
 <p style="text-align: center;">Validation report form for CDM programme of activities (Version 03.0)</p>	
Complete this form in accordance with the instructions attached at the end of this form.	
BASIC INFORMATION	
Title of the programme of activities (PoA)	Methane avoidance in rice cultivation
Version number of the validation report	4.0
Completion date of the validation report	28/12/2020
Version number of PoA-DD to which this validation report applies	3
Date when PoA-DD was uploaded for global stakeholder consultation	15/09/2020
Coordinating/managing entity (CME)	Core CarbonX Solutions Private Limited
Host Parties	India
Applied methodologies and standardized baselines	AMS-III.AU. Version 4.0: Methane emission reduction by adjusted water management practice in rice cultivation
Mandatory sectoral scopes	15
Conditional sectoral scopes, if applicable	NA
Name and UNFCCC reference number of the DOE	TÜV SÜD South Asia Private Limited (E-0005)
Name, position and signature of the approver of the validation report	 Eswar Murty Sr. Manager, Certification Body TÜV SÜD South Asia Private Limited

SECTION A. Executive summary

TÜV SÜD South Asia Pvt. Ltd. has performed the validation of Program of Activities (PoA) of the aforementioned project activity “Methane avoidance in rice cultivation”. The validation is based on the currently valid documentation of the United Nations Framework Convention on Climate Change (UNFCCC).

The validation process includes three phases:

- Desk review of documents;
- Follow-up interviews with the relevant personnel;
- Resolution of outstanding issues and the issuance of final validation opinion.

The Programme of Activities involves the implementation of Alternate wetting and drying method (AWD) and direct direct-seeded rice (DSR).with adjustment water management system in rice cultivation that may result in reduced methane emissions due to a shorter flooding period and decreased soil disturbance compared to transplanting rice seedlings to mitigate methane emission from paddy fields in the regions of India. The PoA will lead to the considerable reduction of methane emission in the paddy fields of India and will contribute strongly to the sustainable development of rural villages involved in the project. Each component project activity (CPA) under the proposed SSC-PoA will involve the implementation of the various options to mitigate CH₄ emissions from paddy fields depending upon the conditions in the regions of the CPA.

Validation objective

Validation is thorough and independent assessment of a proposed CDM PoA against the applicable CDM rules and requirements conducted by a Designated Operational Entity (DOE).

The objective of this validation is to determine whether the proposed CDM PoA complies with the UNFCCC criteria and assesses the claims and assumptions in the programme of activity design document (hereinafter called “PoA-DD”).

Validation scope

The validation scope is defined as an independent and objective review of the PoA-DD. The information in these documents is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed on the Marrakech Accords and the relevant decisions by the CDM Executive Board including the approved baseline and monitoring methodology.

Validation Process

Standard auditing techniques have been applied to assess the correctness of the information provided by the CME.

The validation consisted of the following 3 phases:

(a) Document review, involving:

- A review of data and information;
- Cross checks between information provided in the PoA-DD and information from sources other than those used, if available, the DOE’s sectoral and/or local expert(s) and, if necessary, independent background investigations;

(b) Follow-up actions (e.g. on-site inspection, interview and telephone or e-mail interviews), including:

- Interviews with relevant stakeholders in the host country, personnel with knowledge of the project design and implementation;
- Cross checks between information provided by interviewed personnel (i.e. by checking sources or other interviews) to ensure that no relevant information has been omitted;

(c) Resolution of outstanding issues and the issuance of the final validation report and opinion.

Validation Conclusion

Conclusions of validation are summarized as follows:

- The PoA is in line with all relevant host country's criteria and all relevant UNFCCC requirements for CDM;
- PoA approval has been obtained from designated national authority (DNA) of host country;
- The project's additionality is sufficiently justified and referenced in the PoA-DD;
- The monitoring plan is transparent and adequate;
- The sustainable development is sufficiently justified and referenced.

The report is based on the assessment of the PoA-DD undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews and interviews, review of the applicable/applied methodology and its underlying formulae and calculations.

5 Clarification Requests (CL) and 11 Corrective Action Requests (CARs) have been raised during the course of validation process of renewable crediting period and has been successfully closed. No FARhas been raised.

SECTION B. Validation team, technical reviewer and approver

B.1. Validation team members

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader, Validator & Country Expert	EI	Kewat	Shailendra	TUV SUD South Asia Pvt Ltd	✓		✓	✓
2	Technical Expert (15.1)	EI	Nambiar	Dhanya	TUV SUD South Asia Pvt Ltd	✓		✓	✓

B.2. Technical reviewer and approver of the validation report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Murty	Eswar	TUV SUD South Asia Pvt Ltd
2	Technical Expert (15.1)	EI	Wani	Akhlaq	TUV SUD South Asia Pvt Ltd
3	Approver	IR	Murty	Eswar	TUV SUD South Asia Pvt Ltd

SECTION C. Means of validation

C.1. Desk/document review

The PoA-DD (version 01) was submitted to TUV-SUD and uploaded for the Global Stakeholder Consultation (GSC) on 15/09/2020. The validation is performed primarily as a document review of the publicly available PoA-DD (version 01) and the intermediate versions up to final version (Version 3.0, dated 20/12/2020) were reviewed with additional background documents related to the PoA design including baseline and additionality of the PoA. A complete list of all documents and proofs reviewed is in Appendix 3 of this validation report. TUV's validation process takes into consideration all the CDM Rules and Guidance applicable to the programme of activities, e.g. CDM Validation and Verification Standard, Clean Development Mechanism Project Standard, Clean Development Mechanism Project Cycle Procedure, Checklist for requests for registration of programmes of activities and relevant decisions, clarifications and guidance from the CMP and the CDM Executive Board.

During the desk review, TUV has applied standard auditing techniques to assess the quality of information provided. The following activities were performed:

- Review the compliance of the PoA-DD with the guidance for completing the PoA-DD form;
- Review the completeness of the data and the information presented;
- Review of the eligibility criteria for validation of the CDM PoA;

Review the monitoring plan and monitoring methodology: Particular attention was paid to coverage of all monitoring parameters, the frequency of measurements, the quality of the metering equipment including calibration requirements and the quality assurance and quality control procedures;

- Review the calculations and assumptions used to obtain GHG data;
- Evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

C.2. On-site inspection

Onsite inspection has not been conducted for the validation of the PoA due to travel restrictions imposed due to COVID-19 pandemic and also due to the following reasons:

CDM-EB Guidance	Justification by DOE
If the site visits cannot be postponed, a proper justification should be provided by the DOE why the site visits cannot be postponed, including the demonstration of a significant impact of delaying the site visits on the DOE, or project participants or coordinating/ managing entity (e.g. commitment/ timeline as per the validation or verification contract, CER delivery commitment by project participants) reliance on applicable force majeure provisions in the validation or verification contracts, if needed.	There is no assessment required at on-site inspection due to the reason that all parameters which are fixed ex-ante are either based on the applied baseline & monitoring methodology or the methodological tools. No sampling/survey involved/carried out by the CME, which requires assessment on site. Moreover Site visit for this validation cannot be postponed because delaying the site visit affects significantly with respect to project implementation schedule including CERs delivery. Based on the above-mentioned justification, the DOE could not postpone the site visit.
If the site visit cannot be postponed but are not conducted due to the COVID-19 pandemic, the DOE may use other standard auditing techniques for validation or verification, as referred to in sections 7.1.3 and 9.1.3 of the VVS-PA and sections 7.1.3 and 10.1.3 of the	The DOE has used alternative measures in place of mandatory on-site inspections This has been done as per the decision taken by CDM-EB on 20 March 2020 and subsequent extension of these alternative measures until 31 December 2020 as per p.26 EB 106.

VVS-PoA. In the above regard, the Board agrees to allow for three months, from 23 March to 23 June 2020, to deviate from the requirements in paragraphs 30 and 339 of the VVS-PA and paragraphs 183 and 321 of the VVS-POA. Where the DOE relies on this temporary measure, it shall describe in the validation/ verification report the alternative means used and justify that they are credible and sufficient for the purpose of validation or verification.	Standard auditing techniques have been used to conduct the remote assessment in line with section 7.1.3 of CDM VVS PoA v2.0. Accordingly, a remote audit was conducted, and the personnel interviewed are discussed in section D.3.
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The DOE has used standard auditing techniques as per section 7.1.3 of CDM VVS PoA v2.0 to conduct the remote assessment of the CPA with the help of web meetings and video conferencing. The interviews and discussions were conducted successfully with the CME/PP and their representatives.

Duration of on-site inspection: DD/MM/YYYY to DD/MM/YYYY				
No.	Activity performed on-site	Site location	Date	Team member
1.	NA			
...				

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1	Mohanty	Niroj	Core CarbonX Solutions Private Limited (CME)	19/10/2020	General aspects of PoA, LSC, EIA, etc.	Shailendra Kewat Dhanya Nambiar
2	Mohanty	Niroj	Core CarbonX Solutions Private Limited (CME)	19/10/2020	General support, Technical support	Shailendra Kewat, Dhanya Nambiar
3	P	Abhigna	Core CarbonX Solutions Private Limited (CME)	19/10/2020	Approval of PoA from Host Party and approval of participation of PP, Environment impact analysis	Shailendra Kewat Dhanya Nambiar

C.4. Sampling approach

Validation of the proposed PoA is not focused on assessment of actual monitoring activity or data verification, so sampling approach was not applied to validate proposed program of activity. However, for each CPA the project will adopt the following sampling framework.

Representative sampling will be undertaken that is designed in line with the requirements of the AMS III. AU methodology applied and the "Standard for sampling and surveys for CDM project activities and programme of activities, version 08.0". This sampling plan follows the recommended outline as contained in "Guidelines for sampling and surveys for CDM project activities and programme of activities

Monitoring Parameters

A percentage –Percentage of the areas under cultivation and water regime practices. This will be used to estimate the aggregated project areas for the year

A numeric value –cultivation period of rice in a year. (L_y Cultivation period of rice in year y)

As per the methodology AMS-III.AU version 04.0-Methane emission reduction by adjusted water management practice in rice cultivation para 37 “ 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”. And as per the the section 5, para 22 of the Standard “Parameter values shall be estimated by sampling in accordance with the requirements in the applied CDM methodologies separately and independently for each of the CPAs included in the PoA except when a single sampling plan covering a group of CPAs is undertaken applying 95/10 confidence/precision for the sample size calculation. In the latter case, the populations of all CPAs in the group are combined together.”

Sample size will be chosen for a 95/10 precision (95% confidence interval and 10% margin of error); in cases where survey results indicate that 90/10 precision is not achieved, the lower bound of a 95% confidence interval of the parameter value may be chosen as an alternative to repeating the survey efforts to achieve a 95/10 precision.

Furthermore, as per para 37, Annex 38 of EB 55, “a request for issuance shall include all CPAs which are included in the PoA”. Sampling may therefore be same across CPAs and hence a single sampling plan shall be applied to reduce efforts.

The sample to be surveyed will be drawn through: physical on-site visit (face-to-face) and site visit. For the physical on-site visit (face-to-face interview), data is collected through hard-copy questionnaires and /or online questionnaire.

C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Areas of validation of compliance	No. of CL	No. of CAR	No. of FAR
Programme of activities			
Identification of programme type			
Description of PoA	1	1	
Management system	1		
Demonstration of additionality of PoA		1	
Start date and duration of PoA	1		
Environmental impacts	1		
Socio-economic impacts			
Local stakeholder consultation		1	
Sustainable development co-benefits			
Approval			
Authorization			
Modalities of communication			
Global stakeholder consultation		1	
Generic component project activities			
General description of generic CPA		1	
Selection of methodologies and standardized baselines	1		
<ul style="list-style-type: none"> Deviation from methodologies and/or methodological tools 			
<ul style="list-style-type: none"> Clarification on applicability of methodology, tool and/or standardized baseline 		1	
Application of methodologies and standardized baselines			
<ul style="list-style-type: none"> General 			
<ul style="list-style-type: none"> Project boundary, sources and GHGs 			

• Baseline scenario		1	
• Estimation of emission reductions or net anthropogenic removals		1	
• Monitoring plan		2	
Crediting period type and duration			
Eligibility criteria for inclusion of CPAs		1	
Others (please specify)			
Total	5	11	

SECTION D. Validation findings

D.1. Programme of activities

D.1.1. Identification of programme type

Means of validation	<p>The validation team assessed whether the proposed CDM PoA will include only non-A/R CPAs or A/R CPAs through document review of the PoA-DD and interview with the CME as per para. 37 of VVS.</p> <p>The PoA-DD was reviewed against the latest PoA-DD form in order to determine whether PoA-DD prepared using the valid version of PoA-DD-FORM applicable to the identified programme type and followed instruction therein. The Programme of Activities involves the implementation of adjustment water management system and/or Direct seeding of pre-germinated rice (DSR) may result in to the reduced methane emissions due to a shorter flooding period and decreased soil disturbance compared to transplanting rice seedlings to mitigate methane emission from paddy fields in the regions of India. It finally leads to reduce greenhouse gas emission by introducing AWD method in rice fields. Therefore, it was concluded that the PoA includes only non-A/R CPAs as per para. 31 of PS.</p> <p>The PoA is a Type-III small scale project activity and will be implemented using the approved methodology AMS-III.AU (Version 4.0) and scale of each potential CPA is limited to microscale as per eligibility criteria. Thus, it was found that the PoA will include only small-scale CPAs.</p>
Findings	No CAL/CL has been raised.
Conclusion	TUV-SUD confirms that the PoA includes only small-scale non-A/R CPAs and the PoA-DD complies with the applicable latest PoA-DD forms and instructions therein.

D.1.2. Description of PoA

Means of validation	<p>By means of review of the PoA-DD against all supporting documents and interviews with the CME and relevant stakeholders, the validation team assessed the accuracy and completeness of the description in the PoA-DD and whether it provides an understating of the PoA.</p> <p>Paddy fields are the most dominant anthropogenic sources of methane to the atmosphere (5-20% of the total emission from all anthropogenic sources¹). Anaerobic decomposition of organic material in flooded rice fields produces methane, which escapes to the atmosphere primarily by transport through the rice plants. The annual amount of CH₄ emitted from a given area of rice is a function of the number and duration of crops grown, water regimes before and during cultivation period, and organic and inorganic soil</p>
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¹ <http://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch4ref5.pdf>

	<p>amendments. Soil type, temperature, and rice cultivar also affect CH₄ emissions.</p> <p>This CH₄ emission intensive cultivation method will be targeted by the proposed PoA, that will involve the implementation of the technology/measures that result in reduced anaerobic decomposition of organic matter in rice cropping soils and thus reduced generation of methane.</p> <p>The PoA includes projects such as:</p> <ul style="list-style-type: none"> (a) Rice farms that change the water regime during the cultivation period from continuously to intermittent flooded conditions and/or a shortened period of flooded conditions; (b) Alternate wetting and drying method (c) Rice farms that change their rice cultivation practice from transplanted to direct seeded rice. <p>Thus, the measure will consist of AWD and/or DSR in combination with adjusted water management system in rice cultivation.</p>
Findings	CAR 01 and CL 01 has been raised for clarification on project boundary and some referred documents. PP has provided clarification and accordingly CAR and CL has been completely resolved.
Conclusion	TUV confirms that: the PoA-DD contains a clear description of the PoA including the framework for implementation of PoA, policy/measure or stated goal of the PoA;. The description of the proposed PoA in the PoA-DD is to be accurate and complete and it provides an understanding of the PoA as per para. 42 of VVS for PoA.

D.1.3. Management system

Means of validation	<p>Validation team based on the review of PoA-DD and discussion with CME and CPA implementer during the interview confirms that clear and transparent description of the operational and management arrangements have been established by the CME for the PoA. All the details of individual CPAs including the documents shall be controlled by CPA implementer. Furthermore, the records of individual CPAs shall also be maintained by the CME. Individual CPA implementer shall sign an agreement with the CME and agrees to comply with all terms and conditions of the PoA including those related to the monitoring and data control. The same has been confirmed from the review of template agreement between the CPA implementers and the CME where the eligibility criteria for the inclusion of the CPA in PoA are mentioned. Hence any CPA which would be included in the PoA shall follow the operation and management plan of the PoA as stated in the PoA-DD and signed agreement.</p> <p>The CME has a well-defined project management structure for monitoring of the CPA which can be verified from the PoA-DD. The monitoring plan describes the field measurement procedures, collection of data, roles and responsibilities of staff and archiving data, QA and QC procedures, data storage etc. All the monitoring data is stored / will be recorded and kept for a period of crediting period + 2 years or the last issuance of CERs + 2 years whichever occurs later by CME</p>
Findings	CL 02 has been raised
Conclusion	Validation team reviewed the PoA-DD /02/, CME management system manual /07/ and confirms that clear and transparent information about responsibilities, records handling, training, technical review procedures,

	<p>record keeping, documentation control and measures for continual improvements.</p> <p>The same has been confirmed during the interviews with representatives of CME and document review. The validation team concludes that the operational and management plan described in the PoA-DD is complete. This is deemed appropriate by the validation team. Core CarbonX Solutions Private Limited will be Coordinating/Managing Entity (CME) of this SSC-PoA and is the entity which communicates with the CDM Executive Board. However, in due course of the development, there will be different parties involved as a part of the management system such as CPA implementer, NGOs and Farmers and their Roles & Responsibilities/ Competencies have been provided in the section B of the PoA DD. Validation team confirms the compliance of the requirements of §36 and §37 of the CDM PS for PoAs (version 02.0) and §44 of the CDM VVS for PoAs (version 02.0).</p>
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D.1.4. Demonstration of additionality of PoA

Means of validation	<p>The additionality for each CPA will be demonstrated as per eligibility criteria for the inclusion of a CPA in the PoA. Moreover, the validation team concludes that the approach used to demonstrate additionality is appropriate and justified. PP has used TOOL 21 to demonstrate additionality.</p> <p>As per the para 10 of the TOOL21: Demonstration of additionality of small-scale project activities, version 13.1, project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers</p> <p>(a) <i>Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions;</i></p> <p>(b) <i>Technological barrier: a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;</i></p> <p>(c) <i>Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;</i></p> <p>(d) <i>Other barriers: without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.</i></p> <p>This proposed programme intends to implement projects such as a) Alternate Wetting and Drying (AWD) Method and b) DSR with Adjusted Water Management System in in rice cultivation. The PoA demonstrates the existence of an Investment Barrier and Barrier due to prevailing practice as per the para 10 of the CDM Methodological tool TOOL21: Demonstration of additionality of small-scale project activities, ver. 12.0.</p> <p>Investment Barrier:</p> <p>For AWD technique:</p> <p>The actions under the PoA will alleviate these barriers by installing pipes in the farmland and carry out hand holding and awareness for the farmers about the AWD Technique. The proposed programme will install the pipes at free of cost to users which means no money shall be charged to farmers for the installation of pipes as well as awareness and capacity building will</p>
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be given to farmers. Hence there is no financial return from the programme other than revenue from the sale of CERs.

For DSR and adjusted water management system:

The adoption of DSR is not prevalent due to constraints such as use of High seed rates, Risk of poor or non-uniform crop establishment, higher weed infestation, higher risk of lodging. This underscores the need for an integrated and scientific approach to make direct seeded rice socioeconomically and environmentally sustainable. Thus the CME and CPA implementer will work with research institutes/universities/NGOs in developing, refining and catalyzing dissemination of practices to address the above constraints including (1) Mechanized and precise planting using low seed rate, (2) identifying innovative solutions for weedy rice and other emerging weed problems (e.g. herbicide resistance), (3) decision tools for accurate recommendation, (4) identifying new herbicides for broad-spectrum weed control, (5) exploiting the potential of anaerobic germination tolerant rice for weed suppression, (6) integrating mechanical tools (7) precision application methods and safe handling to improve herbicide efficacy and human safety, and (8) Testing of existing and new superior rice cultivars (inbreds or hybrids) to identify cultivars which are more adapted to DSR. All the cost on piloting, capacity building, monitoring and management in this PoA will be supported by the investor for adoption of DSR technology. In addition, majority of farmers in India are small and poor, therefore access to new mechanized and precision agriculture technology is limited as these are capital intensive and farmers cannot afford. The PoA will support and strengthen the service economy of scale-appropriate mechanization and precision agriculture technologies to provide cost-effective access to capital-intensive machinery and technologies through carbon revenue.

Thus, in the absence of the PoA, none of the CPAs that will be implemented under the PoA would occur. Any emission reduction effect would not occur without being registered as a CDM project activity. Hence, the information presented here constitutes the demonstration of additionality of the PoA as a whole, and this proposed general CPA is small-scale project.

Barriers due to the prevailing practice:

Transplanted Rice (TPR) with continuously flooded fields is the traditional and prevailing cultivation method in India. Rice farmers continue what they have learned from the tradition and stick to these habits. Changing the cultivation method to AWD and DSR is against to their knowledge about the traditional methods, the conviction of their advantages, willingness to innovate and to take risks and the capital to finance equipment. In addition, rice farmer sees the perceived complicated irrigation management system, the risk of seed being washed away by rainfall or eaten by birds/rats after sowing and higher grass weed infestation and thus higher effort for weeding as some of the barrier.

There are also no government policy regulation or incentive mechanism to promotes alternative wetting and drying (AWD) and DSR. Thus, without any support in terms of funding, policies and established practice prevent its dissemination in the India as of today . Therefore, the current AWD/DSR area is limited only to pilot level without any significant penetration on ground.

As discussed in the PoA-DD, the main objective of the project is to establish and maintain a sustainably farming for carbon mitigation, poverty reduction with sustainable livelihoods in the farmers. It is to be also noted that the

	<p>project does not generate any kind of revenue. The project is completely a non-profitable activity, with the intention to support the livelihoods of local community, by means carbon revenue generated from the proposed project.</p> <p>In view of the above, the PoA would not be implemented without the CDM revenue in the geographical region of analysis and it would, therefore, be additional and the proposed project activity is not the baseline scenario. Validators confirm that all data, rationales, assumptions, justifications, and documentation provided by the project participants to support demonstration of additionality are credible and reliable, which was checked and verified at the time of validation. Validators consider the reasoning for the proposed project additionality demonstration is credible and reasonable i.e. the proposed project has the ability to reduce anthropogenic emissions of greenhouse gases by sources below those that would have occurred in the absence of the registered CDM-PoA.</p>
Findings	CAR 03 has been raised
Conclusion	<p>For each CPA to be included under the PoA is in accordance with the requirements of the Paragraph 11 of the TOOL21, 'Demonstration of additionality of small-scale project activities', version 13.0 refers in para 10 of the TOOL21, project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the given barriers. CME has demonstrated the additionality with Investment barriers.</p> <p>This is in conformance with the requirements of §38, §39 and §124 (g) of the CDM PS for PoAs (version 02.0) and §45 of CDM VVS for PoAs (version 02.0).</p>

D.1.5. Start date and duration of PoA

Means of validation	<p>The start date of the PoA has been considered as the webhosting of the project for GSC which is 15/09/2020. The audit team has checked the same with mail sent to CME for PoA-DD publication for GSC by UNFCCC. The project activity adopts renewable crediting period of 7 years period which can be renewed for maximum 2 times.</p> <p>The validation team reviewed the PoA-DD /01/ and found that the duration of the PoA is 28 years, counting from the start date of the PoA. Based on the above assessment, the validation team concludes that the duration of the proposed PoA is in conformance with the requirements of §43 of CDM PS for PoAs (version 02.0) and § 49 of CDM VVS for PoAs (version 02.0). The start date of the PoA is 15/09/2020, which is the date on which PoA is web hosted with UNFCCC.</p>
Findings	CL 03 had been raised in this regard and resolved, please refer appendix 4 for details.
Conclusion	Based on the above assessment, the validation team concludes that the description and determination of the start date of the proposed PoA is in conformance with the requirements of the Glossary of CDM Terms /B06/, § 40, § 41 of CDM PS for PoAs (version 02.0) and § 46, § 48 and § 49 of CDM VVS for PoAs (version 02.0).

D.1.6. Environmental impacts

Means of validation	<p>As per the host country requirements EIA is not required for Rice field cultivations and activities involving adjusted water management system and/or Direct seeding of pre-germinated rice (DSR) in rice cultivation. This was confirmed with the Ministry of Environment and Forests (Government of India) notification dated September 14, 2006 regarding the</p>
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	<p>requirement of environmental Impact Assessment (EIA) studies. It has been indicated in the section E.1 of PoA-DD /01/ that the environmental impact assessment is no required by the host Party.</p> <p>CME has submitted notification of Ministry of Environment and Forests (Government of India) dated September 14, 2006 that the implementation of the project does not require an Environmental Impact Assessment (EIA).</p>
Findings	CL 04 had been raised in this regard and resolved, please refer appendix 4 for details.
Conclusion	Hence, the audit team confirms that environmental impact analysis is not required for the PoA and also for the CPAs to be included in the PoA. This is deemed appropriate in the context of the PoA and also in conformance to the requirements of § 44, § 45 and § 46 of CDM PS for PoAs (version 02.0) / and § 51 to § 55 of CDM VVS for PoAs (version 02.0).

D.1.7. Socio-economic impacts

Means of validation	N/A since the PoA is not a A/R project.
Findings	-
Conclusion	-

D.1.8. Local stakeholder consultation

Means of validation	<p>It has been indicated in Part I, section F of PoA-DD that the local stakeholder consultation would be done at the PoA level. Accordingly, the local stakeholder consultation for the PoA has been conducted. The local stakeholder consultation was conducted via a webinar on 1st September 2020 from 14:00 pm to 16:00 pm due to COVID-19 restriction. The invited stakeholders included representatives from farmers, not-for-profit organisations, Agriculture university scientists, development agencies in the region.</p> <p>The audit team has checked the meeting presentation, comments and the participants of the webinar to confirm the process of local stakeholder consultation.</p>
Findings	CAR 04 had been raised in this regard and resolved, please refer appendix 4 for details.
Conclusion	The DOE confirms that the local stakeholder consultation process has been done in accordance with the requirement of §51 of PoA-PS, Version 02.0 and §58 of VVS-PoA, Version 02.0.

D.1.9. Sustainable development co-benefits

Means of validation	Sustainable development co-benefits will not be monitored in the specific monitoring plan.
Findings	NA
Conclusion	NA

D.1.10. Approval

Means of validation	<p>CoreCarbonX Solutions Private Limited (PP) will communicate with the Board. The host Party (India) meets all relevant participation requirements. A Letter of Approval (LoA) is issued by the DNA of India on 12/12/2012, authorizing CoreCarbonX Solutions Private Limited as CME and project participant and confirming that the PoA contributes to sustainable development. The coordinating/managing entity has obtained a Letter of Approval dated 12/12/2012 from the DNA Party involved in the proposed CDM PoA at the time of request for registration of the PoA.</p> <p>The coordinating/ managing entity has obtained from host Party a Letter of Authorization of its coordination of the proposed CDM PoA; this confirms to the requirement of §69-§71 of CDM PS for PoAs (version 02.0). The project participant is Core CarbonX Solutions Private Limited; the project is a unilateral project and hence India is the only country involved in the proposed Programme of Activities.</p> <p>India, is the Host party and fulfils the requirements to participate in the CDM, having ratified the Kyoto Protocol in August 2005 and establishing a DNA in the “Ministry for Environmental and Forest”.</p>
Findings	No CAR/CL has been raised.
Conclusion	The assessment above is in compliance with §70-§73 of CDM VVS for PoAs (version 02.0).

D.1.11. Authorization

Means of validation	<p>CoreCarbonX Solutions Private Limited (PP) will communicate with the Board. The host Party (India) meets all relevant participation requirements. A Letter of Approval (LoA) is issued by the DNA of India on 12/12/2012, authorizing CoreCarbonX Solutions Private Limited as CME and project participant and confirming that the PoA contributes to sustainable development. There is no separate letter of authorization apart from the LoA. There is no separate letter of authorization apart from the LoA.</p> <p>In accordance with § 69 of CDM PS for PoAs (version 02.0), the coordinating/managing entity has obtained a Letter of Approval dated 12/12/2012 from the DNA Party involved in the proposed CDM PoA at the time of request for registration of the PoA.</p> <p>The coordinating/ managing entity has obtained from host Party a Letter of Authorization of its coordination of the proposed CDM PoA; this confirms to the requirement of §69-§71 of CDM PS for PoAs (version 02.0). The CME and project participant is Core CarbonX Solutions Private Limited; the project is a unilateral project and hence India is the only country involved in the proposed Programme of Activities.</p> <p>India, is the Host party and fulfils the requirements to participate in the CDM, having ratified the Kyoto Protocol in August 2005 and establishing a DNA in the “Ministry for Environmental and Forest”.</p>
Findings	No CAR/CL has been raised.
Conclusion	The assessment above is in compliance with §70-§73 of CDM VVS for PoAs (version 02.0).

D.1.12. Modalities of communication

Means of validation	The MoC is signed on 22/12/2020 was provided by CoreCarbonX Solutions Private Limited with whom DOE has a contractual relationship confirmed by
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	<p>the request of services signed on 09/09/2020. Section 2 of the MoC identifies only focal point i.e. CoreCarbonX Solutions Private Limited. The corporate identity of the focal point and the PP included in the MoC statement, as well the personal identities, the signatures and the related authorized signatures, and the employment status have been cross-checked through written confirmation from the project participant that submits the MoC statement that all corporate and personal details, including specimen signatures, are valid and accurate, interviews with the PP confirmed the same.</p> <p>Validation team confirms that the latest applicable template has been utilized by the CME for the MoC . The MoC has been received directly from the signatories of the coordinating/managing entity with whom the DOE has signed contract for the validation service of this proposed project.</p> <p>The personal/corporate identity of the signatory, specimen signatures and legal status of the entity (CME), who has signed the MoC was confirmed through document review of following documents:</p> <p>1.Certificate of Incorporation of the CME - Core CarbonX Solutions Private Limited. 2. Personal Identity of signatories of CME • Mr. Niroj Mohanty 3.Corporate identity of the signatory • Niroj Mohanty is the Managing Director of Core CarbonX Solutions Private Limited</p>
Findings	No CAR/CL has been raised.
Conclusion	The assessment above confirms to the requirement of §75 of CDM PS for PoAs (version 02.0) and §81-§86 and §86 of CDM VVS for PoAs (version 02.0) .

D.1.13. Global stakeholder consultation

Means of validation	The PoA-DD, version 01 has been web hosted from 15/09/2020 – 15/10/2020. No comments were received during the global stakeholder consultation
Findings	No CAR/CL has been raised.
Conclusion	The process for global stakeholder consultation was conducted in accordance with the requirements of section 7.14 of the CDM VVS for PoAs (version 02.0).

D.2. Generic component project activities

D.2.1. General description of generic CPA

Means of validation	<p>Generic CPA applying AMS-III.AU: The Proposed small scale Component Project Activity involves the implementation of the various water management practices to mitigate methane emission from paddy fields in, India. The CPA will lead to the considerable reduction of methane emission in the paddy fields and will contribute strongly to the sustainable development of rural villages.</p> <p>The two technologies which CPA will adopt to reduce water usage:</p> <p>The technology measures: Adjusted water management system (AWD) Direct seeding of pre-germinated rice (DSR)</p> <p>In accordance with the TOOL21, 'Demonstration of additionality of small-scale project activities', version 13.0, the total annual emission reductions of</p>
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	all fields included under the proposed CPA will be less than 60 kt CO ₂ equivalent. and the geographic location of the project activity is in an India.
Findings	CAR 05 had been raised in this regard and resolved, please refer appendix 4 for details.
Conclusion	The validation team confirmed during the interviews with the representatives of the CME and document reviews. The description provided for a generic CPA in part II of PoA-DD is in conformance to the requirements of § 81 of the Project Standard for PoA version 02.0 §90 - §91 of CDM VVS for PoAs (version 02.0)

D.2.2. Selection of methodologies and standardized baselines

D.2.2.1. Deviation from methodologies and/or methodological tools

Means of validation	NA
Findings	NA
Conclusion	NA

D.2.2.2. Clarification on applicability of methodology, tool and/or standardized baseline

Means of validation	NA
Findings	NA
Conclusion	NA

D.2.3. Application of methodologies and standardized baselines

D.2.3.1. General

Means of validation	The methodology applied is AMS III.AU, version 4 in generic CPA.			
	The applicability of the methodology has been assessed as described below.			
	S.No.	Technology /Measure as per AMS III.AU/version 04	CME Justification	DOE Assessment
	1	Rice cultivation in the project area is predominantly characterized by irrigated, flooded fields for an extended period of time during the growing season, i.e. farms whose water regimes can be classified as <i>upland or rain fed and deep water</i> are not eligible to apply this methodology. This shall be shown from a representative survey conducted in the geographical region of the proposed project or by using national data. This project area characterization shall also include information on pre-season water regime and applied organic amendments, so that all dynamic parameters as shown in Table 2 of the methodology AMS III. AU,	Rice cultivation in the project area under the proposed CPA is predominantly characterized by irrigated, flooded fields for an extended period of time during the growing season. This shall be shown from a representative survey conducted in the geo-graphical region of the proposed project or by using national data. This will demonstrate baseline rice cultivation practices in the geo-graphical	Validation team based on review of the PoA DD and applied methodology confirms that generic CPAs of the PoA meets this applicability criteria, provided it meets the eligibility criteria of the PoA

		version 04 are covered by the baseline study.	region covered under CPA.	
	2	The project rice fields are equipped with controlled irrigation and drainage facilities such that both during dry and wet season, appropriate dry/flooded conditions can be established on the fields.	The rice fields under the proposed CPA will involve controlled irrigation and drainage facilities, consist of both the irrigation activity and the drainage activity that can be controlled or adjusted as desired, not just in terms of timing but also in terms of the quantity of water or the flow rate. Only field where the controlled irrigation and drainage facilities can be established, those field will be considered under CPA..	For each CPAs it has to be checked that only field with controlled irrigation or with drainage facility can be included, which can be verified by physical verification. Validation team based on review of the PoA DD and applied methodology confirms that generic CPAs of the PoA meets this applicability criteria, provided it meets the eligibility criteria of the PoA
	3	The project activity does not lead to a decrease in rice yield. Likewise, it does not require the farm to switch to a cultivar that has not been grown before.	The cultivation method used in the proposed CPA doesn't lead to a decrease in rice yield. The rice cultivar/variety will not be touched by the project cultivation method.	Historical data or survey to be presented for CPA level to verify the same. Validation team based on review of the PoA DD and applied methodology confirms that generic CPAs of the PoA meets this applicability criteria, provided it meets the eligibility criteria of the PoA
	4	Training and technical support during the cropping season that delivers appropriate knowledge in field preparation, irrigation, drainage and use of fertilizer to the farmer is part of the project activity and is to be documented in a verifiable manner (e.g. protocol of trainings, documentation of on-site visits). In particular the project proponent is able to ensure that the farmer by himself or through experienced assistance is	The training programme will focus collaboration between research institutes, NGOs, and universities who will work in the defined regions with farmers. The knowledge and information given in the International Rice Research Institute will be used for building	Training records has to be verified to meet this applicability criteria. Validation team based on review of the PoA DD and applied methodology confirms that generic CPAs of the PoA meets this applicability criteria, provided it meets the eligibility criteria of the PoA.

		able to determine the crop's supplemental N fertilization need. The applied method shall assess the fertilizer needs using for example a leaf colour chart (LCC) or photo sensor or testing strips. Alternatively, a procedure to ensure efficient fertilization considering the specific cultivation conditions in the project area backed by scientific literature or official recommendations shall be used.	up awareness and practices among farmers. Training and technical support during the cropping season that delivers appropriate knowledge in field preparation, irrigation, drainage and use of fertilizer to the farmer is part of the project activity and is to be documented in a verifiable manner (e.g. protocol of trainings, documentation of on-site visits). The region specific protocol of trainings and documentation on site visit will be prepared..	Furthermore training protocol has to be checked at CPA level.
	5	Project proponents shall ensure that the introduced cultivation practice, including the specific cultivation elements, technologies and use of crop protection products, is not subject to any local regulatory restrictions.	In India Rice is mainly grown in two types of soils i.e., (i) uplands and (ii) low lands. The method of cultivation of rice in a particular region depends largely on factors such as situation of land, type of soils, irrigation facilities, availability of labourers intensity and distribution of rainfalls. The crop of rice in Wet or lowland cultivation is grown with Transplanting in flooded field. puddled fields. ² It is verified that there are no effective policies or regulatory requirements that will stimulate switch from the prevailing practice	A survey or documents has to be verify which justify that this project activity is not subject to any local regulatory restrictions. Validation team based on review of the PoA DD and applied methodology confirms that generic CPAs of the PoA meets this applicability criteria, provided it meets the eligibility criteria of the PoA.

² <https://farmer.gov.in/cropstaticsrice.aspx>

			in irrigated rice fields – continuous flooding – to AWD or DSR with adjusted water management a method that leads to lower GHG emissions from rice cultivation. Thus, neither the project activity as a whole nor its elements are in conflict with any laws or regulations in India. Further explanations are given in Section E.	
	6	Excepting the case where the default value approach indicated in paragraph 15 is chosen for emission reductions calculations, project proponents have access to infrastructure to measure CH ₄ emissions from reference fields using closed chamber method and laboratory analysis.	Default value will be used	Referred methodology has to be verified for default values consideration. Validation team based on review of the PoA DD and applied methodology confirms that generic CPAs of the PoA meets this applicability criteria, provided it meets the eligibility criteria of the PoA.
	7	Aggregated annual emission reductions of all fields included under one project activity shall be less than or equal to 60 kt CO ₂ equivalent.	The total annual emission reductions of all fields included under the proposed CPA will be less than 60 kt CO ₂ equivalent.	Referred methodology and ER calculation has to be verified. Validation team based on review of the PoA DD and applied methodology confirms that generic CPAs of the PoA meets this applicability criteria, provided it meets the eligibility criteria of the PoA.
Findings	CAR 06 has been raised in this regard and resolved, please refer appendix 4 for details.			
Conclusion	<p>The applied methodologies are correctly quoted and are identical to the versions available on the UNFCCC website. The applied versions of the baseline and monitoring methodologies /B02/ are valid at the time of submission for stakeholder consultation and also request for registration.</p> <p>All applicability criteria in the methodologies, the applied tools or any other methodology component referred to therein are fulfilled. This is in</p>			

	conformance to the requirements of §92 & §97 of CDM VVS for PoAs (version 02.0).
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D.2.3.2. Project boundary, sources and GHGs

Means of validation	As per § 10 of the applied methodology AMS-III.AU, version 4, validation team was able to confirm that the The project boundary of the CPA follows the definition in AMS-II.AU.				
	The project boundary is the physical, geographical area of the field. and it corresponds to the National boundaries of India and that all the identified emission sources which are impacted by the proposed project activity are addressed by the approved methodology and can be seen in the table below.				
		Source	GHG	Included?	Justification/Explanation
	Baseline	Baseline: Continuation of transplanted rice and flooded rice cultivation	CO ₂	No	Minor source of emissions and limited data available. Exclusion is conservative assumption.
			CH ₄	Yes	Major source of emission
			N ₂ O	No	Minor source of emissions and limited data available. Exclusion is conservative assumption.
	Project Activity	Project activity: Project emissions under the changed cultivation practice	CO ₂	No	Excluded as emissions are neutral
			CH ₄	Yes	Major source of emission
			N ₂ O	No	Excluded for simplification
	Findings				
No CAR/CL has been raised.					
Conclusion					
The Validation team confirms that the project boundary for the potential/future CPAs is based on the applied methodologies and the validation team also confirms that the identified GHG emission source occurring within the project boundary is CH4 and no other gases are involved during the project activity. The same has been verified during the course of validation, which in line with the applied methodologies and This is in conformance with §100 & §101 of CDM Project standard for PoAs (version 02.0) and §98 of CDM VVS for PoAs (version 02.0).					

D.2.3.3. Baseline scenario

Means of validation	<p>The procedure to identify the most plausible baseline scenario derived from the applied methodology AMS-III.AU, version 4 has been applied correctly and is transparently and sufficiently documented in the PoA-DD.</p> <p>As per the applied methodology, the baseline scenario, in the absence of the project activity, will be continuation of the current practice e.g. transplanted and continuously flooded rice cultivation in the project fields.</p>
Findings	CAR 07 has been raised in this regard and resolved, please refer appendix 4 for details.
Conclusion	The validation team confirms that the baseline is defined based on the most recent data available in conformance with the methodology. All assumptions and data used by PP are listed in PoA-DD and/or its annexures with references and sources. Relevant National/Sectoral policies and circumstances are considered and listed in the PoA-DD. The audit team

	confirms that the assumptions made in the demonstration of additionality are reasonable and that the project's additionality is well funded.
	This is in conformance with §102 of CDM PS for PoAs (version 02.0) and § 111 of CDM VVS for PoAs (version 02.0) .

D.2.3.4. Estimation of emission reductions or net anthropogenic removals

Means of validation	<p>The equations and choices provided in the applied methodology, AMS-III.AU, version 4 are correctly quoted in the PoA-DD. The emission reductions of the CPAs of the PoA would be calculated using the formulae mentioned in the applied methodology. The emission reduction by the SSC-CPAs are to be estimated based on the following equation.</p> <p>As an alternative to the reference field approach indicated in paragraphs 12, 13, 16 and 17 of AMS III.AU, project participants may calculate emission reductions using one of the following two simplified approaches (i.e. Option 1 or Option 2) using IPCC tier 1 approach or global default values.</p> <p>Option 1: Using the IPCC tier 1 approach but undertaking measurements to determine baseline emission factors for continuously flooded fields, as per the following formula:</p> $ER_y = EF_{ER} \times A_y \times L_y \times 10^{-3} \times GWP_{CH_4}$ $EF_{ER} = EF_{BL} - EF_P$ $EF_{BL} = EF_{BL,c} \times SF_{BL,w} \times SF_{BL,p} \times SF_{BL,o}$ $EF_P = EF_{BL,c} \times SF_{P,w} \times SF_{P,p} \times SF_{P,o}$ <p>Where:</p> <p>ER_y = Emission reductions in year y (t CO₂e) XXX</p> <p>EF_{ER} = Adjusted daily emission factor (kgCH₄/ha/day). Alternatively, seasonal emission factor (kgCH₄/ha/season) may be determined XXX</p> <p>A_y = Area of project fields in year y (ha) XXX</p> <p>L_y = Cultivation period of rice in year y (days/year). This is not applicable when seasonal emission factor is determined XXX</p> <p>GWP_{CH_4} = Global warming potential of CH₄ (t CO₂e/t CH₄) (25)</p> <p>EF_{BL} = Baseline emission factor (kgCH₄/ha/day) or (kgCH₄/ha/season) XXX</p> <p>EF_P = Project emission factor (kgCH₄/ha/day) or (kgCH₄/ha/season) XXX</p> <p>$EF_{BL,c}$ = Baseline emission factor for continuously flooded fields without organic amendments (kgCH₄/ha/day) or (kgCH₄/ha/season) XXX</p>
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	<p> $SF_{BL,w}$ or $SF_{P,w}$ = Baseline or project scaling factors to account for the differences in water regime during the cultivation period XXX $SF_{BL,p}$ or $SF_{P,p}$ = Baseline or project scaling factors to account for the differences in water regime in the pre-season before the cultivation period XXX $SF_{BL,o}$ or $SF_{P,o}$ = Baseline or project scaling factors should vary for both type and amount of organic amendment applied XXX </p> <p>Option-2</p> <p>Where,</p> <p> ER_y Emission reductions in year y (tCO₂e) EF_{ER} Adjusted daily emission factor (kgCH₄/ha/day) A_y Area of project fields in year y (ha) L_y Cultivation period of rice in year y (days/year) GWP_{CH_4} Global warming potential of CH₄ (tCO₂e/tCH₄, use value of 25) </p> <p>Details and choices are CPA specific. Thus all are provided in the CPA-DD and ER calculation sheet elaborated for the CPA-DD.</p> <p>Using default values of adjusted daily emission factor EF_{ER} (kgCH₄/ha/day) given below in different project scenarios:</p> <p>(a) For regions/countries where double cropping is practiced:</p> <ol style="list-style-type: none"> Use 1.50 (kgCH₄/ha/day) for project activities that shift to intermittent flooding (single aeration); Use 1.80 (kgCH₄/ha/day) for project activities that shift to intermittent flooding (multiple aeration); <p>(b) For regions/countries where single cropping is practiced:</p> <ol style="list-style-type: none"> Use 0.60 (kgCH₄/ha/day) for project activities that shift to intermittent flooding (single aeration); <p>Use 0.72 (kgCH₄/ha/day) for project activities that shift to intermittent flooding (multiple aeration).</p>
Findings	CAR 08 has been raised in this regard and resolved, please refer appendix 4 for details.
Conclusion	<p>All assumptions and data used by the project participants are listed in the general CPA-DD and related document submitted for registration. The data are properly referenced and all documentation is correctly quoted and interpreted. All values used can be deemed reasonable in the context of the CPA.</p> <p>The data and parameters which are fixed ex ante are clearly identified and in line with the methodology and applicable tools.</p> <p>This is in conformance with §108, §110, §111, §112 of CDM PS for PoAs (version 02.0) and §122, §123, §124, §125, §126 of CDM VVS for PoAs (version 02.0).</p>

D.2.3.5. Monitoring plan

Means of validation	The operational and management structure has been clearly described in Section B under "Management System" of the PoA DD and section I of both
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the generic CPA within the PoA DD and is in compliance with the envisioned situation.

The responsibilities, roles and institutional arrangements for data capturing and archiving has been mentioned elaborately and found acceptable. The information provided in the PoA DD has been cross checked during telephonic interview with the concerned people and the same was re-affirmed through the documentary evidence.

The assessment team has reviewed all the parameters in the monitoring plan against the requirements of the applied methodology and confirmed that no deviation was observed. The procedures have been reviewed by the assessment team through document review and interviews with the respective personnel. monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the CME, including the monitoring methodology, data management, and the quality assurance and quality control procedures to be implemented in the context of the project. Therefore, the CME will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

The parameters that are to be monitored ex-post:

S. No.	Parameter	Description and Source/Assessment
1	A _y , Aggregated project area in year y	<p>The size of project fields shall be determined by GPS or satellite data. If such technologies not available, established field size measurement approaches shall be used by PP that uncertainties are taken into account in a conservative manner. Project proponents shall set up a database which holds data and information that allow an unambiguous identification of participating rice farms, including name and address of the rice farmer, size of the field and cultivation practices and wate regimes.</p> <p>In case of survey, a survey representative sample will be carried out . Sampling standard shall be used for determining the sample size to achieve 95/10 confidence precision. A discount shall be applied based on the percentage of aggregate area under the project cultivation practices and water regime as determined by the sample survey.</p> <p>The monitoring paramenter considered in the are inline with the requirements of applied methedology AMS-III.AU., version 4. Also,the monitoring procedure considered for the parameters are verified to be appropriate and fessible.</p>
2	L _y , Cultivation period of rice in year y	<p>It will be determined by using cultivation database maintained by farmers. In case of survey of representative sample, sampling standard shall be used for determining the sample size to achieve 95/10 confidence precision.</p> <p>The monitoring paramenter considered in the are inline with the requirements of applied methedology AMS-III.AU., version 4. Also,the monitoring procedure considered for the parameters are verified to be appropriate and fessible.</p>

	The parameters that are fixed ex-ante:		
	S. No.	Parameter	Description and Source/Assessment
	1	EF _{ER} , Adjusted daily emission factor	<p>As per A.M.S III AU Version 4.0, paragraph 20, Emission reductions can be determined using two simplified options.</p> <p>Option 1: Using IPCC tier 1 approach but undertaking measurements to determine baseline emission factors for continuously flooded fields using the formula.</p> <p>Option 2: Using global default values derived from IPCC tier 1 approach,</p> <p>The project proponent has opted option 2 since the host country falls under the region/countries where double cropping is practiced and the project activities shift to intermittent flooding (multiple aeration).</p> <p>The monitoring parameter considered in the are inline with the requirements of applied methodology AMS-III.AU., version 4. Also, the monitoring procedure considered for the parameters are verified to be appropriate and feasible.</p>
	2	GWP _{CH4} , Global warming potential of CH ₄	<p>The global warming potentials (GWPs) of methane is adopted in accordance with decision 4/CMP.7. A GWP = 25 for methane is used for the second commitment period of the Kyoto Protocol. The GWP of methane is considered as per the table 2.14 of the errata to the contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.</p> <p>The monitoring parameter considered are in line with the requirements of applied methodology AMS-III.AU., version 4. Also, the monitoring procedure considered for the parameters are verified to be appropriate and feasible.</p>
Findings	CAR 09 has been raised in this regard and resolved, please refer appendix 4 for details.		
Conclusion	<p>The monitoring plan as provided in the generic CPA will be conducted in accordance with the requirements of the following CDM documents:</p> <ul style="list-style-type: none"> •Applied version of the methodology of the generic CPA •Standard for Sampling and Surveys for CDM Project Activities and Programme of Activities Version 08.0 •Guidelines for Sampling and Surveys for CDM Project Activities and Programme of Activities Version 04.0 <p>This is in conformance with §113, §114 of CDM PS for PoAs (version 02.0) and §127 of CDM VVS for PoAs (version 02.0) .</p>		

D.2.4. Crediting period type and duration

Means of validation	As per the PoA DD /02/, a renewal crediting period of 7 years has been chosen.
Findings	No CAR/CL has been raised.
Conclusion	This is in conformance with §118 of CDM PS for PoAs (version 02.0) and §135 of CDM VVS for PoAs (version 02.0).

D.2.5. Eligibility criteria for inclusion of CPAs

S.No.	Eligibility criterion – Category/Required condition	Means of validation	Findings	Conclusion
1	The geographical boundary of the SSC-CPA area is uniquely defined and located in India.	The CPA and all project activities should be located within the geographical boundaries of the India.		<p>During the inclusion of the CPA, the DOE will check the each farm included in the CPA. Further to this the DOE will also check the contracts between the CPA implementer and local farmers According to §124 (a), of the CDM project standard for programmes of activities, version 2.0, the geographical boundary of each CPA, shall be consistent with the geographical boundary set in the PoA. The PoA boundary corresponds to the boundaries of India. Each CPA will be located within India. Validation team based on review of PoA-DD confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
2	Double-counting of emission reductions Conditions that avoid double counting of	Each rice farmer and their land shall be assigned a unique serial number which	-	For each CPAs included in the project , the CPA implementer will sign a contract with

	emission reductions like unique identification of product and end-user locations.	<p>shall be stored in the database.</p> <p>Project proponents shall set up a database which will hold data and information that allow an unambiguous identification of participating rice farms, including name and address of the rice farmer, size of the field. A unique serial number and will be given to farmer and to their land</p>	<p>the CME. Also, the CPA implementer will have contracts with the local farmers. Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs in line with §124 (b) of the CDM project standard for programmes of activities, version 2.0. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
3	Exclusiveness of CPA-Conditions to confirm that CPAs are neither registered as CDM project activities, included in another registered PoAs, nor the project activities that have been deregistered;	<p>The CPA shall not be previously:</p> <ul style="list-style-type: none"> c. Registered as a CDM project activity <p>2. Included as a CPA in any other registered PoA, or deregistered as a CPA of a PoA</p>	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs in line with §124 I of the CDM project standard for programmes of activities, version 2.0. All CPAs shall avoid double-registration of CPA (and double counting) by declaration by the CME after checking the UNFCCC homepage. And letter signed by the CPA implementer. Validation team based on review of PoA-DD /02/ confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information</p>

				for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.
4	Specification of the technology/measure, such as the level and type of service, as well as performance specification based on, inter alia, testing/certification;	<p>Technology Employed by the CPA: Project proponents will define all parameters that are part of the project cultivation practice, and at least the following: (a) Sowing; (b) Fertilizer, organic amendments, and crop protection application I Water regime on the field (e.g. "dry/moist/flooded") and dates where the water regime is changed from one status to another; (c) Yield.</p> <p>Details about adopted technology. The proposed CPAs under the PoA involved will generally adopt different technologies including adoption of adjusted water management system (AWD) and/or Direct seeding of pre-germinated rice (DSR) and Adjusted water management in rice field that will result in reducing methane emission.</p>	CAR 11 had been raised in this regard and resolved, please refer appendix 4 for details.	<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements and applicability conditions prescribed by the methodology, as well as §124 (d) including foot note 23 and 24 and §124 (f) of the CDM project standard for programmes of activities, version 2.0. All CPAs shall apply the methodology AMS -III.AU., version 4. Provided the CPA met the eligibility criteria, the technology AMS III.AU version 4. Validation team based on review of PoA-DD confirms that the eligibility criteria is defined in accordance with the project standard. Technical Specification Details will be made available by the CPA to demonstrate compliance with the eligibility conditions. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA DD require n g the supporting evidence for inclusion provides information to meet the requirement and is</p>

				verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion.
5	Conditions to check the start dates of CPAs through documentary evidence;	The earliest date at which the implementation or construction or real action of a CPA will be the start date of the CPA and the start date of the CPA will be after the start of the PoA. Record of end user agreement, registration details, adoption of technology, etc. under the CPA.		DOE has to verify Record of end user agreement, registration details to confirm the start date of CPA. Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements §124 I of the CDM project standard for programmes of activities, version 2.0. The start date of a CPA shall be on or after the PoA start date. Validation team based on review of PoA -DD confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA
6	Conditions to ensure compliance with the applicability of the applied methodologies, the applied standardized baselines and the other applied methodological regulatory documents;	Each CPA complies with the applicability and other requirements outlined in followed methodologies: Methodology: AMS III.AU. – Methane emission reduction by adjusted water management practice		Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements §124 (f) and §124 (h) of the CDM project standard for programmes of activities, version 2.0.

		<p>in rice cultivation, Version: 04</p> <p>The applied methodology “AMS-III.AU.” refers to application of the following tools: Tools applied</p> <p>Guideline: General guidelines for SSC CDM methodologies, Version 23.0</p> <p>TOOL21: Demonstration of additionality of small-scale project activities, Version 13.0</p>		<p>All CPA utilizing this generic CPA -DD shall apply and should comply with the small – scale methodology AMS -III. AU, version 4. Validation team based on review of PoA -DD confirms that the eligibility criteria is defined in accordance with the project standard.</p>
7	<p>Conditions to ensure that CPAs meet the requirements for demonstration of additionality.</p>	<p>The additionality is demonstrated at the PoA level with the investment barrier and barriers due to prevailing practice [in line with para 10 of TOOL21</p>		<p>The additionality is demonstrated at the PoA level with TOOL 21. Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §124 (g) of the CDM project standard for programmes activities, version 2.0. All CPAs shall be additional to be included in the PoA provided they met this eligibility criteria of the PoA. This is adequately prescribed in section C of the Po A -DD. Validation team based on review of PoA -DD confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA -DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of</p>

				corresponding CPAs in the PoA.
8	The PoA-specific requirements, including any conditions related to undertaking local stakeholder consultation and environmental impact analysis.	<p>A Local stakeholder consultation meeting has been conducted at the PoA level to gauge the opinions and comments of the stakeholders in the immediate project area.</p> <p>The Environmental Impact Analysis has been conducted at the PoA level</p>		<p>As per the PoA DD , the local Stakeholder Consultation (LSC) at the PoA level and Environmental Impact Analysis (EIA) are on PoA Level. Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §124 (i) of the CDM project standard for programmes of activities, version 2.0. Validation team based on review of PoA-DD confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA -DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>
9	Conditions to provide an affirmation that funding from Annex I Parties, if any, does not result in a diversion of official development assistance;	Affirmation that funding from Annex I Parties, if any, does not result in a diversion of official development assistance		<p>DOE has to check No ODA declaration from CPA implementer. Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs as per §35 and §124 (j) in the CDM project standard for programmes of activities, version 02. Validation team based on review of Po A -DD confirms that the eligibility criteria is defined in accordance with the project standard.</p>

				Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA -DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA
10	Target group and distribution.	<p>1. Target Group: Rice farmers. 2. Distribution Mechanism: Via Partner Organizations</p> <p>The distribution mechanism will be detailed in each CPADD.</p>		<p>Validation team confirms that this eligibility criterion shall ensures that all CPAs shall specify the target group for all eligible CPAs in order to confirm to the applied methodology, as well as the PoA stated policy, operational and management framework inline with the requirements of §124 (k) including foot note 28 of the CDM project standard for programmes of activities, version 2.0. Validation team based on review of PoA-DD confirms that the eligibility criteria is defined in accordance with the project standard.</p> <p>Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA – DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment</p>

				of the inclusion of corresponding CPAs in the PoA.
11	<p>If the generic CPA is small-scale or microscale, conditions to ensure that CPAs that will be included meet the small-scale or microscale thresholds and remain within those thresholds throughout the crediting period of the CPAs. However, if the generic CPA consists solely of units that qualify as “microscale CDM units” as defined in the “Methodological tool: Demonstration of additionality of microscale project activities”, these conditions are not required.</p>	<p>Not applicable. The technology/measure in this PoA as defined “microscale CDM unit”, the threshold condition is not Required.</p>		<p>Validation team confirms that this eligibility criterion has been sufficiently set for all CPAs inline with the requirements of §124 124 (g), 124 (m), 124 (n) of the CDM project standard for programmes of activities, version 2.0 Validation team based on review of PoA -DD confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA -DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and equitable to permit the assessment of the inclusion of corresponding CPAs in the PoA</p>
12	<p>De-bundling:-Where applicable, the requirements for the debundling check, in case the CPAs belongs to smallscale or microscale project categories.</p>	<p>The technology/measure in this PoA as defined “microscale CDM unit”, the debundling check is not required.</p>		<p>This condition is not applicable for the project activity, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA-DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.</p>

13	Sampling.	Where applicable, the conditions related to sampling requirements for the PoA in accordance with the "Standard for sampling and surveys for CDM project activities and programme of activities" CPAs under the program will adhere to all requirements as mentioned in Standard: "Sampling and surveys for CDM project activities and programme of activities"	Validation team confirms that this eligibility criteria shall ensure that all CPAs in the PoA shall apply to the sampling plan of the PoA. This eligibility criterion is in accordance with AMS – III.AU, version 4 and "Standard: Sampling and surveys for CDM project activities and programme of activities". Validation team based on review of PoA -DD confirms that the eligibility criteria is defined in accordance with the project standard. Furthermore, the eligibility criterion – category, including the conditions provide sufficient information for the corresponding CPAs. The description in the PoA -DD including the supporting evidence for inclusion provides information to meet the requirement and is verifiable as well as sufficiently objective and comprehensive to permit the assessment of the inclusion of corresponding CPAs in the PoA.
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SECTION E. Internal quality control

Internal quality control within the team is assured by means of a technical review process that takes place after the on-site assessment and after closure of findings. The internal quality control in the verification process is given by the final decision made by the Certification Body.

SECTION F. Validation opinion

TÜV SÜD has performed a validation of the aforementioned PoA.

Standard auditing techniques have been used for the validation of the PoA. An internal validation checklist has been prepared to conduct the validation process in a transparent and comprehensive manner.

The review of the PoA design documentation, subsequent follow-up interviews, and further verification of references have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the methodology. In the opinion of TÜV SÜD, the PoA fulfils all relevant UNFCCC requirements for the CDM if the underlying assumptions do not change.

Validation methodology and process The validation has been performed as described in the VVS (version 02.0) and constitutes the following steps:

- Publication of the PoA-DD /01/ on the UNFCCC website (15/09/2020 to 15/10/2020) for GSC
- Document review of data and information (PoA-DD /01/ and the relevant documents including the reference to information relating to projects or technologies similar to the proposed project activity and review based on the approved methodologies being applied and the appropriateness of formulae and accuracy of calculations).
- Cross checks between information provided in the PoA-DD and information from other sources
- Follow up actions for cross checking data and off-site assessment / interviews
- Reference to available documents
- Issuance of Validation Report

The PoA will result in emissions reductions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the PoA is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the PoA.

The validation did not reveal any information that indicates that the PoA can be seen as a diversion of ODA funding.

The PoA-DD contains monitoring plan for the monitoring of the emission reductions from the PoA. The monitoring arrangement described in the monitoring plan is feasible within the project design and its TÜV SÜD's opinion that the project participants are able to implement the monitoring plan.

The validation report describes a total of 16 findings , which include:

- 05 Corrective Action Requests (CARs);
- 11 Clarification Requests (CLs);
- 00 Forward Action Requests (FARs);

All the findings are satisfactorily closed.

The validation has been performed following the requirements of the latest version of the CDM VVS and on the basis of the contractual agreement. The single purpose of this report is its use during the inclusion process as part of the CDM project cycle. Based on the work described in this report, nothing has come to our attention that causes us to believe that any project component or issue has not been covered by the validation process.

Appendix 1. Abbreviations

Abbreviations	Full texts
CAR	Corrective Action Request
CCX	CoreCarbonX Solutions Private Limited
AWD	Alternate wetting and drying method
CDM	Clean Development Mechanism
CDM-EB	CDM Executive Board
CEA	Central Electricity Authority
CER	Certified Emission Reduction
CM	Combined Margin
CME	Coordinating and Managing Entity
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
CO₂e	Carbon dioxide equivalent
CPA	Component Project Activity
CL	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
DSR	Direct Seeded Rice
EF	Emission Factor
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
FAR	Forward Action Request
GHG	Greenhouse Gas(es)
GWP	Global Warming Potential
GSC	Global Stakeholder Consultation
I	Interview
IRL	Information Reference List
KP	Kyoto Protocol
MP	Monitoring Plan
MR	Monitoring Report
MoC	Modalities of Communication
MoV	Means of Validation
NA	Not Applicable
ODA	Official Development Assistant
PCP	CDM Project Cycle Procedure for Programme of Activities
PoA-DD	Programme of Activities Design Document
PP	Project Participant
PS	CDM Project Standard for Programme of Activities
TÜV SÜD	TÜV SÜD South Asia Pvt. Ltd
UNFCCC	United Nations Framework Convention on Climate Change
VVS	CDM Validation And Verification Standard for Programme of Activities

Appendix 2. Competence of team member and technical reviewers



CERTIFICATE OF APPOINTMENT

Mr. Kewat, Shailendra fulfills the requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	ISO-14001-1:2009	Other
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Qualification as						
Status	Validator	Verifier	ATL	Technical Reviewer	Financial Expert	Technical Expert
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TA(s)	1.2, 3.1, 5.1, 13.1					

Country Expertise						
Region	1	2	3	4	5	Other
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Further countries						

Technical Area
1.2_Renewables
3.1_Energy Demand
5.1_Chemical Industries
13.1_Solid waste and waste water

This appointment is valid until 31.05.2021 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0105/001.

Date	Signature
01/03/2020	

IS-CMS-CB-POC-01/05, version 03

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CERTIFICATE OF APPOINTMENT

Mrs. Nambiar, Dhanya fulfills the requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd to participate in audits

Qualification applicable to					
Standard	CDM	GS	VCS	ISO-14084-1:2008	Other
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Qualification as						
Status	Validator	Verifier	ATL	Technical Reviewer	Financial Expert	Technical Expert
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
TA (s)	13.2, 14.1, 15.1					

Country Expertise						
Region	1	2	3	4	5	Other
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Further countries						

Technical Area	
13.2_Manure	
14.1_Afforestation and reforestation	
15.1_Agriculture	

This appointment is valid until 31.12.2020 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0091/004.

Date	Signature
01/01/2020	

IS-CMS-CB-POG-01/05, version 05

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CERTIFICATE OF APPOINTMENT

Mr. Murty, Eswar fulfils the requirements of the Certification Body 'Environment and Energy' of TUV SUD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	ISO-14034-1:2006	Other
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Qualifications						
Status	Validator	Verifier	ATL	Technical Reviewer	Financial Expert	Technical Expert
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
TA (s)	1.1, 1.2, 3.1, 4.1, 13.1					

Country Expertise						
Region	1	2	3	4	5	Other
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Further countries						

Technical Area	
1.1_Thermal Energy Generation	
1.2_Renewables	
3.1_Energy demand	
4.1_Cement and lime production	
13.1_Solid waste and wastewater	

This appointment is valid until 31.05.2021 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TUV SUD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CR-IND-CCP-0034/011.

Date	Signature
01/05/2020	

IS-CMS-CB-POG-01/05, version 03

TUV*

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CERTIFICATE OF APPOINTMENT

Mr. Akhlag Wani fulfills the requirements as per the Evaluation and Qualification criteria (IS-CMS-CB-POG-01/01) of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd and is appointed as a

Technical Reviewer/ Expert

Technical Area
14.1_Afforestation and reforestation
15.1_Agriculture

This appointment as a Technical Reviewer/ Expert is for his involvement in projects related to CDM, GS and VCS Standards.

This appointment is valid until 31.05.2021 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.

Your Certificate has the internal reference no. CB-IND-CCP-00107/001.

Date	Signature
01/06/2020	

IS-CMS-CB-POG-01/05, version 04

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Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	CME	Web hosted-DD	Version-1 10/09/2020	CME
2	UNFCCC	PoA-DD	Version 3 20/12/2020	
3	DNA	Letter of Approval from Host party DNA (India)	12/12/2012	CME
4	CME	1.Modalities of Communication 2. Certificate of Incorporation of the CME	22/12/2020	CME
5	CME	CME declaration for non-involvement of any public funding from Annex I countries for the PoA and the CPA	22/12/2020	CME
6	DOE	Validation service contract between the CME and the DOE	09/09/2020	CME
7	UNFCCC	Email from UNFCCC confirming publication of PoA on UNFCCC website for GSC	15/09/2020	TUV-SUD
8	UNFCCC	Proof of start date of the PoA •Email sent to DOE for GSC		CME
9	UNFCCC	a) Validation and Verification Standard for PoA, Version 02.0 b) Project Standard for PoA, Version 02.0 c)Project Cycle Procedure for PoA, Version 02.0	https://cdm.unfccc.int/	
10	UNFCCC	Methodology AMS.III.AU, version-4 Methane emission reduction by adjusted water management practice in rice cultivation	https://cdm.unfccc.int/	
11	UNFCCC	a)Tool 3: Tool to calculate project or leakage CO2 emissions from fossil fuel combustion, Version, Version 03 b) Guidelines on the demonstration of additionality of small-scale project activities c) Methodological Tool 21 “Demonstration of additionality of smallscale project activities”, version 13.0	https://cdm.unfccc.int/	
12	UNFCCC	Standard: Sampling and surveys for CDM project activities and programme of activities, Version 8.0	https://cdm.unfccc.int/	
13	UNFCCC	Instructions for filling out the project design document form for CDM programme of activities (Version 09.0)	https://cdm.unfccc.int/	
14	UNFCCC	Glossary of CDM Terms, Version 10.0	https://cdm.unfccc.int/	
15	UNFCCC	General Guidelines to SSC CDM methodologies, Version 23.0	https://cdm.unfccc.int/	
16		Reference link for historical practices and baseline: <ul style="list-style-type: none"> https://eands.dacnet.nic.in/PDF/At%20a%20Glance%202019%20Eng.pdf http://www.ipcc-nggip.iges.or.jp/public/gl/guidelin/ch4ref5.pdf 		CME

CDM-PoA-VAL-FORM

		<ul style="list-style-type: none"> • https://www.agriculturejournal.org/volume5number1/direct-seeded-rice-prospects-problemsconstraints-and-researchable-issues-in-india/ • https://dsrc.irri.org/our-work/what-is-dsr 		
17	CME	Declaration from CME that project is a voluntary action	24/09/2020	
18	IPCC	Fourth Assessment Report for GWP values		

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

Table 1. CLs from this validation

CL ID	01	Section no.	A	Date: 20/10/2020
Description of CL				
Project boundary has to be defined clearly. Some sections in PD talks about Asia and Africa as project boundary.				
CME response				Date: 26/10/2020
The project activity will be extended to other major rice producing Asian and African countries like Bangladesh, Myanmar, Sri Lanka, Tanzania etc. That's the reason Asia and Africa as project boundary is proposed.				
Documentation provided by CME				
PoA-DD				
DOE assessment				Date: 14/11/2020
Still section A.2 of the PoA-DD has contradicting statement about project boundary. Please clarify. CL is open				
CME response				Date: 30/11/2020
The PoA DD has been revised and contains project boundary as India only.				
Documentation provided by CME				
Revised PoA-DD				
DOE assessment				Date: 22/12/2020
PP has submitted the revised PoA DD, A.2 has been revised and clarified by the CME that project boundary is India. CL is closed				

CL ID	02	Section no.	B	Date: 20/10/2020
Description of CL				
How biomass power plant relevant to the PoA? In management section PoA talks about distributor, PP has to explain what type of distributor involved in PoA				
CME response				Date: 26/10/2020
This was typo error which has been corrected. There is no distributor in the project activity. The sentence in the section B is removed.				
Documentation provided by CME				
Revised PoA-DD				
DOE assessment				Date: 14/11/2020
PP has submitted the revised PoA DD and error has been corrected. CL is closed				

CL ID	03	Section no.	B	Date: 20/10/2020
Description of CL				
PP has taken start date as 22/11/2012 which is First publication of PoA for GSC. PP has to justify the start date selection and delay in PoA.				

CME response	Date: 25/11/2020
The project was initially intended to be registered before 31/12/2012 however it could not be therefore project was not pursued during that time. However now the technique and awareness about project is being rejuvenated. the current webhosting for global stakeholder consultation was done from 15/09/2020. As per the Glossary: CDM terms start date is defined as “.....the date of publication of the PoA-DD for global stakeholder consultation in accordance with the relevant CDM rules and requirements.	
Documentation provided by CME	
Revised PoA-DD	
DOE assessment	Date: 14/11/2020
PP has taken the start date as per the Glossary CDM terms which is the web-hosting date of PoA. CL is closed	

CL ID	04	Section no.	E.1	Date: 20/10/2020
Description of CL				
Why EIA is not required-PP has to justify this with documentary evidence				
CME response				Date: 26/11/2020
As per the Ministry of Environment and Forests (Government of India) notification dated September 14, 2006 regarding the requirement of environmental Impact Assessment (EIA) studies as per the Environmental Protection Rule, 1986 (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii) Ministry of Environment and Forests), any project developer in India needs to file an application to the Ministry of Environment and Forests (including a public hearing and an EIA) in case the proposed industry or project is listed in a predefined list. Rice field cultivation and activities involving adjusted water management system and/or Direct seeding of pre-germinated rice (DSR) in rice cultivation are not included in this list and thus an EIA is not required. Hence, environmental impact analysis is not required for the PoA and also for the CPA.				
Documentation provided by CME				
EIA rules dated 14th September 2016 is attached as Annex-3				
DOE assessment				Date: 14/11/2020
PP has submitted the revised POA-DD, where section E.1 has the link which is referred. As per the MoEF notification type of project activity involved in PoA doesn't required EIA. CL is closed				

CL ID	05	Section no.	I.1	Date: 20/10/2020
Description of CL				
Details of referred tools are missing in the section				
CME response				Date: 20/10/2020
The revised PoA DD has incorporated the below details: The applied methodology “AMS-III.AU.” refers to application of the following tools: Guideline: General guidelines for SSC CDM methodologies, Version 23.0 TOOL21: Demonstration of additionality of small-scale project activities, Version 13.0				
Documentation provided by CME				
Revised PoA				
DOE assessment				Date: 14/11/2020
Section I.1 has been revised in PoA and now contains all referred tools. CL is closed.				

Table 2. CARs from this validation

CAR 01	01	Section no.	A.1	Date: 20/10/2020
Description of CAR				
1. Hyperlinks given for references are of a study. Either provide a active link or supporting document for the same. 2. Project activity is a voluntary action by CME, a declaration has to be submitted for the same.				
CME response				Date: 26/10/2020
The hyperlink for refrence is incorporated in the revised PoA. A voluntary action by CME is submitted herewith.				
Documentation provided by CME				
Attached as Annexure 1- voluntary action by CME is submitted herewith.				
DOE assessment				Date: 14/11/2020
PP has submitted revised PoA-DD and a declaration stating that PoA is a voluntary action by CME. Hence CAR is closed.				

CAR 02	02	Section no.	A.3	Date: 20/10/2020
Description of CAR				
1. PP has to elaborate the AWD technology in PoA-DD 2. What is DSR technology? Is it applicable for the project?				
CME response				Date: 20/10/2020
1.AWD technology is elaborated in the revised PoA-DD 2. DRS is the abbreviation for Directed Seeded Rice. Yes it is applicable for he project.				
Documentation provided by CME				
Revised PoA-DD				
DOE assessment				Date: 14/11/2020
PP has submitted revised PoA-DD and both the chosen technologies are adequately defined. Hence CAR is closed.				

CAR	03	Section no.	C	Date: 20/10/2020
Description of CAR				
Paragraph 13 of Methodological tool 19: "Demonstration of additionality of micro-scale project activities" talks about 2 technologies and technology used in PoA doesn't fall under those categories.				
CME response				Date: 26/10/2020
The tool 21 is being used for additionality.The additionality of the project activity is demonstrated by a barrier analysis under TOOL 21. As per the para 10 of the TOOL21.				
Documentation provided by CME				
DOE assessment				Date: 14/11/2020
The additionality is demonstrated at the PoA level with the investment barrier and Barrier due to prevailing practice: in line with para 10 of TOOL21. The necessary revision has been made in the PoA. Hence CAR is closed				

CAR	04	Section no.	F.3	Date: 20/10/2020
Description of CAR				
1. What kind of comments has been received? PP has to put a list of comments received. 2. Also, PP need to submit Stakeholder's meeting details viz: <ul style="list-style-type: none"> • Invitation sent to stakeholders • Attendance sheet • Comments received • Video recording of meeting 				
CME response				Date: 20/10/2020
Stakeholders Meeting details are submitted in Section F.3 of updated PDD. Meeting was an online event. Video recording is submitted herewith.				
Documentation provided by CME				
Revised PoA and Video recording of Meeting				
DOE assessment				Date: 14/11/2020
Revised PoA-DD has been submitted and all necessary information is incorporated in the relevant section. CAR is closed				

CAR	05	Section no.	H.4	Date: 20/10/2020
Description of CAR				
PP need to elaborate technical aspects viz: How they are going ensure that flooding has to stop or start? What kind of equipment will be used to monitor water level? How soil and weather will be monitored?				
CME response				Date: 26/10/2020
How they are going ensure that flooding has to stop or start? A practical way to implement AWD safely is by using a 'field water tube' ('pani pipe') to monitor the water depth on the field. After irrigation, the water depth will gradually decrease. When the water level will drop to about 15 cm below the surface of the soil, irrigation should be applied to re-flood the field to a depth of about 5 cm. This practice is known as Safe AWD. From one week before to a week after flowering, the field should be kept flooded, topping up to a depth of 5 cm as needed. After flowering, during grain filling and ripening, the water level can be allowed to drop again to 15 cm below the soil surface before re-irrigation.				
What kind of equipment will be used to monitor water level? The field water tube (Pani pipe)				
The field water tube will be made of 30 cm long plastic pipe or bamboo, with a diameter of 10 to 15 cm to easily see the water level inside the tube. . The bottom 15 cm of the tube will be drilled with holes on all sides; these holes will be about 0.5 cm each and 2 cm away from one another				
How soil and weather will be monitored? Soil and weather parameters are only to understand defines the number of days of non-flooded soil between irrigations can vary from 1 to more than 10 days depending on the number of factors such as soil type, weather, and crop growth stage				
Monitoring aspect of the project activity will form part of the CPA and individual CPAs will be having monitoring mechanisms.				
Documentation provided by CME				
Revised PoA-DD				
DOE assessment				Date: 14/11/2020

Revised PoA-DD has been submitted and all necessary information is incorporated in the relevant section. CAR is closed

CAR	06	Section no.	I.2	Date: 20/10/2020
Description of CAR				
<p>Following are the findings on applicability criteria as per AMS.III.AU methodology (version 4):</p> <ol style="list-style-type: none"> 1. How PP is going to ensure that land used in project area is not rainfed or up land? 2. How PP is going to ensure that land has controlled irrigation and drainage facilities? 3. Does PP has any manual to train farmers? If so, same has to be submitted for validation 4. How PP is going to ensure that the introduced cultivation practice, including the specific cultivation elements, technologies and use of crop protection products, is not subject to any local regulatory restrictions? 5. To calculate CH4 emission PP has adopted closed chamber method. Evidence for same has to be submitted 6. How PP is going to ensure that emission reduction will be under 60 kt CO2 equivalent at CPA level. 				
CME response				Date: 26/10/2020
<ol style="list-style-type: none"> 1. Farms whose water regimes can be classified as upland or rainfed and deep water are not eligible to apply this methodology. This shall be shown from a representative survey conducted in the geographical region of the proposed project or by using national data. 2. The project rice fields are equipped with controlled irrigation and drainage facilities will be defined through a representative survey conducted in the geographical region of the proposed project or by using national data. This will be confirmed by CPA Implementer before admission of the participants and field under the CPA. 3. The training programme will focus collaboration between research institutes, NGOs, and universities who will work in the defined regions with farmers. The knowledge and information given in the International Rice Research Institute will be used for building up awareness and practices among farmers. Training and technical support during the cropping season that delivers appropriate knowledge in field preparation, irrigation, drainage and use of fertilizer to the farmer is part of the project activity and is to be documented in a verifiable manner (e.g. protocol of trainings, documentation of on-site visits). The region specific protocol of trainings and documentation on site visit will be prepared. 4. It is confirmed that the introduced technologies/measures i.e., AWD /DSR is not subject to any local regulatory restrictions Rice farming in India does not fall under any local regulatory restrictions 5. Default values defined under methodology under Option 2 will be used for CER calculations. So closed chamber methods will not be used. 6. Each CPA will be small scale and under 60 kt CO2 equivalent which will be ensured by the size of landmass under cultivation per CPA. 				
Documentation provided by CME				
Revised PoA-DD				
DOE assessment				Date: 14/11/2020
Revised PoA-DD has been submitted and all applicability criteria has been addressed appropriately in the relevant section. CAR is closed				

CAR	07	Section no.	I.5	Date: 20/10/2020
Description of CAR				
How PP is going to ensure baseline scenario at CPA level? Also, what are the measures that will be taken so farmers do not deviate from the cultivation method adopted for CPA?				
CME response				Date: 26/10/2020

The baseline applies to transplanted rice farms that change the water regime during the cultivation period from continuous to intermittent flooded conditions/alternating wetting and drying (single aeration and multiple aeration).

The rice fields use straw as an organic amendment. Other organic amendments such as compost, farm yard manure and green manure, which have been used in the baseline may continue to be used in the project at the same or lower rate.

Project proponents shall ensure that the project reference fields are cultivated in a way that they represent the ranges of cultivation practice elements on the project fields in a conservative manner with respect to methane emissions. Should farmers relevantly deviate from the defined project cultivation practice, so that their fields cannot be deemed to be represented by the reference fields any more, those fields shall not be taken into account for the determination of the aggregated project area. This requirement shall assure that only those farms are considered for the calculation of emission reductions which comply with the project cultivation practice.

Documentation provided by CME

Revised PoA-DD

DOE assessment

Date: 14/11/2020

Revised PoA-DD has been submitted and now it address the issue related to baseline selection and in case of deviation from the project activity. CAR is closed

CAR	08	Section no.	I.6	Date: 20/10/2020
Description of CAR				
<ol style="list-style-type: none"> 1. How project emissions are going to calculate? Information missing in the section. 2. Please submit the supporting for double crop land has been used for generic CPA 3. A report on how baseline parameter has been determined is to be submitted 				
CME response				Date: 26/10/2020
<ol style="list-style-type: none"> 1. As the Emission Reductions is calculated by using equation 6 of the methodology, there is no need to estimate project emissions separately. 2. The double crop or single crop is dependent on the region specific water regime and cultivation practices. Thus, for regions under CPA double crop or single crop will be demonstrated by official government data or peer-reviewed literature that double cropping is practiced, 3. Baseline parameter such as double cropping or single cropping, single aeration or multiple aeration will be determined based on the official government data and/or peer-reviewed literature and baseline field data. 				
Documentation provided by CME				
Revised PoA-DD				
DOE assessment				Date: 14/11/2020
Revised PoA-DD has been submitted and relevant section has been revised. CAR is closed				

CAR	09	Section no.	I.6.2	Date: 20/10/2020
Description of CAR				
Monitoring tables for following parameters are missing: EFp s g, Asg,				
CME response				Date: 26/10/2020
The second approach, described in paragraphs 20, 21,30,31,32 of version 04 of the methodology AMS III. AU., uses default values derived from the IPCC 2006 Guidelines for National Greenhouse Inventories and establishes methane emission reduction factors (instead of separate baseline and project emission factors). Thus, EFp s g, Asg, will not be monitored.				
Documentation provided by CME				

Revised PoA-DD	
DOE assessment	Date: 14/11/2020
Since PP has considered default values for calculation hence monitoring of , EFp s g, Asg will not be required. CAR is closed	

CAR	10	Section no.	I.7.2, I.7.3	Date: 20/10/2020
Description of CAR				
<ol style="list-style-type: none"> 1. Detail on sampling plan is missing. 2. Training manual for farmers has to be submitted for validation 				
CME response				Date: 26/10/2020
<p>Sampling plan is included in the revised PoA DD section I.7.2.</p> <p>There are no training module for farmers. The procedure and guideline for the implementation of the project at the farm will be taken from International Rice Research Institute Knowledge bank that includes information source www.knowledgebank.irri.org/training/fact-sheets/water-management/saving-water-alternate-wetting-drying-awd and https://dsrc.irri.org/our-work/issues-opportunities</p>				
Documentation provided by CME				
Revised PoA-DD				
DOE assessment				Date: 14/11/2020
Revised PoA-DD has been submitted and relevant section has been revised. CAR is closed				

CAR	11	Section no.	K	Date: 20/10/2020
Description of CAR				
<p>Eligibility criteria for CPA:</p> <ol style="list-style-type: none"> 1. How PLF report is related to project activity? 2. What supporting has to given to meet eligibility criteria no.2? 3. Criteria no.3 is to be elaborated that which technology will be used and what supporting will be needed. 4. Condition to check start date of CPA is not clearly defined. 5. Criteria no.5, PP has to elaborate how each and every applicability criteria will be fulfilled 6. Criteria no.6, PP has to clearly define the additionality requirement and how same will be checked at CPA level. 7. Criteria no.7, statement given by PP is too confusing, it talks about PoA stakeholder meeting and EIA requirement for wind projects. Please justify the same. 8. Supporting evidence for criteria no.10 is missing 				
CME response				Date: 26/10/2020

<p>1.It was an error which is corrected in the revised PoA.</p> <p>2.A declaration will be submitted by CPA implementer to CME and the same will be cross checked by the CME before submission to DOE form CME will be provided at CPA stage.</p> <p>3.The proposed CPAs under the PoA involved will generally adopt different technologies including a drip adjusted water management system and/or Direct seeding of pre-germinated rice (DSR) in rice field that will result in reducing methane emission. Database will contain: Details of farmer, details about the irrigation practice, details about adopted technology.</p> <p>4.The earliest date at which the implementation or construction or real action of a CPA will be the start date of the CPA and the start date of the CPA will be after the start of the PoA. Record of end user agreement, registration details, adoption of technology, etc. under the CPA will be submitted as a supporting proof for start date for CPA.</p> <p>5.Methodology applicability check of the CPA-DD applying the applied methodology AMS III.AU. Version 04 and Guideline: General guidelines for SSC CDM methodologies, Version 23.0 and TOOL21.6. The additionality is defined at the PoA level in the revised PoA,</p> <p>7.This is an erroneous mistake and is corrected.</p> <p>8.Supporting details are provided under the criteria number 10.</p>	
Documentation provided by CME	
Revised PoA-DD	
DOE assessment	Date: 14/11/2020
Eligibility criteria section has been revised in PoA-DD and now address each criteria appropriately. Hence CAR is closed.	

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"> • Ensure consistency with version 02.0 of the “CDM validation and verification standard for programmes of activities” (CDM-EB93-A08-STAN); • Make editorial improvements.
02.0	29 December 2017	Revision to align with the requirements of the “CDM validation and verification standard for programme of activities” (version 01.0).
01.0	4 May 2015	Initial publication.
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