**validation CHECKLIST**

**Methodology - METHANE EMISSION REDUCTION BY ADJUSTED WATER MANAGEMENT PRACTICE IN RICE CULTIVATION**

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**SUMMARY**

The methodology checklist is prepared to help Validation and Verification Bodies (VVBs) complete the validation of projects and VPAs (both are referring as “projects”) applying the following methodology:

**Methodology - Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation (AWD V1.0)**

This checklist shall be used as an annex to the validation report prepared by the validating VVB.

This checklist covers the topics relevant to projects that reduce anaerobic decomposition of organic matter in rice-cropping soils. Such measures include changing the water regime during the cultivation period from continuously to intermittently flooded conditions and/or a shortened period of flooded conditions, using the alternate wetting and drying method, adopting aerobic rice cultivation methods, and switching from transplanted to direct-seeded rice (DSR). The methodology checklist covers topics to help assess the compliance with methodology requirements, including but not limited to, monitoring plan requirements, baseline emissions, project emissions, leakage emissions, net emission reductions, uncertainties assessment, and other areas.

This document contains the following sections:

* Validation Assessment
* Appendix 1: Documents/evidence reviewed or referenced.
* Appendix 2: Abbreviations
* Appendix 3: Findings

**How to fill the checklist?**

While assessing the project and filling out this form the VVB shall follow the requirements below:

1. General:
	1. The format of the template shall not be altered (font, placing, text size, section numbering, etc.).
	2. Rows in the tables may be added as required.
	3. VVBs may also add an appendix at the end of the document for reporting any additional information.
	4. The form shall be filled in English, or a translated version shall be provided by the VVB to the certification body.
	5. The VVB shall follow completely answer all the evaluation questions.
2. References:
	1. VVBs shall mention exact references of the evidence which was used for assessing a particular information which includes specific references to chapter, section, para etc. of the evidence used.
	2. The full list of references relevant to this checklist shall be included in Appendix 1 below.
	3. The list of references of the main VVB Validation Report and checklist shall either include these same references for completeness, or reference this checklist’s Appendix 1.
3. Findings:
	1. Whenever the answer to any of the questions of this checklist is **not** in **bold blue** text, the VVB shall raise a Corrective Action Request (CAR) or Clarification Request (CL) or Forward Action Request (FAR) in end of each section, as per guidance in the section 6 of the Validation and Verification Standard.
	2. While raising the findings, the VVBs shall include the following:
		1. What the issue is precisely
		2. Why the issue is raised (specific methodology requirement the finding refers to)
		3. Where the issue was found (e.g. in PDD, ER calculations, etc.), including section/page/tab/cell reference as appropriate.
	3. While closing the findings, the VVB shall justify in the finding list in Appendix 3 why the new or revised document/evidence/information was found acceptable.
	4. Any findings raised in this checklist shall be referenced in the main VVB Validation Report Checklist

|  |  |
| --- | --- |
| VALIDATION ASSESSMENT |  |
| Section A. Scope and Applicability requirements |  |
| Scope and applicability |  | References |
|  | Does the project comprise of technology/measures that result in reduced anaerobic decomposition of organic matter in rice cropping soils and thus reduced generation of methane | [ ]  **Yes**[ ]  No |  |
|  | Does the project involve the implementation of:  | [ ]  **Rice farms that change the water regime during the cultivation period from continuously to intermittently flooded conditions and/or a shortened period of flooded conditions.**[ ]  **Alternate wetting and drying method and aerobic rice cultivation methods**[ ]  **Rice farms that change their rice cultivation practice from transplanted to direct seeded rice.** [ ]  Not any of the above |  |
| Provide a list of the evidence collected and explain below how the above information has been validated for its accuracy.  |  |
| *Add text here* |  |
|  | The VVB shall check |  |
| 1. Is the farm classified as upland or rainfed and deep water?
 | [ ]  Yes [ ]  **No** |  |
| 1. Is the project area predominantly characterized by irrigated, flooded fields for an extended period of time during the growing season?
 | [ ]  **Yes** [ ]  No |  |
| 1. Are the project rice fields equipped with controlled irrigation and drainage facilities?
 | [ ]  **Yes**[ ]  No |  |
| 1. Does the project activity lead to any decrease in rice yield?
 | [ ]  Yes[ ]  **No** |  |
| 1. Does the new cultivar(s) require any changes in the land management practices?
 | [ ]  Yes[ ]  **No** |  |
| 1. Will the Project provide training and technical support to farmers ensuring knowledge in field preparation, irrigation, drainage, and fertilizer use?
 | [ ]  **Yes**[ ]  No |  |
| 1. Is the introduced cultivation practice in compliance with all local regulatory restrictions?
 | [ ]  **Yes**[ ]  No |  |
| 1. Does the PD have access to infrastructure to measure CH4 emissions from reference fields using closed chamber method and laboratory analysis?

*If “Yes”, go to Q#4 and skip the question (i) to (k) below.* | [ ]  **Yes**[ ]  **No** |  |
| 1. Are IPCC default values for emission reductions calculations applied correctly?
 | [ ]  **Yes**[ ]  No |  |
| 1. Is the project Small or Micro scale?
 | [ ]  **Yes**[ ]  No |  |
| 1. Is there any similar project/VPA by the same PD within 1 km of the project at the closest point?
 | [ ]  **Yes**[ ]  No |  |
| Provide your opinion on applicability below.  |  |
| *Add text here* |  |
|  | (PoA only):In case the VPAs opting for micro or small scale and applying tier 1 default values, is there sufficient evidence that the VPAs are not de-bundled from a large scale project/VPA? | [ ]  **Yes**[ ]  No[ ]  **NA** |  |
| **Means of validation (MOV) and justification** |
| *Add text here* |
| **Findings** |
|  | [ ]  CL  | *(Findings ID….)* |
|  | [ ]  CAR | *(Findings ID….)* |
|  | [ ]  FAR | *(Findings ID….)* |
| **Assertion Statement** |
| *Add text here* |

## Section B. Project boundary

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| Project boundary  | References |
|  | Does the project description clearly define the project boundary?*The geographic boundary encompasses the rice fields where the cultivation method and water regime are changed.*  | [ ]  **Yes** [ ]  No |  |
|  | Does the project boundary include all fields that change the cultivation method in the context of the project activity? | [ ]  **Yes** [ ]  No |  |
| **Means of validation (MOV) and justification** |
| *Add text here* |
| **Findings** |
|  | [ ]  CL  | *(Findings ID….)* |
|  | [ ]  CAR | *(Findings ID….)* |
|  | [ ]  FAR | *(Findings ID….)* |
| **Assertion Statement** |
| *Add text here* |

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| Emissions sources included in the project boundary | References |
|  | Does the project description identify emissions sources, including Emissions from continuously flooded rice fields and Emissions from fields with single or multiple drainage, as required by the methodology? | [ ]  **Yes**[ ]  No |  |
|  | Does the project include all of the sources or greenhouse gases (GHGs) listed in the methodology for the baseline scenario? | [ ]  **Yes**[ ]  No |  |
|  | Does the project include all of the sources or greenhouse gases (GHGs) listed in the methodology for the project scenario? | [ ]  **Yes**[ ]  No |  |
|  | If the response is “no” to any of the above questions, are the sources or GHGs excluded for the project scenario demonstrated as |  |
| * 1. non-material?
 | [ ]  **Yes** [ ]  No [ ]  **NA** |  |
| * 1. not applicable to the project?
 | [ ]  **Yes** [ ]  No [ ]  **NA** |  |
|  |  |  |  |
| **Means of validation (MOV) and justification** |
| *Add text here* |
| **Findings** |
|  | [ ]  CL  | *(Findings ID….)* |
|  | [ ]  CAR | *(Findings ID….)* |
|  | [ ]  FAR | *(Findings ID….)* |
| **Assertion Statement** |
| *Add text here* |

## Section C. Demonstration of additionality

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| **DEMONSTRATION OF ADDITIONALITY** | **REFERENCES** |
|  | Does the PD conduct the additionality assessment using one of the options below:1. Applicable GS4GG [Activity Requirements](https://globalgoals.goldstandard.org/201-ar-community-services-activity-requirements/);
2. [CDM Tool 01 - Tool for the Demonstration and Assessment of Additionality](https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-01-v7.0.0.pdf);
3. [CDM Tool 19 - Demonstration of additionality of microscale project activities](https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-19-v9.pdf); (not applicable to Gold Standard microscale projects)
4. [CDM Tool 21 – Demonstration of additionality of small-scale project activities](https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-21-v13.1.pdf); (applicable to small-scale projects only)
5. An approved Gold Standard VER additionality tool
 | [ ]  **Yes** [ ]  No |  |
|  | From the assessment using additionality tool, is it concluded that the project could take place without carbon finance? | [ ]  Yes [ ]  **No** |  |
|  | Is the proposed activity additional to existing legal requirements (*neither directly mandated by law nor otherwise triggered by legal requirements, e.g., legally binding agreements, covenants, consent decrees, or contracts with government agencies or private parties)* | [ ]  **Yes** [ ]  No |  |
|  | If mandated laws or legal requirements related to the project activity are identified, does the PD limit the crediting for the activity only until the date the legal requirements would take effect? | [ ]  **Yes**[ ]  No |  |
| **Means of validation (MOV) and justification** |
| *Add text here* |
| **Findings** |
|  | [ ]  CL  | *(Findings ID….)* |
|  | [ ]  CAR | *(Findings ID….)* |
|  | [ ]  FAR | *(Findings ID….)* |
| **Assertion Statement** |
| *Add text here* |

## Section D. Baseline and project scenarios

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| Baseline AND PROJECT SCENARIOS | REFERENCES |
|  | Does the project description clearly: |  |
| 1. identify the target population for adopting the new project technology?
 | [ ]  **Yes** [ ]  No |  |
| 1. demonstrate the baseline practice as the continuation of the current practice e.g. transplanted and continuously flooded rice cultivation in the project fields?
 | [ ]  **Yes** [ ]  No |  |
| 1. describe the baseline and project scenarios following the stratification process?
 | [ ]  **Yes** [ ]  No |  |
|  | Were the following mandatory conditions considered for stratification: |  |
| 1. Water regime – on-season (mandatory):
 | W1. Continuously flooded | [ ]  **Yes** [ ]  **No** |  |
| W2. Single Drainage | [ ]  **Yes** [ ]  **No** |  |
| W3. Multiple Drainage | [ ]  **Yes** [ ]  **No** |  |
| Others, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_ | [ ]  **Yes** [ ]  **NA** |  |
| 1. Water regime – pre-season (mandatory):
 | P1. Flooded | [ ]  **Yes** [ ]  **No** |  |
| P2. Short drainage (<180d) | [ ]  **Yes** [ ]  **No** |  |
| P3. Long drainage (>180d) | [ ]  **Yes** [ ]  **No** |  |
| Others, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_ | [ ]  **Yes** [ ]  **NA** |  |
| 1. Organic amendment (Application rate) (mandatory):
 | Q1. No organic amendment | [ ]  **Yes** [ ]  **No** |  |
| Q2. Low organic amendment | [ ]  **Yes** [ ]  **No** |  |
| Q3. Medium organic amendment | [ ]  **Yes** [ ]  **No** |  |
| Q4. High organic amendment | [ ]  **Yes** [ ]  **No** |  |
| Others, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_ | [ ]  **Yes** [ ]  **NA** |  |
| 1. Organic amendment (Type) (mandatory):
 | O1. Straw on-season | [ ]  **Yes** [ ]  **No** |  |
| O2. Green manure | [ ]  **Yes** [ ]  **No** |  |
| O3. Straw off-season | [ ]  **Yes** [ ]  **No** |  |
| O4. Farmyard manure | [ ]  **Yes** [ ]  **No** |  |
| O5. Compost | [ ]  **Yes** [ ]  **No** |  |
| Q1. No organic amendment | [ ]  **Yes** [ ]  **No** |  |
| Others, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_ | [ ]  **Yes** [ ]  **NA** |  |
|  | Were any optional conditions considered for stratification? |  |  |
| 1. Soil pH (optional)
 | S1. pH < 4.5 | [ ]  **Yes** [ ]  **No** |  |
| S2. pH within 4.5 – 5.5 | [ ]  **Yes** [ ]  **No** |  |
| S3. pH > 5.5 | [ ]  **Yes** [ ]  **No** |  |
| Others, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_ | [ ]  **Yes** [ ]  **NA** |  |
| 1. Soil Organic Carbon (optional)
 | C1. SOC < 1% | [ ]  **Yes** [ ]  **No** |  |
| C2. SOC within 1 – 3 % | [ ]  **Yes** [ ]  **No** |  |
| C3. SOC > 3% | [ ]  **Yes** [ ]  **No** |  |
| Others, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_ | [ ]  **Yes** [ ]  **NA** |  |
| 1. Climate (optional)
 | W1.Tropics  | [ ]  **Yes** [ ]  **No** |  |
| W2.Subtropics  | [ ]  **Yes** [ ]  **No** |  |
| W3.Temperate  | [ ]  **Yes** [ ]  **No** |  |
| W4.Warm  | [ ]  **Yes** [ ]  **No** |  |
| W5.Cool  | [ ]  **Yes** [ ]  **No** |  |
| W6.Warm/Cool  | [ ]  **Yes** [ ]  **No** |  |
| W7.Arid  | [ ]  **Yes** [ ]  **No** |  |
| W8.Semiarid  | [ ]  **Yes** [ ]  **No** |  |
| W9.Subhumid D | [ ]  **Yes** [ ]  **No** |  |
| W10.Humid | [ ]  **Yes** [ ]  **No** |  |
| Others, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_ | [ ]  **Yes** [ ]  **NA** |  |
| 1. Number of days until maturity (optional)
 | T1. High duration | [ ]  **Yes** [ ]  **No** |  |
| T2. Medium duration | [ ]  **Yes** [ ]  **No** |  |
| T3. Low duration | [ ]  **Yes** [ ]  **No** |  |
| Others, specify: \_\_\_\_\_\_\_\_\_\_\_\_\_ | [ ]  **Yes** [ ]  **NA** |  |
|  | Was each project field classified according to its specific pattern of cultivation conditions? | [ ]  **Yes** [ ]  **No** |  |
|  | Does the PD assign specific stratum code to each of the pattern of cultivation conditions? | [ ]  **Yes** [ ]  **No** |  |
|  | Are the selected reference fields as close as possible to the project fields, with no lateral water movement? | [ ]  **Yes** [ ]  No |  |
|  | Does the PD provide appropriate justification of ecological attributes for all the reference fields? | [ ]  **Yes** [ ]  No |  |
|  | Have three or more reference fields with the same pattern been determined in the project area? | [ ]  **Yes** [ ]  No |  |

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| **Means of validation (MOV) and its justification** |
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| **Findings** |
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|  | [ ]  FAR | *(Findings ID….)* |
| **Assertion Statement** |
| *Add text here* |

## Section E. Emission reduction calculation

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| Selection of emission reduction calculation method | REFERENCES |
|  | The VVB shall assess the chosen calculation TIER for proposed project based on its scale as below: |  |
| TIER 1Direct measurement as per guidance in Appendix A of the methodology | *Applicable for small scale and micro scale. If “Yes”, go to the section “TIER 1 EMISSION REDUCTION CALCULATION”.* | [ ]  Yes [ ]  No |  |
| TIER 2Using the Country-specific values as per guidance in Appendix B of the methodology | *Applicable for all scales. If “Yes”, go to the section “TIER 2 EMISSION REDUCTION CALCULATION”.* | [ ]  Yes [ ]  No |  |
| TIER 3Using the IPCC global, regional or country specific default values | *Applicable for all scales. If “Yes”, go to the section “TIER 3 EMISSION REDUCTION CALCULATION”.* | [ ]  Yes [ ]  No |  |
|  | Does the project apply all the equations associated with the selected method for calculating emissions reduction, as outlined in the methodology? | [ ]  **Yes** [ ]  No |  |
| If any modifications to the prescribed equations are applied, please summarise below. |
| *Add text here*  |

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| **Means of validation (MOV) and its justification** |
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| **Findings** |
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| **Assertion Statement** |
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| TIER 1 Emission reduction calculation –IPCC values | REFERENCES |
| APPLICABLE? [ ]  YES [ ]  NO IF NO PLEASE SKIP THIS SECTION.  |  |
|  | Is country specific or regional default value available?*If “Yes”, go to* ***Q26*** *and skip the* ***Q25*** *below.* | [ ]  **Yes** [ ]  No |  |
|  | Is the parameter value EFER identified using the correct value in Table 8 of the methodology? | [ ]  **Yes** [ ]  No |  |
|  | Is the parameter value EFBL calculated correctly following the Equation 12 using the below scaling factors in: |  |
|  | * Table 4 for SFBL,w
 | [ ]  **Yes** [ ]  No |  |
|  | * Table 5 for SFBL,p
 | [ ]  **Yes** [ ]  No |  |
|  | * Table 6 for SFBL,o
 | [ ]  **Yes** [ ]  No |  |
|  | * Table 9 for EFBL,c
 | [ ]  **Yes** [ ]  No |  |
|  | Is the parameter value EFPJ calculated correctly following the Equation 13 using the below scaling factors in: |  |
|  | * Table 4 for SFP,w
 | [ ]  **Yes** [ ]  No |  |
|  | * Table 5 for SFP,p
 | [ ]  **Yes** [ ]  No |  |
|  | * Table 6 or Equation 14 for SFP,o
 | [ ]  **Yes** [ ]  No |  |
|  | * Table 9 for EFP,c
 | [ ]  **Yes** [ ]  No |  |
|  | Is the parameter value EFER calculated using Equation 11 correctly? | [ ]  **Yes** [ ]  No |  |
|  | Is the parameter emission reductions ERy calculated using Equation 10 correctly? | [ ]  **Yes** [ ]  No |  |
|  | Have the ex-ante value for Ay, Ly and GWPCH4 beencorrectly applied? | [ ]  **Yes** [ ]  No |  |
|  | Has the default uncertainty deduction factor of 15% been correctly applied on the emission reductions? | [ ]  **Yes** [ ]  No |  |

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| **Means of validation (MOV) and its justification** |
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| **Findings** |
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|  | [ ]  FAR | *(Findings ID….)* |
| **Assertion Statement** |
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| TIER 2 Emission reduction calculation – country-specific values | REFERENCES |
| Applicable? [ ]  Yes [ ]  No If No please skip this section. |
| Baseline emissions  |
|  | Has the PD followed the guidance in Appendix B of the methodology correctly for setting up for the baseline situation with: |
|  | 1. a country-specific baseline emission factor for continuously flooded fields without organic amendments (EFc)?
 | [ ]  **Yes** [ ]  No |  |
|  | 1. scaling factors SFw?
 | [ ]  **Yes** [ ]  No |  |
|  | 1. scaling factors SFp?
 | [ ]  **Yes** [ ]  No |  |
|  | 1. scaling factors SFo?
 | [ ]  **Yes** [ ]  No |  |
|  | 1. scaling factors SFs?
 | [ ]  **Yes** [ ]  No |  |
|  | 1. scaling factors SFr?
 | [ ]  **Yes** [ ]  No |  |
|  | Has the PD applied Equation 15 correctly for calculating the country specific emission factor EFBL,s,g? | [ ]  **Yes** [ ]  No |  |
|  | Have the ex-ante value for As,g and GWPCH4 been correctly applied? | [ ]  **Yes** [ ]  No |  |
|  | Are the baseline emissions of each stratum in each season (BEs) calculated correctly using Equation 2? | [ ]  **Yes** [ ]  No |  |
|  | Is the total baseline emissions (BE,y) calculated correctly using Equation 1? | [ ]  **Yes** [ ]  No |  |
| Project emissions  |  |
| CH4 emissions from project fields |  |
|  | Has the PD followed the guidance in Appendix B of the methodology correctly for setting up for the project situation with: |
| 1. scaling factors SFw?
 | [ ]  **Yes** [ ]  No |  |
| 1. scaling factors SFp?
 | [ ]  **Yes** [ ]  No |  |
| 1. scaling factors SFo?
 | [ ]  **Yes** [ ]  No |  |
| 1. scaling factors SFs?
 | [ ]  **Yes** [ ]  No |  |
| 1. scaling factors SFr?
 | [ ]  **Yes** [ ]  No |  |
|  | Has the PD applied Equation 15 correctly for calculating the country-specific emission factor EFP,s,g? | [ ]  **Yes** [ ]  No |  |
|  | Have the ex-ante value for As,g and GWPCH4 been correctly applied and the same as the value for baseline emission calculation? | [ ]  **Yes** [ ]  No |  |
|  | Are the project emissions of each stratum in each season (PEs) calculated correctly using Equation 4? | [ ]  **Yes** [ ]  No |  |
| N2O emissions from N-inputs in the project fields |  |
|  | Was the application of fertiliser in the baseline sufficiently ascertained through interviews, purchase records, fertiliser application logbooks, interview with experts etc.? | [ ]  **Yes** [ ]  No |  |
|  | In the project scenario, will the fertiliser application be recorded in the logbooks or farm records and the ex-ante consumption provided? | [ ]  **Yes** [ ]  No |  |
|  | **If there will be an increase in the application rate of fertilisers** in the project scenario, have the emissions from N2O due to excess of N-inputs been accounted correctly as project emissions?*If “No”, go to* ***Q55****.**If the N2O emissions are less than 5% of the emission reductions (after considering all emission sources in the project scenario in year Y), these N2O emissions can be considered as de minimis, and maybe ignored by choosing NA.* | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Have the ex-ante value for As,g, GWPN2O and EFN been correctly applied? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Have the project emissions from application of exceeded N-inputs (PEN,Proj) been estimated correctly using the Equation 6? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | **If the application rate of N-input in the project does not exceed that of baseline,** have the emissions from N2O due to the expected increase in N2O emissions in AWD systems in comparison to continuously flooded rice field systems been accounted for correctly as project emissions?*Reduction in N2O emissions arising from decrease in fertiliser usage rate cannot be claimed under this methodology* | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Have the ex-ante value for As,g, GWPN2O and CFN2O been correctly applied? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Have the project emissions from application of less N-inputs (PEN,AWD) been estimated correctly using the Equation 7? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Have the final project emissions from application of N-inputs (PEN) been estimated correctly using the Equation 5? | [ ]  Yes [ ]  No[ ]  NA |  |
| CO2 Emissions from field preparations |  |
|  | If the total emissions resulting from using mechanical devices, farm equipment and specialized vehicles for land preparation exceed 5% of the total emission reductions in year y, has it been considered as project emissions?*Emissions from land preparation will be ascertained during the first year of field operation. The emissions from land preparation in the subsequent years is considered insignificant***If NA please skip this Sub-section** | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Has the ex-ante value for QF,i been justified? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Has the IPCC value for EFfuel,i been correctly applied? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Are the project emissions from all fuel consumption type (PEp) calculated correctly using Equation 8? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Are the total project emissions (PE,y) calculated correctly using Equation 3? | [ ]  Yes [ ]  No[ ]  NA |  |
| emissions reductions |  |
|  | Are the emission reductions ERy calculated correctly using Equation 9?*Any effects of the project activity on GHG emissions outside the project boundary are deemed to be negligible and do not have to be considered under this methodology* | [ ]  **Yes** [ ]  No |  |
|  | Was the uncertainty deduction factor determined correctly via the assessment as per the Activity Requirements? | [ ]  **Yes** [ ]  No |  |

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| **Means of validation (MOV) and its justification** |
| *Add text here* |
| **Findings** |
|  | [ ]  CL  | *(Findings ID….)* |
|  | [ ]  CAR | *(Findings ID….)* |
|  | [ ]  FAR | *(Findings ID….)* |
| **Assertion Statement** |
| *Add text here* |

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| --- | --- |
| TIER 3 Emission reduction calculation – Direct measurement | REFERENCES |
| APPLICABLE? [ ]  YES [ ]  NO IF NO PLEASE SKIP THIS SECTION. |  |
| BASELINE EMISSIONS |  |
|  | Has the PD followed the guidance in Appendix A of the methodology for measuring emission factor EFBL correctly? | [ ]  **Yes** [ ]  No |  |
|  | Have the ex-ante values for As,g and GWPCH4 beencorrectly applied? | [ ]  **Yes** [ ]  No |  |
|  | Have the baseline emissions of each stratum in each season (BEs) been calculated correctly using Equation 2? | [ ]  **Yes** [ ]  No |  |
|  | Have the total baseline emissions (BE,y) been calculated correctly using Equation 1? | [ ]  **Yes** [ ]  No |  |
| Project emissions |  |
| CH4 from project fields |  |
|  | Has the PD followed the guidance in Appendix A of the methodology correctly for measuring the emission factor EFP? | [ ]  **Yes** [ ]  No |  |
|  | Have the ex-ante value for As,g and GWPCH4 beencorrectly applied and are they the same as the value for baseline emission calculation? | [ ]  **Yes** [ ]  No |  |
|  | Have the project emissions of each stratum in each season (Pes) been calculated correctly using Equation 4? | [ ]  **Yes** [ ]  No |  |
| N2O from N-inputs in the project fields |  |
|  | Have the application of fertiliser in the baseline been sufficiently ascertained through interviews, purchase records, fertiliser application logbooks, interview with experts etc.? | [ ]  **Yes** [ ]  No |  |
|  | In the project scenario, will the fertiliser application be recorded in the logbooks or farm records and the ex-ante consumption provided? | [ ]  **Yes** [ ]  No |  |
|  | **If there will be an increase in the application rate of fertilisers**, has the emissions from N2O due to exceeds of N-inputs been accounted as project emissions?*If “No”, go to* ***Q79****.**If the N2O emissions are less than 5% of the emission reductions (after considering all emission sources in the project scenario in year Y), these N2O emissions can be considered as de minimis, and maybe ignored by choosing NA.* | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Have the ex-ante value for As,g, GWPN2O and EFN been correctly applied? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Has the project emissions from application of exceeded N-inputs (PEN,Proj) been estimated correctly using the Equation 6? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | **If the application rate of N-input in the project does not exceed that of the baseline**, have the emissions from N2O due to the expected increase in N2O emissions in AWD systems in comparison to continuously flooded rice field systems been accounted as project emissions?*Reduction in N2O emissions arising from decrease in fertiliser usage rate cannot be claimed under this methodology* | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Have the ex-ante value for As,g, GWPN2O and CFN2O correctly applied? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Has the project emissions from application of less N-inputs (PEN,AWD) been estimated using the Equation 7? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Has the final project emissions from application of N-inputs (PEN) been estimated using the Equation 5? | [ ]  Yes [ ]  No[ ]  NA |  |
| CO2 from fields preparation |  |
|  | If the total emissions resulting from using mechanical devices, farm equipment and specialized vehicles for land preparation exceed 5% of the total emission reductions in year y, have they been considered correctly as project emissions?*Emissions from land preparation will be ascertained during the first year of field operation. The emissions from land preparation in the subsequent years is considered insignificant.****If NA please skip this Sub-section*** | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Has the ex-ante value for QF,I been justified? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Has the IPCC value for EFfuel,i been correctly applied? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Are the project emissions from all fuel consumption type (PEp) calculated using Equation 8? | [ ]  Yes [ ]  No[ ]  NA |  |
|  | Is the total project emissions (PE,y) calculated using Equation 3? | [ ]  Yes [ ]  No[ ]  NA |  |
| emissions reductions |  |
|  | Are the emission reductions ERy calculated correctly using Equation 9?*Any effects of the project activity on GHG emissions outside the project boundary are deemed to be negligible and do not have to be considered under this methodology* | [ ]  **Yes** [ ]  No |  |
|  | Was the uncertainty deduction factor determined via the assessment as per the Activity Requirements? | [ ]  **Yes** [ ]  No |  |

|  |
| --- |
| **Means of validation (MOV) and its justification** |
| *Add text here* |
| **Findings** |
|  | [ ]  CL  | *(Findings ID….)* |
|  | [ ]  CAR | *(Findings ID….)* |
|  | [ ]  FAR | *(Findings ID….)* |
| **Assertion Statement** |
| *Add text here* |

## Section F. Monitoring methodology

|  |  |
| --- | --- |
| Monitoring Plan | REFERENCES |
|  | Does the project description describe the project monitoring process in line with the methodology?  | [ ]  **Yes** [ ]  No |  |
| 1. Does it capture all relevant monitoring parameters with necessary details such as monitoring process, frequency, QA QC process, sampling requirements as necessary?
 | [ ]  **Yes** [ ]  No |  |
| 1. Does the project propose any deviations from the monitoring methodological approaches?
 | [ ]  Yes [ ]  No  |  |
| 1. If (b) above is “Yes”, are the deviations permanent in nature?
 | ☐ Yes ☐ No☐ NA |  |
| If project employs any deviation, please describe below.  |  |
| *Add text here* |  |
| cultivation logbook |  |
|  | Does the project description clearly outline how the cultivation logbook is maintained for all project fields by the farmers, including:  |  |
| 1. Sowing (date)
 | [ ]  **Yes** [ ]  No |  |
| 1. Fertiliser, organic amendments, and crop protection application (date and amount);
 | [ ]  **Yes** [ ]  No |  |
| 1. Water regime on the field (e.g. “dry/moist/flooded”) and dates where the water regime is changed from one status to another;
 | [ ]  **Yes** [ ]  No |  |
| 1. Yield
 | [ ]  **Yes** [ ]  No |  |
| Does the cultivation logbook require farmers to state whether they have followed fertilisation recommendations provided with the introduction of the adjusted water management practice?*This shall include details such as whether the optimised dosage of fertilisers, frequency etc is being followed as established during the project design phase* | [ ]  **Yes** [ ]  No |  |
|  |  |  |
| If project employs any deviation, please describe below.  |  |
| *Add text here* |  |
| Other monitoring elements |  |
|  | The VVB shall validate whether the project developer set up: |  |
| 1. the monitoring procedure to assure that the project reference fields will be 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.
 | [ ]  **Yes** [ ]  No |  |
| 1. the monitoring procedure to take out the fields areas where farmers deviate from the defined project cultivation practice from the determination of the aggregated project area As,g of any season.
 | [ ]  **Yes** [ ]  No |  |
| 1. the 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,
* if applicable, additional farm-specific information
 | [ ]  **Yes** [ ]  No |  |
| If project employs any deviation, please describe below.  |  |
| *Add text here* |  |  |
| **Means of validation (MOV) and its justification** |
| *Add text here* |
| **Findings** |
|  | [ ]  CL  | *(Findings ID….)* |
|  | [ ]  CAR | *(Findings ID….)* |
|  | [ ]  FAR | *(Findings ID….)* |
| **Assertion Statement** |
| *Add text here* |

# Appendix 1: Documents/Evidence reviewed or referenced

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.NO | AUTHOR | TITLE | REFERENCE TO THE DOCUMENT | PROVIDER |
|  | Gold Standard | Methodology For Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation |  |  |
|  |  | Project Design Document |  |  |
|  | >> | Emission Reduction Calculations |  |  |
|  | >> |  |  |  |

# Appendix 2: abbreviations

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| --- | --- |
| Abbreviations | Full texts |
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# Appendix 3: FINDINGS

Section 1: Clarifications **(CLs)**

|  |  |
| --- | --- |
| **CL ID** | CL 1  |
| **Reference** | Mention the section number of the checklist to which the CL refers to.  |
| **Date** | Opened | dd/mm/yyyy | Closed | dd/mm/yyyy |
| **Status** | [ ]  Open | [ ]  Turned to a FAR | FAR ID  | Add FAR ID here. If turned into a FAR  |
| **Description**  | Round 1 | Add text hereDescribe the finding here. Auditor should include rational with reference to applicable GS4GG requirement.  |
| **Project developer response** | Round 1 | Add text here |
| **Documents provided by PD** | Round 1 | Add text here |
| **VVB assessment** | Round 1 | Add text here |
| **Project developer response** | Round 2 | Add text here |
| **Documents provided by PD** | Round 2 | Add text here |
| **VVB assessment** | Round 2 | Add text here |
|  |  | Add rows as needed |
| **VVB conclusion** | VVB shall present the final opinion with a brief summary and rational for the decision. |

(Copy and paste the table above as needed. Remove the instructions)

Section 2: Corrective action requests (CARs)

|  |  |
| --- | --- |
| **CAR ID** | CAR 1  |
| **Reference** | Mention the section number of the checklist to which the CAR refers to.  |
| **Date** | Opened | dd/mm/yyyy | Closed | dd/mm/yyyy |
| **Status** | [ ]  Open | [ ]  Turned to a FAR | FAR ID  | Add FAR ID here. If turned into a FAR  |
| **Description**  | Round 1 | Add text hereDescribe the finding here. Auditor should include rational with reference to applicable GS4GG requirement.  |
| **Project developer response** | Round 1 | Add text here |
| **Documents provided by PD** | Round 1 | Add text here |
| **VVB assessment** | Round 1 | Add text here |
| **Project developer response** | Round 2 | Add text here |
| **Documents provided by PD** | Round 2 | Add text here |
| **VVB assessment** | Round 2 | Add text here |
|  |  | Add rows as needed |
| **VVB conclusion** | VVB shall present the final opinion with a brief summary and rational for the decision. |

(Copy and paste the table above as needed. Remove the instructions)

Section 3: Resolution of RELEVANT FARs from any previous review

|  |  |
| --- | --- |
| **FAR ID** |  FAR 1 |
| **Reference** | Mention the section number of the checklist to which the FAR refers to.  |
| **VVB opinion *(is FAR addressed appropriately by the PD?)*** | [ ]  Yes, if FAR has been resolved by the developer please fill in the VVB conclusion only.[ ]  No, if further clarification or corrective action is needed, please use the rows below to capture the details.  |
| **Date** | Opened | dd/mm/yyyy | Closed | dd/mm/yyyy |
| **Status** | [ ]  Open | [ ]  Turned to a FAR  | FAR ID  | Add text here |
| **Description**  | Round1 | Add text here |
| **Project developer response** | Round1 | Add text here |
| **Documentation provided by PD** | Round1 | Add text here |
| **VVB assessment** | Round1 | Add text here |
|  |  | Add rows as needed to |
| **VVB conclusion** | VVB shall present the final opinion with a brief summary and rational for the decision. |

(Copy and paste the table above as needed. Remove the instructions)

Section 4: FARs raised during validation **OF DESIGN CERTIFICATION.**

Reporting guidance:

1. FAR ID: use unique id for each FAR.
2. Reference: Mention the section number of the checklist to which the FAR refers to.
3. Description of FAR: Describe the FAR in clear and concise manner to indicate the action needed to ensure the compliance with the applicable requirement.
4. To be checked by and when: Mention who needs to check the compliance and when for example “Verifying VVB” at the time of “1st issuance”.

|  |  |  |  |
| --- | --- | --- | --- |
| **FAR ID** | **Reference** | **Description of FAR** | **To be checked by whom and when** |
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|  |  |  |  |
|  |  | (add rows as required) |  |

# Document History

|  |  |  |
| --- | --- | --- |
| Version  | Date | Description |
| 1.0 | 5/4/2024 | Initial adoption |
|  |  |  |