Forest Carbon Accounting Second Plenary

13 March 2025

Building a better working world

Housekeeping

- Please turn on your video and include your full name and company/organization in your Zoom display name.
- All participants are requested to stay muted unless speaking (use the Raise Hand function to speak).

- This meeting **will be recorded** and made accessible to all TWG members on **SharePoint**. We encourage members who are **unable to attend to view the recording later** and submit a statement in accordance with the plenary rules where applicable. **These statements** will be shared with all members and processed with the feedback from those who attended

- We want to make **TWG meetings a safe space** – our discussions should be open, honest, challenging status quo, and 'think out of the box' to get to the best possible results for GHG Protocol. Always **be respectful**, despite contrasting discussions on content.
- TWG members should **not disclose any confidential information** of their employers, related to products, contracts, strategy, financials, compliance, etc.

- **Torbjörn Skytt** has withdrawn his participation and **is no longer a member of the TWG** and should be removed from future correspondence relating to the group proceedings.
- **Lucine Courthaudon from SBTi** has joined the TWG and has been included in the group. She received **a presentation on the progress** of the FCA process, and **relevant documents were shared** with her.

- In accordance with point **5.5.3** of **the Technical Working Group Terms of Reference**, which requires **meeting minutes** and updated documentation to **be distributed to participants within five working days**, we must inform you that meeting this **5-day deadline is currently difficult to maintain considering the closely planned sessions**. As a result, we will extend the turnaround time to **10 working days after each meeting.**

Agenda

#	Description	Duration	Speakers
1.	Objectives of the FCA process and the plenary session	10 min	Secretariat & EY
2.	Approach #1: Managed Land Proxy	Up to 45 min	TWG members
2.1.	Approach brief	10 min	Nathan & Vaughan
2.2.	Discussion on 8 descriptive elements for MLP	35 min	EY & TWG members
3.	Approach #2: Activity-Based-Accounting	45 min	TWG members
3.1.	Approach brief	10 min	Miguel, Timothy, Jiaxin Charles & Kate
3.2.	Discussion on 8 descriptive elements for ABA	35 min	EY & TWG members
4.	#3: Hybrid Option 1b	15 min	TWG members
4.1.	Option summary	10 min	Melissa (GHG P Secretariat)
4.2.	Closing comments on 3 proposals	5 min	TWG members
5.	FCA timeline & objective for the next session	5 min	EY

Objectives of the FCA process

- **The objectives of the forest carbon accounting Technical Working Group** for the Land Sector and Removals Standard include the following:
  - Define the problem statements with worked examples to illustrate the need for solutions on reporting forest management emissions and removals accurately and completely
  - Refine the current options or propose fresh solutions to account for forest management emissions and removals following the GHG Protocol decision-making criteria and hierarchy
- In refining or offering additional alternative versions of applying the current options, any recommendations **must respond to the primary concerns** raised by advocates of other options
- Based on this objective FCA TWG members should ensure their proposals **align with the GHG Protocol's decision-making criteria and hierarchy** [1]
- The forest carbon accounting approach outlined in the **Scope 3 Standard** [2] aims to address specific considerations within the realm of Scope 3 accounting.
  - Scope 3 emissions: All indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions
  - Indirect emissions: Emissions that are a consequence of the activities of the reporting company but occur at sources owned or controlled by another company

[1] Decision-making criteria and hierarchy slides on page 7 and 8 from the first plenary meeting
[2] GHG document on Corporate Value Chain (Scope 3) Accounting and Reporting Standard

1. Objectives for the plenary session

- **Clarify Approach definition specifics:** TWG members who have developed **FCA quantification methodologies (MLP, ABA as well as the Hybrid version 1b)** will present their approach for up to 10 minutes after which the floor will be opened for discussion and comment to work through the 7 key defining elements for that approach and address member comments to the document.

- **Open Dialogue:** Key **points** have been identified either as definition gaps or areas needing further clarity, these will serve as discussion initiators for each element and allowing each member time to **share their views** and concerns **about the approach elements** in a respectful and constructive manner

- **Align on Approach status:** Confirm the approach to be **adopted and ensure a shared understanding** among all members on agreements and pending points for further deliberation.

- The **three approach documents** will be kept open for **5 days until 18th March 2025** (after the plenary session) for comments from today to be addressed where possible and the text to be built up subsequently.

- **Eventually develop final proposal/ consensus proposal:** Work towards **creating mutually acceptable compromises** that address the core issues of approaches discussed as we head into phase 3 of the FCA deliberation process.

2. Approach #1: Managed Land Proxy – Summary of the approach I/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*	Points to Clarify - EY	TWG members comments
Carbon Pools	▸ All land-based carbon pools shall be included: – Inclusive of both aboveground and belowground biomass – Dead organic matter – Organic and inorganic carbon	▸ Companies must report changes by utilizing field observations or remote sensing measurements to estimate stock gains or losses from all relevant pools. This can be achieved through either a stock change approach, where stocks at T1 are measured against those at T0, or a gain-loss approach	▸ Clarify the specific measurements, data, or models necessary for successful accounting	▸ Remote sensing measurements are calibrated to specific region and land covers, and proven to fall within specified accuracy range compared to ground truthed primary inventory data
Spatial Boundary of Analysis	▸ From a Scope 1 perspective, companies must include all owned lands in their inventory ▸ From a Scope 3 perspective, companies should ensure physical traceability to the land management unit or sourcing region	▸ Define sourcing regions and calculate a 'land carbon accounting factor' that represents the amount of net emissions and/or removals occurring within a sourcing region per unit of forest product	▸ Specify the rules for different scopes more clearly ▸ Include additional requirements for conservation lands or lands not actively managed for production	▸ Scope 1 all land owned or controlled, this is valid for forest land, grassland, shrub land, arable land, wetlands,... ▸ In scope 3 see working land definition under GHG P LSRG draft. Context dependent can be the land management unit, or sourcing region with safeguards (refer to the LSRG draft)

*Based on the MLP FCA quantification approach developed by Nathan Truitt and Vaughan Andrews and comments from Christoph Leibing and Jiaxen Chen

2. Approach #1: Managed Land Proxy – Summary of the approach II/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*	Points to Clarify - EY	TWG members comments
Temporal Boundary of Analysis	▸ Companies shall employ an **annual temporal boundary** when applying the MLP to align with the current LSR Standard, as well as all **corporate GHG inventory accounting practices**	▸ As the goal of an inventory is to report an annual snapshot of emissions and removals attributable to company activities, **there is no challenge to require an annual temporal boundary.** It would enable **easy comparisons with other emissions/removals** within a company's inventory and **between companies in different sectors**	▸ **Address potential systematic** flaws when considering temporal boundaries on an annual basis ▸ **Provide further temporal boundary** aspects to consider when estimating emissions or removals	▸ **If the changes in forest carbon stocks** have nothing to do with a company's activities, making the information more transparent cannot **strengthen the linkage that does not exist** ▸ How the **forest carbon stock changes** can be used to set the company's mitigation targets, if the changing forest carbon stocks **are not caused by the company's activities**?
Separation of Anthropogenic and Natural Effects	▸ **Companies shall not aggregate inventory categories** for use in reporting, target setting, or claims	▸ An **inventory system based** on direct observations cannot **separate direct anthropogenic and indirect-anthropogenic effects** ▸ **IPCC experts** propose to: – **Keep the MLP** in place – **Improve it** over time – **Reconcile goal** setting with NGHGIs	▸ **Appears to be the crucial challenge**; unsolvable from a methodological point of view ▸ Provide a **clear explanation of how anthropogenic and natural effects** on emissions/removals are separated ▸ **Include specific methodologies** or examples to illustrate this separation	▸ Using MLP, it is impossible to **distinguish between anthropogenic and natural effects** ▸ Without separating anthropogenic and natural effects, making the MLP assessment **more transparent is only a logical fallacy from science**

*Based on the MLP FCA quantification approach developed by Nathan Truitt and Vaughan Andrews and comments from Christoph Leibing and Jiaxen Chen

2. Approach #1: Managed Land Proxy – Summary of the approach III/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*	Points to Clarify - EY	TWG members comments
Baseline Considerations	▸ **Companies shall select a base year or base period** by which to measure progress over time ▸ **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	▸ Companies should use a **consistent inventory boundary** so that **land management emissions/removals** are compared against a common standard ▸ **In a Scope 1 context**, companies must **monitor owned land** previously allocated emissions/removals ▸ **In a Scope 3 context**, they must continue **monitoring sourcing regions for raw materials**	▸ **Stock-based changes** are reported as emissions (if negative) or removals (if positive) ▸ **Provide specific methodologies** used for **baseline determination**	▸ By definition, the baseline in MLP is a base year (or period), e.g., 1990 for national GHG inventory reporting. The results are the **changes of forest carbon stocks over time**, which might or might not **be caused by a company's activities** ▸ No issues **with arbitrary unverifiable baselines** or **modelled projection** into the future required.
Methodology	▸ The quantification, in simplistic terms, would require that **forest inventory data be translated to carbon data**	▸ **Improve the guidance** around distinguishing between **managed and non-managed land** ▸ To address the **complexity of allocating the "appropriate" emissions/removals to downstream manufacturers**, one approach could be to develop a "**land removal factor**" that allows a purchaser to attribute a portion of the net change in a sourcing region to their own activities	▸ **Identify specific methodologies** available for use currently	▸ **Allometric equations** are often available by **species in literature** to convert from DBH or DBH/hight measurements to tree biomass, which can then be converted to live tree carbon; based on live **tree carbon stocks**, other **forest carbon pools** are estimated by forest type/age based on measurements or data in literature. This would be the same for both ABA and MLP.

*Based on the MLP FCA quantification approach developed by Nathan Truitt and Vaughan Andrews and comments from Christoph Leibing and Jiaxen Chen

2. Approach #1: Managed Land Proxy – Summary of the approach IV/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*	Points to Clarify - EY	TWG members comments
Data Requirements	▸ Companies shall meet **the requirement stipulated in the LSRS draft:** – **Use empirical data specific** to carbon sinks and pools – **Report the quantitative uncertainty range** – **Calibrate model-based/remote** sensing approaches with actual measurements	▸ To fully implement MLP across scopes, we need to: – **Accurate inventories of forest carbon stocks** or **credible removals/emissions factors** related to management activities – **Clear distinctions between managed and non-managed lands**, with data generally available or derivable in most contexts	▸ Provide examples of data sources or databases that can be used. ▸ Provide details on **how global and local companies can obtain the required datasets**	▸ Data needs to be **collected over time** for estimating **changes in forest carbon stocks** of different pools
Additional Considerations	▸ After developing an inventory, **companies should inform the target level by using reference levels for land carbon pools** that project business-as-usual trends to factor out **non-additional and non-anthropogenic impacts on carbon stocks and flows** (e.g., natural growth of forests), such that progress against the target represents additional (company-driven) and anthropogenic (human-induced) mitigation action taken to meet GHG targets			

*Based on the MLP FCA quantification approach developed by Nathan Truitt and Vaughan Andrews and comments from Christoph Leibing and Jiaxen Chen

3. Approach #2: Activity Based Approach – Summary of the approach I/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*	Points to Clarify - EY	TWG members comments
Carbon Pools	▸ All land-based carbon pools shall be included: – Inclusive of both aboveground and belowground biomass – Dead organic matter – Organic and inorganic carbon	▸ Forest carbon pools: live above-ground vegetation, live below-ground vegetation, standing and downed dead wood (including slash, felled saplings and other wood downed), forest floor, soil organic carbon pools ▸ External Wood Carbon Pools: all wood products prior to decomposition or combustion, and after they are used, such as in landfills.	▸ Do we include activity and baseline models for all different pools?	▸ Although the ABA includes all of these pools, it will no longer report "biomass carbon stock changes on forest lands." ▸ It will instead doubly report (at least, possible more depending on the counterfactual proposed) carbon fluxes to the atmosphere from harvesting
Spatial Boundary of Analysis	▸ From a Scope 1 perspective, companies must include all owned lands in their inventory ▸ From a Scope 3 perspective, companies should ensure physical traceability to the land management unit or sourcing region	▸ Wood products shall be based on the net emissions of the weighted average wood harvested from the sourcing area to which wood can be reliably traced	▸ Do we understand it as? ▸ Scope 1: lands owned or controlled by the reporting company ▸ Scope 3: jurisdictional boundary ▸ Scope 3: sourcing region boundary ▸ Scope 3: land management unit level boundary	▸ It seems that the ABA is implementable only at the stand level, and this will cause significant challenges to reporting (particularly in scope 3) where traceability to the stand level is extremely difficult or in many cases literally impossible to achieve

*Based on the ABA FCA quantification approach developed by Timothy Searchinger, Miguel Brandão, Charles Canham, Jiaxin Chen and Kate Dooley and comments from Nathan Truitt

3. Approach #2: Activity Based Approach – Summary of the approach II/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*	Points to Clarify - EY	TWG members comments
Temporal Boundary of Analysis	▸ Companies shall employ an **annual temporal boundary** when applying the MLP to align with the current LSR Standard, as well as all **corporate GHG inventory accounting practices**	▸ Regarding harvesting: Carbon pool changes between counterfactual and factual baseline estimates **30 years after harvest or 25 years after harvest** ▸ Regarding management: **carbon pool changes** between **counterfactual and factual baseline** estimates since 1990.	▸ Why is there a difference: **30 years after harvest or 25 years after harvest** ▸ Is the baseline year 1990 fixed or will it be retightened over time?	▸ The **counterfactual proposed requires companies to project forwards** in time over at **least a twenty-year period a counterfactual** and use that projection to annualize an estimated delta between observed **stock changes and stocks from the counterfactual**
Separation of Anthropogenic and Natural Effects	▸ **Companies shall not aggregate inventory categories** for use in reporting, target setting, or claims	▸ Separation of **natural growth** is modelled as the difference of counterfactual against factual baseline including **anthropogenic effects**	▸ What about **natural catastrophic losses** (pest, fires, …)? Specifically, how is **salvage wood treated**?	▸ **Separating well these effect** but only on non-managed land: – On on-managed land, removals are entirely non-anthropogenic, and any harvesting would create anthropogenic emissions ▸ ABA does **not distinguish at all between anthropogenic and non-anthropogenic effects** on managed land, because the **counterfactual is actually mostly anthropogenic**

*Based on the ABA FCA quantification approach developed by Timothy Searchinger, Miguel Brandão, Charles Canham, Jiaxin Chen and Kate Dooley and comments from Nathan Truitt

3. Approach #2: Activity Based Approach – Summary of the approach III/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*	Points to Clarify - EY	TWG members comments
Baseline Considerations	▸ Companies shall select a base year or base period by which to measure progress over time ▸ 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	▸ Baselines described as no harvest/ no management	▸ Baselines for all pools separately? ▸ Does the no harvest baseline represent a no human activity baseline? What about game management in this baseline?	▸ Challenge of constructing appropriate baselines is massive (see almost any article from the past 5+ years on forest carbon projects)
Methodology	▸ The quantification, in simplistic terms, would require that forest inventory data be translated to carbon data	▸ Which methodology should be considered?	Are there 4 different methods to be chosen? 1. Without subsequent forest carbon growth 2. With subsequent forest carbon growth 3. Management based changes since 1990 4. Short rotation plantations	▸ ABA proponents need to present how baselines and future counterfactual / foregone sequestration scenarios are to be quantified, including which models and equations

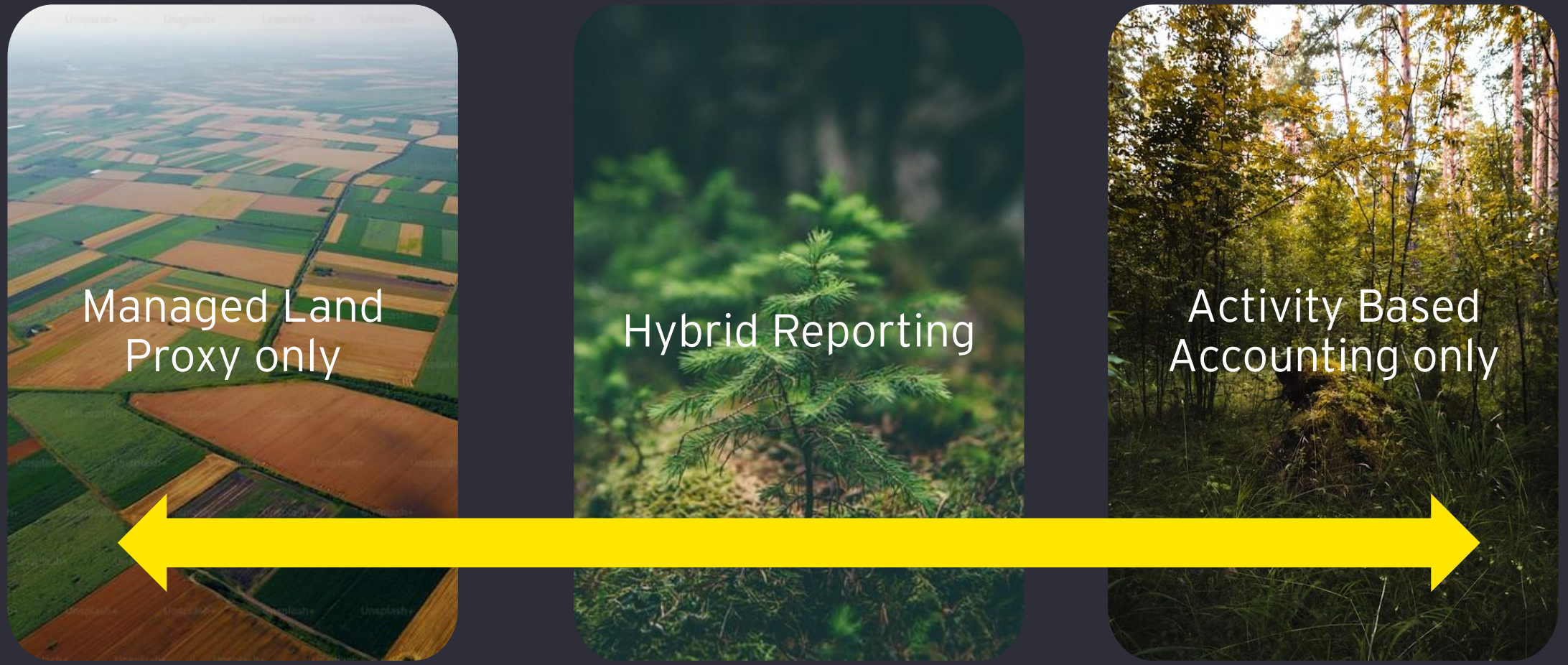
*Based on the ABA FCA quantification approach developed by Timothy Searchinger, Miguel Brandão, Charles Canham, Jiaxin Chen and Kate Dooley and comments from Nathan Truitt and Christoph Leibing

3. Approach #2: Activity Based Approach – Summary of the approach IV/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*	Points to Clarify - EY	TWG members comments
Data Requirements	▸ Companies shall employ an **annual temporal boundary** when applying the MLP to align with the current LSR Standard, as well as all **corporate GHG inventory accounting practices**	▸ **Which data should be considered?**	▸ **Activity models** are calibrated **against measurements ?** ▸ **Counterfactuals** are extracted from literature, databases, …?	▸ XX
Additional Considerations	▸ **Companies shall not aggregate inventory categories** for use in reporting, target setting, or claims			

*Based on the ABA FCA quantification approach developed by Timothy Searchinger, Miguel Brandão, Charles Canham, Jiaxin Chen and Kate Dooley and comments from Nathan Truitt and Christoph Leibing

Approach #3: Option 1b – an option to recommend to the ISB?



Approach #3: Option 1b - Hybrid reporting proposal

- **3 mandatory components** for companies reporting net land-based removals:
  - **MLP approach** for the **Scope 1 & Scope 3 portions** of their **GHG inventory**
  - **ABA approach** to **report a separate category of "Forest Carbon Impact"**, outside the scopes, within their GHG inventory
  - **Additional claims guidance** to contextualize the unique role of removals in forest carbon accounting, including:

1. How to interpret the different parts of the GHG inventory
2. How the reporting relates to any target-setting/emission reduction claims
3. Restate safeguards, e.g. no netting land and non-land emissions/removals
4. This language should be developed by the LSRG secretariat with input from the TWG

Approach #3: Option 1b - Why this hybrid approach?

More complete than either approach individually

Aligns with current accounting & reporting practices

- Accounting method within the scopes remains consistent between forestry and agriculture and aligns with LSRS
- Consistent with a "dual ledger" reporting framework that separates a physical inventory from GHG impact reporting that is used in Scope 2 and is being considered by GHGP's activity and market-based reporting TWG
- Consistent with UNFCCC reporting, which includes the Global Stock take based on net change accounting and NDCs based on ABA

Additional claims guidance adds context to unique role of removals in forestry

4. Approach #3: Option 1b – Summary of the approach I/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*
Carbon Pools	▸ All land-based carbon pools shall be included: – Inclusive of both aboveground and belowground biomass – Dead organic matter – Organic and inorganic carbon	▸ GHG inventory: same as MLP approach as described in the MLP FCA Quantification Approach Template ▸ GHG reporting: same as ABA approach as described in the ABA FCA Quantification Approach Template
Spatial Boundary of Analysis	▸ From a Scope 1 perspective, companies must include all owned lands in their inventory ▸ From a Scope 3 perspective, companies should ensure physical traceability to the land management unit or sourcing region	▸ Same as the spatial boundary setting practices in the MLP approach. Importantly, the spatial boundary for both the GHG inventory and GHG reporting must be consistent in order to ensure comparability

*Based on the Hybrid option FCA quantification approach developed by Melissa Gallant

4. Approach #3: Option 1b – Summary of the approach II/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*
Temporal Boundary of Analysis	▸ Companies shall employ an **annual temporal boundary** when applying the MLP to align with the current LSR Standard, as well as all **corporate GHG inventory accounting practices**	▸ For the sake of **comparability** between the GHG inventory and reporting, **both should use the same annual temporal boundary** as described in the **MLP approach**.
Separation of Anthropogenic and Natural Effects	▸ **Companies shall not aggregate inventory categories** for use in reporting, target setting, or claims	▸ This hybrid approach would separate anthropogenic and natural effects in **two ways:** – **Using the managed land proxy** to eliminate removals from unmanaged lands in the **GHG inventory** – **ABA approach** OR **separating out removals resulting from indirect human effects** using a counterfactual in **GHG reporting**

*Based on the Hybrid option FCA quantification approach developed by Melissa Gallant

4. Approach #3: Option 1b – Summary of the approach III/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*
Baseline Considerations	▸ **Companies shall select a base year or base period** by which to measure progress over time ▸ **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	
Methodology	▸ The quantification, in simplistic terms, would require that **forest inventory data be translated to carbon data**	▸ **GHG inventory:** same as **MLP approach** as described in the MLP FCA Quantification Approach Template ▸ **GHG reporting:** same as **ABA approach** as described in the ABA FCA Quantification Approach Template

*Based on the Hybrid option FCA quantification approach developed by Melissa Gallant

4. Approach #3: Option 1b – Summary of the approach IV/IV

Defining elements	Forest Carbon Accounting element requirements	Approach Summary*
Data Requirements	▸ Companies shall meet **the requirement stipulated in the LSRS draft:** – **Use empirical data specific** to carbon sinks and pools – **Report the quantitative uncertainty range** – **Calibrate model-based/remote** sensing approaches with actual measurements	▸ **GHG inventory:** same as **MLP approach** as described in the MLP FCA Quantification Approach Template ▸ **GHG reporting:** same as **ABA approach** as described in the ABA FCA Quantification Approach Template
Additional Considerations		▸ **Discuss about additional claims guidance**

*Based on the Hybrid option FCA quantification approach developed by Melissa Gallant

5. FCA timeline with primary objective for each session