

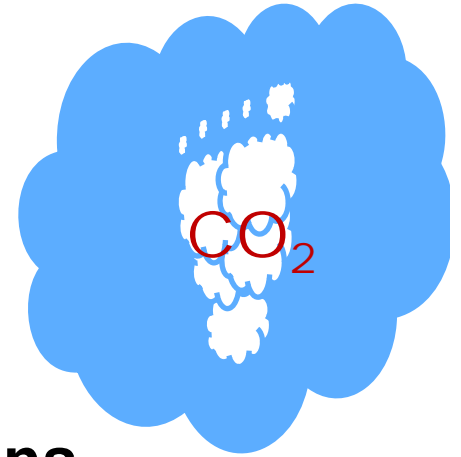
# CARBON FOOTPRINT OF WOOD PRODUCTS – METHODOLOGICAL ISSUES AND SOME EXAMPLES FROM NORWAY

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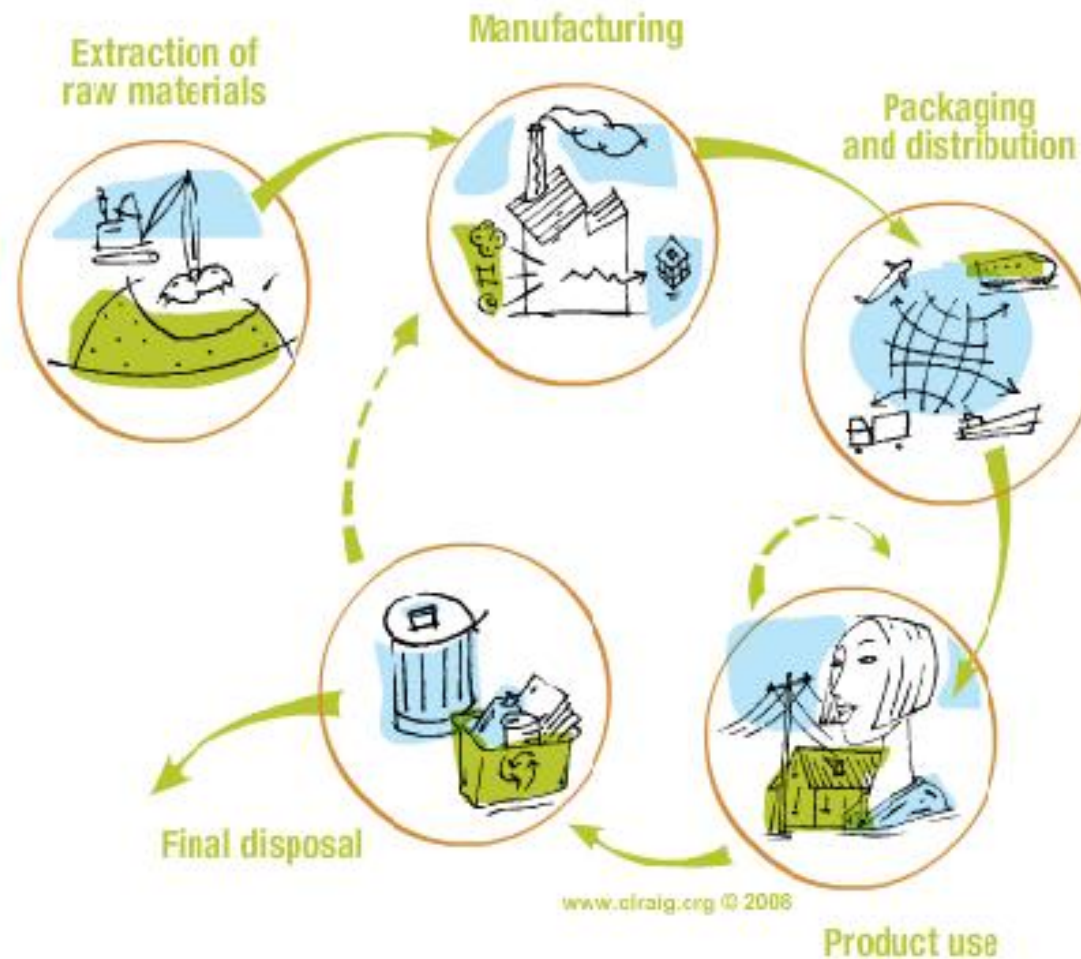
# Carbon footprint of a product

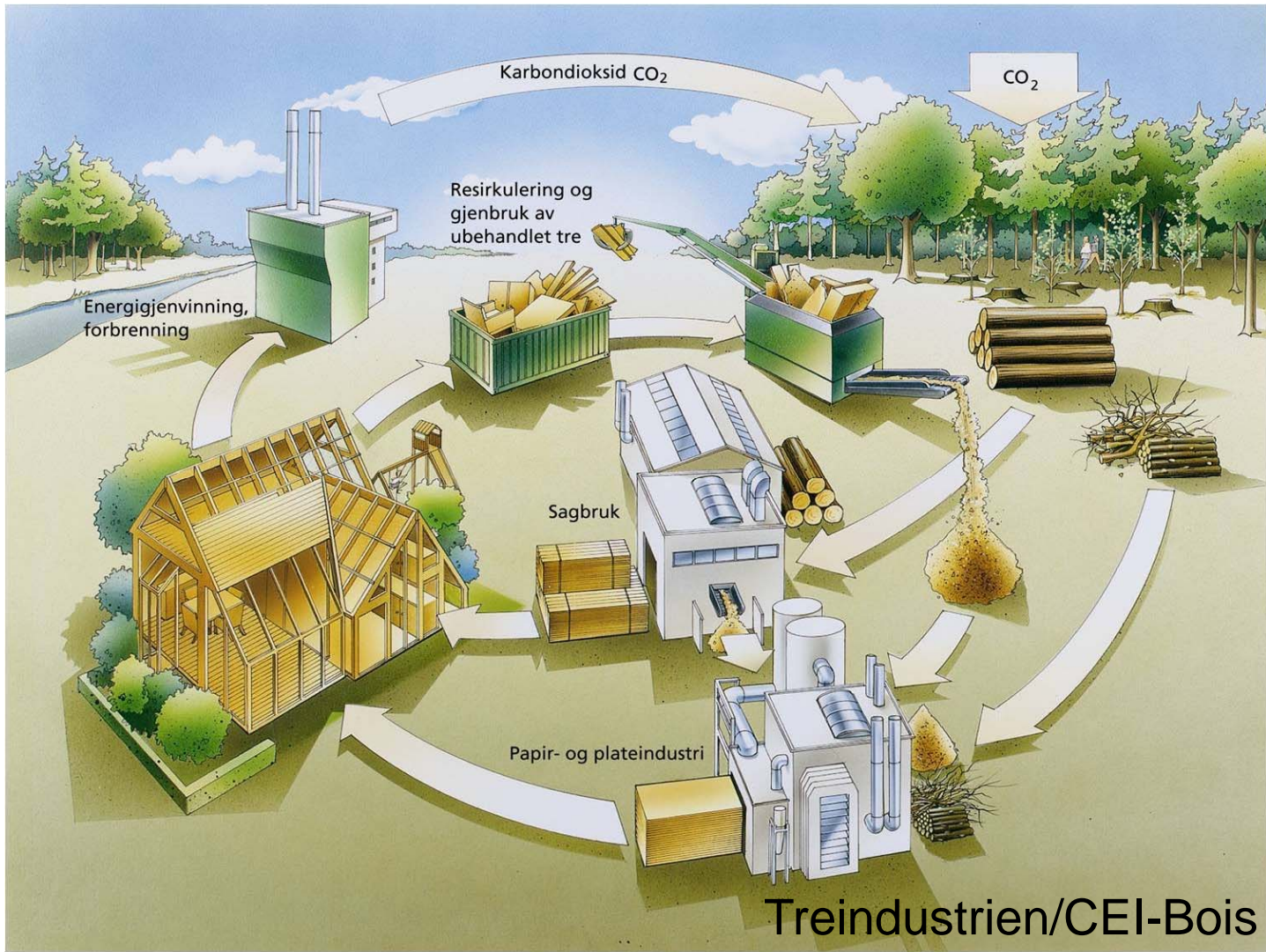


- **sum of greenhouse gas (GHG) emissions and GHG removals of a product system, expressed in CO<sub>2</sub> equivalents based on a life cycle approach**
- **includes not only CO<sub>2</sub>, but also other gases listed by IPCC (e.g. methane, nitrous oxide)**
- **expressed in CO<sub>2</sub> equivalents for a given time horizon (normally 100 years)**

# LCA covers all life cycle stages

## The life cycle of a product

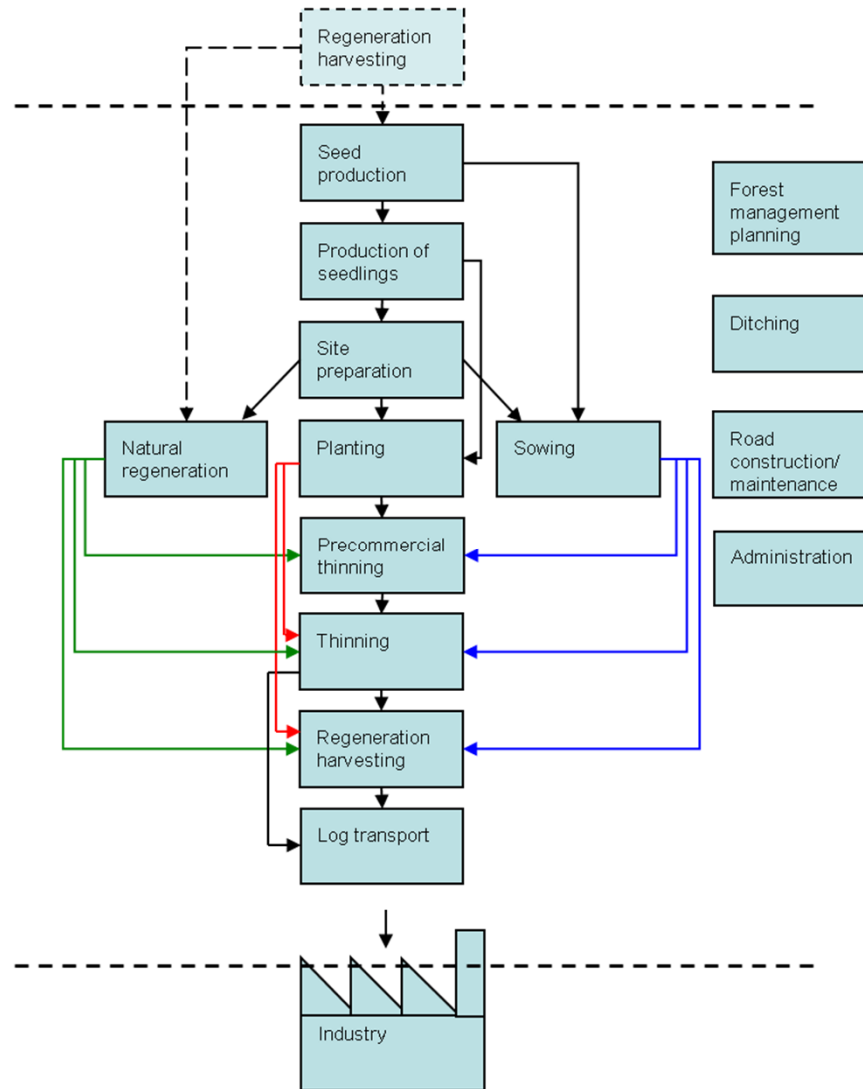




Treindustrien/CEI-Bois

# Complex sub-systems

## Forestry



# Challenges

- **Many methodological aspects can influence the results significantly, and thereby impede comparison of different products**
  - e.g. system boundaries, allocation, etc
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# Solution

- **Product Category Rules (PCR):**
  - **set of specific rules, requirements and guidelines for developing type III Environmental Product Declarations (EPDs) for one or more product categories**
  - **ensures a fair comparison of products**

# Product examples from Norway

Sawn timber



Interior cladding



Structural timber



Cu impregnated timber



Gluelam



CLT



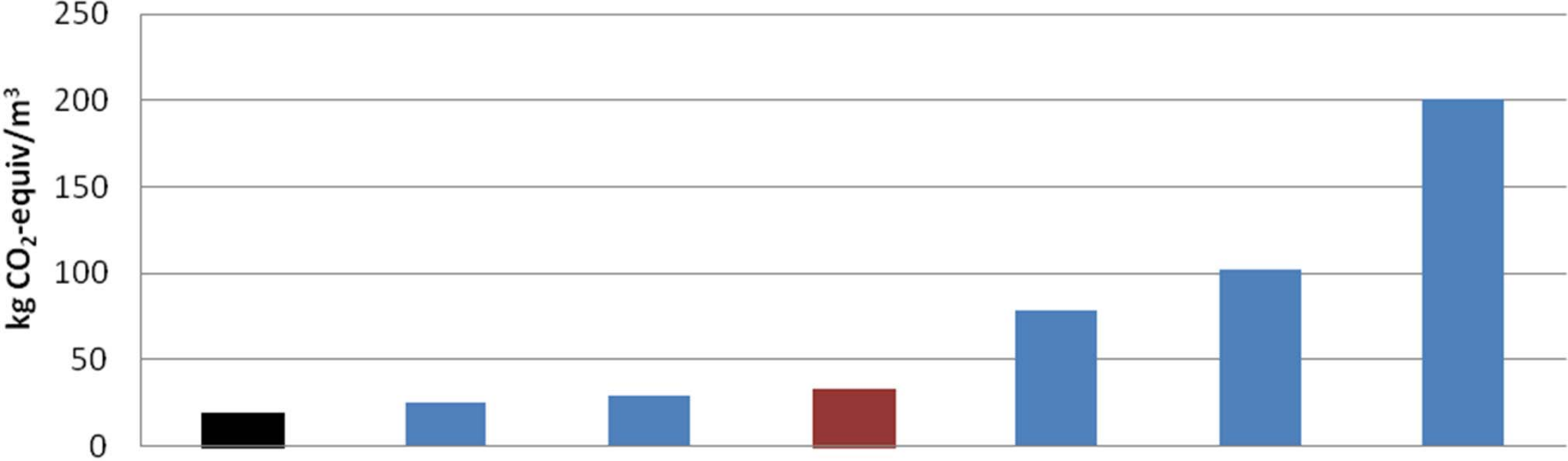
Exterior cladding



## About the results

- **Extracted from Environmental Product Declarations (EPDs) developed according to ISO 14025, ISO 14044, ISO 21930 and NPCR 015 Solid Wood Products**
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- **Includes all life cycle stages (except sawn timber and Cu preservative treated timber)**
  - **from tree seedling to end of life**
- **GHG removals or emissions related to biogenic carbon are not accounted**

# GWP<sub>100</sub>



Sawn timber

Interior cladding (untreated)  
ESL: 30 years

Structural timber  
ESL: 60 years

Cu-impregnated timber

Gluelam  
ESL: 60 years

Cross laminated timber  
ESL: 60 years

Exterior cladding (coated)  
ESL: 50 years

- The EPDs can be downloaded at [www.epd-norge.no](http://www.epd-norge.no)
- Ongoing project: KlimaTre (Climate Wood)
  - More information at: [www.klimatre.no](http://www.klimatre.no)

