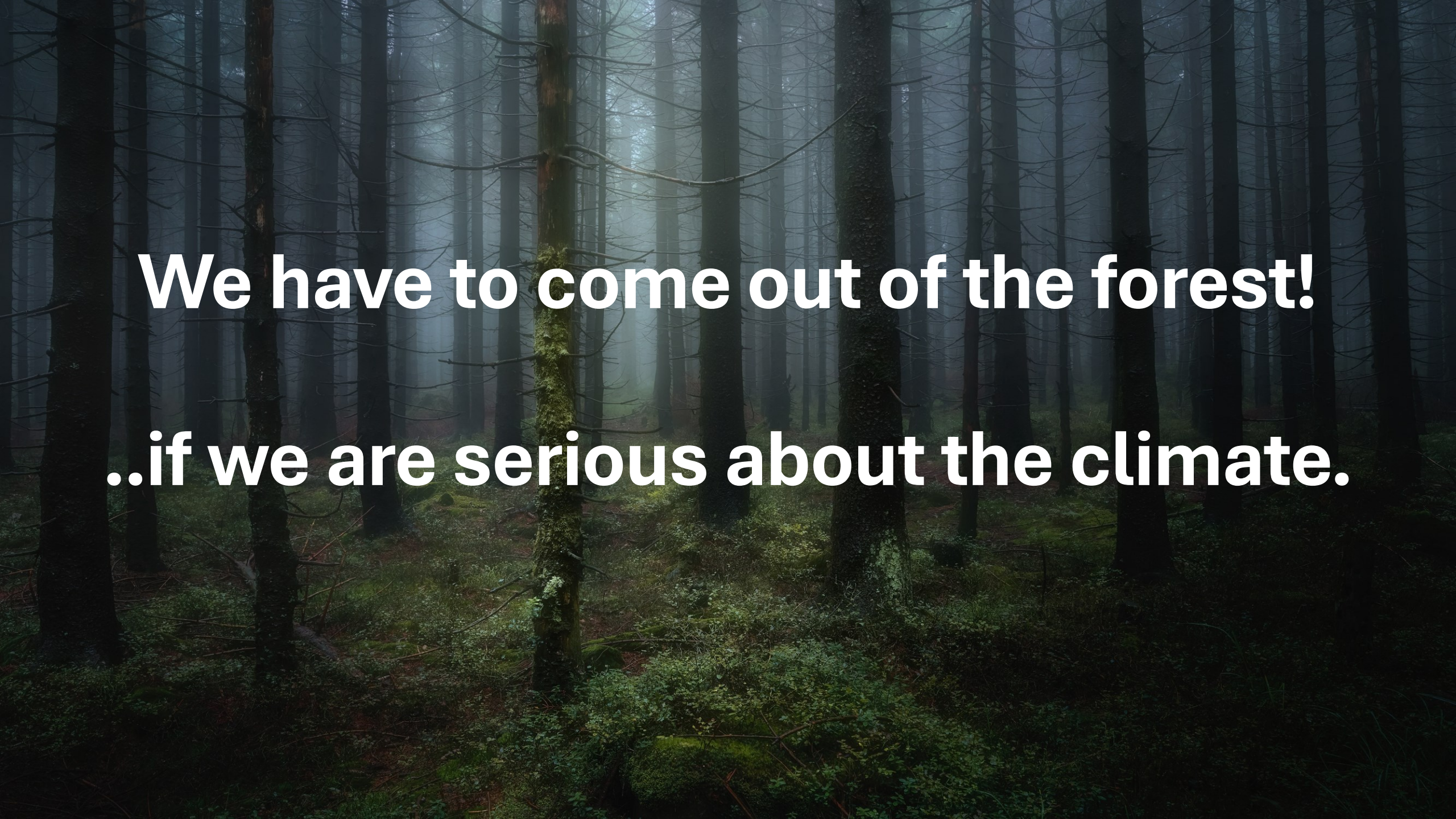
Framework for corporate climate reporting in the wood-based sector

Peter Holmgren

17 oktober 2024


We have to come out of the forest!
..if we are serious about the climate.

1. Policy frameworks, existing

Climate convention basics since 1992

Two separate climate change mitigation goals:

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Reduce emissions.

The big task.
>80% of the problem.

2.
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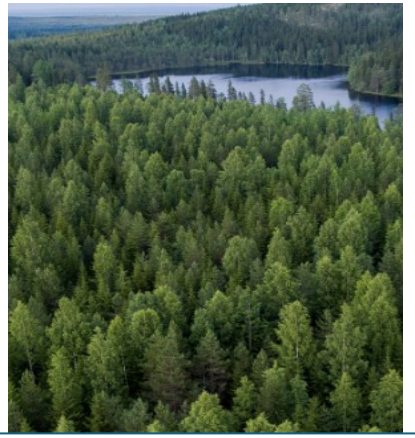
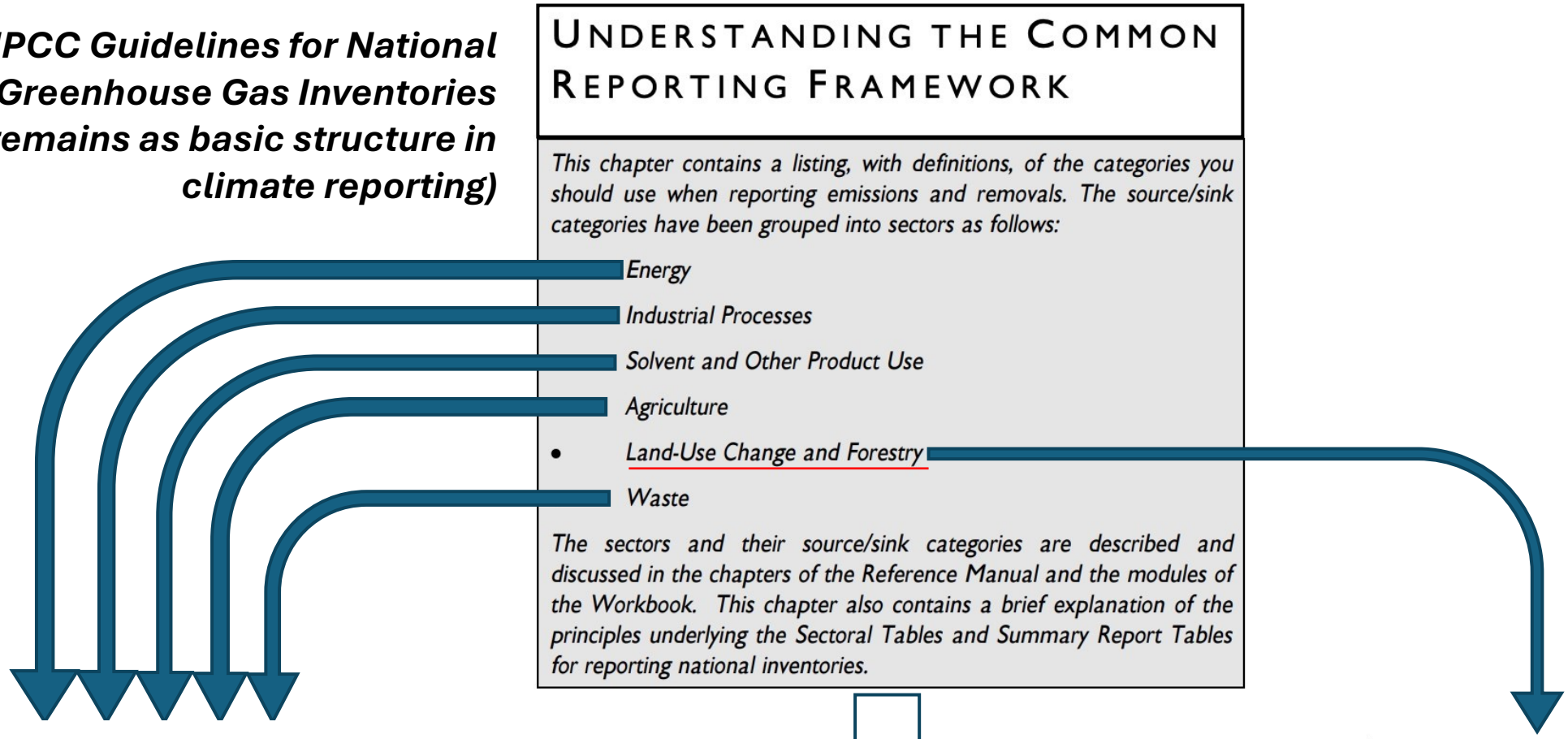


PROBLEM: Forests are only considered as a sink

SOLUTION: Forests and wood-based products serve <u>both</u> goals.

IPCC Common Reporting Framework (CRF)

1996 IPCC Guidelines for National Greenhouse Gas Inventories (remains as basic structure in climate reporting)



(c) Promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors;

(d) Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems;

Responding to 1992 UNFCCC Climate Change Mitigation objectives

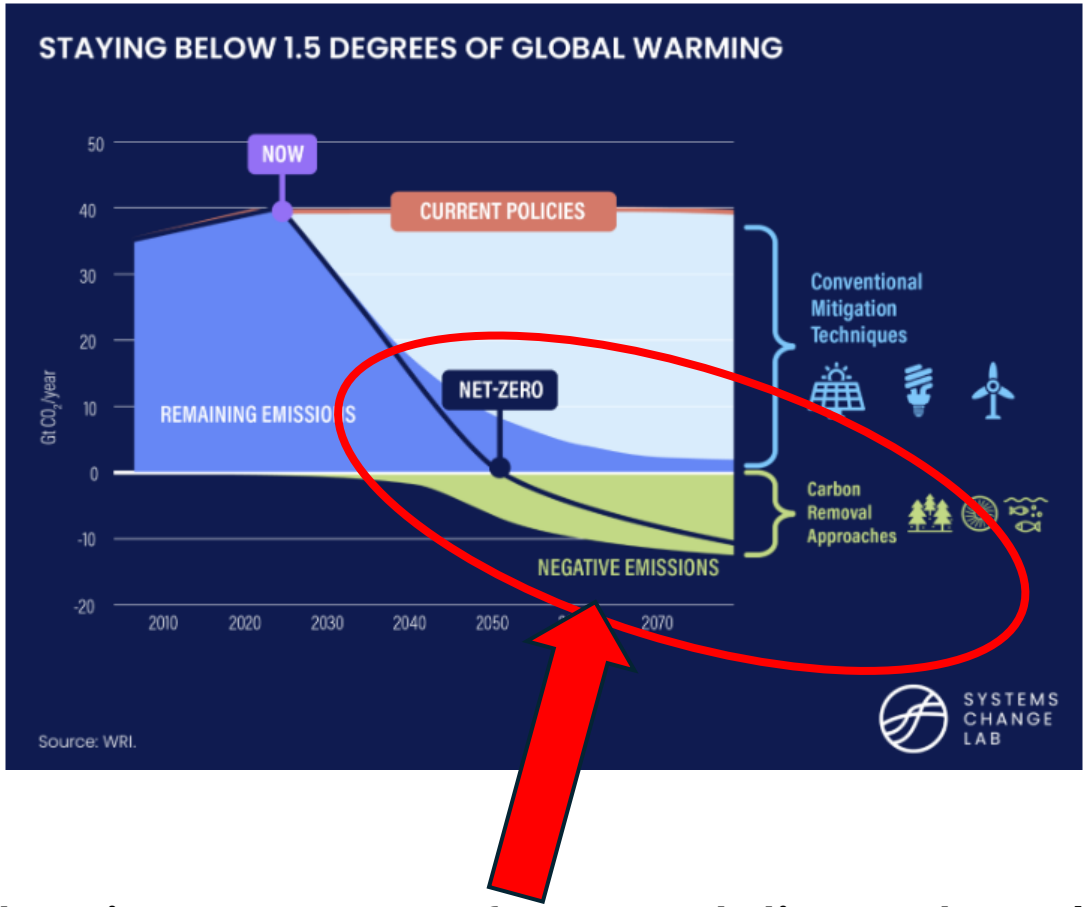
1. Reduce emissions

2. Enhance sinks & reservoirs

Paris Agreement and new **“Net-Zero”** problem

..overarching goal is to hold “the increase in the global average temperature to well below 2°C above pre-industrial levels” and pursue efforts “to limit the temperature increase to 1.5°C above pre-industrial levels.”

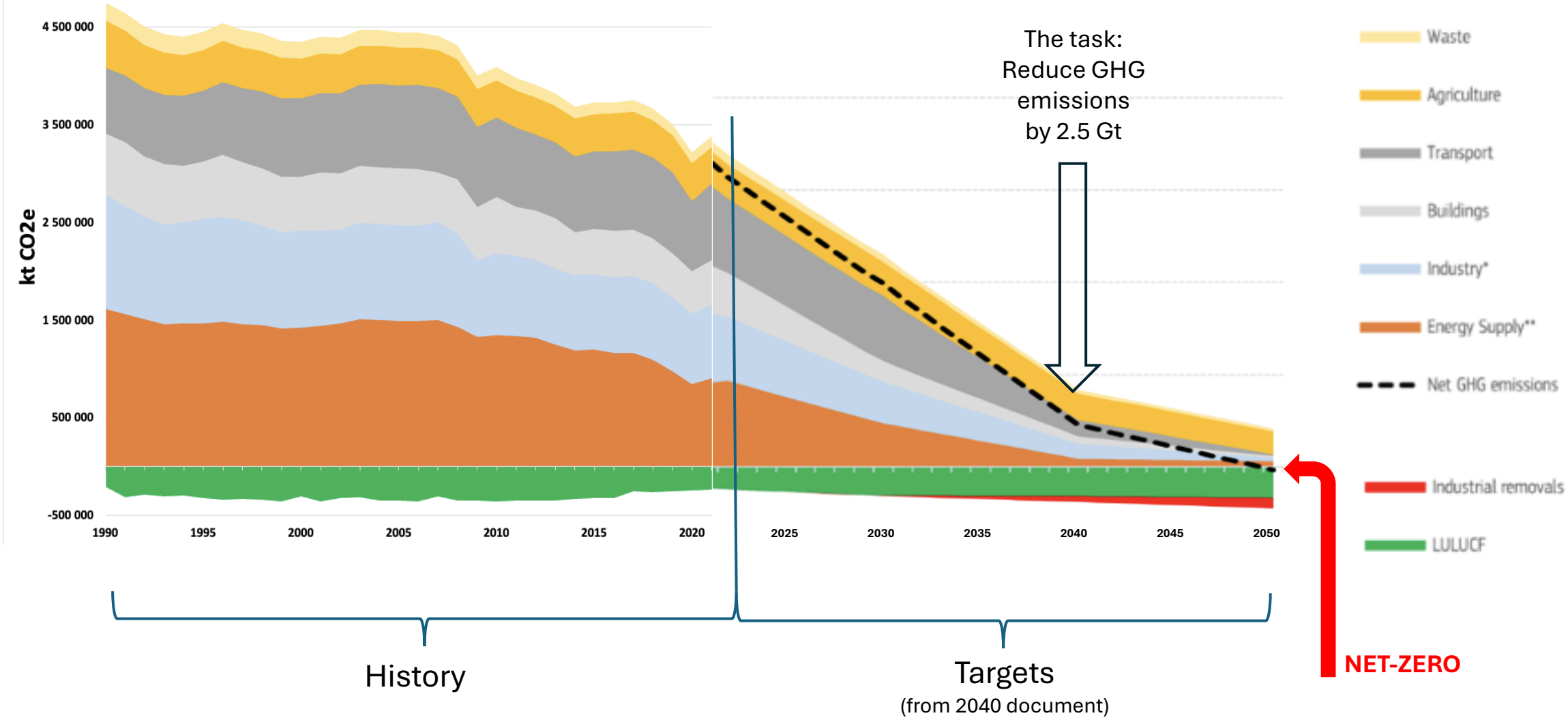
...achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century. –> **NET-ZERO**



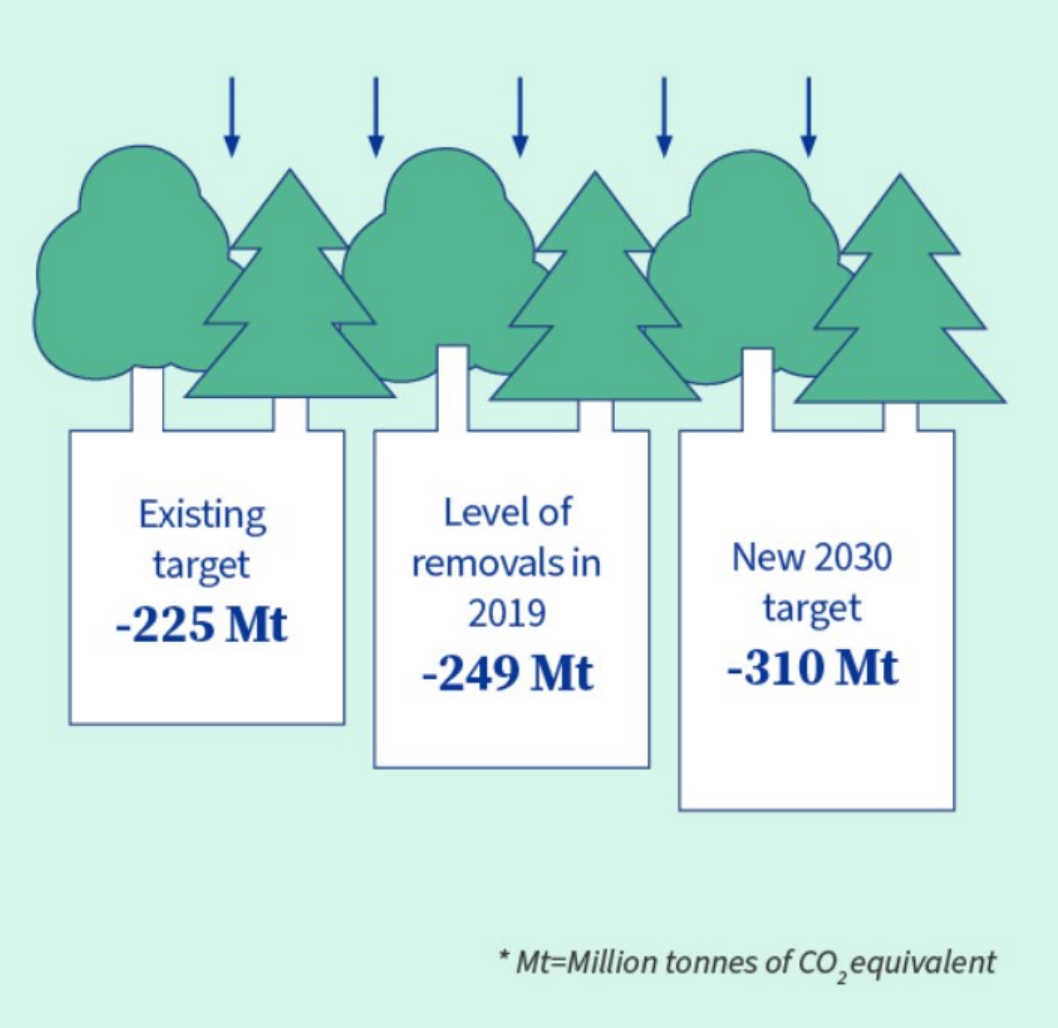
This is where it goes wrong wrt forests and climate change!

EU Climate legislation

Draft 2040 targets and the past



EU LULUCF (Land use, land use change and forestry)



- Tied to the overall climate legislation
  - To ensure **"net-zero"** through compensation of remaining GHG emissions in 2050
- Unrealistic
  - Few countries will meet targets
- Counterproductive
  - Only option in Sweden for short-term targets is drastic reduction of wood harvest.
  - Which will result in
    - leakage,
    - less C in products and
    - more fossil emissions

Swedish climate law 2017

Sweden's Climate Act and Climate Policy Framework

In 2017 Sweden adopted a new climate policy framework. The framework consists of a climate act, climate targets and a climate policy council. Sweden's long-term target is to have zero net greenhouse gas emissions by 2045 at the latest.

Supplementary measures

To achieve the target of zero net emissions of greenhouse gases by 2045 and the milestone targets by 2030 and 2040, supplementary measures may be utilized, such as:

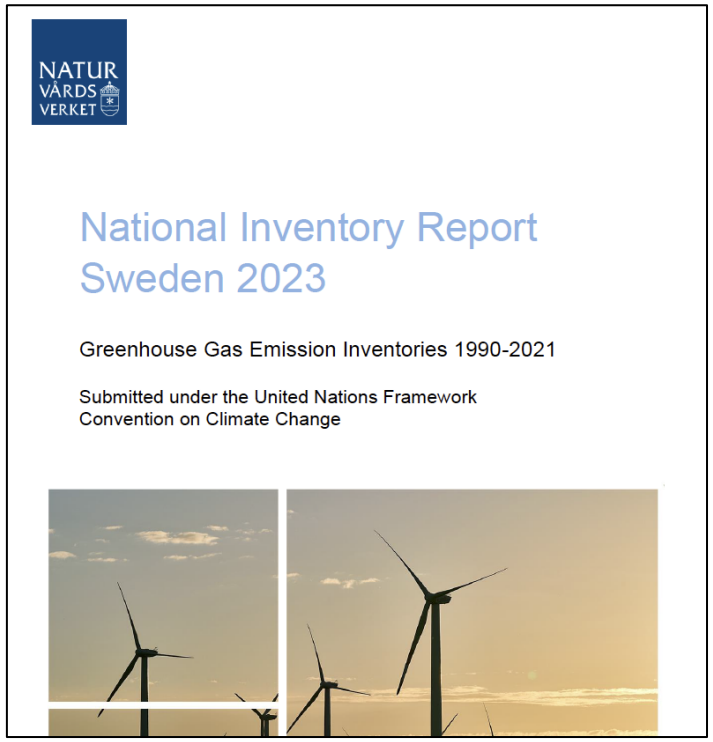
- increased uptake of carbon dioxide by forests as the result of additional measures;
- verified emission reductions carried out outside the Swedish borders; and
- carbon capture and storage based on the combustion of biomass, known as bio-CCS.

2. Reporting frameworks, existing

2 examples

National Inventory Reports

- Annual reports by “Annex 1” countries
- Defined by national boundary
- Uses CRF format (still)
- LULUCF is included, but excluded from totals


NATUR VÅRDS VERKET

National Inventory Report Sweden 2023

Greenhouse Gas Emission Inventories 1990-2021

Submitted under the United Nations Framework Convention on Climate Change

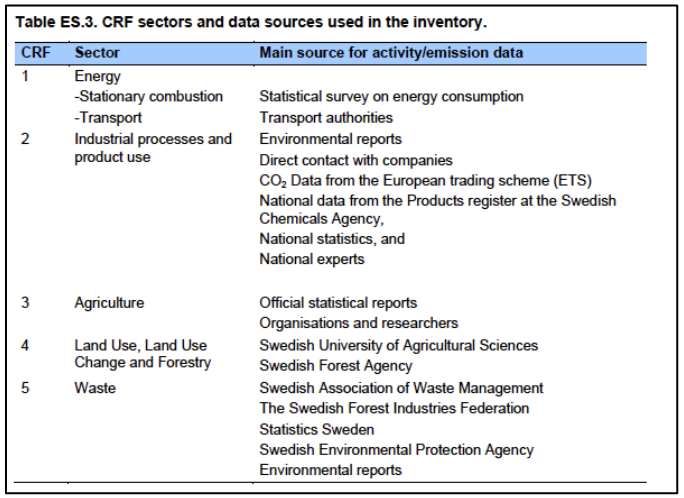
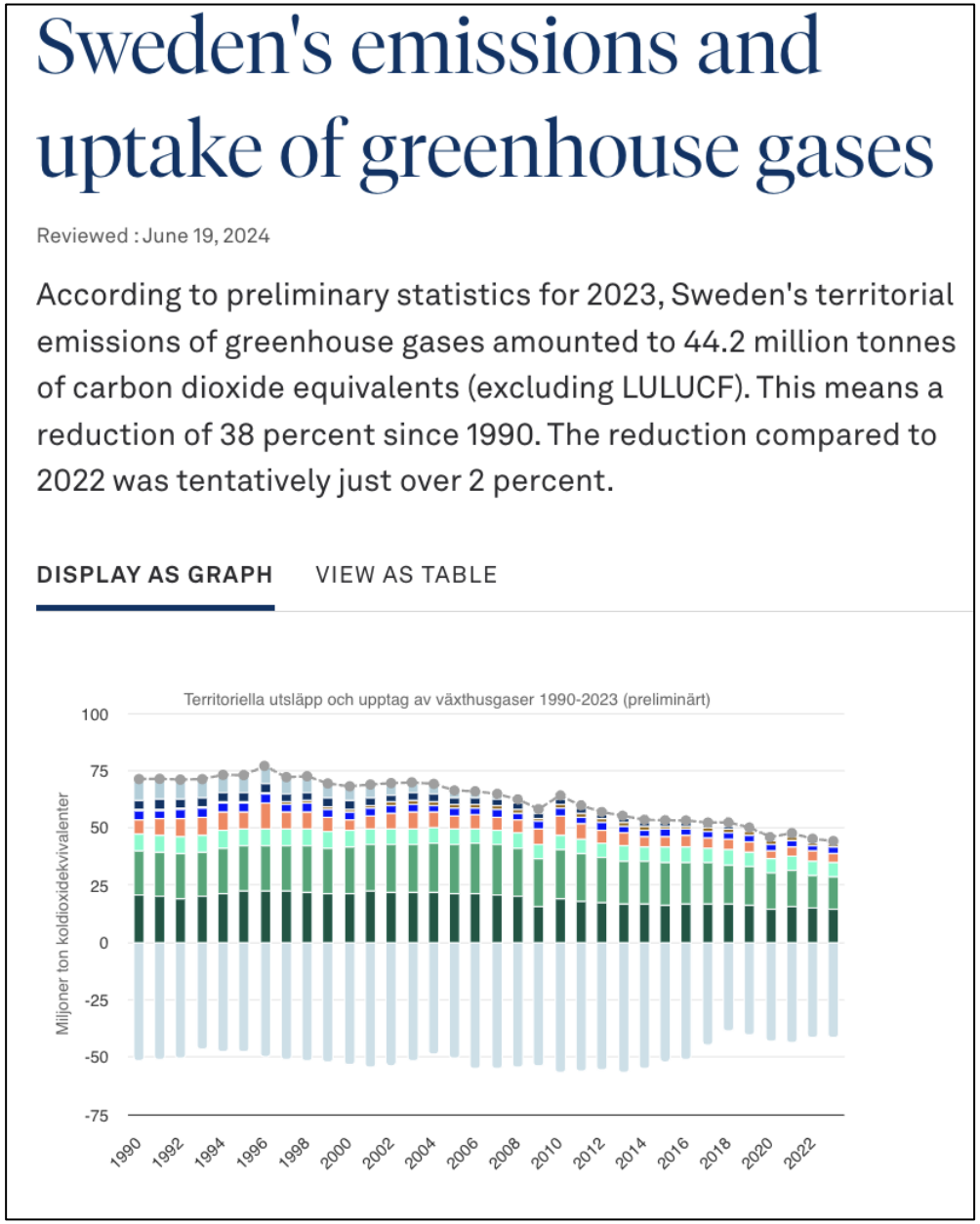


Table ES.3. CRF sectors and data sources used in the inventory.

CRF	Sector	Main source for activity/emission data
1	Energy	
	-Stationary combustion	Statistical survey on energy consumption
	-Transport	Transport authorities
2	Industrial processes and product use	Environmental reports Direct contact with companies CO_2 Data from the European trading scheme (ETS) National data from the Products register at the Swedish Chemicals Agency, National statistics, and National experts
3	Agriculture	Official statistical reports Organisations and researchers
4	Land Use, Land Use Change and Forestry	Swedish University of Agricultural Sciences Swedish Forest Agency
5	Waste	Swedish Association of Waste Management The Swedish Forest Industries Federation Statistics Sweden Swedish Environmental Protection Agency Environmental reports


Sweden's emissions and uptake of greenhouse gases

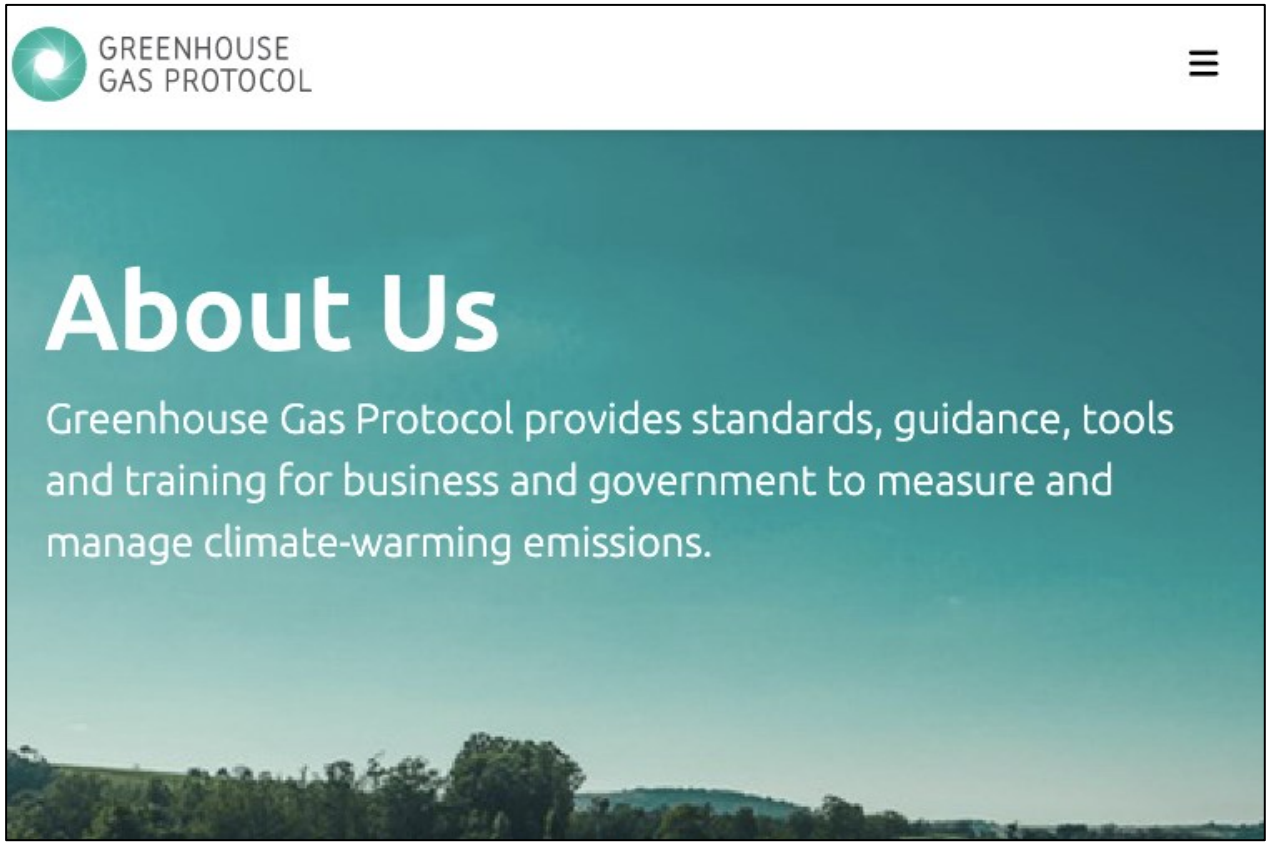
Reviewed : June 19, 2024

According to preliminary statistics for 2023, Sweden's territorial emissions of greenhouse gases amounted to 44.2 million tonnes of carbon dioxide equivalents (excluding LULUCF). This means a reduction of 38 percent since 1990. The reduction compared to 2022 was tentatively just over 2 percent.

DISPLAY AS GRAPH VIEW AS TABLE

Greenhouse Gas Protocol

- Corporate reporting
- *de facto* “standard”
- Emissions Scope 1-3
  - Addresses only the emission goal
- Attempts to include “land emissions”
  - cf LULUCF
  - Contested approach, issues on governance



3. What’s NOT in above frameworks?

Existing frameworks are siloed

- Missing: Impact in other sectors
  - For example when wood-based products help reduce emissions in housing, transportation, food system, energy.
  - Practically all wood-based products are used in other sectors.

- Missing: Impact in other countries/jurisdictions
  - For example when wood-based products are exported and help reduce emissions in other countries.
  - 85% of Sweden’s wood-based products are exported

Interference for forest-climate solutions

- Counterproductive policy
  - LULUCF
- Counterproductive advocacy
  - Wrong: “Synergy between conservation for biodiversity and forest contribution to climate solution”
- Focus on less significant factors
  - “long-lived products” (only refers to sink/storage, not emission reduction)
- Less focus on forest growth
  - Focus on carbon storage and reducing harvest will reduce carbon uptake, which in turn reduces opportunities for solutions.

4. So what do we do?
A new reporting model.

Recall: Climate convention basics since 1992

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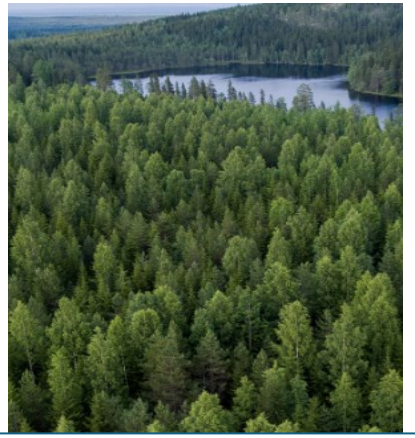

PROBLEM: Forests are only considered as a sink

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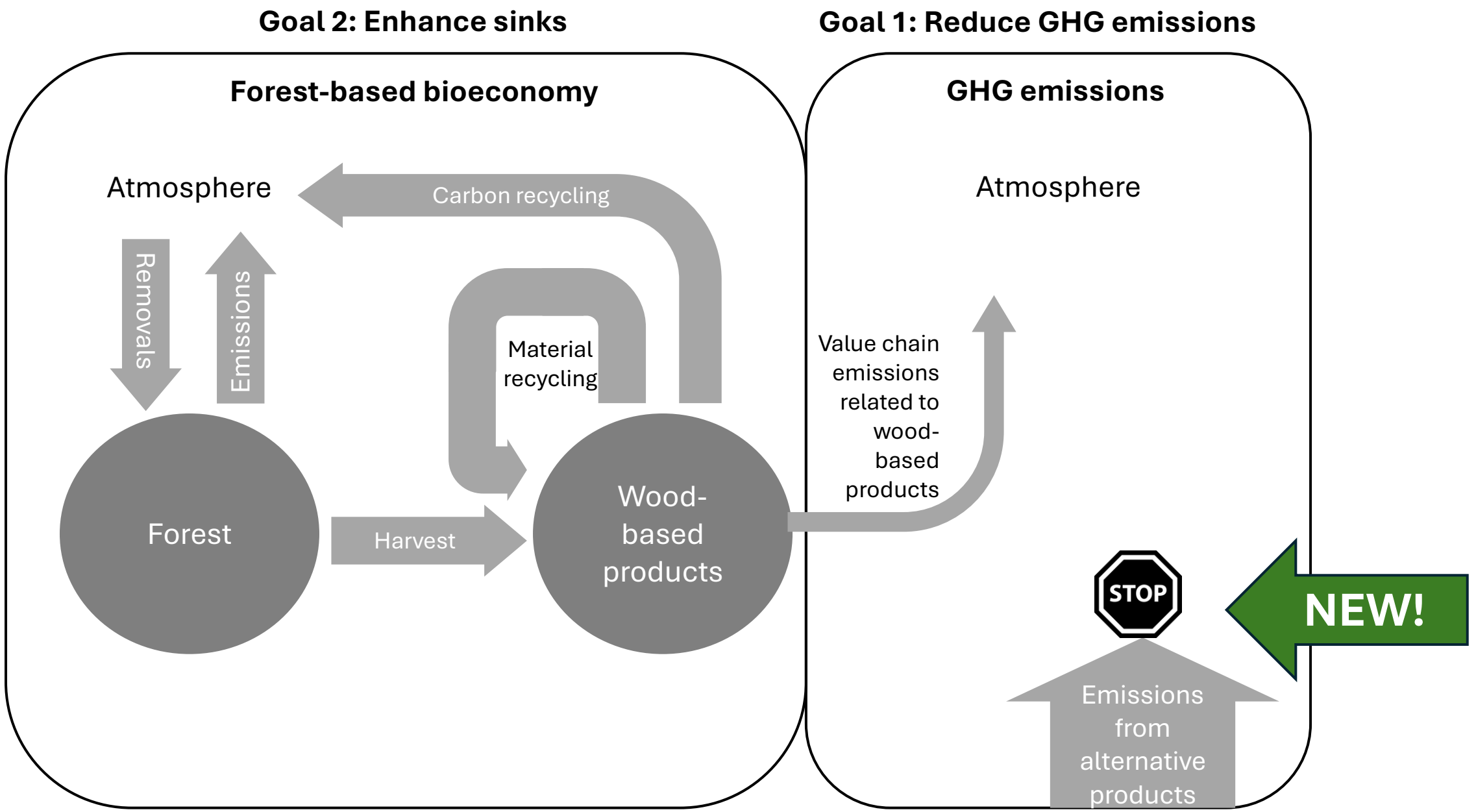
Towards a complete model



Four component model for corporate reporting

Forest carbon

Living biomass
- above ground
- below ground

Deadwood
Litter
Soil organic matter

Wood-based carbon

Harvested Wood Products (HWP)

Wood-based value chain

GHG emissions

Counterfactual non-wood value chain

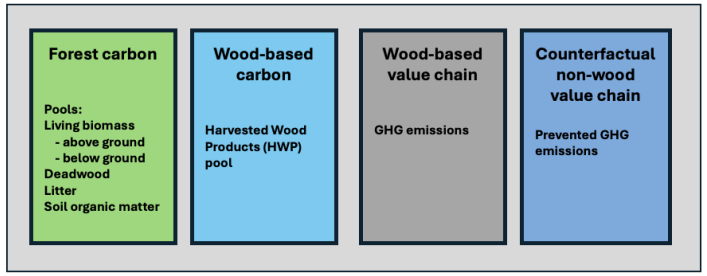
Prevented GHG emissions

Enhance sinks ⟷ **Reduce emissions**

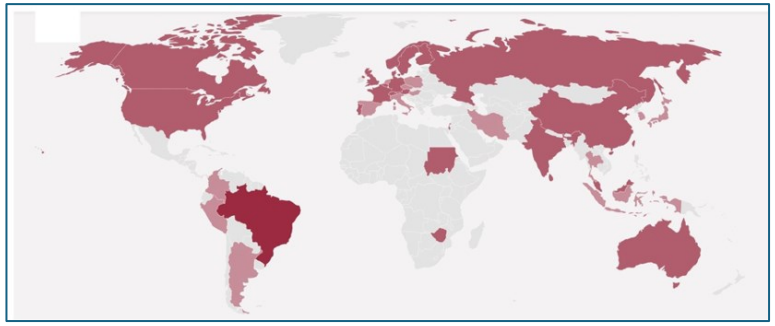
= Overall Climate effect

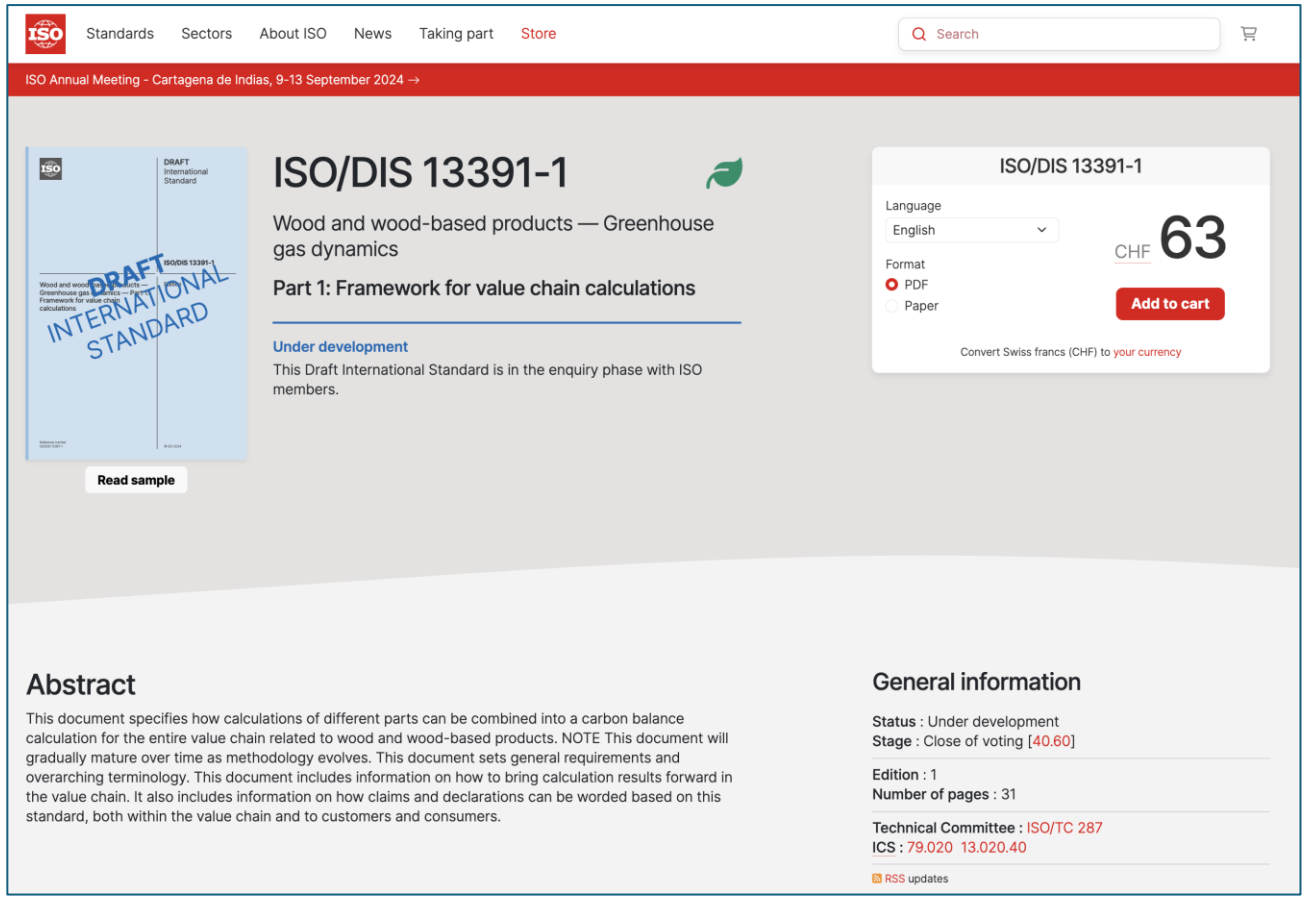
ISO 13391 approved, to be published early 2025

Greenhouse Gas dynamics of Wood and Wood-based Products



Participating countries:

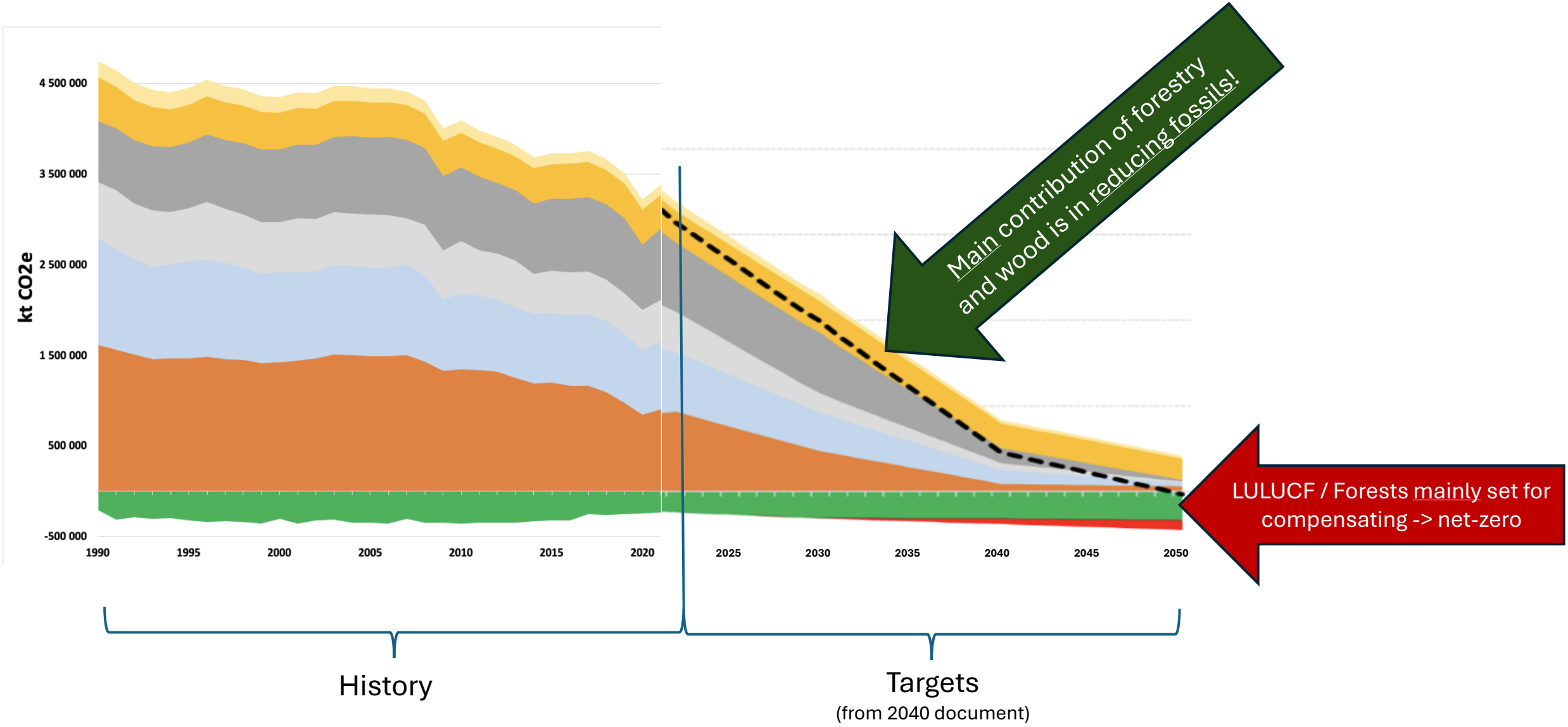




5. This gives us a new perspective

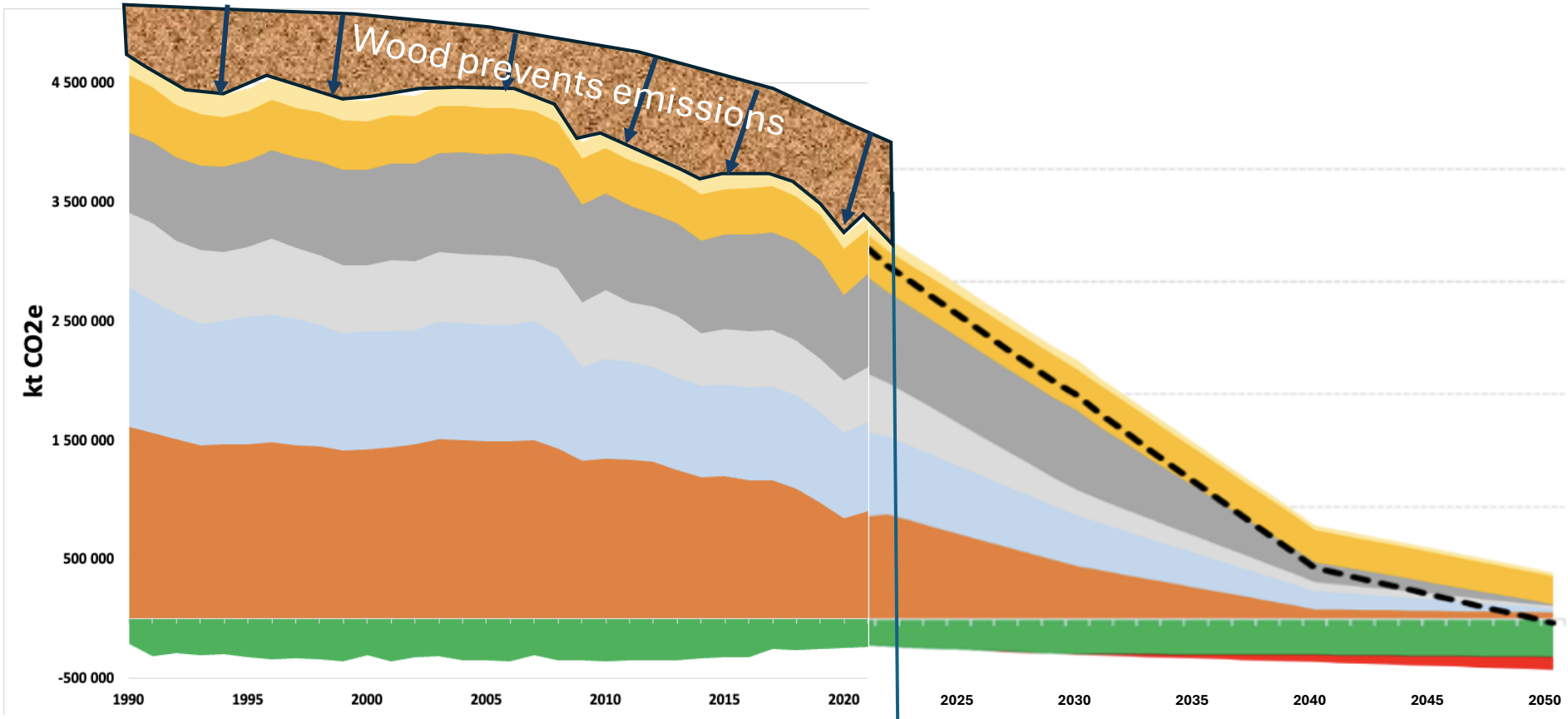
Recall, EU 2040 targets: It's the fossils we must focus on!

Forests and the bioeconomy are major factors for succeeding in other sectors!



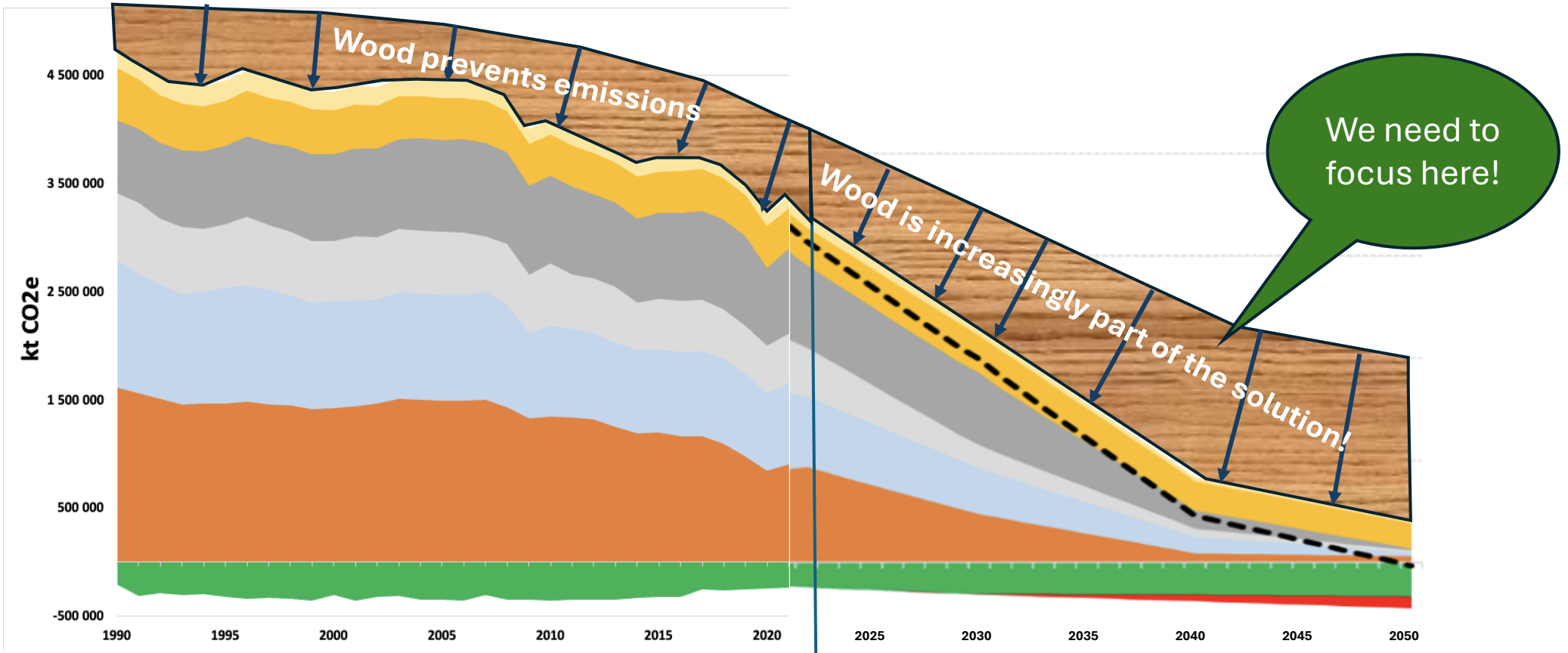
The wood-based sector already massively prevents GHG emissions

Without wood-based products, GHG emissions would be much higher!

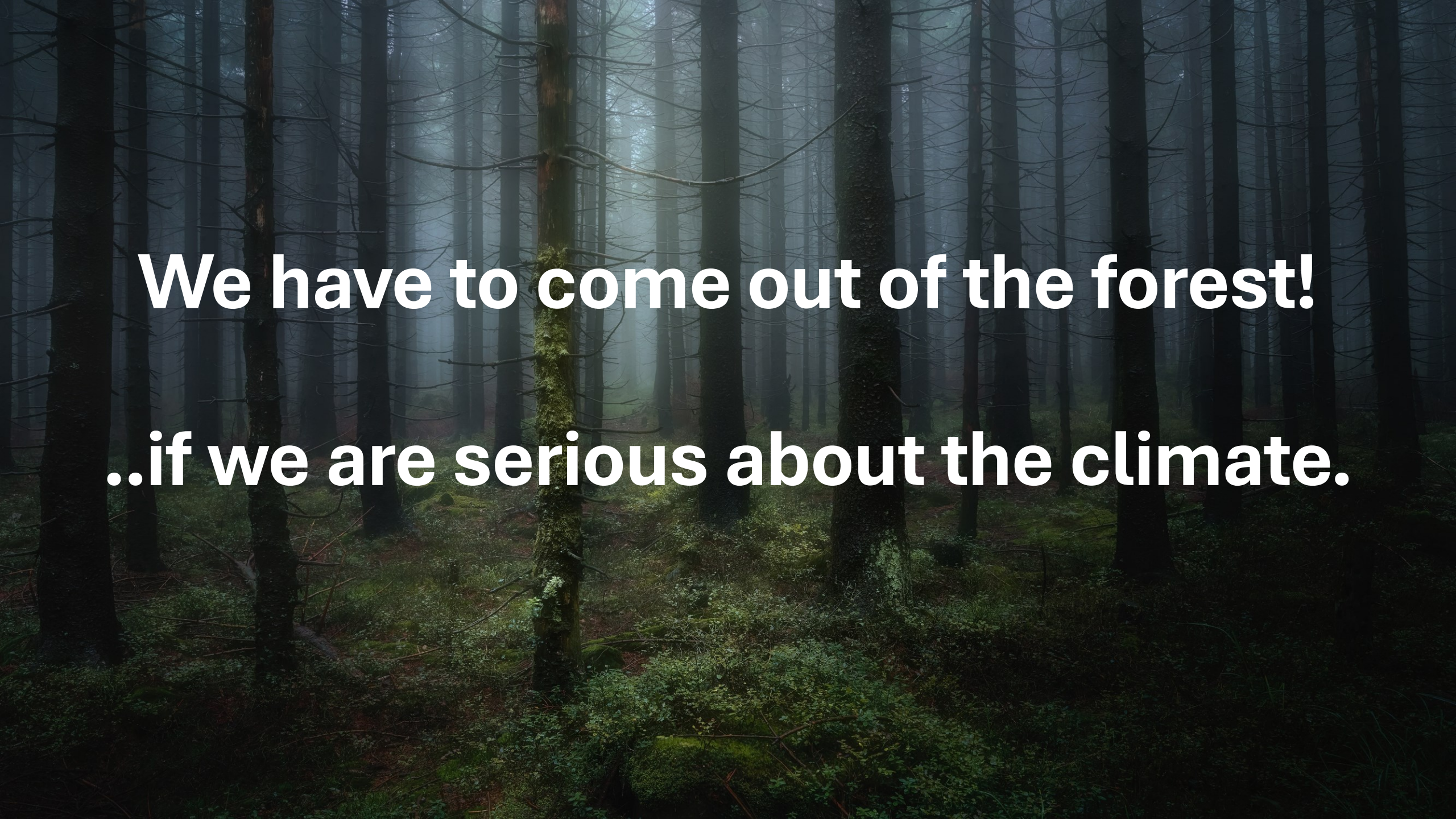


What is the potential future contribution of wood-based products?

More wood, more efficient value chains and new user solutions can raise the bar!



Three take homes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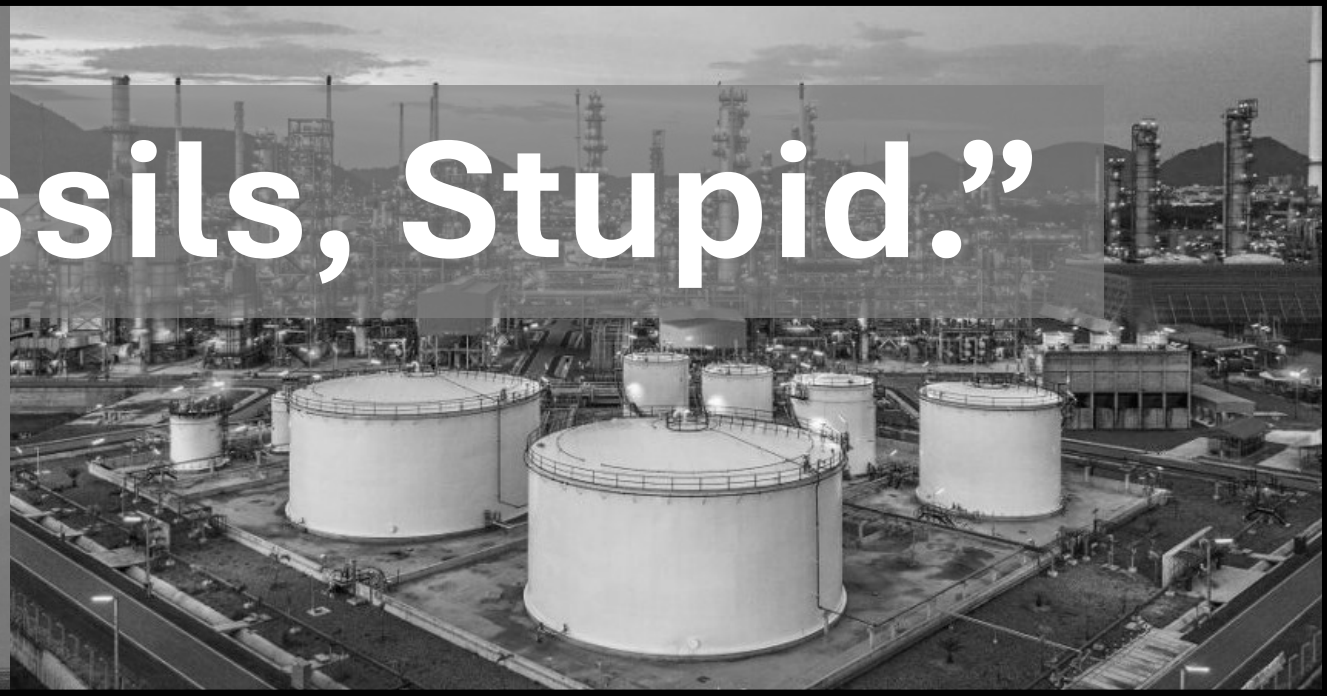

“It’s the fossils, Stupid.”

Forests can help reduce our fossil addiction!

SOLUTION: Four component model

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ISO standard