REQUEST FOR PROPOSALS

DEVELOPMENT OF A VCS METHODOLOGY OR MODULE FOR THE QUANTIFICATION OF GREENHOUSE GAS EMISSIONS FROM RICE PRODUCTION SYSTEMS

July 11, 2023

INTRODUCTION

Verra is a global leader helping to tackle the world's most intractable environmental and social challenges. As a mission-driven nonprofit organization, Verra is committed to helping reduce greenhouse gas emissions, improve livelihoods, and protect natural resources across the private and public sectors. We support climate action and sustainable development with standards programs that credibly, transparently, and robustly assess environmental and social impacts and that also enable funding for sustaining and scaling up projects that verifiably deliver these benefits. We work in any arena where we see a need for clear standards, a role for market-based mechanisms, and an opportunity to generate significant environmental and social value.

PROJECT BACKGROUND AND OBJECTIVE

Rice is a staple crop for more than half of the world's population.[1] Globally, most rice cultivation takes place in flooded fields. These anaerobic conditions lead to significant emissions of methane (CH_4) and, to a lesser extent, nitrous oxide (N_2O). On average, rice systems contribute just under 8% of global CH_4 emissions[2] and emit more than 25 Mt CH_4 annually (~624 Mt CO_2e).[3]

Feasible and effective management practices can minimize CH_4 emissions from flooded rice systems by reducing the anaerobic decomposition of organic matter in rice cropping soils, thus decreasing soil methanogenesis. These practices, which focus on shortening the

[1] FAOSTAT (2022), https://www.fao.org/faostat/en/
[2] Global Methane Assessment (2021), https://www.ccacoalition.org/en/resources/global-methane-assessment-full-report
[3] EPA (2019), https://www.epa.gov/sites/default/files/2019-09/documents/epa_non-co2_greenhouse_gases_rpt-epa430r19010.pdf

intermittent flooding period to alternate wet and dry soil conditions, include midseason drainage (MD) and alternate wetting and drying (AWD). Analyses show that these and other practices have a high potential to reduce CH_4 emissions from rice production globally (6-9 Mt CH_4; 168-252 Mt CO_2e by 2030). However, there is some evidence that these practices contribute to increased N_2O emissions and soil organic carbon (SOC) losses. Therefore, the trade-offs between CH_4, N_2O, and CO_2 (SOC) emissions must be considered when quantifying the total greenhouse gas (GHG) emission balance.

Several GHG accounting methodologies that quantify CH_4 emission reductions in rice systems have been developed (see Appendix). These methodologies allow for the generation of carbon credits, which are traded in voluntary and compliance carbon markets. Of these, the UNFCCC CDM rice methodology AMS-III.AU is the most commonly used.

Until early this year, Verra's Verified Carbon Standard (VCS) Program allowed projects to use the CDM rice methodology. However, a recent Verra review resulted in the inactivation of the CDM methodology based on identified concerns including a) insufficient guidance for field stratification; b) lack of consideration, accounting, or monitoring for changes in N_2O emissions and SOC stocks; and c) need for standardized guidance for conducting CH_4 measurements. These findings indicate that the CDM methodology is no longer fit for purpose.

Verra now seeks a qualified consultant or a consulting team to develop a new VCS methodology or module[4] for *VM0042, v2.0*[5] that builds on past efforts and includes the latest scientific understanding of GHG dynamics; monitoring; and measurement, reporting, and verification (MRV) in rice systems. Proposals from consultants or consulting teams must consider the most up-to-date scientific findings and data related to developments and innovations for improved management of rice production and total GHG quantification, including MRV systems. Verra will fund the methodology/module development and assessment process.

SCOPE OF WORK

Verra anticipates that the selected consultant will take 12 months to develop the methodology/module. During this time, the consultant will be expected to maintain regular communication with Verra, which includes participating in virtual meetings to exchange views and discuss draft products as necessary. The consultant is expected to follow the steps

[4] In the VCS Program, a module is a component of a methodology that can be applied to perform a specific methodological task.
[5] *VM0042 Methodology for Improved Agricultural Land Management, v2.0*

outlined in the *VCS Methodology Development and Review Process, v4.2*. At a minimum, Verra expects the consultant to carry out the following principal tasks and responsibilities:

- **Prepare a methodology or *VM0042* module outline**. Perform a high-level review of existing methodologies (see Appendix), including *VM0042, v2.0*. The review must assess key methodology approaches and procedures, such as additionality and baseline setting, applicability conditions, leakage, project activities, project boundaries, GHG quantification, and monitoring procedures. This information must be used to develop an outline for a new full methodology/module proposal.
- **Prepare a draft VCS methodology or *VM0042* module document**. Develop and submit a draft of the new methodology/module to Verra. The methodology/module must conform to relevant VCS documentation[6] and be prepared using the *VCS Methodology Template, v4.2*. Verra will assess it against the rules and requirements of the VCS Program and provide the relevant findings in a review report. The consultant must further refine the approach and adapt the methodology in an iterative process until all findings are closed and ready to proceed to the next stage. The methodology or module should include the following main aspects:
    - Definition of the approach to assessing additionality and baseline crediting, giving preference for the adoption of a standardized method
    - Detailed and comprehensive guidance for project area stratification
    - Expansion of eligible project activities to include improved rice varieties, straw management, tillage (e.g., conventional and no-till), and improved fertilization management (e.g., ammonium sulfate, nitrification inhibitor, slow-release, reduced use, and auto-fertilization)
    - An approach for leakage assessment that includes potential GHG emission increase related to straw removal from the project area and subsequent use elsewhere
    - A GHG accounting boundary that includes the assessment of potential increases in N_2O emissions and losses of SOC stocks in the project scenario
    - Guidelines for the development of regional emission factors to enable Tier 2 reporting of GHG emissions
    - A standardized and optimized protocol for in situ gas measurements to enable Tier 3 reporting of GHG emissions

[6] Documentation includes *VCS Standard, v4.4*, *VCS Program Definitions, v4.3*, and *VCS Methodology Requirements, v4.3*.

  - Guidelines for using models and testing their performance to estimate CH4 and N2O emissions and SOC stock changes aligned with existing guidance in the VMD0053, v2.0
  - Updated equations for GHG quantification, including from the *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*
  - Innovative and robust approaches for cost-effective MRV of GHGs in rice systems
  - Provisions such as applicability conditions and procedures to ensure environmental integrity
- **Review and respond to public comments and produce an updated proposal draft.** Verra will coordinate a 30-day public consultation on the proposed methodology/module. The consultant must respond to each substantive issue raised during the consultation period. They should use the input from the public and expert consultations, as well as Verra's comments, to produce a revised draft of the methodology/module.
- **Manage the progression of the proposal through a validation/verification body (VVB) assessment.** Following the public consultation, Verra will select and contract an independent VVB to review the methodology. The VVB will produce an assessment report with their findings. The consultant must respond to the findings and update the methodology/module until all findings are resolved.
- **Manage the final review process and produce the final methodology/module.** Verra will conduct the final review and provide the relevant findings in a review report. The consultant must address any findings in an iterative process with Verra (and the VVB if necessary) until all findings are closed.

DELIVERABLES

The main deliverables resulting from this assignment are as follows:

1) A presentation to Verra describing the methodology review outcomes with accompanying documentation (e.g., comparative spreadsheet), including main findings and a summary outlining the proposed methodology/module
2) A first full draft of the methodology/module for public consultation using the *VCS Methodology Template, v4.2*
3) Responses to each issue raised during the consultation period

4) An updated draft of the methodology/module following the public consultation, which should be informed by the input from the consultations, and which will be submitted for VVB assessment

5) An updated draft of the methodology/module after VVB assessment that addresses all findings from the VVB's assessment report (issued by the VVB); during this stage the consultant will be expected to iterate with Verra and the VVB to resolve VVB findings

6) The final version of the methodology/module

CRITERIA FOR EVALUATION

Verra will evaluate proposals by how effectively they demonstrate the following:

- A depth of understanding of rice production systems in different geographical locations, including the heterogeneity of environmental and landscape conditions and potential impacts on GHG emissions sources
- Analytical and innovative thinking with respect to developing new solutions for a robust, scientifically sound, and cost-effective approach for the quantification of GHG emissions from rice systems
- A list of costs for the full development of a methodology/module, including a justification for the proposed level of effort consistent with the outcomes
- Knowledge of basic VCS documentation such as *VCS Standard, v4.4*, *VCS Program Definitions, v4.3*, *VCS Methodology Requirements, v4.3*, and *VCS Methodology Development and Review Process, v4.2*
- Experience in developing methodologies for the carbon market and/or examples of having successfully used the proposed approach, or a similar approach, in prior work (e.g., in pilot projects)

RESPONSES TO THE RFP

Proposals should not exceed five pages and should include the following:

- A high-level summary of initial ideas for a new methodology/module considering the key elements described above. Applicants are also encouraged to describe any innovations/value-added propositions that they think would enhance the scope of work requirements.
- A description of the technical plan showing how the consultant plans to achieve the overall objective, including a timeline for each key/major deliverable

- An estimated timeline for completing the project[7]
- A cost proposal, not to exceed $80,000, that includes the rationale for main budget items[8]
- A description of how the consultant would avoid any potential conflict of interest in undertaking the scope of work
- A summary of consultant or consulting team qualifications and separately appended resumes/CVs (not to exceed two pages each)
- If available, examples of similar projects the consultant has worked on, and outcomes achieved

Although it is not mandatory, Verra encourages proposals from consulting teams with diverse multidisciplinary backgrounds (e.g., representatives from the scientific community, project and/or methodology developers, investors). Teams with such backgrounds will be given priority during selection.

All proposals and documents submitted to Verra will be kept confidential.

All documents must be submitted to Carolina Cardoso Lisboa at clisboa@verra.org by close of business on August 25, 2023. The top candidates will be asked clarifying questions or invited for a deeper discussion about their proposal. Verra plans to finalize the selection of the consultant by October 24, 2023, with the work to begin as soon as possible after then.

LEGAL NATURE OF RFP

This RFP is an invitation for proposals and Verra is under no legal obligation to accept any proposal or proceed with the RFP. Verra reserves the right to amend the requirements at any time.

[7] Verra estimates the duration of this assignment will be approximately 10 months.
[8] The cost proposal/budget is not to exceed $80,000, including total estimated costs based on a daily or hourly rate. (Note: this does not include the cost of VVB review, which Verra will pay for.)

APPENDIX – GHG METHODOLOGIES FOR RICE SYSTEMS

- American Carbon Registry, *Emission Reductions in Rice Management Systems* (2013) (inactive), https://americancarbonregistry.org/carbon-accounting/standards-methodologies/INACTIVE-emission-reductions-in-rice-management-systems
- California Air Resources Board, *Compliance Offset Protocol Rice Cultivation Projects* (2015), https://ww2.arb.ca.gov/our-work/programs/compliance-offset-program/compliance-offset-protocols/rice-cultivation-projects
- Climate Action Reserve, *Rice Cultivation Project Protocol* (2013) (inactive), https://www.climateactionreserve.org/how/protocols/ncs/rice-cultivation/
- Gold Standard, *Methodology for Methane Emission Reduction by Adjusted Water Management Practice in Rice Cultivation, v1.0* (2023), https://globalgoals.goldstandard.org/437-luf-agr-methane-emission-reduction-awm-practice-in-rice/
- Plan Vivo, *PM001 Agriculture and Forestry Carbon Benefit Assessment Methodology* (2022), https://www.planvivo.org/methodologies
- Plan Vivo, *PU003 Estimation of baseline and project GHG emissions from sources in Plan Vivo projects* (2022), https://www.planvivo.org/methodologies
- SOCIALCARBON, *SCM002 Methane emission reduction by adjusted water management practice in rice cultivation* (2022), https://static1.squarespace.com/static/6161c89d030b89374bec0b70/t/6389dbd817a02b01f41020de/1669979098005/SOCIALCARBON-SCM0002-v1.1.pdf
- UNFCCC CDM, *AMS-III.AU Methane emission reduction by adjusted water management practice in rice cultivation, Version 4.0* (2014), https://cdm.unfccc.int/methodologies/DB/D14KAKRJEW4OTHEA4YJICOHM26M6BM
- Verra, *Calculating Emission Reductions in Rice Management Systems* (2011) (inactive), https://verra.org/methodologies/calculating-emission-reductions-in-rice-management-systems/