Way Forward for MRV

Requirements of the finance community

A. Identify the goal for climate finance:

1. **Green finance**: practices aligned with climate change mitigation and co-benefits (e.g. water and biodiversity conservation), where the certainty of directional change is likely, but the impact level is not measured. For example, companies or loans using "green lists" of eligible practices; "good enough" methods (lowest requirements)
2. **Results-based payments**: payments based on defined climate mitigation result supported by an accounting system that fosters confidence in impacts, although medium/high quantification uncertainty applies (intermediary requirements)
3. **Carbon-credit markets**: quantification of climate mitigation results following rules and procedures determined by protocols and standards under third-party verification (e.g. CDM, Verra and Gold Standard standards), which lowers uncertainties and increases credibility of results (highest requirements)

B. Plan for improving accuracy and uncertainty over time toward carbon market-grade credits.

Practice lists and criteria Indicators and proxies Modeling Measurement

from (lowest accuracy and highest uncertainty) to (highest accuracy and lowest uncertainty)

C. MRV design considerations:

1. **What needs to be estimated?** Carbon sinks, avoided carbon loss, GHGs emissions, and mitigation co-benefits, e.g. water and biodiversity conservation, to ensure benefits to farmers
2. **How well?** Accuracy and uncertainty
3. **How to reduce risks of impermanence** or **non-performance**
4. **How to minimize costs** (e.g. acceptable % of the total project budget spent on MRV, sufficient benefit to farmers)
5. **Other considerations:** Scalability needs, verification needs (e.g. first, second and third-party), frequency of estimations, reporting requirements, timing needed to detect changes (e.g. usually > 5 years) and make payments

D. Improving accuracy and uncertainty

1. Move to hybrid approaches: direct measurements with modeling and remote sensing
    a. **Measurement**, based on project/region characteristics and resources available
        i. **activity data collection** (e.g. use of smartphone, interviews)
        ii. **focus on few high-quality measurements** (e.g. what to measure and how - sampling design; soil C and soil bulk density; frequency)
        iii. **prioritization** (e.g. sampling design; soil C or bulk density; soil C determination method; use of pedo-transfer functions)
        iv. **data gaps:** filling out gaps (e.g. scientific literature, experts consultation, global databases)
    b. **Modeling**: choosing a model, model calibration, technical requirements and acceptable uncertainties
    c. **Remote sensing**: application and requirements
    d. **Co-benefits:** assessment (e.g. generating water/biodiversity indicators from/in tandem? with soil C measurements)
2. Aggregation across larger scales to reduce project-level variation effects (landscapes)

E. Reducing risk of impermanence or non-performance:

1. Discounted carbon credits to account for impermanence and accuracy risks
2. Buffers in carbon credits allocated
3. Accounting at the landscape scale to spread risk over large areas.
4. Verification type and frequency (credibility highest with third-party)