

# Towards a horizontal framework for a European climate label for products

## - The potential for one clear and simple standard

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Future of Science and Technology (STOA)

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# Content of presentation

- Current ISO climate labelling standards
- Different interpretations of the standards
- Mixing different interpretations
- The EU Product Environmental Footprint (PEF) method
- The perverse effects of Product Category Rules (PCRs)
- Other current limitations in PEF method
- Recommendations

# Current ISO climate labelling standards

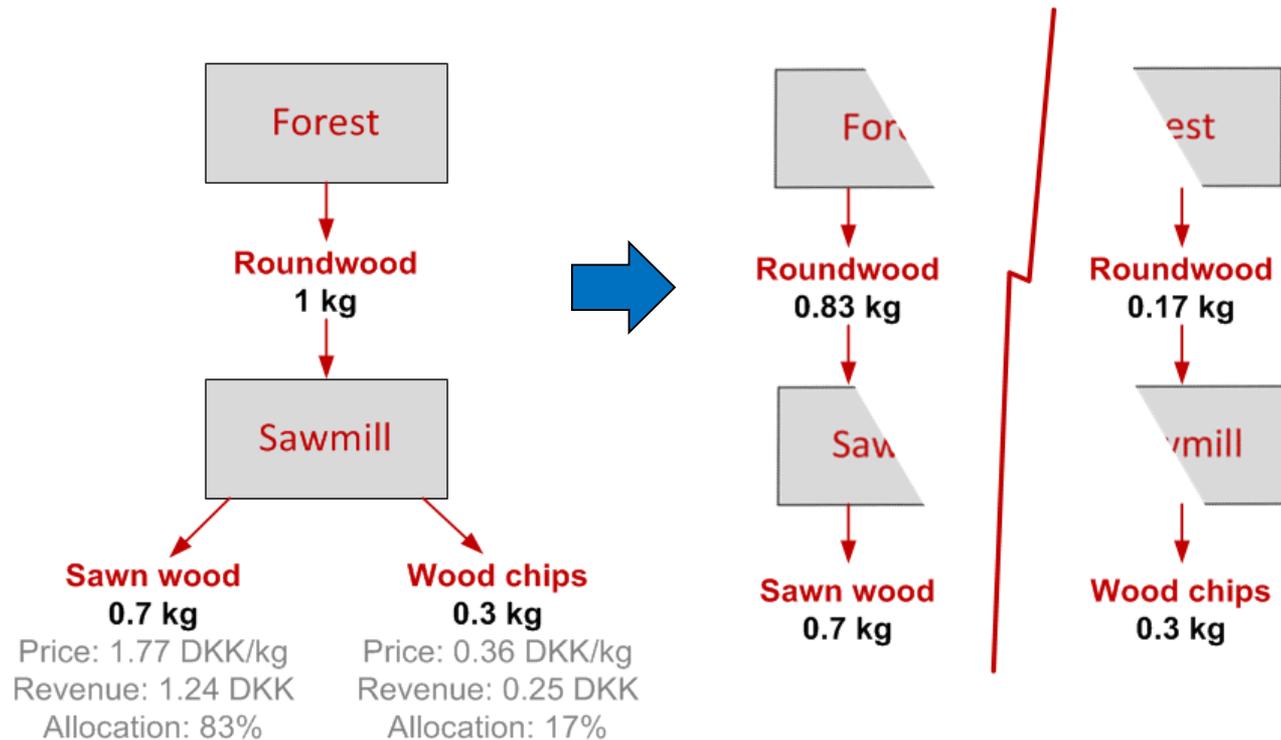
- Many standards and guidelines exist for climate labelling of products, but at the ISO level the following are most pertinent:
  - ISO 14021-14027 on Environmental labels and declarations
  - ISO 14067 on carbon footprint of products
- Both of these are based on the core standard:
  - ISO 14044 on Life Cycle Assessment – Requirements and guidelines
- ISO 14044 remains the most consistent collection of requirements for how to perform a Life Cycle Assessment (LCA)
- As part of the ISO 14000 series of standards on Environmental Management, the focus is on continuous environmental improvements
- Unfortunately, ISO 14044 is often interpreted in ways that runs against the original intention of supporting improvements

# Different interpretations of the standards

- Continuous improvement requires a model that includes the activities that actually change as a result of a change in demand
- The procedure to identify this is described in ISO 14044 Annex D.2.1
- This type of modelling has become known as **consequential**
  
- An **attributorial** model, on the other hand, is typically described as the **value chain** or “an account of the history of the product” (ISO 14040 Annex A.2)
- The results from attributional models are not applicable for decision-making for environmental improvements, since they:
  - do not include all affected activities,
  - include irrelevant activities that cannot react to changes in demand,
  - subdivide joint production activities, leading to violation of physical conservation laws

# Partitioning (allocation) of joint production

*- Mass balances are not preserved*



# Mixing different interpretations

- Often, the consequential and attributional interpretations are confused and not understood to be distinct
- They are therefore often mixed within the same standard or study, giving irrelevant, non-comparable, and intransparent results
- Size of problem: Even when using the same database, the choice of method has been shown to give order of magnitude differences in results, and even sign changes
- Extent: All methods used by current labelling programmes mix consequential and attributional modelling elements

# The EU Product Environmental Footprint

- The EU Product Environmental Footprint (PEF) method was originally developed as another attempt at harmonising the calculation rules
- However, also the PEF method currently mixes consequential and attributional modelling elements
- Furthermore, PEF applies the concept of Product Category Rules (PCRs), which allows each product group to have its own rules
- This limits comparability between product groups (such as beef and vegetables or cars and trains)

# Perverse effects of Product Category Rules

- Example: Brewery by-products used as pig fodder

PEFCR for beer: 100% to beer; 0 impacts to pigs

Process	Allocation rule	Modelling instructions
Processing of crops to beer ingredients	Economic allocation	Economic allocation shall be conducted with allocation factors calculated based on the company-specific data <i>or</i> based on the accompanying MS Excel file of the feed PEFCR when no company-specific data is applied.
Distribution	Physical allocation	Allocation of transport emissions to transported products shall be done on the basis of physical causality, such as mass or volume.
Malting	No allocation	Avoid allocation, by putting 100% of the impact on beer if the co-products are used for animal feed purposes <sup>19</sup> .  Use the Circular Footprint Formula in all other cases. (e.g. discharged to a pond, landfilling).

0 or 0.8 kg CO<sub>2</sub>-eq. per kg feed?



→ no incentive for brewery to send to recycling;  
→ pigs look more climate friendly than they are

PEFCR animal feed: Pigs take an economic share of impacts of beer production

Processing of feed	Economic allocation	Economic allocation shall be conducted
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→ irrelevant activities (beer production) included in pig production

# Unjustified use of Product Category Rules

- Current PCRs show significant differences in conformance with ISO standards (Bath 2020)
- Most PCRs have different approaches to allocation, specific modelling requirements, primary data requirements, or specific inclusions/exclusions
- No rationale is provided for why these aspects of the PCRs are, or need to be, different
- PCRs currently include many requirements that are unnecessary and could be (or are already) better addressed at the general level of standards for all products

# Other current limitations in PEF method

- Unnecessary or unnecessarily complicated requirements in PEF:
  - Requiring primary data for parts of life cycle where there are no direct supplier relations
  - Data quality and reporting requirements that could better be covered by open and automated data handling and access
- The completeness requirements of ISO 14044 Clause 4.3.3.4 (only excluding unit processes without significance) is not followed
- No clear and practicable requirements for treatment and reporting of uncertainty on data and results

# One clear and simple PEF standard

In spite of the current limitations, there are no technical barriers to make a clear and simple standard for PEF, by introducing the following changes:

- **Improving methodology** to consistently follow a consequential modelling approach, thereby supporting decisions that actually lead to a reduction in climate impacts
- **Re-evaluating the role of PCRs**, to exclude issues that can be more consistently regulated at the generic level for all products
- Removing **unnecessary** or unnecessarily complicated requirements
- Adding a **completeness** requirement, following ISO 14044
- Adding clear and practicable requirements for treatment and reporting of **uncertainty** on data and results