

PRELIMINARY SUMMARY OF ERRATA AND CLARIFICATIONS AND MINOR REVISIONS TO AUDD METHODOLOGIES

14 February 2023

1 INTRODUCTION

This document outlines the changes that will be introduced into VCS Avoiding Unplanned Deforestation and Degradation (AUDD) methodologies [VM0006](#), [VM0007](#), [VM0009](#), [VM0015](#), and [VM0037](#). These changes are intended to correct errors, inaccuracies, and internal inconsistencies as well as to clarify criteria and procedures. The proposed errata and clarifications (Section 2) will be effective upon their release. Minor revisions (Section 3) are effective six months after their publication.

Documentation to implement the changes through errata and clarifications or minor revisions is under development and will be completed and submitted to Verra's internal approval procedures in March 2023.

2 ERRATA AND CLARIFICATIONS

2.1 VM0006 Methodology for Carbon Accounting for Mosaic and Landscape-scale REDD Projects, Version 2.2 (17 March 2017)

2.1.1 Section 8.1.1.2 Select a Valid Reference Region

- Clarify requirements for reference region delineation:
 - Include requirement for the reference region to be a single contiguous area that includes or is adjacent to the project area.
 - Include similarity thresholds for variables in Table 3.

2.1.2 Section 8.1.2 Analyze Historical Deforestation and Forest Degradation in the Reference Region

- Set concrete parameters for the historical reference period: 10-year duration \pm one year allowance for data availability, as per the *VCS Methodology Requirements*.

2.1.3 Section 8.1.3.1 Identify Agents and Drivers of Deforestation and Forest Degradation

- Require identifying the presence – or lack – of temporal trends in the agents and drivers of deforestation.

2.1.4 Section 8.1.5.1 Calculate Total Rates of Deforestation and Forest Degradation in the Project Area

- Replace the use of beta regression to estimate future deforestation and degradation rates by simple linear regression over time.
- Include sample size (length of time series data) and statistical significance requirements for linear regression model.

2.1.5 Overall

- Address minor language/clarification issues.

2.2 VM0007 REDD+ Methodology Framework (REDD+ MF), Version 1.6 (08 September 2020)

2.2.1 Section 5.2.1 Start Date and End Date of the Historical Reference Period

- Set concrete parameters for the historical reference period: 10-year duration \pm one year allowance for data availability, as per the *VCS Methodology Requirements*.

2.2.2 Section 6.2 Re-assessing the Baseline Scenario

- Set duration of baseline validity period as per the latest version of the *VCS Methodology Requirements*.

2.2.3 Overall

- Address minor language issues.

2.3 Module VMD0007 Estimation of baseline carbon stock changes and greenhouse gas emissions from unplanned deforestation and unplanned wetland degradation (BL-UP) Version 3.3 (08 September 2020)

2.3.1 Section 5 Procedures and Part 2. Estimation of annual areas of unplanned deforestation

- Set duration of baseline validity period as per the latest version of the *VCS Methodology Requirements*.
- Include statistical significance requirements for estimating baselines from observed historical deforestation trends.

2.3.2 Section 1.1 Definition of the spatial boundaries of the analytical domain

- Clarify the delineation of the reference region for projecting the deforestation rate, requiring it to be a single contiguous area that includes or is adjacent to the project area.

2.3.3 Section 1.2 Temporal boundaries

- Set concrete parameters for the historical reference period: 10-year duration \pm one year allowance for data availability, as per the *VCS Methodology Requirements*.

2.3.4 Part 2. Estimation of annual areas of unplanned deforestation

- Include sample size (length of time series data) and statistical significance requirements for using deforestation trends for estimating annual areas of unplanned deforestation.

2.3.5 STEP 2.2 Estimation of the annual areas of unplanned baseline deforestation in the RRD

- Clarify statistical requirements and procedures for using deforestation trends to construct the project baseline. Include uncertainty estimation.
- Remove the use of non-linear regressions.

2.4 VM0009 Methodology for Avoided Ecosystem Conversion, Version 3.0 (6 June 2014)

2.4.1 Summary; Section 2.1.2 Areas; Section 3.1 Definitions; Section 5.1 Delineating the Spatial Boundaries; Section 6 Procedure for Determining the Baseline Scenario; and Appendix D. Area Selection Criterion

- Clarify characteristics, requirements (similarity thresholds), and criteria for delineating the project area and project accounting area, reference areas, and proxy areas.

2.4.2 Section 2.2.6 Standard Errors & Section 2.2.13 Quantified Uncertainties

- Correct distinction between standard errors and uncertainty estimates.

2.4.3 Section 2.2.7 Theoretical Parameters and Parameterized Models

- Correct distinction between theoretical parameters and estimates.

2.4.4 Section 2.2.15 Matrices

- Delete as this section is unnecessary.

2.4.5 Section 2.3 Application Overview; Section 5 Project Boundaries; Section 6 Procedure for Determining the Baseline Scenario; and Appendix D. Area Selection Criterion

- Clarify characteristics, requirements (similarity thresholds), and criteria for delineating the project area, project accounting area, reference area, and proxy area for different activities.

2.4.6 Section 3.1 Definitions

- Correct baseline reevaluation as per the latest version of the *VCS Methodology Requirements*.

2.4.7 Section 3.1 Definitions and Section 6 Procedure for Determining the Baseline Scenario

- Set concrete parameters for the historical reference period: 10-year duration \pm one year allowance for data availability, as per the *VCS Methodology Requirements*.

2.4.8 Section 6 Procedure for Determining the Baseline Scenario; Section 9 Monitoring; Appendix A: Theoretical Background; Appendix F: Equations in the Methodology; and Appendix G: Validation Variables

- Replace the use of logistic model of cumulative deforestation for simple linear regression.
- Add sample size (length of time series data) and statistical significance requirements.
- Remove the use of covariates other than time to construct the model.

2.4.9 Overall

- Address minor language issues.

2.5 VM0015 Methodology for Avoided Unplanned Deforestation, Version 1.1 (3 December 2012)

2.5.1 Section 1.1.1 Reference region

- Clarify characteristics, requirements (similarity thresholds), and criteria for delineating reference regions similar to the project area.
- Clarify the delineation of the reference region, requiring it to be a single contiguous area that includes or is adjacent to the project area.

2.5.2 Section 1.2.1 Starting date and end date of the historical reference period

- Set concrete parameters for the historical reference period: 10-year duration \pm one year allowance for data availability, as per the *VCS Methodology Requirements*.

2.5.3 Section 3 Step 3: Analysis of agents, drivers and underlying causes of deforestation and their likely future development

- Include an intermediate step to identify the most plausible baseline scenario.

2.5.4 Section 4.1.1: Selection of the baseline approach

- Restrict time function approach to simple linear regression.
- Add sample size (length of time series data) and statistical significance requirements.
- Remove the modeling approach.

2.5.5 Overall

- Address minor language issues.

2.6 VM0037 Methodology for Implementation of REDD+ Activities in Landscapes Affected by Mosaic Deforestation and Degradation, Version 1.0 (3 November 2017)

2.6.1 Section 4 Applicability Conditions

- Restrict use to mosaic deforestation.

2.6.2 Section 5.1 Reference Region

- Clarify requirements for reference region delineation:
 - Include requirement for the reference region to be a single contiguous area that includes or is adjacent to the project area.
 - Include similarity thresholds.

2.6.3 Section 8.1.3 Select Data Set for Historical Change Analysis

- Set concrete parameters for the historical reference period: 10-year duration \pm one year allowance for data availability, as per the VCS Methodology Requirements.

2.6.4 Section 8.1.6 Assess Forest Transition and Forest Scarcity

- Clarify the applicability of the forest transition concept.
- Add sample size (length of time series data) and statistical significance requirements for using regression models to project transition rates. Include uncertainty estimation.

2.6.5 Overall

- Address minor language issues.

3 MINOR REVISIONS

3.1 VM0006 Methodology for Carbon Accounting for Mosaic and Landscape-scale REDD Projects, Version 2.2 (17 March 2017)

3.1.1 Section 8.1.2.8 Summarize all Historical Land Transitions

- Evaluate accuracy and uncertainty of activity data estimates, as required by the VCS *Methodology Requirements*. Include discounting factor to account for uncertainty.
- Include use of sample-based approach for estimating bias-corrected activity data.

3.1.2 Section 8.1.5.1 Calculate Total Rates of Deforestation and Forest Degradation in the Project Area

- Include conservative discounting of regression predictions to account for uncertainty as per the *VCS Methodology Requirements*.

3.1.3 Overall

- Require all annexes, maps, and calculation spreadsheets referred to in the project description to be included with the project documentation.
- Include set of standard parameters (historical and current activity data, emission factors, and emission estimates) to be reported by each project.

3.2 Module VMD0007 Estimation of baseline carbon stock changes and greenhouse gas emissions from unplanned deforestation and unplanned wetland degradation (BL-UP) Version 3.3 (08 September 2020)

3.2.1 Section 5 Procedures

- Remove the population-driven approach for estimating the baseline.

3.2.2 Section 1.1.1.1 Alternate. Reference region for projecting rate of deforestation (RRD) based on population drivers

- Remove section.

3.2.3 Section 1.1.1.2 Alternate. Reference region for projecting location of deforestation (RRL) using population driver approach

- Remove section.

3.2.4 Section 1.1.3 Alternate. Leakage Belt using population driver approach

- Remove section.

3.2.5 Section Part 2. Estimation of annual areas of unplanned deforestation

- Remove the population-driven approach.

3.2.6 Section STEP 2.1 alternate. Analysis of historical deforestation and correlation to population

- Remove the population-driven approach.

3.2.7 Section STEP 2.2 Alternate. Estimation of the annual areas of unplanned baseline deforestation in the reference region

- Remove the population-driven approach.

3.2.8 Section 2.1.2 Mapping of historical deforestation & Section 2.1.3 Calculation of the historical deforestation

- Evaluate accuracy and uncertainty of activity data estimates, as required by the VCS *Methodology Requirements*. Include discounting factor to account for uncertainty.
- Include use of sample-based approach for estimating bias-corrected activity data.

3.2.9 Overall

- Require all annexes, maps, and calculation spreadsheets referred to in the project description to be included with the project documentation.
- Include set of standard parameters (historical and current activity data, emission factors, and emission estimates) to be reported by each project.

3.3 VM0009 Methodology for Avoided Ecosystem Conversion, Version 3.0 (6 June 2014)

3.3.1 Summary; Section 3.1 Definitions; Section 6 Procedure for Determining the Baseline Scenario

- Remove the “cascade of degradation” concept to ensure that projects fall within one of the recognized AUD categories.

3.3.2 Section 6 Procedure for Determining the Baseline Scenario

- Remove sentence on page 46 stating that “If a jurisdictional baseline has been established and is applicable to the project activity, it may be used per VCS requirements.”

3.3.3 Overall

- Require all annexes, maps, and calculation spreadsheets referred to in the project description to be included with the project documentation.
- Include set of standard parameters (historical and current activity data, emission factors, and emission estimates) to be reported by each project.

3.4 VM0015 Methodology for Avoided Unplanned Deforestation, Version 1.1 (3 December 2012)

3.4.1 Section 2.4 Analysis of historical land-use and land-cover change

- Evaluate accuracy and uncertainty of activity data estimates, as required by the VCS Methodology Requirements. Include discounting factor to account for uncertainty.
- Include use of sample-based approach for estimating bias-corrected activity data.

3.4.2 Overall

- Require all annexes, maps, and calculation spreadsheets referred to in the project description to be included with the project documentation.
- Include set of standard parameters (historical and current activity data, emission factors, and emission estimates) to be reported by each project.

3.5 VM0037 Methodology for Implementation of REDD+ Activities in Landscapes Affected by Mosaic Deforestation and Degradation, Version 1.0 (3 November 2017)

3.5.1 Section 8.1.5.2 Analyze LULC Change

- Evaluate accuracy and uncertainty of activity data estimates, as required by the VCS *Methodology Requirements*. Include discounting factor to account for uncertainty.
- Include use of sample-based approach for estimating bias-corrected activity data.

3.5.2 Section 8.1.8 Baseline Emissions from REDD Activities

- Evaluate uncertainty and add bias correction to emission factors estimates.

3.5.3 Overall

- Require all annexes, maps, and calculation spreadsheets referred to in the project description to be included with the project documentation.
- Include set of standard parameters (historical and current activity data, emission factors, and emission estimates) to be reported by each project.