Carbon Footprint – a suitable environmental impact indicator for gardening products?

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Agenda

1. Project WeGa
2. Carbon Footprint – Definition and standards
3. Carbon Footprint – Scenarios
4. Other impact categories
5. First impressions
6. Questions and discussion

1. Project WeGa – Kompetenznetz Gartenbau

Joint project „Process Assessment“
Sub-category **„Carbon Footprint of gardening products“**

- Calculating **life cycle PCF** of 
- Developing **scenarios for user phase** and **different production systems**
- Concluding recommendations for **user phase methodology**
- Mapping out **other** important **impact categories**

1. Project WeGa – Kompetenznetz Gartenbau

Joint project „Process Assessment“
Sub-category **„Carbon Footprint of gardening products“**

Research questions:

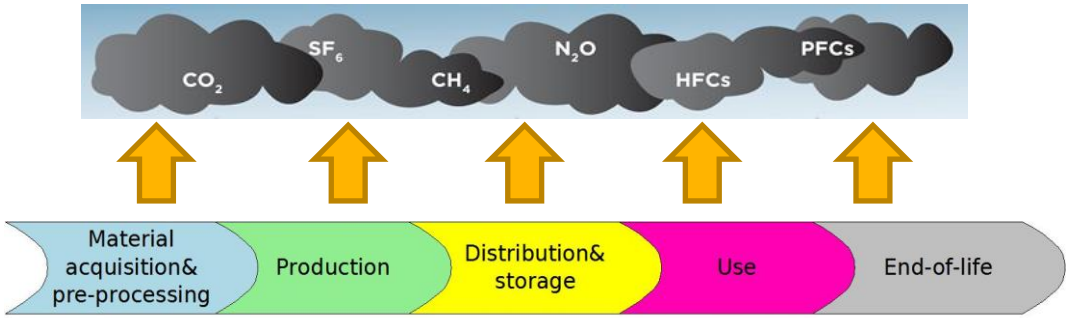
→ How does **using different PCF standards** influence the results?

→ How do **different production systems** influence PCF result?

→ How do **different uses of products** influence PCF results?

→ What **impact categories** other than climate change are also relevant?

2. Carbon Footprint – Definition and Standards



Definition (ISO 14067):

"sum of **greenhouse gas emissions and removals** in a **product system**, expressed as **CO2 equivalent** and based on a **life cycle assessment**"

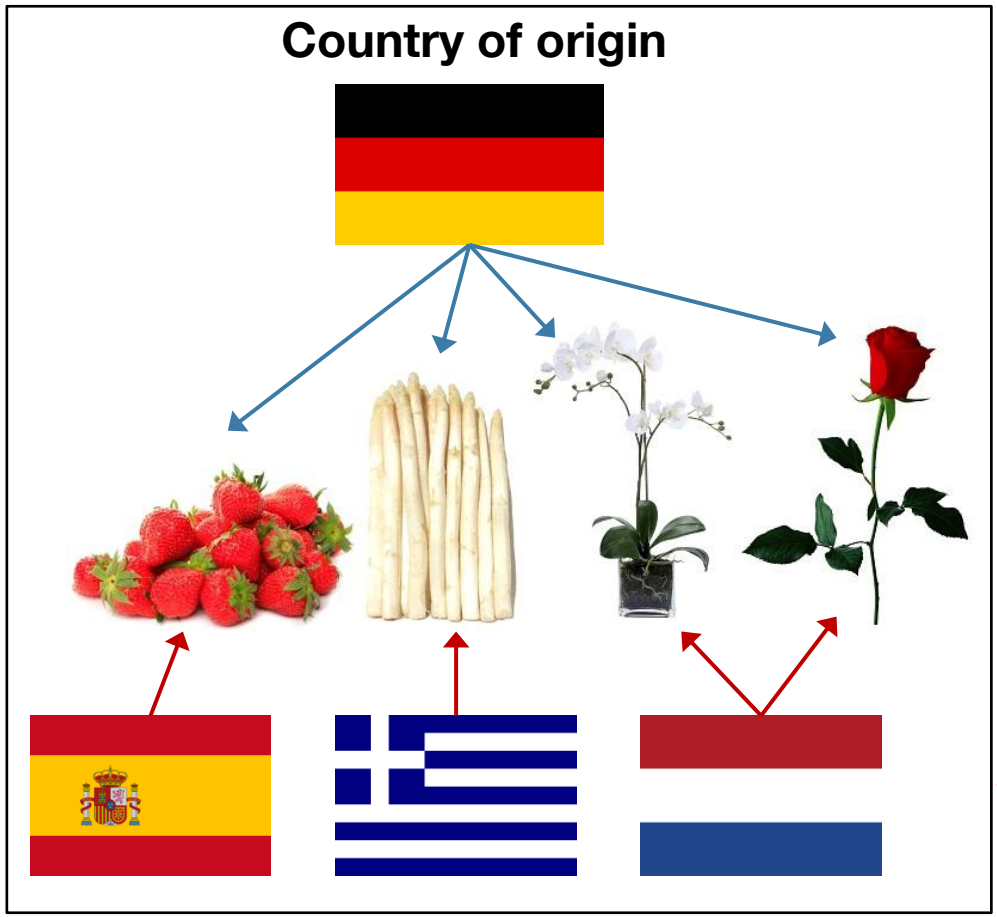
Standards:

- PAS 2050
- Product LC Accounting & Reporting Standard
- ISO 14040, 14044
- (ISO 14067)
- Country specific guidance
- Labelling systems

Use of different standards causing differences in CF results?

Method: theoretical comparison with a case study

3. Carbon Footprint – Scenarios



User phase

Best case

Statistical

Worst case

Energy source

- Wood
- Oil
- Gas

What causes differences in the CF results?

Method: scenario building

4. Other impact categories

Geographically unspecific

- **Carbon Footprint –** GHG climate impact

Geographically specific

- **NB! Water Footprint**
- Eutrophication
- Acidification
- Land use change
- Social impacts
- Economical impacts (also global effects)
- etc.

What other impact categories are relevant?

Method: literature review and…???

5. First impressions 1

- Differences between standards – theoretically 8 potential differences (GHG Protocol 2012)
  - Product Category Rules
  - Radiative Forcing Index
  - System boundary
  - Cut-off rules
  - Allocation
  - etc.

Most important ones – causing variation in results probably in every PCF study

- Complexity of including use phase – time consuming, expensive => challenge for small producers!

5. First impressions 2

- Data availability – often “business secret” because of strong competition in gardening sector, little motivation to give out data when the PCF is expected to be “bad”

- Objectivity of using CF as a message to customers about the product's environmental impact
  - Other impact categories in other growing locations more important, e.g. Water use in Spain for strawberry production

6. Questions and discussion