

Summary of ISB Forest Carbon Accounting Deliberations

This document describes the deliberations of the Greenhouse Gas Protocol's Independent Standards Board (ISB) concerning reporting standards for forest carbon accounting (FCA). It summarises proposed methods received by the ISB from the FCA Technical Working Group (TWG) and identifies key areas of consensus and where consensus is lacking in the ISB's deliberations.

The ISB did not reach consensus on the appropriate FCA methodology for a company's physical inventory and is requesting additional public information to inform its future deliberations. The ISB did not consider whether either approach was suitable for other purposes or areas of reporting under the Greenhouse Gas Protocol, noting that such purposes remain under development.

The ISB discussed the role of the methods in target-setting frameworks but focused its efforts on establishing suitability for inventories, consistent with the scope of the *Land Sector and Removals Standard*.

1. Procedural History

At its 18 November 2024 meeting, the ISB discussed and later approved a FCA Requirements Development Plan and the composition of the FCA TWG. Pursuant to the approved work plan, the FCA TWG deliberated for several months and returned two competing proposals of methods for the ISB's consideration: one approach known as "managed land proxy plus" (MLP+), which was supported by a group of industry and nonprofit FCA TWG members, and another approach known as "activity-based accounting" (ABA), which was supported by a group consisting of the majority of independent scientists and a nonprofit FCA TWG member.

The ISB received its first briefing on the FCA TWG deliberations at its 21 May 2025 meeting. The ISB had additional discussions at its 17 June and 14 July meetings, and reviewed the following FCA TWG materials:

- ABA proposal (April 2025)
- MLP+ proposal (May 2025)
- MLP+ explanatory memo (May 2025)
- ABA explanatory memo (May 2025)
- MLP+ proponents' supplemental explanatory memo (June 2025)
- ABA proponents' response to MLP+ explanatory memo (June 2025)
- A copy of the complaint from a FCA TWG member (April 2025)

At the request of a FCA TWG proponent of the MLP+ proposal, the ISB chair invited four outside experts for a review. Their reports were also reviewed by the ISB. Two of the four outside experts supported the MLP+ proposal, and two supported the ABA proposal.

In addition, the ISB reviewed public letters received following release of an earlier 2022 draft of the Land Sector and Removals Guidance, which was produced prior to the formation of the ISB. As explained further below, the 2022 draft contemplated the use of a "managed land proxy" (MLP)

approach, which is included and expanded upon in the MLP+ approach developed by the FCA TWG in 2025. The ISB reviewed the following materials:

- Letter from NGOs objecting to the treatment of biogenic emissions (September 2023)
- Letter from academics supporting the MLP approach (November 2023)
- Letter from forest industry proponents of the MLP approach (December 2023)
- Letter from the European Academies Science Advisory Council (January 2024)
- Letter from academics objecting to the MLP approach (February 2024)
- Anonymized results of MLP pilot testing from the 2022 draft standard (no date)

Because the ISB was unable to reach sufficient agreement on the path forward at its regular meetings in May-July 2025, the ISB convened a subgroup (ISB FCA subgroup) at the 14 July 2025 ISB meeting to continue discussions among four ISB members, representatives of the GHG Protocol Secretariat, and the ISB Chair. Over the following months, the ISB FCA subgroup deliberated extensively across multiple meetings and via written communications, but was unable to reach consensus on a proposal to bring to the full ISB for a potential decision.

2. Summary of proposals

The FCA TWG developed two alternative proposals for an accounting method, with each supported by a different and non-overlapping subset of FCA TWG members. Because the MLP+ proposal is based on the MLP approach previously considered in the 2022 draft Land Sector and Removals Guidance, we briefly review the MLP approach and then summarize the new MLP+ and ABA proposals.

To understand the substance of the proposals, it is also necessary to introduce the concept of anthropogenic emissions and anthropogenic removals. In general, as well as in the specific context of the Greenhouse Gas Protocol, emissions reporting seeks to isolate only those emissions and removals that are attributable to human activity. In the case of forestry, this issue is complicated because total fluxes on any unit of forest land include a mix of anthropogenic and non-anthropogenic components. As a result, any estimate or measurement of total FCA fluxes necessarily includes some anthropogenic and non-anthropogenic components.

- **MLP approach.** The MLP approach would apply the same approach taken for national greenhouse gas inventory accounting under the United Nations Framework Convention on Climate Change (UNFCCC) to company- and product-level reporting. The IPCC Task Force on National Greenhouse Gas Inventories describes the MLP as “an approach to approximate estimates of anthropogenic emissions and removals, but this proxy estimate also contains emissions and removals resulting from natural disturbances.”¹ In the context of national accounting, countries designate which of their forests are “managed” and which forests are “unmanaged”; all observed fluxes, including emissions and removals, are counted on managed lands as anthropogenic and are disregarded on unmanaged lands. In the context of company- or product-level reporting, companies following the MLP approach would report FCA fluxes as anthropogenic emissions and/or anthropogenic removals based on the net

¹ IPCC Task Force on National Greenhouse Gas Inventories, 2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, [Volume 4: Agriculture, Forestry and Other Land Use](#), Chapter 1 at 1.5.

land carbon stock change in a reference area. This approach includes both those FCA fluxes that are unambiguously anthropogenic as well as “indirect” or “passive” effects such as CO₂ fertilization.

The FCA TWG developed two approaches for the ISB’s consideration, which are summarized briefly and without full technical detail here:

- **MLP+ proposal.** The MLP+ proposal would require companies to report emissions and removals in their physical GHG inventory using the MLP approach, and also separately report a “forest impact statement” outside of the physical GHG inventory. The forest impact statement would use a non-zero forest carbon reference level (e.g., a level necessary to achieve net zero global emissions) for target-setting purposes. The technical details of the forest impact statement are not specified and would be developed in future FCA TWG work. The MLP+ proposal would not allow netting between FCA removals and fossil fuel emissions, and would require companies to include a disclaimer that reporting using MLP+ methods “should not be interpreted as the achievement of a state of net-zero [emissions].”²

ABA proposal. The ABA proposal would require companies to report emissions and removals only in a company’s physical GHG inventory, without a separate forest impact statement. For typical wood harvest applications, the ABA proposal would require companies to estimate net changes in forest and external wood carbon pools over a projected 30-year period after harvest, relative to a no-additional-human-activity reference scenario. Companies could either choose between a “committed emissions” approach, in which neither foregone growth nor post-harvest removals are included, or a “subsequent growth” option, in which both are included. The ABA proposal includes special rules for short-rotation forest plantations and for the treatment of post-1990 management interventions made to increase carbon stocks in forests harvested before 1990.

3. Areas of ISB Consensus

The ISB identified several areas of consensus:

- **MLP methods are consistent with national inventory practices.** The ISB agrees that a company using MLP methods for its physical GHG inventory would apply the same general practices as governments do in reporting national inventories to the UNFCCC. As discussed below, however, the ISB did not reach agreement on whether this observation supports the use of MLP/MLP+ methods for company- or product-level reporting.
- **Global carbon budgets and net-zero requirements are based on bookkeeping models that are not consistent with national inventory practices.** The ISB observes that global carbon budgets and other requirements identified by the IPCC as necessary to achieve net-zero emissions and temperature stabilization are based on “bookkeeping” carbon cycle models. When bookkeeping models project the warming impact of CO₂ emissions, they include the subsequent uptake of atmospheric CO₂ in the land sector from CO₂ fertilization and other “passive” or “indirect” FCA fluxes. Because these fluxes are designated as anthropogenic removals under the MLP approach, the MLP approach is not

² MLP+ proposed regulatory text (May 2025) at p13.

consistent with contemporary global carbon budgets. This results in a discrepancy of approximately 6-7 billion tCO₂-eq. per year (or about 15% of annual global CO₂ emissions).³ Furthermore, because removals reported using MLP methods count mitigation benefits that are already factored into contemporary carbon budgets, the use of MLP methods is only consistent if new climate targets were set that feature faster and deeper global emission reductions relative to prior IPCC findings. As discussed below, however, ISB did not reach agreement on whether this observation argues against the use of MLP/MLP+ methods for companies' physical GHG inventories.

- **Assigning removals from the growth of forests not involved in the production of specific wood products is not appropriate for company- or product-level reporting.** The ISB agreed that counting removals associated with the growth of forests in a larger reference area than the production of the physical forest product is not appropriate for FCA reporting for the production or consumption of wood products. These concerns are particularly important when the reference area for company or product reporting is at the level of national and especially global forests.
- **MLP methods were pilot tested and consistently resulted in reported net removals.** The ISB reviewed pilot testing results from the 2022 draft Land Sector and Removals Guidance, where companies chose to apply the MLP method. Draft FCA results from 15 anonymized wood-producing and wood-purchasing companies indicate that 14 companies reported net anthropogenic removals on the order of hundreds of thousands to tens of millions of tCO₂-eq. per year, with one company reporting emissions equal to removals in Scope 1.⁴ The ISB notes that while the MLP+ proposal would require companies to report a forest impact statement outside their physical GHG inventory, it would nevertheless require companies to use standard MLP methods to report emissions and removals in their physical GHG inventory. As a result, the ISB considers the 2022 pilot testing results a reasonable proxy for what companies would be expected to report in their physical GHG inventories under the MLP+ proposal. As discussed below, however, the ISB did not reach consensus on whether these concerns would be mitigated by a separate forest impact statement reported outside the inventory.
- **The restrictions on the netting of removals proposed in the MLP+ method are likely not sufficiently stringent.** The MLP+ proposal disallows the netting of MLP-based FCA removals and fossil fuel emissions but does not explicitly foreclose netting with other sources of emissions (e.g., agricultural emissions). The ISB did not develop a specific counterproposal. Some ISB members were opposed to any outcome in which MLP-based FCA removals could be netted against any other emissions sources, while others thought

³ IPCC Task Force on National Greenhouse Gas Inventories, [Report of the IPCC Expert Meeting on Reconciling Anthropogenic Land Use Emissions](#) (July 2024) at 5.

⁴ The ISB understands that the pilot testing results it reviewed were not validated by WRI or WBCSD, and that individual reporting companies may only have reported results for individual countries, product lines, and/or corporate divisions, rather than comprehensively across a reporting entity.

increased stringency is likely warranted but wished to have more external input before developing a recommendation.

4. Areas lacking ISB consensus

The ISB identified several areas where consensus was not reached:

- **Whether MLP methods or the ABA method are suitable for the purposes of estimating an organization’s greenhouse gas inventory.** The ISB did not reach consensus on the suitability of MLP methods⁵, the MLP+ proposal, or ABA for this purpose according to the accounting and reporting principles of the Greenhouse Gas Protocol.
- **Whether consistency with national inventory practices supports the adoption of MLP/MLP+ practices for company- or product-level reporting.** The ISB did not reach consensus on whether consistency with national inventory practices is a valid argument in support of MLP/MLP+ methods for company- and product-level reporting. Proponents of this view emphasized the value of consistency and alignment; view the justifications for the use of MLP in national inventories as being largely also relevant in the company- and product-level context (such as the challenge of separating the anthropogenic and non-anthropogenic components of total FCA fluxes); view a supplemental reference level applied in a forest impact statement as being able to provide similar information as a disaggregation without violation of their perspective of accounting practices for physical inventories; and note the IPCC’s expected interest in expressing net-zero pathways for global and national inventories both in terms of legacy bookkeeping model approaches and new, MLP-aligned calculations.⁶ Opponents of this view observed that the IPCC Task Force on National Greenhouse Gas Inventories disclaims its recommended use of MLP methods for subnational applications;⁷ that there are no Scope 3 considerations in national inventory reporting, which assumes global coverage analogous to comprehensive, non-overlapping Scope 1 reporting; and that it is unlikely that countries and companies will consistently agree to deepen and accelerate their climate targets given the gap between reported outcomes and climate targets today.
- **The importance of isolating anthropogenic FCA fluxes.** The ISB did not reach consensus on the importance of accurately separating anthropogenic and non-anthropogenic FCA fluxes. Some ISB members considered it a top priority for scientific integrity in the

⁵ The ISB notes that neither FCA TWG proposal advances the argument that MLP methods should be used in isolation, and that the MLP+ proposal requires the use of MLP methods in a company’s physical inventory along with a required forest impact statement reported outside of a company’s physical inventory.

⁶ IPCC Task Force on National Greenhouse Gas Inventories, [Report of the IPCC Expert Meeting on Reconciling Anthropogenic Land Use Emissions](#) (July 2024) at 5; see also IPCC, Sixty-Second Session of the IPCC, [Decision IPCC-LXII-8, Scoping of the IPCC Seventh Assessment Report \(AR7\)](#) (February 2025) at Annex 3 (indicating that approved IPCC AR7 WGIII outlines include topics on consistency and reconciliation between carbon budgets and national emissions reporting methods).

⁷ IPCC Task Force on National Greenhouse Gas Inventories, [FAQ Question Q2-10](#).

decision-making criteria and hierarchy, while others considered it a relatively lower and/or co-equal priority with respect to other criteria or principles.⁸

- **Whether it is appropriate to use a non-zero reference level in the physical GHG inventory.** The ISB did not reach consensus on whether it is appropriate to include a non-zero reference level to isolate the net effects of forest interventions in a company's physical inventory. Proponents argued that the use of a non-zero reference level is necessary to isolate the net effects of forest interventions, it is appropriate to include in a physical inventory, and there is a precedent that a non-zero reference level is used in other sections of the GHG Protocol. Opponents argued that physical inventories are counting exercises of real-world phenomena, and therefore unobservable counterfactuals are not appropriate for use in a physical inventory.
- **Whether the provision of a non-zero reference level outside of the physical inventory addresses concerns about the use of MLP methods in the physical inventory.** The ISB did not reach consensus on whether the provision of a reference level outside of the physical inventory would address concerns expressed about the use of MLP methods in a company's physical inventory. Proponents took the view that non-zero reference levels are inappropriate for use in physical inventories and argued that separate reporting is necessary instead. Proponents also suggested that a credible entity could monitor whether companies make inappropriate or misleading public statements about outcomes reported in their physical inventory that are not supported by their forest impact statement. Opponents argued that so long as companies report in their physical inventory non-anthropogenic removals or removals associated with forests that are not being harvested, the potential for inappropriate or misleading public statements is significant—even if more relevant and/or corrective information is also reported in a separate forest impact statement. Opponents also observed that reporting net anthropogenic removals in the physical GHG inventory, as the pilot testing results indicate is likely, would encourage the consumption of primary wood products (including from old-growth forests) above the consumption of recycled wood products or decarbonized alternative products. Such a method may also discourage climate-beneficial land management practices, as those practices would influence the magnitude of reported anthropogenic removals but would not be necessary to report net anthropogenic removals from forest harvests.
- **The choice of non-zero reference level.** The ISB did not reach consensus on the choice of a non-zero reference level, whether that level is used in the physical inventory (ABA proposal) or in a separate forest impact statement (MLP+ proposal). The ABA proposal uses a no-additional-human-activity reference level for inventory reporting. Other potential non-zero reference levels include a natural forest regeneration scenario or a 1.5°C-aligned land management intervention scenario. The ISB observed that the selection of a non-zero reference level is relevant for both the ABA proposal and the forest impact statement component of the MLP+ proposal. Some ISB members consider the no-additional-human-activity reference level to be necessary and appropriate for isolating anthropogenic fluxes.

⁸ Greenhouse Gas Protocol, [Governance Overview, Version 1.1](#) (November 2024) at Annex A.2.

Other ISB members do not believe that counterfactual reference levels can accurately be described as isolating anthropogenic fluxes and believe that different reference levels have different purposes, complicating the selection of a single reference level to define a physical inventory.

- **Time boundary.** The ISB notes that the ABA method involves projecting changes to wood pools over a forward-looking 30-year period, as compared to reporting in-year emissions and removals. The ISB did not reach consensus as to whether this was a deviation from typical accounting practices for physical inventories.
- **Spatial boundary.** The ISB notes that the MLP+ method allows companies to attribute removals from forests that are not involved in the production of certain wood products to the net emissions profile of those same wood products. Consequently, results depend on the growth of other forests not involved in wood harvests, rather than exclusively on the forest that produced the wood products. The ISB did not reach consensus as to whether this is a deviation from typical accounting practices for physical inventories.
- **Definitions of anthropogenic, passive, and indirect FCA fluxes.** The ISB noted competing views about how to properly define and disaggregate total fluxes that can be observed or estimated for a given forest or forest area. While the ISB agreed that total fluxes include both anthropogenic and non-anthropogenic components, the ISB was unable to reach consensus on consistent technical definitions, including how to classify removals from post-harvest forest regrowth and whether CO₂ fertilization effects result in anthropogenic removals for reporting purposes.

5. Request for Information

In recognition that additional inputs are needed to inform further ISB deliberation on FCA, and that the proposed methods under consideration should be subject to further stakeholder consultation, the ISB has requested the Secretariat to release a Request for Information under a special comment period.