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Comments Related to the Discussion of U.S. Forest Projects Compliance Offset Protocol
December 15,2022

Thank you for the opportunity to provide comments regarding the U.S. Forest Projects Compliance Offset Protocol. I am happy that CARB is considering a review of the protocol and engaging additional expertise as part of the process. I have been involved in the development of forest protocols in California since 2003, serving as a workgroup member of an early process that led to the California Climate Action Registry's (now the Climate Action Reserve) Forest Protocol Version 1.0. I later worked as a facilitator with a greatly expanded workgroup, consisting of verification bodies, environmental groups, state and federal agencies, carbon market experts, and private and public landowners to develop an updated version of the Reserve's forest protocol. The process to develop the updated version began in 2007 and was completed in 2009. CARB ultimately adopted this protocol as the U.S Forest Projects Compliance Offset Protocol, following its own public and update process, as the compliance protocol. The protocol has undergone very few changes since then. It is appropriate to consider revisions to the protocol, given the fact that there is a little over a decade of experience with the compliance protocol.

I am grateful for CARB's leadership in this space and offer a few comments for your consideration.

Baseline

The workgroup addressed the Greenhouse Gas (GHG) accounting themes with a vision of a forest carbon project as a long-term proposition. Forests are slow to react to changes in forest management. Similarly, the risks that apply to current forest stocks can take several to many years to play out. The baseline concept in the U.S. Forest Projects Compliance Offset Protocol was developed within the framework of a 100-year plus project life and is based on this long-term perspective.

The approach to developing baselines for Improved Forest Management projects in the U.S. Forest Projects Compliance Offset Protocol uses a 'governor' that is termed Common Practice. Common Practice is the average stocking across all tree species within a project's neighborhood that shares similar species, legal oversight, and timber markets. It is developed from US Forest Service Forest Inventory and Analysis plots and are an unbiased estimator of forest stocking conditions across private lands.

The Common Practice approach was applied to better address the effects of 'business as usual' forest management activities on carbon stocking. Prior to the implementation of the Common Practice governor, baselines were determined based on a 'maximize net present value' approach. Indeed, the maximize net present value approach is the way private forest lands are bought and sold. Due to the intense competition when forest lands are traded, the maximize net present value approach to defining baseline makes some sense. Some voluntary programs continue to use this approach in setting baselines and are flourishing. The Common Practice governor to baseline establishment leads to a more conservative baseline, as it is always above a maximize net present value approach. Projects that are affected by the Common Practice governor would almost always able to demonstrate a sustainable harvest level that meets both legal requirements and is

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financially viable well below the Common Practice statistic, which demonstrates that it is doing its job to set a baseline within a conservative business as usual context.

I am happy to hear that CARB is considering a review of Common Practice to ensure that a project's peers are adequately represented in the designation of the Assessment Areas used to develop the Common Practice statistics across the country. I believe any improvements should recognize that land ownership will change frequently over the project permanence period of 100 years plus and, therefore, should not attempt to overly stratify private landowners into subsets of ownership types. An update that improves the representation of a project's peers will improve confidence in the protocol.

Permanence and the Reversal Buffer Pool

A project's durability success is based on ensuring that a credited tonne of CO2e, either sequestered or avoided as an emission, is maintained out of the atmosphere for at least 100 years, which is how permanence is defined in the U.S. Forest Projects Compliance Offset Protocol. This standard is among the highest in carbon markets. The long-term permanence in the U.S. Forest Projects Compliance Offset Protocol provides greater assurance that the baseline is reasonable and that the credits generated are real.

The reversal buffer pool is a critical link in ensuring that projects can endure events that could derail the credits from achieving the 100-year mark. There has been some concern raised that project permanence could fail due to recent and projected wildfires and the observation that the project contribution to the buffer pool is between 2 and 4 percent of the projects credit to cover this risk. The protocol identifies risks for reversals associated with financial, management, social, and natural disturbance. In total, the sum of the buffer pool contributions based on the risks add up to about 19%, depending on circumstances. The risks are pooled. Should a reversal occur, the buffer pool is available to compensate for the losses regardless of what causes the reversal. This was intentional. When the protocol was first made available, actuarial data had not been developed for carbon losses. It was unknown how project development would occur across varying risk profiles of wildfire, hurricanes, windfall, social challenges and the like.

The objective was to develop a buffer pool that was conservative and develop the actuarial data with experience. The program now has a little over 10 years of experience. Projects are diversified across a myriad of varying risk profiles and the buffer pool is in very good shape. All insurance mechanisms constantly adapt to evolving risks, so it is appropriate that ARB is revisiting the buffer pool contributions. It is important to consider the evidence of claims and future risk across all risk categories, not just the fire risk portion on its own. That is, don't cherry pick the fire risk category due only to the public attention it has received! It is important to use data-based evidence to calibrate the risks and buffer pool contributions with more precision than currently exist. It also is important to further develop discounts to buffer pool contributions based on a demonstration of management activities that increase resilience of a project's forest to risk elements.

Lastly, the compensation of reversals should consider the value the Greenhouse Gas (GHG) benefits provided by the sequestered or avoided emissions credits prior to them being reversed. Due to the counterfactual nature of the baseline assessment, perhaps such an approach could take place after some defined period of the project

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has been met. The appropriate use of tonne-year accounting principles could be helpful in quantifying the atmospheric benefit that had been provided prior to the reversal.

Defining Project Benefits

It seems that terminology that describes project benefits often misses the mark in terms of how improved forest management actually can provide a better trajectory for greenhouse gas emissions. The benefits of forest carbon projects have been presented in the press and in the recent ARB public hearing in terms of 'not harvesting' or 'protecting individual trees'. I believe we need to make a conscious effort to avoid this narrative. An improved forest management project is not about stopping all harvest or protecting individual trees.

It would be very difficult to push back against claims of leakage if that were the case and the risk of reversals would likely be heightened in many cases if forests aren't actively managed to maintain resilient conditions. Improved forest management projects are about changing the way harvest is conducted across the landscape. Business as usual harvest is often focused on ensuring maximum revenue production. Changing harvest patterns may mean deferring financial opportunity by satisfying timber demand through thinning from below, growing older trees, stocking control, all of which can help to improve the ability of forests to withstand environmental perturbations. Harvest volume can catch up and increase with time. It is a well-known principle in forestry that the maximum sustained production occurs by growing the best trees to the culmination of mean annual increment.

Monitoring, Reporting, and Verification (MRV)

ARB's protocol revision process should consider updates to MRV as well. The project costs for MRV have become excessive and become a major roadblock to increase participation in the program. It is generally thought that only forest landscapes with at least 10,000 acres can consider engaging in a project. Certain potential considerations to reduce cost could include:

- Establishing clear criteria and guidance for verification. A review should be conducted to determine what elements are essential to ensure carbon quantification and those that are superfluous or provide minimal return in terms of reasonable assurance.
- Exploring how the US Forest Service Forest Vegetation Simulator (FVS) could be used to quantify data for annual reporting. This function of FVS has not been used mainly due to the disparity of biomass equations used in FVS and those used in the Forest Service FIA program to quantify Common Practice. Since they are both Forest Service programs, it would seem that this hurdle could be overcome. The use of a standardized computing platform, such as FVS, would ensure consistent reporting and reduce costs for project developers to develop their own quantification frameworks. Furthermore, the verification of computing software used by project developers is a high-cost item. Shifting to an approved tool could help to reduce costs.
- Reducing the verification requirements for annual monitoring reports. Forests usually don't change substantially between site verification efforts. The annual verification could be greatly streamlined without posing a threat to the program integrity.

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- A shift to a form of programmatic or disturbance-based monitoring for those projects that have grown to a maintenance carbon stocking level whereby the expected credit yield is greatly reduced. The schedule of verification events could be extended beyond standard site verification cycles to when additional credits are requested (there has been adequate growth to warrant the costs of verification) or a significant disturbance has been detected that could impact registered credits. 100 years of monitoring beyond the last credit issuance is an unreasonable financial burden unless there is an event to warrant the verification. The use of remote sensing to detect significant disturbances is a technology that is currently available.
- Standardized inventory datasets, developed from remotely sensed data and publicly available ground-based (FIA plots) are becoming more common. Such datasets could greatly reduce project development and monitoring costs, if it could be determined that the datasets reasonably represent project-level inventories. Additionally, the frequency of updating of these datasets is critical to whether they would function well for forest carbon projects.

Scaling up Through Landscape Planning

Forests clearly have an important role in mitigating climate change. Business as usual management, both in terms of forest management (or the lack thereof) and the conversion of forests to other uses, is not likely to change in any meaningful way absent the investment of resources into forest sector, which will result in an underwhelming response of forests to the climate crisis. CARB's U.S. Forest Projects Compliance Offset Protocol was a major stride in the development of a mechanism to realize value in non-timber forest resources. It is expected that challenges to the architecture of the protocol should arise with experience and serve to advance the thinking and improve the basis for determining value in non-timber resources.

One potential avenue for improvement would be to shift the assessment of the GHG accounting elements (baseline, additionality, permanence, leakage, and MRV) to a broader, landscape scale, such as a watershed or a county. The 'project' becomes the landscape in which defined activities, such as management for older forests, resilience, or reforestation, can occur and the activities can rely on conservative default values of avoided emissions or enhanced sequestration, rather than having to undergo prohibitively expensive project development, monitoring, reporting, and verification exercises. MRV, at the landowner scale, focuses on whether the landowner is performing the activity as specified by the program. This approach has the potential to scale actions to smaller landowners than is conceivable under the current landowner/project architecture.

While this goes beyond a basic protocol update, CARB has been a leader in creating innovative approaches in the past and some creative thought could be part of a current or future update process.

Sincerely,

John Nickerson
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