

An aerial photograph of a rural landscape. The image shows a patchwork of green fields, some of which are plowed and appear brown. A dirt road winds through the landscape. The text is overlaid on the center of the image.

Forest Carbon Accounting Proposal for ISB Discussion

Memo for the 21st May 2025 ISB meeting

12 May 2025

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Background and Context

To complete an accurate and comprehensive GHG inventory, companies that own or control forest lands or source forestry products (timber, paper, pulp, wood pellets, resins, etc.) need to account for how their harvesting, management, and/or purchasing activities result in CO₂ emissions and removals. The IPCC states that “anthropogenic emissions and removals means that greenhouse gas emissions and removals included in national inventories are a result of human activities” (IPCC 2006, 2019), yet distinguishing anthropogenic from non-anthropogenic emissions or removals due to corporate forest sector activities is complex. This is because forests emit and remove CO₂ and do so both because of and despite human activities.

Estimating anthropogenic emissions and removals for the forest sector is a complex subject at the national level, as demonstrated by the outcomes of 2024 IPCC Expert Meeting on “Reconciling Anthropogenic Land Use Emissions”, of at the national level is a Forest carbon GHG inventory accounting at the national level uses an approach called the “managed land proxy.” To distinguish anthropogenic from non-anthropogenic emissions and removals, the IPCC’s guidelines for national GHG inventories recommends that countries apply the managed land proxy by defining which areas of a nation’s forests are considered “managed,” and which are not. All CO₂ emissions and removals from managed forests are assumed to be anthropogenic and assigned to the reporting country; all CO₂ emissions and removals from unmanaged forests are considered non-anthropogenic and omitted from the inventory. Note that, in temperate countries, nearly all forests are considered “managed” because they have been extensively harvested in the past. The draft LSRG guidance released in 2022 adopted an approach where companies were required to use this managed land proxy or assume all forest lands are managed. A managed Land Proxy “Plus” methodology has been developed to further mitigate the risks identified with applying the Managed Land Proxy for corporate GHG inventory accounting.

An alternative proposal for forest management carbon accounting brought forward after reviewer feedback on the 2022 draft LRSR requires “activity-based” accounting. To distinguish anthropogenic from non-anthropogenic emissions and removals, this approach requires that companies compare the physical carbon stock fluxes in the reporting year on managed forest lands to a no human activity baseline without the corporate or any other human activities, and account for the difference in their GHG inventories. This approach aims to isolate the effect of the company’s wood harvesting, forest management including forest product purchasing activities on forest carbon stocks in the reporting year. This aims to reflect the principles in the Kyoto Protocol that countries should not be able to factor into their national accounting the carbon accumulating in forests due to climate change itself or legacy forest regrowth from prior harvests.

Overview

This document contains a summary of each methodology considered by the GHG Protocol’s Forest Carbon Accounting Technical Working Group (TWG) and background information to support ISB in decision-making. The information and proposals in this document have been built to be integrated on the Land Sector and Removals Standards (LSRS), which will be available in 2025.

To support TWG members in drafting their methodology while ensuring comparability, the Secretariat team has identified 8 key elements that must be addressed. These 8 key elements were introduced to the TWG members during the two second small group sessions, scheduled February 18th and 19th. The goal of these 8 key elements is to prepare each methodology for discussion in the meeting and prepare for a vote. Below is a summary of each methodology based on these 8 key elements.

Table 1: Summary of each methodology on each key elements

Key elements	Managed Land Proxy “Plus”	Activity-based Accounting
Disclaimer	The translation of the proposals into the key elements was carried out by EY and/or the Secretariat to ensure a comparison for the ISB	
Carbon Pools	Forest carbon pools: Includes changes in living biomass, dead organic matter, and soils. If management practices do not significantly impact dead organic matter or soils, these categories are recommended, but optional. Separate product carbon storage: Carbon stored in or emitted from biogenic products shall not be included in the physical inventory of forest carbon emissions and removals. Under the MLP-based stock-change approach, all carbon is assumed to be emitted at the time of harvest and must be accounted for in a separate category if it remains stored in product carbon pools.	Forest carbon pools: Includes above-ground vegetation, live below-ground vegetation, standing and downed dead wood, and forest floor and soil organic carbon pools. Only carbon remaining after 30 years is counted. External wood carbon pools: Includes carbon stored in wood products prior to decomposition or combustion, and after use, such as in landfills. Only carbon remaining after 30 years is counted.
Spatial Boundary of Analysis	Scope 1: Includes all owned or controlled land. Scope 3: Includes attributable productive forest lands influenced by company actions, defined by physical traceability to land management units or sourcing regions with specific safeguards when accounting for removals.	Scope 1: Lands owned or controlled by the company. Scope 3: Includes areas harvested for wood supply, defined by physical traceability to land management units or sourcing regions.

Temporal Boundary of Analysis	Annual assessment: Emissions or removals are reported based on the annual (or annualized) net forest carbon stock change. Companies may annualize changes in inventory results over a longer monitoring period if necessary.	Annual reporting: Emissions or removals are reported annually based on projected carbon stock differences For Scope 1, companies may use the committed emissions approach or a rolling average over 30 years. For Scope 3, emissions are based on wood used that year and calculated over 30 years using a committed emissions approach with or without subsequent forest growth. Growth is counted either before or after a harvest.
Separation of Anthropogenic and Natural Effects	Transparency: Companies should not aggregate inventory categories for reporting or target setting. Disclaimers should explain why net removals should not be interpreted as achieving net-zero. Whereas the physical stock-based inventory does not separate direct from indirect human impacts, the proposed forest impact statement for target setting uses an activity-based baseline for the separation. Companies are required to separately report a forest impact statement that quantifies the impact of forest management.	Focus on Human activity: The ABA approach segregates anthropogenic effects by focusing on wood harvest and forest management activities. Effect of management are accounted for if a) they occur after 1990; b) if they result in additional removals when compared to a no human management baseline and c) if companies forego including subsequent growth in their calculation of harvest emissions
Baseline Considerations	Historical comparison: The physical stock-based inventory is based on historical comparisons of annual carbon stock change in a base year or period. This approach also requires separate reporting of a forest impact statement relative to different options of counterfactual baselines	No human activity baseline: The counterfactual baseline is the lack of anthropogenic management. Effects of management are credited if they occur after 1990.
Methodology	Quantification methods: Established methods for inventorying forest carbon stocks, including converting tree inventory data to carbon data using allometric equations, calibrated forest growth and yield models or remote-sensing based approaches. The forest impact statement uses an activity-based methodology to be used for target setting purposes.	Accuracy and availability: The ABA approach models forest and external wood carbon stock changes from wood harvest and management activities based on average or specific forest management practices relative to a counterfactual baseline. Baselines can be constructed based on observations from baseline forests (if available) or based on scientific models.

Data Requirements	Empirical data: Use empirical data specific to sinks and pools, report uncertainty ranges, and provide justification for selected values. Requirements: Companies shall report changes using empirical data and provide quantitative uncertainty estimates.	Data requirements: For Scope 1, data on wood harvested, slash rates, and root/shoot ratios are needed. For Scope 3, data on wood harvest quantities, locations, and types, and the fate of harvested wood are required. Estimates can be made using national resource inventory data or forest growth models. Overall, two separate datasets are required; one for actual carbon stocks and one for the no human activity counterfactual.
Additional Considerations	Consistency: Consistent with GHG Protocol and IPCC reporting practices, ensuring comparable data and assumptions across estimates for the physical inventory and forest impact statement. Although the forest impact statement is in accordance with scientific recommendation, more research and deliberation are necessary to formalize the methodology for constructing it.	Importance of accurate data: Emphasizes the importance of accurate data, clear baselines, and the separation of anthropogenic and natural effects to ensure robust carbon accounting.

Managed Land Proxy “Plus” (MLP) approach

Overview of approach

The Managed Land Proxy (MLP) is an approach for quantifying and attributing fluxes of carbon dioxide to and from managed lands that has been thoroughly developed over the past several decades, and which remains the approach supported by the IPCC and the broader scientific community (supported by the IPCC approach and part of broader scientific community). The foundation of this proposal is to maintain and improve the use of the MLP in the context of corporate GHG inventories. The proposed improvements address the central concern with the use of the MLP, which to our understanding is that there is a discrepancy between results of the MLP and the results of global models that have been used to calculate the global carbon budget consistent with 1.5- and 2-degree scenarios.

Discussions at the Technical Working Group (TWG) level have identified several concerns with the use of the MLP, including that there is a discrepancy between the results of the MLP in inventories and the results of the global models used to calculate the carbon budget and net-zero target years. TWG members with reservations about building a system that relies on the MLP have eloquently made these concerns clear. This proposal, however, is based on the belief that maintaining the use of the MLP, while instituting several immediate safeguards and identifying continued opportunities for improvement to mitigate these concerns, is the best path forward. Not only is this approach aligned with the best available science, also it is the only way to produce a workable version of the Land Sector and Removals Standard (LSRS) on the timeline that this moment in climate action deserves.

The IPCC recently articulated a recommendation for reconciling anthropogenic land use emissions, which is to maintain the use of the MLP for the purpose of inventorying emissions, and then to address discrepancies in the context of communications, claims-making, and target setting. Following this thesis, the Managed Land Proxy “Plus” (MLP+) proposal introduces safeguards to the implementation of the MLP itself, clarifies the need for additional counterfactual analysis for purposes of target-setting, and sets clear guardrails around reporting and claims to address the discrepancy between the MLP and global models. The resulting proposal will align the LSRS and the GHG Protocol with the current scientific approach, maintain consistency with the rest of the carbon accounting ecosystem, and enable companies around the world to implement the LSRS. Most importantly, it will establish a robust framework for protecting existing carbon stocks in forests, improving the management of working forests, and establishing new forests at scale, all of which are critical components of any 1.5-degree scenario.

The MLP+ proposal requires three components to report the full and accurate impact of forests and forest products within a greenhouse gas (GHG) inventory report:

1. A physical inventory, which shall include the annual change in forest carbon stocks, reported as either net emissions or net removals. To attribute emissions or removals to anthropogenic activities, companies shall follow the 2022 draft Land Sector and Removals Guidance's methods which are based on the managed land proxy, in alignment with the latest guidance from the IPCC¹. Emissions and/or removals calculated using this approach that meet the requirements of the final LSRS, including changes made since the 2202 draft and the additional forest-specific requirements described in this proposal, shall be reported within the scopes of a company's GHG inventory report.

In addition to the physical inventory, the MLP+ proposal a) requires companies to disaggregate targets for land-based removals from targets from fossil-based reductions, through the production of a forest impact statement; and b) clarifies that companies cannot combine forest-based removals with fossil-based emissions in order to make climate-related claims, through a forest claims disclaimer.

2. The forest impact statement complements the physical inventory with quantified information about the impact of forest management and/or other land-based interventions. To calculate this statement, companies should employ a consequential accounting approach (or approaches) to quantify the impact of forest management and land use in relation to historical practices and/or what is necessary to achieve net zero global emissions. Emissions and/or removals calculated using this approach should be reported within a company's GHG inventory report, but outside of the physical inventory. This proposal makes recommendations about how to develop a forest impact statement but stops short of providing a required methodology, given the remit of FCA TWG to focus on the physical inventory. These approach(es) will need to be developed after the work of this TWG, with leadership from the GHG Protocol², Science Based Targets initiative³, or another entity.
3. The forest claims disclaimer contextualizes the unique role of forest removals in carbon accounting. Companies shall follow best practice about how to develop and communicate a GHG inventory report, as well as any related emissions reductions or target achievement claims, to ensure that companies with forests in their value chains do not misstate their role in supporting ambitious climate action. At a minimum, any GHG inventory report that includes forest carbon removals shall clearly state that net land-based removals reported within the physical inventory shall not be claimed as compensation for fossil-based emissions; and that, therefore, companies cannot balance their fossil-based emissions with forest carbon removals as a way of achieving carbon neutrality, negativity, net zero, or any other climate-related claim. This proposal outlines the core elements of such a disclaimer, but the full statement should be developed by the GHGP Secretariat and ISB, given their scope of knowledge regarding the entire LSRS and other relevant GHG Protocol standards

¹ IPCC (2024). [Report of the IPCC Expert Meeting on Reconciling Anthropogenic Land Use Emissions](#). Eds: Enoki T., Hayat M., Grassi G., Sanz M., Rojas Y., Federici S., Seneviratne S., Rupakheti M., Howden M., Sukumar R., Fuglestad J., Itsoua Madzous G., Krug T., Romanowskaya A. Pub. IGES, Japan.

² GHG Protocol Standards Development Plan: [GHG Accounting and Reporting on the Impacts of Actions and Market Instruments](#)

³ Science Based Targets initiative: [Timber and Wood Fiber Pathway Revision Project](#)

Key Sections and elements

Carbon Pools

Component 1: Physical Inventory

Requirements included in the current version of the LSRS: When estimating net forest carbon stock change, companies shall include changes in living biomass, dead organic matter, and soils. If management practices do not significantly impact dead organic matter or soils, these categories are recommended, but optional.

- Living biomass: Includes aboveground and belowground biomass on forest lands
- Dead organic matter: Includes dead wood and litter
- Soil: Includes organic carbon in mineral and organic soils

Recommendations: Companies should estimate the change in forest carbon stocks from all relevant pools using measurement-based approaches or calibrated model-based or remote sensing-based approaches. This should be done either through a stock change approach, in which stocks at T1 are measured and compared to stocks at T0, or through a gain-loss approach, in which activities are identified and then an emissions or removals factor is applied to estimate fluxes arising from those activities on managed lands. Scope 1 removals or emissions measurements from forest owning companies should use the stock change approach, whereas Scope 3 reporting may rely on a gain-loss approach, in which fluxes from attributable productive lands are estimated at the appropriate spatial resolution (see section 2). Measurement of certain pools (such as soil carbon) may utilize a gain-loss approach or assume no changes in carbon stocks where management does not significantly disturb soils, as these pools can be difficult and expensive to measure. All measurements shall still meet the data requirements (section 7).

Component 2: Forest Impact Statement

Recommendations: The same carbon pools included within the physical inventory should be included within the forest impact statement. Where this is not possible because the models required to conduct the consequential accounting do not include all the relevant carbon pools, any discrepancies should be justified and disclosed.

Spatial Boundary of Analysis

Component 1: Physical Inventory

Requirements included in the current version of the LSRS (scope 1): For the scope 1 portion of the physical inventory, companies shall define their spatial boundary as the lands they own or control, based on their selected consolidation approach.

Additional requirements of the MLP+ proposal (scope 1): In selecting the appropriate scope 1 spatial boundary for forest lands, companies shall apply the Managed Land Proxy (MLP), which defines managed land as “land where human interventions and practices have been applied to perform production, ecological or social functions including conservation and fire protection activities”. Applying the MLP is the IPCC’s recommended approach for identifying direct and indirect anthropogenic effects on managed lands.

Requirements included in the current version of the LSRS (scope 3): For the scope 3 portion of the physical inventory, companies shall report the emissions or removals that are a consequence of their activities (purchasing, processing, using or selling products), but that occur on lands they do not directly own or control. The spatial boundary for these indirect emissions or removals shall depend on the level of traceability a company has to the lands where the products originated. The current requirements of the LSRS were built on the MLP’s identification of anthropogenic effects but have been adapted for a scope 3 context. The existing requirements (summarized below but made available to TWG members), along with the additional MLP+ requirements, are intended to support the decision-making criteria of the GHG Protocol while still maintaining alignment with the IPCC’s recommendation of employing the MLP.

Recommendations: In many parts of the developing world, land tenure is legally and operationally inconsistent. For example, legally granted land concessions to companies are often unable to be fully controlled due to illegal encroachment by local communities. For practical reasons, therefore, land that is legally owned may not be controlled nor managed in many parts of the world. In these instances, companies should only include land they control within their spatial boundary. Using operational control instead of financial control is recommended in these instances.

Component 2: Forest Impact Statement

Recommendations: The forest impact statement complements the physical inventory and should provide guidance for companies to set targets which incorporate global models of land sector mitigation. It also enables companies to report the broader climate impacts of their forest management activities, including emissions reductions, avoided emissions, and contributions to nature-based climate solutions.

For target-setting purposes, companies shall align the spatial boundaries used for the forest impact statement with those of the physical inventory. The same spatial boundary shall be applied to both components, and any exclusions must be justified and documented. For example, if the physical inventory spatial boundary is restricted to attributable productive lands, a conservation set-aside would fall outside the physical inventory. The mitigation results from establishing that set-aside should be reported in the forest impact statement, following guidance from GHGP, SBTi, and others.

This component incentivizes sustainable forest management of both productive and non-productive lands, even when these lands do not generate net carbon removals in the reporting period.

Temporal Boundary of Analysis

Component 1: Physical Inventory

Requirements included in the current version of the LSRS: Companies shall employ an annual temporal boundary when applying the MLP to align with the current LSRS, as well as all corporate GHG inventory accounting practices. Companies may annualize changes in inventory results over a longer monitoring period if necessary.

Recommendations: For companies that source forest products, data from their sourcing regions is unlikely to be available in a timely manner (e.g., sourcing region emissions/removals factors may lag by 2-3 years before it can be applied to company sourcing data to calculate scope 3 emissions/removals). However, this should be mitigated by updating previously reported emissions/removals once more recent/appropriate data becomes available, as is widespread practice within scope 2 accounting.

Component 2: Forest Impact Statement

Recommendations: The temporal boundary chosen for the forest impact statement should reflect the operating context and land ownership history for the land included within the boundary. For example, if a company has owned the same land for 20 years, they would have a greater ability to set a “historical practices” baseline compared to if they acquired the land last year. As an additional example, if the land experienced a natural disturbance 25 years ago, it would be important to include that within the temporal boundary so that forest regrowth since the disturbance would be included in both the observable results and the counterfactual, to ensure companies do not get credit for forest regrowth in the forest impact statement. Given these place-based nuances, companies should be allowed the flexibility to choose the temporal boundary that makes the most sense for their circumstances, but practical safeguards should be developed to ensure the forest impact statement is unbiased. Some suggested safeguards (which will need further development and pilot testing with real-world examples) include:

- The temporal boundary should be the average rotation age of the forests within the spatial boundary, or 20 years, whichever is longer.
- Where different temporal boundaries are applied within the forest impact statement, the choice of each temporal boundary should be justified, and the results of each assessment should be reported separately.

Separation of Anthropogenic and Natural Effects

Component 1: Physical Inventory

Requirements included in the current version of the LSRS: Companies shall not aggregate or net inventory categories for use in reporting, target setting, or claims. Specific cases of categories that shall not be added or netted include:

- Emissions and removals
- Land management removals & fossil fuel/industrial emissions
- Product carbon storage and emissions/removals

Component 2: Forest Impact Statement

Recommendation: Separation of direct and indirect anthropogenic effects should be taken up in the respective development of a target-setting counterfactual and in reporting of the impact of management decisions. In both cases, the methodologies and counterfactual models used should consider the impact of indirect anthropogenic effects so that companies' reported impacts of specific interventions/management decisions exclude changes in carbon fluxes due to indirect anthropogenic effects.

Component 3: Forest Claims Disclaimer

Companies shall include disclaimers in GHG inventory reports which include land-based removals that explain why net removals reported using the MLP approach should not be interpreted as the achievement of a state of net-zero. See "Additional Considerations" for more recommendations.

Baseline Considerations

Component 1: Physical Inventory

Requirements included in the current version of the LSRS: To select a baseline for the physical inventory, companies shall select a base year or base period by which to measure progress over time. For example, a base year of 2020 could be selected to compare the change in forest carbon stocks in 2020 to the stock change in 2025. Land sector companies may use a base period, rather than a single base year, given the significant interannual variability that can occur in land-based carbon pools.

To maintain an appropriate baseline, companies must also adhere to the permanence principle when accounting for removals in the physical inventory. This is operationalized through the following requirements:

- Companies shall only report removals if an ongoing monitoring plan is in place to detect losses of stored carbon
- Losses of stored carbon shall be reported as either emissions (if the carbon pools remain in the spatial boundary) or reversals (if the carbon pools are no longer in the spatial boundary)
- Companies shall provide information about their monitoring plans, traceability systems, uncertainty ranges, carbon pools, and sourcing region safeguards relevant to their reported removals

Recommendations: When measuring progress over time companies should use a consistent inventory boundary so that land management emissions/removals are comparable over time. In a scope 1 context, this will require companies to monitor owned or controlled land that previously was

allocated emission/removals to measure progress over time. In a scope 3 context, this will require companies to continue monitoring the sourcing regions or forest management units where they procured raw material. Tools such as the one that has been developed by AFF, or next-generation tools that rely on DMRV, can make this process significantly easier and more effective.

Component 2: Forest Impact Statement

Recommendation: The purpose of including consequential accounting in the MLP+ proposal is to inform companies' decision-making and to incentivize adoption of management practices that enhance removals and reduce emission over time. Instead of the baseline of "no harvest" suggested by the ABA proposal, the MLP+ proposes one of two different baselines, which are more actionable by companies in determining how to best mitigate climate change. Neither method is intended to be fully developed by this TWG but could be taken up by other working groups. Importantly, forest management and/or other land-based interventions that protect carbon stocks in terrestrial ecosystems should be included in the forest impact statement and integrated into target-setting as part of a complete definition of net-zero.

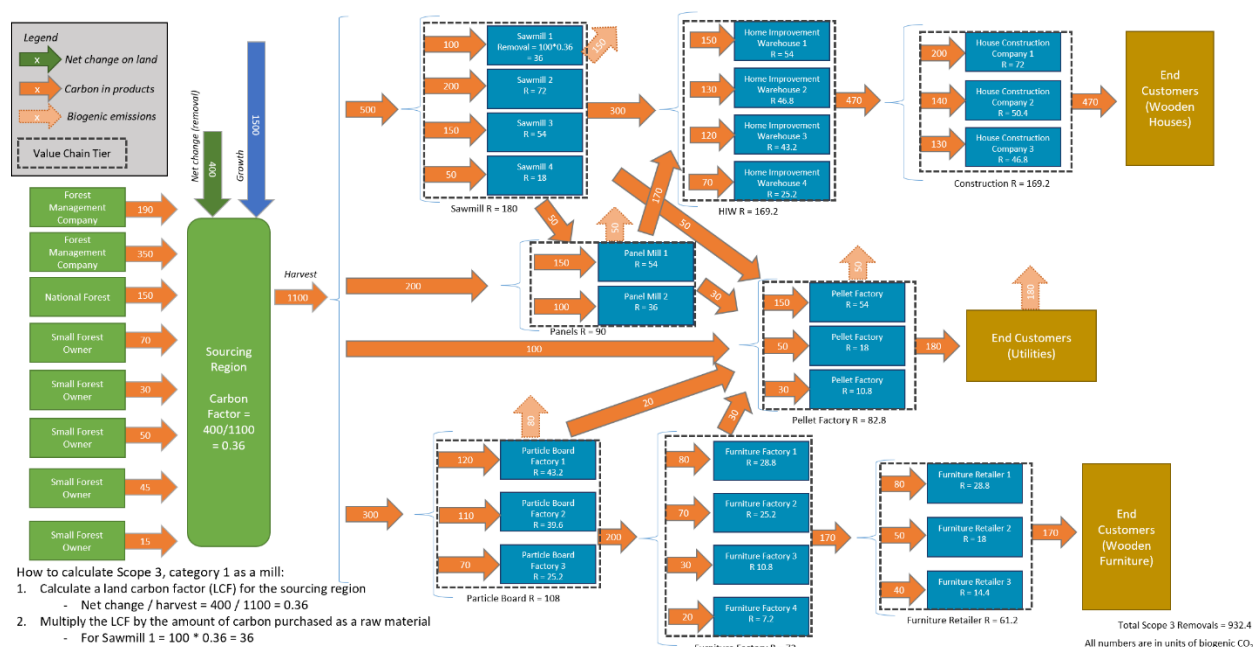
1. A counterfactual based upon some version of a historical baseline or standard management practices that would measure emissions reductions/enhanced removals resulting from specific changes in forest management. This would incentivize companies to invest in improved management practices that could be reported as progress towards climate goals. *This could be further developed in alignment with GHG Protocol's Activity and Market Instruments Technical Working Group.*
2. One approach would be based on the increased sequestration needed to align with a science-based net zero pathway to 1.5 degrees. Used in that way, a counterfactual would inform a company how far it is from being in line with the increased removals needed to meet global climate goals, thereby when used in conjunction with a net zero target would incentivize them to align with that emissions trajectory. *This could be further developed during the redevelopment of SBTi's Timber and Wood Fiber Pathway, which is beginning as of April 2025.*

Methodology

Component 1: Physical Inventory

Recommendation: The methodologies for inventorying forest carbon stocks are well established. The quantification, in simplistic terms, would require that forest inventory data be translated to carbon data. For example, tree inventory data (in units of weight) can be multiplied by 0.5 to factor out water weight and 0.5 to account for the proportion of dry wood weight that is carbon (these are very rough approximations). Allometric equations to do this math are also well established in scientific literature to convert from diameter at breast height (DBH) to tree biomass, which can then be converted into live tree carbon. Based on live tree carbon, other forest carbon pools are estimated by forest type/age based on measurements or data in literature. In the United States, Smith et al. provide guidance on this topic⁴.

EXHIBIT 1: SCOPE 3 ALLOCATION



Component 2: Forest Impact Statement

This component of a company's GHG inventory report will require multiple methodologies. However, the development of these methodologies is outside the scope of this FCA TWG and should be developed by other groups and standard development processes, in alignment with the end-to-end integrity framework.

⁴ Smith, James & Heath, Linda & Skog, Kenneth & Birdsey, Richard. (2006). [Methods for Calculating Forest Ecosystem and Harvested Carbon with Standard Estimates for Forest Types of the United States](#)

Data Requirements

Component 1: Physical Inventory

Requirements included in the current version of the LSRS: Companies shall meet the requirements stipulated in the LSRS, including:

- using empirical data specific to sinks and pools where carbon is stored
- reporting on the quantitative uncertainty range
- using measurement-based approaches or calibrated model-based or remote sensing-based approaches
- providing justification for how selected values do not overestimate removals

Component 2: Forest Impact Statement

The data requirements for this component of a company's GHG inventory will vary depending on the methodology. This is outside the scope of this TWG and should be considered by other ongoing groups and standard development processes. In alignment with the end-to-end integrity framework.

Additional considerations

Component 1: Physical Inventory

The MLP benefits from having been developed in the context of the GHG Protocol and the LSRG and thus being aligned with its other provisions. It is also consistent with the other standards in development at the GHG Protocol, in particular with the Action and Market Instruments TWG. It was also designed to be consistent with IPCC country UNFCCC reporting.

The consistency of an approach based on net land carbon stock changes across all land uses is vital in enabling comparable reporting across the economy. In addition, introducing consequential accounting within the physical inventory would have unknown and dangerous consequences.

Component 2: Forest Impact Statement

To the best of our knowledge, The MLP+ proposal's requirement to develop a forest impact statement is in accordance with the latest scientific recommendation. However this realm of science is both complex and turbulent. Given the ongoing nature of these discussions, the forest impact statement, reported separately from the physical inventory, is an appropriate place for the GHG Protocol to land in 2025. Further research and deliberation are necessary in order to formalize the methodology for constructing the forest impact statement. This proposal wishes to "hand a baton" to the next group who wishes to bring harmonization to the world of carbon accounting. The TWG members of the MLP+ group are passing the baton with many laps left to run, but believe the approach described in the MLP+ is in the best interests of the GHG Protocol and of the shared ecosystem for climate action that the group is striving towards.

Component 3: Forest Claims Disclaimer

Unlike most sectors, which need to reduce emissions to achieve net-zero, the AFOLU/FLAG sector needs to go from being a net source of emissions globally to a net sink. The latest IPCC report finds that improved forest and agricultural management practices could contribute as much as 11.3 gigatons of CO₂e/year in mitigation potential globally by both reducing emissions and enhancing sequestration/removals.

To realize that transition and for the land sector to fully contribute to net zero goals, companies in land-intensive sectors must maintain existing carbon stocks, reduce emissions, and enhance sequestration.

As a result, companies in land-intensive industries, even if they measure and report net land-based removals, may not be operating in line with a science-based pathway to net zero. This is especially true in the forestry sector, where forests may continue to sequester carbon even under unimproved management techniques. Companies shall keep this in mind when setting targets and making claims about their climate performance. This is why it is critically important for companies to set targets that align with science, and, in the absence of targets or before achieving those targets, to avoid overstating their climate benefit. In all sectors, especially land-intensive ones, claims shall focus on highlighting the results of improved management practices instead of reflecting the status quo.

Therefore, component 3 requires that a claims disclaimer be included in the inventory for any company reporting forest-based removals. Here is an example of what such a disclaimer might look like, with final development and ratification of such a disclaimer to be completed by the GHGP Secretariat: “Land-based emissions and/or removals are separately reported from non-land emissions. Globally, the land sector has both emissions and removals but is a net sink. Meeting global net zero goals will require that the land sector becomes a greater sink by maintaining existing carbon stocks, reducing land-based emissions, and enhancing land-based sequestration.

The LSRS requires that land and fossil-based emissions be reported separately and not netted. Similarly, net land-based removals reported within the physical inventory shall not be claimed as compensation for fossil-based emissions. Therefore, companies cannot balance their fossil-based emissions with inventory forest carbon removals as a way of reaching net zero, achieving carbon or climate neutrality, or any other climate-related claim. Instead, companies seeking to make those claims must follow separate reporting and target-setting guidance.”

Activity Based Accounting (ABA) approach

Overview of approach

This proposal offers a distinctive approach to accounting for biogenic carbon, particularly in the context of forestry and wood products. It introduces a precise methodology for assessing net biogenic carbon emissions through comparison of projected forest carbon stock changes relative to a no human activity counterfactual, considering both forest carbon pools and external wood storage, while ensuring accurate allocation of emissions. Unlike conventional frameworks, it uniquely separates the effects of wood harvest and forestry management, allowing companies to choose from different accounting methods based on scientific data. The proposal also incorporates rules for short-rotation plantations and artificial regeneration, making it adaptable to various forestry practices. Additionally, it emphasizes emissions intensity reduction through rigorous Scope 1 and Scope 3 rules, aligning corporate strategies with global climate stabilization efforts.

Key sections and elements

Carbon Pools

All carbon pools are counted including forest carbon pools and external wood pools.

Forest carbon pools: These pools include above-ground vegetation, live below-ground vegetation, standing and downed dead wood (including slash, felled saplings and other wood downed), and forest floor and soil organic carbon pools. Slash includes all downed vegetation added to the forest floor carbon pools due to harvesting or forest management activities

External Wood Carbon Pools: These pools include carbon stored in all wood products prior to decomposition or combustion, and after they are used, such as in landfills. However, wood carbon pools are only counted for carbon remaining stored after 30 years.

Spatial Boundary of Analysis

For Scope 1, the spatial boundaries are lands owned or controlled by the company as defined by other parts of the GHG Protocol. However, the only emissions and removals counted are those caused by company activities within these lands as defined more fully in the proposal.

For Scope 3, the spatial boundaries are the areas harvested for wood supply. Again, the net emissions are only those that derive from harvest and forest management activities. The area in which these are estimated will depend on the extent to which a company can trace its wood to particular locations. For some, as in the case of any other product, the net emissions will be global. For many others, traceability can be done to a country. As provided in the proposal, if a type of wood product is generated primarily from a particular type of forest, then these forest types can be used to generate the estimates.

Temporal Boundary of Analysis

For both Scope 1 and Scope 3, the temporal boundary of analysis is the company's activities in the reporting year. Conducting the ABA analysis in only the reporting year is not practical as a discrete time period since the ABA approach is a comparison of two different scenarios.

For Scope 1, companies may choose to smooth out their emissions by using the committed emission approach or a rolling average annual loss over 30 years: harvest effects within the subsequent 30 years or management impacts since 1990 (see section Methodology).

For Scope 3, emissions are based on the wood used that year and calculated based on the committed emissions with or without subsequent growth over 30 years.

The proposal takes a committed emissions approach for wood harvests. Committed emissions approaches are common in emissions accounting. The reason is that wood harvests cause emissions over many years as wood from different wood "pools" decomposes or is burned. The committed emissions approach focuses on the cumulative effects, measured by changes in atmospheric carbon 30 years after harvest.

An alternative approach to estimate committed emissions is based on effects year by year. For direct agricultural conversion, the GHG Protocol has used an approach that estimates carbon loss over a 20 year-period but assigns these losses to each year. This works if, and only if, agricultural production continues on this land for 20 years. In that event, the full emissions from conversion will ultimately be assigned to some agricultural product. However, if agricultural production ceases in less than 20 years, some of the emissions from land conversion would not be assigned to any product.

For wood, focusing only on emissions by year would be a problem because the products from a single wood harvest are generated and consumed typically in that year, and there is no repeat harvest for many more years. That is true even though the actual emissions from harvest and use occur over a period of years as slash and roots in the forest decompose and as wood products are burned or decompose. Using the year-by-year approach, a consumer of paper would report some emissions in the year used while then reporting ongoing emissions in subsequent years not for new wood harvest but just for the ongoing effects of the production or use of paper in the original year. This does not seem workable; hence the MLP+ group proposes the 30- year cumulative atmospheric effect as the simplest way to capture committed emissions from wood harvest.

Separation of Anthropogenic and Natural Effects

The method described inherently segregates anthropogenic from natural effects by focusing on the effects of wood harvest, an anthropogenic activity, and only those changes in forest growth rates and therefore changes in carbon stocks due to active forest management. Both natural variations and the indirect effects of climate change and such matters as nitrogen deposition are factored out through comparison to a no human activity counterfactual.⁵

⁵ This statement is yet to be agreed upon by the full TWG due to it being brought in a late amendment to the ABA proposal

Baseline Considerations

The baseline is always a lack of any anthropogenic management. Following the guidance of Kyoto Protocol agreements, changes in management are credited so long as they occur after 1990, the original base year for climate agreements and the base year for judging climate mitigation. The method therefore automatically focuses on anthropogenic effects: the effects of harvest, and the effects of forest including game management.

The idea of a counterfactual only arises out of a desire to credit forest management for increases in forest carbon accumulation rates, including the effects of a harvest. In this context, it is the reasonable burden on a company to show that forest management has increased these rates, in addition to natural forest growth, because forests grow on their own. In this context, the “counterfactual” is forest growth without harvest or active management.⁶ The baselines in this context are the predominant natural forest types in an area and their average growth rates. because forests grow on their own. In this context, the “counterfactual” is forest growth without harvest or active management. The baselines in this context are the predominant natural forest types in an area and their average growth rates.

Companies may ignore all efforts to compare growth rates with and without harvest and management and just focus on the effects of harvesting wood. In other words, they may ignore the fact that forests if not harvested will continue to grow, but if so, they must also ignore that forests will regrow after harvest⁷.

The baseline defined for estimating emissions is not necessarily the baseline for estimating removals. If forest management improves and as a result there is increased carbon uptake relative to prior management or reduced carbon losses when wood is harvested, it will generally be reasonable to treat the difference as mitigation. Mitigation is nearly always defined by reference to a prior practice, e.g., reduced emissions from driving relative to prior driving. Mitigation does not mean, however, that the mitigating activity has no or negative emissions because it is less than a prior practice. Instead, emissions of prior activity and of present activity are each defined relative to a no human activity baseline. Mitigation can be assessed based on reductions in the emissions of each.

⁶ Based on the EY assessment, it’s interpreted as having no human impact. No human impact means no forest management, especially no harvest, but also no forestry activities like planting, thinning, game management, etc.

⁷ However, through the three small group and plenary sessions, EY understands that this point has not been fully addressed

Methodology and data requirements

The methods would vary somewhat between Scope 1 and Scope 3.

For Scope 1 and evaluation of forest carbon pools, two types of data are required. One is the quantity and type of wood harvested from lands owned or controlled by the company, along with estimates of slash rates and root/shoot ratios. Both can be independently estimated by a company or taken from standard equations. If the company wishes to credit wood carbon pools, the second would be the fate of the wood harvested. However, the only necessary focus is the percentage of this wood that makes it into long-lasting products that will last beyond 30 years. This would primarily focus on the percentage of the wood that ultimately is incorporated into construction (with perhaps most quantities left out from wood used for furniture or in landfills). Estimates are available by country of the quantity of wood harvested that is used in this way, but more detailed data could be gathered for specific wood types or for the uses of wood from particular areas. Estimates can also be made by major wood product types, and use the conservative default IPCC parameters, e.g., half-life, degradable fraction in landfill, to estimate carbon stocks for wood products in use or in landfills. At this time, relatively standard equations have been published.

A company may also choose to estimate that its forest management has increased growth rates since 1990. To do so, it should use one of two choices. One would be national resource inventory data comparing growth rates of native forest types with those of its own, managed forests of the same stand age, composition, and structure, excluding effects on management that occurred prior to 1990. Alternatively, it can use sound forest growth models for the predominant forest types.

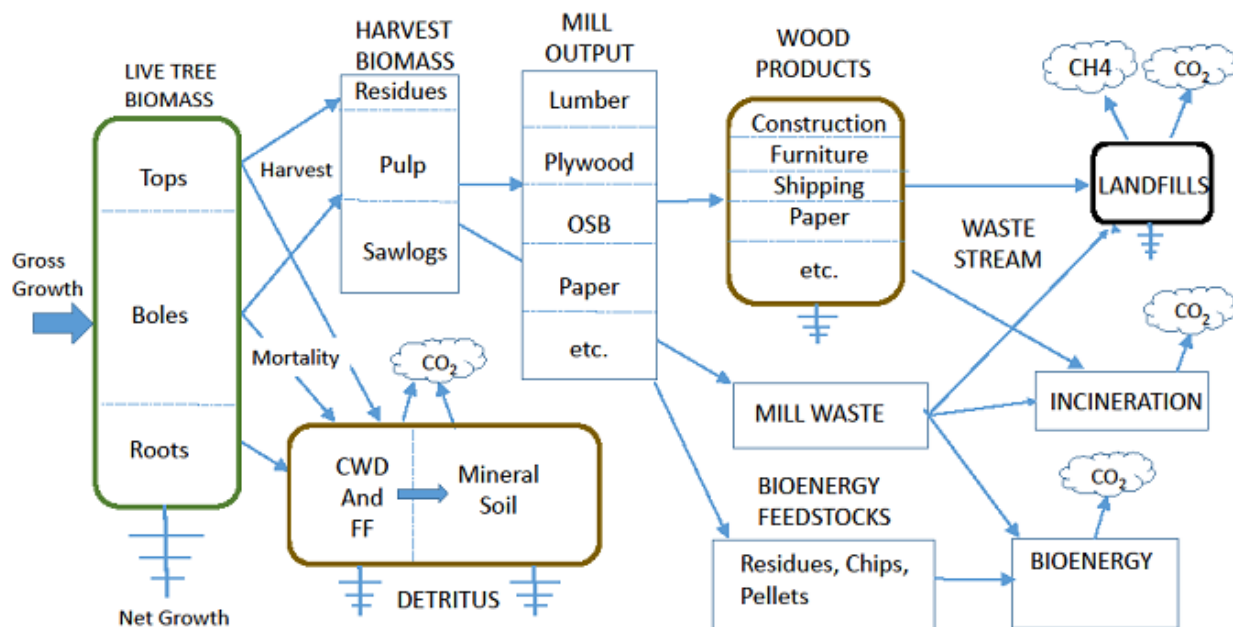
For scope 3, the data and methods used will vary by traceability. Some companies, such as paper mills and large furniture manufacturers, may be able to trace their wood to specific countries or portions of countries or even specific sourcing areas. Others will have only broad regional or even global information. Regardless, the methods will be based on available data about wood harvest quantities, locations, and types, estimates of slash rates (available from the IPCC as biomass expansion factors but also from better sources), and the fates of harvested wood from the standpoint of quantities of wood products created. The data is generally available from the FAO and national sources and can increasingly be improved upon through satellite measurements. Significant academic and industry-source work also exists by which to quantify sources, locations and types of wood harvested, growth rates with and without forest management.

Additional Considerations

For wood products, information on prices of various wood products at the whole or mill gate are needed (the MLP+ group is still considering other allocation methods).

Recommendations on target setting are considered. In general, target setting should focus on maintaining or reducing the emissions intensity of different wood products, and not on achieving net-zero in a forest harvest context.

Illustration



The above figure illustrates the flow of carbon through growth and harvests into live tree biomass, detrital pools, harvested wood and products, and the waste stream. Removals of carbon from the atmosphere happen through gross growth of live tree biomass. Carbon is stored in 4 pools: live tree biomass, detritus, harvested wood products, and landfills. Emissions occur through decomposition of detrital pools and wood products that end up in landfills, or through incineration of either waste or bioenergy feedstocks. Although the interim steps are complicated, the ultimate calculation for results after 30 years for the effects of harvest is sensitive only to a limited number of factors, such as decomposition quantities after 30 years of slash and roots, the percentage of wood used for construction, and the lifetimes of wood used in construction.

The effects of management and harvest on growth have also been analyzed through a variety of models. In the Northeastern U.S., the model (SORTIE-ND, www.sortie-nd.org) models these effects based on statistical evaluation of Forest Inventory Activity (FIA) data while also incorporating the effects of harvest. Canada has refined forest models that explicitly incorporate a wide range of silvicultural treatments.

“Activity based accounting” simply runs through the calculations given harvest for a specific activity (say paper production by a particular business), including the effects of management activities such as planting, fertilizing, and thinning that may increase gross growth, and then runs through the calculations asking what would happen without that management and specific level of harvest. Corporations managing forestland routinely do growth/yield modeling under various scenarios of harvest intensity and silvicultural systems. The difference between the net carbon balance with the activity versus without the activity is the key measure that an activity-based accounting system needs.

MLP+ and ABA proposals alignment to the GHG Protocol Decision Making Criteria and Hierarchy:

Decision Making Criteria	Managed Land Proxy “Plus”	Activity Based Activity
Disclaimer	The comparative assessment against the GHG Protocol decision making criteria in this section incorporates feedback from FCA TWG plenary meetings, emails exchanges and final quantification proposal submissions. These stakeholder insights provide additional perspectives on the methodological distinctions, scientific alignment, implementation challenges, and broader implications of the <i>Activity-Based Accounting (ABA)</i> and <i>Managed Land Proxy Plus (MLP+)</i> approaches for forest carbon accounting. The proposal alignment to the decision-making criteria was carried out by EY and the Secretariat to ensure a comparison for the ISB and should not be taken as an endorsement. While both proposals introduce structured methodologies, there remain open areas where feasibility, scientific robustness, and practical implementation need further assessment. Certain elements, such as counterfactual baseline modeling in <i>ABA</i> and safeguards for Scope 3 reporting in <i>MLP+</i>, may require pilot testing and refinement before broad industry adoption. Additionally, differences in data availability across regions could affect the scalability and accuracy of each approach, necessitating further validation in specific forest management scenarios.	
1A - Scientific integrity <i>Ensure scientific integrity and validity, adhere to the best applicable science and evidence ... and align with the latest climate science.</i>	Pro: - Aligned with the recommendation of the IPCC Expert Meeting on Reconciling Anthropogenic Land Use Emissions and some peer-reviewed studies to maintain the MLP (for national GHG inventories), improve it, and then to address discrepancies within the context of communications, claim-making, and target setting. - Introduces safeguards like the Forest Impact Statement and Forest Claims Disclaimer to address some of the MLP limitations, distinguish between anthropogenic and non-anthropogenic impacts, and provide a framework to ‘translate’ between physical inventories using MLP and different versions of an ABA approach. Con: - The MLP has not previously been applied directly in the scientific literature to products, for Scope 3 accounting or even to Scope 1 company accounting in general, only through the assumption of carbon neutrality for forest product. The implications of applying the MLP are fundamentally different and much more distorting when used by a company and when applied to a product rather than to a country as recommended by IPCC experts, which can result in harmful consequences. - The MLP values reported in the physical inventory reflect indirect anthropogenic effects such as CO2 fertilization which is not caused by forest management. - Does not provide detailed methodologies for the Forest Impact Statement to separate anthropogenic and non-anthropogenic emissions and removals and instead makes recommendations about how to develop a Forest Impact Statement.	Pro: - <i>ABA</i> methodologies are widely used in scientific climate modeling, suggesting that its approach to forest carbon fluxes is more consistent with global carbon budget assessments. - The ABA approach uses a 30 year accounting window, aligning with climate stabilization strategies and discount rate methodologies (Peng et al; Nature 2023) and based on methods used in a broad literature. Con: - TWG members raised several methodological questions about specific situations that appear challenging (e.g., plantations in Brazil, forests on peatland in Indonesia, spruce-dominated forests in Central Europe) with only unclear responses from scientific literature regarding suitability of no human activity counterfactual models. - The ABA approach relies on a policy judgement for the selection of a 30-year assessment timeframe. This selected time period has major implications on the final value. - Challenges with making accurate long-term projections for forest growth, suggesting that these projections are likely to be inaccurate due to unpredictable factors - There is no evidence of alignment of the counterfactual of no human activity with book-keeping models and/or 1.5 aligned science-based targets.

1B - GHG accounting & reporting principles <i>Meet the GHG Protocol accounting and reporting principles of accuracy, completeness, consistency, relevance, and transparency. Additional principles should be considered where relevant: conservativeness (for GHG reductions and removals), permanence (for removals), and comparability (TBD), ...</i>	Pro: - Dual reporting statement (physical inventory and additional forest impact statement) consistent with the existing land sector reporting structure and latest AMI TWG developments - Ensures transparency through the introduction of the Forest Claims Disclaimer, helping companies communicate their carbon claims effectively - Carbon emitted or stored in products is not included in physical inventories but reported in a separate reporting category, consistent with existing LSR Standard draft, final AC decisions and with principles of conservativeness, permanence, and comparability. Con: - Does not provide an accurate estimate of anthropogenic emissions or removals in the scope 3 physical inventory as a physical inventory by definition cannot distinguish between anthropogenic and "natural" effects. - MLP results are largely dependent on traceability requirements which may introduce data variability risks making cross industry standardization and comparability difficult.	Pro: - Clearly defined rules around accounting for and reporting storage in wood carbon pools, distinguishing between forest carbon pools and product carbon pools, improving the transparency in the reporting. Con: - ABA approach is based on consequential accounting methods and introduces concepts such as "committed emissions"; the integration of such approaches in physical inventory becomes an "exception" that should be justified and might not align with the dual statement approach based on AMI discussions. - Departs from existing land sector accounting and reporting structure by including product carbon storage in the estimate, which does not guarantee permanence of carbon stored in wood products. - ABA proposal purports to use consequential accounting but ignores best practices of such accounting, including the need to account for the risk of disturbance, leakage and substitution effects. - Misalignment between the proposed 30-year assessment timeframe and the permanence principle for any reported removals.
2A - Support decision making that drives ambitious global climate action <i>Meet the GHG Protocol accounting and reporting principles of accuracy, completeness, consistency, relevance, and transparency. Additional principles should be considered where relevant: conservativeness (for GHG reductions and removals), permanence (for removals), and comparability (TBD), ...</i>	Pro: - The proposal acknowledges discrepancies between MLP+ results and global carbon models, provides safeguards to improve MLP shortcomings and suggests an additional reporting component, the Forest Impact Statement, to drive global climate action through setting targets aligned with 1.5 degree scenarios. - MLP+ does not require detailed regional modelling or hypothetical counterfactuals, allowing standardized application across forest types and supply chains without extensive modifications. Con: - Challenges in implementing guardrails and expressed concerns that they might create wrong incentives, potentially discouraging companies from protecting important forests or engaging in land management practices that could increase wood harvests - There are discrepancies between how the MLP approach calculates fluxes to and from the atmosphere and how bookkeeping models formulate net zero goals. - The MLP values reported in the physical inventory include CO₂-fertilization effects which overestimates anthropogenic removals. This	Pro: - Establishes a quantifiable and conservative framework for anthropogenic biogenic carbon effects, measuring changes across forest carbon pools and external wood pools up to 30 years post-harvest. - Encourages responsible land-based carbon accounting, ensuring emissions are accurately attributed to harvesting activities. - Follows Kyoto and Paris Agreement principles by clearly isolating corporate-induced carbon stock changes from passive forest growth. This distinction strengthens its alignment with climate policy frameworks. Con: - Allows quantifying either removals from pre-harvest management or removals from post-harvest management, but not both. Additionally, its exclusion of any forest growth beyond 30 years may create an incentive for short-rotation forestry, potentially discouraging long-term ecosystem management. - The counterfactual baseline of no harvest doesn't support decision making. Under this proposal, the only way to eliminate emissions and achieve net-zero would be to stop managing forests-something clearly at odds with IPCC and FAO reports and recommendations.

	might lead to removals assigned to harvested wood without active management. To address this risk an activity-based forest impact statement is proposed in MLP+ to accompany the physical inventory. - May give the wrong incentives by assigning removals value to product in the scope 3 physical inventory which could incentivize sourcing more paper products to report scope 3 removals or virgin timber over recycled wood fiber (LSRS and MLP+ proposal include additional safeguards to prevent from netting removals with emissions)	- Under this proposal, the best way to reduce emissions while maintaining timber supplies would be to transition semi natural forest to plantations and shorten rotation lengths both of which would not significantly increase CO2 removals.
2B - Support programs based on GHG Protocol and uses of GHG data <i>Promote interoperability with key mandatory and voluntary climate disclosure and target setting programs ... while ensuring policy neutrality. Approaches should support appropriate uses of the resulting GHG data and associated information by various audiences, ...</i>	Pro: - Aligns with IPCC standards but provides flexibility, allowing adaptation across industries. - Building on established national inventory methods, makes it relatively easier to integrate such national forest carbon data and GHG reporting with corporate GHG reporting frameworks. - Introduces disclaimers to prevent misuse of carbon accounting claims - Aligns with and builds on the accounting / reporting / target-setting frameworks in place. Providing flexibility to set targets at regionally explicit and/or aligned with national LULUCF policies under the Paris agreement Con: - Lacks standardized implementation guidance to the forest impact statement making it challenging for industries to apply consistently. A forest impact statement is proposed, but will need to be developed after the work of this TWG, with leadership from the GHG Protocol, Science Based Targets initiative, or another entity - Proposals to use the MLP for the inventory while developing an alternative accounting system for target-setting would not avoid the fundamental problems with the MLP and would create contradictory results, leading to confusing and misleading corporate climate claims. - MLP+ does not directly align with carbon flux models, making reconciliation with international climate frameworks more complex. -	Pro: - Provides a sector specific carbon accounting principles for different wood product categories - Prevents double counting issues, when using GWP100, where passive forest carbon sinks are already incorporated. Con: - Rigid methodology may require industry specific adjustments for seamless adoption. - A field-testing phase with target setting programs has not been performed yet and there are substantial risks on interoperability with current voluntary climate disclosure and target setting programs - ABA will disrupt the “end-to-end integrity framework” by incorrectly embedding target setting questions within the inventories themselves. This will make target setting under any framework, but particularly under SBTi, effectively impossible for any company with significant forest products emissions and/or removals in their value chain.
3 - Feasibility to implement <i>Approaches which meet the above criteria should be feasible to implement, meaning that they are accessible, adoptable, and equitable. ... For aspects that are difficult</i>	Pro: - Recognizes industry adoption challenges offering general recommendations to improve traceability and reporting quality - The flexible framework allows adaptation to evolving carbon accounting standards - Baseline considerations regarding the forest impact statement require historical data that might be available for forest owners. Carbon stock measurements are well established and already done on a wide level. - Addresses practical constraints in carbon accounting for different sourcing regions	Pro: - Defines scope-based accounting rules allowing companies to select methodologies suited to their specific forestry operations. - Establishes committed emissions and subsequent growth accounting options supporting long term carbon tracking. - The ABA approach can be applied in a similar manner regardless of the degree of traceability a company has.

<i>to implement, GHG Protocol should aim to improve feasibility, for example, by providing guidance and tools to support implementation</i>	Con: - It lacks detailed methodological guidance for implementing the Forest Impact Statement, limiting practical application. - Challenges remain in implementing many of the safeguard to limit the MLP assessment to only attributable managed forest land in scope 3. - Forest impact statement and the claims disclaimer are not yet implemented and have to be specified respectively developed. - Allocation of removals in scope 3 and across the value chain presents a challenge, especially given the complexity of selling wood to various customers. - One proposed baseline consideration focused on the alignment with a science-based net zero pathway to 1.5 degrees within the Forest Impact Statement, which is still not in practice and has to be field tested.	Con: - Although the ABA proposal follows extensive literature, there are practical issues to work out in its implementation in different locations because of differential data available for different forest products, forest types and locations. - Companies have an option to account for forest carbon stock changes based on projecting expected growth rates which cannot be directly observed. - ABA proposal defines the counterfactual as a "no human activity" baseline, with a base year of 1990, but in many countries national baseline data do not cover a lot of such unmanaged natural forests. Even historical data usually do not represent "no human activity" baselines. Under these conditions the proposed counterfactual appears to be only a hypothetical construction with no chance of getting measured and validated. - The high complexity requires detailed annual estimates and traceability assurances which may be difficult for companies with limited resources to implement. - While there are several existing bookkeeping models and academic literature, there are no existing tools or resources to support corporate reporting in accordance with the ABA proposal. - The complex methodology may pose implementation challenges for companies with limited expertise in forest carbon modeling.
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Reflections from FCA TWG Plenary Meetings and Subsequent Discussions

Key methodological considerations for forest carbon accounting, reviewing how the Managed Land Proxy Plus (MLP+) and Activity-Based Accounting (ABA) approaches evolved during discussions leading to the final two proposals (MLP+ and ABA) as of May 7th, 2025

1. Current Standing on Anthropogenic vs. Natural Removals

Earlier Plenary Discussions & MLP+/ABA Proposals: TWG members debated challenges in distinguishing anthropogenic vs. natural removals, questioning whether forest carbon sequestration should be classified as direct human influence or passive land processes.

- MLP+ formalizes removals attribution at the managed land scale, assuming human interventions shape overall land-use carbon dynamics, rather than isolating discrete management activities.
- ABA explicitly separates wood harvest effects from broader management activities, aiming to quantify net biogenic effects over a 30-year window, excluding passive regrowth assumptions.

Post-plenary email reflections: Some TWG members raised concerns that ABA's exclusion of historic land-use effects may oversimplify the role of prior management interventions in shaping long-term carbon stock changes.

Despite refinements to both methodologies, there remains separate classifications for Scope 1 and Scope 3 removals. However explicit guidance on **how historic land-use changes should factor into reporting** is still lacking. TWG members continue advocating for **clearer attribution adjustments** in corporate inventories.

2. Current Standing on Scope 3 Accounting & Carbon Neutrality Claims

Earlier Plenary Discussions & MLP+/ABA Proposals: TWG members debated how Scope 3 removals should be classified, raising concerns that **MLP+ could allow companies to claim climate neutrality without fully balancing emissions with removals**.

- MLP+ proposes broad sectoral attribution of removals, allowing companies to report carbon uptake at the managed landscape level. The additional elements of the **forest impact statement** and **forest claims disclaimer** seek to address limitations of the MLP
- **ABA requires** direct linkage between harvest impacts and carbon stock depletion, defining the **net biogenic effect of wood extraction relative** to counterfactual scenarios (i.e., carbon storage without harvest).
- ABA disallows automatic carbon-negative wood classifications, requiring companies to **demonstrate carbon benefits relative** to alternative materials rather than assuming them.

Post-Plenary Email Reflections: TWG members cautioned that MLP+'s broad spatial attribution of removals in Scope 3 could result in misleading carbon footprint claims, particularly if wood

sourcing area averages mask the true impact of individual harvest activities. There was strong advocacy for ensuring granularity in Scope 3 tracking to avoid unintended incentives favoring high harvest volumes.

Although the MLP+ reinforces Scope 3 safeguards, it does not fully resolve concerns about **broad spatial attribution of removals**. TWG members continue to push for more precise sourcing mechanisms in Scope 3 reporting.

3. Current Standing on Scientific Integrity & Double Counting Risks

Earlier Plenary Discussions & MLP+/ABA Proposals: Concerns were raised that MLP+ could integrate land sinks into corporate inventories, leading to potential double counting risks in climate assessments.

- ABA explicitly excludes forest regrowth effects from corporate carbon accounting, aligning with global standards preventing passive sequestration claims.
- MLP+ applies an inventory-based approach, assuming land removals can be collectively attributed to forestry operations but proposes an activity-based approach for a **forest impact statement** to be used for setting climate targets.

Post-Plenary Email Reflections: TWG members debated how MLP+ and ABA methodologies align with net-zero commitments, warning that **companies could unintentionally report carbon reductions inconsistently if land sequestration is counted in Scope 1 without safeguards against double counting**.

While the proposals acknowledge double counting risks, it does not formally adjust GWP methodologies to reconcile land sink removals and corporate inventory tracking. Further clarifications may be needed to ensure **transparent reporting frameworks**.

4. Current Standing on Feasibility of ABA Implementation & Data Limitations

Earlier Plenary Discussions & ABA Proposal: TWG members debated whether **companies have sufficient data and model** access to implement ABA accurately, especially for long-term forecasting.

- **ABA requires no-human-activity** counterfactual baseline modeling to compare forest carbon stock losses due to harvest, which introduces **complexity in data collection and validation**.

Post-Plenary Email Reflections: TWG members raised concerns that long-term biogenic carbon projections under ABA may need periodic recalibration rather than relying on static assumptions for 30 years. There was broad support for pilot testing ABA methodologies before formal adoption.

TWG members continue advocating for **structured trials to validate** ABA models before formal implementation.

5. Current Standing on Hybrid Accounting Approaches – MLP+ Incorporating Option 1B

Earlier Plenary Discussions & MLP+ Proposal: TWG members initially explored MLP vs. ABA as distinct methodologies, but discussions evolved toward **hybrid models integrating elements of both**.

- MLP+ now incorporates structured elements from Option 1B, ensuring **sector-wide inventory tracking (MLP) while applying activity-level refinements from ABA for target setting plus a forest claims disclaimer that has to be worked out subsequently**.

Post-Plenary Email Reflections: Some TWG members **continued to push for additional** product-level attribution refinements, particularly ensuring biogenic carbon tracking reflects actual supply chain dynamics rather than aggregated sourcing trends.

While **MLP+ is now presented as the** refined hybrid model, it does not yet fully reconcile its integration with ABA's tracking rules for supply chains. TWG members continue requesting **structured definitions to ensure transparency**.

The reflections from all plenary meetings, post-discussions, and final proposal reviews indicate significant evolution in forest carbon accounting methodologies, however critical refinements are noted as open.