VERRA Standards for a Sustainable Future

Long-term monitoring for reversals in VCS AFOLU projects

Public consultation webinar

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Welcome

Verra Innovations Team

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Agenda

- Non-permanence risk in VCS AFOLU projects
- Proposed approach to long-term reversal monitoring system
- Proposed updates to VCS non-permanence approach
- Public consultation questions
- Questions and comments

Non-Permanence Risk in VCS AFOLU Projects

Background on Non-permanence

- AFOLU removal carbon credit projects have non-permanence risk
  - Examples of reversals: deforestation/land use change, degradation, fires, pest outbreaks, natural hazards (storms, geologic events)

- Projects are credited based on 100-year GWPs, so permanence should be ensured for a similar timescale

Current permanence approach

- VCS AFOLU Non-permanence risk tool used to calculate different categories of risk – internal, external and natural
- Natural risk calculation based on historical likelihood and significance
- Overall risk calculation determines number of buffer credits to be set aside in AFOLU pooled buffer account
- Projects monitored; reversals compensated for with buffer credit cancelation
- Non-permanence risk is updated at each verification
- At the end of crediting period, project buffer credits cancelled to cover future risk

Proposed Long-term Reversal Monitoring System

Rationale

- Monitoring provides greater certainty that buffer credit cancellations cover post-crediting period reversals
- Most projects are still within crediting period, limited experience with post-crediting period permanence
  - No requirement to monitor post-crediting period

- Technology makes it increasingly possible to remotely monitor reversals for some types of AFOLU projects

Objectives

- Detecting loss events and quantifying reversals (in post-crediting period) within the boundaries of VCS AFOLU projects
- Cancelling VCS buffer pool credits when reversals occur rather than at the end of project crediting period
- Updating the AFOLU Non-permanence risk tool calculations (e.g., every 5 years) based on observed reversal trends

Proposed design

- Phased approach to developing a fully remote and automated monitoring system
- Quantification of reversals using remote sensing and technology innovations such as modelling, machine learning algorithms and artificial intelligence
- Work with project proponents and experts to validate and develop monitoring system

Phase 1: Forest project loss alerts

- Remote sensing-based detection and alerts for loss events in VCS forest carbon projects
  - Tree cover loss, tree mortality and fire detection based on RS is currently possible
- REDD, ARR and IFM are most common project types, and will enter post-crediting period earliest
- Validate loss events with project proponents
- Develop methods and rules for using RS to determine whether loss event is a reversal

Phase 2: Expanded AFOLU loss alerts

- Launch Verra's LTRMS platform, featuring automated detection and reporting of loss event alerts
- Expand alerts to cover additional AFOLU project types and determine reversals
- Create new rules for cancelling AFOLU buffer pool credits for post-crediting period
- Update AFOLU non-permanence risk assessment if needed based on monitoring data

Phase 3: Reversal quantification

- Quantification of carbon losses from reversals based on remote sensing, modelling, AI/ML and other technologies
- Continue monitoring projects during crediting period and begin monitoring post-crediting projects
- Implement new rules for cancelling AFOLU buffer pool credits based on quantified reversals in post-crediting projects
- Periodically update AFOLU Non-permanence risk tool withholding and criteria to reflect actual reversal risk in different categories

TIMELINE

2022-2023

- Phase 1 (forest project alerts)
  - Generate loss event alerts and validate with current projects

2023-2025

- Phase 2 (expanded alerts)
  - Develop LTRMS platform and new rules for buffer credit cancellation

post 2025

- Phase 3 (reversal quantification)
  - Automated detection and quantification of reversals, implement new AFOLU buffer management procedures

Proposed Updates to VCS Non-permanence Approach

Proposed updates

- Cancellation of AFOLU buffer pool credits based on LTRMS quantified reversals, instead of all project buffer credits at the end of crediting period
- Independent review of LTRMS data and quantification methods for reversals
- Periodic stress-testing of VCS buffer to ensure resilience
- Periodic review and updates of Non-permanence risk tool to ensure sufficient buffer withholding percentages based on LTRMS and other risk data

Public consultation questions

Questions

LTRMS Public Consultation

1. Should Verra monitor VCS AFOLU projects for reversals during the post-crediting period?
2. What would be the opportunities, benefits, challenges, and risks of Verra doing this?
3. What types of VCS AFOLU projects could be remotely monitored effectively and efficiently? How will remote sensing and other technologies likely evolve in the near future, and will this enable monitoring of additional types of AFOLU projects or losses?

Questions

4. Would the LTRMS and proposed adjustments to withholding percentages increase the resilience of the AFOLU buffer pool and permanence of VCUs?
5. How long should Verra monitor for post-crediting projects?
6. How frequently should Verra aim to monitor loss events?
7. If Verra ceases to operate or manage the LTRMS prior to the end of the monitoring commitment, how can the environmental integrity of VCUs be maintained?

Questions

8. What best practices, standards or guidance should the LTRMS follow? What are the limitations to the accuracy, reliability, and credibility of a remote monitoring approach for quantifying AFOLU reversals?
9. What oversight/quality assurance practices are necessary to ensure the LTRMS functions properly and accurately quantifies reversals?
10. What other considerations should Verra keep in mind while developing LTRMS?

Questions and comments