



Standards and methodologies for soil carbon credit projects

09 February 2026

Training cum workshop on sustainable food systems – an agenda for climate-risked times

Photo by Lisa Murray, Bale Mountains Eco-Region REDD+ Project, Ethiopia (Verra Project 1340).

AGENDA

- About Verra
- Key Definitions
- Process Overview
- Methodologies under VCS

SLIDE TITLE

Verra was founded in 2007 by environmental and business leaders who saw the need for greater quality assurance in voluntary carbon markets. We now manage the world's leading voluntary carbon market program, the Verified Carbon Standard (VCS) Program, as well as a suite of other programs; advance the use of these programs worldwide; and incubate new ideas to generate meaningful environmental and social value at scale.

Verra's strategic direction is set by the Verra Board of Directors and our staff.

Verra is registered as a nonprofit corporation under the laws of the District of Columbia (Washington, DC, USA) and is a tax-exempt organization under Section 501(c)(3) of the US Internal Revenue Code.



SLIDE TITLE



We build standards for activities as diverse as reducing deforestation, to improving agricultural practices, to addressing plastic waste, and to achieving gender equality.



We manage programs to certify that these activities achieve measurable high-integrity outcomes.



Verra sets the world's leading standards for climate action and sustainable development.

Everything we do is in service of increasingly ambitious climate and sustainable development goals – and an accelerated transition to a sustainable future.



Key Definitions

- **VCS Standard:** Rules and requirements that all projects must follow to be registered and issue Verified Carbon Units (VCUs) (*project design, eligible project types, stakeholder and ecological safeguards*)
- **Methodology:** A specific set of criteria and procedures, which apply to specific project activities, for identifying the project boundary, determining the baseline scenario, demonstrating additionality, quantifying net GHG emission reductions and/or carbon dioxide removals, and specifying the monitoring procedures.
- **Project Proponent:** Individual or organization that has overall control of, and responsibility and accountability for, a project, or an individual or organization that together with others, each of which is also a project proponent, has overall control of, and responsibility and accountability for a project. Such entities can demonstrate the right to operate and the right to reductions and removals.

Key Definitions cont.

Crediting Period:The time period for which GHG emission reductions or carbon dioxide removals generated by the project are eligible for issuance as VCUs, not including any potential crediting period renewals. Also referred to as the “project crediting period”

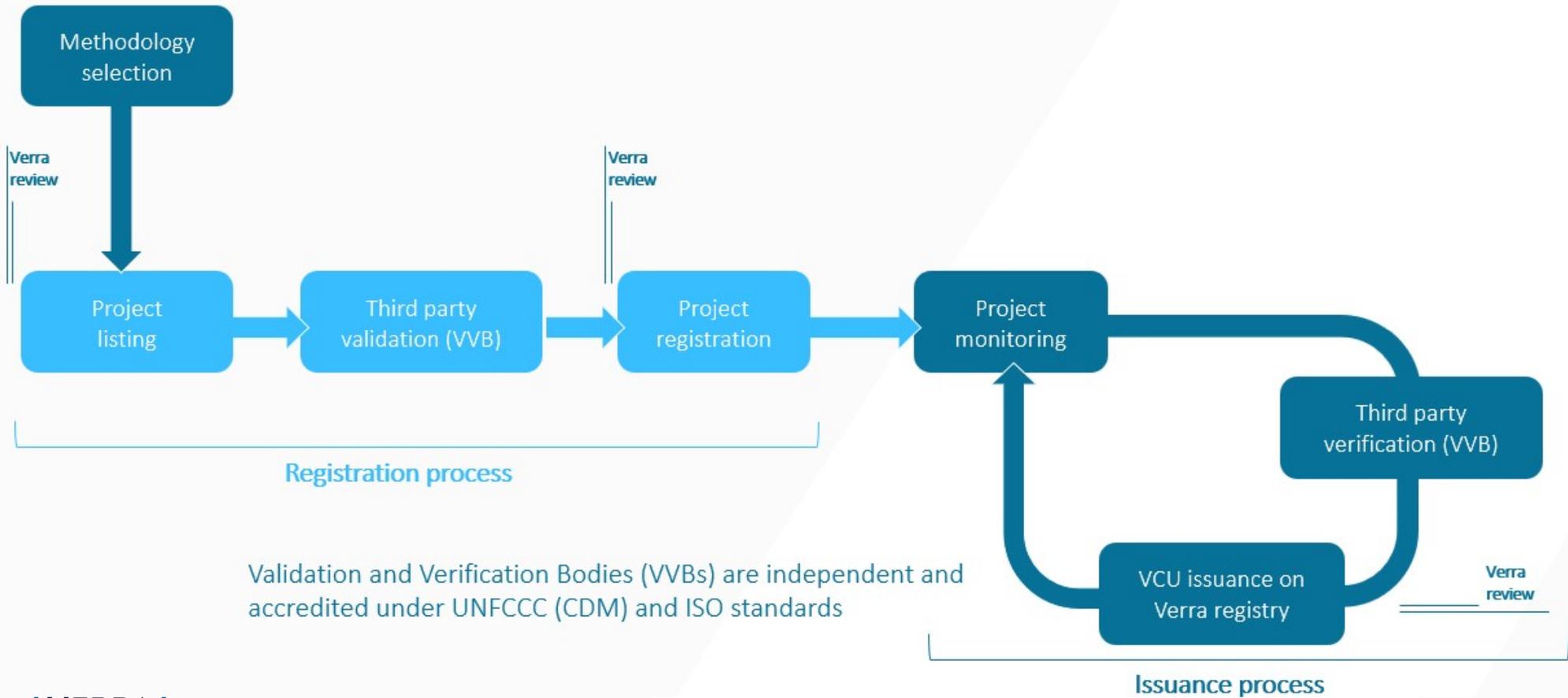
Validation/verification body (VVB) :An organization approved by Verra to act as a validation/verification body in respect of providing validation and/or verification services in accordance with the VCS Program rules. VVBs must be accredited by an International Accreditation Forum (IAF) Multilateral Recognition Arrangement (MLA)-recognized accreditation body for ISO 14065 scope VCS.

Validation:The independent assessment of the project by a validation/verification body that determines whether the project conforms to the VCS Program rules and evaluates the reasonableness of assumptions, limitations, and methods that support a claim about the outcome of future activities

Verification: The periodic ex-post independent assessment by a validation/verification body of the GHG emission reductions and carbon dioxide removals that have occurred as a result of the project during the monitoring period. The assessment is based on historical data and information to determine whether the claim is materially correct and conforms to specified requirements and is conducted in accordance with the VCS Program rules.



Project cycle



Project preparation

Feasibility

- Project location, area, scale, project activities
- Check for suitable methodology
- Why, where, who, what and how?

Pre-project

- Stakeholder engagement
 - Farmer Onboarding, agreements
 - Baseline Scenario development
- Stakeholder Consultations
 - Project Area Mapping
 - Project design (activities, instances, etc.)

Project

- Development of project documents and projected ERR estimations
 - Ongoing stakeholder consultation
- Project activity implementation
 - Monitoring

What is a methodology?

A specific set of criteria and procedures, which apply to specific project activities,

- Sets applicability conditions
- Identifies the project boundary
- Guidance to determine the baseline scenario- what will happen in the absence of the project, calculate baseline emissions
- Steps and processes to demonstrate additionality
- Equations and processes to quantify net GHG emission reductions and/or carbon dioxide removals, and specifying the monitoring procedures

Baseline scenario → Baseline emissions

Project activities (planned and implemented) → Project emissions

VCS Methodologies

- VM0042 (v2.1 and 2.2 (CCP) active, v3.0 under development)
- VM0051 (v1.0)
- VM0032 (*grasslands*)
- VM0044 (*biochar, not an ALM/AFOLU methodology, but has soil applications*)
- VM0041 (*enteric methane*)

- VMD0053 (used when models are used for quantification)
- VT0014 (digital soil mapping)
- VT0008 (Additionality)
 - Increases in C pools (soil, biomass)
 - Reductions in emissions (N₂O, CH₄, CO₂)
 - A broad range of improved land and livestock management practices

VM0042 - Methodology for Improved Agricultural Land Management

- VM0042 (v2.1 and 2.2 (CCP) active, v3.0 under development)
 - VMD0053 (used when models are used for quantification)
 - VT0014 (DSM)
 - VT008 (Additionality, v2.2)
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- Improve fertilizer (organic or inorganic) management;
 - Improve water management/irrigation;
 - Reduce tillage
 - Improve residue management;
 - Improve crop planting and harvesting (e.g. agroforestry, crop rotations, cover crops)
 - Improve grazing practices

VM0042 - Methodology for Improved Agricultural Land Management

Require periodic, direct SOC measurements

- SOC MUST be included in the project and must be monitored

Three quantification approaches:

- Measure and model (QA1) (VMD53 must be applied)
- Measure and re-measure using control sites for comparisons (QA2)
- Default factors (QA3) (not for SOC)

Buffer pools

Non-permanence risk analysis tool (AFOLU-NPRT) for the estimation of carbon credits to compensate for any future reversals

- *VM42, v2.2 is ICVCM-approved, and VCU's issued using this methodology are eligible receive CCP labels*
- *VT0014 can be used to increase MRV cost-efficiency and gain better accuracy of project area heterogeneity*



VMD0053: Model Calibration, Validation and Uncertainty Guidance

- **Detailed guidance** for projects that use a measure and model quantification approach
- **Procedures for model calibration, validation and verification**
- **Standardizes assessment of model performance**
- **Model Validation Report (MRV)** for the evaluation of conformity with VM0042 and VM0053 requirements
- **Assessed by Independent Modeling Experts (IMEs)**

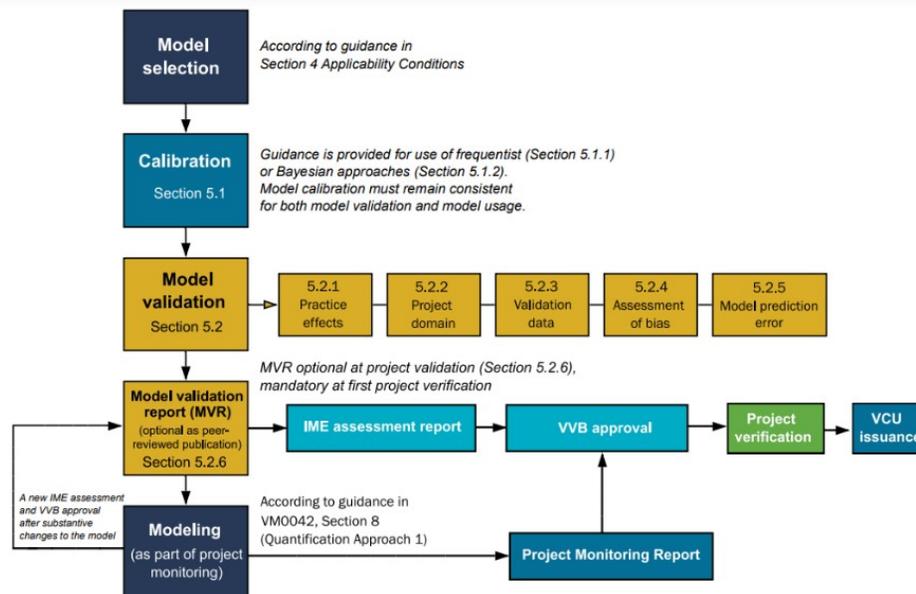


Fig 1. Steps for using models for GHG quantification in VM0042 projects

VM005 I - Improved Management in Rice Production Systems

- Same 3 Quantification Approaches as VM0042. (Model, measure, default values)
VMD0053 must be applied when models are used for quantification
- Projects implement improved irrigation management practices that result in CH₄ emission reductions including at least one of the following:
 - Single drainage and/or a shortened period of flooded condition
 - Alternate wetting and drying (AWD)
 - Use of direct seeded rice (DSR)
- Project rice fields are equipped with controlled irrigation and drainage facilities
- Other activities (reduced N use, fossil fuels)

Not allowed:

- Practices that result in material declines in SOC stocks due to declines in the carbon input rate to soils (e.g., increased rice straw removal, decreased application rate of manure or compost, and introduction of new cultivars known to have a materially smaller root system than the cultivar(s) used in the baseline)
- Rice is grown under upland, rainfed or deep-water, or non-irrigated lowland rice production systems.

Use with other standards managed by Verra

- Sustainable Development Verified Impact Standard (SD VISta): Uses the SDGs to measure and verify impact
- Nature Framework
- Climate Community and Biodiversity Standard (CCBS): tangible climate, community, and biodiversity benefits.
- Scope 3 (under development): The Scope 3 Standard (S3S) Program certifies value chain interventions to support increased corporate climate action.

**Integration of standards to maximize impact and market value
(i.e., VCS *plus other standards*)**





THANK YOU

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**Verified Carbon
Standard**



**Jurisdictional
& Nested REDD+**



SD VISTa



**Climate, Community
& Biodiversity Standards**



**Plastic Waste
Reduction Standard**



**Scope 3
Standard**