil fuel consumption, finally provides the affordable and clean Energy to rural households in China.

The solar cooker reduces fuel consumption through using clean solar energy. The technology to be employed is environmentally safe and sound as well as state of the art. PD purchased the solar cookers from manufacturer/11/ and distributed them to households by free. By implementing the project PD has provided an opportunity for local community to generate steady and continual income for their livelihood.

The project is applicable to the applied CDM Methodology AMS-I.C “Thermal energy production with or without electricity” (Version 22.0)/36/.

The location of the project activity is an ideal area for solar energy utilization.

The detailed geographic coordinates of the project included in this monitoring period is listed as below:

No.	Project Location
Host Country	P. R. China
Region:	Henan Province
Project location address:	7 townships (Jingziguan, Siwan, Xihuang, Maotang, Dashiqiao, Shangji and Jinhe) of Xichuan County

Township	Longitude	Latitude
Jingziguan	110.9790°E - 111.0316°E	33.2323°N - 33.2513°N
Siwan	111.1273°E - 111.1651°E	33.1588°N - 33.1651°N
Xihuang	111.1390°E - 111.1713°E	33.2393°N - 33.2461°N
Maotang	111.2805°E - 111.4480°E	33.1502°N - 33.2697°N
Dashiqiao	111.2509°E - 111.2592°E	33.0524°N - 33.0575°N
Shangji	111.4803°E - 111.4878°E	33.1289°N - 33.1352°N
Jinhe	111.3979°E - 111.4020°E	33.1024°N - 33.1030°N

The start date of operation of the project activity was 01/08/2011, when all the 48,000 solar cookers completely distributed for the crediting period began which has been confirmed in the PDD and validation report/3/,/4/.

The project completed the registration of CDM on 02/05/2012 (UNFCCC Reference Number 6125) with a fixed crediting period which is from 02/05/2012 to 01/05/2022. The project completed the registration in GS on 13/08/2013 and the start date of the first crediting period of the project is defined as 02/05/2012. The project has completed the transition to GS4GG with the product of GS VER on 04/09/2023/8/

	with the 2nd crediting period is from 02/05/2017 to 01/05/2022. The current monitoring period belongs to the 2nd crediting period. While for the GS CER issuance, via checking the project dedicated GS webpage and 6th periodical verification report/7/, it is confirmed that the CERs of period from 01/01/2021 to 31/05/2021 (part of 6th GS periodical verification) have were not issued by CDM, so the PD does not make the request for GS labelling for period from 01/01/2021 to 31/05/2021 till now. But after the project completed the transition to GS4GG with the product of GS VER, PD decided to apply the GS VER issuance for the period from 01/01/2021 to 31/05/2021, which is verified as reasonable. Therefore, it is correct and plausible that the start date of this monitoring period is 01/01/2021. As part of the site visit the Verification Team was able to confirm that the project description in MR is in accordance with the project description contained in the PDD/3/.
Findings	CL 01 and CAR 01 were raised and resolved. Refer to Appendix 4 for detail assessment.
Conclusion	It can be confirmed that the final version Monitoring report/1/ is complete and transparent and in accordance with the PDD/3/ and Global Goals Monitoring Report Template version 1.1 in October 2020/40/. Refer to the below sections for details.

E.2. Remaining forward action requests from validation and/or previous verification

This is the 7th periodic verification of the project. There is no FAR from previous verifications via checking the previous verification reports/7/, and no FAR from the GS issuance Review Form for 6th GS verification/37/. There were 4 FARs raised during the Transition review dated 21/08/2023 and they have been successfully closed in the validation report for the crediting period renewal and approved by SustainCERT. There was two remaining FARs from the Performance Review dated 20/10/2021 and validation of the crediting period renewal respectively, detailed assessment please refer to Appendix 4 of this report.

E.3. Compliance of the project implementation with the registered project design document

Means of verification

By means of an in-depth review of the PDD and the checks carried out during the on-site visit an assessment has been carried out whether the project has been implemented and operated in line with the PDD and whether all physical features of the project are in place. The following has been checked: implemented technology, project equipment as well as monitoring equipment.

The verification team leader has performed a site visit to interview with end users and staffs, in addition by all the provided evidence, it is found that the project has been put into full operation since 01/08/2011 until all the 48,000 solar cookers were distributed to households and it is found that the implementation of the project activity is in accordance with the PDD/3/. The changes in the factors and parameters used during this monitoring period to arrive at the emission reduction calculations are transparently described in the Monitoring Report/1/.

PD has provided justifications for the changes and these changes are accounted correctly while calculating emission reductions/2/. The project involves distribution and installation of 48,000 sets of solar cookers for rural households/15/. The project activity involves dissemination of solar cooker in 7 townships (Jingziguan, Siwan, Xihuang, Maotang, Dashiqiao, Shangji and Jinhe) of Xichuan County, Henan Province, China. The rated and maximum total installed capacity of the project is 37.128 MW_{th} and 42.073 MW_{th} respectively/13/.

Basic technical details of the project are summarized in below table.

Parameters	Unit	Test Results
Focus	mm	667 - 684
Aperture area	m^2	1.75 - 1.82
Rated Power	W_{th}	802.375 – 875.238

	<table><tr><td>Thermal Efficiency</td><td>%</td><td>65.5% - 68.7%</td></tr><tr><td>The area with temperature over 400°C</td><td>cm^2</td><td>73 - 105</td></tr><tr><td>Maximum operational height</td><td>m</td><td>1.13 - 1.19</td></tr><tr><td>Maximum operational distance</td><td>m</td><td>0.67 - 0.73</td></tr><tr><td>Technical life of equipment</td><td>years</td><td>> 10</td></tr></table> The technical parameters of the solar cookers are consistent with the GS PDD for 2nd crediting period, also consistent with the solar cookers sales contract/11/ and the testing report of focus type solar cookers/13/. The emission reductions achieved during this monitoring period are 77,921 tCO_2e/2/. The details of verification against changes incorporated by PD during this monitoring period are provided in the respective sections. PD has introduced one model of the solar cooker as defined in the sales contract /11/. The solar cooker has been verified via site inspection. Verification team herewith confirms that the specifications of solar cooker are the same as provided in the PDD and MR. This is the 7th monitoring period of 2nd 5-years crediting period and the verification team herewith confirms that the project implementation is consistent as mentioned in the PDD. There are no major obstructions or gaps noted during this monitoring period. The actual distribution and operation are found in accordance with the descriptions provided in the PDD. There is no deviation / change evidenced during this monitoring period and there were no delays compared to information in approved project.
Findings	N/A
Conclusion	Assessment concludes the following: a. The implementation status of project activity was found to be in compliance with PDD/3/. b. VVB has conducted the on-site visit to confirm the implementation status of the project w.r.t. the realized technology/11/. c. The actual operation of project activity was found to be in compliance with PDD/3/. d. There were no delays compared to information in approved project.

E.4. Post-registration changes

E.4.1. Temporary deviations from Certified Key Project Information, Project Design Document, Monitoring & Reporting Plan, applied methodology or applied standardized baseline

Not Applicable

E.4.2. Corrections

Not Applicable

E.4.3. Changes to start date of crediting period

Not Applicable

E.4.4. Permanent changes from registered monitoring plan, applied methodology or applied standardized baseline

Not Applicable

E.4.5. Changes to project design of approved project

Not Applicable

E.5. Compliance of the monitoring system applied by the project with the registered monitoring plan

Means of verification	By means of comparison of the MR with the applied CDM methodology and all applicable GS guidelines, the verification team has checked whether the monitoring system is in compliance with the monitoring plan/3/ and related requirements of the applied methodology/36/, whether the sample plan conducted accordingly, the source and the applied value of the SDG monitored parameter is acceptable; whether the parameters monitored explain the operational and management structure, responsibilities and institutional arrangement for data collection/archiving, QA/QC procedures. The monitoring system applied by the project compliance with the registered monitoring plan is demonstrated as below for corresponding SDG monitored parameters, **Total number of jobs** As per the PDD, the number of jobs generated will be monitored once per year, hence during this monitoring period, the labor contracts with the employees/31/ have been checked for year 2021 and 2022, it is verified that the number of jobs generated yearly during this monitoring period is 30 including 16 females and 14 males. **Monthly solar irradiance intensity in the project region, R_i** For the parameter R_i, as per the PDD, the value is derived from official source meteorological data and monitored once per year, hence during this monitoring period, the value was issued by Nanyang Meteorological Bureau for the whole monitoring period from Jan 2021 to May 2022/24/. It is confirmed that the monthly value in the MR is consistent with the official source meteorological data/24/, thus is verified as correct. **Number of beneficiaries: Households** By gathering and analyzing Solar Cooker end users' data sourced from User information registration form/14/ and usage rate $U_{p,y}$ monitored in Usage Rate Survey, the number of beneficiaries households reached by the project activity who have access to affordable and clean energy will be determined based on the multiply result of both values. **Ongoing Sampling Studies: Usage rate $U_{p,y}$ and monthly operating time t_i** **i. Usage rate $U_{p,y}$** The sampling plan/25/ and monitoring survey records for usage rate/19/ are verified by the verification team, it is confirmed that the sample size determination for determine the parameter $U_{p,y}$ in the monitoring survey is in line with the GS requirement "Requirements and Guidelines for usage rate monitoring"/44/. PD has employed stratified sampling method and random sample selection methodology to ensure the final sample selected for this parameter monitoring survey was representative. It is verified that the method is in line with GS requirement "Requirements and Guidelines for usage rate monitoring"/44/. Monitoring parameter of $U_{p,y}$ was determined by conducting Usage Survey which is weighted based on drop off rates that are representative of the age distribution for project solar cookers in the total sales record. It is conducted on annually basis. The usage survey has been conducted in this monitoring period by monitoring team from PD. For 2021 vintage, the 100 samples were randomly divided into 3 groups. The 90 days monitoring activity of each group was completed successively, the start date for 90 days monitoring of the 3 groups was 01/02/2021, 02/05/2021 and 01/08/2021 separately.

	For 2022 vintage, the 100 samples were randomly divided into 1 group by considering this monitoring period only covers 121 days. The 90 days monitoring activity of each group was completed successively, the start date for 90 days monitoring of the 1 group was 01/02/2022. For sampling survey as requested in the GS requirement "Requirements and Guidelines for usage rate monitoring"/44/, total 200 end users of solar cooker have been selected and visited by monitoring team members which has been confirmed by checking the monitoring survey records for usage rate/19/. Overall, 200 solar cookers with only one age (same age group, due to all 48,000 solar cookers had been completely distributed in May to July in 2011 and no more units will be added into the project with the progress of the project) were monitored. Random sampling approach has been applied for selection of samples. It is confirmed that the sample size fulfils the minimum sample size requirement of continuous use monitoring in the Requirements and Guidelines for usage rate monitoring/44/. All measurements and interviews in the usage survey have been conducted in person within the household, and questionnaire has also been used to collect responses from interviewees. Above mentioned evidences were provided to the verification team during site verification. PD conducted the usage survey fulfilled with the level B. Good Practice Monitoring Requirements as requested in the "Requirements and Guidelines for usage rate monitoring"/44/. Refer to section D.4 for the assessment of Level A and B. **ii. monthly operating time t_i** Monitoring parameter of **t_i** was determined by conducting sampling survey which measured daily and recording the daily operating time of the solar cookers finally aggregate to the monthly value. The sampling survey has been conducted in 313 sample households daily for different year, which means 626 (313 for 2021 and 313 for 2022) in this monitoring period by monitoring team members filling the related monitoring forms designed by PD/17/. The monitoring team members were well trained by how to measure the time of using by cloak and watch before filling the forms which has been confirmed by checking the training records/30/ and interview with the monitoring team members. For sampling survey as designed in the PDD/3/, 313 end users of solar cooker have been selected to monitor the operating time daily for different year, which means 626 (313 for 2021 and 313 for 2022) in this monitoring period. Stratified sampling method and Random sampling approach has been applied for selection of samples as per the PDD sampling design. It is confirmed that the sample size fulfils the requirement of the guideline of the sampling as stated in the PDD/3/. Via checking the sampling method as stated in the sampling plan/25/, it is verified that the method is in line with the PDD sampling plan/25/. All measurements of the operating time have been conducted by end users, and monitoring forms have been used to record the time which has been confirmed by checking the filled monitoring forms by monitoring team members/17/ and on-site interview with the users. The results show that all the sampled record the operating time accordingly by watch or clock, the monthly operating time has been calculated correctly which has been checked and confirmed in t_i calculation sheet/18/ against the original forms filled in sample households/17/. Above mentioned evidences were provided to the verification team during site verification. Via checking the above evidence, it is confirmed that t_i for this monitoring period is correct and reasonable. **Distribution Record and Project Database** PD has maintained the Solar Cooker Sales contract/11/ and invoice of the solar cookers/12/. The related information of household and solar cooker is included in the User information registration form/14/ and cross checked the Solar cookers usage agreements/15/. For this project, all 48,000 solar cookers had been completely distributed in 2011 and no more units have been added into the project

	with the progress of the project. **Quality Assurance and Quality Control** The related QA/QC procedure has been conducted by PD for the monitoring process including data verification and cross check by monitoring team and project owner which has been verified by checking the related sampling plan/25/ and monitoring survey records for usage rate/19/,/17/. It is confirmed that the QA/QC procedure has been implemented by PD properly during this monitoring period and the data management is confirmed as effective. **Non-Double counting assessment** The VVB has checked for double counting by reviewing all relevant registries including CDM/54/, VCS/53/, IREC/49/ and CCER/50/ schemes. It is confirmed that there is no potential exists for Double Counting of emissions reductions due to issuance of Gold Standard CERs/CO_2-certificates from the considered project activity. Furthermore, for the project end users and solar cookers number management, to avoid the double counting, PD has implemented the related actions as the unique serial No. of the solar cookers corresponding to one end users, the serial number of solar cookers have been verified during site visit and confirmed as consistent with the user information registration form/14/, project users' information is also verified during site visit and confirmed as consistent with the User information registration form/14/. It is concluded that the PD has taken method to avoid the double counting to ensure the ER calculation is conservative. Thus the risk of double counting is unlikely to happen. Besides, PD has provided a declaration ensure that no Double Counting of emissions reductions will be occurred from PD side/28/. In conclusion, the MP is completely in accordance with the approved methodology applied by the GS project, GS guideline for usage survey and PDD.
Findings	CL 02 was raised and resolved. Refer to Appendix 4 for detail assessment.
Conclusion	The monitoring plan complies with the applied methodology and the monitoring system and all applied procedures are completely in compliance to the latest approved monitoring plan and the methodology.

E.6. Compliance of monitoring activities with the registered monitoring plan

E.6.1. SDG Data and parameters fixed ex ante or at renewal of crediting period

Means of verification

The values of ex-ante parameter assessed in the table given below:

Ex Ante Data and Parameters

Parameters	Value	Source of Data	Demonstration by Verification team
R – SDG 13 Standard solar irradiance intensity used to calculate rated power of the solar cooker	700 W_{th}/m^2	Derived from National Standard of the People's Republic of China for solar cookers (GB NY/T219-2003)/48/	PD has applied value of 700 W_{th}/m^2, this value is applied as per National Standard of the People's Republic of China for solar cookers (GB NY/T219-2003)/48/ and listed in ex-ante determined value in PDD/3/. This value is found correct and acceptable.
A – SDG 13 Solar cooker's light-collecting area	$1.7m^2$	Derived from Solar Cooker Sales contract/11/ as stated in the technical specification of the solar cooker	PD has applied value of $1.7m^2$, this value is applied as per technical specification of the solar cooker listed in the Solar Cooker Sales

			contract/11/ and listed in ex-ante determined value in PDD/3/. This value is found correct and acceptable.
H– SDG 13 Solar cooker's thermal efficiency	65%	Derived from Solar cooker testing report provided by the solar cooker vendors and cross check with the National Standard of the People's Republic of China for solar cookers (GB NY/T219-2003)/48/ request the solar cooker's thermal efficiency should be no less than 65%	PD has applied value of 65%, this value is applied as per Solar cooker testing report/13/ and national standard/48/ is cross-checked. Also this is listed in ex-ante determined value in PDD/3/. This value is found correct and acceptable.
$\eta_{BL,thermal}$– SDG 13 Thermal efficiency for the traditional coal furnace	15%	Derived from GS PDD for 2nd crediting period, validation report and Clean Energy for Development and Economic Growth: Biomass and Other Renewable Energy Options to Meet Energy and Development Needs in Poor Nations.	PD has applied value of 15%, this is an ex-ante fixed value during the renew of crediting period, the value is consistent among the PDD/3/, the validation report/4/ and the Clean Energy for Development and Economic Growth: Biomass and Other Renewable Energy Options to Meet Energy and Development Needs in Poor Nations issued by UNDP/51/. This value is found correct and acceptable.
$EF_{FF,CO2}$ – SDG 13 Baseline emission factor of Coal	87.3 tCO_2/TJ	Fuel type of Coal is determined in baseline scenario. Emission Factor is derived from IPCC 2006, page 2.22, Table 2.5. Due to the local data for coal is not available, IPCC minimum default value for all types of coals is used as per the paragraph 34 of AMS-I.C. (version 22.0).	PD has applied value of 87.3 tCO_2/TJ, this value is applied as per IPCC value/35/ against the applied methodology /36/. Furthermore, via checking the "2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories", it is confirmed that the emission factor of coal is not updated, so the parameter is still sourced from IPCC 2006 which is verified as reasonable. Also this is listed in ex-ante determined value in PDD/3/. This value is found correct and acceptable.
n- SDG 13 and	48,000	User information	PD has applied value of

	SDG 7 Number of solar cookers distributed in the project		registration form	48,000, this value is applied as per User information registration form/14/ the original validation report/4/ is cross-checked. Also this is listed in ex-ante determined value in PDD/3/. This value is found correct and acceptable.
	The assessment team has checked that all the ex-ante parameters were fixed at the level of PA and were verified from the PDD/3/. Also, the ex-ante parameter values have been consistently applied for the ER calculation which is evident from the ER calculation sheet/2/.			
Findings	N/A			
Conclusion	The value mentioned in the Monitoring Report/1/ and Emission Reduction Spreadsheet/2/ are consistent with the Transition request form to GS4GG/8/. The applied value is correct and justified.			

E.6.2. SDG Data and parameters monitored

Means of verification

1. t_i

Relevant SDG indicator:	SDG13
Data/Parameter	t_i
Description	The monthly operating time of each solar cooker
Value applied for this monitoring period	

Month	Using hour (hour)
01/01/2021-31/01/2021	79
01/02/2021-28/02/2021	112
01/03/2021-31/03/2021	65
01/04/2021-30/04/2021	99
01/05/2021-31/05/2021	127
01/06/2021-30/06/2021	125
01/07/2021-31/07/2021	123
01/08/2021-31/08/2021	117
01/09/2021-30/09/2021	124
01/10/2021-31/10/2021	116
01/11/2021-30/11/2021	105
01/12/2021-31/12/2021	103
01/01/2022-31/01/2022	104
01/02/2022-28/02/2022	91
01/03/2022-31/03/2022	96
01/04/2022-01/05/2022	132

Measuring /Reading /Recording frequency	The usage time of cookers is measured and recorded daily. At the end of each month, all the daily data of the past month are summarized to produce the monthly usage time.
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the measuring and reporting frequency are in line with the GS PDD for 2nd crediting period/3/.
Monitoring equipment with accuracy	Clock, watch or cell phone Accuracy: 1 minute
Is the installed monitoring equipment has been duly calibrated for this entire	The calibration of Clock, watch or cell phone only need to be conducted when the clock and the device that does not automatically update

	monitoring period? (Yes / No)	the time online, the time calibration shall be carried out weekly according to the device that automatically updates the time online. During this monitoring period, via checking the monitoring data, it is confirmed that the monitoring is continuous and no calibration carried out.
	How were the values in the monitoring report verified?	Monitoring parameter of $\mathbf{t_i}$ was determined by conducting sampling survey which measured daily and recording the daily operating time of the solar cookers finally aggregate to the monthly value. The sampling survey has been conducted in 313 sample households daily for different year, which means 626 (313 for 2020 and 313 for 2021) in this monitoring period by monitoring team members filling the related monitoring forms designed by PD/17/. The monitoring team members were well trained by how to measure the time of using by cloak and watch before filling the forms which has been confirmed by checking the training records/30/ and interview with the monitoring team members. For sampling survey as designed in the PDD/3/, 313 end users of solar cooker have been selected to monitor the operating time daily for each year (total 626 for this monitoring period). Stratified sampling method and Random sampling approach has been applied for selection of samples as per the PDD sampling design. It is confirmed that the sample size fulfils the requirement of the guideline of the sampling as stated in the PDD/3/. Via checking the sampling method it is verified that the method is in line with the PDD sampling plan/25/. All measurements of the operating time have been conducted by monitoring team members, and monitoring forms have been used to record the time which has been confirmed by checking the filled monitoring forms by members /17/ and on-site interview with the users. The results show that all the sampled record the operating time accordingly by watch, clock or cell phone, the monthly operating time has been calculated correctly which has been checked and confirmed in t_i calculation sheet/18/ against the original forms filled in sample households/17/. Above mentioned evidences were provided to the verification team during site verification. To check if the PD sample data is correct, the verifier conducted the sampling approach during the site visit. 38 samples were selected by verifier and interviewed during site inspection. Refer to section D.4 of this report for VVB's sampling action.

	Via checking the above evidence, it is confirmed that t_i for this monitoring period is correct and reasonable.
If applicable, has the reported data been cross-checked with other available data? (Yes / No)	Yes. The t_i calculation sheet/18/ was cross checked with filled monitoring forms by monitoring team members/17/ and by on-site interview results.
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, QA/QC procedures were found to be appropriate and reliable.

2. **R_i**

Relevant SDG indicator:	SDG 13
Data/Parameter	**R_i**
Description	Monthly solar irradiance intensity in the project region
Value applied for this monitoring period	
Measuring /Reading /Recording frequency	Once per year
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the measuring and reporting frequency are in line with the GS PDD for 2nd crediting period/3/.
Monitoring equipment with accuracy	N/A The value is derived from Official source meteorological data
Is the installed monitoring equipment has been duly calibrated for this entire monitoring period? (Yes / No)	N/A
How were the values in the monitoring report verified?	The values are derived from official source meteorological data and monitored once per year, hence during this monitoring period, the values were issued by Nanyang Meteorological Bureau for the whole monitoring period/24/. It is confirmed that the monthly value in the MR is consistent with the official source

Month	R_i
01/01/2021-31/01/2021	433.38
01/02/2021-28/02/2021	457.21
01/03/2021-31/03/2021	467.52
01/04/2021-30/04/2021	498.56
01/05/2021-31/05/2021	553.68
01/06/2021-30/06/2021	604.91
01/07/2021-31/07/2021	621.71
01/08/2021-31/08/2021	663.92
01/09/2021-30/09/2021	649.60
01/10/2021-31/10/2021	586.70
01/11/2021-30/11/2021	502.39
01/12/2021-31/12/2021	440.00
01/01/2022-31/01/2022	430.25
01/02/2022-28/02/2022	459.36
01/03/2022-31/03/2022	467.89
01/04/2022-01/05/2022	496.11

	meteorological data/24/, thus is verified as correct.
If applicable, has the reported data been cross-checked with other available data? (Yes / No)	No. The data is official source no cross-check is needed.
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	No. The data is official source and no addition QA/QC procedures may need to be planned.

3. Total number of jobs

Relevant SDG indicator:	SDG8
Data/Parameter	Total number of jobs
Description	Number of full-time jobs created
Value applied for this monitoring period	All for local residents From 01/01/2021 to 31/12/2021, 30 full-time jobs created including 16 females and 14 males. From 01/01/2022 to 01/05/2022, 30 full-time jobs created including 16 females and 14 males. In the 7th monitoring period from 01/01/2021 to 01/05/2022, 30 full-time jobs created including 16 females and 14 males.
Measuring /Reading /Recording frequency	Once per year
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the measuring and reporting frequency are in line with the PDD/3/.
Monitoring equipment with accuracy	N/A The value is derived from labor contracts with the employees/31/.
Is the installed monitoring equipment has been duly calibrated for this entire monitoring period? (Yes / No)	N/A
How were the values in the monitoring report verified?	Monitoring parameter of number of jobs generated was determined by checking the labor contracts with the employees/31/ has been checked, it is verified that the number of jobs generated during this monitoring period is 30 full-time (same per year). It is verified that the data in MR is correct.
If applicable, has the reported data been cross-checked with other available data? (Yes / No)	Yes. The fixed contracts with the employees/31/ was cross checked with payroll of the employment/32/ and on-site interview with staffs.

Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, QA/QC procedures were found to be appropriate and reliable.

4. Number of beneficiaries: Households

Relevant SDG indicator:	SDG7
Data/Parameter	Number of beneficiaries: Households
Description	Number of beneficiaries: Households
Value applied for this monitoring period	From 01/01/2021 to 31/12/2021, Number of beneficiaries: 42,240 Households From 01/01/2022 to 01/05/2022, Number of beneficiaries: 40,800 Households In the 7th monitoring period from 01/01/2021 to 01/05/2022, Number of beneficiaries: 42,240 and 40,800 Households
Measuring /Reading /Recording frequency	Annually
Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the measuring and reporting frequency are in line with the PDD/3/.
Monitoring equipment with accuracy	N/A The value is derived from User information registration form/14/ and usage rate survey (refer to assessment to below parameter $U_{p,y}$)
Is the installed monitoring equipment has been duly calibrated for this entire monitoring period? (Yes / No)	N/A
How were the values in the monitoring report verified?	Monitoring parameter of number of jobs generated was calculated by $n*U_{p,y}$ which are determined by checking the User information registration form/14/ for n and usage rate survey for $U_{p,y}$ It is verified that the data in MR is correct.
If applicable, has the reported data been cross-checked with other available data? (Yes / No)	Yes. User information registration form/14/ and usage rate survey for $U_{p,y}$ were checked (refer to assessment to below parameter $U_{p,y}$).
Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, QA/QC procedures were found to be appropriate and reliable.

5. **$U_{p,y}$**

Relevant SDG:	SDG 7, SDG 13
Data/Parameter	**$U_{p,y}$**

	Description	Usage rate of solar cookers engaged in the proposed project
	Value applied for this monitoring period	2021: 76.72% 2022: 78.78%
	Measuring /Reading /Recording frequency	Once per year
	Is measuring and reporting frequency in accordance with the monitoring plan and monitoring methodology? (Yes / No)	Yes, the measuring and reporting frequency are in line with the "Requirements and Guidelines: Usage Rate Monitoring (Version 2.0)"/44/.
	Monitoring equipment with accuracy	N/A
	Is the installed monitoring equipment has been duly calibrated for this entire monitoring period?	N/A
	How were the values in the monitoring report verified?	Monitoring parameter of $U_{p,y}$ was determined by conducting Usage Survey which is weighted based on drop off rates that are representative of the age distribution for project solar cookers in the total sales record. The calculation formula for $U_{p,y}$ is as follows: $U_{p,y}$ = Share of units in normal use* the average share of running time Where: Share of units in normal use= Number of units in normal use (Sample)/ Random Survey Sample (100); the average share of running time= 1-Number of days that units are not working/Total number of days in use. Also, Number of days that units are not working= Average number of days that units are not in operation in survey sample (days/unit) *total number of solar cookers involved in this project; Total number of days in use= total number of solar cookers involved in these project * survey days (90 days). The usage survey has been conducted in this monitoring period by monitoring team from PD. For 2021 vintage, the 100 samples were randomly divided into 3 groups. The 90 days monitoring activity of each group was completed successively, the start date for 90 days monitoring of the 3 groups was 01/02/2021, 02/05/2021 and 01/08/2021 separately. For 2022 vintage, the 100 samples were randomly divided into 1 group by considering this monitoring period only covers 121 days. The 90 days monitoring activity of each group was completed successively, the start date for 90 days monitoring of the 1 group was 01/02/2022. For sampling survey as per the Requirements and Guidelines for usage rate monitoring/44/, total 200 end users of solar cooker have been

			selected and visited by monitoring team members which has been confirmed by checking the monitoring survey records for usage rate/19/. Overall, total 200 solar cookers with only one age (same age group, due to all 48,000 solar cookers had been completely distributed in May to July 2011 and no more units have been added into the project with the progress of the project) were monitored. Random sampling approach has been applied for selection of samples. It is confirmed that the sample size fulfils the minimum sample size requirement of continuous use monitoring in the Requirements and Guidelines for usage rate monitoring/44/. Via checking the sampling method as stated in the monitoring survey record/19/, it is verified that the method is in line with the sampling plan/25/ and Requirements and Guidelines for usage rate monitoring/44/. All measurements and interviews in the usage survey have been conducted in person within the household, and questionnaire has also been used to collect responses from interviewees. The results show that 88% and 85% surveyed solar cookers were in normal use by the households during the monitoring period respectively for 2021 and 2022 vintage by questionnaire survey/21/, and through questionnaire survey results for the number of days that units are not in use/21/, the average share of running time is calculated as 87.18% and 92.68% respectively for 2021 and 2022 vintage, thus the weighted usage rate is calculated as 76.72% (88% * 87.18%) for 2021 and 78.78% (85% * 92.68%) for 2022 which has been checked and confirmed in usage rate calculation sheet/20/ against the original questionnaires filled by sample households/21/ and the monitoring survey record/19/. Therefore, it is concluded that based on the “Requirements and Guidelines for usage rate monitoring”/44/, the usage survey carried out fulfils the Level A. Mandatory and Level B. Good Practice Monitoring Requirements. Therefore, the final calculation result of 76.72% for 2021 and 78.78% for 2022 usage rates have been used for vintage emission reduction calculation is confirmed as reasonable and correct. Therefore, based on the “Requirements and Guidelines for usage rate monitoring”, the usage rate of no higher than 90% as per Level B requirement which is 76.72% for 2021 and 78.78% for 2022 can be claimed for this monitoring period. To check if the PD sample data is correct, the verifier conducted the sampling approach during the site visit. 38 samples were selected	

		by verifier and interviewed during site inspection. Refer to section F.4 of this report for VVB's sampling action. It is verified that the data in MR is correct.
	If applicable, has the reported data been cross-checked with other available data?	Yes. The usage rate calculation sheet/20/ is cross-checked with the monitoring survey record/19/ and filled questionnaires/21/.
	Does the data management ensure correct transfer of data and reporting of emission reductions and are necessary QA/QC processes in place?	Yes, QA/QC procedures were found to be appropriate and reliable.
Findings	CAR 02 was raised and resolved. Refer to Appendix 4 for detail assessment.	
Conclusion	The parameters have been monitored appropriately, in accordance with the registered monitoring plan/3/ (as per measurement methods and procedures to be applied), Transition request form to GS4GG/8/ and applied methodology/36/ and GS guideline for usage survey/44/. The monitoring results were recorded consistently as per the approved frequency in the monitoring plan of PDD/3/.	

E.6.3. Comparison of monitored parameters with last monitoring period

Means of verification

This is the 7th monitoring period. PD has provided the values from 6th monitoring period and values from 7th monitoring period for each monitoring parameters for comparison as below table.

Note that this monitoring period is the first one following crediting period renewal, the related monitoring parameters have been adjusted, and some are differ from the previous monitoring period, so only the same parameters have been compared.

Data/Parameter	Value obtained in this monitoring period	Value obtained last monitoring period
The health changes due to the implementation of this project	N/A for this MP	Measure / Age / Mean Averted: Averted DALYs / Child / 520 Averted Deaths / Child / 6 Averted DALYs / Adult / 15,167 Averted Deaths / Adult / 837 Total / / 17,072
6th: The increased number of households using clean energy for cooking and boiling water after the implementation of this project 7th: Number of beneficiaries: Households	42,240 and 40,800 Households for 2021 and 2022 respectively	43,200 households
6th: The number of employments generated by this project 7th: Total number of jobs	30 full-time jobs created including 16 females and 14 males	30 (including 16 female and 14 male employees) employment generated from

Salary of employees in project region	N/A	3,800 CNY/Month	

t_i

Month	Using hour (hour)
01/01/2021-31/01/2021	79
01/02/2021-28/02/2021	112
01/03/2021-31/03/2021	65
01/04/2021-30/04/2021	99
01/05/2021-31/05/2021	127
01/06/2021-30/06/2021	125
01/07/2021-31/07/2021	123
01/08/2021-31/08/2021	117
01/09/2021-30/09/2021	124
01/10/2021-31/10/2021	116
01/11/2021-30/11/2021	105
01/12/2021-31/12/2021	103
01/01/2022-31/01/2022	104
01/02/2022-28/02/2022	91
01/03/2022-31/03/2022	96
01/04/2022-01/05/2022	132

Month	Using hour (hour)
01/05/2020-31/05/2020	132
01/06/2020-30/06/2020	114
01/07/2020-31/07/2020	107
01/08/2020-31/08/2020	126
01/09/2020-30/09/2020	126
01/10/2020-31/10/2020	117
01/11/2020-30/11/2020	111
01/12/2020-31/12/2020	116
01/01/2021-31/01/2021	79
01/02/2021-28/02/2021	112
01/03/2021-31/03/2021	65
01/04/2021-30/04/2021	99
01/05/2021-31/05-2021	127

R_i

Month	**R_i**
01/01/2021-31/01/2021	433.38
01/02/2021-28/02/2021	457.21
01/03/2021-31/03/2021	467.52
01/04/2021-30/04/2021	498.56
01/05/2021-31/05/2021	553.68
01/06/2021-30/06/2021	604.91
01/07/2021-31/07/2021	621.71
01/08/2021-31/08/2021	663.92
01/09/2021-30/09/2021	649.60
01/10/2021-31/10/2021	586.70
01/11/2021-30/11/2021	502.39
01/12/2021-31/12/2021	440.00
01/01/2022-31/01/2022	430.25
01/02/2022-28/02/2022	459.36

Month	**R_i**
01/05/2020-31/05/2020	560.35
01/06/2020-30/06/2020	608.87
01/07/2020-31/07/2020	625.78
01/08/2020-31/08/2020	668.26
01/09/2020-30/09/2020	653.85
01/10/2020-31/10/2020	584.65
01/11/2020-30/11/2020	500.64
01/12/2020-31/12/2020	438.47
01/01/2021-31/01/2021	433.38
01/02/2021-28/02/2021	457.21
01/03/2021-31/03/2021	467.52
01/04/2021-30/04/2021	498.56
01/05/2021-31/05-2021	553.68

	<table><tr><td>01/03/2022-31/03/2022</td><td>467.89</td></tr><tr><td>01/04/2022-01/05/2022</td><td>496.11</td></tr></table> $U_{p,y}$ 2021:76.72% 2022:78.78% 76.97% Via checking the verification report of 6th monitoring period/42/, CTI confirmed that the values are correct and based on the comparison, CTI verified that the values for all the related same monitoring parameters are not changed significantly comparing with the 6th monitoring period/42/, hence, the values for this monitoring period are verified as reasonable.
Findings	CAR 03 was raised and resolved. Refer to Appendix 4 for detail assessment.
Conclusion	The comparison of monitored parameters with last monitoring period was conducted, CTI confirmed that the values are not changed significantly thus the values for this monitoring period are deemed as reasonable.

E.6.4. Compliance of the sampling implementation with the registered sampling plan

Means of verification	The monitoring has been carried out in accordance with the sampling plan contained in the PDD/3/ and GS guideline for usage survey/44/. **Sampling Design/Target Population/Sampling Frame/Reliability**: Sampling plan was provided by PD and has demonstrated in the PDD. The following will be monitored by sampling method. i. Usage Survey (US) for $U_{p,y}$ Due to the project only including the 48,000 solar cookers and distributed in the same year, no more new solar cookers accumulated along the implementation, so there is no age difference for the solar cookers. There is no this parameter of $U_{p,y}$ in the PDD or Transition request form to GS4GG, however, based on the "Requirements and Guidelines for usage rate monitoring" issued by GS for the this type of project, it is requested to monitor Usage Rate $U_{p,y}$ by usage survey in line with the requirement this guideline/44/. Hence, prior to an annual monitoring, representative of project solar cookers being credited would be randomly selected from the end-user databases, and the minimum total sample size is 100 (total 200 for two years). The survey would be completed annually, and on time for any request of issuance. "Requirements and Guidelines for usage rate monitoring" will be followed when conducted the usage survey, Level B. Good Practice monitoring requirements will be used for the project, including Defining stove use and non-use, Household Usage Survey, Verification checks, Field team training and supervision, End-User Training and follow up visits and Awareness campaign. ii. Sampling survey for t_i The project activity applies stratified sampling method and simple random sampling for monitoring the monthly operating time of each solar cooker, t_i, and the sample size is 313 yearly (626 for this monitoring period). The sample size is confirmed as correct which has been verified according to "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities"/39/. The sample size of each township was decided on the method of proportional distribution and the monitoring will be conducted at the beginning of each year during the crediting period. The sampling plan is confirmed as in line with the GS requirement, CDM sampling standard and guideline and applied methodology. **Sampling Frame:** All the end users with the solar cookers installed and operational are considered as the sampling frame. **Sampling Method and selection:**

The PD has applied Stratified Sampling Method and Simple Random Sampling for both $U_{p,y}$ and t_i all over the population (48,000 household with solar cookers). The samples have been chosen randomly using on-line random numbers generator which has been confirmed by screenshots of the generation process/27/.

Sample Size for Parameter of Interest:

The sample size is chosen using the equation in line to CDM guidelines for Sampling and surveys for CDM project activities and programmes of activities for t_i and "Requirements and Guidelines for usage rate monitoring" for $U_{p,y}$.

In this regard, sample size calculation as stated in the PDD was checked and found correct as per registered monitoring plan. The complete details are given in PDD.

Implementation of Sampling Survey and Field Test Records:

Based on interviews with the PD and surveyors during the site visit, in addition to asking this question to the end users. Therefore, the implementation of surveys was considered reliable.

The monitoring team were trained by PD during the current monitoring period which has been verified by checking the training record/29/.

The monitoring survey for t_i (field survey / tests) was carried out by users daily during this monitoring period.

The users and the monitoring personnel were trained by PD/29/ before the starting of the project operation to ensure that they are fully aware of and able to strictly follow this conservative principle.

Reliability and precision calculation:

According to Guidelines for Sampling and surveys of CDM project activities and programmes of activities (Version 04.0)/39/, confidence/precision have been checked as follows:

a. The stratified estimated overall mean:

The sample estimated of the overall mean operation hours is confirmed to be calculated with the equation below as per "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities"/39/:

$$m_{strat} = \sum_{i=a}^{k} \frac{g_i}{N} \times m_i$$

Where:

m_{stra}	is the stratified estimated overall mean;
g_i	is the size of the i^{th} district where i=a,…,k;
N	is the population total (48,000);
m_i	is the mean of the i^{th} district where i=a,…,k.

b. The standard error of the stratified estimated overall mean:

The standard error of the stratified estimated overall mean is confirmed to be calculated as per "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities"/39/:

$$s.e.(m_{strat}) = \sqrt{\sum_{i=a}^{k} (\frac{g_i}{N})^2 \times (1 - \frac{n_i}{g_i}) \times \frac{SD_i^2}{n_i}}$$

Where:

$s.e.(m_{strat})$	is the standard error of the stratified estimated overall mean;
g_i	is the size of the i^{th} district where i=a,…,k;
N	is the population total (48,000);
n_i	is the number of sampled units the i^{th} district where i=a,…,k;
SD_i^2	is the variance of the ith district where i=a,…,k.

c. t-value:

T-value depends on (i) the level of confidence and (ii) the size of the sample. The t-

	value associated with 90% confidence and the sample size of 313 is confirmed to be 1.6497 as derived in Microsoft Excel using the TINV function following "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities"/39/. **d. Precision:** The precision associated with an estimate is confirmed to be: t-value × standard error of the mean as per "Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities"/39/. The precision of the mean monthly solar cooker operation hours, assuming 90% confidence, is therefore confirmed to be:

Period	t-value	m_{strat}	s.e. (m_{strat})	Precision	Relative Precision
01/01/2021-31/01/2021	1.6497	79.37	0.7616	1.2565	1.58%
01/02/2021-28/02/2021	1.6497	111.73	0.9183	1.5149	1.36%
01/03/2021-31/03/2021	1.6497	64.66	0.3506	0.5783	0.89%
01/04/2021-30/04/2021	1.6497	99.12	0.4330	0.7143	0.72%
01/05/2021-31/05/2021	1.6497	127.28	0.5149	0.8495	0.67%
01/06/2021-30/06/2021	1.6497	124.98	0.8526	1.4066	1.13%
01/07/2021-31/07/2021	1.6497	123.31	0.6575	1.0848	0.88%
01/08/2021-31/08/2021	1.6497	117.21	0.7622	1.2574	1.07%
01/09/2021-30/09/2021	1.6497	124.24	0.7793	1.2856	1.03%
01/10/2021-31/10/2021	1.6497	115.82	0.8077	1.3325	1.15%
01/11/2021-30/11/2021	1.6497	104.95	0.6721	1.1088	1.06%
01/12/2021-31/12/2021	1.6497	102.56	0.6053	0.9987	0.97%
01/01/2022-31/01/2022	1.6497	103.91	0.6903	1.1389	1.10%
01/02/2022-28/02/2022	1.6497	90.91	0.6068	1.0011	1.10%
01/03/2022-31/03/2022	1.6497	95.58	0.5892	0.9721	1.02%
01/04/2022-01/05/2022	1.6497	131.76	0.6611	1.0906	0.83%

	The relative precision is less than 10%. The data are within the required specification. Therefore, it is verified that the required confidence/precision has been met.
Findings	N/A
Conclusion	The verification team has found out that the sampling plan applied is found to be in-line with the monitoring plan mentioned in the PDD/3/, GS guideline for usage survey/44/ and Sampling and survey standards, ver.09.0/38/

E.7. Assessment of data and calculation of SDG Impacts

E.7.1. Calculation of baseline value or estimation of baseline situation of each SDG Impact

Means of verification	***SDG 7 Baseline Impact:*** Via checking the MR and through interview with users, it is confirmed that the project promotes access to affordable and clean energy services. Hence, in compliance with the UN's SDG indicator "7.1.1 Proportion of population with access to electricity", the monitoring parameter of SDG7 is defined as ***Number of beneficiaries: Households***. In the baseline situation, as per the interview with users, it is verified that no distribution of project technology and 0 household using clean energy for cooking and boiling water. Therefore, baseline impact benefit is zero. ***SDG 8 Baseline Impact:*** Via checking the MR and through interview with representative of staffs, it is confirmed that the project generated jobs.

	Hence, in compliance with the UN's SDG indicator "8.5.1 Average hourly earnings of employees, by sex, age, occupation and persons with disabilities", the parameter of SDG8 is defined as ***Total number of jobs***. In the baseline situation, as per interview with representative of staffs, it is verified that no new job generated. Therefore, baseline impact benefit is zero. ***SDG 13 Baseline Impact:*** Via checking the MR and through checking the PDD/3/, it is confirmed that the project leads to amount of GHG emissions avoided or sequestered generated from the replacement of coal-fired stoves with solar cookers. Hence, in compliance with the UN's SDG indicator "13.2.1 Number of countries with nationally determined contributions, long-term strategies, national adaptation plans and adaptation communications, as reported to the secretariat of the United Nations Framework Convention on Climate Change", the parameter of SDG13 is defined as ***Amount of GHG emissions avoided or sequestered***. In the baseline situation, as per the PDD/3/, it is verified that the amount of GHG emissions avoided or sequestered is 0 tCO_2/year.
Findings	N/A
Conclusion	The verification team confirms that a) The complete data was available and is duly reported; b) As indicated above, the description with regard to cross-check of reported data is included under respective parameter (refer Section E.6.2. of this report); c) Appropriate methods and formulae for calculating baseline SDG Impact; d) Appropriate emission factors and other reference values were correctly applied. e) The calculation of baseline situation of each SDG Impact is correct.

E.7.2. Calculation of project value or estimation of project situation of each SDG Impact

Means of verification	***SDG 7 Project Impact:*** For SDG Indicator 7.1.1, the total number of solar cookers installed by the proposed project is 48,000, by considering the value of share of units in normal use as assessed in E.6.2, it is verified that, From 01/01/2021 to 31/12/2021, Number of beneficiaries: Households is 48,000*88%=42,240 From 01/01/2022 to 01/05/2022, Number of beneficiaries: Households is 48,000*85%=40,800 Therefore, the SDG 7 project impact in the 7th monitoring period from 01/01/2021 to 01/05/2022 was 42,240 households and 40,800 households. ***SDG 8 Project Impact:*** From 01/01/2021 to 31/12/2021, 30 full-time jobs for local people created (including 16 females and 14 males), which is verified in section E.6.2. From 01/01/2022 to 01/05/2022, 30 full-time jobs for local people created (including 16 females and 14 males), which is verified in section E.6.2. For 7th monitoring period from 01/01/2021 to 01/05/2022, 30 full-time jobs for local people created (including 16 females and 14 males), which is verified in section E.6.2. ***SDG 13 Project Impact:*** The applied methodology AMS-I.C Version 22.0/36/ defines the methodological steps to determine the baseline emissions, project emissions and leakages and then finally calculate the SDG 13 project impact, i.e. Amount of GHGs emissions avoided or sequestered.

Baseline Emissions Calculation Assessment:

The formula used for the determination of baseline emissions which is consistent with the PDD:

$BE_{thermal,CO2,y} = (EG_{thermal,y}/\eta_{BL,\ thermal}) * EF_{FF,CO2}$

Where:

$BE_{thermal,CO2,y}$	Baseline emissions from thermal energy displaced by the project activity during year y in tCO_2e.
$EG_{thermal,y}$	the net quantity of heat supplied by the project activity during the year y in TJ.
$EF_{FF,CO2}$	The CO_2 emission factor of coal (tCO_2e/ TJ). IPCC default emission factor of 87.3 tCO_2e/TJ will be adopted in the proposed project.
$\eta_{BL,thermal}$	The efficiency of the coal-fired stove that would have been used in the absence of project activity. The value adopted is 15%.

$$EG_{thermal,y} = \sum_{i=1}^{12} EG_{thermal,i}$$

$$BE_{thermal,CO_2,y} = \sum_{i=1}^{12} BE_{thermal,CO_2,i}$$

$$BE_{thermal,CO_2,i} = \left(\frac{EG_{thermal,i}}{\eta_{BL,thermal}}\right) * EF_{FF,CO_2}$$

Where

$EG_{thermal,i}$	the net heat supplied in month i in TJ.
$BE_{thermal,CO2,i}$	the baseline emission in month i in tCO_2e

According to basic physics principle,

Heat = Power*Time

The monthly net heat supplied by the cooker is the product of its actual power in that month and its usage time in that month, i.e.:

$$EG_{thermal,i} = n * U_{p,y} * \sum_{i=1}^{12} P_i * t_i * 3.6 * 10^{-9}$$

Where:

n	The total number of solar cookers installed by the proposed project. The value adopted is 48,000.
$U_{P,y}$	Usage rate of solar cookers engaged in the proposed project
P_i	the actual average power of the solar cooker in month *i* in W
t_i	The usage time of the solar cooker in month *i* in hours.
$3.6*10^{-9}$	the conversion factor between "W_{th}*h" and "TJ", i.e., 1 W_{th}*h = 3.6 $\times 10^{-9}$ TJ

Hence, based on above,

$BE_{thermal,CO2,i} = n * U_{p,y} * P_i * t_i * (3.6*10^{-9}) * EF_{FF,CO2} / \eta_{BL,\ thermal}$

The actual power of the solar cooker P_i is proportional to the solar irradiance intensity under which the cooker is operated.

$P_i = P_{solar\ cooker} * (R_i/R)$

$P_{solar\ cooker} = R * A * \eta$

Where:

$P_{solar\ cooker}$	The calculated maximum power of single solar cooker, W_{th}.
R_i	The actual solar irradiance intensity in month *i* in W_{th}/m^2.
R	Standard solar irradiance intensity used to calculate rated power of solar cooker, W_{th}/m^2. According to National Standard of the People's Republic of China for solar cookers (GB NY/T219-2003)/48/, the value adopted is 700 Wth/m^2.
A	Solar cooker's light-collecting area (m^2). According to National Standard of the People's Republic of China for solar cookers (GB NY/T219-2003)/48/, the value adopted is 1.7 m^2
η	Solar cooker's thermal efficiency, %. According to National Standard of the People's Republic of China for solar cookers (GB NY/T219-2003)/48/, the value adopted is 65%.

Based on above,

$$BE_{thermal,CO_2,y} = n * U_{P,y} * \sum_{i=1}^{12} \left[773.5 * \left(\frac{R_i}{700}\right) * t_i * 3.6 * 10^{-9}\right] * EF_{FF,CO_2}/\eta_{BL,thermal}$$

Where:

R_i	The actual solar irradiance intensity in month *i* in W_{th}/m^2.
t_i	The usage time of the solar cooker in month *i* in hours.
n	The total number of solar cookers installed by the proposed project. The value adopted is 48,000
773.5	$P_{solar\ cooker}$ Calculated maximum power of single solar cooker, W_{th}.
700	*R*, Standard solar irradiance intensity used to calculate rated power of solar cooker, W_{th}/m^2.
$U_{p,y}$	Usage Rate of the solar cookers engaged in the proposed project in year *y*.
EF_{FF,CO_2}	The CO_2 emission factor of coal (tCO_2e/TJ). IPCC default emission factor of 87.3 tCO_2e/TJ will be adopted in the proposed project.
$\eta_{BL,thermal}$	The efficiency of the coal-fired stove that would have been used in the absence of project activity. The value adopted is 15%.

The input to calculate baseline emissions are taken from the related monitoring surveys records for Usage rate/19/ and for operation time t_i /17/,/18/ done during monitoring period.

Project Emissions

The implementation of the project will not produce any GHG emission as per the applied methodology, i.e. PE_y=0.

Leakage

Refer below section E.7.3 for detail assessment. LE_y=0.

Emission Reduction (Amount of GHGs emissions avoided or sequestered)

The emission reduction ER_y during a given year y is calculated as follow:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y	the emission reductions produced by the proposed project during the year y in tCO_2e.
BE_y	the baseline emissions from heat displaced by the project activity during the year y in tCO_2e.
PE_y	the emissions produced by the proposed project during the year y in tCO_2e.
LE_y	the leakage produced by the proposed project during the year y in tCO_2e.

The values monitored during such surveys are transparently shown in the Monitoring Report Section D.2. During onsite, the verification team cross-checked these values in detail using various supporting records and documents. Refer to the section E.6.1 and E.6.2 of this report for parameters assessment.

The **SDG 13 project impact** (Amount of GHG emissions avoided or sequestered calculation) is provided in the Emission reduction calculation spreadsheet/2/ in a transparent manner and the calculation found correct. There is no material error noted in the accounting and application of various data against monitored parameters.

The project impact for SDG 13 during this monitoring period is summarized as below,

Date	**Solar irradiance intensity** W_{th}/m^2	**Usage Rate %**	**Actual Power of Solar Cooker** W_{th}	**Monthly Usage Time** h	**Net Heat Supplied Monthly** TJ	**GS VER Generated Monthly** tCO_2e
	R_i	$U_{p,y}$	P_i	t_i	$EG_{thermal,i}$	$BE_{thermal,co_2,i}$
01/01/2021-31/01/2021	433.38	76.72%	478.88	79	5.04	2,932
01/02/2021-28/02/2021	457.21	76.72%	505.22	112	7.48	4,355
01/03/2021-31/03/2021	467.52	76.72%	516.61	65	4.43	2,577
01/04/2021-30/04/2021	498.56	76.72%	550.91	99	7.24	4,213
01/05/2021-31/05/2021	553.68	76.72%	611.82	127	10.32	6,008
01/06/2021-30/06/2021	604.91	76.72%	668.43	125	11.07	6,445
01/07/2021-31/07/2021	621.71	76.72%	686.99	123	11.23	6,536
01/08/2021-31/08/2021	663.92	76.72%	733.63	117	11.40	6,634
01/09/2021-30/09/2021	649.60	76.72%	717.81	124	11.82	6,880
01/10/2021-31/10/2021	586.70	76.72%	648.30	116	9.95	5,793
01/11/2021-30/11/2021	502.39	76.72%	555.14	105	7.72	4,495
01/12/2021-31/12/2021	440.00	76.72%	486.21	103	6.61	3,847
01/01/2022-31/01/2022	430.25	78.78%	475.43	104	6.72	3,913
01/02/2022-28/02/2022	459.36	78.78%	507.59	91	6.28	3,655
01/03/2022-31/03/2022	467.89	78.78%	517.02	96	6.73	3,915
01/04/2022-01/05/2022	496.11	78.78%	548.20	132	9.83	5,723

SDG 13 project impact

From 01/01/2021 to 31/12/2021, Amount of GHG emissions avoided or sequestered is thus verified as 60,715 tCO_2e.

From 01/01/2022 to 01/05/2022, Amount of GHG emissions avoided or sequestered is thus verified as 17,206 tCO_2e.

For 7th monitoring period from 01/01/2021 to 01/05/2022, Amount of GHG emissions avoided or sequestered is thus verified as 77,921 tCO_2e.

Findings	N/A
Conclusion	The verification team confirms that a) The complete data was available and is duly reported; b) As indicated above, the description with regard to cross-check of reported data is included under respective parameter (refer Section E.6.2. of this report);

	c) Appropriate methods and formulae for calculating project SDG Impact were followed; The calculation of project situation of each SDG Impact is correct.

E.7.3. Calculation of leakage

Means of verification	Via checking the PDD of this project and applied methodology, it is confirmed that no leakage for this project was identified. LE_y=0.
Findings	N/A
Conclusion	The verification team confirms that no leakage is considered.

E.7.4. Calculation of net benefits as difference of baseline and project values or direct calculation for each SDG Impact

Means of verification	Calculation of net benefits as difference of baseline and project impact values for each SDG Impact is as following, ***SDG 7 Net Benefit*** Net Benefit SDG 7 for 01/01/2021 to 31/12/2021 = Project impact of SDG7 (42,240) – Baseline impact of SDG7 (0) = Number of beneficiaries: 42,240 households Net Benefit SDG 7 for 01/01/2022 to 01/05/2022 = Project impact of SDG7 (40,800) – Baseline impact of SDG7 (0) = Number of beneficiaries: 40,800 households Net Benefit SDG 7 for 01/01/2021 to 01/05/2022= Project impact of SDG7 (42,240 and 40,800) – Baseline impact of SDG7 (0) = Number of beneficiaries: 42,240 and 40,800 households ***Goal 8 Net Benefit*** From 01/01/2021 to 31/12/2021, Net Benefit SDG 8 (jobs) = Project impact of SDG8 (30 full-time jobs for local people created including 16 females and 14 males) – Baseline impact of SDG8 (0) =30 full-time jobs for local people created including 16 females and 14 males From 01/01/2022 to 01/05/2022, Net Benefit SDG 8 (jobs) = Project impact of SDG8 (30 full-time jobs for local people created including 16 females and 14 males) – Baseline impact of SDG8 (0) =30 full-time jobs for local people created including 16 females and 14 males From 01/01/2021 to 01/05/2022, Net Benefit SDG 8 (jobs) = Project impact of SDG8 (30 full-time jobs for local people created including 16 females and 14 males) – Baseline impact of SDG8 (0) =30 full-time jobs for local people created including 16 females and 14 males ***Goal 13 Net Benefit*** In accordance with applied methodology, GS PDD for 2nd crediting period and validation report, Net Benefit SDG 13 Amount of GHGs emissions avoided or sequestered = baseline emission – project emission – leakage emission = 77,921 tCO_2e - 0 tCO_2e -0 tCO_2e = 77,921 tCO_2e **Amount of GHGs emissions avoided or sequestered Calculation**

Parameters Period	Baseline Emissions BE_y (tCO_2e)	Project Emissions PE_y (tCO_2e)	Leakage Emissions LE_y (tCO_2e)	Emission Reductions ER_y (tCO_2e)
01/01/2021-31/12/2021	60,715	0	0	60,715
01/01/2022-01/05/2022	17,206	0	0	17,206
Total	**77,921**	**0**	**0**	**77,921**

	All the figures as per the monitoring report were cross-checked by the verification team against basic monitored data. Refer to E.6.2 for details.
Findings	N/A
Conclusion	The verification team confirms that a) The complete data was available and is duly reported;

	b) As indicated above, the description with regard to cross-check of reported data is included under respective parameter (refer Section E.6.2. of this report); c) Appropriate methods and formulae for calculating net benefits for each SDG Impact were followed; The calculation of net benefits for each SDG Impact is correct.

E.7.5. Comparison of actual SDG Impacts with estimates in approved PDD

Means of verification	The verification team has checked if the MR includes a comparison of actual values of the monitoring period with the estimations in the GS PDD for 2nd crediting period or Transition request form to GS4GG for each SDG. Conclusion is as below table

Item	Values estimated in ex ante calculation of approved PDD or Transition request form to GS4GG	Actual values achieved during this monitoring period
SDG7	01/01/2021-31/12/2021: 43,200 households 01/01/2022-01/05/2022: 43,200 households 7th monitoring period from 01/01/2021 to 01/05/2022: 43,200 households	01/01/2021-31/12/2021: 42,240 households 01/01/2022-01/05/2022: 40,800 households 7th monitoring period from 01/01/2021 to 01/05/2022: 42,240 and 40,800 households
SDG 8	01/01/2021-31/12/2021: 30 full-time jobs created including 16 females and 14 males 01/01/2022-01/05/2022: 30 full-time jobs created including 16 females and 14 males 7th monitoring period from 01/01/2021 to 01/05/2022: 30 full-time jobs created including 16 females and 14 males	01/01/2021-31/12/2021: 30 full-time jobs created including 16 females and 14 males 01/01/2022-01/05/2022: 30 full-time jobs created including 16 females and 14 males 7th monitoring period from 01/01/2021 to 01/05/2022: 30 full-time jobs created including 16 females and 14 males
SDG 13	01/01/2021-31/12/2021: 81,184 tCO_2e 01/01/2022-01/05/2022: 26,913 tCO_2e Total 7th monitoring period: 108,097 tCO_2e	01/01/2021-31/12/2021: 60,715 tCO_2e 01/01/2022-01/05/2022: 17,206 tCO_2e Total 7th monitoring period: 77,921 tCO_2e

Findings	N/A
Conclusion	The MR includes a summary table of comparison of actual values of the monitoring period with the estimations in the PDD for each SDG.

E.7.6. Remarks on increase in achieved SDG Impacts from estimated value in approved PDD

Means of verification	For SDG 7, the actual outcomes during this monitoring period are lower than the estimated value due to the usage rate values fluctuate according to the usage pattern of the users and nature solar sources for this kind of project, hence it is reasonable that the actual value is lower than estimated in PDD/3/. For SDG 8, there is no difference by comparison of actual value of outcomes with estimates in PDD/3/. For SDG 13, It is confirmed that the actual value during this monitoring period was found to be 28% lower than ex-ante estimated value the for this project during this monitoring period, via comparing with the PDD/3/ estimated value, it is verified that the change of three parameters, i.e. R_i, t_i and Usage rate impact the actual emission reduction calculation, however these parameters depend on the solar irradiance intensity and

	usage pattern of the users which changes over time. Hence it is verified that the actual value lower than estimated in PDD/3/ is reasonable and acceptable.
Findings	N/A
Conclusion	The actual SDG Impacts for 7 and 13 are lower than and SDG Impacts for 8 is same to the estimated values given in the GS PDD for 2nd crediting period/3/, which is assessed as appropriate and accepted.

E.8. Safeguards reporting

Means of verification	Via checking the PDD/3/, CTI confirmed that there are no safeguarding principles need to be monitored. And via site visit and interview with end users, CTI verified that the project was implemented normally and in line with the design in the PDD/3/ and approved Transition request form to GS4GG/8/, there was no information on any assessment questions answered 'Potentially' related to Safeguarding principles. All the Information on any assessment questions answered as "No", so there is no need to re-assessment the Safeguarding principles.
Findings	N/A
Conclusion	All the Information on any assessment questions answered as "No", so there is no need to re-assessment the Safeguarding principles during this monitoring period.

E.9. Stakeholder inputs and legal disputes

Means of verification	As confirmed through the onsite visit and interview with the end users, it is verified that the inputs/grievances mechanism has been in place. As per onsite checking the Grievance Book/34/ and internet/email address/33/ which has been provided during the validation process and interview with PD and local stakeholders, it is verified that they have access to provide issues or comments through given methods. And via checking the different approach, it is verified that there was no input/grievance received during this monitoring period.
Findings	N/A
Conclusion	All the methods of continuous input /grievance mechanism are confirmed during on-site investigation and interviews. It is verified that there are no comments/complaints received from the stakeholders during this monitoring period of the project activity.

SECTION F. Internal quality control

The final verification report was undergone a technical review by a qualified independent reviewer before requesting issuance of the project activity. The technical review was performed by a technical reviewer qualified in accordance with CTI's qualification scheme for GS validation and verification that meets the criteria of GS4GG guidelines for qualification.

SECTION G. Verification opinion

The verification team assigned by the VVB (CTI) concludes that the 7th periodic verification of GS programme of activities "Nanyang Danjiang River Solar Cooker Project Phase I" in Sichuan Province, China, as described in the approved PDD, GS approved Transition request form to GS4GG and final version of monitoring report, meets all relevant requirements set by the Gold Standard for the Global Goals Principles and Requirements.

The project activity was correctly implemented according to selected monitoring methodology and monitoring plan. The collected monitoring data allowed to verify the amount of achieved SDG Impacts. And the project is contributed to sustainability development. Thus, the VVB is pleased to issue a positive verification opinion.

SECTION H. Certification statement

CTI Certification Co., Ltd (CTI) has performed the 7th periodic verification of the SDG Impacts that have been reported for the GS project activity "Nanyang Danjiang River Solar Cooker Project Phase I" in Henan Province, P. R. China for the period 01/01/2021 to 01/05/2022.

The verification is based on the baseline and monitoring methodology AMS-I.C "Thermal energy production with or without electricity" (Version 22.0), the approved PDD, GS approved Transition request form to GS4GG and the final version of monitoring report. The verification consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up on-site visit and interviews with project participants; iii) resolution of outstanding issues and the issuance of the final verification and certification report.

The PDs are responsible for the collection, calculation and determination of the SDG Impacts data in accordance with the monitoring plan and the reporting of SDG Impacts on the basis set out within the project monitoring report.

It is CTI's responsibility to provide an independent verification statement on the reported SDG Impacts for the project. Based on an understanding of the risks associated with reporting of SDG Impacts data and the controls in place to mitigate these, CTI planned and performed our work to obtain the information and explanations that we considered necessary to provide reasonable assurance that reported SDG contributions are fairly stated.

CTI confirms that the SDG Impacts are calculated without material misstatements. Based on the evidence and information that are considered necessary to guarantee that SDG contributions are appropriately calculated, CTI confirms that the SDG contributions from the "Nanyang Danjiang River Solar Cooker Project Phase I" in Henan Province, P. R. China during the monitoring period 01/01/2021 to 01/05/2022 as follows:

Monitoring Period Number: 7th

Monitoring period: 01/01/2021 to 01/05/2022

The verified amount of each SDG impact in the PA as per vintage is stated below;

SDG No.	SDG impacts for Vintage year		Total SDG impacts for this Monitoring Period
	01/01/2021 to 31/12/2021	01/01/2022 to 01/05/2022	01/01/2021 to 01/05/2022
SDG 7	Number of beneficiaries: 42,240 households	Number of beneficiaries: 40,800 households	Number of beneficiaries: 42,240 and 40,800 households
SDG 8	30 full-time jobs for local people created including 16 females and 14 males	30 full-time jobs for local people created including 16 females and 14 males	30 full-time jobs for local people created including 16 females and 14 males
SDG 13	60,715 tCO_2e GS VER	17,206 tCO_2e GS VER	77,921 tCO_2e GS VER

Mr. Zhang Lei
Team Leader
08/04/2024

Mr. Lin Wu
Technical Reviewer
08/04/2024

Appendix 1. Abbreviations

Abbreviations	Full texts
AQL	Acceptable quality level
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM-EB	CDM Executive Board (the board)
CER	Certified Emission Reductions
CL	Clarification Request
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CTI	CTI Certification Co., Ltd
DNA	Designated National Authority
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse Gas
GS	Gold Standard
GS4GG	Gold Standard for the Global Goals
GS-TAC	Technical Advisory Committee of GS
GWP	Global Warming Potential
MoC	Modalities of communication
MoV	Means of Verification
MP	Monitoring Plan
MR	Monitoring Report
PD	Project Developer
PE	Project Emission
PoA	Programme of Activities
PoA-DD	PoA Design Document
PS	Project Standard
QA/QC	Quality Assurance / Quality Control
SCR	Stakeholder Consultation Report
SD	Sustainable Development
SDI	Sustainability Development Indicator
SDG	Sustainable Development Goals
SDM	SD Matrix
SFR	Stakeholder Feedback Round
SS	Sectoral Scope
SSC	Small-scale
TA(s)	Technical Area(s)
UNFCCC	United Nations Framework Convention on Climate Change
UQL	Unacceptable Quality Level
VVB	Validation and Verification Body
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

Mr. Lei ZHANG

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification					
GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
√	√	√	√	√	√

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation
	TA 1.2: Energy generation from renewable energy sources
SS 3: Energy demand	TA 3.1: Energy demand
SS 4: Manufacturing industries	TA 4.1: Cement and lime production
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater
	TA 13.2: Manure

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

Wu LIN Wu Lin

Technical Competent Manager

Shenzhen, 25/10/2022

Mr. Ziqi LI

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification					
GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
√	√	√	√	-	√

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.2: Energy generation from renewable energy sources
SS 3: Energy demand	TA 3.1: Energy demand
SS 4: Manufacturing industries	TA 4.1. Cement and lime production
SS 5: Chemical industry	TA 5.1: Chemical industry
	TA 5.2: Caprolactam, nitric and adipic acid
SS 11: Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	TA 11.1: Emissions of fluorinated gases
	TA 11.2: Refrigerant gas production
SS 12: Solvents use	TA 12.1: Chemical industry
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater
	TA 13.2: Manure

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

Wu LIN Wu Lin

Technical Competent Manager

Shenzhen, 25/10/2022

Mr. Wu LIN

Satisfies the requirements of competence management system of CTI Certification, and is hereby appointed as:

Qualification					
GHG Auditor	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
√	√	√	√	√	√

Scope	Technical Area
SS 1: Energy industries (renewable/non-renewable sources)	TA 1.1: Thermal energy generation
	TA 1.2: Energy generation from renewable energy sources
SS 2: Energy distribution	TA 2.1: Electricity distribution
SS 3: Energy demand	TA 3.1: Energy demand
SS 4: Manufacturing industries	TA 4.1: Cement and lime production
SS 5: Chemical industry	TA 5.1: Chemical industry
	TA 5.2: Caprolactam, nitric and adipic acid
SS 10: Fugitive emissions from fuels (solid, oil and gas)	TA 10.1: Fugitive emissions from oil and gas
SS 11: Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	TA 11.1: Emissions of fluorinated gases
	TA 11.2: Refrigerant gas production
SS 12: Solvents use	TA 12.1: Chemical industry
SS 13: Waste handling and disposal	TA 13.1: Solid waste and wastewater
	TA 13.2: Manure

This appointment is valid for 3 years from its date of approval below and is bound by internal requirements of management system of the Certification Body of CTI.

Approved by:

Lu ZHOU

General Manager

Shenzhen, 01/01/2021

Appendix 3. Documents reviewed or referenced

No	Author	Title	References to the document	Provider
1.	PD	7th periodic GS4GG Monitoring Report of "Nanyang Danjiang River Solar Cooker Project Phase I"	- Draft Version No. 01, dated 23/10/2023 - Final Version No. 04, dated 07/04/2024	PD
2.	PD	7th periodic GS4GG Emission Reduction Calculation spreadsheet of "Nanyang Danjiang River Solar Cooker Project Phase I"	- Draft Version No. 01, dated 23/10/2023 - Final Version No. 02, dated 30/11/2023	PD
3.	PD	Project Design document of "Nanyang Danjiang River Solar Cooker Project Phase I" for 2nd crediting period	Project Design Document for 2nd crediting period: "Nanyang Danjiang River Solar Cooker Project Phase I", version 02, dated 30/11/2023	PD
4.	PD	SDG impact tool for this monitoring period	- Draft Version No. 01, dated 23/10/2023 - Final Version No. 02, dated 30/11/2023	PD
5.	DOEs	CDM Verification Report	Previous Verification Report, 1st – 7th CDM monitoring period	UNFCCC
6.	CTI	GS Validation Report for 2nd crediting period	GS Validation Report, version 1.0, dated 30/11/2023	GS
7.	VVB	GS Verification Report	Previous GS Verification Report 1st - 6th GS monitoring period	GS
8.	PD	GS4GG Transition request form	GS4GG Transition request form to GS4GG for "Nanyang Danjiang River Solar Cooker Project Phase I", version 01, dated 25/07/2023	PD
9.	Beijing City Administrative Bureau for Industry and Commerce	Business License	Business License of Sirreon Technology & Development (Beijing) Co., Ltd issued on 2010-09-03 valid to 2030-09-02	PD
10.	PD & Nanyang City Jinlong Solar Technology Co., Ltd.	Commissioning Confirmation	Commissioning Confirmation issued dated 31/07/2011	PD
11.	PD & Nanyang City Jinlong Solar Technology Co., Ltd	Solar cookers sales contract	Solar cookers sales contract signed dated 28/05/2011	PD
12.	PD	Invoice of the solar cookers	Invoice of the solar cookers	PD
13.	Nanyang City Quality and Technology Supervision and Testing Centre	Testing report of focus type solar cookers	Testing report of focus type solar cookers issued dated 10/08/2021	PD
14.	PD	User information registration form	User information registration form	PD
15.	PD & local residents	Solar cookers usage agreements	Solar cookers usage agreements signed dated 31/05/2011	PD

16.	PD	Sample Records	Monthly operating time of solar cookers sampled by project participants as the aggregation of the daily operating hour records during this monitoring period	PD
17.	PD	Original daily operating hour records in monitoring forms	t_i monitoring forms designed by PD filled by monitoring team members with original daily operating hour records	PD
18.	PD	t_i calculation sheet	t_i calculation sheet based on the t_i monitoring forms filled by monitoring team members	PD
19.	PD	Monitoring survey records for usage rate	Monitoring survey records for usage rate collected from 200 samples information and used for Usage rate calculation	PD
20.	PD	Usage Rate Calculation Sheet	Usage rate calculation sheet based on the monitoring survey records and questionnaire survey results	PD
21.	PD	Questionnaire survey for usage rate	Usage survey filled questionnaires by 200 samples	PD
22.	PD	Pictures of the project solar cookers	Pictures of the project solar cookers, Pictures of solar cookers used in the kitchen of the households Pictures of the project solar cookers checked by PD	PD
23.	PD	Record of verification checks	Record of verification checks conducted by PD by end of November 2021 and by the end of May 2022	PD
24.	Nanyang Meteorological Bureau	Monthly solar irradiance intensity	Monthly solar irradiance intensity, dated 05/06/2021 (for first 5 months in year 2021), dated 05/01/2022 (for surplus 7 months in year 2021) and dated 06/01/2023 (for year 2022) covering this monitoring period	PD
25.	PD	Sampling plan	Sampling Plan for sampling survey guide	PD
26.	PD	Monitoring Manual	Monitoring & Management Manual for the project activity and project site management rules and regulations	PD
27.	PD	Screenshots	Screenshots of the samples generation process	PD
28.	PD	No double counting declaration	No double counting declaration dated 08/02/2022	PD
29.	PD	Training and Competence Records	Training and Competence Records of project 1. Monitoring Training Records in 2021 and 2022 for staffs including attendance list 2. Training Plan	PD
30.	PD	End-user training records	End-user training records of using and maintenance solar cookers and measuring the using time of solar cookers	PD
31.	PD and employees	Labor contracts with the employees	Labor contracts signed with 30 employees for implementation of this project	PD
32.	PD	Payroll of the employees	Monthly Payroll for employees covering this monitoring period	PD
33.	PD	Internet/email address	Internet/email address for	PD

			inputs/grievances mechanism	
34.	PD	Grievance Book	Grievance Book kept by the officer in office of village committee in each village.	PD
35.	IPCC	IPCC	• 2006 IPCC Guidelines for National Greenhouse Gas Inventories • 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories	Public Website
36.	UNFCCC	CDM Approved Small Scale Methodology AMS-I.C	"Thermal energy production with or without electricity" (Version 22.0.0)	UNFCCC website
37.	GS	GS issuance Review Form for 6th GS verification	GS issuance Review Form for 6th GS verification	GS website
38.	UNFCCC	Sampling and Survey Standard	Standard of sampling and surveys for CDM project activities and programme of activities" version 09.0	UNFCCC website
39.	UNFCCC	Guideline of Sampling and surveys	"Guideline of Sampling and surveys for CDM project activities and programmes of activities" version 04.0	UNFCCC website
40.	GS	GS4GG MR template	Gold Standard for Global Goals Monitoring Report Template version 1.1 in October 2020	GS Website
41.	GS	Gold Standard for the Global Goals Principles and Requirements	Version 1.2	GS Website
42.	GS	Gold Standard for the Global Goals Safeguarding Principles & Requirements	Version 1.2	GS Website
43.	GS	Gold Standard for the Global Goals Community Services Activity Requirements	Version 1.2	GS Website
44.	GS	"Requirements and Guidelines for usage rate monitoring"	Version 2.0	GS Website
45.	GS	Gold Standard for the Global Goals Stakeholder Consultation and Engagement Requirements	Version 1.2	GS Website
46.	GS	GS4GG GHG Emissions Reduction & Sequestration Product Requirements	Version 2.2	GS Website
47.	GS	Gold Standard for the Global Goals Validation and Verification Standard	Version 1.0	GS
48.	National Standard	GB NY/T219-2003	National Standard of the People's Republic of China for solar cookers	Public Website
49.	IREC	IREC	https://www.irecstandard.org/	Website
50.	China CER	CCER	http://cdm.ccchina.org.cn/	Website
51.	UNDP: Clean Energy for Development and Economic Growth	UNDP	Biomass and Other Renewable Energy Options to Meet Energy and Development Needs in Poor Nations dated 2002 http://www.undp.org/energy /publications/2002/2002b.htm http://content.undp.org/go/cmsservic e/ download/publication/?	Website

			version=live&id=2102581	
52.	Gold Standard Organization	Gold Standard	http://www.goldstandard.org/	Website
53.	VERRA	VCS	http://www.v-c-s.org/	Website
54.	UNFCCC	UNFCCC	http://cdm.unfccc.int	Website

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. Remaining FAR from validation and/or previous verification

FAR ID	01	**Section no.**	Performance Review dated 20/10/2021	**Date:** 20/10/2021
Description of FAR				
In future usage survey, PD shall include the question, what is used for cooking and water boiling when solar cooker is not in use in usage survey.				
Project participant response				**Date:** 19/03/2024
Since this monitoring period is from 01/01/2021-01/05/2022, the usage rate survey was carried out respectively in 2021 and 2022. For 2021, the usage rate survey started separately on 01/02/2021, 02/05/2021 and 01/08/2021. However, this FAR wasn't raised until 20/10/2021, hence the referred question wasn't involved in the usage rate survey for 2021. For 2022, the usage rate survey started on 01/02/2022. The referred question doesn't relate to calculations on usage rate hence wasn't included in the usage rate calculation sheet that was already submitted to Sustain-Cert on 07/12/2023. Nonetheless, the referred question has been survey during the usage rate survey for 2022, see Document "Samples of Usage rate survey questionnaires-2022" for details. Accordingly, the usage rate calculation sheet has been updated, see the document named "Usage Rate calculation sheet-7th 1378-20240319". Moreover, in real practice the users used to turn to the baseline-coal-fired-stove for cooking and water boiling when solar cooker wasn't in use, which however doesn't impact ER calculation that adopts actually the real running time and the usage rate.				
Documentation provided by project participant				
Samples of Usage rate survey questionnaires-2022, Usage Rate calculation sheet-7th 1378-20240319				
VVB assessment				**Date:** 20/03/2024
By checking the usage rate questionnaire survey, it is confirmed that the usage rate surveys for the years 2021 and 2022 were conducted within the stipulated monitoring period from 01/01/2021 to 01/05/2022. The surveys commenced on 01/02/2021, 02/05/2021 and 01/08/2021 in 2021 which are all after the FAR was raised, therefore, the questions referred to in the FAR were not included in the 2021 usage rate survey. For survey in 2022 started on 01/02/2022, the referred question was surveyed and has been documented in the "Samples of Usage rate survey questionnaires-2022". The updated "Usage Rate calculation sheet-7th 1378-20240319" reflects these changes, ensuring that the usage rate calculations remain current and accurate. The practice of users resorting to baseline-coal-fired-stoves when the solar cooker is not in use has been noted. However, this does not affect the Emission Reduction (ER) calculation as it accounts for the actual running time and usage rate of the solar cookers. Therefore, FAR 01 was closed.				

FAR ID	02	**Section no.**	GS1378 GS4GG Design Renewal Review	**Date:** 15/01/2024
Description of FAR				
Refer Site Visit and Remote Audit Requirements v.02 §3.2.2 "A physical site visit by VVB is mandatory at the first verification of a project" after design renewal certification.				
Project participant response				**Date:** 19/03/2024
For this project, the combine review of the CP renewal design certification and the subsequent first performance certification was chosen, which was in line with para 5.1.53 of the GS Principles and requirements (Version 1.2). However, considering the workload of the audit team as well as the audit quality, the VVB appointed two separate audit teams for conducting the CP renew design certification and the subsequent first performance certification, i.e. the CP renewal site visit was conducted on 24/10/2023-27/10/2023 and the performance certification site visit was conducted on 06/11/2023-10/11/2023.				
Documentation provided by project participant				
Samples of Usage rate survey questionnaires-2022, Usage Rate calculation sheet-7th 1378-20240319				
VVB assessment				**Date:** 20/03/2024
According to the "Service contract for the 7th GS verification and crediting period design renew validation of Nanyang Danjiang River Solar Cooker Project Phase I" signed between the project developer and CTI, the project developer chose to combine the CP renew design certification and the subsequent first performance certification (7th MP since project registered under GS) which is in line with para 5.1.53 of the GS Principles and requirements version 1.2. As per para 5.1.53 of the GS Principles and requirements version 1.2, "VVB				

may combine site visits concurrently", however, considering the workload of the audit team as well as the audit quality, CTI has appointed two separate audit teams for conducting the CP renew design certification and the subsequent first performance certification. The two audit teams were intended to jointly conduct the site visit, however if combining the site visit, the duration of the site visit would take more than one week, due to the availability of the audit team members, project developer, consultancy and the end users and considering the operability, the two audit teams of CTI has conducted the site visit separately, i.e., the CP renewal site visit was conducted on 24/10/2023-27/10/2023 and the performance certification site visit was conducted on 06/11/2023-10/11/2023 which is about one week after the CP renewal site visit at their earliest availability. In addition, during the opening meeting of site visit of CP renewal, the audit team from CTI has also introduced and explained the process and requirement of the subsequent performance certification to the attendees. Therefore, although the site visits were not performed at the same time, considering the continuity of two on-site visits and the coherence of the audit work, the validation of the crediting period renewal and the verification performance can be regarded as a combined audit work which is in line with the requirement of section (h) in the GS Principles and requirements version 1.2.
Thus, FAR 02 was closed.

Table 2. CL from this verification

CL ID	01	**Section no.**	A.1	**Date:** 15/11/2023
Description of CL				
In the section A.1, 1. The project history information of CDM, GS CER, transition to GS VER and crediting period renew is not clarified. 2. Why this monitoring period started from 01/01/2021 by observing that the 6th GS CER monitoring period ended on 31/05/2021. Clarification is requested.				
Project participant response				**Date:** 24/11/2023
1. This project completed the registration in CDM on 02/05/2012 with a fixed crediting period which is from 02/05/2012-01/05/2022. This project completed the design certification under GS previous version on 13/08/2013 and seek to issue GS CER. In 2019, this project completed the transition from GS previous version to GS4GG and seek the GS CER product. As CDM only issues CERs achieved as of 31/12/2020, so the GS Labelling was also only issued as of 31/12/2020 by GS4GG. In order to issue the emission reductions achieved in 01/01/2021-01/05/2022, so this project successfully completed the transition from CDM to GS4GG with the product of GS VER on 04/09/2023. As per para.6.5.1 of "GHG Emissions Reduction & Sequestration Product Requirements (version 2.2)", the transition project, PoA/CPAs shall follow GS4GG certification cycle for crediting period renewal (e.g., 5 years) in order to issue or convert issued emission reductions to GSVERs under GS4GG. This project has completed the transition with seek to issue the GS VER, so this project shall follow GS4GG certification cycle for crediting period renewal. The crediting period renewal will be request for review in 12/2023 (the 2nd crediting period is from 02/05/2017 to 01/05/2022). 2. The 6th monitoring period of this project is from 01/05/2020 to 31/05/2021 and the performance review No. 6 has been approved on 11/04/2022, the product seek to issue is GS labelling. As CDM only issues CERs achieved as of 31/12/2020, so GS can only issue GS labelling achieved up to 31/12/2020. Now, this project has been successfully transferred to GS4GG with the product of GS VER on 04/09/2023, so the 7th monitoring period can be from 01/01/2021 to 01/05/2022 and the product seek to issue was GS VERs.				
Documentation provided by project participant				
/1/ version 02				
VVB assessment				**Date:** 27/11/2023
1. The revised MR is checked, CTI confirmed that the project history has been added and verified as correct by comparing the information in GS website, CDM website, transition request form and GS renew validation report. 2. The revised MR is checked, CTI confirmed that the clarification has been added. The project sought GS CER issuance for 6th monitoring period of this project is from 01/05/2020 to 31/05/2021, however, The request of issuance of CERs of 01/01/2021-31/05/2021 were recorded as 'provisional' which is in accordance with the temporary measures for CDM processes related to the period from 1 January 2021 agreed by the CDM Executive Board at its 108th meeting and pending guidance from the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol at its sixteenth session. So, the CERs of 01/01/2021-31/05/2021 have not issued by CDM thus not issued as GS CERs. Now, this project has been successfully transferred to GS4GG with the product of GS VER, so the 7th monitoring period can start from 01/01/2021 to 01/05/2022 and the product sought to issue was GS VERs. CL 01 is closed.				

CL ID	02	Section no.	C	Date: 15/11/2023
Description of CL				
In the section C, how the project avoid double counting from other carbon scheme is not clarified.				
Project participant response				**Date:** 24/11/2023
In addition, this project shall claim emission reductions achieved in 01/01/2021-01/05/2022 only once under GS4GG, and no longer request for issuance under CDM. Also, PP has signed the Declaration of No Double Counting.				
Documentation provided by project participant				
/1/ version 02 /14/ /28/				
VVB assessment				**Date:** 27/11/2023
The revised MR is checked, it is confirmed that clarification has been added. The VVB has checked for double counting by reviewing all relevant registries including CDM/54/, VCS/53/, IREC/49/ and CCER/50/ schemes. It is confirmed that there is no potential exists for Double Counting of emissions reductions due to issuance of Gold Standard CERs/CO2-certificates from the considered project activity. Furthermore, for the project end users and solar cookers number management, to avoid the double counting, PD has implemented the related actions as the unique serial No. of the solar cookers corresponding to one end users, the serial number of solar cookers have been verified during site visit and confirmed as consistent with the user information registration form/14/, project users' information is also verified during site visit and confirmed as consistent with the User information registration form/14/. It is concluded that the PD has taken method to avoid the double counting to ensure the ER calculation is conservative. Thus the risk of double counting is unlikely to happen. Besides, PD has provided a declaration ensure that no Double Counting of emissions reductions will be occurred from PD side/28/. CL 02 is closed				

Table 3. CAR from this verification

CAR ID	01	Section no.	A.4	Date: 15/11/2023
Description of CAR				
In the section A.4, the information of related crediting period is not correct and relevant to GS VER.				
Project participant response				**Date:** 24/11/2023
The information of related crediting period has been modified and the details are as follows: **Start date of crediting period** This project completed the registration in CDM on 02/05/2012 with a fixed 10-years crediting period which is from 02/05/2012-01/05/2022 and has been successfully completed the transition to GS4GG with the product of GS VERs on 04/09/2023. As per para. 6.2.1 of in Annex B of GHG Emissions Reduction& Sequestration Product Requirement (Version 2.2):" The start date of crediting period for transition project or CPA remains unchanged and shall be the date as registered with other standard". Therefore, the start date of crediting period under GS4GG is also 02/05/2012. In addition, as per para.6.5.1 in Annex B of GHG Emissions Reduction& Sequestration Product Requirement (Version 2.2):" Transition project, PoA/CPAs shall follow GS4GG certification cycle for crediting period renewal (e.g., 5 years) in order to issue or convert issued emission reductions to GSVERs under GS4GG". Therefore, this project shall follow GS4GG certification cycle for crediting period renewal and the second crediting period should be from 02/05/2017 to 01/05/2022. **Total length of crediting period** This project completed the registration in CDM on 02/05/2012 with a fixed 10-years crediting period which is from 02/05/2012-01/05/2022 and completed the design certification under GS previous version on 13/08/2013 with the product of GS CER. In 2019, this project completed the transition from GS previous version to GS4GG with the product of GS CER and successfully completed the transition to GS4GG with the product of GS VERs on 04/09/2023. As per para.6.1.1 in Annex B of GHG Emissions Reduction& Sequestration Product Requirement (Version 2.2):" Transition project & CPA seeking issuance of GSVERs or conversion of issued GSCERs to GSVERs shall issue GSVERs for a maximum crediting period allowed as per relevant GS4GG activity requirements or crediting period with the other standard, whichever ends first". This project applied the "Community Services Activity Requirements (version 1.2)", as per 4.1.5 of this document: "New Projects may seek Certification and receive Issuance of Gold Standard Certified Impact Statements or Products for a maximum of two Design Certification Renewal Cycles i.e., a total of 15 years issuance". Therefore, the total length of crediting period is also 10 years.				

Documentation provided by project participant	
/1/ version 02	
VVB assessment	**Date:** 27/11/2023
The revised MR is checked, it is confirmed that the information of crediting period is updated to be correct which is verified as in line with the GS renew validation report. CAR 01 is closed.	

CAR ID	02	**Section no.**	D.2	**Date:** 15/11/2023
Description of CAR				
In the section D.2, the SDG 7 related monitoring parameter is missing.				
Project participant response				**Date:** 24/11/2023
The SDG7 related monitoring parameter has been added into section D.2 of MR (Version 02).				
Documentation provided by project participant				
/1/ version 02				
VVB assessment				**Date:** 27/11/2023
The revised MR is checked, CTI confirmed that the parameter has been supplemented accordingly. Refer to section E.6.2 of this report for detail assessment. CAR 02 is closed.				

CAR ID	03	**Section no.**	D.3	**Date:** 15/11/2023
Description of CAR				
In the section D.3, the comparison with last monitoring period values is not provided.				
Project participant response				**Date:** 24/11/2023
The comparison with last monitoring period values has been described in section D.3 of MR (version 02).				
Documentation provided by project participant				
/1/ version 02				
VVB assessment				**Date:** 27/11/2023
The revised MR is checked, CTI confirmed that the comparison has been supplemented accordingly. Refer to section E.6.3 of this report for detail assessment. CAR 03 is closed.				

Table 4. FAR from this verification

FAR ID	xx	**Section No.**		**Date:** DD/MM/YYYY
Description of FAR				
No FAR from this verification				
Project participant response				**Date:**
Documentation provided by project participant				
VVB assessment				**Date:**