

*Incentivizing investments and interventions in the forest product industry's supply chain to reduce Scope 3 emissions and achieve emission reduction targets: A supply shed approach.*

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# Land Acknowledgement

*I would like to recognize that the Pacific Forestry Center is located on the unceded territory of the Lək'wəŋən (Songhees and Esquimalt) Peoples.*



# Presentation Overview

1. **Introduction**
2. **Current Research**
3. **Background**
  - ▶ Carbon insetting v. carbon offsetting
4. **Supply Sheds**
5. **Allocation of GHG Mitigation Outcomes**
6. **Role of Non-Industrial Private Forest Owners**

# Current Ph.D. Research

**Purpose:** The purpose of this research is to assess whether carbon insetting can help the forest products industry achieve its emission reduction targets.

**Chapter 1:** Provides a broad overview of the peer-reviewed and grey literature concerning carbon insetting, the current state of insetting, and the challenges of applying insetting to the forest sector.

**Chapter 2:** Critically examines companies that are undertaking insetting projects around the globe to determine how insetting projects can be developed and used in the forest sector.

**Chapter 3:** Analyzes current and draft FLAG guidance and how this guidance might enable or impede forest product companies from making direct investments in their supply sheds.

**Chapter 4:** Determine how to allocate and account for insetting projects and other interventions in the forest products supply chain.



# GHG Emission Reduction Targets

## Weyerhaeuser

- ▶ Scope 1 and 2 emissions — by 42 percent by 2030
- ▶ Scope 3 emissions — by 25 percent per ton of production by 2030
- ▶ Scope 3 emissions account for 87% of total emissions

## West Fraser

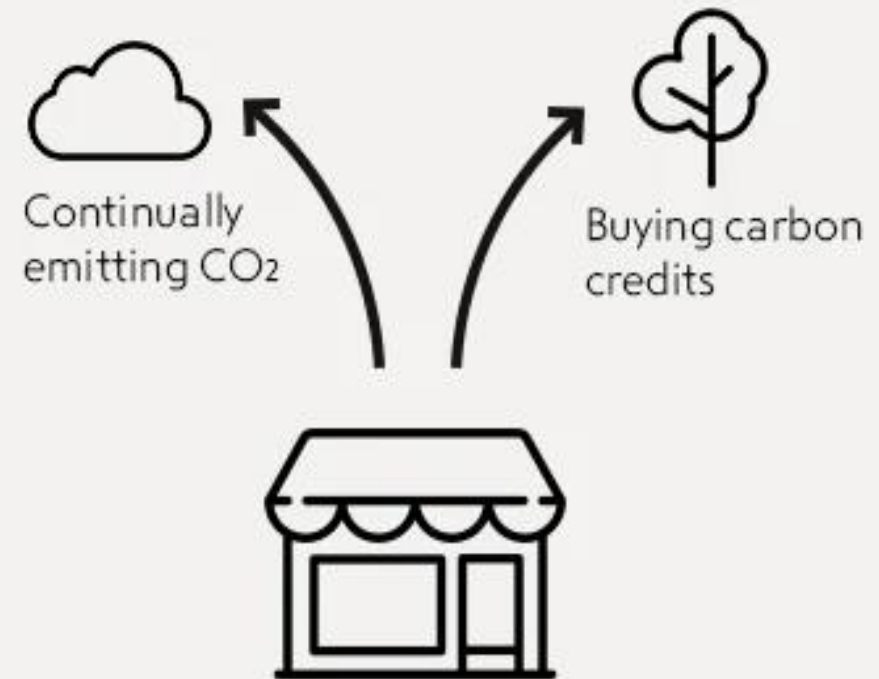
- ▶ Scope 1 and 2 emissions — by 46.2 percent by 2030
- ▶ Scope 3 emissions — by 25 percent per ton of production by 2030
- ▶ Scope 3 emissions account for 60% of total emissions

## INSETTING

Reducing CO<sub>2</sub>  
emissions internally



## OFFSETTING



# Insetting definitions:

**Anthesis, 2024:** Carbon reduction or removal projects are coordinated and run by a business, within its value chain. Investment is intended to generate mutual benefit for both the business funding the 'inset' and the recipient, by way of increased productivity and resilience.

**Brandt and Silber, 2022:** Interventions by a company in or along their value chain that are designed to generate GHG emissions reductions or carbon removals, and at the same time create positive impacts for communities, landscapes, and ecosystems. (Insetting Platform Initiative)

**Green et al, 2019:** Funding decarbonization measures within the sector where the emissions originated.

**STBi, 2021:** Insetting can be used to describe **mitigation projects that are wholly contained within a scope 3 supply chain boundary** of a company, a project partially within their scope 3 supply chain boundary, and a project adjacent to a supply chain boundary.

**GHG Protocol, 2022:** Used to refer to activities using the same quantification methods as offset credits but that reduce emissions or increase removals within the reporting company's value chain.

# Insetting Challenges

- ▶ Lack of guidance
- ▶ Geographic boundaries are unclear
- ▶ No consensus on the scope or type of claim companies can make
- ▶ Most projects are currently unverified and uncertified
- ▶ Issues around double counting
- ▶ High cost of project development & long-term monitoring
- ▶ Lack of regulation, particularly around reporting of Scope 3 emissions
  - ▶ California SB-253
  - ▶ EU CSRD



# Carbon Offsetting v. Carbon Insetting

CARBON OFFSETTING CRITERIA (IETA)	
<b>Real</b>	Offsets must represent real emission reductions that have already occurred
<b>Additional</b>	Offsets must represent emission reductions that are in addition to what would have occurred otherwise
<b>Permanent</b>	Offsets must represent emission reductions that are non-reversible or must typically be sequestered for a given number of years
<b>Verifiable</b>	Sufficient data quantity and quality must be available to ensure emission reductions can be verified
<b>Quantifiable</b>	Emission reductions must be reliably measured or estimated and capable of being quantified.
<b>Enforceable</b>	Offset ownership is undisputed

CARBON INSETTING CRITERIA (GHG Protocol)	
<b>Additional</b>	The intervention reduces emissions or increases removals relative to the amount of emissions that would have occurred without the interventions
<b>Credible Baseline</b>	GHG reductions are quantified relative to a realistic, defensible, and conservative relative to a baseline scenario.
<b>Permanent</b>	Reduction/removal ensure the longevity of the carbon pool and sustainability of stock over time (~100 years).
<b>Avoid Leakage</b>	Mitigates the risk of displacing impacts elsewhere/outside project boundaries
<b>Quantifiable</b>	Emissions reduction or removals must be independently verified and validated.
<b>No net harm</b>	Must adhere to social, economic, ecological, & environmental safeguards to avoid unintended harm.

# The GHG Protocol - Insetting

Insetting refers to activities using the same quantification methods as offset credits but that reduce emissions or increase removals within the reporting company's value chain.

ACCOUNTING FOR	DESCRIPTION	ACCOUNTING METHOD	QUALITY CRITERIA
Emissions & Removals	Emissions and removals that occur in a company's operations and value chain.	Inventory Method – Absolute GHG reduction relative to year 1; used to track emissions and removals within a defined boundary over time.	<ul style="list-style-type: none"> <li>• N/A for emissions</li> <li>• For removals – ongoing monitoring, traceability, primary data, uncertainty, reversals.</li> </ul>
Inset Credits  <b><i>Inset credits cannot be used to adjust Scope 3 emissions or removals.</i></b>	<p>Quantified GHG reduction or removal impacts of intervention.</p> <p>GHG claims are CREDITED &amp; TRANSFERRED between parties.</p>	Intervention Method – Estimated GHG effect relative to baseline scenario; used to quantify the impacts on GHG emission of specific projects/ actions/ interventions.	Additionality, credible baselines, monitoring, permanence, leakage avoidance, unique issuance/claiming, validation/verification, governance, no net harm.

# The Supply Shed Approach

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## What is a supply shed?

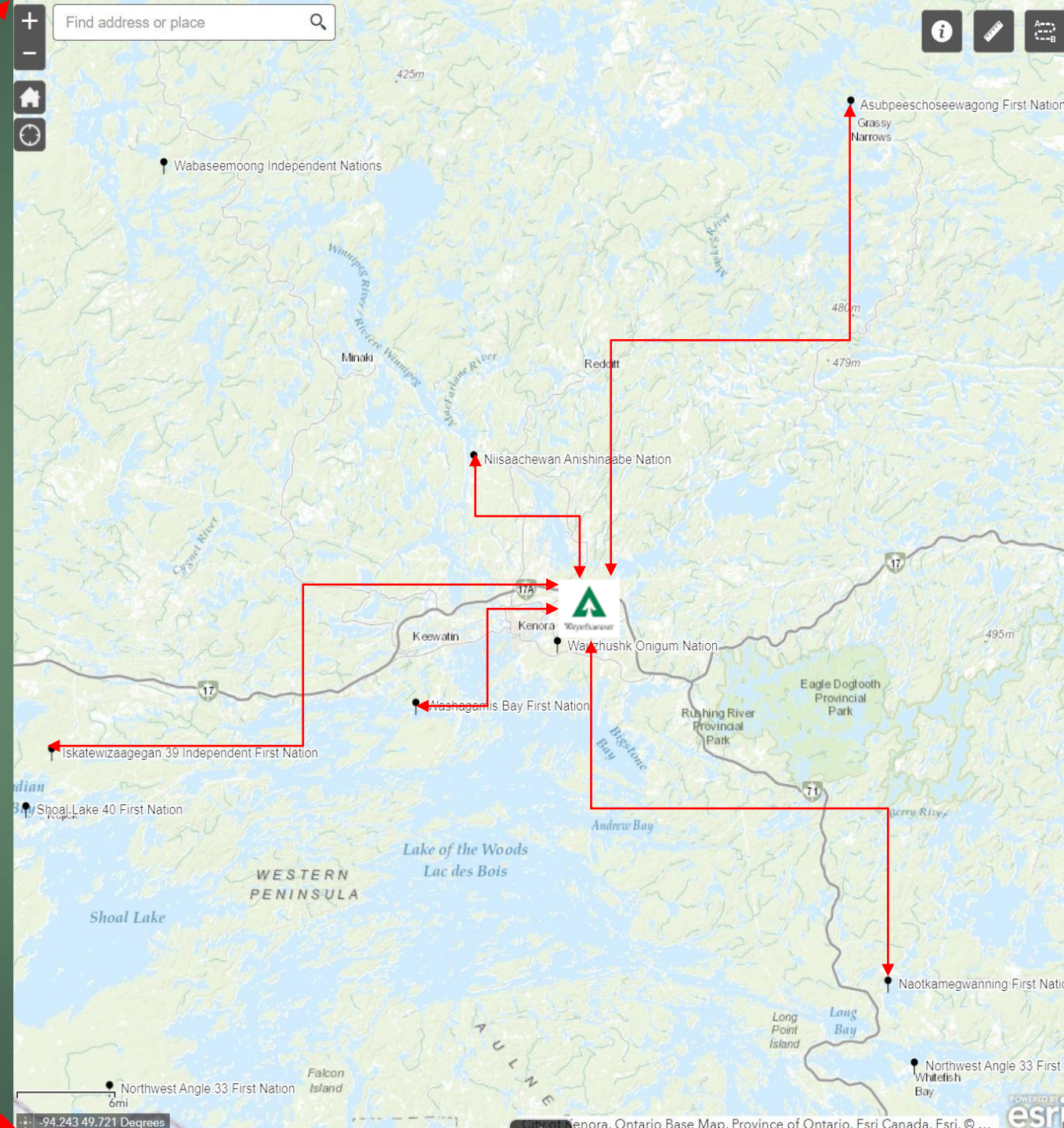
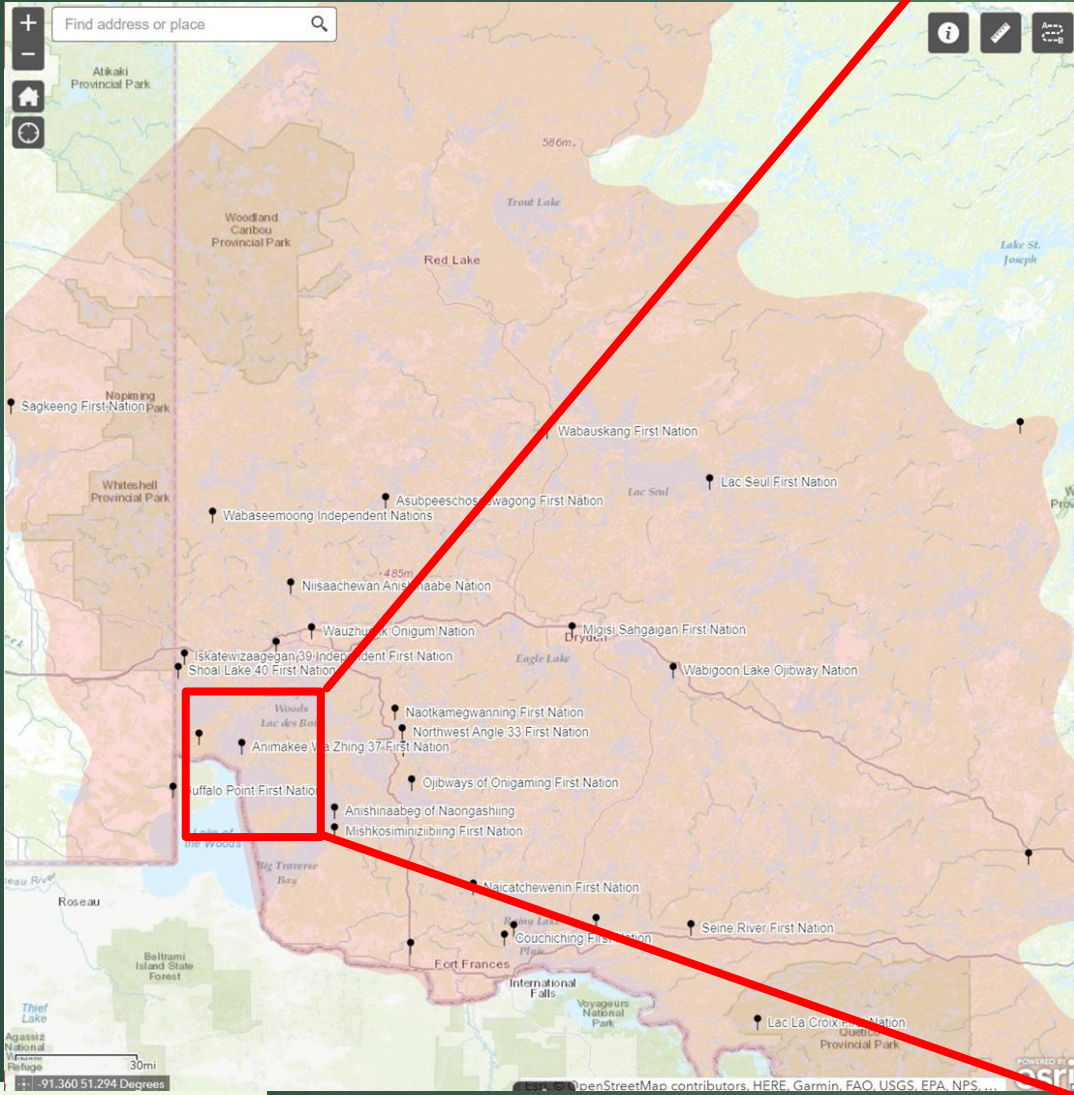
A supply shed is “a group of suppliers in a specifically defined geography and/or market providing similar goods and services that can be demonstrated to be associated with the company’s value chain.”

- Value Change Initiative, The Gold Standard

## Benefits of a supply shed approach to insetting:

- ▶ Clarifies supply chain boundaries
- ▶ Improves traceability
- ▶ Improves the selection of interventions needed within a supply shed
- ▶ **Helps address issues with double-counting**

# A Supply Shed

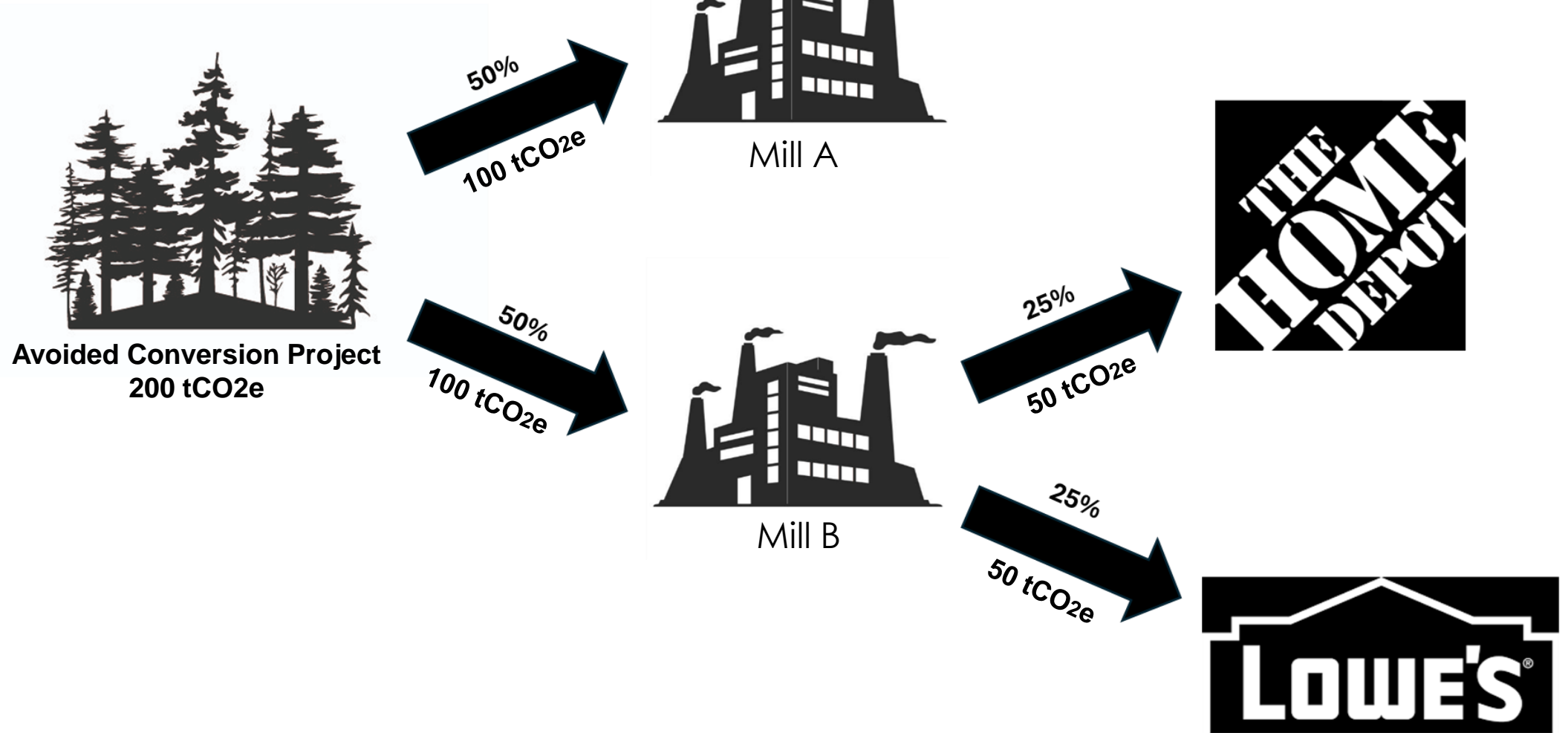


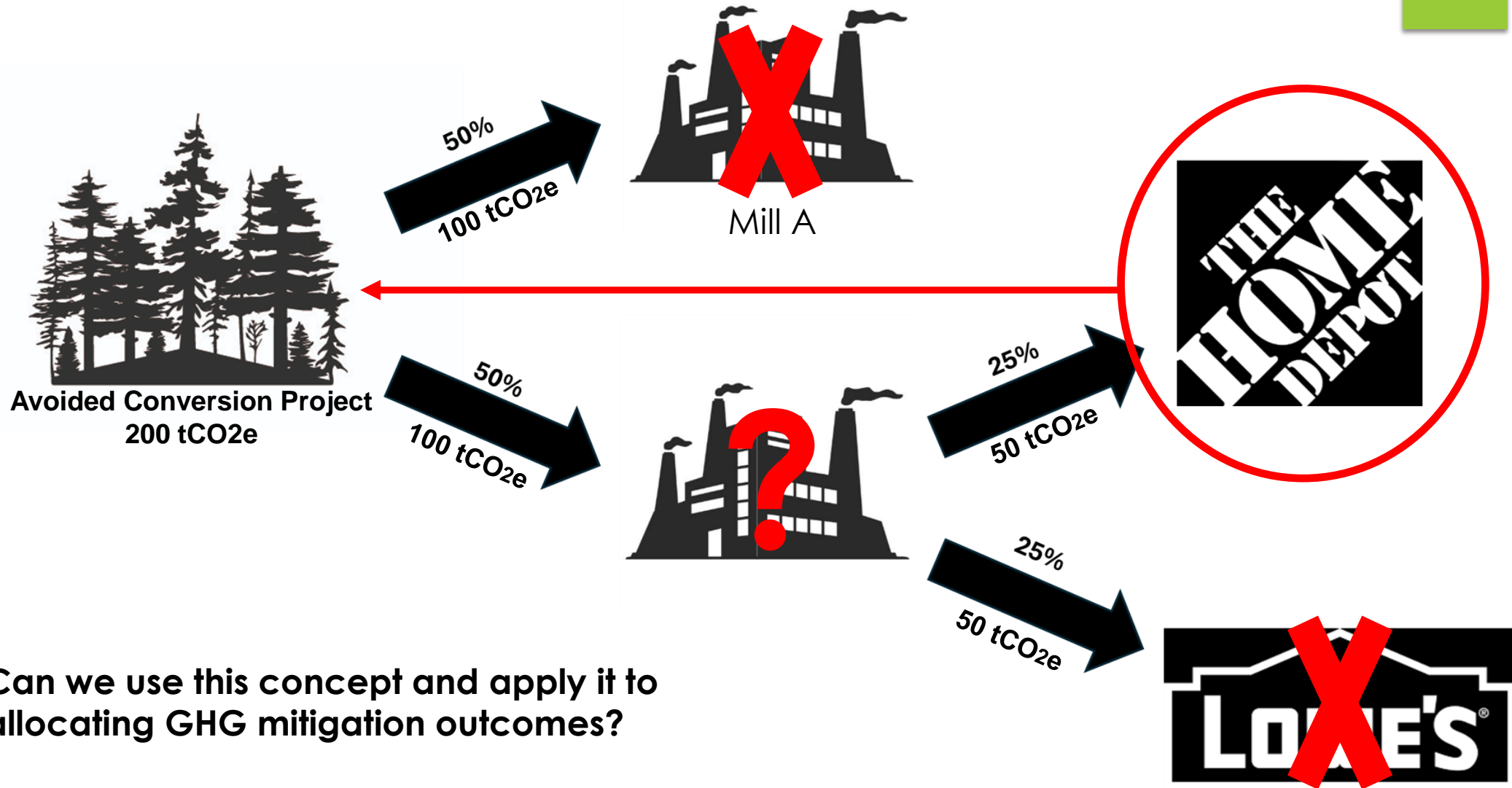
# Two Key Purposes of the Supply Shed

Incentivise investments to enhance traceability by allowing companies to claim mitigation outcomes generated in a Supply Shed.

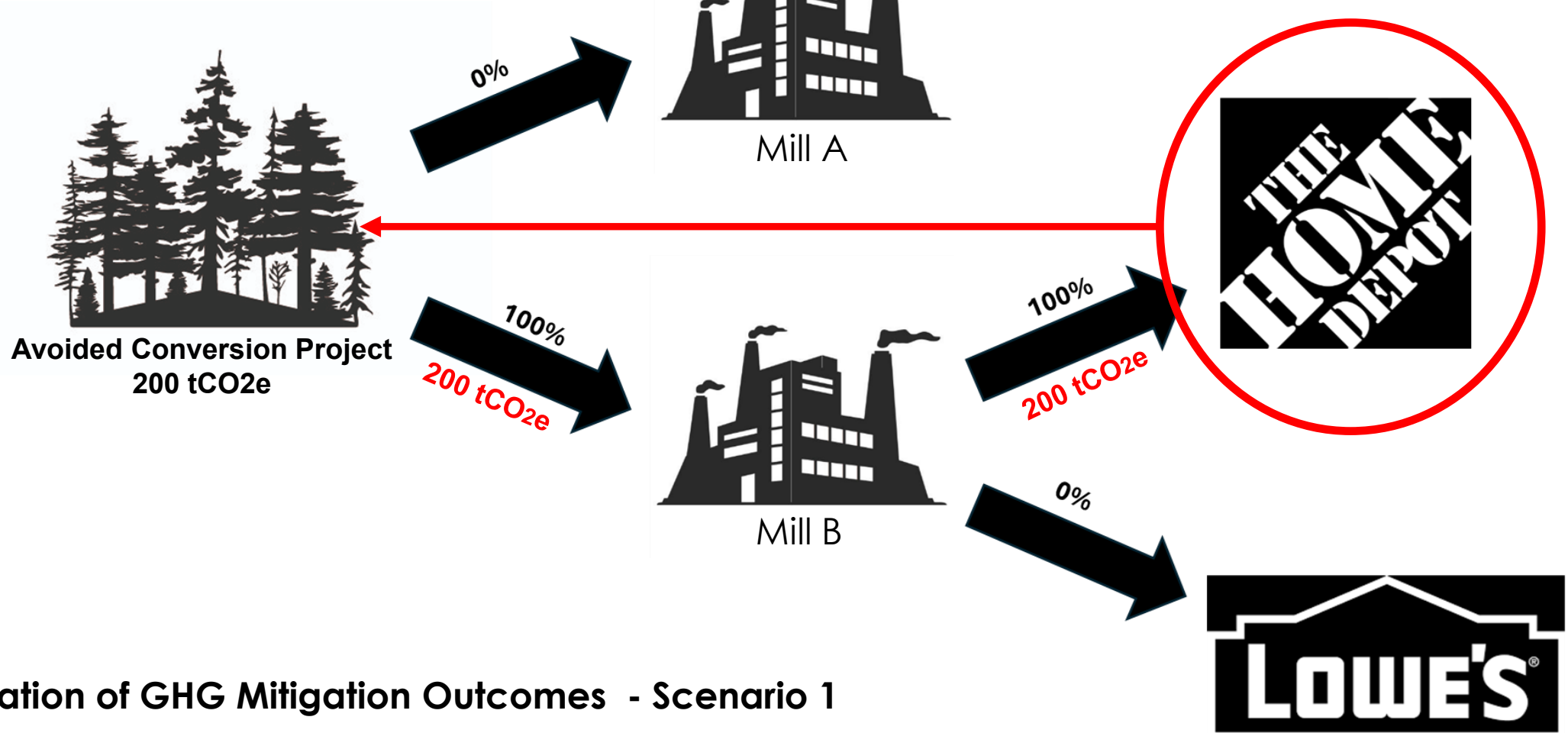
Enable credible co-claiming and co-investment by allowing multiple parties to execute interventions in a region where they source but may not directly influence their exact suppliers.

# The Greenhouse Gas Protocol Guidance on Double Counting



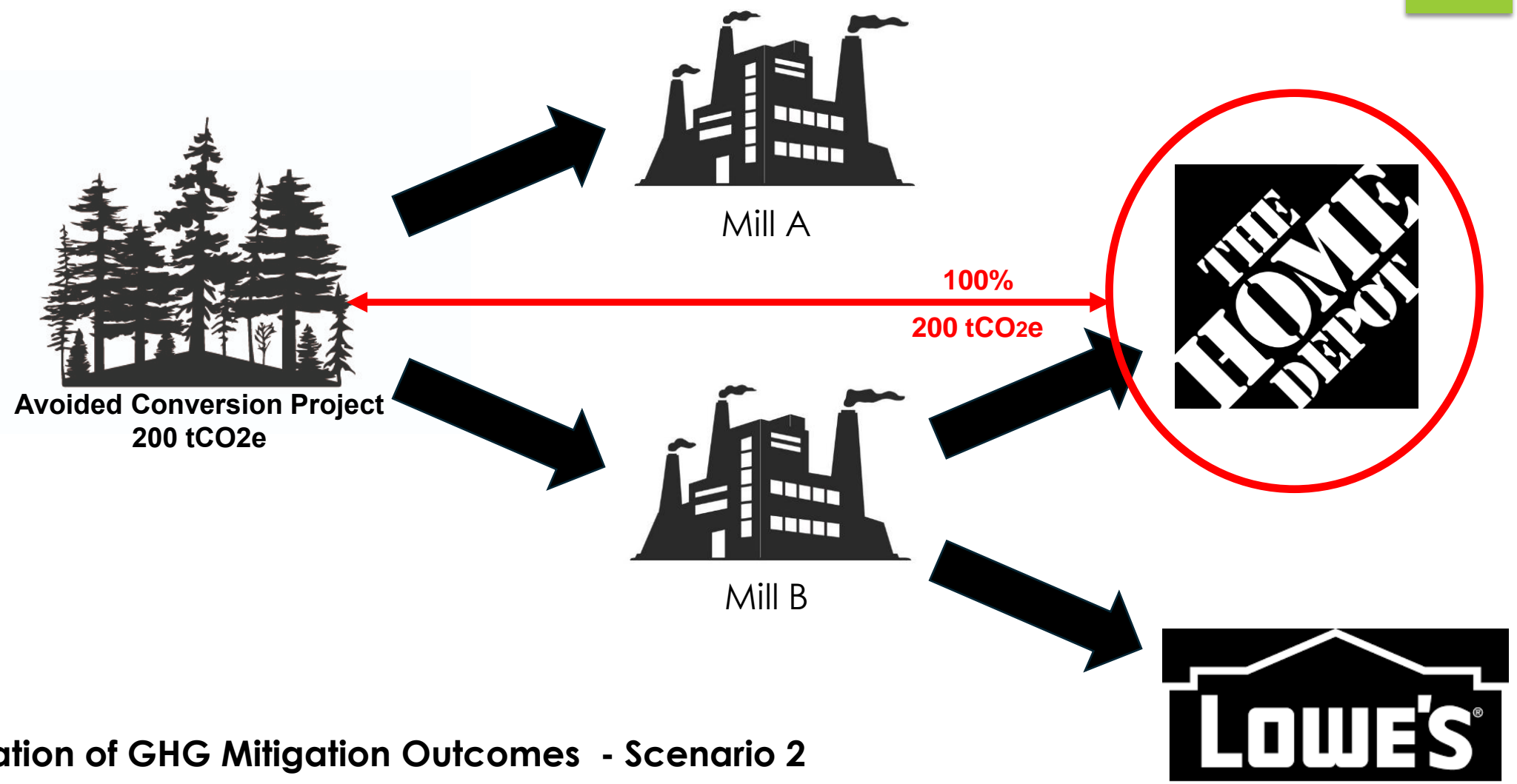


Q: Can we use this concept and apply it to allocating GHG mitigation outcomes?



Allocation of GHG Mitigation Outcomes - Scenario 1





Allocation of GHG Mitigation Outcomes - Scenario 2

# Current Thinking

GHG mitigation outcome and emissions reduction benefits should be proportional to the size of the financial contribution or investment of each company in the supply shed and use an inseting crediting method.

		Mill A	Mill B	Comp. 1	Comp. 2
Ex. 1	210 tCO <sub>2</sub> e	70 tCO <sub>2</sub> e	0	70 tCO <sub>2</sub> e	70 tCO <sub>2</sub> e
	Investment (%)	33.33	0	33.33	33.33
Ex. 2	200 tCO <sub>2</sub> e	50 tCO <sub>2</sub> e	50 tCO <sub>2</sub> e	50 tCO <sub>2</sub> e	50 tCO <sub>2</sub> e
	Investment (%)	25	25	25	25

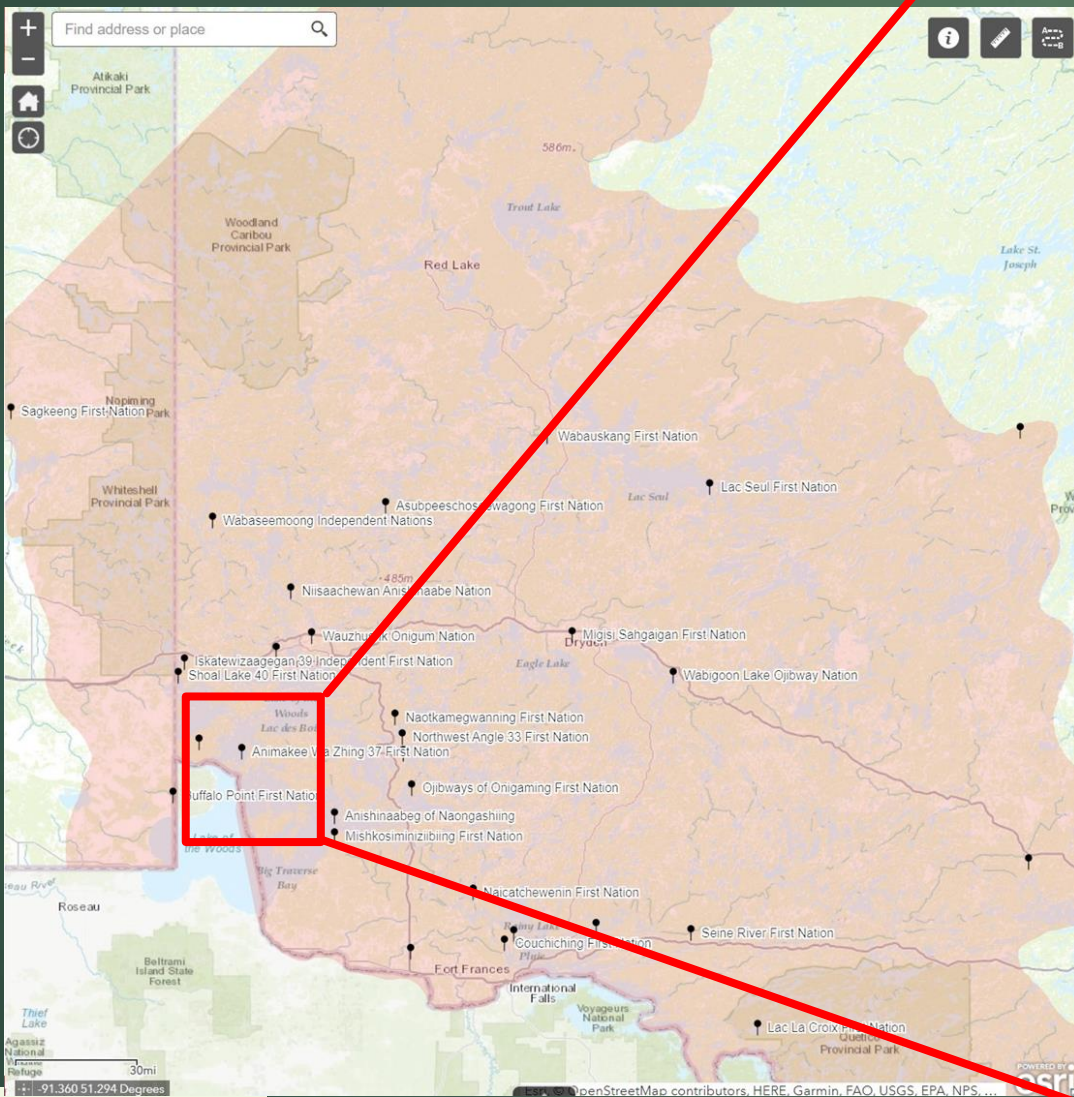
# Recommendation

1. Redefine carbon insetting:

**Intervention(s) by a company within their supply region or supply shed that are designed to generate GHG emissions reductions or carbon removals, while at the same time having measurable socioeconomic and environmental benefits.**

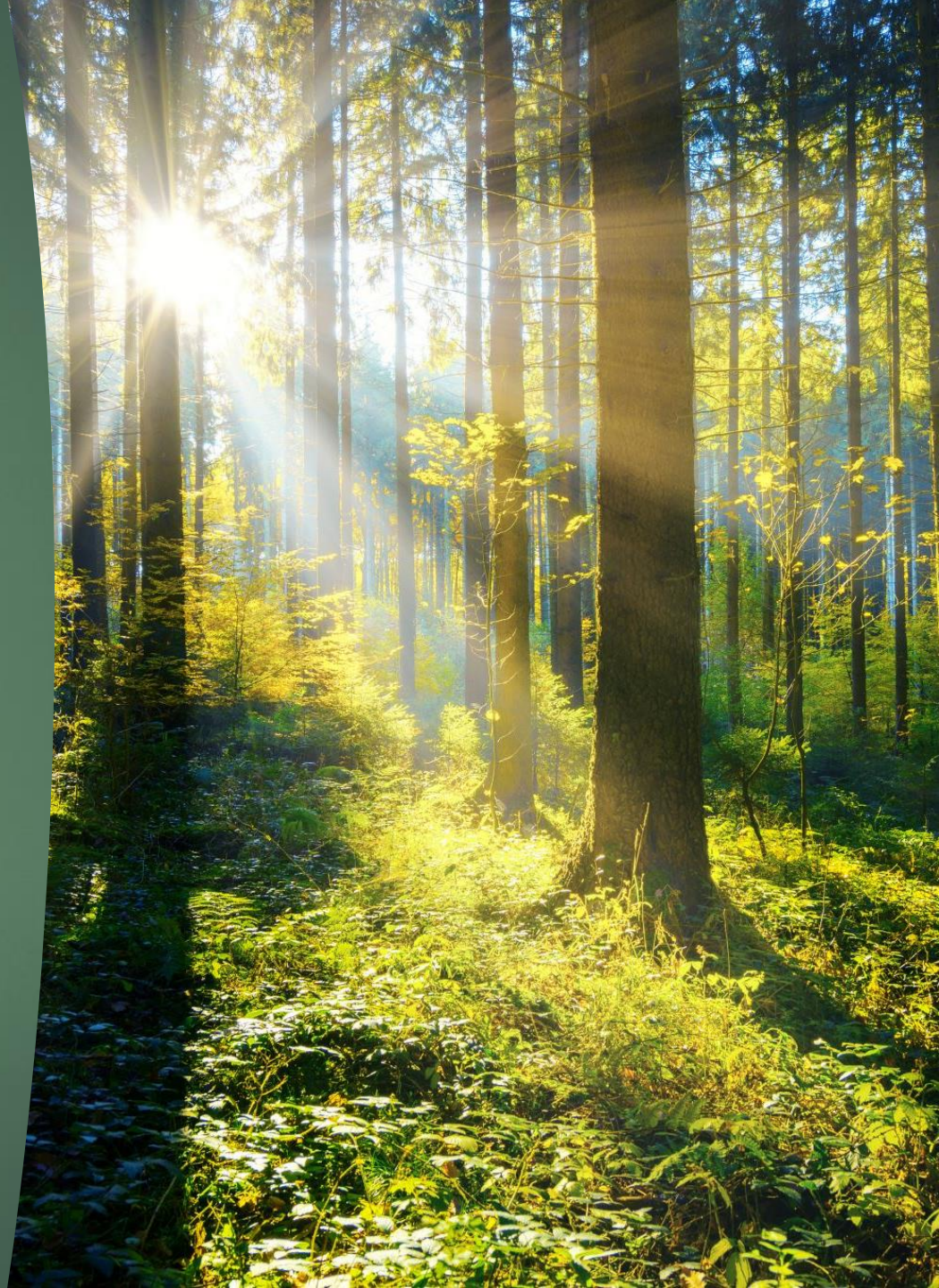
2. Interventions should be funded entirely by the forest products industry.
  - a. Forest products industry will receive 100% benefits from the intervention.
  - b. Incentivizes consumers to buy from forest products company because credits from interventions will travel through the supply chain and should be proportional to the amount of product purchased.

# Supply Shed Interventions



# NIPF Owners: An Untapped Opportunity?

Nonindustrial private forest (NIPF) owners hold more than a third of the forested land in the United States, which accounts for **39% or approximately 5.5 billion metric tons of aboveground carbon storage** in the U.S. This untapped carbon store could potentially help the forest products industry achieve their commitments to reducing Scope 3 emissions.



# Who is the Nonindustrial Private Forest Owner?

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- ▶ Owns land that has **existing tree cover or is suitable for growing trees**; and is owned by any nonindustrial private individual, group, association, corporation, Indian Tribe, or other private legal entity that has **definitive decision-making authority over the land**.
- ▶ NIPF owners often face barriers to traditional forest carbon offset programs including:
  - ▶ the low price of carbon and the high cost of market entry
  - ▶ market accessibility to NIPF landowners
  - ▶ the cost of forest management planning and certification
  - ▶ NIPF owner's land management objectives do not align with the requirements of carbon markets or registries.



# Why this could work...

- ▶ Intervention/insetting activities could use the same quantification methods as offset credits.
- ▶ Companies investing in insetting projects are better able to prove (traceability) that their investment leads to credible mitigation outcomes that they want to claim from the supply shed (so long as those projects do not extend beyond the boundaries of the supply shed).
- ▶ Incentivises investments and enables credible [co-]claiming and [co-]investments in the supply shed.

# References:

- ▶ Brandt S, Silber T. *A practical guide to inseting*; 2022.
- ▶ Greene S, Brost K, Frohlich N, Kunz J. *Carbon Insets for the Logistics Sector: Innovating carbon offset practices to accelerate freight decarbonization*; 2020.
- ▶ SBTi, 2021. SBTi-Net-Zero-Standard-Road-Workshop-2.