VERRA Standards for a Sustainable Future

Intro to Verra´s monitoring requirements for REDD+

GFOI Plenary - *Panel discussion: REDD+ monitoring: many different needs but a consistent approach is key!*
9 September 2021

VERRA

Standards for a Sustainable Future

Verified Carbon Standard

Jurisdictional & Nested REDD+

California Offset Project Registry

Climate, Community & Biodiversity Standards

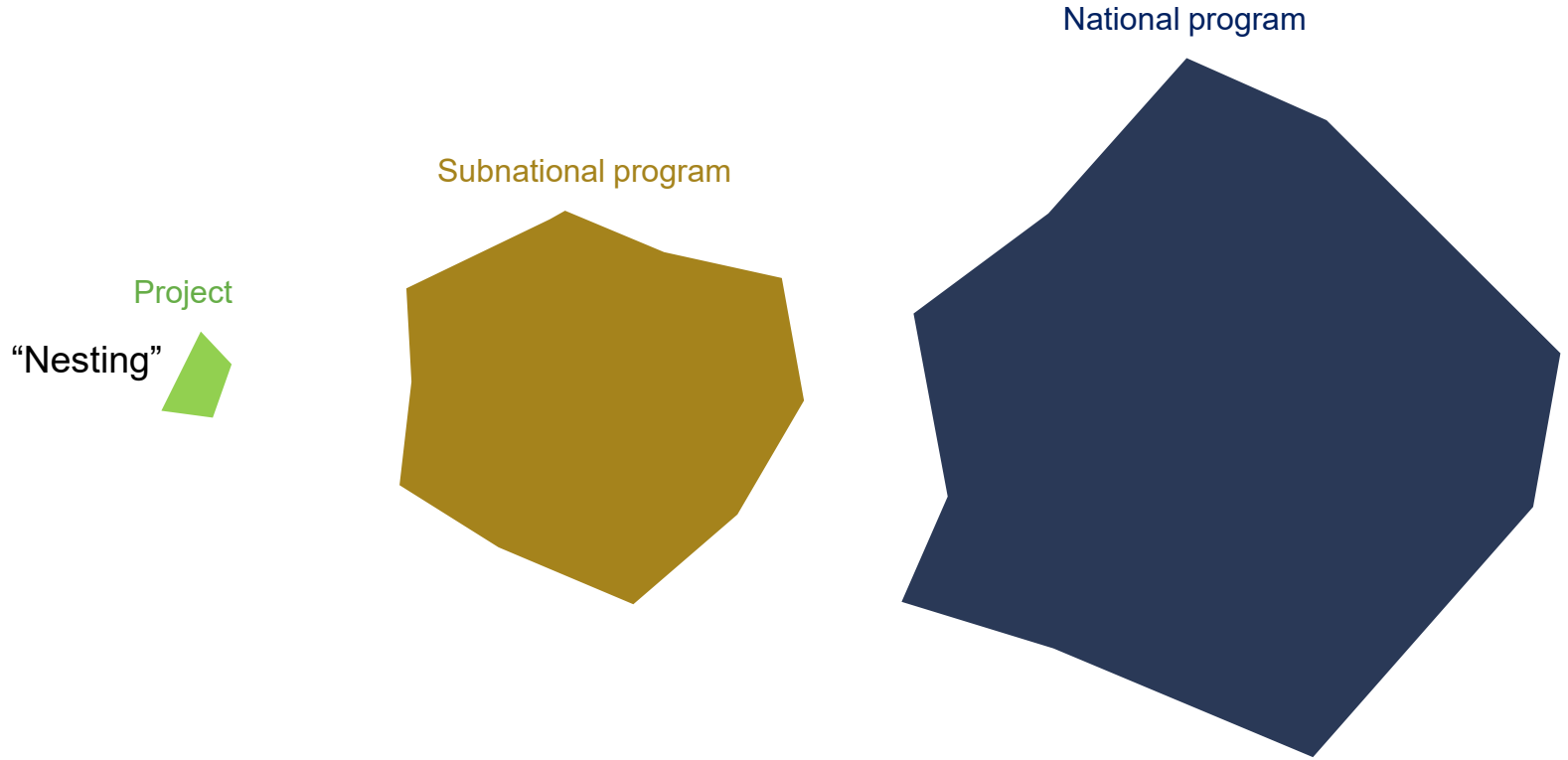
Sustainable Development Verified Impact Standard

ICAT INITIATIVE FOR Climate Action Transparency

LANDSCALE

3R

Crediting options allowed under the VCS/JNR



Data needs

Projects (requirements currently under revision):

- Baselines: data from a reference region for a historical reference period of >10 years
- Monitoring: project area, leakage belt, reference region.

Jurisdictional programs/FRELs:

- FRELs: historical data for a reference period of 4-6 years. FREL reassessment: AD shall be updated every 4-6 years, EF every other update of the FREL (8-12 years).
- Monitoring: jurisdiction, at least every 2 years (verification every 4-6 years).

Nesting:

- Risk mapping for FREL allocation: A wall-to-wall map of historical deforestation/degradation covering the entire jurisdictional area, a wall-to-wall Forest Cover Benchmark Map (FCBM) covering the entire jurisdictional area

Data quality

- Verra´s standards and methodologies are designed to meet “carbon market quality”.
- This implies that they are designed to generate “conservative” estimates according to universal quality standards:
  - Conservative estimates are designed to exclude any risk of overestimation,
  - The same requirements apply in any country, regardless of national circumstances, and
  - There is a verification conducted where an external body audits the estimates.

Main data requirements

- Activity data
  - Area measurements shall be undertaken through remote sensing, using either maps or area sampling approaches
  - For **area sampling approaches**:
    - Area sampling shall use high-resolution imagery with a maximum pixel size of 5 meters per pixel. Such high-resolution imagery shall be available for most of the historical reference period and for the entirety of the FREL validity period. Lower resolutions imagery may only be used if high-resolution imagery is not available.
    - Classification error shall be quantified and minimized.
    - Stratified or non-stratified sampling and random or systematic sampling may be used. The approach to setting the sample size and to sample allocation shall be described.
    - Data shall be analysed using standard best practice methods
    - Each area estimate shall include an uncertainty estimate representing sampling error
  - Where AD are estimated from **maps**:
    - An accuracy assessment shall be undertaken for each map separately (e.g., relying on visual sampling of high-resolution imagery as a reference) following the same requirements as for sampling approaches.
    - A bias correction shall be made to the area estimates based on the accuracy assessment and using standard best practice methods

Main data requirements

- Emission factors:
  - Emission factors are fixed at validation.
  - Above-ground and below-ground biomass shall be estimated based on a plot-based field inventory conducted within the jurisdictional area
  - Above-ground and below-ground biomass shall be derived from tree measurements using allometric models and/or root-to-shoot ratios (based on local data or alternatively, globally developed)
  - Uncertainty associated with allometric equations may optionally be included. Uncertainty associated with root-to-shoot ratios shall be propagated.
  - Deadwood and litter biomass shall be estimated through field inventories conducted within the jurisdictional area. Default data (e.g., from the 2019 Refinement to the 2006 IPCC guidance) may be used in exceptional cases.
  - Data sources for estimating non-forest biomass: shall be estimated through field inventories where suitable data that meets the requirements for field inventories; default data (e.g., from the 2019 Refinement to the 2006 IPCC guidance) may be used where it meets the VCS requirements for use of default factors and models.
  - Uncertainty shall be estimated for each carbon pool and each forest type.

Uncertainty discounts

Uncertainty of the volume of GHG emissions and GHG emission reductions	Discount factor	Uncertainty of the volume of GHG emissions and GHG emission reductions	Discount factor
95% - 100%	-25.53%	45% - 50%	-12.44%
90% - 95%	-24.22%	40% - 45%	-11.13%
85% - 90%	-22.91%	35% - 40%	-9.82%
80% - 85%	-21.60%	30% - 35%	-8.51%
75% - 80%	-20.29%	25% - 30%	-7.20%
70% - 75%	-18.99%	20% - 25%	-5.89%
65% - 70%	-17.68%	15% - 20%	-4.58%
60% - 70%	-16.37%	10% - 15%	-3.27%
55% - 60%	-15.06%	5% - 10%	0.0%
50% - 55%	-13.75%	0% - 5%	0.0%


Thank you!
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