



The Verified Carbon Standard and Requirements for Geologic Carbon Storage

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Agenda

- Overview of Verra
- The Verified Carbon Standard
- Requirements for Geologic Carbon Storage
- The Foundation for the Future



Photo: FUNDAECO / REDD Conservation Coast Project



Standards for a Sustainable Future

We accelerate action on climate change and sustainable development through standards that drive investment to achieve measurable high integrity outcomes for global stakeholders.



Standards for a Sustainable Future

2007

Founded in 2007 by environmental and business leaders who saw the need for greater quality assurance in voluntary carbon markets

501(c)(3)

Registered nonprofit organization under Section 501(c)(3) of the U.S. Internal Revenue Code

120+

With approximately 120 staff and growing rapidly, Verra is headquartered in Washington, D.C., USA, with staff working remotely internationally



Verified Carbon Standard

The world's most widely used
voluntary greenhouse gas program

By the Numbers



How It Works

Verified Carbon Standard

VCS Methodology
VM0044

METHODOLOGY FOR BIOCHAR FOR SOIL AND NON-SOIL APPLICATIONS

Version 1.0
12 August 2022
Sectoral Scope 13

VCS Methodology: VCS Version 4.1

H¹ Applicability conditions state that qualifying biomass facilities that divert a portion of their biomass away from renewable energy production to biochar (high-carbon fly ash) must divert less than 6 percent of the total biomass used on an annual basis. In addition, the biomass facility must demonstrate that they are not replacing the biomass lost with fossil fuel sources. If both criteria are met, biomass-based heat or electrical production loss can be considered de minimis.

E¹ If the biochar facility sells electricity to the grid under an existing renewable energy program, project electrical generation that displaces fossil fuel-based electricity should not be counted in the calculations (to avoid double counting).

6 BASELINE SCENARIO

The baseline scenario is that in which, in the absence of the project activity, waste biomass is either left to decay or combusted for purposes other than energy production and is not utilized for producing biochar for either soil or non-soil application. As per the applicability conditions (see Section 4), the waste biomass must only have the following fates: decay (aerobic or anaerobic) or combustion of biomass for purposes other than energy production. The resulting emission avoidance potential for the project activity feedstock has been excluded (a conservative assumption).

The project proponent must provide credible evidence of the baseline scenario of waste biomass. Examples of evidence include but are not limited to annual government records, records of a waste disposal facility, and records of a production facility. In the absence of records, the project proponent must utilize data from existing literature, existing survey data of similar industries in the same region, or conduct its own survey.

7 ADDITIONALITY

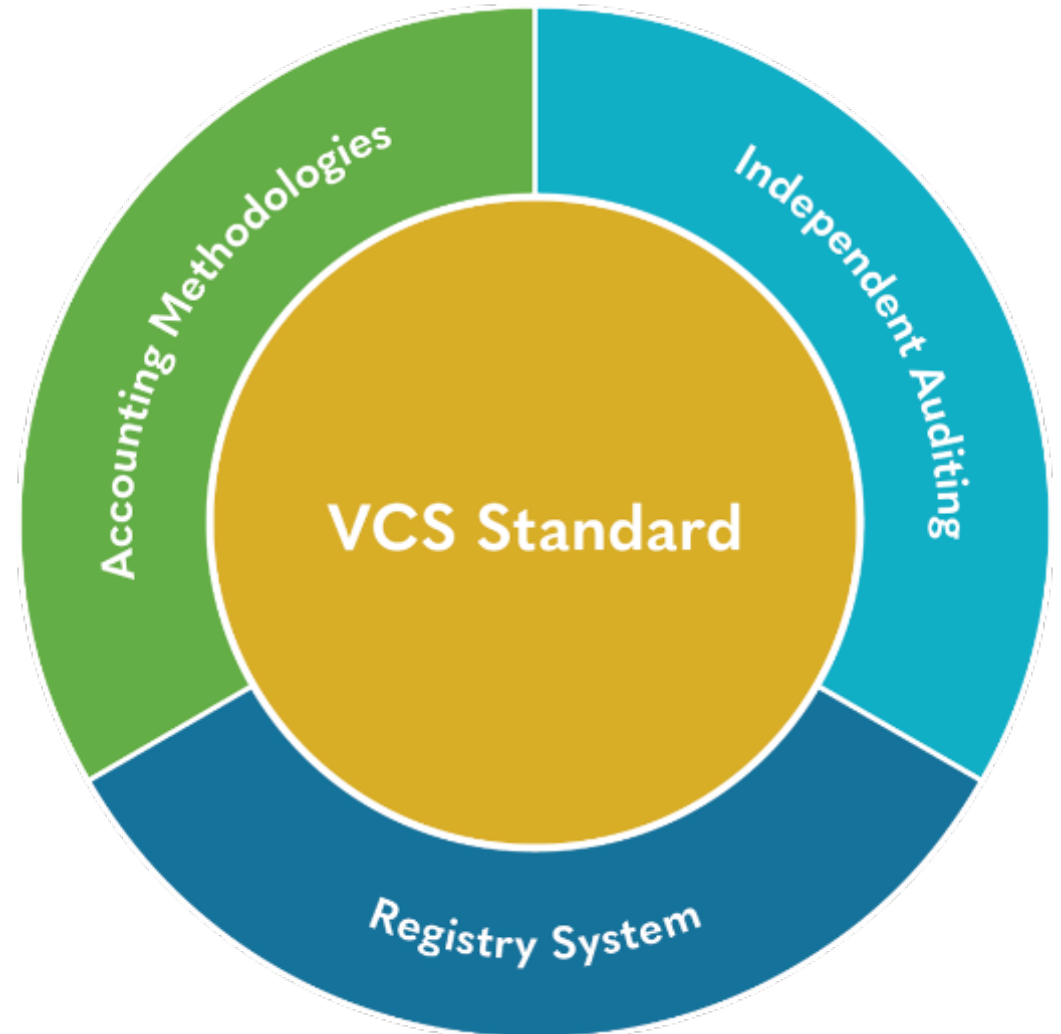
The methodology uses a standardized approach for the demonstration of additionality, specifically an activity method. Activity methods pre-determine additionality for given classes of project activities using a positive list. Projects that implement activities on the positive list are automatically deemed as additional and do not otherwise need to demonstrate additionality. The processing of waste biomass to biochar is the basis for a positive list in this methodology.

Project proponents applying this methodology must determine additionality using the procedure below.

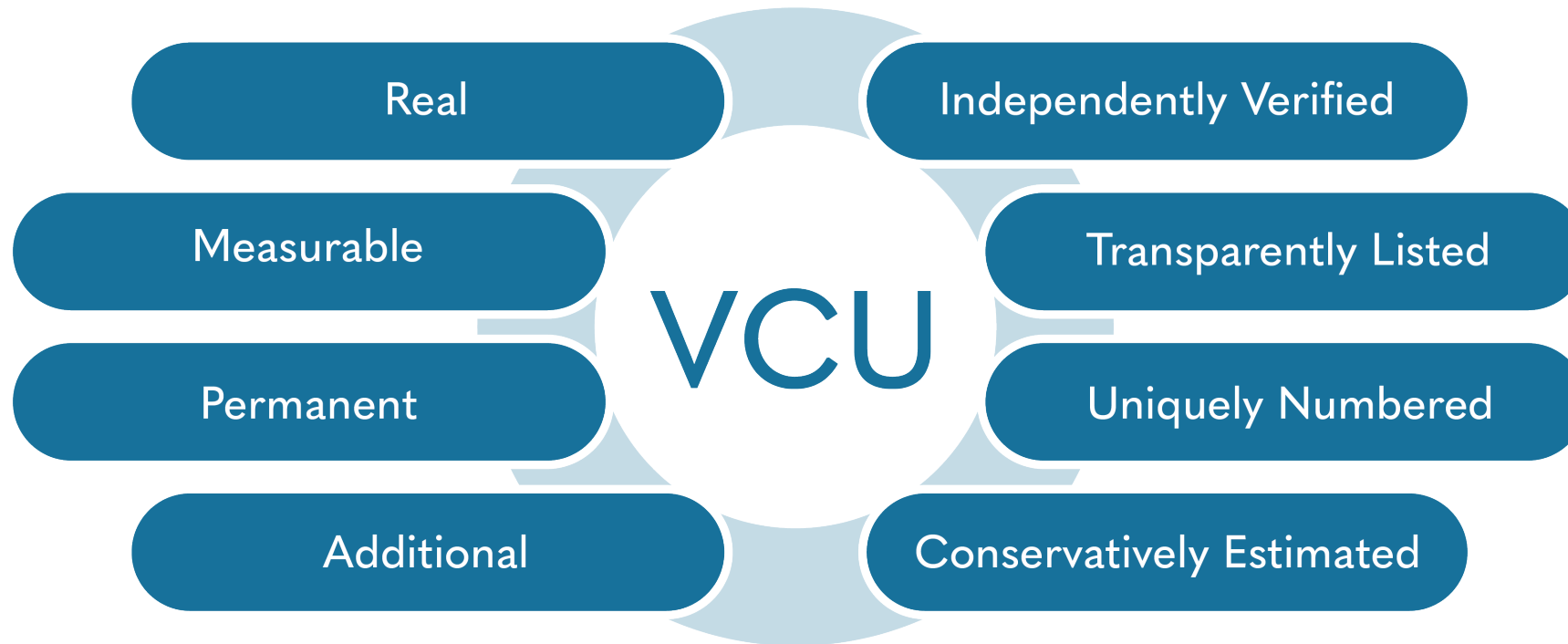
Step 1: Regulatory Surplus

The project proponent must demonstrate regulatory surplus in accordance with the rules and requirements regarding regulatory surplus set out in the latest version of the VCS Standard and VCS Methodology Requirements.

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What Makes a Good Carbon Credit?



Verra Projects issue unique carbon credits known as Verified Carbon Units (VCUs)

Requirements for Geologic Carbon Storage (GCS) Projects

- Expanded scope of the VCS Program to include GCS project activities
- New terminology established across VCS Program for GCS project activities
- GCS is the umbrella term used by Verra to encapsulate carbon capture and storage (CCS)/utilization (CCUS), and geologic carbon mineralization (GCM) projects



Verified Carbon Standard

[GEOLOGICAL CARBON STORAGE \(GCS\) REQUIREMENTS, V4.0](#)



[VCS STANDARD, V4.4](#)



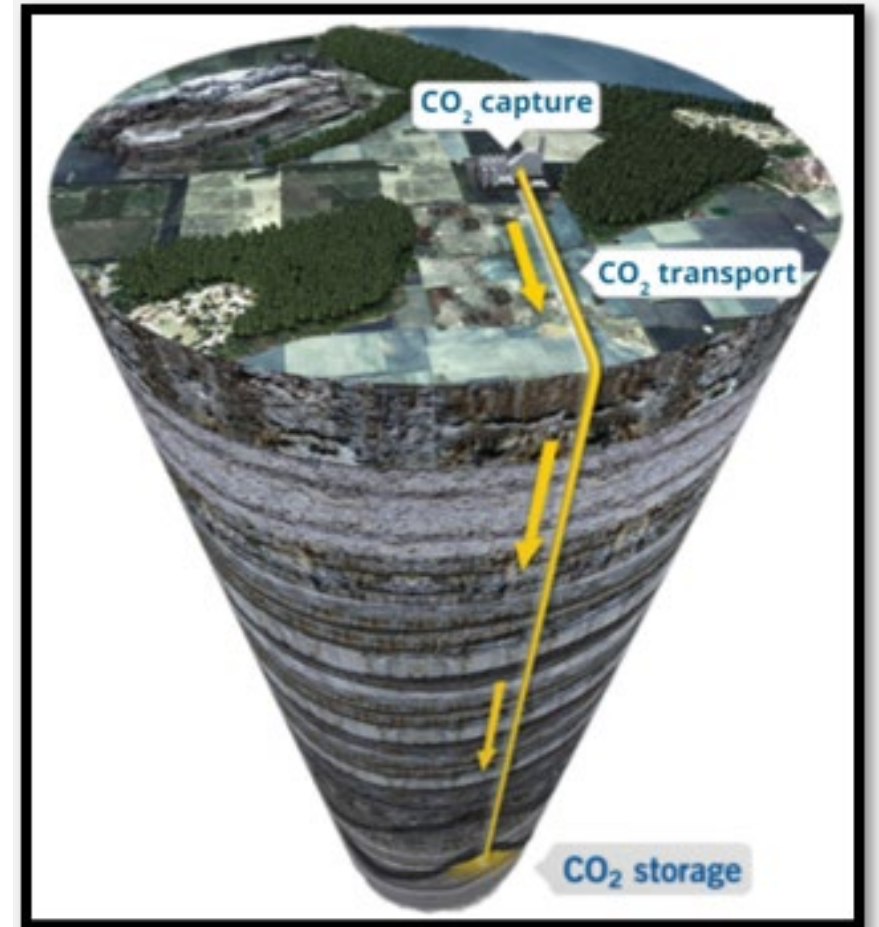
[VCS PROGRAM DEFINITIONS, V4.3](#)



[GEOLOGIC CARBON STORAGE NON-PERMANENCE RISK TOOL](#)



GCS Projects Beyond ERR's



GCS Requirements

- Currently only for CCS projects
- Future CCUS and GCM requirements
- Details for project/pore space ownership and site characterization
- Construction design and well operating requirements
- Enables “project expansions” under the VCS program – CCS Hubs
- Storage site monitoring and closure requirements
- Extended crediting periods



GCS Non-Permanence Risk Tool (NPRT)

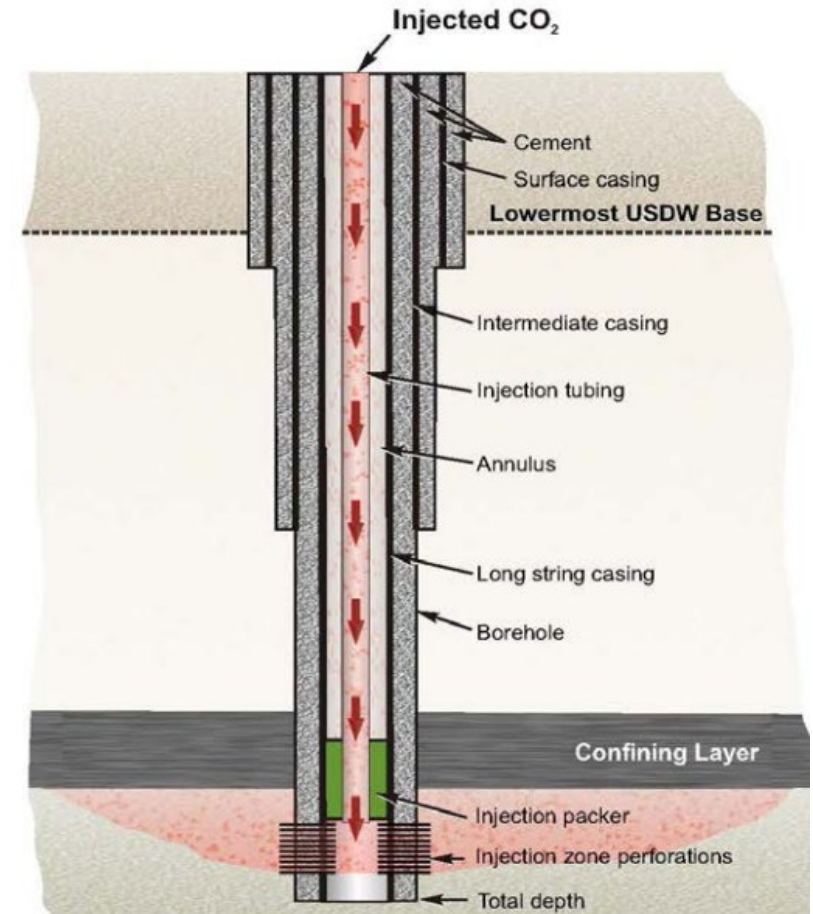
- Tool for a project to determine GCS buffer pool contribution
- Project risk evaluated in five categories
- Max acceptable score (project risk)
- Injection well design guidelines
- Ensures integrity and transparency of projects while mitigating environmental, social, and safety risks

Table 6: Overall Risk Rating

| Risk Category | |
|--|-------------------------------|
| RFR | Regulatory Framework Risk |
| PR | Political Risk |
| LRTR | Land and Resource Tenure Risk |
| CFR | Closure Financial Risk |
| DR | Design Risk |
| Overall risk rating = RFR + PR + LRTR + CFR + DR | |

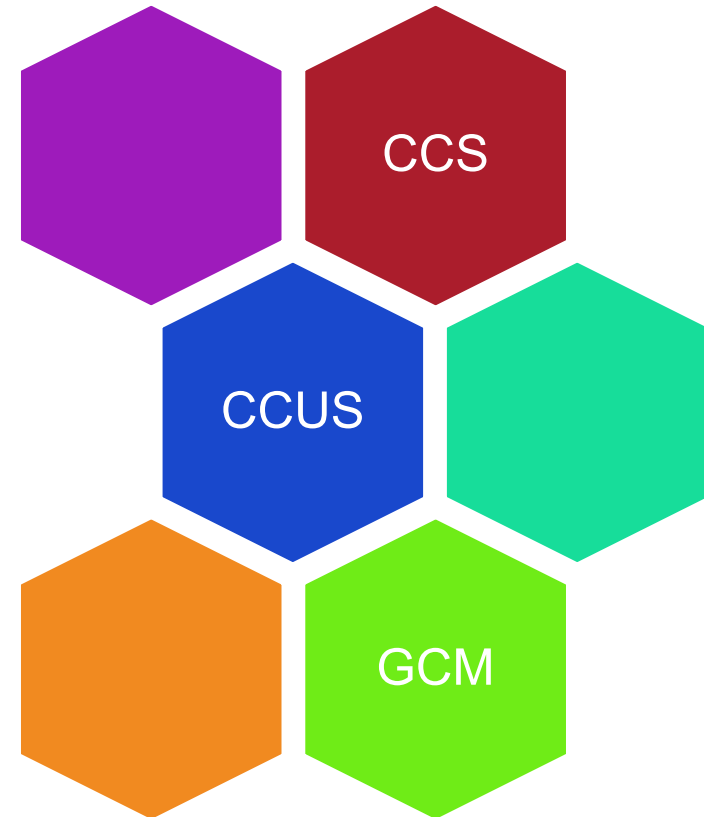
Example: Table 5- Design Risk

| Risk Element | Description or Criteria | Score |
|---|---|-------|
| a) | All injection wells for the project meet the design guidelines in Appendix 1. | 0 |
| | Some or all injection wells for the project do not meet the design guidelines in Appendix 1. | 2 |
| b) | The storage reservoir has more than two confining layers above the sequestration zone. | 0 |
| | The storage reservoir does not have more than two confining layers above the sequestration zone. | 1 |
| c) | The project proponent has access to relevant data (e.g., drilling logs, seismic data, core samples) from all wells that penetrate the primary or any secondary seals of the storage reservoir within the area of review for site characterization and monitoring as part of the monitoring program. | 0 |
| | There are wells other than the injection and monitoring wells of the project that penetrate the primary or any secondary seals of the storage reservoir within the area of review, to which the project proponent does not have access for review or inclusion of relevant data (e.g., drilling logs, seismic data, core samples) for site characterization and monitoring as part of the monitoring program. | 1.5 |
| Total Design Risk (DR) = a + b + c | | |



The Foundation for the Future

- VCS Program is the world-leading carbon standard
- GCS projects — new project activity eligible in the VCS Program with program level requirements set
- Forthcoming CCS methodology (CCS+ Initiative)
- Enables and accelerates the generation of GHG removals



Thank You

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Verra

www.verra.org



Photo: FUNDAECO / REDD Conservation Coast Project