Approved VCS Module VMD0016
Version 1.0
REDD Methodological Module:
Methods for stratification of the project area (X-STR)
Sectoral Scope 14

I. SCOPE, APPLICABILITY AND PARAMETERS

Scope

This module provides guidance on stratifying the project area into discrete, relatively homogeneous units to improve accuracy and precision of carbon stock and carbon stock change estimates.

Applicability

Any module referencing strata *i* shall be used in combination with this module. Strata are only used for pre-deforestation forest classes, and are the same in baseline and actual cases.

Post-deforestation (conversion) land-uses are not stratified, instead using average post-deforestation stock values (e.g. "Simple Conservative" or "Historical Area-weighted" approaches per BL-UP).

Parameters

This methodology produces the following parameters:

Parameter	SI Unit	Description
i	dimensionless	Stratum
A_i	ha	Area of stratum *i*

In the equations used in the accompanying modules, the letter *i* is used to represent a stratum and the letter *M* for the total number of strata.

II. PROCEDURES

Pre-stratification (prior to inventory) of the project area is not required, however, pre-stratification may serve to avoid requirements for post measurement stratification later (below). It is not expected that project proponents will begin with high resolution, spatially explicit, biomass measurement information for the project area and leakage belt. Thus, it is acceptable practice to base strata on ancillary data that can serve as a proxy for potential biomass classes (e.g. vegetation class maps, interpretation of aerial photographs or high resolution satellite imagery; see BL-UP). The areas of strata delineated prior to allocation of inventory plots using stratified sampling are known *exactly* and require no accuracy assessment.

At the project start and whenever biomass stocks are re-measured (i.e. at least every 10 years), project proponents must demonstrate *after inventory* that within the project area there are no unidentified (i.e. not previously stratified) discrete clusters of sample plots/points representing $\geq$10% of samples in the project area that consistently differ (i.e. each sample plot/point estimate) from the overall project mean by ±20%. In the event that such a cluster of points is identified, a new stratum will be delineated. Area limits of the new stratum, encompassing the cluster, can be determined on the basis of existing vegetation class maps, interpretation of aerial photographs or high resolution satellite imagery.

A map displaying the final delineation of strata must be included in the VCS PD. Areas of individual strata naturally sum to the total project area; any discrepancies must be reconciled.

III. DATA AND PARAMETERS MONITORED

Data / parameter:	A_i
Data unit:	Ha
Used in equations:	
Frequency:	At the project start and whenever biomass stocks are re-measured (at least every 10 years)
Description:	Total area of stratum *i*
Source of data:	GIS coverages, ground survey data and/or remote imagery (satellite or aerial photographs)
Measurement procedures (if any):	N/A
Any comment:	*Ex-ante,* it shall be assumed that stratum area will remain constant for the baseline period