PV CLIMATE TOOL CONCEPT NOTE

Baseline Scenario and Additionality Assessment and Carbon Pool and Emission Source Significance Testing Tool

Version 1.3

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Contents

1 Summary

The current version of **PM001** applies the following CDM tools developed for A/R projects for baseline scenario and additionality assessment, or carbon pool and emission source significance testing:

- **AR-TOOL02** Combined tool to identify the baseline scenario and demonstrate additionality in A/R CDM project activities, Version 1.0
- **AR-TOOL04** Tool for testing significance of GHG emissions in A/R CDM project activities, Version 1.0.

The proposed tools will minimise reliance on external methodological elements by introducing new procedures for the following approaches:

- Defining and reassessing the baseline scenario and additionality of project interventions using:
    - Identification of potential land-use scenarios
    - Barrier analysis
    - Investment analysis
    - Common practise analysis
- Identifying the carbon pools and emission sources that will be included when quantifying carbon benefits

These changes will be integrated into the relevant sections of **PM001**, and two supporting tools which are applicable globally to all PV Climate project interventions:

- Baseline Scenario and Additionality Assessment (Tool 1)
- Carbon Pool and Emission Source Significance Testing (Tool 2)

2 Relationship to Existing Approaches

The proposed tools would be applied with Plan Vivo methodology **PM001**

The approaches for estimating the most likely land use scenario in the absence of project interventions and the additionality of the project interventions described in Tool 1 are adapted from **AR-TOOL02**. Additional guidance consistent with Section 6 of **PM001** will be included to allow for its application across all PV Climate project interventions.

The approaches for estimating the significance of carbon pools and emission sources in Tool 2 will follow the established procedures defined in **AR-TOOL04** for identifying the carbon pools and emission sources that will be included when quantifying carbon benefits. These procedures will be adapted to align with the definitions provided in the PV Climate Glossary and those specified in **PM001**. Additional guidance consistent with Section 5 of **PM001** will be included to allow for its application across all PV Climate project interventions.

3 Scope and Applicability

The proposed tools are globally applicable to all project interventions that meet the PV Climate Project Requirements, and can be referenced in Plan Vivo-approved methodologies for:

- The initial determination and periodic reassessment of a baseline scenario and demonstration of additionality (Tool 1)
- Testing the significance of all GHG emissions from carbon pools and emission sources attributable to project interventions (Tool 2)

The following carbon pools and emission sources will be included in Tool 2:

- Carbon pools – Aboveground woody biomass, aboveground non-woody biomass, belowground biomass, litter, deadwood, soil organic carbon, wood products
- Emission sources – Nitrogen fertilisers (N_2O), nitrogen fixing species (N_2O), biomass burning (CH_4), fossil fuel use (CO_2), enteric fermentation (CH_4), manure deposition (CH_4, N_2O), soil methanogenesis (CH_4)

4 Baseline Scenario and Additionality

Tool 1 will describe procedures for the initial baseline scenario and additionality assessment and the reassessment of the baseline scenario and additionality, as summarised below.

Approach for initial baseline scenario and additionality assessment

The initial baseline scenario and additionality assessment will apply the following steps:

- Preliminary screening based on the start date of the project intervention;
- Identification of alternative land-use scenarios;
- Barrier analysis to identify barriers to implementing the alternative land use scenarios;
- Investment analysis (if needed) to determine which of the alternative land-use scenarios with no barriers is the most likely; and
- Common practice analysis to demonstrate that the project intervention is not widely practised in the project region under conditions similar to those in the project area(s)

The above approach will be completed for each project intervention included in the project, with full justification and supporting evidence provided at each step.

If a project intervention will be applied to multiple project areas with different alternative land-use scenarios, all steps must be completed for each project intervention and baseline scenario combination.

For grouped projects, where project areas will be added during the project period, the baseline scenario and additionality assessment will include all potential project areas, and any assumptions related to the baseline scenario and additionality must be reflected in the eligibility conditions used to assess new project areas before they are included in the project.

Approach for reassessment of the baseline scenario and additionality

The baseline scenario must be reassessed and updated whenever a crediting period is renewed, and at least every 10-years throughout the project period (Project Requirements 3.1.2) following the procedures as described for the initial assessment, for the below steps:

- Identification of alternative land-use scenarios;
- Barrier analysis to identify barriers to implementing the alternative land use scenarios; and
- Investment analysis (if needed) to determine which of the alternative land-use scenarios with no barriers is the most likely.

Additionality of the project interventions must be reassessed whenever a crediting period is renewed and at least every 5-years by reassessing barriers preventing new project participants from implementing the project interventions, and regulatory surplus of each project intervention (Project Requirement 3.7.5)[1].

The additionality reassessment may take place at the same time as the baseline scenario reassessment, or it can be done independently. If the additionality reassessment happens concurrently with the baseline scenario reassessment, the procedures described above will also cover the additionality reassessment. However, if the additionality reassessment is done independently of the baseline scenario reassessment, a barrier analysis will be required to identify barriers to implementation of the project intervention without being registered as a PV Climate project.

A new baseline scenario must be established for existing project areas where project interventions that are found to be not additional are being implemented if the intervention is still within its crediting period. The new baseline scenario for project areas where a project intervention is not additional must include the implementation of the project intervention from the date of baseline reassessment.

Potential outcomes of the baseline scenario reassessment are:

i. The baseline scenario from the previous assessment is re-confirmed,
ii. A new baseline scenario is established, or
iii. The project intervention is <u>not additional</u>

Project interventions found to be not additional cannot be applied to new project areas.

Potential outcomes of the additionality reassessment at the same time as baseline scenario reassessment are:

i. The project intervention is not the baseline scenario and is therefore <u>additional</u>, or
ii. The project intervention is <u>not additional</u>

Project interventions found to be not additional cannot be applied to new project areas, and a new baseline scenario for existing project areas must be established (see Section **Error! Reference source not found.**).

Potential outcomes of the additionality reassessment without the baseline scenario reassessment are:

[1] Consideration of regulatory surplus is beyond the scope of this tool, and should follow the relevant PV Climate Project Requirements.

i. There are no barriers to implementation of the project intervention without being registered as a PV Climate project, so the project intervention is not additional, or
ii. Implementation of the project intervention without being registered as a PV Climate project is prevented by one or more barriers, so the project intervention is additional.

Project interventions found to be not additional cannot be applied to new project areas, and a new baseline scenario for existing project areas must be established (see Section **Error! Reference source not found.**).

5 Quantification of Carbon Benefits

Carbon pools and emission sources that generate more emissions in the project scenario than the baseline scenario can be excluded if the total difference in emissions between the baseline scenario and project scenario for all excluded carbon pools and emission sources does not exceed 5% of the total expected carbon benefits of the project (Methodology Requirement 2.2.4). Tool 2 will describe the procedures for testing the significance of all expected and actual project and leakage emission estimates, as summarised below:

- Baseline and project GHG emissions will be estimated using the approaches in **PU002** for each of the following carbon pools and emission sources:
  - Carbon pools – Aboveground woody biomass, Aboveground non-woody biomass, Belowground biomass, Litter, Deadwood, Soil organic carbon, Wood products;
  - Emission sources – Nitrogen fertilisers (N_2O), Nitrogen fixing species (N_2O), Biomass burning (CH_4), Fossil fuel use (CO_2), Enteric fermentation (CH_4), Manure deposition (CH_4, N_2O), Soil methanogenesis (CH_4).
- Leakage emissions for each of the above carbon pools and emission sources will be estimated using the approaches in **PU004**.
- The relative contributions of the project GHG emissions by sources and possible decreases in carbon pools will be calculated and ranked in descending order of their relative contributions (omitting any negative or zero values).
- The cumulative sum of the relative contributions will be calculated, beginning with the highest ranked i.e. lowest relative contributor identified in the previous step, and the summation stopped when the lowest value not greater than the threshold of 5% is reached.
- Any project, baseline or leakage emissions marked in the previous step will be considered insignificant because their sum is lower than 5% of the expected carbon benefit of the project

6 Development Team

The lead author of the proposed tools is the lead author of PM001 and all the associated modules and tools. He is a chartered forester with a PhD in Tropical Forest Ecology. He is also the chair of the Plan Vivo Technical Advisory Committee and has been providing technical support to Plan Vivo projects since 2008. He has played a leading role in the last two updates of the Plan Vivo Carbon Standard, and the development of the Plan Vivo Methodology requirements. He has previously developed methodologies for reduced emissions from deforestation and forest degradation,

improved agricultural land management, and grassland management that have been approved by Plan Vivo and VCS.

Contributors to the new tools include the Technical Officer at the Plan Vivo Foundation, who supported their development and internal review.