

Public Comment Response

Overview →

As part of Verra's regular process for evaluating new methodologies, this past spring they held a public consultation on our proposed Targeted, Short-Term Harvest Deferral methodology. Verra received 285 public comments. These comments came from 27 entities including other carbon project developers, NGOs, academics, individual landowners, industry research and trade organizations, and energy companies.

We are very grateful for the participation in this public consultation by so many stakeholders. We are taking all feedback into consideration as we revise our methodology, which we plan to release later this year as part of a new approach to [scaling near-term climate impact](#).

In the interest of transparency and continual improvement, we provide below a summary of the comments that Verra received about our methodology. We have categorized the 285 comments according to six key themes, to which we provide responses.

Public Comment Themes

01 Additionality

03 Uncertainty

05 Leakage

02 Model transparency

04 Harvested wood products

06 Permanence

Additionality

CONCERNS REFLECTED IN PUBLIC COMMENTS:

- Forests are managed on decadal timescales so it is impossible to assume a harvest may take place in a specific year. Baseline models are uncertain over a long time frame, but even more uncertain in any particular year.
- An econometric model can't be used effectively to predict small landowner behavior because they tend to harvest based on financial needs or other, hard-to-model, circumstances. Landowners that never had an intention of harvesting will be the landowners that enroll in projects, thereby creating non-additional projects.
- The methodology handling of exercisable options for timber harvesting is non-additional. If a landowner has sold options to harvest, they should no longer be eligible for receiving carbon credits since they are no longer responsible for business-as-usual activities.

NCX SUMMARY RESPONSE:

- Projects are additional when the carbon stocks in the project scenario are greater than the carbon stocks expected under the baseline scenario—this is the basis for any carbon project verified against any standard. Because additionality, and therefore creditable carbon, is dependent on an accurate baseline, eligibility is limited to forests that are truly at risk of being harvested in the next year. Deferring that harvest results in additional carbon stored in the landscape.
- No statistical model will perfectly predict landowner behavior, but to work at scale, a model such as the one we have proposed provides a strong foundation. Where the methodology is not explicitly prescriptive, it is expected that project developers will implement appropriate safeguards to avoid adverse selection. We look forward to working in the future with other developers and academic researchers to explore methods of measuring and accounting for adverse selection directly.
- We recognize that the first version of the methodology contained confusing language around exercisable options for timber harvesting. The intent, which we have clarified in the updated methodology, is that only the owner of the exercisable option may generate carbon credits.

Model Transparency

CONCERNS REFLECTED IN PUBLIC COMMENTS:

- The baseline model is opaque. It is unclear what parameters are taken into account or how the model performs against benchmarks. The baseline model could not possibly predict with any accuracy the harvest behavior, especially of a small landowner, over one year since a small landowner may be motivated to harvest by unpredictable factors.
- The use of a single predictive model means landowners are able to generate carbon credits from non-merchantable timber.
- Remote sensing measurements should not be used in forest carbon projects because they don't meet established uncertainty thresholds. The use of remote sensing in the methodology is not prescriptive so it is unclear what proportion of remote sensing to field measurements should be used.

NCX SUMMARY RESPONSE:

- Our business-as-usual model is a hierarchical model that predicts one-year harvest risk and intensity based on FIA training data and a suite of covariates that include geographic, biological, economic, and sociological factors. Partial pooling across forest types ensures that the model is able to leverage the similarity and ubiquity of covariate relationships across the forests of the continental U.S. while still allowing for regionally specific differences. Predicting behavior of any type, which is the basis for any forest carbon program, is not straightforward, and depends on models whose performance can be measured. Our revised methodology requires the propagation of model uncertainty through to the calculation of final credits, as well as reporting of benchmarks for all models.

- To mitigate activity-shifting leakage, the methodology requires that landowners enroll all of their eligible acreage, which can lead to confusion suggesting that even non-merchantable stands are at risk of harvest. However, the non-merchantable stands should not contribute to the estimate of carbon at risk of harvest. The revised methodology includes more information on baseline modeling and checks for stands like this.
- As we have revised our methodology we have clarified the emphasis on leveraging remote sensing-derived data products for generating inventory estimates at scale. We have further emphasized methods for incorporating field measurements into estimates of forest disturbance and change, and the approach for including uncertainty from remotely sensed data products in overall project-level accounting.
- As we advance this methodology independently from Verra, we are utilizing a new platform to increase transparency of the methodology itself rather than depending only on a subjective expert review process. The new approach includes both detailed documentation of particular models used, and provides benchmarking and performance information for baseline models.

Uncertainty

CONCERN REFLECTED IN PUBLIC COMMENTS:

- The default uncertainty deduction used in the methodology is not enough since this is a very novel approach that hasn't been peer-reviewed or tested yet. There are many sources of uncertainty present in the methodology, from field measurements to timber pricing and remote sensing, without any discussion of the associated uncertainty factors.
- NCX Summary Response: We agree that accounting for uncertainty is very important in any forest carbon project. Our revised methodology fully propagates and accounts for uncertainty, and requires a deduction associated with the uncertainty of all models. The magnitude of uncertainty associated with the overall climate impact from our entire approach is used to calculate an uncertainty deduction factor, which reduces the overall number of credits generated from the project.

Harvested wood products (HWP)

CONCERN REFLECTED IN PUBLIC COMMENTS:

- The exclusion of HWP from project accounting unrealistically assumes that all of the carbon contained in a forest would be immediately emitted to the atmosphere after harvest. A deduction higher than 0% should be taken to reflect the fact that some proportion of a forest's carbon remains in HWP well after the project activity period.
- NCX Summary Response: The carbon stored in trees is released into the atmosphere when a tree dies, some of it almost instantaneously and sometimes over years to decades. We believe it is important to account for all reasonable pools of emissions related to a harvest, and our revised methodology takes the storage of carbon in, and subsequent release of carbon from, harvested wood products into account.

Leakage

CONCERN REFLECTED IN PUBLIC COMMENTS:

- The default leakage deduction of 10% is not nearly enough since the neighboring forest landowners not enrolled in a project would make up any timber supply deficit caused by the deferral of harvests.
- Response: Leakage is poorly studied across existing IFM projects, especially short-term harvest deferral projects. We agree that leakage is a possible outcome of purposely delaying a harvest. Based on the comments received, we have updated the methodological approach to include a more conservative deduction. We look forward to working with other developers and academic researchers to explore methods of measuring leakage directly in the future.

Permanence

CONCERNS REFLECTED IN PUBLIC COMMENTS:

- It is too difficult to demonstrate additionality with short-term crediting since the changes of behavior aren't as drastic as in longer, 100-year harvest deferrals.
- Short-term credits will open up too much carbon credit supply, weakening the success of other, traditional carbon projects.
- Tonne-year accounting is an untried and untested method that does not guarantee permanence, therefore should not be used in forest carbon projects generally, and harvest deferral projects specifically.
- Short-term credits don't have any permanence, so don't have any real climate impact; they may actually make climate change worse by creating more warming on an already warmer planet.
- It is not possible to establish a physical equivalence between carbon emissions and sequestered or avoided emissions in forests, especially when a discount rate is used. True physical equivalence would require carbon to be removed from the atmosphere permanently.

NCX SUMMARY RESPONSE:

- We agree that additionality is key for any carbon project to work, whether one year or 100 years. That is why we rigorously measure additionality in our program and transparently share the results of all project cycles. No nature-based solutions are permanent. However, in this critical decade increasing sequestration and storage is critical to meet global goals. Therefore, we are incentivizing immediate action when it counts. When tonne-year accounting is combined with ex-post crediting, climate impact is delivered immediately and cannot be reversed. Acknowledging and designing for temporary storage using tonne-year accounting and short-term crediting provides accountability when fires, pests, and climate change itself make long-term forest predictions near impossible.

- More credits coming to the market in this critical decade is not a weakness of our approach, but a strength, as the current supply of traditional credits isn't near the required amount to limit warming to 2° C.
- A tonne-year is simply a unit of carbon account like a kilowatt hour is to a kilowatt for electricity, a unit of volume over time. While tonne-year accounting may not be used widely today in the voluntary carbon market, it has been supported as an alternative to traditional carbon accounting in the scientific literature for many years. One cannot adequately know the full benefit of a solution without adding in the time or duration term. Fundamentally, tonne-year accounting allows for the delivery of realized impact, not presumed future impact on timescales incongruent with the variability of natural systems. Furthermore, tonne-year accounting allows the direct comparison of benefits of different carbon offsets approaches over many different time scales and technologies.
- The goal of climate mitigation is more about mitigating the damage caused by climate change, rather than the actual quantity of carbon in the atmosphere. The carbon in the atmosphere causes increased temperatures through climate forcing, which in turn leads to costly economic and social damages to our water, homes, businesses, and livelihoods. The long-standing research and implementation of the Social Cost of Carbon approximates the net present value of the perpetual stream of future costs and damages caused by climate change. For our methodology, we apply a similar economic framing and a net discount rate of 3.0% to identify the equivalence ratio between the benefits of delaying emissions for 1 year compared with 100 years. See [Parisa et al. 2022](#) for a full explanation of how this economic model yields an economic equivalence between credits of different durations. In order to incentivize action today to avoid those future damages, it is appropriate to use a similar economic framework to calculate the benefits of near-term climate action. While a ratio does not signify a physical equivalence, it does appropriately value the future economic benefits of physical action today.

Conclusion

NCX appreciates that the public engaged so thoroughly in reviewing our novel approach to developing a harvest deferral carbon credit methodology. NCX developed its methodology specifically to overcome many of the well-known failings of the first generation of forest carbon methodologies. As innovators in the climate change and technology space, we understand the onus is on us to demonstrate how and why our methodology can have critical benefit at meaningful scales. When we release our revised methodology later this year, we will also provide more technical detail and scientific rationale for the many choices we made to respond to the public comments. We continue to believe that through learning in public and providing transparency in our approach, we will be able to transform nature-based climate solutions.

LEARN MORE

Read about our new, [next generation harvest deferral methodology](#).