

### **SUMMARY AND RESPONSE TO PUBLIC COMMENTS**

A draft *Methodology for the Quantification, Monitoring, Reporting and Verification of Greenhouse Gas Emissions Reductions and Removals from Improved Forest Management in Non-Federal U.S. Forestlands, Version 2.0*, was developed for approval by the American Carbon Registry (ACR).

All new methodologies and methodology modifications, whether developed internally or brought to ACR by external parties, undergo a process of public consultation and scientific peer review prior to approval.

The methodology was posted for public comment from September 20<sup>th</sup>, 2020 – October 19<sup>th</sup>, 2021. Comments and responses are documented here. If applicable, additional public comments received after the formal close of the public comment period are also documented herein.

#	Organization	Comment	Author Response
1	Appalachian Mountain Club	<p>4.1 Identification of Baseline.            The methodology singles out a particular class of landowners (NGOs) for standards that are not applied to other landowners (such as non-commercial private forests or tribal forests) that may manage their land in an identical fashion, and for similar reasons of environmental conscience, but which do not have defined “fundamental institutional barriers” such as a mission statement. All landowners should be subject to the same standards.</p>	<p>Baseline requirements have been further standardized across ownership types, as clarified in subsequent responses.</p>
2	Appalachian Mountain Club	<p>4.1 Identification of Baseline.            The methodology inappropriately elevates management objectives (which may change over time) to the status of permanent legal constraints, but only as it applies to NGOs. There is a reason that conservation easements generally do not incorporate detailed forest management objectives or actions within conservation easements, but rather place these in a management plan that is generally outlined in the easement. This is done in recognition that these objectives may be subject to change. While NGO management objectives are generally intended to be maintained over the long term, changing circumstances, such as organizational financial issues, may lead to changes in management (including increasing harvesting) or even the sale of land. (As stated in financial prospectuses, “Past performance is no guarantee of future results.”) The critics of NGO</p>	<p>We’ve revised this section with further recognition that 1) long-term management objectives are subject to change over time, and 2) that past performance is no guarantee of future results.</p>

		carbon projects ignore the fact that these projects not only reward past conservative management, but also lock in the carbon benefits of this management for the future life of the project. Only legally enforceable constraints should be considered in baseline determination.	
3	Appalachian Mountain Club	<p>4.1 Identification of Baseline.</p> <p>The requirement that NGOs (but only NGOs) demonstrate that “they manage their lands consistent with the definition of a working forest” in order to justify the use of an NPV maximization baseline is a recipe for confusion and variable interpretation. The only requirement in the definition of “working forest” is that the land is “managed to generate timber revenue.” What exactly does this mean? If 10% of a property is managed for timber harvest, is the entire property considered working forest? If limited sale of timber takes place every 10 years, is that sufficient? The definition of “working forest” is vague and subject to a wide range of interpretation.</p>	<p>The “working forest” designation and similar requirements (such as the “long-term management objectives” and “fundamental institutional barriers” language) have been removed in favor of the following methodological changes in section 4.1: 1) a revisit and conservative adjustment of the NGO NPV discount rate to 3%, 2) increased specificity regarding eligible silviculture and what constitutes a legally binding baseline constraint, and 3) further standardization in the reporting of baseline scenario metrics (section 4.1.1.).</p>
4	Appalachian Mountain Club	<p>4.1 Identification of Baseline.</p> <p>Similarly, the requirement for “working forest” status inappropriately discriminates against voluntary no-harvest management and is also subject to variable interpretation. It is also counterproductive, as no-harvest management is often the approach that maximizes carbon storage. In addition, absent a legally enforceable “forever wild” provision on a defined area</p>	<p>This requirement has been removed (see also response to comment 3).</p>

		<p>(which is considered in baseline determination), the distinction between no-harvest and active management is a continuum, both spatially and temporally. It can range from voluntary no-harvest management across the entire property, to very light and infrequent harvesting on limited areas, to set-asides and no-harvest protection zones (such as riparian buffers) dispersed throughout an actively managed forest, to active management up to the limit of annual growth. Where would the line be drawn? Baseline determination should not be based on difficulty to define distinctions between legally allowable forms or levels of management.</p>	
5	Appalachian Mountain Club	<p>4.1 Identification of Baseline.          The second paragraph on page 21 (quoted earlier) contains contradictory provisions. To provide an example: AMC’s land included in the ACR project currently in development is governed by a management plan that includes the objective to “Provide income from sale of timber products.” This clearly satisfies the definition of working forest that would allow the use of an NPV maximization baseline. However, the plan also includes the objective to “Increase average stocking of managed stands over the long term.” How would this be incorporated into baseline determination? Different verifiers may come to different decisions about this, leading to inconsistent treatment of different projects. The</p>	<p>This requirement has been removed (see also response to comment 3).</p>

		proposed methodology includes conflicting provisions without guidance as to how they should be balanced.	
6	Appalachian Mountain Club	<p>4.1 Identification of Baseline.</p> <p>The proposed methodology is counterproductive, in that it subjects those most likely to undertake carbon-positive forest management (i.e., NGOs) to a stricter standard that may limit participation in forest offset markets. In many cases, NGOs (including AMC) are using revenue from forest carbon projects to support low-intensity and restorative forest management or to conserve additional land – a positive feedback that results in additional carbon sequestration. By applying a stricter standard to NGOs, the proposed methodology discourages the type of carbon-positive action that should be encouraged.</p>	The methodology now specifies consistent requirements across all ownership classes.
7	Appalachian Mountain Club	<p>4.1 Identification of Baseline.</p> <p>The proposed methodology, by taking an individualized approach to baseline determination for one class of landowner, rather than an objectively defined approach that is applied consistently to all projects, puts an undue burden on verifiers. Unlike clearly defined legal constraints, interpretation of how “fundamental institutional barriers” (such as mission statements or general management objectives) influence long-term management of a specific property is prone to subjective and inconsistent interpretation. As stated by David Clegern, a spokesman for the</p>	The reference to "fundamental institutional barriers" has been removed in conjunction with changes outlined in response 3.

		California Air Resources Board, such an approach would be “unrealistic and impractical.” An individualized approach to determining “business as usual” has been rejected as unworkable by the major United States registries, including ACR in its existing methodology.	
8	Appalachian Mountain Club	4.1 Identification of Baseline. The proposed methodology also puts an undue burden on verifiers and ACR to judge the veracity of stated management objectives (but only for NGOs) – essentially forcing them to read the minds of project developers. What is to keep an NGO from including active timber management as an objective for a particular property (thus qualifying for an NPR maximization baseline) and then not undertaking such management once a carbon project is completed? How would verifiers determine the truth of such rationales as “the markets haven’t been favorable”, or assess one limited harvest over a long period of time conducted solely to justify the management objective? The proposed methodology creates a perverse incentive to misrepresent management objectives.	We have removed the reference to long-term management objectives (see also changes in conjunction with comment 3).
9	Appalachian Mountain Club	Finally, by subjecting NGOs to a standard that is not applied to other landowners, the proposed methodology is simply unfair. Imagine two identical large tracts of old growth forest. One is owned by a conservation NGO such as The Nature Conservancy,	As stated in previous comments, we have revised the requirements for consistent treatment of ownership classes and increased verifiability.

		<p>who clearly state their objective to preserve it. The other is owned by a timber liquidator, who clearly states their intention to cut it down as quickly as possible unless paid not to. According to the critics of NGO carbon projects (and reflected in the proposed ACR methodology), only the liquidator would be eligible for carbon offset credits. While the approach of “paying the bad actors to change their behavior, while trusting the good actors to continue their good behavior on their own” may be the most efficient from the standpoint of economic theory (and may satisfy a rigorously applied definition of additionality), most people would consider it to be grossly unfair. It penalizes NGOs, based not on what they do but why they are doing it. An approach that rewards bad intentions while penalizing good intentions is a textbook example of improperly designed incentives. The methodology should treat equivalent actions equally, without regard for why those actions have been taken.</p>	
<p><b>10</b></p>	<p><b>Bluesource</b></p>	<p>Bluesource would like ACR to integrate calculations for Removals so that they can be verified and designated on the Registry. The section below describes how Bluesource recommends that ACR calculates the ERTs associated with annual live tree growth (also known as Removals Credits) for ACR projects under the Improved Forest Management Methodology for Quantifying GHG Removals and Emission Reductions through Increased Forest Carbon Sequestration on Non-Federal U.S.</p>	<p>ACR has added a new equation (30) denoting the calculation of “removals” credits for this methodology.</p>

		<p>Forestlands version 2.0. An ERT calculation worksheet has been provided separately illustrating these calculations using the examples in the draft ERT calculation worksheet.</p> <p>The calculation of Removal Credits does not take into account any avoided emissions reductions from modeled baseline losses in CO2 stocks. However, the calculation of removals ERTs does account for leakage, buffer pool contributions, and uncertainty deductions (<i>further details on the calculation provided in the letter</i>).</p>	
<p><b>11</b></p>	<p><b>Bluesource</b></p>	<p>Section E.III of the ACR Buffer Pool Terms/Conditions currently has the following language to describe how compensation after reversals should be handled (<i>language referenced in the letter</i>). Requiring that credits be replaced within 30 days of the reversal is way too short of a time frame. Reversals can take many months to quantify. For instance, if there is a large-scale fire or windthrow event, project proponents will need to spend months re-inventorying the property to assess the net impact on carbon stocks. Taking a wild guess within 30 days of the reversal event seems impractical and unnecessary, and requires extra work on both ends to amend the crediting differences after the reversal has been verified. We believe that project proponents should be given more time to verify the reversal and acquire appropriate credits to compensate ACR. Most reversals are small, so in many cases landowners would prefer to let the project grow</p>	<p>While this comment does not directly address the proposed methodology revision, ACR will consider this comment within the context of updates to the <i>ACR Buffer Pool Terms and Conditions</i>.</p>



		an additional year and then use credits from the next Reporting Period to cover the reversal. As such, we recommend the following change in language ( <i>proposed language provided in the letter</i> ).	
12	Bluesource	<p>Bluesource suggests adding language to deal with situations where there is a net reversal in the removal credits, but no reversal in total ERTs. This would occur when overharvesting causes the project stocks to decrease in a given year, but the net change in ERTs (due to baseline loss) is positive. If Removal Reversal occurs, we suggest that a Desk Verification be required to validate the reversal amount, and the project proponent should be given 1 year from the completion of the verification and ACR review to compensate ACR with the same number of Removal credits to be cancelled out from the ACR system.</p> <p>Similarly, if an small unintentional causes the CO2 stocks to decline, but doesn't result in the net ERTs generated in the reporting period to be negative, then the loss of Removal credits should be compensated by the removal credit buffer pool.</p>	ACR has added equations for calculating and distinguishing "removals" (see also comment 10). The approach is different from that suggested by Bluesource and does not present the opportunity for "removal reversals".
13	Bluesource	When projects transition from previous versions of the Methodology, we suggest that previous reporting period ERT calculations also be updated to the new calcs so that there is consistency from the Start Date to the current Reporting Period. If the new calculations only apply to the current reporting period moving forward this will unduly penalize early actors. We	Project baselines must conform to the version of the methodology for which they are generating credits. This requires revisiting baseline assumptions to ensure they conform with the current methodology version and remodeling as appropriate. Any differences in crediting will be applied on a forward moving basis only.

		believe projects should be able to recoup past differences in crediting based on a most current uncertainty and leakage assumptions.	
14	Bluesource	Bluesource recommends that the example calculation workbook be updated so that project standing dead stocks do not vary year. Project standing dead stocks are held constant between inventories (project proponents can't randomly decide which trees have fallen and which are still standing), so standing dead will not change as drastically as the example workbook suggests they will.	We have revised section 4.2.1 to state "Estimations of dead wood in the with-project scenario must remain static between measurement events, and model predictions of dead wood dynamics may only be used in baseline and ex-ante with-project estimates". In addition, the calculation workbook has been updated to keep the with-project dead pool steady between measurements.
15	Bluesource	Bluesource suggests adding a note to say that project standing dead stocks should remain constant between reporting periods unless updated with new inventory data. Modeling future actual standing dead stocks in the project scenario does not make sense when project crediting will be based on the actual changes in standing dead stocks from year to year. Trying to model changes in standing dead (letting a model guess which random live trees die, and which random dead trees fall) is less accurate than just assuming that dead tree CO2 is constant in between collection of new inventory data. Such a change would also bring project standing dead stocks in line with the ARB protocol.	See response to comment 14.
16	Finite Carbon	Acronyms/Definitions. Regarding the definition of "Professional Forester," we would note that some states do not have licensure for professional foresters, and instead maintain registries.	Change made as suggested in "Acronyms/Definitions" section.

		We'd suggest stating that foresters should be "credentialed" rather than "licensed" to acknowledge the different types of state programs.	
17	Finite Carbon	1.2 Applicability Conditions. We recommend that ACR add an option for tribes to utilize sustainable forest management practices informed by traditional knowledge in lieu of management plans, similar to what was included in the Improved Forest Management (IFM) on Canadian Forestlands methodology (v1.0) for First Nations and Metis communities. While many tribes in the US do have management plans approved by BIA, tribes that are not federally recognized would benefit from having this as an additional option in demonstrating adherence to sustainable harvesting requirements.	We have clarified in section 1.3 that federally recognized tribes must demonstrate a current BIA approved forest management plan. Non-federally recognized tribes may utilize one or more of the sustainable management options provided or, in the absence of such verifiable evidence, adhere to sustainable forest management practices informed by traditional knowledge.
18	Finite Carbon	4.1 Identification of Baselines. Section 4.1 of the proposed updates introduces a requirement for NGOs to “demonstrate they manage their lands consistent with the definition of a working forest.” However, footnote 15 notes an exception to this requirement when NGO projects commence within one year of land acquisition. In such cases, projects may also use the NPV discount rate of the prior ownership class. We’re supportive of this change and the concept of a lookback period. However, the acquisition of new land is a multi-year process for most NGOs and it is reasonable to expect that land will have been acquired more than a year prior with the intent to implement a carbon project. Local and regional	We now clarify in section 4.1 that "Project Proponents shall use the baseline discount rates in Table 1 corresponding to their current ownership class .... , unless the ownership was recently acquired (< 5 years) in which case the discount rate of the previous ownership class may be employed".

		<p>NGOs that acquire conservation land with the purpose of implementing a carbon project are often completing multiple transactions over a period of three to five years in order to reach scale for a viable carbon project. These challenges are exacerbated when one or more land trusts or other NGOs are working to enroll these new acquisitions in an aggregated or PDA project design that meets a minimum threshold for financial and operational viability, since concurrent issues with contractual arrangements are likely to arise. We suggest a lookback period of 5 years to better capture land acquisitions that have been made with the intent to initiate a carbon project.</p>	
<p>19</p>	<p><b>Finite Carbon</b></p>	<p>4.1 Identification of Baseline.          Added language to section 4.1 states “Baseline scenario forest management must be plausible given fundamental institutional barriers not captured as legal constraints or in the NPV calculation.” “Fundamental institutional barriers” are further defined as “political, social, or operational barriers to the baseline harvest regime engrained in the management of a specific property and unlikely to change over time.” Evaluation of the persistence of institutional barriers throughout the 100-year baseline modeling period is highly subjective, and we believe this new requirement will be challenging to verify. This change is likely to increase the burden on project development, validation, and verification – increasing barriers to entry for market</p>	<p>The “fundamental institutional barriers” reference has been removed in favor of the revisions outlined in response to comment 3.</p>

<p>20</p>	<p><b>Finite Carbon</b></p>	<p>5.6 Estimation of Emissions due to Market Leakage. ACR proposes changing the maximum default market leakage discount factor to 30%, in association with a modified baseline accounting framework for carbon sequestered in long-lived wood products. We recognize the challenge in trying to identify a clear, defensible market leakage deduction, given the dearth of relevant literature pertaining to the leakage impacts of individual forest carbon offset projects. ACR’s recently adopted Improved Forest Management (IFM) on Small Non-Industrial Private Forestlands methodology, which applies to non-industrial private forestlands from 40-5,000 acres, includes a default market leakage discount factor of 20%. We suggest that landowners holding under 5,000 acres, but which elect to use the Improved Forest Management (IFM) on Non-Federal U.S. Forestlands methodology (v2.0) should similarly be permitted to utilize the 20% market leakage discount factor, while landowners with holdings larger than 5,000 acres would use the 30% discount factor.</p>	<p>ACR has added an equation 20, allowing a 20% market leakage deduction for aggregated or PDA projects consisting of small private landowners (owning &lt;5,000 acres). This reduced deduction rate coincides with key principles of forest economic theory and literature supporting that both 1) inherent project design associated with aggregated and PDA projects comprised of multiple landowners and 2) focused enrollment of the small NIPF ownership demographic leads to greater enrollment diversity and market inelasticity, in turn mitigating potential leakage compared to larger, single ownership projects .</p>
<p>21</p>	<p><b>Land Trust Alliance</b></p>	<p>2.4 Additionality            "On page 15, it states, "The Project Proponent shall demonstrate that the proposed project activity exceeds the common practice of similar landowners managing similar forests in the region."             Although this additionality prong does not represent a change or update to the current version (1.3 –</p>	<p>We have clarified the common practice test for this methodology in section 2.4. "Similar" explicitly refers to similar forests of the region (e.g., forest type, ecological condition, species/product mixture).</p>

		<p>April 2018) of the methodology, the Alliance believes ACR should consider modifying this prong to minimize any unintended negative consequences. The provision could be interpreted to require land conservation organizations to be compared only to other land conservancies, as opposed to considering a variety of landowner classes that can and do manage similar forests using comparable forest management practices. Explicitly including land trusts with other private landowners would minimize bias by more accurately comparing landowners across classes regardless of corporates status or mission.</p> <p>Furthermore, narrowly defining similar landowners can make proving common practice extremely challenging, time-consuming, expensive or impossible due to a lack of available data and examples. Requiring a comparison only to other land conservancies results in too small of a pool of “similar landowners” to meaningfully be considered “common.”</p>	
22	<p><b>Land Trust Alliance</b></p>	<p>4.1 Identification of Baseline.          "On page 21, it states, “In cases where the mission of an NGO includes land conservation and stewardship, the Project Proponent (NGO or associated private entity claiming carbon credit ownership) must justify the baseline scenario by demonstrating they manage their lands consistent with the definition of a working forest.”</p>	<p>The "working forest" reference has been deleted in conjunction with response to comment 3. The five-year lookback from land acquisition has been included in response to comment 18.</p>

		<p>Applying a working forest standard in the methodology (as defined on page 6), to only one landowner class is arbitrary. Such an approach cannot be fairly applied, and in fact seems to ignore the fact that private forest landowners other than land conservation organizations, such as tribes and family forest landowners do not manage their lands to generate timber revenue in every instance. There is a variety of goals landowners establish for the management of their forest holdings, including employing practices that render degraded forests more functional over time.</p> <p>The working forest provision as applied to the identification of the baseline also seems to contradict ACR's previous claims that they do not use historical activity because it does not necessarily represent what will happen in the future, and that the future harvest scenario of any given forest is fundamentally unknown. Land management goals and plans are influenced by a variety of factors and can and do change over time. For instance, forests are by their very nature dynamic, and as they grow forest management approaches must be adjusted accordingly.</p>	
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		<p>Further, footnote 15 on page 21 qualifies the working forest demonstration as not relevant for NGO projects with start dates within one year of land acquisition and using the NPV discount rate of the prior ownership class. The Alliance believes this look-back provision is helpful but inadequate in supporting projects where the project proponent and/or underlying landowner is a land conservation organization. The look-back period should be lengthened to five years. Coupled with the Programmatic Development Approach, this would provide land conservation organizations with a more realistic timeframe to bring a project to feasible scale. Typically, land acquisitions take years to reach fruition, and so establishing a five-year look-back period would provide critical flexibility for a land trust to create the pipeline of land acquisitions necessary for project feasibility.</p>	
<p>23</p>	<p><b>Land Trust Alliance</b></p>	<p>4.1 Identification of Baseline. On page 22, it states, “Baseline scenario forest management must be plausible given fundamental institutional barriers not captured as legal constraints or in the NPV calculation.” “Fundamental institutional barriers” are further defined as “political, social, or operational barriers to the baseline harvest regime engrained in the management of a specific property and unlikely to change over time.” Although not explicitly stated, this provision can be interpreted as targeting organizations whose mission is</p>	<p>The "fundamental institutional barriers" language has been deleted in conjunction with response to comment 3.</p>



		<p>land conservation and stewardship. Regardless, the standard is flawed in several ways as a required criterion for the development of a project’s baseline scenario, including, but not limited to the following ways:</p> <ul style="list-style-type: none"> <li>• Unlike legal constraints that are clearly defined in such instruments as a conservation easement, identifying and interpreting “fundamental institutional barriers” is an arbitrary exercise. What sources of information would be employed and what qualified entities would possess the necessary expertise to analyze, interpret, and draw defensible conclusions from those sources?</li> <li>• Determining these barriers would likely create undue burdens, and excessive time commitments and costs to the project development process.</li> <li>• Even if fundamental institutional barriers could be identified, it is just as plausible to assume that these barriers may change or dissolve over time. As such, how would this assumption influence and/or alter the baseline scenario determination?</li> </ul>	
<p><b>24</b></p>	<p><b>Southpole</b></p>	<p>2.4 Additionality. We think another point for additionality could be a cultural or social barrier, since changing from a “Business as Usual” practice in the United States, to a conservation or other removals’ practices in a purely forestry setting, could be a strong barrier to develop a carbon project based on conservation or better practices</p>	<p>We've clarified in section 2.4 that technological or institutional barriers as referenced in the ACR Standard may also be relevant.</p>

25	Southpole	4.1 Identification of Baseline. Is the project scenario including the carbon credits?	Section 2.4 now clarifies the project scenario's carbon revenue does not need to be considered in the financial analysis, since carbon revenue incentivizes the otherwise less profitable project activity.
26	Southpole	4.2.4 Harvested Wood Products. Why is this value applied, instead of the 0,47 of the IPCC, and which seem more conservative?	0.5 is a previous IPCC default and is consistently used across ACR methodologies. Because the same factor is used in both the project and baseline scenarios any potential difference upon crediting is expected to be negligible and conservative, given more HWPs are produced in the baseline than project scenario.
27	Southpole	7.3 Validation and Verification. In case of validation together with verification, validation within 3 years and verification no less than 5 years. Then a project could not validate at the same time with verification, at least for the first validation, verification period?	Validation and verification may be conducted simultaneously (Chapter 9.A ACR Standard).
28	Terra Carbon	2.4 Additionality. Regarding Section 2.4, Additionality, we request from ACR further specificity in applying the following: “The Project Proponent shall demonstrate that the proposed project activity exceeds the common practice of similar landowners managing similar forests in the region.” ➤ Application of this requirement has repeatedly proved challenging on projects, particularly those that represent unique ownerships (e.g. municipal forests, public university forests), for which there are few available “similar ownerships” to assess common practice. We suggest in this case that, to the extent	Please see response 21 for specificity regarding the "similar landowners managing similar forests" requirement of the Common Practice test. We've clarified the demonstration is relevant to sites of similar ecological characteristics (e.g., forest type, ecological condition, species/product mixtures), which more closely aligns with the baseline scenario and provides increased verifiability.

		that the project activity must be demonstrated to “go beyond common practice”, “common practice” is logically best represented by past (pre-project start date) forest management in the project area, and the methodology requirement met by showing how the project activity goes beyond, is additional to, past practice.	
29	Terra Carbon	<p>4.1 Identification of Baseline.</p> <p>Regarding Section 4.1, Identification of Baseline, the additional constraints that have been added concerning development of baselines should improve the credibility of baselines going forward, and address some of the criticisms that have been recently levied on IFM projects. In practical terms though, we have concerns about applying some of the new constraints, and request further clarity in defining the following: “In the base-line, harvests and silviculture must also be constrained such that documented long-term management objectives of the NGO, specific to the project area if available, can reasonably and verifiably be expected to be accomplished.” and “Baseline scenario forest management must be plausible given fundamental institutional barriers (“Fundamental institutional barriers” are political, social, or operational barriers to the baseline harvest regime engrained in the management of a specific property and unlikely to change over time) not captured as legal constraints or in the NPV calculation.”</p> <p>➤ We suggest either striking the referenced text</p>	Please see responses to comments 2 and 7 in which the long-term management objectives and fundamental institutional barriers language was removed, in favor of a more quantitative and verifiable approach.

		<p>above, or specifying which institutional barriers and how they are to be incorporated in the baseline. Terms like “reasonably” and “plausible” are particularly problematic, likely to be applied unevenly across projects depending on the project proponent and/or the VVB. If the intent of these new constraints is to be retained, further clarity is necessary, otherwise ACR will find itself in the position of fielding repeated questions from project proponents and verifiers, and be forced to arbitrate in the interpretation of the methodology.</p>	
30	Terra Carbon	<p>5.5 Activity Shifting Leakage. Regarding Section 5.5, Activity shifting leakage, we propose deleting this section. On May 14 2021, we shared with ACR correspondence received from Brian Murray and Brent Sohngen, clarifying that market leakage findings from their published modeling studies, that inform the default factors included in the ACR IFM methodology, are inclusive of activity shifting leakage (i.e. they don’t distinguish between direct agents and other actors). Application of existing Section 5.6, Estimation of emissions due to market leakage, thus accounts leakage from both activity shifting and market effects (as they are currently defined by ACR), and makes any absolute exclusion of activity shifting leakage (as currently under Section 5.5) unnecessary.</p>	<p>We acknowledge the correspondence with Dr. Brent Sohngen. We agree with the interpretation that activity-shifting and market leakage were not independently distinguished in their work. However, given the importance of conservatism in leakage accounting and the ability to track harvests within an ownership, we chose to retain these provisions. We feel the approach is conservative and further corroborates our updated market leakage deduction rate.</p>
31	Terra Carbon	<p>4.1 Identification of Baseline.</p>	<p>ACR IFM conservatively credits baseline decline only until baseline stocks reach long-term average (t=T), after which</p>

		<p>If ACR were to consider further improvements to the methodology, we would recommend that baseline assumptions be subject to periodic (e.g. every 5 years) review. In the event that any key assumptions have deviated substantially, (e.g.</p> <ul style="list-style-type: none"> <li>• the nearby pulp mill, driving assumptions around conversion to loblolly pine plantations, just shut down, or</li> <li>• observed sustained reductions in timber prices that would result in substantial differences in profit-maximization scenarios going forward, or</li> <li>• a new state policy is in place restricting clearcuts, then the baseline for subsequent years would have to be revised to reflect these changes. If they have not changed at the periodic review event, the previous baseline remains in place. While we recognize that this would introduce additional investment risk in projects, we think that 20-year baselines based on fixed historic assumptions invite valid criticism, and can be addressed with a periodic review process, and true up as needed. Some stability of baselines, and practicality of methodology application, could be provided for by specifying a few, clear and narrow criteria that would require baseline revision.</li> </ul>	<p>point credits are generated solely from growth. This inherently helps to ensure that credits associated with baseline decline coincide with relatively recent baseline assumptions. Still, we appreciate the thoughtful comment and will consider it in the context of future potential updates, to ensure sufficient public comment can be achieved.</p>
32	The Climate Trust	<p>2.4 Additionality. On page 15, the methodology states that “The project proponent shall demonstrate that the proposed project exceeds the common practice of similar landowners managing similar forests in the region.”</p>	<p>We have added further specificity regarding how Project Proponents must demonstrate they exceed common practice (see response 21).</p>

		<p>This language is vague and creates uncertainty, which directly increases feasibility study and development costs, increasing the barrier to carbon market entry. Landowners might share similarities but simultaneously have very different management values and harvest regimes. Using this language to determine whether a particular landowner is sufficiently similar to another requires a high degree of subjectivity that easily leads to time-consuming and expensive back and forth between the developer, verifier, and registry. This vagueness and uncertainty creates planning challenges for project developers and increases risk for project finance. ACR itself acknowledges the need for objective measures, stating, “This technique is appropriate in that it provides a transparent and systematic metric by which landowners, project developers, verifiers, and offset purchasers can base their assessment of an ACR IFM carbon project” (pg 18).</p>	
<p><b>33</b></p>	<p><b>The Climate Trust</b></p>	<p>4.1 Identification of Baseline. On page 21 the document states, “In cases where the mission of an NGO includes land conservation and stewardship, the Project Proponent (NGO or associated private entity claiming carbon credit ownership) must justify the baseline scenario by demonstrating they manage their lands consistent with the definition of a working forest. If sufficient justification can be provided and verified, baseline harvest levels may be determined using an NPV analysis at the 4% harvest discount rate for NGOs. In the baseline, harvests and</p>	<p>We no longer stipulate specific requirements for particular ownership groups. The "working forest" language has also been removed in favor of a more quantitative approach (see response to comment 3). Sections 2.4 and 4.1 now further clarify that legally binding terms and conditions of land acquisition or donor funding restrictions legally regulating timber activities must be considered in the baseline.</p>

		<p>silviculture must also be constrained such that documented long-term management objectives of the NGO, specific to the project area if available, can reasonably and verifiably be expected to be accomplished.”</p> <p>Establishing a unique threshold for a particular landowner class to prove additionality is subjective and biased. All landowner types should be evaluated the same way because all landowner types can and do engage in a wide range of timber harvesting intensity. Conservation does not mean creating a wilderness or no-harvest preserve. Stewardship can easily include timber harvesting.</p> <p>The absence of documentation or management demonstrating that a forest is being commercially harvested does not mean it is not a working forest. Management goals and decisions change over time and are affected by a wide variety of variables including project prioritization, management personnel and agenda, and financial crises.</p> <p>Furthermore, management and harvest planning is reflective of forest condition. Forests are dynamic. Not only do trees become increasingly valuable as timber as they grow but forests and landscapes face ever-evolving challenges such as losses of diversity and wildlife habitat, novel pests and disease, climatic disturbances, and senescence, all of which influence management decisions.</p> <p>ACR already distinguishes landowner classes by differentiating the discount rate applied in NPV</p>	
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		<p>calculations, making further distinction unnecessary. ACR might consider replacing the above language with a required attestation from NGO conservation organizations not currently engaged in timber harvesting that project lands were not purchased using donor funds that prohibited timber harvesting.</p>	
<p><b>34</b></p>	<p><b>The Climate Trust</b></p>	<p>4.1 Identification of Baseline. The language on page 22 which states, “Baseline scenario forest management must be plausible given fundamental institutional barriers not captured as legal constraints or in the NPV calculation,” and subsequent definition of fundamental institutional barriers as: “...political, social, or operational barriers to the baseline harvest regime engrained in the management of a specific property and unlikely to change over time,” is vague and subjective. The vague nature of this language introduces subjectivity to the methodology because proving the presence or absence of an insurmountable social or political barrier is impossible. This subjectivity creates uncertainty that will make feasibility analysis and project development more expensive, increase financial risk to project investment, and generally increase barriers to market entry. Part of this requirement is redundant in that operational barriers are already accounted for in the NPV analysis that incorporate stumpage values. If additional language is required to clarify that timber is accessible and operable, this language could be moved</p>	<p>The "fundamental institutional barriers" language has been removed in favor of more quantitative requirements (see response to comment 3). We've also included in section 4.1 that "...timber included in baseline harvest must be demonstrably accessible and operable".</p>



		to section C or be included in the updated language regarding mill capacity studies.	
35	<b>The Climate Trust</b>	<p>4.1 Identification of Baseline.          The same paragraph on page 22 goes on to state: "Projects in which land acquisition date occurred within 1 year of the project start date may consider the institutional barriers of the prior ownership."          We suggest significantly extending this 'look back' period to allow conservation organizations to more easily use carbon finance to obtain and improve management on previously degraded forests. Conservation transactions take years to put together, are often completed in stages, and frequently consist of small acquisitions that are not large enough to financially support their own carbon projects. These properties must be held for a significant period of time until enough acreage is acquired to cover the expense of carbon project development. One year is an insufficient period as many transactions and carbon project development require significantly more time.</p>	The lookback for assigning NPV discount rate has been extended to 5 years (see also response to comment 18).
36	<b>The Nature Conservancy</b>	<p>We recommend not including the new option to meet sustainable management requirements by: "Adhere to a long-term forest management plan or program... (plan and program criteria subject to ACR approval)". Utilizing existing 3rd party sustainable management standards is likely to be more effective and efficient.</p>	We agree that certification by a 3rd party sustainable management standard is a robust way to ensure sustainable management. However, obtaining 3rd party certification entails significant costs that may be prohibitive for smaller entities. We have modified this option as only available for landowners owning <5,000 acres. We've also clarified our

		<p>Ensuring that forest projects are sustainably managed for multiple goals takes significant effort and is a cornerstone principle of sound forest carbon projects. Third party certification standards are developed much like carbon methodologies with rigorous peer review and public input. This new option does not have this infrastructure and thus doesn't provide clarity on what would qualify. If ACR intends to be the approving entity, ACR would need clear criteria for a plan to demonstrating conformance to "the principles of sustained yield and natural forest management", which would also need to be defined. Then verifiers would need implementation criteria to confirm the application of the plan also conforms to those principles. Finally, since this is an ongoing applicability condition, and is designed to control risk of activity shifting leakage, does the proponent have to adhere for the crediting period, or for the Minimum Project Term?</p>	<p>assessment criteria for the relevant plan or program and that the requirements are relevant over the crediting period. Please see comment 30 for more detail on the conservatism of the methodology's activity shifting leakage mitigation measures and section 5.5 for additional clarification on the activity shifting leakage requirements.</p>
37	The Nature Conservancy	<p>2.4 Additionality. In the U.S. it seems reasonable to assume that all applicable laws that could impact a forest carbon project are enforced, therefore we recommend dropping "enforced".</p>	<p>We agree that in the U.S. it's reasonable to assume currently effective laws are enforced. However, the referenced language was ultimately retained for specificity.</p>
38	The Nature Conservancy	<p>2.4 Additionality. Broaden the first additionality test to include restrictions in easements, deeds, and other encumbrances (e.g. funding source restrictions). These</p>	<p>Deed restrictions are now included in section 2.4, as well as legally binding conditions of easements in place &gt; 1 year prior to project start date. We've also added clarification that where project lands were purchased with donor funds, the common practice test includes confirmation that funding</p>

		all potentially limit how timber harvesting could be implemented on a project.	stipulations do not prohibit timber harvesting. These and other relevant legally binding restrictions to forest management were also clarified as baseline constraints in section 4.1.
39	The Nature Conservancy	The commonly accepted definition of “Permanence/Durability” for NCS projects is 100 years from credit issuance. Please clarify the current approach to long term durability of offsets (>40 years). How is ACR thinking about this for other AFOLU methodologies?	<p>No length of time short of perpetual (or at least the atmospheric lifetime of anthropogenic CO<sub>2</sub>, estimated at 400 years ± 20%) is truly permanent. 100 years seems to have been inspired by the IPCC “100 year GWPs”, but there is no sound scientific basis or accepted international standard around any number of years that equates to an emission reduction/removal being permanent. ACR AFOLU projects must commit to maintain, monitor, and verify project activity for a minimum project term of 40 years. ACR has focused on effective assessment and mitigation of reversal risks to make forest offsets secure and fungible with truly permanent offsets, allowances, and on-system emission reductions.</p> <p>The ACR AFOLU minimum project term is aligned with scientific reports by the IPCC and others that have assessed the critical role of the AFOLU sector in all 1.5°C-consistent pathways to achieve Paris Agreement targets and reach net zero emissions by mid-century to avoid the catastrophic effects of climate change. It strikes an appropriate balance between ensuring credibility and providing the opportunity for broad landowner participation to achieve the environmental objective of greater GHG reductions in the near term.</p>

40	The Nature Conservancy	<p>1.1 Scope and Definitions; 1.4 Methodology Summary; 4.1 Identification of Baseline.</p> <p>The term "perpetual" seems to be misapplied as the sentence later goes on to explain that the model should include 100 years.</p>	We have deleted the reference to "perpetual" throughout.
41	The Nature Conservancy	<p>In the following statement: "In cases where the mission of an NGO includes land conservation and stewardship, the Project Proponent (NGO or associated private entity claiming carbon credit ownership) must justify the baseline scenario by demonstrating they manage their lands consistent with the definition of a working forest", please clarify which lands are being described by the term "their lands". As currently written, it is unclear if an NGO could demonstrate conformance to this requirement by showing that just 5% of their total lands (not including the project area) are working forests. To conform to the ACR Standard Core GHG Accounting Principles, this requirement should apply to the proposed project area, and not just some subset of lands the organization owns/manages, unless the NGO has acquired the property in the past 1 year and the previous owner managed it as a working forest.</p>	The "working forest" reference has been deleted in favor of more quantitative requirements (see also response to comment 3).
42	The Nature Conservancy	<p>There can be many sources for NGOs long-term management objectives, including public statements at the time of acquisition, management plans, strategic planning documents, etc. All of these should be evaluated to ensure additionality and that the baseline scenarios are appropriate.</p>	The reference to "long-term management objectives" has been removed (see also response to comment 2), but we've incorporated additional specificity as to what constitutes a legally binding constraint in section 4.1 (see also response to comment 38). Also, a new section (4.1.1.) has been incorporated to better standardize reporting related to baselines and additionality.

43	<b>The Nature Conservancy</b>	<p>P.21 states “In the baseline, harvests and silviculture must also be constrained such that documented long-term management objectives of the NGO, specific to the project area if available, can reasonably and verifiably be expected to be accomplished.”</p> <p>This statement indicates that an appropriate baseline for an NGO shall I) demonstrate that the project area is/is very likely, to be managed as a working forest, ii) utilize a 4% discount rate in the NPV analysis, and iii) often further constrain the baseline scenario to be more conservative to align with the NGOs objectives. We strongly advise the development of clear criteria to demonstrate appropriate implementation of this requirement such that it can be confirmed by verifiers. Updated criteria should address when/if/how a more conservative discount rate should be used to ensure the baseline scenario is credible given their documented long term management objectives.</p>	<p>The approach has been revised in favor of a more quantitative approach (see also response to comment 3).</p>
44	<b>The Nature Conservancy</b>	<p>The approach of considering a NGOs documented long-term objectives should apply to all landowners whenever they can be identified. In many cases there is a well-documented management history, publicly stated management goals and/or publicly vetted and reviewed management plans, and when these objectives are identified, the baseline should be conservatively constrained to ensure alignment with the objectives. Ignoring this information is not consistent with developing conservative baselines and the principles established in ISO 14064-2:2019.</p>	<p>The approach has been revised consistent with response to comment 3. We’ve added increased specificity in section 4.1 on baseline modeling procedures, including what must be considered in determining baseline constraints.</p>

45	<b>The Nature Conservancy</b>	<p>4.1 Identification of Baseline. The methodology allows proponents to “assume increased mill capacity over time” if an analysis is completed to demonstrate “feasibility” of the hypothetical mills. To conform with relevant ISO and ACR principles, we recommend removing this option. Global wood product markets are exceedingly complex and the ability of anyone to reliably predict when and where a mill will be constructed as far as 20 years in the future is quite limited. It would be more appropriate to update baseline scenarios more frequently to take account of dynamic markets and policies.</p>	We have removed this option as suggested.
46	<b>The Nature Conservancy</b>	<p>4.1 Identification of Baseline. Adding that baseline scenarios must be plausible is commendable. However how this qualitative requirement would be satisfied is not well defined. Additional guidance and quantitative parameters should be added. Institutional Barriers, as described on Page 22 of the methodology, should be expanded to include publicly vetted forest management plans, publicly stated management goals, and adherence to sustainable forestry principles if the projects forest management has been third party certified for one year or longer prior to the project start date.</p>	See response to comment 3 regarding incorporation of more objective requirements and further justification of the baseline management scenario.
47	<b>The Nature Conservancy</b>	<p>1.2 Applicability Conditions. Footnote 1 clarifies that in some cases federal land can be eligible for this methodology. The baseline scenario</p>	Now clarified in the footnote that the NPV discount rate of the entity retaining full control of timber and carbon rights must be employed for baseline setting.

		section should clarify which discount rate should be used in this case.	
48	<b>The Nature Conservancy</b>	The reference to the ISO 14064-2:2019 principle of conservativeness is sound guidance, and the statement that the most conservative choice must not always be chosen is indeed accurate. However, the guidance also states, "Explanations of how assumptions and choices are conservative should be provided in project documentation". This further supports that baseline scenarios should be not only plausible, but also conservative and supports our prior comment that baselines that are not supported by past practices be justified with further evidence and should be added to the methodology to provide balance.	We agree that baselines should be conservative and well established in their choice of assumptions, parameters, data sources, and other key factors. We've incorporated several changes in the methodology to address this issue. Specifically, section 4.1 now includes greater specificity regarding legally binding baseline constraints (comment 38), choice of silvicultural prescriptions (comment 3), and baseline feasibility and operability (comment 34). Baseline reporting requirements have also been significantly expanded in newly added section 4.1.1. As stated by other stakeholders (e.g., comments 2, 22, 33), past practices are no guarantee of future results. We feel the increased specificity in assigning and reporting baselines provides balance and conservatism on this topic.
49	<b>The Nature Conservancy</b>	5.5 Monitoring for Activity Shifting Leakage. Consistent with Comment 1, we believe that an ACR approved long-term management plan or program is poorly defined with no transparency or public review and should not be given as an option.	See response to comment 36 regarding additional specificity in this requirement.
50	<b>The Nature Conservancy</b>	The reduction in the leakage deduction from 40% to 30% is described in the summary document as a result of a "modified baseline accounting framework" and a review of the literature. However, the underlying information was not well documented. Please provide additional information that that supports this proposed change, including how the baseline accounting	The adjustment to the standardized leakage deduction was based on two main factors. First, it better corresponds to the rates currently available in the literature (noting the literature typically has not differentiated between activity-shifting and market leakage as our methodology does - see also response to comment 30). Secondly, the new rate is now applied more directly and conservatively (separately

		framework has been modified, and what new literature the reduced leakage deduction is based on.	accounting for market leakage and harvested wood products, whereas previous accounting was combined). Further supporting documentation has been provided separately.
51	<b>The Nature Conservancy</b>	5.4 Estimation of Emissions due to Market Shifting Leakage. Any project that elects to directly account for market leakage associated with the project activity should be required to provide a description of methods used and summary results in the publicly available GHG plan.	We now specify that "Methods and summary results must be provided in the GHG Project Plan or subsequent Monitoring Reports" when this option is employed.
52	<b>The Conservation Fund</b>	The Conservation Fund supports changes to the ACR IFM standard that improve the baseline modeling process. In particular, requiring baseline models to account for regional best management practices is an appropriate and important change. Additionally, stipulating that land purchased within 1 year of project start date be subject to the timberland ownership class requirements associated with the former landowner class appropriately aims to demonstrate that a counterfactual baseline scenario reflect the potential that the land be managed as by the ownership class of the former landowner. The Conservation Fund suggests that the language be amended to allow NGOs to seek permanent conservation funding in advance of project development, replacing land acquisition with "permanent land conservation". Permanent land conservation may be demonstrated by placing a permanent conservation easement on the land, or transferring ownership to a non-federal public agency.	Thanks for your support of our changes around baselines and assigning ownership class. Eligible start dates for IFM are defined in the ACR Standard Table 4. ACR Standard v8.0 is currently in public comment and includes a specific start date designated by "Land acquisition or easement enrollment date". Assuming the project is listed and validated within 3 years of the project start date, the project would be eligible.



