



Standards for a
Sustainable Future

REQUEST FOR PROPOSALS

DEVELOPMENT OF A VCS BIOCHAR METHODOLOGY

December 2020

1. BACKGROUND

Biochar is a carbon-rich solid material created from biomass subjected to high heat and limited-oxygen environments. It is similar to charcoal, though biochar is explicitly not used for energy production purposes, but rather as a soil amendment or other non-energy producing end uses. One of the compelling characteristics of biochar is that its organic carbon component is generally one to two orders of magnitude more stable than the original material it was produced from (i.e. the feedstock). This means that when used as a soil amendment or other non-energy producing end uses, a substantial portion of biochar's organic carbon persists for decades to millennia without being mineralized into inorganic carbon. In contrast, biochar feedstocks (e.g. grain straw, rice husks, wood, animal manure, etc.) typically undergo mineralization of their organic carbon compounds in months to years. Because of this characteristic, biochar has been touted for more than a decade as a tool with high potential to combat climate change if deployed on a massive global scale.

Further to its potential role in climate change mitigation, biochar offers a range of well-studied soil fertility benefits, including enhanced nutrient and water retention, aeration, drainage, microbial activity and others, which can help increase crop yields, especially in degraded agricultural soils. Furthermore, biochar has the potential to rehabilitate soils contaminated by toxic mine tailings or stormwater run-off. While uses in soil are most prominent in terms of research and early-stage commercial development, other end uses with promising potential include construction materials, the cement and asphalt industries, and other industrial applications. Additionally, biochar production can help deal with excess waste biomass which often presents significant environmental challenges (e.g. water contamination, greenhouse gas emissions), for example in rice, coffee, or oil palm production systems. Finally, the biochar thermochemical conversion process involves the generation of heat energy, which can help offset existing energy needs and reduce greenhouse gas (GHG) emissions and pollution if captured and utilized.

2. OBJECTIVE & NEED

Because of biochar's compelling climate, agronomic and environmental benefits, there is interest in developing GHG accounting methodologies for biochar projects. Notably, there were two previous efforts to develop such methodologies in established carbon offsetting programs 5+ years ago at [VCS](#) and [ACR](#); both of which were not finalized due to perceived scientific uncertainty, at the time, about biochar's carbon stability. Since then, biochar science has continued to evolve with dozens

of peer-reviewed papers published on the properties, applications and GHG accounting procedures, which prominently includes the recent publication of the [Method for Estimating the Change in Mineral Soil Organic Carbon Stocks from Biochar Amendments](#) in the IPCC's 2019 Refinement¹. Moreover, while the biochar industry is still in its infancy, production technologies as well as projects continue to spread in all regions of the world signaling the growing viability of the biochar industry.

Hence, Verra believes this is an opportune time to bring forward a biochar methodology in our flagship VCS Program² – the leading GHG program for Agriculture, Forestry and Other Land Use (AFOLU) projects – and we are seeking proposals from a qualified consultant or consulting team to develop a comprehensive biochar GHG accounting methodology. Verra will fund and manage the development and assessment process for the methodology³.

3. SCOPE OF WORK AND DELIVERABLES

In order to achieve the objective of developing a comprehensive biochar GHG accounting methodology, the consultant should carry out the tasks described below, and follow the steps outlined in the VCS [Methodology Approval Process](#). The consultant will be expected to have regular calls with Verra to exchange views and discuss draft products, as necessary:

1. Gather and review relevant information and analyze different approaches

The information to be analyzed includes:

- Review the inactive methodologies at [VCS](#) and [ACR](#) and consider and propose elements to include from those methodologies.
- Review active biochar production and/or accounting standards and frameworks including but not limited to the IPCC [Method for Estimating the Change in Mineral Soil Organic Carbon Stocks from Biochar Amendments](#), the [International Biochar Initiative \(IBI\) Biochar Standards](#), the [European Biochar Certificate \(EBC\)](#), [Carbonfuture](#), and [Puro.earth](#), and consider and propose ways to leverage and/or build on these efforts.
- Consult relevant biochar stakeholders (to be agreed between the consultant and Verra) to get their views on the scope, and advantages and weaknesses of different approaches to structuring the methodology (e.g. “modules” for differentiated feedstocks and/or end uses).

Based on the information gathered from the sources above, the consultant will propose a recommended approach for the biochar methodology, including project activities and

¹ Specifically see the *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories Volume 4 Agriculture, Forestry and Other Land Use* <https://www.ipcc-nggip.iges.or.jp/public/2019rf/vol4.html>.

² The VCS Program is the world's largest carbon crediting program and accounts for about two-thirds of all voluntary carbon market transaction volume, e.g. see [State and Trends of Carbon Pricing 2020](#) (May 2020) - World Bank Group.

³ While this approach is different from the usual VCS methodology development process, it is important to note that Section 2.2 of the [Methodology Approval Process, v4.0](#) states that Verra may pilot alternative processes for approving methodologies where it is deemed that an alternative approach may be more efficient, and equally robust.

boundaries, applicability conditions, GHG quantification, approach to additionality, environmental integrity, uncertainty, data requirements and expected costs for use.

Deliverable 1: A presentation to Verra describing the outcomes of the information review, feedback from biochar stakeholders, and the recommended approach to developing a biochar methodology.

2. Prepare and submit full draft methodology.

Following step 1 and taking on board Verra feedback, the consultant will develop and submit a full methodology using the [VCS Methodology Template v4.0⁴](#). The consultant should iterate with Verra throughout this step to refine the approach prior to formal submission of the VCS Methodology Template, including sharing drafts of the methodology and checking in with Verra on a ~biweekly basis.

Deliverable 2: A first full draft methodology using the Methodology Template.

3. Review and respond to public comments, and produce an updated draft of the methodology.

Verra will coordinate a 30-day public consultation on the proposed methodology. The consultant should respond to each substantive issue raised during the consultation period, and use the inputs obtained from the public and expert consultations, as well as comments received from Verra, to produce a final draft of the methodology.

Deliverable 3: Summary of the comments (public and expert) received during the consultation period and a description of how they were addressed by the consultant.

Deliverable 4: An updated draft of the methodology.

4. Manage the progression of the methodology through a validation/verification body (VVB) assessment.

Following the public consultation, the proposed methodology will be assessed by an independent VVB selected and contracted by Verra who will review the methodology and produce an assessment report with findings. The consultant will produce a revised version of the methodology addressing all the findings in the assessment report. The VVB will review this version to ensure that the modifications made have not produced any non-conformances with the VCS rules. The consultant should revise the methodology to address any issues found by the VVB and produce a final version for publication in the VCS Program.

Deliverable 5: The final version of the proposed methodology.

⁴ Available at <https://verra.org/project/vcs-program/rules-and-requirements/> under Templates & Forms > Methodology.

4. MILESTONES & TIMELINE

The duration of this consultancy will be approximately 8 months (February through September 2021). An indicative timeline for meeting key milestones and deliverables follows:

Milestone	Deliverable	Indicative Timeline
Kick-off meeting with Verra		Early February
Information review and recommended approach	<u>Deliverable 1</u> : Presentation to Verra	February - March
Iterate with Verra to prepare and submit full draft methodology	<u>Deliverable 2</u> : First full draft methodology	April
Respond to public comments and produce updated draft methodology	<u>Deliverable 3</u> : Summary of comments and responses <u>Deliverable 4</u> : Updated draft of the methodology	May - June
VVB assessment and final methodology	<u>Deliverable 5</u> : Final version of the proposed methodology	July - September

5. SKILLS & QUALIFICATIONS

The consultant should have:

- Applied experience with biochar production and use including in agricultural and non-agricultural settings.
- Scientific understanding of biochar life cycle and GHG accounting associated with different feedstocks, production processes, and end-uses.
- Understanding of the challenges associated with biochar production and commercialization.
- Experience developing carbon offset methodologies

To meet these diverse skills and qualifications, proposals including multiple entities are encouraged (i.e. from a team comprised of two or more entities).

6. RESPONSES TO RFP

Respondents are requested to submit the following as part of their proposals:

- High-level technical proposal (not to exceed four pages) for the scope of work and deliverables including a work plan. Applicants are encouraged to describe any innovations/ added value propositions that they feel would enhance the scope of work requirements.
- Cost proposal/budget not to exceed USD 60,000 including total estimated costs based on a daily or hourly rate. NB: this does not include the cost of VVB review, which Verra will pay for separately.

- Description of how the consultant would avoid any potential conflict of interest in undertaking the described scope of work.
- 1-page summary of qualifications of consultant or consulting team, and separately appended resumes/CVs (not to exceed two pages each).

Respondents should feel free to submit clarifying questions to sjirka@verra.org on any of the above information.

All application materials submitted to Verra will be kept confidential, **and must be submitted via email to sjirka@verra.org by close of business on Friday, 15 January 2021**. Verra will set up interviews of short-listed candidates and/or request clarifying information by 22 January with the aim to finalize selection by early February.

7. Legal Nature of RFP

This RFP is an invitation for proposals and Verra is under no legal obligation to accept any proposal nor proceed with the RFP. Verra reserves the right to amend the requirements at any time.