
VERIFICATION AND CERTIFICATION REPORT

NET ZERO AG LTD.

Methane Reduction from Rice
Cultivation in Punjab Pakistan

IN

PAKISTAN

MONITORING PERIOD:

From 22/06/2022 to 16/11/2023 (both days included)

R-C-18 / 12.12.2023- 07

(Technical Reviewer):	Seda Atabek ¹		☐ Unrestricted Distribution
	Abdulkadir Bektaş (TA 15.1 Expert)		

¹ Change of ITR from Rohit Badaya to Seda Atabek based on GS deviation request.

Abbreviations

CAR	: Corrective Action Request
CDM	: Clean Development Mechanism
CEF	: Carbon Emission Factor
CER	: Certified Emission Reduction(s)
CL	: Clarification request
CO₂	: Carbon dioxide
CO₂e	: Carbon dioxide equivalent
DNA	: Designated National Authority
DOE	: Designated Operational Entity
DR	: Document Review
EF	: Emission Factor
ER	: Emission Reductions
ERPA	: Emission Reduction Purchase Agreement
FAR	: Forward Action Request
GHG	: Greenhouse gas(es)
GS	: Gold Standard
GS4GG	: Gold Standard for Global Goals
GWP	: Global Warming Potential
I	: Interview
IPCC	: Intergovernmental Panel on Climate Change
kWh	: Kilo Watt Hour
MP	: Monitoring Plan
MoV	: Means of Verification
MW	: Mega Watt
MWh	: Mega Watt Hour
NGO	: Non-governmental Organisation
ODA	: Official Development Assistance
PDD	: Project Design Document
PD	: Project Developer(s)
tCO₂e	: Tonnes of CO ₂ equivalents
UNFCCC	: United Nations Framework Convention on Climate Change

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1. EXECUTIVE SUMMARY– VERIFICATION AND CERTIFICATION OPINION

Re Carbon Ltd. performed the first periodic verification of the “Methane Reduction from Rice Cultivation in Punjab Pakistan”, a Gold Standard project with the registry reference number “GS11709” for the period in between 22/06/2022 and 16/11/2023. The scope of the activities covers the verification and certification of GHG emissions reductions reported in the Monitoring Report Version 3.6, dated 03/04/2025 of “Methane Reduction from Rice Cultivation in Punjab Pakistan”.

Re Carbon Ltd. hereby confirms that the project activity “Methane Reduction from Rice Cultivation in Punjab Pakistan” in Pakistan, is implemented in accordance with the validated and registered PDD version 5.5, dated 25/12/2023. The monitoring system is in place and the emission reductions are calculated without material misstatements as per the applied approved methodology, which is “Methodology for Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation” Version 01.

Re Carbon Ltd. confirms the following based on the results of document review and on-site assessment:

The implementation of the project has resulted in the avoidance of 46,714 tCO₂e during the monitoring period between 22/06/2022 and 16/11/2023.

2. INTRODUCTION

2.1. Objective

Through a combined validation and verification contract, dated 08/11/2022, Re Carbon Ltd. was appointed by “NetZeroAg Ltd.” to perform the first periodic verification of the “Methane Reduction from Rice Cultivation in Punjab Pakistan”. The objective of this verification activity was to assess, with objective evidence:

- if the monitoring report dated “03/04/2025” conforms with the requirements of the monitoring plan of the registered PDD and the approved methodology
- if the project activity conforms with the monitoring report and the registered PDD, and
- if the data reported in the monitoring report are complete and transparent.

2.2. Scope

The scope of the verification is the independent and objective review of the monitored GHG reductions. The verification activity is based on the validated and registered PDD version 5.5, dated 25/12/2023.

The project activity and the monitoring report are assessed against the requirements of Article 12 of the Kyoto Protocol, CDM Modalities and Procedures as agreed on in the Marrakech Accords under decision 3/CMP.1, the annexes to that decision, “GS Methodology for Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation (v1.0)”, subsequent decisions and guidance made by COP/MOP and the CDM Executive Board as well as other related rules, according to the guidance given in the CDM Validation and Verification Standard for project activities version 3.0, CDM Project Standard for project activities version 3.0, Gold Standard for the Global Goals (GS4GG) version 1.2 and other relevant GS4GG requirements.

The only purpose of the verification and certification is its usage during the issuance process as part of the GS project cycle. Therefore, Re Carbon Ltd. cannot be held liable by any party for decisions made or not made based on the verification and certification opinion, which will go beyond that purpose.

2.3. Description of the Project Activity

NetZeroAg plans to introduce Alternate Wetting and Drying (AWD) method to a group of 2,000 farmers covering 24,462 hectares (60,448 acres) primarily in Sheikhpura and neighboring districts Gujranwala 1, Sialkot, and Nankana Sahib of Punjab Province, Pakistan. The project aims to reduce methane emissions associated with conventional farming techniques used to harvest Super Basmati and Basmati-515.

The rice was cultivated on irrigated land by continuous flooding in the target fields before the implementation of the project. This leads to methane emissions per season due to the conventional farming of continuously flooding and the project aims to achieve net emission reductions by switching to the AWD Method.

The company, along with its local subsidiary Rice Partners, provided advisory services to participating farmers on seed selection, sowing methods, optimal planting time, efficient use of fertilizers and pesticides, and better agronomy practices. Implementation of AWD was facilitated through site visits, audio calls, informative materials, and SMS services. Additionally, a crop check system was established to guide farmers in eco-friendly rice cultivation, and field officers worked closely with all farmers to ensure the adoption of sustainable farming techniques.

The AWD technique involves a controlled irrigation strategy that can significantly reduce methane emissions, water use, and pumping costs. By withdrawing water from paddy fields mid-season and reapplying it only as needed, the AWD method offers environmental benefits without compromising yield. Studies conducted in 2016 suggest that Pakistan can potentially reduce emissions related to rice cultivation by 48% to 70% by adopting alternate wetting and drying methods.

The project start date is 02/05/2022 corresponding to the start of land preparations i.e., laser land levelling. The crediting period start date of the project stated in the PDD is 22/06/2022 with choice of renewable crediting period.

The cultivation periods commenced with plant establishment on 22 June 2022 and concluded with harvest on 16 November 2022 for the 2022 season. For the 2023 season, cultivation occurred from 15 June 2023 to 16 November 2023. Plant establishment date was determined as per the earliest recorded date in the sampled logbooks, while the harvest date was based on the final date recorded by the same sample group.

2.4. Parties Involved

NetZeroAg Ltd is the project developer working with Rice Partners Pvt Ltd (Local Subsidiary) as project participant in the project and host country is Pakistan.

2.5. Verification Period Covered

This is the 1st verification period of the 1st crediting period from 22/06/2022 to 16/11/2023 (both days included).

PROJECT NUMBER:

3. METHODOLOGY

The verification of this GS project activity includes the following steps:

- Assessment of the conformity of the actual project activity and its operation with the registered PDD, dated 25/12/2023 version 5.5
- A physical site visit, executed on 21/12/2022 to 23/12/2022 and thereafter on 12/01/2024 – 14/01/2024 in order to assess that all physical features of the project activity proposed in the registered PDD are in place and that the project developer has operated the project activity in line with the registered PDD.
- Assessment of the compliance of the monitoring plan with the monitoring methodology Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation, version 01
- Assessment of the compliance of the monitoring with the monitoring plan
- Assessment of data and calculation of greenhouse gas emission reductions
- Issuance of the verification report
- Independent technical review
- Approval of the verification report and request for issuance

The Verification Protocol is used for the assessment of each requirement during the execution of verification activities and is given in Annex-1 of this verification report.

The Verification Protocol consists of two tables:

- Table 1 (GS-Monitoring Report (MR)-FORM, GS4GG and CDM Verification Requirements)
- Table 2 (Resolution of Corrective Action, Forward Action and Clarification Requests)

The usage description of Table-1 in the Verification Protocol is explained in Table 3-1 below:

Table 3-1: Explanation of Table-1 in the Verification Protocol

Question	Reference	MoV*	Findings, comments, references and document sources	Draft & Final Conclusion
The requirements related with the GS monitoring report, GS4GG and CDM verification Standards and/or Procedures	Gives reference to the legislation or documents where the relevant requirement is found	Explains how conformance with question is investigated. Examples of means of verification are Document Review (DR), Interview (I) and Not Applicable (NA)	Is used to elaborate and discuss the question and/or conformance to the question by giving related references and document sources based on which the finding is issued, or evidence is checked	Either acceptable based on the evidence provided (OK), non-compliance with the requirement (CAR), further clarification (CL) due to insufficient, unclear or not transparent information, forward action request (FAR) that needs to be solved during the next periodic verification

The usage description of Table-2 in the Verification Protocol is explained in Table 3-2 below:

Table 3-2: Explanation of Table-2 in the Verification Protocol

Draft Report Clarifications, Forward Action and Corrective Action Requests by Verification Team	Ref. to Questions in Table-1 and Table-2	Summary of Project Developers' Response	Verification Team Conclusion
The all CL, FAR and CARs determined during the draft verification report should be listed here	Gives reference to the checklist questions in Table-1 of Verification Protocol	Is used to summarize the responses by project developers regarding the non-conformities	Is used to summarize the responses by verification and their conclusions

The Verification Protocol is filled out by the verification team in line with the descriptions above. All CARs, CLs and FARs are listed in a transparent and clear manner.

3.1. Verification Team and ITR Selection

The appointment process of the verification team takes into account the GHG Project Type(s), Project-Level Group (s), and relevant host country experience required by the team members for the verification of the emission reductions achieved by the project activity in the related monitoring period for this verification. The relevant GS verification and previous ITR experiences are also assessed during the selection of the team members as well as the Independent Technical Reviewer (ITR). The verification team and ITR was assigned to this verification activity on 18/10/2022, taking all the above factors into consideration and following the contract review procedure.

The verification team and ITR details are given in Table 3-3 below:

Table 3-3: Verification team and ITR details

Name	Role	Host Country Experience	Scope Coverage	Technical Expertise	Involvement*
Mr. Sandeep Kanda	Team Leader	☐	☒	☒	DR, RA, R
Mr. Abid Ali	Local Expert for Pakistan	☒	☐	☐	SV
Mr. Rohit Badaya (former)	ITR	☐	☒	☐	ITR
Ms. Seda Atabek ² (Current)	ITR	☐	☒	☐	ITR
Dr. Abdulkadir Bektaş	ITR Expert (Agriculture)	☐	☒	☒	ITR

* Explanations for the abbreviations used for involvement types are as follows:

² Change of ITR initiated based on GS deviation approval requirement request.

- A : Administrative
- DR : Desk Review
- SV : Site Visit
- RA : Remote Assessment³
- R : Reporting
- ITR : Independent Technical Review

3.2. Desk Review of Documents

The basis for the verification activity is the monitoring report version 01, dated 06/12/2022, which was submitted to the verification team on 09/12/2022. This monitoring report was revised several times due to issued CARs and CLs, resulting in version 3.6, dated 03/04/2025 as the final version. The monitoring report and the monitoring activities were assessed against the registered PDD, version 5.5, dated 25/12/2023, the “Methodology for Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation, version 01”, the relevant CDM rules and regulations, CDM Validation and Verification Standard for project activities version 3.0, CDM Project Standard for project activities version 3.0, GS4GG version 1.2, other relevant GS4GG requirements, and the following:

- final validation report of “Re Carbon Ltd., version 03, dated 29/01/2024.

The following actions were involved in the desk review:

- A review of the data and information presented to verify their completeness
- A review of the monitoring plan and monitoring methodology, paying particular attention to the frequency of measurements, the quality of metering equipment including calibration requirements, and the quality assurance and quality control procedures
- An evaluation of data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions

A list of all the documents that were reviewed can be found in Section 6 of this verification report.

³ A physical site visit was not executed due to security concerns and visa issues. Instead of that, alternative means (such as a remote inspection) were executed by the Verification Team in order to carry out the same activities as in a physical on-site inspection by using information and communication technologies (ICT) tools. These include, but are not limited to the following: Teleconference/video or other online meetings, interviews with relevant stakeholders, local authorities, project participants, individuals responsible for data collection, end user and/or beneficiaries of the project, photographic evidence (e.g. project site and the equipment associated with the project) and/or video recordings, satellite images and (where available) checking related documents and/or other publicly available information.

3.3. On-Site Visits

As a part of the verification activities a combined online (remote) and physical site visit for validation and verification was performed to the project activity site, details of which can be seen in the Table 3-4 below:

Table 3-4: Site visit details

Date	21/12/2022 to 23/12/2022	
Location	Sheikhpura district of Punjab Province, Pakistan	
Participant	Company Name	Role in the Organization / Role in the Site Visit
Mr. Zafar Iqbal	Rice Partners Ltd. (RPL)	Manager Sustainability
Mr. M. Ali Tariq	RPL	CEO
Dr. Riaz Ahmed Mann	RPL	Technical Advisor
Mr. Amjad Iqbal Khattak	RPL	Plant Manager
Mr. Rizwan Ali	RPL	Human Rights Officer
Mr. Abid Ali	Re-Carbon Ltd.	Regional Expert
Points Verified		Source of Information
To confirm rightness of project description, as per GS PDD including project components and location		Document review and on-site audit interviews with the local stakeholders
To check the project development and operation		Document review and on-site audit
To interview with the local stakeholders about the project and its impacts		On-site audit interviews with the local stakeholders

The Site visit started with introduction with the client and a short meeting with them detailing them on the site visit plan. Then the farmers visits were carried out. The rest of the day will be with the Client to seek documentation record and demand lapses/corrections in the information already provided.

1. Validating the baseline scenario

What was the practice before the introduction of AWD?

- What is the general cropping pattern of the cropping practice for rice cultivation in the project area?
- Is it different from the cropping pattern in the region or country?
- What are the rice varieties sown and what are the estimated yields?

2. Training and technical support material prepared by the project proponent and dissemination of the same to the farmers.

- Has RPL provided you with training and given any training material on sustainable rice farming?
- Have you ever received any training material?

- c. Are you comfortable in getting the relevant training?
3. Contractual relationship including transfer of carbon rights.
 - a. Has the company informed you of the carbon credits and do you have any information regarding The Gold Standard?
 - b. Do you know anything about carbon credits?
 - c. Will the farmers opt for AWD in absence of the benefits from the VERs?
4. Stakeholder consultations held and grievance addressal mechanism.
 - a. How many consultative sessions have been organized by the project proponent?
 - b. Have the consultative sessions held in your vicinity?
 - c. Is there any Grievance Redressal Mechanism in Place?
5. Verifying the project scenario
 - a. Through site visit interviews confirm the cropping practice for rice cultivation (in the respective farmer field and overall, in the region)
 - What has been the cropping practice in your field and has it changed after your contract with RPL?
 - What are the technologies you are employing for the better yield?
 - Is renewable technology being used for pumping water to the farms?
 - b. Area of farms shifted to AWD practice as part of project.
 - How much of your farm is using AWD?
 - c. Rice variety sown and yields (Project), also to confirm that the project yields are not lower.
 - Has the yield increased or decreased after the introduction of AWD?
 - Do you think it is beneficial?
 - For which crop do you think AWD is a better intervention?
6. Measurement methods adopted for methane measurement from project rice fields.
 - a. Do you have any information on the climate impacts of rice cultivation?
 - b. Has RPL employed any instruments in the rice field to your knowledge?
 - c. What are the instruments that RPL uses on the field?
 - d. Do you know anything about the instruments?
 - e. Have you been informed on the methods of measurement?
 - f. Was the Emission monitoring instrument installed?
 - g. When was the Emission monitoring instrument installed?

Sample farmers with whom interactions were carried out:

Sr. No.	Name of Farmer	Village	Farm area (acres)	Herein referred as
1.	Shahid Rasool	Fateh Pur	78	F-1
2.	Mukhtar Hussain	Saikhum	24	F-2

3.	Sajjad Ahmed	Khokhar Ki Mallian	24	F-3
4.	Muhammad Farooq	Kathiala Virkan	90	F-4
5.	Muhammad Irshad	Dera Barkat	4	F-5
6.	Rana Muhammad Zubair	Hadiyala Virkaan	16	F-6
7.	Shahbaz Dhillon	Ahdiyan	30	F-7
8.	Mudassar Nawaz	48 Virkaan	90	F-8
9.	Shahbaz Ahmed	Mojo Ki malian	60	F-9
10.	Waseem Akhtar ⁴	Hardo Sehol Muslim	40	F-10
11.	Imran Shoukat	Ahdiyan	20	F-11

1. Field verification

The Regional Expert travelled for the site visit on 21st December to the project site and undertook a 3-day verification and stakeholders meeting to determine the following:

Interviews with 11 Farmers in the 10 villages of District Sheikhpura to verify the impact of project on economic, environmental and social welfare of the local population.

Verification of the AWD equipment installation claims.

On the ground verification of the social welfare initiatives of the proponent.

On the ground checking of the claims of the proponent regarding the AWD tools and equipment.

Checking the originality of the farmers' contracts

Checking if the HSE considerations are actually taken into account.

Verifying through the survey and interviews the baseline scenario and trends of cultivation in the project area.

Assessment of the farmers' knowledge about the environmental benefits of the intervention.

Verification of the proponent's claims regarding the dissemination of information material, weather advisory and trainings.

Checking the logbook and other relevant documents for the data that will be used to

- Interviews with 11 Farmers in the 10 villages of District Sheikhpura to verify the impact of project on economic, environmental and social welfare of the local population.
- Verification of the AWD equipment installation claims.
- On the ground verification of the social welfare initiatives of the proponent.
- On the ground checking of the claims of the proponent regarding the AWD tools and equipment.
- Checking the originality of the farmers' contracts
- Checking if the HSE considerations are actually taken into account.
- Verifying through the survey and interviews the baseline scenario and trends of cultivation in the project area.
- Assessment of the farmers' knowledge about the environmental benefits of the intervention.

⁴ (Azeem, his younger brother represented him due to a death in family. Waseem had to go to the funeral)

- Verification of the proponent's claims regarding the dissemination of information material, weather advisory and trainings.
- Checking the logbook and other relevant documents for the data that will be used to

2. Summary of the field visit

3. Day one

After the introductory meeting with the project proponent, visited villages of Fatehpur, Saikhum and Khokhar ki Mallian to meet farmers.

4. Day two

Visited the Community Non formal schools and met with farmers in the villages of Kahtiala Virkan, Dera Barkat, Hadiyala Virkan and Ahdiyan.

5. Day three

Visited the farmers in the villages of 48 Virkaan, Mojo ki Mallian, Hardo Sehol Muslim and Ahdiyan. Visits were followed by ending meeting with project proponent. A few records and documents were seen and photographs were taken.

6. Findings and results

Sr. No.	Indicator	Answer	Remarks
1.	Farm size verification	F-1: Confirmed F-2: Confirmed F-3: Confirmed F-4: Confirmed F-5: Confirmed F-6: Confirmed F-7: Confirmed F-8: Confirmed F-9: Confirmed F-10: Confirmed F-11: Confirmed	All the farmers interviewed had the same farm sizes as mentioned in the excel sheet by RPL. 2 samples were changed at the spot due to unavailability of the farmers.
2.	Were the AWD tubes installed this year?	F-1: Yes F-2: Yes, 1 for every acre F-3: Yes F-4: Yes F-5: Yes F-6: Yes F-7: Yes F-8: Yes F-9: Yes F-10: Yes F-11: Yes	The overall impression from the interviews suggests that AWD tubes had been installed this year and before the intervention, a few of the farmers were already engaged in the laser land levelling for better yields.
3.	Attended any awareness raising sessions on harmful gases from the paddy fields	F-1: Yes, on and off site F-2: Yes, on site F-3: Yes, F-4: Yes F-5: Yes F-6: Yes, on and off site F-7: Yes	Interviews suggest that there were more than 5-6 training sessions on the AWD, crop management and environment had been conducted by the RPL in this year. These were conducted in hotels. Contrarily,

		F-8: Yes F-9: Yes F-10: Yes F-11: Yes	proponent provided the list of the trainings this year which has 11 trainings.
4.	Have you received any training on AWD tubes installation	F-1: Yes, on site F-2: Yes, on site F-3: Yes, on site F-4: Yes, on site F-5: RPL install themselves. F-6: Yes, off site and on site F-7: RPL installs these, though we know how to install. F-8: Yes F-9: RPL installs these, though we know how to install. F-10: RPL installs these, though we know how to install. F-11: Yes	It was found out during the interviews that training sessions on AWD installation and benefits were conducted on and off site. RPL representatives keep on visiting the farms and it was told that they continually check the tubes in their frequent visits in the paddy season.
5.	Have you been receiving the Weather advisory from RPL?	F-1: Yes, regularly F-2: Yes, regularly F-3: Yes F-4: Yes F-5: Yes, regularly F-6: Yes F-7: Yes F-8: Yes F-9: Yes, regularly F-10: Yes, regularly F-11: Yes, regularly	All the farmers said that they receive messages for weather advisory and other instructions for crop production on a regular basis. Messages were seen on their mobile phones.
6.	Have you received any Information, Education, and Communication (IEC) material?	F-1: Don't know but got flyers in training. F-2: Yes F-3: Yes, but have not any right now F-4: (Dint ask him) F-5: Yes F-6: Yes but have not saved them. F-7: Yes F-8: Yes F-9: (Dint ask him) F-10: Yes F-11: Yes	During the training they might have got the IEC and proponents say that IEC material on different topics is provided to the farmers. Though farmers had to look for it and had not got any preserved. The IEC samples were seen in the Proponent's office.
7.	Were Safety kits given to you for Transplantation labor?	F-1: Yes F-2: Yes F-3: Yes F-4: Yes F-5: Yes F-6: Yes F-7: Yes F-8: Yes F-9: Yes	All the farmers did get a safety kit including goggles, shoes, masks and gloves. The safety kits were seen, and pictures taken. However, a few safety kits instruments were almost new and must have been used rarely. Shoes though have been found used a lot.

		F-10: Yes F-11: Yes	
8.	Were the Medical camps for labor set up?	F-1: Yes F-2: Yes F-3: Yes F-4: Yes F-5: Yes F-6: Yes F-7: Yes F-8: Yes F-9: Yes F-10: Yes F-11: Not to his knowledge	All the farmers were on the same page except for F-11 that medical camps during the time of transplantation were setup and free medicines were given to labor and even other locals deserving. (pictures of medical camps taken from the photolog and records of patients treated seen, and pictures taken)
9.	What are the AWD Impacts on yield	F-1: Yield increased, 5 maunds/acre F-2: Yield increased, 8 maunds/acre F-3: Yield increased, 6-7 maunds/acre F-4: Yield increased, 7 maunds/acre F-5: Yield increased, 28 maunds/acre F-6: Yield increased, 9 maunds/acre F-7: Yield increased, 12 maunds/acre F-8: Yield increased, 8 maunds/acre F-9: Yield increased, 6 maunds/acre F-10: Yield increased, 6-7 maunds/acre F-11: Yield increased, 5 maunds/acre	The major advantage that farmers believe they have got after the AWD intervention is the increase in the yield of paddy. Less water also did not let the crop fall and the numbers on the left are the increase in yields that farmers stated they have got.
10.	What are the AWD Impacts on Pesticide use	F-1: 1 spray reduced F-2: 1/2 spray reduced F-3: 1 spray reduced F-4: 1 spray reduced F-5: 1 spray reduced F-6: 1 spray reduced F-7: ½ spray reduced F-8: 1 spray reduced F-9: 1 spray reduced F-10: 1 spray reduced F-11: ½ spray reduced	The overall benefit of pesticide reduction has been stated by the farmers during the interviews. Almost half of the pesticide has been reported to be reduced.
11.	What are the AWD Impacts on DAP use	F-1: 2 sacks reduction F-2: 2 sacks reduction F-3: 1 sacks reduction F-4: 2 sacks reduction F-5: 2 sacks reduction F-6: 2 sacks reduction F-7: 1 sacks reduction F-8: 2 sacks reduction F-9: 2 sacks reduction F-10: 2 sacks reduction F-11: 1 sacks reduction	Previously farmers gave an overall impression that Di-ammonium Phosphate (DAP) usage was 3 to 4 sacks per acre and has now been reduced by almost half.
12.	What are the AWD Impacts on diesel use for	F-1: 12000 PKR diesel saving F-2: Not sure F-3: 15000 F-4: Not calculated	Farmers have witnessed a remarkable reduction in diesel usage. Water is pumped through the Peter pumps and

	water extraction and supply	F-5: 22000 PKR diesel saved F-6: 5-6000 PKR diesel saved F-7: 8000 PKR diesel saved F-8: Not sure F-9: Dint ask or record F-10: 10000 diesel PKR saved F-11: 5000 PKR diesel saved	tubewells and a lot of diesel was consumed for these processes. Now since water requirement has been lessened so in turn diesel costs have also been reduced.
13.	What are the AWD Impacts on water usage	F-1: 25% water reduced F-2: 30-35% water saved F-3: 30-40% water saved F-4: water saved a lot F-5: Not calculated but a lot reduced F-6: 45% water saved F-7: Not questioned F-8: 33% water reduced F-9: 33% water reduced F-10: A lot but not calculated F-11: Not sure how much reduced but certainly reduced	The figures on the left are the percentages derived from the waters that the farmers use for the fields. They usually talk in terms of no. of times water is given to the fields in the entire season. The same has been changed to percentages to reflect the amount of water that the farmers claim to have saved because of the AWD intervention.
14.	Have you saved AWD tubes for reinstallation	F-1: Yes, a few F-2: Yes, a few F-3: Yes, a few F-4: Yes, a few F-5: Yes, a few F-6: Yes, a few F-7: Yes, a few F-8: Yes, a few F-9: Yes, a few F-10: Yes, a few F-11: Yes, a few	A few tubes used during this season in the farmer fields have been saved this year and many have been lost and not managed properly apparently because RPL did not give clear instructions on the preservation of AWD tubes next year. Farmers though want to reinstall the tubes for the next season.
15.	Was there any initiative in place to educate the transplantation labor by RPL?	F-1: Yes, community school F-2: Not sure F-3: Yes F-4: Yes F-5: Not sure F-6: Not sure F-7: Yes F-8: Yes F-9: Not sure F-10: Yes F-11: Yes	Community schools are being supported by RPL. 15 such schools have children of labor class. Moreover, a Community Mother Program is in place that takes all children of the transplantation labor to the program's camp where they provide them education, food and uniforms (just have secondary pictures as no visual information at site related to medical camps and community mother program could be witnessed)
16.	Have you provided equal wages to female workers?	F-1: Head of family receives remuneration, but we talk to them on equal wages. F-2: Can't ensure.	Farmers stated that RPL gave them instructions to ensure equal wages for the male and female workers. They gave an overall impression that

		F-3: Head of family receives remuneration. F-4: Head of family receives remuneration, but we talk with them on equal wages. F-5: Yes F-6: Yes F-7: Yes F-8: Head of family receives remuneration, but we talk with them on equal wages. F-9: We can't ensure though we talk with them. F-10: Head of family is guided by us and RPL representatives on equal wages. F-11: Head of family receives remuneration, but we talk with them on equal wages	although they told the transplantation labor about the equal wages but it usually happens that Head of the family receives the remuneration so they can just make them aware of the equal wages but cannot intervene to certain extent.
17.	Do the children also accompany parents in transplantation activity?	F-1: No F-2: No F-3: No F-4: No F-5: No F-6: No F-7: No F-8: No F-9: No F-10: No F-11: No	As stated earlier, farmers stated that it is ensured by them that children don't come to farms for any labor and are sent to the Community Mother Program where they are kept for the entire day and are provided meals and education and clothes for free.
18.	What do the labor's children do at the time of transplantation?	F-1: Go to community Mother center setup by RPL F-2: Go to community Mother center setup by RPL F-3: Go to community Mother center setup by RPL F-4: Go to community Mother center setup by RPL F-5: Go to community Mother center setup by RPL F-6: Go to community Mother center setup by RPL F-7: We ensure that they are not involved in transplantation activity or any labor on field F-8: Go to community Mother center setup by RPL F-9: Go to community Mother center setup by RPL F-10: Go to community Mother center setup by RPL	Refer to Sr. no. 17

		F-11: Go to community Mother center setup by RPL	
19.	Do you have your RPL's contract copy?	F-1: Yes F-2: Yes F-3: Yes F-4: Yes F-5: Yes F-6: Yes F-7: Yes F-8: Yes F-9: Yes F-10: Yes F-11: Yes	All of the farmers had their contract copies as they stated. Witnessed copies of 3 farmers. All others had to dug out for the same, but they verbally told that they have the contract copies with them.
20.	Any information on the other benefits from AWD installation?	F-1: RPL informed us about benefits to the environment in connection with the gaseous emissions from our fields. F-2: The tubes limit gases from field F-3: No idea F-4: Less humidity from fields and environmental benefits F-5: Benefits to environment and humans F-6: RPL informed us about benefits to the environment in connection with the gaseous emissions from our fields. F-7: Less humidity from our fields F-8: Environmental betterment overall F-9: Not sure F-10: Tubes limit gases from our field F-11: RPL informed us about benefits to environment in connection with the gaseous emissions from our fields	Farmers generally believe that there have been remarkable differences in the humidity level from the paddy fields. They link this directly to the AWD tubes intervention and RPL had also told earlier that AWD would reduce the gases, but the farmers knowledge is limited and do not know about the methane, but they term the difference in gases and humidity from the field and generally believe that when there is less water in the summer in the fields, that ultimately contributes to lesser humidity.
21.	What do you do with stubble?	F-1: We don't burn it now and cut it in the fields where they are absorbed in the soil and in turn limit DAP and fertilizer usage. F-2: Cut it in the fields and don't burn because of section 144 imposed. F-3: We don't burn and cut it in the fields. F-4: Cut it in the fields which act as natural fertilizer. F-5: We don't burn it. F-6: Don't burn and cut it in the fields which limit our DAP usage. F-7: We don't burn it now. F-8: Due to section 144 imposition, we stopped burning it, it causes smog in cities like Lahore.	It was told by project proponent that farmers do not engage in stubble burning now which was not the case earlier. Though government of Punjab had already put section 144 that imposes heavy fines on the stubble burning in wake of the smog issue caused in various cities of Pakistan. Moreover, farmers have been told by RPL that stubble cutting in the field increases soil fertility and hence they cut down the stubble and let it absorb in the field which has reduced their fertilizer use as well.

		F-9: We cut it into our fields which act as fertilizer. F-10: Cut it into the fields. F-11: We don't burn it now. F-8: Due to section 144 imposition and also cut it in our fields which reduces fertilizer consumption	
22.	Has RPL given any advisory on management of stubble?	F-1: Yes F-2: Yes F-3: Yes F-4: Yes F-5: Yes F-6: Yes F-7: Yes F-8: Yes F-9: Yes F-10: Yes F-11: Yes	RPL in their training claims to have imparted this information to farmers and is confirmed by interviews.
23.	In the pre and post AWD tube installation, is there any difference in the humidity from the farms?	F-1: Yes, remarkable F-2: A minor F-3: Yes, remarkable F-4: Yes, remarkable F-5: Yes, remarkable F-6: Yes, remarkable F-7: Yes, remarkable F-8: Yes, remarkable F-9: Yes, remarkable F-10: Little difference F-11: Yes, remarkable	Please refer to Sr. No. 21
24.	Would you use AWD yourself in the absence of RPL?	F-1: Yes, it benefits our crop F-2: Yes, it benefits our crop F-3: Yes, it benefits our crop F-4: Yes, it benefits our crop F-5: Yes, it benefits our crop F-6: Yes, it benefits our crop F-7: Yes, it benefits our crop F-8: Yes, it benefits our crop F-9: Yes, it benefits our crop F-10: Yes, it benefits our crop F-11: Yes, it benefits our crop	As suggested by the answers, farmers themselves want to do the laser levelling and install tubes. They also claim to have been trained by RPL to install tubes and monitor the water levels. Even in the absence of RPL, farmers aspire to install tubes for better production and economic benefits.
25.	Has RPL used any other instrument in addition to AWD tubes?	F-1: Not to my knowledge F-2: No F-3: Not to my knowledge F-4: Not to my knowledge F-5: Not to my knowledge F-6: Not to my knowledge F-7: Not to my knowledge F-8: Not to my knowledge F-9: Not to my knowledge F-10: Not to my knowledge	NO monitoring instrument has yet been used by the proponent for the methane emissions measurement. Project proponents also said the same and farmers confirmed. However, proponent said that they plan to install the instruments for methane measurement.

		F-11: Not to my knowledge	
26.	What are the cropping pattern changes this year?	F-1: AWD tubes installation F-2: AWD tubes installation and laser land levelling F-3: AWD tubes installation F-4: AWD tubes installation F-5: AWD tubes installation F-6: AWD tubes installation F-7: AWD tubes installation and laser land levelling and following instructions of RPL on every stage of paddy F-8: AWD tubes installation F-9: AWD tubes installation and laser land levelling F-10: AWD tubes installation and following RPL instructions at every stage F-11: AWD tubes installation and following RPL instructions at every stage	The farmers said in their interviews that laser land levelling and AWD tube installation has been introduced this time. Previously, although RPL get the product and would usually visit the farms to check the quality and process of the paddy but this time they would be responsible for all installations and have increased their visits to have a check on the AWD tubes and water levels.

Introductory meeting with project proponent

The visit started with the introductory meeting with the project proponent. They gave a detailed presentation on their interventions and various questions were posed to them during the presentation.

In the introductory meeting, proponent was told to come up with specific and measurable impacts against each SDGs. Client showed the contracts and log book having all the data related to the paddy farming including pesticides usage, DAP usage and water record. They were told to come up with the specific references and credible studies related to the paddy in the local atmosphere and topography.

Previous practices of paddy farming

Previously farmers were involved in continuous flooding practices and a few neighbours who are not with RPL are still doing the same practices. A lot of diesel is required to pump the water, big amounts of water have to be continuously employed in the fields. But the benefits of the AWD are enhanced when laser land levelling is done before installation of AWD tubes.

Visit to the community non-formal school

A community non formal school was visited in the Kot Hanif locality on the second day of visit. The school is non formal based in the house of the teacher who is paid by government. RPL takes care of the stationery supplies to the schools. RPL has signed an MOU with government of Punjab for 2 years and vide this MOU, RPL has taken 15 such schools on their panel and are responsible to provide these school with all the stationery. Each school houses and teaches 35-40 children (51 were counted on the visit as these were 2 schools combined at one place/house since teacher and his brother are both the registered teachers and this is a

merged class). It is a multi level class that has representation of community children. The children are well aware of the RPL's representative who keeps on visiting the schools.

Concluding meeting with proponent

In the concluding meeting, proponent was asked if they have any comments, suggestions or questions. They were just not sure about the process what to come next and what would be the timeline of receiving the carbon credits. They were informed of the formal procedure.

Besides that, they were requested to produce the following documents that they did produce:

- 1) Agreements of farmers visited
- 2) Logbooks of the farmers including farmer's information on DAP, pesticide, water usage and various timelines
- 3) Water calculation of 100 farmers
- 4) Medical camps
- 5) Patient records
- 6) IEC material
- 7) Mulcher pictures (that RPL provides to farmers for stubble cutting)
- 8) Community school MoU

Conclusion

The purpose of the site visit was to see the on the ground interventions of the AWD and interview farmers on the AWD and associated benefits. It was also to confirm if the statements made in the PDD are real and being implemented on the ground. It was also to see if the project has put in place adequate community uplift, social and environmental interventions for the betterment of local communities and farmers

It was found that:

More concrete on the ground findings could have achieved if the visit was scheduled around June-July as now the paddy has been cut and wheat has been sown on the same fields. Farmers were happy with the intervention given they received benefits from it and were aware of the benefits of AWD. Farmers were trained to use AWD. They received regular weather advisory and IEC material

RPL sets up medical camps, community mother program at the time of transplantation. Farmers had little knowledge of the impact of intervention on environment but all of them were assertive of some positive impact on environment. Farmers witnessed high yields, lesser bills (because of low diesel usage), water saving, pesticide, DAP and Urea saving. RPL though is engaged with these farmers since 2013 but have introduced AWD this year. Before this, they kept on checking the quality of the produce and were visiting at various stages of paddy. It is understood as RPL has to ensure the quality of the product. No child labor is told to be employed in the fields. Farmers did talk about equal wages for the transplantation labor but can not ensure this aspect as head of the family of transplanters receive the wages. Monitoring mechanism of the methane emission reduction has not been prepared and needs to be developed. It should be ensured that safety kits are actually used and strict implementation of the usage must be ensured.

Further, as the project changed the methodology during the course of validation from CDM methodology 'AMS-III.AU: Methane Emission Reduction by Adjusted Water Management

Practice in Rice Cultivation, version 4.0' to 'GS Methodology for Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation, version 1.0'; and subsequent to project registration with GS, another site visit was performed. The second field visit is for the verification stage and is focused to identify, check and verify the relevant parameters, numbers, socio economic indicators in relation to the SDGs and their impacts. The details of same are as follows:

Date	12/01/2024 to 14/01/2024	
Location	Sheikhupura, Nankana Sahib and Gujranwala of Punjab Province, Pakistan	
Participant	Company Name	Role in the Organization / Role in the Site Visit
Mr. Zafar Iqbal	Rice Partners Ltd. (RPL)	Manager Sustainability
Mr. Mudassar Ahmed	RPL	Project Officer Health
Mr. Shahzad Qamar	RPL	Soil Scientist/Field Officer
Mr. Zahid Imran	RPL	Field Officer
Mr. Abid Ali	Re-Carbon Ltd.	Regional Expert

Furthermore, in line with paragraph 26 of the Sampling and surveys for CDM project activities and programmes of activities CDM sampling standard, version 09, the verification team has applied acceptance sampling approach through on-site interviews as part of verification. Applying paragraphs 30-32 of the sampling standard, version 09, a sample size of 15 farmers was chosen with zero discrepant record. A sample size of 11 was determined, based on an AQL of 0.5% and UQL of 20%; producer risk of 10% and consumer risk of 10 % each in determining the VVB's sample size acceptance number. However, a still larger size of 16 farmers was covered during the on-site and no discrepant record was observed. The following farmers were interviewed:

Sr. No.	Name of Farmer	Village	District / Region	Farm area (acres)
1.	Jahangir Ali	Pindi rattan Singh	Sheikhupura	10
2.	Abdul Rauf	Saran Wala	Sheikhupura	60
3.	Azam Maseh	Khokhar Ki Mallian	Sheikhupura	12
4.	Asghar Ali	Nangal Kaswal	Sheikhupura	20
5.	Muhammad Azeem	Dera Mehran	Sheikhupura	20
6.	Qasim Ali	Dala Wahga	Sheikhupura	10
7.	Zahid Ali	Lado wala	Nankana	100
8.	Atif Ali	Chota Saghinan wala	Nankana	35
9.	Khurram Hayat	Walgan Sohail	Nankana	25
10.	Ghulam Mustafa	Macharala	Nankana	25
11.	Rizwan Ghaffar	Ihata Khushi Ram	Nankana	33
12.	Saddam Hussain (S/O Nazir Ahmed	Mirza Virkan	Sheikhupura	35

13.	Iltaf Hussain	Mukta	Sheikhupura	5
14.	Khalid Mehmood	Kurar	Sheikhupura	45
15.	Sabir Ali	Shamsa Dadda	Sheikhupura	54
16.	Ghulam Murtaza	Mango Ki Virkan	Gujranwala	14

The Regional Expert conducted the site visit from 12th to 14th January 2024 for a 3-day verification visit to observe, check and report on the following;

- Interviews with 16 Farmers in the 16 villages of Districts Sheikhupura, Nankana Sahib and Gujranwala to verify the impact of project on economic, environmental and social welfare of the local population.
- Verification of the AWD equipment installation claims.
- Checking and observing the farming conditions and farm boundaries/watercourses
- On the ground verification of the social welfare initiatives of the proponent.
- On the ground verification of the claims of the proponent regarding the AWD tools and equipment used.
- Checking the originality of the farmers' contracts
- Checking if the HSE considerations are actually taken into account.
- Verifying through the survey and interviews the baseline scenario and trends of cultivation in the project area.
- Assessment of the farmers' knowledge about the environmental benefits of the intervention.
- Verification of the proponent's claims regarding the dissemination of information material, weather advisory and trainings.
- Checking the logbook and other relevant documents for the data

Summary of the field visit

Day one

After the introductory meeting with the project proponent, visited villages of Pindi rattan Singh, Saran Wala, Khokhar Ki Mallian, Nangal Kaswal, Dera Mehran and Dala Wahga to meet farmers.

Day Two

Visited the farmers in the villages of Lado wala, Chota Saghinan wala, Walgan Sohail, Macharala and Ihata Khushi Ram and visited their fields/farms.

Day Three

Visited the farmers in the villages of Mirza Virkan, Mukta, Kurar, Shamsa Dadda and Mango Ki Virkan. Visits were followed by ending meeting with project proponent. A few records and documents were seen and photographs were taken. A few other relevant documents were requested to the client.

Observations and visit's details

Introductory meeting with project proponent

The visit started with the introductory meeting with the project proponent. PD briefed and updated on their interventions. PD also elaborated on the increase in the number of farmers and showed intent that the number of farmers are envisaged to be increased. PD informed about the socio economic interventions that were put in place since the validation time including arranging medical camps for the plantation labor, training of the farmers on sustainable farming methods, health and environmental issues, supporting the local youth and young girls in particular for the skill development.

After the introductory meeting, VVB representative proceeded to villages and farms to meet farmers and witness the condition at farms. The meetings with farmers and on site observations provided the following insights;

Present condition of fields

The rice plantations are done in the early June and AWD tubes are employed in the field 15 days after the plantation. For AWD tubes installation, laser land levelling has to be done. The fields appeared to have gone through laser land levelling. A typical laser land levelling is enough for three years and has to be renewed by almost 3 years. It was winter season so water regime and plantations could not be observed. The traces of the AWD tubes installation and removal were tried to look at but since tubes were removed two months back in early November and its very difficult to locate any traces of AWD tubes installation or removal due to the topographic, landuse and changes over time.



Now is the time when many of the farmers have started cutting down the stubble for various purposes. One major purpose is to enhance the crop fertility because it acts as the natural fertilizer if cut and left in the fields to be absorbed in the land with time. The cut stubble is also used by the farmers to cut it and mix it with cattle fodder. It is also being sold in the market by the farmers now in contrast with the BAU scenario when stubble was burnt down.



PD's operational and management approach

It was informed that the project is led by the team leader who develops a weekly monitoring/visiting plan and is also tasked with verifying the visits conducted by field officers. There are eight field officers working under the project manager. During the field visits, the field officers assess the irrigation process, AWD installation, crop health, and overall crop management. Additionally, they verify social compliance, including child and labor rights. The field officers also provide suggestions and recommendations regarding crop management, irrigation schedule to the farmers. Each field officer is responsible for visiting 28-32 farmers on a weekly basis. Furthermore, each farmer's site is visited 8-10 times during the crop season, which spans from May to October.

AWD tubes (Storage, management, installation and training)

AWD tubes are perforated PVC pipes that are inserted in the farms 15 days after the plantation which is the time of first watering of the rice fields. The tubes are the property of RPL who has given these to the farmers for RPL's carbon project intervention.



On average a tube costs around 700 rupees and PD's SM informed that since the land is laser levelled so one tube serves an area of 5 acre and accordingly almost 13,000 tubes are the property of PD who hands these over to the farmers during the season and takes these back 15 days prior to the cutting. The tubes are taken back to avoid any loss to the asset of the PD. A few of the farmers still had these in their possession though.



Farm boundaries and flow control structures

VVB representative visited the farms and witnessed that plots are separated by the discrete boundaries of each farm that separates it from the neighbouring farm. There are earthen walls (around 1-1.5 feet) that differentiate and serve as the boundaries of each farm. These structures also are meant to avoid any overflow or seepage of water into the neighbouring farms.



Pakistan has one of the largest irrigated agriculture setup in the world. The canals feed the farms with water from various reservoirs through lined and unlined watercourses. These watercourses are made, regulated, checked, monitored and maintained regularly by Agriculture and Irrigation departments of Government. These departments have specified various water quotas for each farm with respect to the water availability. Those who cannot meet their water requirements of the farm and crops have installed diesel, electricity and solar based tubewells that extract underground water and serve the purpose of water requirements by the farmers.

Water overflow and regulation inside farms is a sensitive issue and the breaches at times happen that are handled formally by the relevant departments and a few of the farmers also go to courts for resolution of the grievances in regards to the judicious use of water. It is the government departments who are responsible for governing and regulating the water flow to the specific farms to avoid any grievances. But farmers also take this responsibility themselves to avoid any water overflow, breaches in the boundaries or water theft.

There are a few big watercourses that are developed and maintained by the government; however, farmers also make the “khalas”-earthen/unlined watercourses (water regulation routes inside the farms) and “bunds”-an earthen wall of 1-1.5 feet height (flow control structures), and boundaries themselves for effective and efficient agriculture activities in the farm.

Water regime at farm (BAU and Project)

The interviews revealed that prior to the project intervention (AWD tubes installation), fields remained flooded for months that would lead to the following;

- Higher water consumption
- High fertilizer usage

- High humidity from the fields in the month of July
- High bills of electricity and fuel for generator to extract underground water

After the introduction of AWD tubes in the field, water regime has largely changed and has reduced all of these above. The indicators such as the fertilizer use, farm area, pesticide usage, water usage, electricity bills and yield amounts are communicated by farmers to RPL on season basis. These are recorded in the log book that keeps a record of all the indicators and farm applications. The log book for a few farmers who were interviewed during the visit was looked at to verify the numbers reported in the site visit.

Use of fertilizers (BAU and Project)

The farmers revealed that prior to the project, no specific amount of fertilizer was used, it was used as per the needs of the farm every time. After the project intervention and continuous guidance by RPL employees, farmers are able to reduce the fertilizer cost by 25-30%. The fertilizers of Urea and DAP (Diammonium Phosphate) are used by the local farmers. Now a few of the farmers after receiving some guidance and awareness about the stubble, have started using it as a natural fertilizer too.

Use of Pesticide (BAU and Project)

On average, farmers reported a reduction of 15-20% in the amount of pesticide sprays. They relate it with the water regime change and continuous advisory received from the RPL and their field staff.

Cultivar and impacts in yield (BAU and Project)

Same cultivar was revealed to be used by the farmers in their fields and most of them have been using it since last 7 to 8 years. Farmers reported an increase of 15-20% in the yield (around 10 maunds per acre) since the application of AWD coupled with advisory and instructions received from RPL.

Farmer's income (BAU and Project)

Farmers shared that now that water use is judicious and quite less, fertilizer use has been limited as the usage of sprays for pesticides. In addition to that their yield has increased coupled with benefit in the electricity usage reduction and diesel/gas bill reduction. These things have contributed to their overall increase in income.

Labor conditions

Although at the time of plantation, the visit could not be made so the labor insights are from the project developer and farmers. Farmers gave following insights about the labor;

Labor is involved in the process at the time of plantation and cutting the crop.

In the BAU scenario, children would also accompany the labor parents in the plantation but this practice has now been changed and farmers and the project developers make sure that no child under 18 comes to the farms for any labor

RPL has provided a safety gear and a medical box to the farmers to hand over the necessary PPEs at the time of plantation and sprays

The boxes were observed and photographed



Gender Considerations

The project area is predominantly male dominated and there are no women farm owners and even if there are, their male representatives usually sign the contract with RPL and it cannot be ascertained if any of the 2000 farmers are women farm owners.

Although women usually accompany farmers in their daily chores related to the farm management, maintenance and allied activities but it is males who usually take the lead in these tasks. Women were seen collecting and managing stubble too from the fields. A few of them were cutting the vegetable from farms.



At the time of plantation, entire families of the labourers are engaged in the farm excluding children. Women from these families are throughout engaged in the process. As for the wages, head of the plantation family (usually males) receive the wages and it's difficult to ascertain if the female labor has received equal wages.

For gender empowerment, RPL is supporting a skill development program for young women in the project area. Under this initiative, RPL engages in the skill development for the local women and bears the fee of the skill development courses. Courses like beautician, dress making and computer are arranged for the young local women.



Employee trainings

During the interview with PD field staff, it was informed that RPL trains its staff on crop management and sustainable agricultural practices. They are also trained and made aware on the AWD and its impacts as well as its installation, management and keeping a close coordination with farmers.

Farmers training and advisory

Interviews and relevant records confirmed that RPL held various trainings for farmers on sustainable rice production and carbon footprint reduction in the Paddy fields.



Training of farmers on sustainable rice production



SMS records and interviews also revealed that continuous advisory service is provided to the farmers through sms and Robo calls. Field staff also engages with farmers on their fields on an off season to advise and train them on sustainable farming methods. Seminars are also held to serve the purpose. Interviews suggest that there were more than 3 training sessions on the AWD, crop management and environment had been conducted by the RPL in the year 2023.



Free Medical Camps

It was informed during the interviews that free medical camps were held for the plantation labor in the year 2023. Farmers and labourers were able to get free medicine from these camps.



Free medical camp arranged at the time of plantation



Concluding meeting with Client

After the site visit, concluding meeting was held with Client at the RPL office. Contracts of interviewed farmers were checked to verify the numbers reported during the interviews. The numbers were also compared with Log book numbers. PD informed that they have a complaint box. PD was requested to provide the documents including Farmers signed contracts, farmers training records, logbook, staff training record, sustainability team organogram, SMS records of the advisory services to the farmers, Skill development record and Grievances Committee notification.

3.4. Reporting of Findings via the Verification Protocol

During the verification period, a Verification Protocol (attached as Annex 1 to this verification report) was used to submit the findings to the project developers.

As part of this verification report, please see “**Attachment to Verification Report / GS4GG Audit Techniques Template for Verification**” for details of Audit Techniques used and the related risk assessment.

In line with the CDM Validation and Verification Standard the team reports the non-conformities in the form of Corrective Action Requests (CARs), Clarification Requests (CLs) and Forward Action Requests (FARs). When and for which type of non-conformities CARs, CLs and FARs are issued is explained below:

- The Verification team raises a **CAR** if one of the following occurs:
 - A non-conformity with the monitoring plan or methodology is found in the monitoring and reporting, or if the evidence provided to prove conformity is insufficient.
 - Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions.
 - Issues identified in a FAR during validation to be verified during verification have not been resolved by the project developers.
- The Verification team raises a **CL** if information is insufficient, not transparent, or not clear enough to determine whether the applicable CDM and/or GS4GG requirements have been met.
- The Verification team raises a **FAR** during the verification for actions if the monitoring and reporting require attention and/or adjustment for the next verification period.

According to these principles, a total of 19 CARs, 03 CLs and 00 FARs were issued, all of which are listed in the Verification Protocol.

3.5. Follow-Up Interviews

During the verification period, follow-up interviews were performed by the verification team in order to further analyze the correctness and accurateness of the information provided. A list of individuals interviewed is given in Section 5 of this Verification Report.

3.6. Resolution of Outstanding Issues

During the verification activity, CARs and CLs were issued to clarify the issues that are not sufficiently transparent to reach a positive verification opinion and to approve the achieved GHG emission reductions.

If there are any findings issued as Forward Action Requests (FARs) previously, as indicated in earlier validation and/or verification reports, these are also addressed in this phase.

Outstanding issues indicated in the FARs from earlier reports, and CLs and CARs from this verification activity, were resolved and/ or clarified during the written and oral communications between the Project Developer and Re Carbon Ltd.'s Verification Team Members. These communications are backed up with objective evidence that were sent to the verification team as a proof of compliance. Concerns issued in the desk review, the on-site audit assessments, the follow up interviews and the responses provided for the issued concerns are documented in Annex 1 (Verification Protocol) in order to guarantee the transparency of the verification process.

The verification timeframe is given in detail in Table 3-5 below:

Table 3-5: Verification Timeframe

Activity	Date
Desk review started	26/12/2022
On site assessment	Site visit 1: 21/12/2022 to 23/12/2022 Site visit 2: 12/01/2024 to 14/01/2024
1 st Protocol submission to client and subsequent rounds	24/08/2023 – 05/04/2024
Closure of all CARs and CLs	05/04/2024
Submission for Technical Review	05/04/2024
Submission for final approval	18/04/2024
Final documents submitted to client	24/04/2024
Revision based on GS comments (1 st round)	02/10/2024
Revision based on GS comments (2 nd round)	24/12/2024
Revision based on GS comments (ITR change)	18/08/2025

Information or clarifications provided as a response to a CAR, CL or FAR could also lead to a new request. This can also be seen transparently in the Verification Protocol provided in Annex 1 of this Verification Report.

3.7. Internal Quality Control

As a final step of verification, the final documentation including the verification report and its annexes must undergo an internal quality control in Re Carbon Ltd. This quality control is also referred to as the “Independent Technical Review” process.

The Independent Technical Review is performed by another Team Leader who was not involved in the verification activity of this project activity. Following finalization of the Verification Report by the Team Leader, the draft report is sent to the Independent Technical Reviewer. At this stage not only the report but all the supporting documents, such as emission factor calculations, additionality justifications, relevant excel sheets etc. are being reviewed.

Further CLs and CARs can be issued by the Independent Technical Reviewer during this review to cover all aspects that may need further clarification. After all the CLs and CARs are closed, the verification report is reviewed and approved by the Team Leader, ITR and the Certification Manager. The request for issuance is submitted to the Project Developer in line with the positive verification opinion and along with all relevant documents.

4. VERIFICATION FINDINGS

4.1. Remaining Issues from Previous Validation or Verifications

There were no FARs raised during the validation process nor in the GS design review.

4.2. Compliance of the Project Implementation with the Registered PDD

NetZeroAg has introduced the AWD method to a group of 2,000 farmers covering 24,462 hectares (60,448 acres) primarily in Sheikhpura and neighboring districts Gujranwala 1, Sialkot, and Nankana Sahib of Punjab Province, Pakistan. The project aims to reduce methane emissions associated with conventional farming techniques used to harvest Super Basmati and Basmati-515.

The company, along with its local subsidiary Rice Partners, provided advisory services to participating farmers on seed selection, sowing methods, optimal planting time, efficient use of fertilizers and pesticides, and better agronomy practices. Implementation of AWD was facilitated through site visits, audio calls, informative materials, and SMS services. Additionally, a crop check system was established to guide farmers in eco-friendly rice cultivation, and field officers worked closely with all farmers to ensure the adoption of sustainable farming techniques.

The AWD technique involves a controlled irrigation strategy that can significantly reduce methane emissions, water use, and pumping costs. By withdrawing water from paddy fields mid-season and reapplying it only as needed, the AWD method offers environmental benefits without compromising yield. Studies conducted in 2016 suggest that Pakistan can potentially reduce emissions related to rice cultivation by 48% to 70% by adopting alternate wetting and drying methods.

During the cultivation periods, starting from plant establishment on 22/06/2022 and ending with harvest on 16/11/2022 for the 2022 season, and from 15/06/2023 to 16/11/2023 for the 2023 season. Plant establishment date was determined as per the earliest recorded date in the sampled logbooks, while the harvest date was based on the final date recorded by the same sample group.

The verification team confirms through the site visit inspection and provided evidence that all physical features of the project activity including data collecting systems and storage have been implemented in accordance with the registered PDD.

4.3. Compliance of the Monitoring Plan with the Monitoring Methodology

The monitoring plan is in accordance with the approved GS Methodology for Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation, version 01, applied by the project activity.

The monitoring plan contained in the PDD was reviewed in relation to the monitoring requirements of the applied methodology. In light of the review conducted, it was found that the monitoring plan in the PDD contains all the required parameters to be monitored and description and allows determination of emission reductions according to the PDD and applied methodology.

4.4. Compliance of the Monitoring with the Registered Monitoring Plan

Based on the desk review of the registered VPA-DD and the submitted monitoring report in conjunction with the applied GS Methodology for Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation, Version 1.0, the VVB confirms that the monitoring is in compliance with the monitoring plan contained in the registered VPA-DD.

The monitoring parameters are in line with the applied methodology and include the following:

Parameters fixed ex-ante

The following parameters are determined ex-ante and mentioned in section D.1 of the monitoring report:

Parameter	Unit	Value applied	Means of assessment
GWP_{CH_4}	tCO ₂ e/tCH ₄	28	As per IPCC Fifth Assessment Report
GWP_{N_2O}	tCO ₂ e/tN ₂ O	265	As per IPCC Fifth Assessment Report
$EF_{BL,c}$	kgCH ₄ /ha/day	1.0769	Country specific default value derived from FAO database. Noting that methodology Table 9 provides 'Global, regional and country specific default emission factors', however the value for Pakistan is not cited therein. Acknowledging that Pakistan has higher emission intensity compared to other South Asia countries; India and Bangladesh (https://blogs.worldbank.org/eastasiapacific/greening-rice-we-eat) with irrigation. The project uses FAO database that enables to calculate a country specific value. Area of rice crop (ha) and CH₄ emissions (kt) have been withdrawn from that data source to get kgCH₄ emitted per hectare (indicated as 0.14 tCH₄/ha). This value has been divided to the length of rice season (130 days) to find kgCH₄/ha*day in Pakistan. The derived factor for Pakistan is above the regional value but lower than the global value, hence accepted.
CF_{N_2O}	kg N ₂ O/kg N input	0.00314	As per 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories (IPCC 2019) cited in the methodology
$SF_{BL,w}$	-	1	As per methodology corresponding to water regime during the cultivation period as irrigated and continuously flooded.
$SF_{P,w}$	-	0.55	As per methodology corresponding to water regime during the cultivation period as irrigated and multiple drainage periods.
$SF_{BL,p}$	-	0.89	As per methodology corresponding to water regime prior to rice cultivation period as non-flooded pre-season > 180 days (indicating single cropping).

$SF_{P,p}$	-	0.89	As per methodology corresponding to water regime prior to rice cultivation period as non-flooded pre-season>180 days (indicating single cropping).
$SF_{BL,o}$	-	1.27	As per methodology corresponding to water regime prior to rice cultivation period as non-flooded pre-season>180 days (indicating single cropping) and organic amendments including rice straw incorporation of 2.53 t/ha and farmyard manure of 2.37 t/ha/year.
$SF_{P,o}$	-	1.27	As per methodology corresponding to water regime prior to rice cultivation period as non-flooded pre-season>180 days (indicating single cropping) and organic amendments including rice straw incorporation of 2.53 t/ha and farmyard manure of 2.37 t/ha/year.
<i>Crop Yield in kilograms per hectare and year</i>	<i>kg/ha</i>	<i>3,100</i>	Average yield taken as a benchmark to demonstrate that no penalty in yield is expected by the implementation of the project, towards demonstration of contribution to SDG 2.

The parameters for ex-ante are found to be aligned with the applied methodology, registered PDD and are found to correct, justified and consistent through all documents.

Data/parameters monitored ex-post:

The following parameters are stated to be determined ex-post and mentioned in section D.2 of the monitoring report:

Parameter	Unit	Value applied	Means of assessment
A_y	Ha	2022: 7,082 ha; 2023: 24,462 ha	Land area survey documentation of the project, crosschecked through project database including farmer names and locations and interviews done on site.
L_y	Days/year	2022: 133; 2023: 126	The cultivation period is between 120-140 days in Pakistan. The season days for each vintage has been computed as weighted average of the respective farm area and season days observed of 30 samples to arrive at conservative estimate as against simple average or taking the start and end dates of the season. This approach is deemed acceptable to the VVB.
Water regime-on-season	-	Multiple drainage by applying Alternate Wetting and Drying (AWD) method	Sample farmers logbooks used to check the water regime-on-season, further corroborated with interviews held onsite.
Water regime-pre-season	-	Long drainage (>180d)	The project owner records the information, cross-checked through randomly selected farmers' logbooks for the dates of AWD

			implementation, further corroborated with interviews held onsite.
Organic amendment	kg	Straw-off season (0.07 t/ha) and farmyard manure (2.37 t/ha)	Checked through sample logbooks, further corroborated with interviews with farmers held onsite.
Synthetic fertilizer	Kg	79.07 kgN	Checked through sample logbooks, further corroborated with interviews with farmers held onsite.
Q _{F,i}	Liter	55.35 L/ha	Operational records, further corroborated with interviews with farmers held onsite. 85% and 100% of the land is cultivated by efficient tractors in 2022 and 2023 respectively. Total land accounted are as follows: 2022: 5,991 ha; and 2023: 17,380 ha
Laser levelling applied to the fields	-	-	The fields appeared to have gone through laser land levelling, as observed during site visit and also corroborated with site photographs.
No. Of farmers adopted practices promoted by the project	Number	2022: 700; 2023: 2000	Project database, cross-checked by the farmers agreements and logbooks, further corroborated with interviews with farmers held onsite.

4.5. Completeness of Monitoring

The VVB checked from the Gold Standard website that the prescribed form has been used for preparing the Monitoring Report. The PD has used the Gold Standards for Global Goals latest MR template version 1.1 available on the GS webpage and all the details were filled as per the MR template filing guidelines.

The verification team confirms the compliance of the monitoring report with the latest version of the GS monitoring report template and the instructions therein for filling out the form.

All parameters required by the methodology and Gold Standard are monitored and there are no missing parameters. The VVB confirms that the monitoring is complete in line with the latest version of “Guidelines for Completing the Monitoring Report Form” and the monitoring plan in the registered PDD.

4.6. GS4GG Safeguarding Principles and Requirements

Safeguarding Principles and Requirements are in line with the registered PDD and the final version of the Gold Standard for the Global Goals. For the verification of Safeguarding Principles and Requirements in the current monitoring period, document review, on-site visit observations and on-site interviews with local stakeholders were used.

Compliance check of the Data / Parameter(s) indicated in the Safeguarding Principles Monitoring Plan of the registered PDD has been carried out as described in Table 4-1 below:

Table 4-1: Safeguarding Principles monitoring parameters

No.	Relevant SDG Indicator/ Safeguarding Principle	Chosen Data / Parameter	Way of Monitoring (When)	Compliance Check
1.	SDG 1: No Poverty	Change in farmer income as a result of project	Annual Monitoring Project Survey	Net savings of 5,656 Rs/ha (2022: 5,960 Rs/ha; 2023: 6,368 Rs/ha) checked through logbooks and interview with farmers on site
2.	SDG 2: Zero Hunger	Crop yield in kilograms per hectare and year as result of the project's intervention	Annual Monitoring Project Survey	About 18% increase in yield (2022: 3,624.70 kg/ha/yr; 2023: 3,663.30 kg/ha/yr) checked through logbooks and interview with farmers on site
3.	SDG 3: Good Health and Well-being	Number of farmers avoided open burning of biomass, crop residue	Annual Monitoring Project Survey	2022: 700 farmers; 2023: 2000 farmers shifted from open burning of crop residue, checked through contracts, logbooks and interview with farmers on site
4.	SDG 4: Quality Education	Number of employees provided skill development training	Annual Monitoring Project Survey	19 training sessions on the implementation of AWD method; 11 training sessions for employees, checked through training records and interview with locals on site
5.	SDG 5: Gender Equality	Gender Wage Equity	Annual Monitoring Project Survey	Not included, as could not be ascertained
6.	SDG 6: Clean Water and Sanitation	Number of farmers and others who have applied water management practices as a result of project activity	Annual Monitoring Project Survey	2022: 700 farmers; 2023: 2000 farmers shifted from continuously flooded field to AWD practice in their rice fields, checked through logbooks and interview with farmers on site
7.	SDG 8: Decent Work and Economic Growth	Economic value generated locally via employment	Annual Monitoring Project Survey	11 permanent employees; 7 training sessions on methane reduction programme, checked through interviews with people on site and training records
8.	SDG 12: Responsible Consumption and Production	Average reduction (%) in synthetic fertiliser used per ha	Annual Monitoring Project Survey	35% reduction in fertilizer usage, checked through logbooks and interview with farmers on site

9.	SDG 13: Climate Action	Amount of GHGs emissions avoided or sequestered	Calculated as per the methodology	The contribution towards SDG 13 is computed as per the applied methodology. The project has resulted in the emission reduction of 46,714 tCO₂e during the monitoring period. This has been checked based on desk review and onsite visit for the underlying parameters, as presented in the previous section 4.4 and the calculations thereof checked and confirmed in section 4.8.
10.	Safeguarding Principles Monitoring Principle 9.6 Pesticides & Fertilisers	Proper application of chemical pesticides and herbicides	Annual Monitoring Project Survey	Based on the site visit interviews and records submitted, VVB confirms that farmers were being trained and informed about the responsible quantity of fertilizers to be implemented; and necessary health and safety equipment (PPEs) were being used during the implementation of all chemicals and fertilizers

During the on-site visit by the VVB, the grievance logbook was checked, and it was confirmed that no complaints were registered for the current monitoring period. Additionally, VVB also interviewed the local villagers about their grievance. The complaints registered were resolved by the PD. The stakeholder interviews provide VVB with sufficient confidence that the grievances are taken into consideration and were found as duly resolved for the current monitoring period. There were no stakeholder mitigations that were agreed to be monitored during the current monitoring period. Also, there were no legal disputes during the current monitoring period.

4.7. Compliance with the Calibration Frequency Requirements for Measuring Instruments

N/A.

4.8. Assessment of Data and Calculation of Emission Reductions

VVB confirms that the data used for emission reductions are correct. The parameters fixed ex-ante in the registered VPA-DD and the ex-post monitoring parameters as presented in section 4.4 have been correctly applied. VVB also confirms that the methods and formulae used for calculating the emission reductions are in line with the applied methodology “GS Methodology for Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation, version 01” and the registered PDD.

The project has computed emission reductions using the simplified approach with reference to IPCC default values, however, with slight modifications, as follows:

Note 1: As per the methodology, if IPCC default values are applied, the preference shall be country specific default value, regional default value and global default value, in that order of preference. As country specific value for Pakistan is not provided in the methodology table 9, the next choice would have been the regional value. Acknowledging that Pakistan has higher emission intensity compared to other South Asia countries; India and Bangladesh (<https://blogs.worldbank.org/eastasiapacific/greening-rice-we-eat>) with irrigation, the next choice would have been the use of Global default. However, the project uses FAO database (FAOSTAT: <https://www.fao.org/faostat/en/#data/GR>) that enables to calculate a country specific value. Area of rice crop (ha) and CH₄ emissions (kt) have been withdrawn from that data source to get kgCH₄ emitted per hectare (indicated as 0.14 tCH₄/ha). This value has been divided to the length of rice season (130 days) to find kgCH₄/ha*day in Pakistan. The derived factor for Pakistan is 1.0769 kgCH₄/ha/day above the regional value (at 0.85 kgCH₄/ha/day) but lower than the global value (at 1.19 kgCH₄/ha/day), hence accepted. These numbers have been validated and part of the registered PDD.

The season days for each vintage has been computed as weighted average of the respective farm area and season days observed to arrive at conservative estimate as against simple average or taking the start and end dates of the season. This approach is deemed acceptable to the VVB.

Note 2: For N₂O emissions Equation 7 as per the methodology has been applied, as the fertilizer application rate (79.07 kg N/ha) is lower than the baseline scenario (121 kg N/ha). Among other conclusions from the site visit by the VVB it was also inferred that the farmers witnessed high yields, lesser bills (because of low diesel usage), water saving, pesticide, DAP and Urea saving. Further, as a conservative approach, the N₂O emissions are not multiplied with the uncertainty deduction and rather after computing the emission reductions with application of the 15% default value the N₂O emissions have been further deducted. This is acceptable to the VVB.

Note 3: Furthermore, Quantity of fossil fuel consumed has been accounted for land preparation activities as per clause 3.6.7 of the methodology: "The project emissions shall be estimated based on equipment usage for land preparation, fuel consumption and resulting emissions. Emissions from land preparation will be ascertained during the first year of field operation".

In the registered PDD, CO₂ emissions from land preparation were calculated based on the difference between baseline and project emissions due to a material mistake. This value is now recalculated by PD using actual emissions derived from the land preparation arrived through sample logbooks and diesel consumption per unit area by 40% efficient tractor 60% inefficient tractor usage. The first year land preparation relation CO₂ emissions from fuel usage has been deducted in the ER calculations.

Thus, based on the underlying parameters, checked based on desk review and onsite visit, as presented in the previous section 4.4 and the calculations thereof the project has resulted in emission reductions of 46,714 tCO₂e during the covered monitoring period.

Furthermore, the double counting issue has also been assessed and the verification team has checked the CDM, GS and VCS project database and there is no such registered project in the region.

4.9. Quality of Evidence

According to the VPA-DD the estimated emission reduction for this monitoring period would be 50,408 tCO₂e. However, the project achieved 46,714 tCO₂e in this period.

The vintage break-up of the emission reductions during the current monitoring period was as follows in Table 4-3 below:

Table 4-1: Emission reduction

Period	Emission reductions (tCO ₂ e)
22/06/2022 – 31/12/2022	10,867
01/01/2023 – 16/11/2023	35,847
Total (22/06/2022 – 16/11/2023)	46,714

PD has submitted the underlying emission reduction calculation sheet with the ex-ante and ex-post data and the calculations have been reproduced by VVB.

4.10. Management System and Quality Assurance

Based on a review of records and interviews with PD representatives and the monitoring team, as well as an on-site visit by the regional expert, it is confirmed that the PD has implemented an appropriate management and operational system for monitoring and reporting emission reductions.

Monitoring of cultivation practice by the farmers ensuring high-quality, unbiased and reliable information regarding the performance of the project in terms of implementation and outcomes, and for the purposes of calculating emission reductions following the applied GS methodology is maintained by the PD. A comprehensive record of logbook for each farmer and process books with the following information is backed up electronically along with the original documentation being stored in the appropriate office:

- Farmer details: Name, address, lat-lon coordinates, area among others
- Field recording details: land preparation, plant establishment, fertilizer application, irrigation schedule, pest-weed control, harvest, quality test

Recommendations and trainings are also provided to the farmers based on the logs. This was verified by the sample logbook records and onsite interviews. The organizational structure and monitoring roles and duties are consistent with the situation on the ground, as validated by interviews with PD representatives during the onsite visit. As a result, the verification team affirms that the structure is adequate.

After a series of onsite interviews and desk-based assessment, it was concluded that the PD had an effective plan for management and monitoring and reporting of emission reductions.

During the onsite audit, the implementation and operation of the management system were also checked with the farmers and the information provided was found to be consistent with the information in the database and logbook.

The verification team assessed the management system in place to implement the monitoring of the PA. This included the roles and responsibilities, data collection, transfer and aggregation procedures, data storage and archiving for the monitoring system. The roles and responsibilities

data collection transfer and aggregation procedures, data storage and archiving for the monitoring system have been provided in the monitoring report. The verification team confirms that the monitoring management system of the PDD is in place with the responsibilities properly identified and established as per the design documents.

4.11. Materiality

Level of materiality is ensured by application of “Guideline on the Application of Materiality in Verifications” version 02. As the project is a small-scale project activity achieving total emission reductions of <60,000 tCO₂e per year; as such, a 5 per cent materiality threshold is applied.

The emission reduction calculation sheet and the farmer list have been reviewed in detail by the assessment team. Each step for the calculation has been thoroughly checked to confirm the final numbers as well as the steps involved both computationally as well as, in accordance with the methodological requirement.

The emission reductions are a function of project area and cultivation period (season days), fertilizer application and other fixed factors.

Along the audit trail the VVB has checked the total area and season days and has been observed some discrepancy based on desk review of farmer list. The VVB has pointed out these to the PD and corresponding corrections have been carried out by the PD. After having confirmed that the PD has corrected the identified errors, and having determined that there is no risk of material errors within the data set, the VVB determines that further sampling is not needed.

All errors were individual errors and no extrapolation of errors in the final calculation of ERs was required. The verification team confirms that the final ERs are free from material errors with a reasonable level of assurance.

4.12. Verification of Sampling Plan

There is no sampling involved, except for the samples considered for arriving at the season days, number of irrigation events, fertilizer application, average yield among other such parameters is derived from the sampled logbooks. Herein 30 random samples have been considered for each vintage, by the PD as the parameter of interest is a proportion. This is deemed acceptable to the VVB.

Further, in line with paragraph 26 of the Sampling and surveys for CDM project activities and programmes of activities CDM sampling standard, version 09, the verification team has applied acceptance sampling approach through on-site interviews as part of verification. Applying paragraphs 30-32 of the sampling standard, version 09, a sample size of 15 farmers was chosen with zero discrepant record. A sample size of 11 was determined, based on an AQL of 0.5% and UQL of 20%; producer risk of 10% and consumer risk of 10 % each in determining the VVB’s sample size acceptance number. However, a still larger size of 16 farmers was covered during the on-site and no discrepant record was observed.

4.13. Post Registration Changes

4.13.1. Temporary deviations

The contribution to SDG 5 is temporarily excluded from the monitoring plan. This is based on the following observations from the VVB during the site visit:

The project area is predominantly male dominated and there are no women farm owners and even if there are, their male representatives usually sign the contract with RPL, and it cannot be ascertained if any of the 2000 farmers are women farm owners.

Although women usually accompany farmers in their daily chores related to the farm management, maintenance and allied activities but it is males who usually take the lead in these tasks. Women were seen collecting and managing stubble too from the fields. A few of them were cutting vegetables from farms.

At the time of plantation, entire families of the laborers are engaged in the farm excluding children. Women from these families are throughout engaged in the process. As for the wages, head of the plantation family (usually males) receive the wages and it's difficult to ascertain if the female labor has received equal wages.

Although, for gender empowerment, RPL is supporting a skill development program for young women in the project area. Under this initiative, RPL engages in the skill development for the local women and bears the fee of the skill development courses. Courses like beautician, dress making, and computer are arranged for the young local women.

4.13.2. Corrections

The earliest date of land preparation has been recorded as 11/05/2022 from the sampled logbooks. Therefore, the project start date is revised from 02/05/2022 to 11/05/2022.

In the registered PDD, CO₂ emissions from land preparation were calculated based on the difference between baseline and project emissions due to a material mistake. This value is now recalculated using fuel usage for land preparation as project emissions in the ER calculations.

4.13.3. Changes to the start date of the crediting period

N/A.

4.13.4. Permanent changes

As per CL-02 raised during the GS design review, the verifying VVB shall verify every 3 years the renewed laser land levelling of the project area. The PD has already included this as a monitoring parameter in section B.7 of the PDD.

Based on the second site visit conducted by the VVB, the following can be confirmed:

The rice plantations are done in the early June and AWD tubes are employed in the field 15 days after the plantation. For AWD tubes installation, laser land levelling has to be done. The fields appeared to have gone through laser land levelling. A typical laser land levelling is enough for three years and has to be renewed by almost 3 years.

4.13.5. Changes to the project design

N/A.

5. LIST OF INDIVIDUALS INTERVIEWED

The list of individuals who were interviewed during the verification period is given in Table 5-1 below:

Table 5-1: List of individuals interviewed

Reference Number	Means of Interview ⁵	Full Name	Title	Organization
I01	SV	Zafar Iqbal	Manager Sustainability	Rice Partners Ltd. (RPL)
I02	SV	M. Ali Tariq	CEO	RPL
I03	SV	Riaz Ahmed Mann	Technical Advisor	RPL
I04	SV	Amjad Iqbal Khattak	Plant Manager	RPL
I05	SV	Rizwan Ali	Human Rights Officer	RPL
I06	SV	Mudassar Ahmed	Project Officer Health	RPL
I07	SV	Shahzad Qamar	Soil Scientist/Field Officer	RPL
I08	SV	Zahid Imran	Field Officer	RPL
I09	SV	Shahid Rasool	Farmer	Project beneficiary
I10	SV	Mukhtar Hussain	Farmer	Project beneficiary
I11	SV	Sajjad Ahmed	Farmer	Project beneficiary
I12	SV	Muhammad Farooq	Farmer	Project beneficiary
I13	SV	Muhammad Irshad	Farmer	Project beneficiary
I14	SV	Rana Muhammad Zubair	Farmer	Project beneficiary
I15	SV	Shahbaz Dhillon	Farmer	Project beneficiary
I16	SV	Mudassar Nawaz	Farmer	Project beneficiary
I17	SV	Shahbaz Ahmed	Farmer	Project beneficiary
I18	SV	Waseem Akhtar	Farmer	Project beneficiary
I19	SV	Imran Shoukat	Farmer	Project beneficiary
I20	SV	Jahangir Ali	Farmer	Project beneficiary
I21	SV	Abdul Rauf	Farmer	Project beneficiary
I22	SV	Azam Maseh	Farmer	Project beneficiary
I23	SV	Asghar Ali	Farmer	Project beneficiary
I24	SV	Muhammad Azeem	Farmer	Project beneficiary
I25	SV	Qasim Ali	Farmer	Project beneficiary

⁵ SV: Site visit; T: Telephone; E: E-mail

Reference Number	Means of Interview ⁵	Full Name	Title	Organization
I26	SV	Zahid Ali	Farmer	Project beneficiary
I27	SV	Atif Ali	Farmer	Project beneficiary
I28	SV	Khurram Hayat	Farmer	Project beneficiary
I29	SV	Ghulam Mustafa	Farmer	Project beneficiary
I30	SV	Rizwan Ghaffar	Farmer	Project beneficiary
I31	SV	Saddam Hussain (S/O Nazir Ahmed	Farmer	Project beneficiary
I32	SV	Iltaf Hussain	Farmer	Project beneficiary
I33	SV	Khalid Mehmood	Farmer	Project beneficiary
I34	SV	Sabir Ali	Farmer	Project beneficiary
I35	SV	Ghulam Murtaza	Farmer	Project beneficiary

6. LIST OF DOCUMENTS REVIEWED

The list of the documents which were reviewed during the verification period is given in Table 6-1 below:

Table 6-1: List of documents reviewed

Document Number	Document Name	Version	Date (dd/mm/yyyy)
D01	PDD (GS11709)	5.5	25/12/2023
D02	ER Calculation Excel Sheet submitted for registration for GS11709	-	-
D03	MR	1.0	06/12/2022
		2.0	27/02/2023
		3.0	25/12/2023
		3.0	16/02/2024
		3.1	28/02/2024
		3.2	20/03/2024
		3.3	17/04/2024
		3.4	18/09/2024
		3.5	05/12/2024
		3.6	03/04/2025
D04	ER Calculation Excel Sheet	1	26/12/2022
		3	24/08/2023
		3	25/12/2023
		3	28/02/2024
		3.1	07/03/2024
		3.2	04/04/2024
		3.3	17/04/2024
		3.4	05/12/2024
D05	Sample Agreement with Farmers	-	10/06/2022
D06	AWD pictures.pdf	-	-
D07	GS11709_SDG-Impact-Tool.xlsx		
D08	fact-sheet-Pakistan-Agriculture-sector.pdf		
D09	Basmati_Rice_Cluster_Report.pdf	-	-
D10	GS11709_SDG-Impact-tool_v2.xlsx	02.0	-
D11	Pakistan Country Report- Scoping Study.pdf	-	-
D12	AMS-III.AU.: Methane emission reduction by adjusted water management practice in rice cultivation --- Version 4.0	04.0	28/11/2014

Document Number	Document Name	Version	Date (dd/mm/yyyy)
D13	GS Methodology for Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation	1.0	06/07/2023
D14	CDM Validation and Verification Standard for Project Activities	3.0	09/09/2021
D15	CDM Project Standard for Project Activities	3.0	09/09/2021
D16	Gold Standard for Global Goals	1.2	-
D17	Sector specific Climate Change Gender Action Plan_2022_Final.pdf	-	-
D18	2022_Pakistan Country Report Climate Smart Rice_CCAC.pdf	-	-
D19	Final-NZA-Farmers-Pak (2).xlsx	-	-
D20	Map Corners GPS (1).csv	-	-
D21	Pakistan Rice MRV Report.pdf	-	-
D22	CAR7-Logbook scanned	-	-
D23	CAR9_Crop Check Program	-	-
D24	CAR9_Pesticides Program	-	-
D25	CL3_Process book and its translation	-	-
D26	Community Mother Program	-	-
D27	Farmer Training record	-	-
D28	Laser levelling evidence	-	-
D29	Medical camps	-	-
D30	NFBE and Youth HR Days	-	-
D31	Pesticides Program of RPL's 2022	-	-
D32	RPL- Farmer Training Manual	-	-
D33	Skill Development Program	-	-
D34	Log Books_2022	-	-
D35	Logbooks 2023	-	-
D36	List NZA farmer 2k_2023	-	-
D37	CAR11_All NZA farmer 2022_2023	-	-
D38	All NZA farmer 2022_2023_Land Registry records	-	-
D40	Parcels_Farmers_1-700(B1)_UTM43N	-	-
D41	Parcels_Farmers_701_2000(B2)_UTM43N	-	-
D42	GS Final_Val Report_962 Punjab Rice_Sandeep Kanda_v03_29-01-2024.pdf	03	29/01/2024

7. VERIFICATION TEAM AND ITR COMPETENCE

Mr. Sandeep Kanda holds a Bachelor's degree in "Mechanical Engineering", a Master's degree in "Energy Systems Engineering" from the Indian Institute of Technology/Bombay and a Post Graduate Diploma in "Industrial Safety & Environmental Management" from the National Institute of Industrial Engineering in India. He has over 20 years of professional experience working in the area of energy and environmental management, capacity building, climate change adaptation and mitigation activities, sustainability, auditing and product development. Sandeep has been involved in various capacities in the development and impact assessment of more than 500 climate change mitigation projects and programmatic activities worldwide, covering a range of sectoral scopes, such as Energy industries (renewable-/non-renewable), Energy distribution, Energy demand, Manufacturing industries, Chemical industries, Transport, Metal production, Waste handling & disposal and Agriculture. With re-carbon, Sandeep is a free-lance Team Leader, ITR and a Project-Level Group 1, 5 and 6 Expert. Sandeep is also a Regional Expert for China, India, Indonesia, Mexico, Nepal, Philippines, Tanzania, Thailand, Türkiye and Vietnam.

Mr. Abid Ali holds B.Sc. degree in "Environmental Sciences" and a M.Phil. degree in "Environmental Science and Policy". With re-carbon, Abid is a free-lance Regional Expert for Pakistan.

Mr. Rohit Badaya holds a Master's degree in "Nanotechnology" and a Bachelor's degree in "Pulp and Paper Engineering" from the Indian Institute of Technology Roorkee (IIT Roorkee). He is also an Energy Auditor, certified by the Bureau of Energy Efficiency, Ministry of Power, Govt. of India. Rohit has more than 14 years of work experience in the area of Climate Change (CDM, GS, VCS, GCC) and has worked for various DOEs/VVBs in the capacity of Team Leader, Validator/Verifier, Technical Expert, ITR, Manager (Technical & Certification) and Quality Manager. Within the context of CDM/GS/VCS/GCC, Rohit has a record of accomplishment of more than 200 projects as Team Leader, Validator, Verifier, Technical Expert and Technical Reviewer. He is well versed with various local regulations related to CDM/GS/VCS/ GCC projects, located in countries in Asia, Africa, Middle East, Asia Pacific as well as in Türkiye. With re-carbon, Rohit is a free-lance Team Leader, ITR and an expert in Project-Level Group 1 - GHG Project Types: Renewable Energy Production & Energy Efficiency Improvements // Project-Level Group 5 - GHG Project Types: Methane collection & destruction as well as Livestock and other anaerobic digester operations // Project-Level Group 6 - GHG Project Types: Capture & destruction of Landfill gas & Capture & use of Landfill gas & Avoidance of methane production in wastewater treatment. Rohit is also a Regional Expert for Bhutan, Brazil, Cambodia, Chile, Democratic Republic of Congo, Egypt, El Salvador, Ethiopia, The Gambia, India, Indonesia, Iran, Kenya, Madagascar, Malawi, Mauritius, Mexico, Morocco, Myanmar, Nepal, Nicaragua, Nigeria, Papua New Guinea (PNG), Republic of Madagascar, Senegal, South Africa, Sri Lanka, Thailand, Türkiye, Uganda, Vietnam and Zambia.

Mrs. Fikriye Seda Atabek holds B.Sc. degree in "Chemical Engineering" and a M.Sc. degree in "Energy Science and Technology". She is a lead auditor and trainer for ISO 50001 and has been working in the fields of "Management systems", "ISO 14064" and "Energy Management in Industry" since 2004. Seda has been involved in more than 100 GS and VCS

projects as an ITR, Team Leader, Validator and Verifier. With re-carbon, Seda is a free-lance Team Leader, ITR and a “Project-Level Group 1 - GHG Project Types: Renewable Energy Production and Energy Efficiency Improvements” Expert. Seda is also a Regional Expert for Türkiye.

Dr. Abdulkadir Bektaş holds a PhD degree in “Energy Systems Engineering” and is a UNFCCC appointed “Agriculture Expert”. With re-carbon, Abdulkadir is a free-lance Agriculture Expert. Abdulkadir is also a Regional Expert for Türkiye, Czechia, Portugal, Australia, Hungary, Denmark.

7.1. Appointment Certificates

CERTIFICATE OF APPOINTMENT



Within the scope and in strict accordance to the appointments indicated below, the bearer may:

- Participate in assessments conducted by re-carbon Ltd.
- Take the appointed positions within and outside of an assessment team
- Bring specific expertise to assessments

This Certificate of Appointment is valid unless there are changes in the related requirements for the qualification and appointment and/or the person's work agreement is terminated. There is no defined validity period for this Certificate. However, The Certificate may be updated, suspended or cancelled at any time, as a result of performance assessments and/or other reasons as defined above.

This Appointment Certificate is granted on the date of **01.08.2022** by:



Christian Johannes
(General Manager)

This Certificate of Appointment is given to

Mr. Sandeep Kanda

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:



Gold Standard
 Climate Security & Sustainable Development



SECTORIAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy industries	TA 1.1: Thermal energy generation	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022
	TA 1.2: Renewables	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022
SS 02: Energy distribution	TA 2.1: Energy distribution	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022
SS 03: Energy demand	TA 3.1: Energy demand	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022
SS 12: Waste handling and disposal	TA 12.1: Solid waste and wastewater	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022
	TA 12.2: Manure	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022
SS 15: Agriculture	TA 15.1: Agriculture	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022



ICR International Carbon Registry

BioCarbon Registry

SECTORIAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy industries	TA 1.1: Thermal energy generation	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022										
	TA 1.2: Renewables	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022										
SS 02: Energy distribution	TA 2.1: Energy distribution	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022										
SS 03: Energy demand	TA 3.1: Energy demand	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022										
SS 12: Waste handling and disposal	TA 12.1: Solid waste and wastewater	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022										
	TA 12.2: Manure	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022										
SS 15: Agriculture	TA 15.1: Agriculture	01.01.2022	01.01.2022	01.01.2022	01.01.2022	01.01.2022										

COUNTRY EXPERTISE:

China, India, Indonesia, Mexico, Nepal, Philippines, Tanzania, Thailand, Türkiye, Vietnam

CERTIFICATE OF APPOINTMENT



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- Bring specific expertise to assessments

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This Appointment Certificate is granted on the date of **20.10.2022** by:



Christian Johannes
(General Manager)

This Certificate of Appointment is given to

Abid Ali

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:



Gold Standard
Climate Security & Sustainable Development



SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy Industries	TA 1.1 Thermal energy generation															
	TA 1.2 Bio-waste															
SS 02: Energy distribution	TA 2.1 Energy distribution															
SS 03: Energy demand	TA 3.1 Energy demand															
SS 10: Waste handling and disposal	TA 10.1 Solid waste and wastewater															
	TA 10.2 Manure															
SS 15: Agriculture	TA 15.1 Agriculture															



ICR International Carbon Registry

BioCarbon Registry

SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy Industries	TA 1.1 Thermal energy generation															
	TA 1.2 Bio-waste															
SS 02: Energy distribution	TA 2.1 Energy distribution															
SS 03: Energy demand	TA 3.1 Energy demand															
SS 10: Waste handling and disposal	TA 10.1 Solid waste and wastewater															
	TA 10.2 Manure															
SS 15: Agriculture	TA 15.1 Agriculture															

COUNTRY EXPERTISE:

Pakistan for all schemes listed above in this certificate

CERTIFICATE OF APPOINTMENT



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This Appointment Certificate is granted on the date of **01.08.2022** by:



Christian Johannes
(General Manager)

This Certificate of Appointment is given to

Mr. Rohit Badaya

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:



Gold Standard
Climate Security & Sustainable Development



SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy Industries	TA 1.1: Thermal energy generation	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021
	TA 1.2: Renewables	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021
SS 02: Energy distribution	TA 2.1: Energy distribution	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021
SS 03: Energy demand	TA 3.1: Energy demand	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021
SS 10: Waste handling and disposal	TA 10.1: Solid waste and wastewater	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021
	TA 10.2: Manure	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021	26.10.2021
SS 15: Agriculture	TA 15.1: Agriculture															



ICR International Carbon Registry

BioCarbon Registry

SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy Industries	TA 1.1: Thermal energy generation	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022										
	TA 1.2: Renewables	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022										
SS 02: Energy distribution	TA 2.1: Energy distribution	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022										
SS 03: Energy demand	TA 3.1: Energy demand	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022										
SS 10: Waste handling and disposal	TA 10.1: Solid waste and wastewater	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022										
	TA 10.2: Manure	07.07.2022	07.07.2022	07.07.2022	07.07.2022	07.07.2022										
SS 15: Agriculture	TA 15.1: Agriculture															

COUNTRY EXPERTISE:

India and Turkey

CERTIFICATE OF APPOINTMENT



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This Appointment Certificate is granted on the date of **01.07.2025** by

Christian Johannes
(General Manager)

Gold Standard
Climate Security & Sustainable Development

Verified Carbon Standard
A VERBA STANDARD

CERCARBONO
Certified Carbon Standard

PROJECT LEVEL GROUP	GHG PROJECT TYPE EXPERTISE	APPOINTMENT DATE (MONTH AND YEAR)	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
1	Renewable Energy Production	2.2	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022
1	Energy Efficiency Improvements	2.2	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022	08.02.2022
6	Methane Collection & destruction	2.2															
6	Livestock & other anaerobic digester operations	2.2															
6	Agricultural methane emission reduction	2.2															
6	Agricultural carbon emission reduction	2.2															
6	Capture & destruction of landfill gas	2.2															
6	Capture & use of landfill gas	2.2															
6	Avoidance of methane production in wastewater treatment	2.2															
SDS Criteria:																	

ICR | International Carbon Registry

BioCarbon Registry



PROJECT LEVEL GROUP	GHG PROJECT TYPE EXPERTISE	APPOINTMENT DATE (MONTH AND YEAR)	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
1	Renewable Energy Production	3.2	01.10.2024	01.10.2024	01.10.2024	01.10.2024	08.02.2022					08.02.2022	01.07.2025	01.07.2025	01.07.2025	01.07.2025	01.07.2025
1	Energy Efficiency Improvements	3.2	01.10.2024	01.10.2024	01.10.2024	01.10.2024	08.02.2022					08.02.2022	01.07.2025	01.07.2025	01.07.2025	01.07.2025	01.07.2025
6	Methane Collection & destruction	3.2															
6	Livestock & other anaerobic digester operations	3.2															
6	Agricultural methane emission reduction	3.2															
6	Agricultural carbon emission reduction	3.2															
6	Capture & destruction of landfill gas	3.2															
6	Capture & use of landfill gas	3.2															
6	Avoidance of methane production in wastewater treatment	3.2															
SDS Criteria:																	
COUNTRY EXPERTISE:			Türkiye														

F-C-044 / 01.07.2025 - 03

CERTIFICATE OF APPOINTMENT



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This Appointment Certificate is granted on the date of **01.08.2022** by:



Christian Johannes
(General Manager)

This Certificate of Appointment is given to

Dr. Abdulkadir Bektaş

as a confirmation of compliance with re-carbon's internal qualification requirements for the following positions:



Gold Standard
Climate Security & Sustainable Development



SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy industries	TA 1.1: Thermal energy generation															
	TA 1.2: Bio-waste															
SS 02: Energy distribution	TA 2.1: Energy distribution															
	TA 2.2: Energy distribution															
SS 03: Energy demand	TA 3.1: Energy demand															
	TA 3.2: Energy demand															
SS 10: Waste handling and disposal	TA 10.1: Solid waste and wastewater															
	TA 10.2: Manure															
SS 15: Agriculture	TA 15.1: Agriculture					01.08.2022					01.08.2022					01.08.2022



ICR International
Carbon
Registry

BioCarbon
Registry

SECTORAL SCOPE	TECHNICAL AREA	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT	VERIFIER	VALIDATOR	TEAM LEADER	ITR	EXPERT
SS 01: Energy industries	TA 1.1: Thermal energy generation															
	TA 1.2: Bio-waste															
SS 02: Energy distribution	TA 2.1: Energy distribution															
	TA 2.2: Energy distribution															
SS 03: Energy demand	TA 3.1: Energy demand															
	TA 3.2: Energy demand															
SS 10: Waste handling and disposal	TA 10.1: Solid waste and wastewater															
	TA 10.2: Manure															
SS 15: Agriculture	TA 15.1: Agriculture															

COUNTRY EXPERTISE:

Austria, Czechia, Denmark, Hungary, Portugal, Türkiye

8. VERIFICATION AND CERTIFICATION OPINION

Re Carbon Ltd. performed the 1st periodic verification of Gold Standard “Methane Reduction from Rice Cultivation in Punjab Pakistan”, a project with the registry reference number “GS11709” for the period in between 22/06/2022 and 16/11/2023. The scope of our activities covers the verification and the certification of GHG emissions reductions, as reported in the Monitoring Report Version 3.6 dated 03/04/2025 of “Methane Reduction from Rice Cultivation in Punjab Pakistan”.

NetZeroAg Ltd. is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions of the project on the basis set out within the project Monitoring Plan as indicated in the final PDD. The development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of GHG emission reductions from the project are under the responsibility of the management of the Project. The development and maintenance of the records and the related monitoring procedures are in accordance with Monitoring Report Version 3.6.

The verification was performed by a verification team consisting of “Sandeep Kanda as the team leader, Abid Ali as the regional expert, Seda Atabek as the ITR and Abdulkadir Bektaş as the TA 15.1 (ITR) Expert.”, and the project activity was checked against the applicable rules and regulations of CDM including Section I of CDM Modalities and Procedures, the relevant guidance and decisions of the COP/MOP, CDM EB and CDM Validation and Verification Standard for project activities version 3.0, CDM Project Standard for project activities version 3.0, GS4GG version 1.2 and other relevant GS4GG requirements.

Re Carbon Ltd. hereby confirm that the project activity “Methane Reduction from Rice Cultivation in Punjab Pakistan” in Pakistan, was implemented in accordance with the validated and registered PDD version 5.5, dated 25/12/2023. The monitoring system is in place and the emission reductions were calculated without material misstatements as per the applied approved methodology for Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation, Version 1.0.

Re Carbon Ltd. confirms the following, based on the results of the document review and the on-site by local expert and remote by team leader assessment:

Project Title	Methane Reduction from Rice Cultivation in Punjab Pakistan
Applicable Period	22/06/2022- 16/11/2023 (Inclusive of both dates)
Emission Reductions	46,714 tCO ₂ e 22/06/2022 – 31/12/2022: 10,867 tCO ₂ e; 01/01/2023 – 16/11/2023: 35,847 tCO ₂ e



Sandeep KANDA
Team Leader
18/08/2025



Seda ATABEK
ITR
18/08/2025



Esin TUNALI
Certification Manager
18/08/2025

ANNEX 1: VERIFICATION PROTOCOL

Table 1 –GS-Monitoring Report (MR)-FORM, GS4GG and CDM Verification Requirements

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
Cover Page					
1. Has the following information been provided on the cover page of the MR?	GS4GG-MR-FORM version 1.1				
1.1. Gold Standard project ID;	GS4GG-MR-FORM version 1.1	DR	Yes, indicated as 11709	OK	OK
1.2. Title of the project;	GS4GG-MR-FORM version 1.1	DR	Yes, indicated as 'Methane Reduction from Rice Cultivation in Punjab Pakistan'	OK	OK
1.3. Version number of PDD applicable to this monitoring report;	GS4GG-MR-FORM version 1.1	DR	This is available as "3.0"	OK	OK
1.4. Version number of the monitoring report;	GS4GG-MR-FORM version 1.1	DR	This is available as "1.0"	OK	OK
1.5. Completion date of the monitoring report (DD/MM/YYYY);	GS4GG-MR-FORM version 1.1	DR	This is available as "06/12/2022"	OK	OK
1.6. Date of the project design certification (DD/MM/YYYY);	GS4GG-MR-FORM version 1.1	DR	Please insert the date of project design certification and also update the version number of the PDD too.	CAR-1	OK
1.7. Date of last annual report;	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK

* CAR= Corrective Action Request, FAR= Forward Action Request, CL= Clarification Request

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
1.8. Monitoring period number;	GS4GG-MR-FORM version 1.1	DR	This is available as “1”	OK	OK
1.9. Duration of this monitoring period (DD/MM/YYYY– DD/MM/YYYY);	GS4GG-MR-FORM version 1.1	DR	This is available as “22/06/2022- 16/11/2022”	OK	OK
1.10. Project representative(s);	GS4GG-MR-FORM version 1.1	DR	Ceres Enve	OK	OK
1.11. Host country;	GS4GG-MR-FORM version 1.1	DR	Pakistan	OK	OK
1.12. Activity requirements applied;	GS4GG-MR-FORM version 1.1	DR	Land Use and Forestry Activities/Risks & Capacities	OK	OK
1.13. Methodology (ies) applied and version number;	GS4GG-MR-FORM version 1.1	DR	AMS-III.AU: Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation (version 4.0)	OK	OK
1.14. Product requirements applied;	GS4GG-MR-FORM version 1.1	DR	GHG Emissions Reduction & Sequestration	OK	OK
2. Has the achieved sustainable development contributions been summarized in Table-1 using the relevant tabular format provided?	GS4GG-MR-FORM version 1.1	DR	The SDG contribution stated should correspond to the net accounting for the baseline values too.	CAR-2	OK
3. Has the product vintages been included in Table-2 using the relevant tabular format provided?	GS4GG-MR-FORM version 1.1	DR	Refer to CAR above	CAR-2	OK
A. Description of project					

* CAR= Corrective Action Request, FAR= Forward Action Request, CL= Clarification Request

Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
A.1. General description of project					
A.1.1. Has a brief summary of the detailed description given in the section B.1 provided under section A.1 of the MR?	GS4GG-MR-FORM version 1.1	DR	Yes.	OK	OK
A.1.2. Has the purpose of the project and the measures taken to reduce greenhouse gas emissions been provided under section A.1 of the MR?	GS4GG-MR-FORM version 1.1	DR	Section A1 clearly defines the purpose of the project and the measures taken to reduce greenhouse gas emissions.	OK	OK
A.1.3. Has a brief description of the installed technology and equipment been provided under section A.1 of the MR?	GS4GG-MR-FORM version 1.1	DR	In Section A1 of the MR, please include a brief description of the project, including the meaning of the abbreviation AWD.	CAR-3	OK
A.1.4. Has the relevant dates for the project activity (e.g. construction, commissioning, continued operation periods, etc.) been provided under section A.1 of the MR?	GS4GG-MR-FORM version 1.1	DR	This is provided as “plant establishment on 22/06/2022 and ending with the harvest on 16/11/2022.” Please submit evidence for the same.	CL-1	OK
A.2. Location of project					
A.2.1. Has complete information on the location of the project activity, including town, city, country, map and GPS coordinates been provided under section A.2 of the MR?	GS4GG-MR-FORM version 1.1	DR	The location of the project activity is indicated clearly in Section A.2.	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
A.3. Reference of applied methodology					
A.3.1. Has a complete reference of the methodology, referred tools and standardized baselines, if applicable, applied been provided under section A.3 including the version numbers and titles?	GS4GG-MR-FORM version 1.1	DR	The applied methodology and the relevant tools are available in Section A.3.	OK	
A.4. Crediting period of project					
A.4.1. Has the crediting period including the crediting period start and end dates, choice and length of the crediting period been provided under section A.4 of the MR?	GS4GG-MR-FORM version 1.1	DR	The crediting period is stated as “10 years (22/06/2022-21/06/2032)”	OK	OK
B. Implementation of project					
B.1. Description of implemented project					
1. Has the installed technology(ies), technical process and equipment, including the diagrams, where appropriate, been included in section B.1 of the MR?	GS4GG-MR-FORM version 1.1 CDM project standard for project	DR	The details of the project technical process and equipment, along with the diagrams are clearly indicated in Section B1.	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
	activities §256a				
2. Has the information on the implementation and actual operation of the project activity (including relevant dates, construction, commissioning, continued operation periods etc.) been provided under section B.1 of the MR?	CDM project standard for project activities §256b	DR	Please provide the dates when the pipes were commissioned, and operation started for each site and the coverage of the 700 farmers.	CAR-4	OK
3. If the project activity consists of more than one site, has the status of implementation and starting date of operation for each site been clearly described under section B.1 of the MR?	CDM project standard for project activities §256b	DR	Please refer to B.1.2	CAR-4	OK
4. If the implementation of the project planned to be realized in different phases, has the progress of the proposed GS project achieved in each phase been indicated under section B.1 of the MR?	CDM project standard for project activities §256b	DR	N/A	OK	OK
5. Do the actual project and its operation comply with the registered PDD?	CDM validation and verification standard for project activities §354a	DR	The implementation is in line with the registered PDD.	OK	OK
6. Have the PDs implemented and operated the GS project as per the descriptions contained in the registered PDD?	CDM validation and verification standard for project activities §354b	DR	The implementation is in line with the registered PDD.	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
B.1.1. Forward action requests (FARs) identified during validation and/or previous verification					
B.1.1.1 Is there any remaining FARs from the validation and/or previous verification activities?	GS4GG-MR-FORM version 1.1 CDM validation and verification standard for project activities §319c, 395h	DR	The project is undergoing combined validation and verification. Please update section B.1.1 as the validation gets concluded.	CAR-5	OK
B.1.1.2 If there any remaining FARs from the validation and/or previous verification activities, have the PDs addressed these FARs in the MR?	GS4GG-MR-FORM version 1.1 CDM validation and verification standard for project activities §320	DR	Please refer to B.1.1.1.	CAR-5	OK
B.1.1.3 Has the FARs been resolved?	GS4GG-MR-FORM version 1.1 CDM validation and verification standard for project activities §344d §346	DR	Please refer to B.1.1.1.	CAR-5	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
B.2. Post design certification (registration) changes					
B.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline					
B.2.1.1 Is it indicated whether any temporary deviations have been applied during this monitoring period?	GS4GG-MR-FORM version 1.1 CDM project standard for project activities §231 CDM validation and verification standard for project activities §282	DR	N/A	OK	OK
B.2.1.2 If there are temporary deviations from the registered monitoring plan or applied methodology or standardized baseline, have PDs described the nature, extent and duration of the non-conforming monitoring and the proposed alternative monitoring of the project activity in the MR?	GS4GG-MR-FORM version 1.1 CDM project standard for project activities §231	DR	N/A	OK	OK
B.2.1.3 If there are temporary deviations from the registered monitoring plan or applied methodology or	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
standardized baseline, do the description of deviations include the following?					
B.2.1.3.1 How it deviates from the monitoring plan and/or applied methodology(ies),	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK
B.2.1.3.2 The duration for which the deviation(s) is(are) applicable	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK
B.2.1.3.3 Justification on the conservativeness of the approach.	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK
B.2.1.4 If there are temporary deviations from the registered monitoring plan or applied methodology or standardized baseline, have PDs applied conservative assumptions or discount factors to the calculations to the extent required to ensure that GHG emission reductions will not be over-estimated as a result of the deviation?	CDM project standard for project activities §231a CDM validation and verification standard for project activities §284	DR	N/A	OK	OK
B.2.2. Corrections					
B.2.2.1 Has it been indicated whether there are any corrections to project	GS4GG-MR-FORM version 1.1 CDM validation and verification	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
information or parameters fixed at the registration?	standard for project activities §288				
B.2.2.2 Is the corrected information an accurate reflection of actual project information?	CDM validation and verification standard for project activities §288a	DR	N/A	OK	OK
B.2.2.3 Are the corrected parameters in accordance with the applied methodology, selected monitoring plan and/or the applied standardized baseline?	CDM validation and verification standard for project activities §288b	DR	N/A	OK	OK
B.2.3. Changes to start date of crediting period					
B.2.3.1 Is it indicated whether any changes to the start date of the crediting period?	CDM project standard for project activities §235 §236 CDM validation and verification standard for project activities §290	DR	N/A	OK	OK
B.2.4. Permanent changes from registered monitoring plan, applied					

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Question		Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
methodology or applied standardized baseline						
B.2.4.1	Is it indicated whether any permanent changes from the registered monitoring plan or applied methodologies or standardized baseline?	GS4GG-MR-FORM version 1.1 CDM project standard for project activities §238	DR	N/A	OK	OK
B.2.4.2	If there are such changes, have they been listed providing the version number and completion date of the revised design certified (i.e., approved) PDD for each?	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK
B.2.4.3	Are the changes to the monitoring plan contained in the registered PDD in compliance with the applied methodology and, where applicable, the applied standardized baseline?	CDM validation and verification standard for project activities §296	DR	N/A	OK	OK
B.2.4.4	Do the changes reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan?	CDM validation and verification standard for project activities §297	DR	N/A	OK	OK
B.2.4.5	If the permanent changes are likely to lead to a reduction in the accuracy of the calculation of emission reductions, do the PDs apply	CDM validation and verification standard for project activities §298	DR	N/A	OK	OK

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conservative assumptions or discount factors to the calculations to the extent required to ensure that emission reductions will not be over-estimated as a result of the permanent change?					
B.2.5. Changes to project design of approved project					
B.2.5.1 Are there proposed or actual changes to the project design of the approved project?	GS4GG-MR-FORM version 1.1 CDM validation and verification standard for project activities §300	DR	N/A	OK	OK
B.2.5.2 Do the actual changes comply with the monitoring plan, the applied monitoring methodology and tools and/or, where applicable, the applied standardized baseline, and/or the level of accuracy of the monitoring activity?	CDM validation and verification standard for project activities §302	DR	N/A	OK	OK
B.2.5.3 Does the revised PDD comply with the applied monitoring methodology and tools and/or standardized baseline or any later version of the methodology and/or	CDM validation and verification standard for project activities §303	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
standardized baseline or the requirements of another methodology and/or the standardized baseline that is applicable to the project activity?					
B.2.5.4 Does the changes to project activity include the following?	CDM project standard for project activities §241	DR	N/A	OK	OK
B.2.5.4.1 Increase in the capacity specified in the registered PDD with the following conditions:	CDM project standard for project activities §241a	DR	N/A	OK	OK
B.2.5.4.1.1 If the project activity is large-scale: CERs may be claimed up to an amount calculated based on the increased capacity by 20 per cent of the capacity specified in the originally registered PDD; or	CDM project standard for project activities §241a (i)a	DR	N/A	OK	OK
B.2.5.4.1.2 If the project activity is large-scale: CERs may be claimed for the full amount calculated based on the increased capacity if the project developers can demonstrate that the reason for the increase is not within the control of the project developers;	CDM project standard for project activities §241a (i)b	DR	N/A	OK	OK
B.2.5.4.1.3 If the project activity is small-scale, CERs may be claimed for	CDM project standard for project	DR	N/A	OK	OK

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the full amount calculated based on the increased capacity, provided that the resulting project activity does not exceed the small-scale threshold for the corresponding small-scale project type (i.e., Type I, II or III);	activities §241a (ii)				
B.2.5.4.2 Decrease in the capacity specified in the registered PDD;	CDM project standard for project activities §241b	DR	N/A	OK	OK
B.2.5.4.3 Addition of new components or extension/addition of technologies/measures that introduce complimentary technologies/measures involving mass and/or energy transfer to/from the technologies/measures specified in the originally registered PDD;	CDM project standard for project activities §241c	DR	N/A	OK	OK
B.2.5.4.4 Removal of a component or technology/measure specified in the registered PDD;	CDM project standard for project activities §241d	DR	N/A	OK	OK
B.2.5.4.5 Changes to the technologies/measures that result in the same technologies/measures as in the	CDM project standard for project activities §241e	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
originally registered technologies/measures					
B.2.5.4.6 Removal or addition of one or more site(s) of the project activity registered with multiple sites;	CDM project standard for project activities §241f	DR	N/A	OK	OK
B.2.5.4.7 Removal of a project activity from a bundle of small-scale CDM project activities; methodologies, or voluntary change to other methodologies, provided all requirements in the updated/changed methodologies are met.	CDM project standard for project activities §241g	DR	N/A	OK	OK
B.2.5.4.8 Actual operational parameters that are within the control of the project developers, differing from the expected parameters;	CDM project standard for project activities §241h	DR	N/A	OK	OK
B.2.5.4.9 Any consequential changes to the application of methodologies, standardized baselines and/or other methodological regulatory documents resulting from the changes referred to in questions B.2.6.7.1-B.2.6.7.4 above	CDM project standard for project activities §241i	DR	N/A	OK	OK
B.2.5.4.10 Voluntary update of the applied methodologies or the other applied methodological regulatory	CDM project standard for project	DR	N/A	OK	OK

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documents to a later valid version of them, or voluntary change to other methodologies, provided all requirements in the updated/changed methodologies and the other applied methodological regulatory documents are met	activities §241j				
B.2.5.5 Do the PDs report in the revised PDD the impacts of the proposed or actual changes to the registered project activity on the following:	CDM project standard for project activities §242	DR	N/A	OK	OK
B.2.5.5.1 The applicability and application of the applied methodology and, where applicable, the applied standardized baseline under which the project activity has been registered;	CDM project standard for project activities §242a CDM validation and verification standard for project activities §303a	DR	N/A	OK	OK
B.2.5.5.2 Compliance of the monitoring plan with the applied methodology and, where applicable, the applied standardized baseline;	CDM project standard for project activities §242c CDM validation and verification standard for project activities §303c	DR	N/A	OK	OK

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B.2.5.5.3 The level of accuracy and completeness in the monitoring of the project activity;	CDM project standard for project activities §242d CDM validation and verification standard for project activities §303d	DR	N/A	OK	OK
B.2.5.5.4 The additionality of the project activity;	CDM project standard for project activities §242e CDM validation and verification standard for project activities §303e	DR	N/A	OK	OK
B.2.5.5.5 The scale of the project activity.	CDM project standard for project activities §242f CDM validation and verification standard for project activities §303f	DR	N/A	OK	OK
B.2.5.6 In the case of investment analysis, have PDs modified the key parameters in the original spreadsheet calculations affected by	CDM project standard for project activities §243a	DR	N/A	OK	OK

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the proposed or actual modifications to the project activity?	CDM validation and verification standard for project activities §304a				
B.2.5.7 In cases where only barriers have been claimed to demonstrate additionality, have PDs demonstrated that the barriers are still valid under the new circumstances?	CDM project standard for project activities §243b CDM validation and verification standard for project activities §304b	DR	N/A	OK	OK
B.2.5.8 If the PDs can't demonstrate compliance with the requirements of the applied methodology and, where applicable, the applied standardized baseline under which the project activity has been registered, has PDs revised the PDD applying the latest version of the methodology and, where applicable, the applied standardized baseline?	CDM project standard for project activities §245a (i)	DR	N/A	OK	OK
B.2.5.9 If another methodology and, where applicable, the applied standardized baseline is applied to the project activity, has PDs demonstrated compliance with the requirements	CDM project standard for project activities §245a-(ii)	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
of the selected methodology and/or the selected standardized baseline?					
C. Description of monitoring system applied by the project					
C.1. Has a description of the monitoring system been provided under section C of the MR?	GS4GG-MR-FORM version 1.1 CDM project standard for project activities §258	DR	The monitoring system is to be further explained in section C. Please clarify: (a) If this data is collected once at the start of the project, or at the beginning of every sowing season. (b) Is there a system in place wherein legitimacy and timeliness of data is monitored (for instance if the farmers are filling their logbooks legibly)? (c) The details of closed chamber method for monitoring of methane emission factor have not been provided.	CAR-6	OK
C.2. Has information about the data collection procedures, including following been provided under section C of the MR?	GS4GG-MR-FORM version 1.1 CDM project standard for project activities §258	DR	Please see below.		OK
C.2.1. Information flow including data generation	CDM project standard for project activities §258	DR	Refer to C.1.	CAR-6	OK
C.2.2. Data aggregation	CDM project standard for project activities §258	DR	This is available.	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
C.2.3. Data recording	CDM project standard for project activities §258	DR	This is available.	OK	OK
C.2.4. Data calculation	CDM project standard for project activities §258	DR	N/A	OK	OK
C.2.5. Data reporting	CDM project standard for project activities §258	DR	Please specify how the recorded data is reported in Section C.	CAR-7	OK
C.3. Has organizational structure, roles and responsibilities of personnel, and emergency procedures for the monitoring system been provided under section C of the MR?	GS4GG-MR-FORM version 1.1 CDM project standard for project activities §258	DR	Please provide the organizational structure (positions and how many people are working on those positions), and a brief information of roles and responsibilities of all personnel in Section C.	CAR-8	OK
C.4. Regarding to the management and operational system, are the responsibilities and authorities for monitoring and reporting in accordance with the responsibilities and authorities stated in the monitoring plan?	CDM validation and verification standard for project activities §361b-(iv)	DR	Please refer to C.3.	CAR-8	OK
C.5. Have quality assurance and quality control procedures been applied in accordance with the monitoring plan?	CDM validation and verification standard for project activities §361e	DR	Please provide quality assurance and quality control procedures in Section C. Also, specify for how long the monitored data will be stored.	CAR-9	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
C.6. Has line diagram(s) showing all relevant monitoring points been provided under section C of the MR?	CDM project standard for project activities §258	DR	N.A	Ok	OK
C.7. Have the monitoring plan been properly implemented and followed by the PDs?	CDM validation and verification standard for project activities §361a	DR	Please refer to C.1, C.2.5, C.3 and C.5.	CAR-6 CAR-7 CAR-8	OK
C.8. Has the monitoring of parameters (baseline / project / leakage / emission reduction) in the project activity been implemented in accordance with the monitoring plan contained in the registered PDD or any accepted revised monitoring plan?	CDM validation and verification standard for project activities §361b-(i)-(ii)-(iii)	DR	Please refer to C.1, C.2.5, C.3 and C.5.	CAR-6 CAR-7 CAR-8	OK
C.9. Have all parameters stated in the monitoring plan, the applied methodology and relevant CDM EB decisions been sufficiently monitored and updated as applicable?	CDM validation and verification standard for project activities §361b	DR	Please refer to C.1, C.2.5, C.3 and C.5.	CAR-6 CAR-7 CAR-8	OK
C.10. Are monitoring results consistently recorded and stored as per the approved frequency?	CDM validation and verification standard for project activities §361d	DR	Refer to CAR above	CAR-9	OK
D. Data and Parameters					
D.1. Data and parameters fixed ex ante or at renewal of crediting period					

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
D.1.1. Has all the data that is determined only once for the crediting period but are used after registration of the project, been listed under section D.1 using the tabular format?	GS4GG-MR-FORM version 1.1	DR	Please indicate the parameters that are fixed ex ante and would not be monitored in section D.1 of the monitoring report. Also, provide corresponding reference to the methodology and evidence for the source of data and value applied. Further, the project emission factor is a monitoring parameter.	CAR-10	OK
D.1.2. If all the data that is determined only once for the crediting period but are used after registration of the project, does the listed data include all the parameters used to calculate baseline, project and leakage emissions as well as other relevant parameters required by the approved methodology and the monitoring plan?	GS4GG-MR-FORM version 1.1	DR	Refer to CAR above.	CAR-10	OK
D.1.3. In the data/parameter tables provided under section D.1 of the MR, for each SDG Indicator given in accordance with the approved PDD?	GS4GG-MR-FORM version 1.1	DR	Refer to D.1.2.	CAR-10	OK
D.1.4. In the data/parameter tables provided under section D.1 of the MR, for each data has the name of the data/parameters given in accordance with the approved PDD and the applied approved methodology?	GS4GG-MR-FORM version 1.1	DR	Refer to D.1.2.	CAR-10	OK
D.1.5. In the data/parameter tables provided under section D.1 of the MR, for each data has the unit of the data/parameters given in accordance	GS4GG-MR-FORM version 1.1	DR	Refer to D.1.2.	CAR-10	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
with the approved PDD and the applied approved methodology?					
D.1.6. In the data/parameter tables provided under section D.1 of the MR, for each data has the description of the data/parameters given in accordance with the approved PDD and the applied approved methodology?	GS4GG-MR-FORM version 1.1	DR	Refer to D.1.2.	CAR-10	OK
D.1.7. In the data/parameter tables provided under section D.1 of the MR, for each data has the source of the data/parameters given in accordance with the approved PDD and the applied approved methodology?	GS4GG-MR-FORM version 1.1	DR	Refer to D.1.2.	CAR-10	OK
D.1.8. In the data/parameter tables provided under section D.1 of the MR, for each data has the values applied of the data/parameters given in accordance with the approved PDD and the applied approved methodology?	GS4GG-MR-FORM version 1.1	DR	Refer to D.1.2.	CAR-10	OK
D.1.9. In the data/parameter tables provided under section D.1 of the MR, for each data has it been indicated what measurement methods and procedures have been used?	GS4GG-MR-FORM version 1.1	DR	Measurement methods are stated for each data parameter.	OK	OK
D.1.10. In the data/parameter tables provided under section D.1 of the MR, for each	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
data has it been indicated what the data/parameters are used for (baseline/project/leakage emission calculations)?					
D.2. Data and parameters monitored					
D.2.1. Has all the data that are monitored been listed under section D.2 of the MR using the tabular format?	GS4GG-MR-FORM version 1.1	DR	This is in line with the registered PDD.	OK	OK
D.2.2. In the data/parameter tables provided under section D.2 of the MR, for each data has the name of the SDG Indicator and data/parameters given in accordance with the approved PDD and the applied approved methodology?	GS4GG-MR-FORM version 1.1	DR	Please correct the notation of the data/parameter following the methodology. Regarding the parameter 'A _{s,g} ' the description is 'Aggregated project area in given season s', also the days per year parameter too is to be corrected, among others. Further, regarding the parameter 'Change in farmer income as a result of project, by gender' the baseline value too is to be provided.	CAR-11	OK
D.2.3. In the data/parameter tables provided under section D.2 of the MR, for each data has the unit of the data/parameters given in accordance with the registered PDD and the applied approved methodology?	GS4GG-MR-FORM version 1.1	DR	Refer to CAR above	CAR-11	OK
D.2.4. In the data/parameter tables provided under section D.2 of the MR, for each data has it been described how the data is monitored?	GS4GG-MR-FORM version 1.1	DR	Refer to CAR above	CAR-11	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
D.2.5. In the data/parameter tables provided under section D.2 of the MR, for each data has the source of data been indicated (like logbooks, daily records, surveys, etc.)?	GS4GG-MR-FORM version 1.1	DR	Refer to CAR above	CAR-11	OK
D.2.6. In the data/parameter tables provided under section D.2 of the MR, for each data has the values of the monitoring parameter been indicated?	GS4GG-MR-FORM version 1.1	DR	Refer to CAR above	CAR-11	OK
D.2.7. In the data/parameter tables provided under section D.2 of the MR, for each data has the QA/QC procedures being applied been given?	GS4GG-MR-FORM version 1.1	DR	Please add QA/QC procedures for each data point in Section D.2.	CAR-12	OK
D.2.8. In the data/parameter tables provided under section D.2 of the MR, for each data has it been indicated what types of equipment are used to monitor each parameter, including following, if applicable as per the monitoring plan?	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK
D.2.8.1 Details on accuracy class	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK
D.2.8.2 Calibration frequency	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK

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D.2.8.3	Serial number	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK
D.2.8.4	Calibration date	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK
D.2.8.5	Validity of the calibration	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK
D.2.9.	In the data/parameter tables provided under section D.2 of the MR, for each data has the measurement and recording frequency been indicated?	GS4GG-MR-FORM version 1.1	DR	Monitoring frequency of each data parameter is adequately described.	OK	OK
D.2.10.	Is the calibration frequency for measuring equipment specified in the monitoring methodology, in the applied standardized baselines or in the monitoring plan?	CDM validation and verification standard for project activities §370	DR	N/A	OK	OK
D.2.11.	If the calibration frequency for measuring equipment isn't specified in the monitoring methodology, in the applied standardized baselines or the monitoring plan, are the equipment calibrated either in accordance with the specifications of the local/national standards, or as per the manufacturer's specification?	CDM validation and verification standard for project activities §370	DR	N/A	OK	OK
D.2.12.	If neither local/national standards nor the manufacturer's specification are	CDM validation and verification standard for	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
available, have the international standards been used?	project activities §370				
D.2.13. Is the calibration of the measuring equipment that have an impact on the claimed emission reductions conducted by the PDs at a frequency specified in the applied monitoring methodology and/or the monitoring plan?	CDM validation and verification standard for project activities §371	DR	N/A	OK	OK
D.2.14. Has the calibration been delayed and has the calibration been implemented after the monitoring period in consideration (i.e., the results of delayed calibration are available) for the certain monitoring period?	CDM validation and verification standard for project activities §366	DR	N/A	OK	OK
D.2.15. If the calibration is delayed and if the calibration is implemented after the monitoring period in consideration (i.e., the results of delayed calibration are available) for the certain monitoring period, are one of the following approaches adopted by the PDs for the calculation of emission reductions?	CDM validation and verification standard for project activities §366	DR	N/A	OK	OK
D.2.15.1 Applying the maximum permissible error of the instrument to the measured values taken during the period between the scheduled date	CDM validation and verification standard for project	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
of calibration and the actual date of calibration, if the results of the delayed calibration do not show any errors in the measuring equipment, or if the error is smaller than the maximum permissible error; or	activities §366a				
D.2.15.2 Applying the error identified in the delayed calibration test, if the error is beyond the maximum permissible error of the measuring equipment.	CDM validation and verification standard for project activities §366b	DR	N/A	OK	OK
D.2.16. If calibration is delayed and if the calibration is implemented after the monitoring period in consideration (i.e. the results of delayed calibration are available) for the certain monitoring period, has the error been applied in following ways?	CDM validation and verification standard for project activities §367	DR	N/A	OK	OK
D.2.16.1 The adjusted measured values of the delayed calibration result in fewer claimed emission reductions?	CDM validation and verification standard for project activities §367a	DR	N/A	OK	OK
D.2.16.2 For all measured values taken during the period between the scheduled date of calibration and the actual date of calibration?	CDM validation and verification standard for project activities §367b	DR	N/A	OK	OK
D.2.17. If the results of the delayed calibration aren't available, have PPs calculated	CDM validation and verification standard for project	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
the emission reductions conservatively?	activities §368				
D.2.18. If the results of the delayed calibration aren't available, have post registration requirements been followed by the PDs?	CDM validation and verification standard for project activities §369	DR	N/A	OK	OK
D.2.19. Have any information about appropriate emission factors, IPCC default values and any other reference values that have been used in the calculation of emission reductions been given in detail in the MR?	GS4GG-MR-FORM version 1.1	DR	Information about appropriate emission factors, IPCC default values and any other reference values that have been used in the calculation of emission reductions been given in detail in the MR.	OK	OK
D.2.20. If the data that are monitored been listed under section D.2 using the tabular format, does the listed data include all the parameters used to calculate baseline, project and leakage emissions as well as other relevant parameters required by the approved methodology and, where applicable, the applied standardized baseline and the monitoring plan?	GS4GG-MR-FORM version 1.1 CDM project standard for project activities §259	DR	Refer to CAR above	CAR-11	OK
D.2.21. Is a complete set of data available for the specified monitoring period?	CDM validation and verification standard for project activities §373	DR	Refer to CAR above	CAR-11	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
D.3. Comparison of monitored parameters with last monitoring period					
D.3.1. In case of community service activities, has the monitored parameters been stated and compared with the previous monitoring period?	GS4GG-MR-FORM version 1.1	DR	This is the first monitoring period. Data for comparison is not available.	OK	OK
D.3.2. In case of community service activities, has the short explanation for any values that have increased or are less conservative been provided?	GS4GG-MR-FORM version 1.1	DR	This is the first monitoring period. Data for comparison is not available.	OK	OK
D.4. Implementation of sampling plan					
D.4.1. If data and parameters monitored described in section D.2 of the MR are determined by a sampling approach, has the description on how PDs implemented the sampling for those data and parameters according to the sampling plan been provided?	GS4GG-MR-FORM version 1.1 CDM Standard: Sampling and surveys for CDM project activities and programmes of activities CDM Guideline: Sampling and surveys for	DR	The implementation of sampling plan as indicated in section D.4 of the monitoring report is incomplete and inconsistent too. The parameter(s) to be monitored are not presented, the expected proportion is stated inconsistently, and the results obtained with the confidence/precision achieved too is not cited.	CAR-13	OK

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Question		Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
		CDM project activities and programme of activities				
D.4.2.	If data and parameters monitored described in section D.2 of the MR are determined by a sampling approach, has the following been included?	GS4GG-MR-FORM version 1.1 CDM Standard: Sampling and surveys for CDM project activities and programmes of activities §29 §30 §31 §32 §33 §39	DR	Refer to CAR above	CAR-13	OK
D.4.2.1	Description of implemented sampling design;	GS4GG-MR-FORM version 1.1	DR	Refer to CAR above	CAR-13	OK
D.4.2.2	Collected data (electronic spreadsheets may be attached and referenced);	GS4GG-MR-FORM version 1.1	DR	The sampling records and associated analysis are to be submitted.	CL-2	OK
D.4.2.3	Analysis of the collected data;	GS4GG-MR-FORM version 1.1	DR	It is indicated that the cultivation period average and Saved irrigation events on average have been derived from the collected data. However, please refer to CL above.	CL-2	OK
D.4.2.4	Demonstration on whether the required confidence/precision has been met.	GS4GG-MR-FORM version 1.1	DR	Refer to CAR above	CAR-13	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
D.4.2.5 Demonstration that the samples were randomly selected and are representative of the population.	GS4GG-MR-FORM version 1.1	DR	Refer to CAR above	CAR-13	OK
E. Calculation of SDG Impacts					
E.1. Calculation of baseline value or estimation of baseline situation of each SDG impact					
E.1.1. Has all the formulae used to calculate the baseline value been provided under section E.1 of the MR?	GS4GG-MR-FORM version 1.1	DR	The formulae used to calculate the baseline value are to be provided with reference to the methodology.	CAR-14	OK
E.1.2. Has sample calculations for all formulae used and calculation of baseline values been provided under section E.1 of the MR?	GS4GG-MR-FORM version 1.1	DR	The sample calculations are available in Section E.1	OK	OK
E.1.3. Has all electronic spreadsheets to present full calculations in the monitoring report been attached?	GS4GG-MR-FORM version 1.1	DR	ER Calculation sheet has been provided.	OK	OK
E.1.4. Have any assumptions used in baseline calculations been justified?	CDM validation and verification standard for project activities §373d	DR	N/A	OK	OK
E.1.5. If applicable, are the appropriate factors used for the baseline	CDM validation and verification standard for project	DR	IPCC AR5 GWP values have been used and adequately justified in line with the good guidance practices.	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
calculations in line with the good guidance practices? (e.g., IPCC default values and other reference values)	activities §373e				
E.2. Calculation of project value or estimation of project situation of each SDG outcome					
E.2.1. Has all the formulae used to calculate the project value been provided under section E.2 of the MR?	GS4GG-MR-FORM version 1.1	DR	The formulae used to calculate the project value are to be provided with reference to the methodology. Further, in context of SDG 8 for the training provided, only the one covering the monitoring period are to be considered.	CAR-15	OK
E.2.2. Has sample calculations for all formulae used and calculation of project values been provided under section E.2 of the MR?	GS4GG-MR-FORM version 1.1	DR	The sample calculations are available in Section E.2	OK	OK
E.2.3. Has all electronic spreadsheets to present full calculations in the monitoring report been attached?	GS4GG-MR-FORM version 1.1	DR	ER Calculation sheet is attached which includes calculations for ER, SDG1, SDG6 and SDG1_Water consumption have been provided.	OK	OK
E.2.4. Have any assumptions used in project calculations been justified?	CDM validation and verification standard for project activities §373d	DR	N/A	OK	OK
E.2.5. If applicable, are the appropriate factors used for the project calculations in line with the good	CDM validation and verification standard for project activities §373e	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
guidance practices? (e.g., IPCC default values and other reference values)					
E.3. Calculation of leakage					
E.3.1. Has all the formulae used to calculate the leakage value been provided under section E.3 of the MR?	GS4GG-MR-FORM version 1.1	DR	Leakage emission is neglected.	OK	OK
E.3.2. Has sample calculations for all formulae used and calculation of leakage values been provided under section E.3 of the MR?	GS4GG-MR-FORM version 1.1	DR	Leakage emission is neglected.	OK	OK
E.3.3. Has all electronic spreadsheets to present full calculations in the monitoring report been attached?	GS4GG-MR-FORM version 1.1	DR	N/A	OK	OK
E.3.4. Have any assumptions used in leakage calculations been justified?	CDM validation and verification standard for project activities §373d	DR	N/A	OK	OK
E.3.5. If applicable, are the appropriate factors used for the leakage calculations in line with the good guidance practices? (e.g., IPCC default values and other reference values)	CDM validation and verification standard for project activities §373e	DR	N/A	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
E.4. Calculation of net benefits or direct calculation for each SDG impact					
E.4.1. Have all the net benefits as difference of baseline and project values or direct calculations for each SDG outcome provided under section E.4 of the MR?	GS4GG-MR-FORM version 1.1	DR	Net benefits are to correspond to the covered monitoring period.	CAR-16	OK
E.4.2. Has all electronic spreadsheets to present full calculations in the monitoring report been attached?	GS4GG-MR-FORM version 1.1	DR	ER Calculation sheet is to be corrected to present the net benefits for the SDGs during the covered monitoring period.	CAR-17	OK
		DR			
E.5. Comparison of actual SDG impacts with estimates in approved PDD		DR			
E.5.1. Has a comparison of actual values of the SDG impact of the project achieved during the monitoring period with the estimations in the approved PDD been given under section E.5 of the MR?	GS4GG-MR-FORM version 1.1 CDM project standard for project activities §267	DR	Please correct the estimated emission reduction values in the MR and in the ER Excel sheet based on the registered PDD.	CAR-18	OK
E.5.2. If the comparison of actual values of the SDG outcome of the project achieved during the monitoring period with the estimations in the approved PDD is given under section E.5 of the MR, has this comparison	GS4GG-MR-FORM version 1.1	DR	Comparison of actual values of the SDG outcome of the project achieved during the monitoring period with the estimations in the approved PDD given under section E.5 of the MR, is given using the tabular format.	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
been given using the tabular format provided?					
E.6. Remarks on difference from estimated value in approved PDD					
E.6.1. Has an explanation of the cause of any increase in the actual values achieved during the current monitoring period (e.g. higher water availability, higher load plant factor, etc.), including all information (i.e. data and/or parameters) that is different from that stated in the approved PDD, been provided under section E.6 of the MR?	GS4GG-MR-FORM version 1.1	DR	The explanation provided for ex-ante value estimated for SDG 13 and the outcome is not adequate. Please cite reason for the increase or specify how is the increase negligible.	CAR-19	OK
F. Safeguards Reporting					
F.1. Has the report on the safeguarding principles that were available the in the monitoring plan been provided including the following?	GS4GG-MR-FORM version 1.1	DR	Please see below:		OK
F.1.1. An update on the implementation including information on relative success and failures, or improvements to proposed mitigation measures	GS4GG-MR-FORM version 1.1	DR	No parameters are identified for safeguarding reporting.	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
F.1.2. Monitoring and reporting on any key indicators identified, including against pre-set tolerances	GS4GG-MR-FORM version 1.1	DR	No parameters are identified for safeguarding reporting.	OK	OK
F.1.3. Information on any assessment questions answered 'potentially' or where requirements call for regular re-assessment	GS4GG-MR-FORM version 1.1	DR	It is provided that no parameters are identified for safeguarding reporting.	OK	OK
G. Stakeholder Inputs and Legal Disputes					
G.1. List all inputs and grievances which have been received via the continuous input and grievance mechanism together with their respective responses/mitigations					
G.1.1. Is the list of all inputs/grievances which have been received for the project during the monitoring period together with their respective answers/actions provided in section G.1 of the MR?	GS4GG-MR-FORM version 1.1	DR	It is provided that no grievances or inputs received during the monitoring period. Please submit the grievance register, also clarifying the process for obtaining the inputs from the stakeholders.	CL-3	OK
G.2. Report on any stakeholder mitigations that were agreed to be monitored					
G.2.1. If there any remaining inputs/grievances from previous monitoring period where follow up	GS4GG-MR-FORM version 1.1	DR	It is provided that stakeholder mitigations are N/A.	OK	OK

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Question	Reference	Means of verification*	Findings, comments, references and document sources	Draft opinion	Final opinion
action/mitigation measure is to be verified in this monitoring period from the validation and/or previous verification activities, have the PDs addressed these in section G.2 of the MR?					
G.3. Provide details of any legal contest that has arisen with the project during the monitoring period					
G.3.1. Has there been any legal contest or dispute that has arisen with the project during the monitoring period and are such details and resolution provided in section G.3 of the MR?	GS4GG-MR-FORM version 1.1	DR	It is provided that legal contests are N/A.	OK	OK

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Table 2 – Resolution of Corrective Action, Forward Action and Clarification Requests

Draft Report Clarifications, Forward Action and Corrective Action Requests by Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Developers' Response	Verification Team Conclusion
CAR-1 Please insert the date of project design certification and also update the version number of the PDD too.	1.6	PDD version revise revised. Design certification date to be updated. Review 1: Version of the PDD is corrected as 5.5 Monitoring period id revised as: 22/06/2022-16/11/2023 (both days are included)	Review-1: Version of the PDD is to be checked and corrected. Further, the monitoring period start and end dates are to be clarified and whether both dates are inclusive. Review-2: Ok Closed (MR revised)
CAR-2 The SDG contribution stated should correspond to the net accounting for the baseline values too.	2	The baseline values for SDG1, 2 and 13 have been included in the PDD and ER calculation excel sheet. Review 1: Start date is checked for all farmers; the plant establishment dates for 699 is recorded as 02 June, 03 July. This is revised as 02 July and 03 July. By this correction the earliest date for plant establishment is predicted as 15/06/2023. Please see ER calculations sheet, Sampled Logbooks_2023 tab, J34. Review 2: Table 2 is revised accordingly	Review-1: The start and end dates are to be checked and corrected in table 2. Review-2: The start date and end date are to correspond to the covered monitoring period. Review-3: Ok Closed (MR revised)
CAR-3 In Section A1 of the MR, please include a brief description of the project, including the meaning of the abbreviation AWD.	A.1.3	More information has been added to Section A.1. Review 1: Start and end dates for each season have been clarified. The plant establishment date is the earliest date recorded as per the sampled logbooks. The harvest	Review-1: The monitoring period start and end dates are to be clarified along with the season start and end dates too along with corresponding evidence.

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Draft Report Clarifications, Forward Action and Corrective Action Requests by Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Developers' Response	Verification Team Conclusion
		date is the final date as recorded by the same sample group. Log books have been provided.	Review-2: Ok Closed (MR revised)
CAR-4 Please provide the dates when the pipes were commissioned, and operation started for each site and the coverage of the 700 farmers.	B.1	The dates for transplanting, installation and removal of AWDs and harvest are provided in Section B.1. the dates could be cross-checked from the sampled group of farmers in the excel sheet provided. Review-1: AWD installation and removal dates are recorded in log-books. The exact dates could be seen in translated 2023 sampled logbooks as irrigation schedule dates, column I, AWD. For 2022, the dates have been provided with a separate email as they were missing in the translation. Please see a copy of the email "AWD dates.pdf". All dates are updated in 2022. Review-2: As per the methodology: 4.2.4 Reporting and verification shall be done on the basis of samples of the log-books from the farmers, according to the latest version of the "Standard for sampling and surveys for CDM project activities and programme of activities". We have provided the sampled logbooks and take the earliest date of implementation as 11 July.	Review-1: The dates and the evidence file are unclear. Review-2: The complete date list of the total number of farmers for 2022 and 2023 is not available. Also, the cited dates are different than what is cited in section B.1 as 'AWD tubes are installed were installed from 11 July -17 Aug and 1 July – 6 Aug for season 2022 and 2023 respectively'. Whereas the AWD dates file cites 'the AWD were installed from 5 July -19 Aug'. Review-3: Ok Closed (MR revised)
CAR-5 The project is undergoing combined validation and verification. Please update section B.1.1 as the validation gets concluded.	B.1.1.1	Updated. Review 1: The FAR is included in B.2.4 and included in the summary of technical specifications in B.1.	Review-1: The FAR from design certification has not been included. Review-2:

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Draft Report Clarifications, Forward Action and Corrective Action Requests by Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Developers' Response	Verification Team Conclusion
		Review-2: CL02 is included in Section B1.1. as well.	The FAR indication is also to be cited in section B.1.1. Review-3: Ok Closed (MR revised)
CAR-6 The monitoring system is to be further explained in section C. Please clarify: (a) If this data is collected once at the start of the project, or at the beginning of every sowing season. (b) Is there a system in place wherein legitimacy and timeliness of data is monitored (for instance if the farmers are filling their logbooks legibly)? (c) The details of closed chamber method for monitoring of methane emission factor have not been provided.	C.1	a) The data is collecting start from land preparation up to harvesting. Added to the Monitoring plan. b) Field team fill down and manage the logbooks and report to Project developer on a day to day basis c) Closed chamber method is not implemented.	Review-1: Ok closed (Clarified)
CAR-7 Please specify how the recorded data is reported in Section C.	C.2.5	Project field team records the data on paper in local language and then converted to Excel sheets in English. The original logbooks of the sampled group of farmers are provided. Review-1: Scanned logbooks are provided.	Review-1: Please submit correspondingly labeled documents. Review-2: Ok closed (Logbook sample has been submitted)
CAR-8 Please provide the organizational structure (positions and how many people are working on those positions),	C.3	Organizational structure is provided with explanation of the responsibilities.	Review-1: Ok closed (Clarified)

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Draft Report Clarifications, Forward Action and Corrective Action Requests by Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Developers' Response	Verification Team Conclusion
and a brief information of roles and responsibilities of all personnel in Section C.			
CAR-9 Please provide quality assurance and quality control procedures in Section C. Also, specify for how long the monitored data will be stored.	C.5	QA/QC procedures are included in the monitoring plan. The monitoring data will be stored at least two years.	Review-1: Ok closed (Clarified)
CAR-10 Please indicate the parameters that are fixed ex ante and would not be monitored in section D.1 of the monitoring report. Also, provide corresponding reference to the methodology and evidence for the source of data and value applied. Further, the project emission factor is a monitoring parameter.	D.1.1	The project applies GS Methodology for Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation (v1.0) by using simplified approach and default value for Pakistan. Therefore, the emission factor is fixed for the crediting period.	Review-1: Ok closed (MR updated)
CAR-11 Please correct the notation of the data/parameter following the methodology. Regarding the parameter 'A _{s,g} ' the description is 'Aggregated project area in given season s', also the days per year parameter too is to be corrected, among others. Further, regarding the parameter 'Change in farmer income as a result of project, by gender' the baseline value too is to be provided.	D.2.2	As per the applied methodology, applicable monitoring parameters are revised. Baseline value for SDG 1 is provided. Review-1: The area covered is confirmed by the coordinates recorded in both logbooks and farmer agreements. For 2022; 700 farmers have signed the carbon transfer agreement and implemented the method. For 2023; the agreements are renewed with 700 farmers and an additional 1300 farmers are contracted. Please see sample agreement, item 1. Indicating the year. The list of farmers with GPS coordinates are provided in file: All NZA farmer 2022_2023.xlsx. Before our intervention farmers apply 100kg urea/acre, now the quantity has been reduced 50kg urea/acre.	Review-1: Submit the evidence for the area covered in 2022 and 2023 season days and the basis of cultivation period too. Further, clarify the reduction in kg/acre of Urea application. Furthermore, evidence for the annual yield per ha is also to be submitted. The health camp registries and training records too are to be provided. Also, submit the social security records and pay bills. Review-2: Please clarify the difference in the area of the 700 farmers for 2022 and 2023. Also

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Draft Report Clarifications, Forward Action and Corrective Action Requests by Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Developers' Response	Verification Team Conclusion
		This is due to the raised awareness among farmers and usage of leaf color charts. Total yield and average yield per acre is recorded in farmer logbooks as Monds. ER calculation sheet is revised to include total yield recorded for each farmer. The protocol for receiving farmers paddy is explained in Crop Check Program and now included in Section E.2. Please also see the sample of payment receipts to the farmers. A sample of health camp registries have been provided for 2022 and 2023. The patients register, prescription, photographs, MoU with doctors, Ambulance service provider and payment record are included. The total patient are calculated based on the number of doctors and working hours. Training records for farmers are provided. The list of permanent employees, salaries and payment receipt of social securities are shared. A sample card of health insurance is attached. Review -2: The total area for 2023 is now corrected as per the list of farmers. Annual yield per farmer is recorded on the logbooks and cross-checked with 4 randomly selected farmers' net weighted harvest records at the gate of mill. Please	note that the area has not been correctly added for 2023. Further, evidence for the annual yield per ha is also to be clarified with the submitted document name. Review-3: Ok Closed (MR revised and evidence submitted)

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Draft Report Clarifications, Forward Action and Corrective Action Requests by Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Developers' Response	Verification Team Conclusion
		see ER calculations sheet, Average yield crosscheck tab and the mill records provided.	
CAR-12 Please add QA/QC procedures for each data point in Section D.2.	D.2.7	Added.	Review-1: Ok closed (MR updated)
CAR-13 The implementation of sampling plan as indicated in section D.4 of the monitoring report is incomplete and inconsistent too. The parameter(s) to be monitored are not presented, the expected proportion is stated inconsistently, and the results obtained with the confidence/precision achieved too is not cited.	D.4.1	The expected proportion is revised as 95%. Only parameter to be monitored by sampling is the proportion of farmers implementing the method since the project applies simplified approach and global default values derived from IPCC tier 1 approach.	Review-1: Ok closed (MR updated)
CAR-14 The formulae used to calculate the baseline value are to be provided with reference to the methodology.	E.1.1	Revised as per the applied GS Methodology	Review-1: Ok closed (MR updated)
CAR-15 The formulae used to calculate the project value are to be provided with reference to the methodology. Further, in context of SDG 8 for the training provided, only the one covering the monitoring period are to be considered.	E.2.1	The formula is updated as per the applied methodology 11 trainings occurred during the monitoring period 26/06/2022- 16/11/2023	Review-1: Ok closed (MR updated)
CAR-16 Net benefits are to correspond to the covered monitoring period.	E.4.1	Project and net benefits are provided in the table under Section E.4 Review -1: The table format is revised. Review-2: Typo error corrected	Review-1: The table format in section E.4 is to be corrected. Review-2: The SDG 13 project estimate is to be checked and corrected.

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Draft Report Clarifications, Forward Action and Corrective Action Requests by Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Developers' Response	Verification Team Conclusion
			Review-3: Ok Closed (MR revised)
CAR-17 ER Calculation sheet is to be corrected to present the net benefits for the SDGs during the covered monitoring period.	E.4.2	Revised.	Review-1: Ok closed (MR updated)
CAR-18 Please correct the estimated emission reduction values in the MR and in the ER Excel sheet based on the registered PDD.	E.5.1	Ex-ante estimations are added to MR and ER Excel sheet. Review-1: The vintages are added to E.5. The vintage dates are corrected in ER calculation sheet. Review-2 Table- 2 is corrected.	Review-1: The vintage dates are to be clarified and corrected. Review-2: The 2023 vintage value for ER is inconsistent with Table 2 is to be clarified and corrected. Review-3: Ok Closed (MR revised)
CAR-19 The explanation provided for ex-ante value estimated for SDG 13 and the outcome is not adequate. Please cite reason for the increase or specify how is the increase negligible.	E.6.1	Section E.6.1. is revised	Review-1: Ok closed (MR updated)
CL-1 This is provided as "plant establishment on 22/06/2022 and ending with the harvest on 16/11/2022." Please submit evidence for the same.	A.1.4	The excel sheet includes the sampled farmers data. Original logbooks of the sampled farmers are provided.	Review-1: Ok closed (Clarified)

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Draft Report Clarifications, Forward Action and Corrective Action Requests by Verification Team	Ref. to Checklist Questions in Table-1	Summary of Project Developers' Response	Verification Team Conclusion
CL-2 The sampling records and associated analysis are to be submitted.	D.4.2.2	Sampled records and associated analysis is presented in ER calculation excel file.	Review-1: Ok closed (Clarified)
CL-3 It is provided that no grievances or inputs received during the monitoring period. Please submit the grievance register, also clarifying the process for obtaining the inputs from the stakeholders.	G.1.1	The scanned pages of the process book is provided. In total 36 comments have been received and solved. All of the comments are related to the implementation of AWD.	Review-1: Ok closed (Clarified)

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