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Forschungsanstalt Agroscope Reckenholz-Tänikon ART

Applying Life Cycle Assessment on the Food and Beverage Supply Chain

44th LCA Discussion Forum, June 21st, Lausanne

Gérard Gaillard, Agroscope ART

An introduction

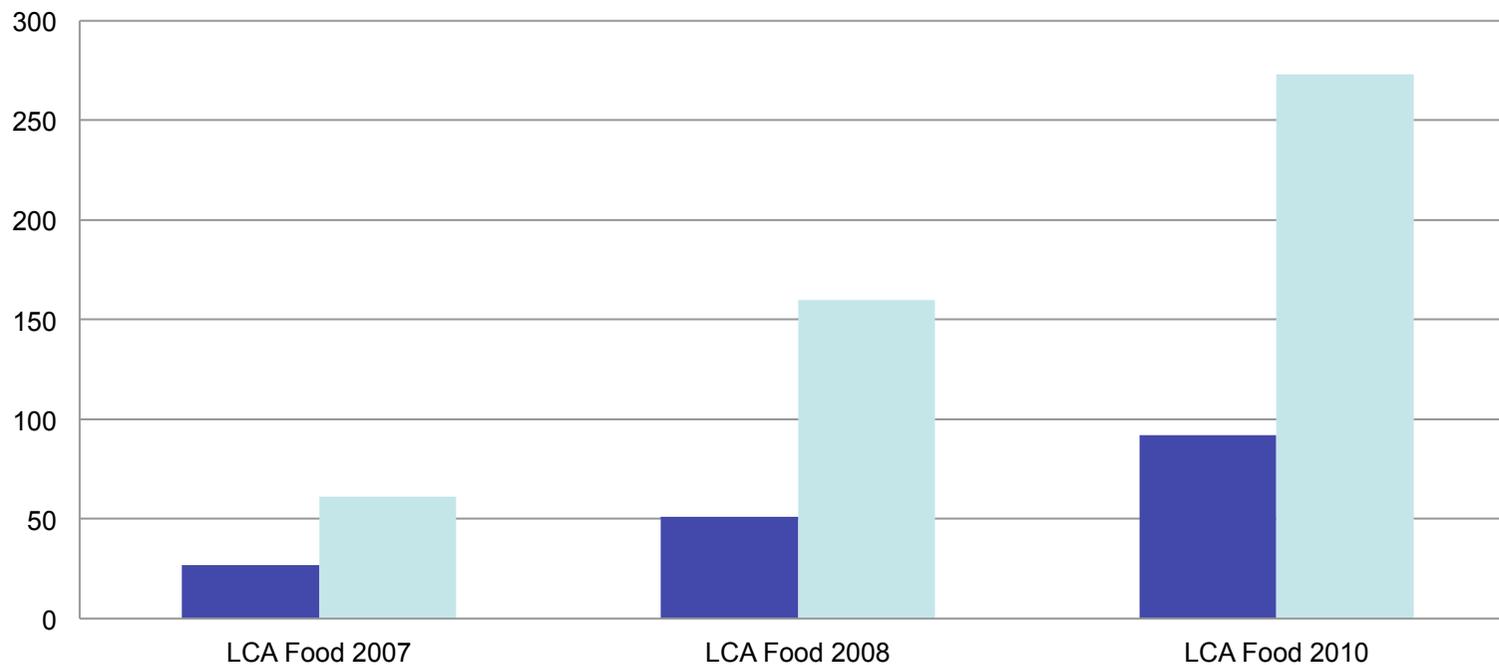


LCA research and the food chain

- Major discussion issues in society
- Scientific challenges
- Target groups
- Impact
- Conclusion



LCA and the food chain: Relevance of the topic Example: Conference LCA Food



Number of oral presentations and participants (Notarnicola, 2011)

Major discussion issues in society (1)

- **First major issue:**
Promotion of a more environment-friendly food chain

Point of view of the producer

- *Old research questions, e.g.:*

- Organic versus conventional production
 - Air versus ship transport

- *New research questions, e.g.:*

- Environment-friendly conceiving of arable crop rotations
 - Alternative pest control strategies in orchards
 - Environmental assessment of company strategies



Major discussion issues in society (2)

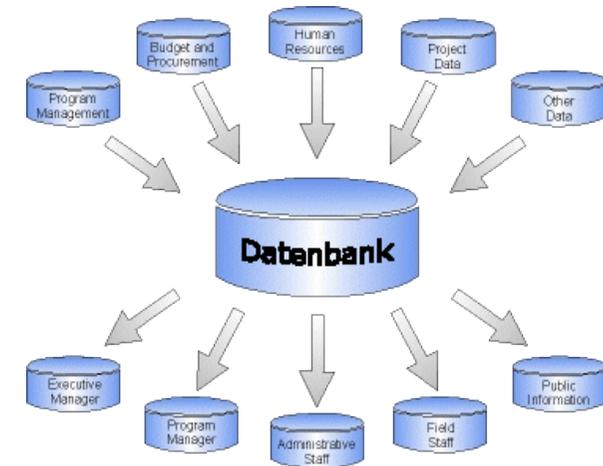
Second major issue: Environmental Product Declaration of food / Integrated Product Policy *Point of view of the consumer*

Old research questions, e.g.:

Environmental profile of a crop product
Creation of public LCI databases

New research questions, e.g.:

Scientific support of EPD policy
Scientific background of purchasing strategy
of retailers



🇨🇭 Major discussion issues in society (3)

- **Environmental design of land use strategies**

 - Point of view of the citizen*

 - **New challenging issues**

 - Food vs. Bioenergy strategies

 - Home production vs. Import

 - Ecological intensification



Scientific challenges

- **Environmental issues of high complexity**
 - Linked to the land use (biodiversity, soil quality)
 - Linked to the water use
 - Dependent on biogeographical properties (regionalisation, etc.)
- **Technical issues of high complexity**
 - Production technology
 - Complexity of the food products themselves
- **Suitability of the detail level of the investigation**
 - High enough to be able to answer the question
 - Low enough in order to be managed (data, budget etc.)

Target groups (1)

■ Principle

- LCA are directed towards **Decision-makers**
- Consequently, decision-makers with a **strategic organised knowledge management** have clear advantages

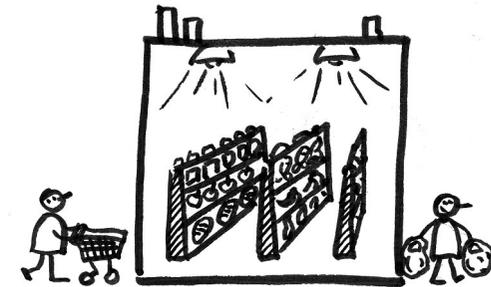
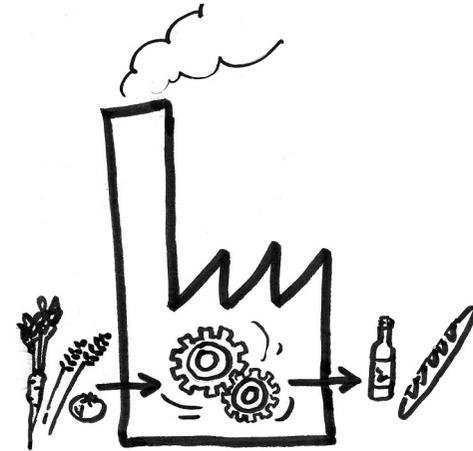
■ Target groups directly addressed

■ Private sector

- Retailers, Food industry

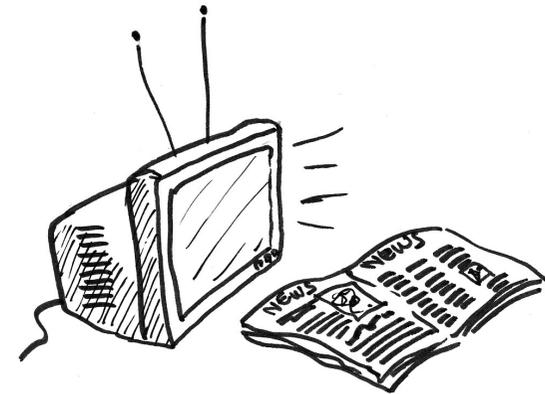
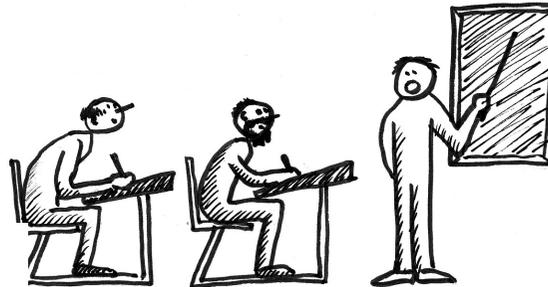
■ Authorities

- Ministries, Environmental agencies



Target groups (2)

- Target groups indirectly addressed, namely through
 - Knowledge transfer organisations**
 - Professional associations, extension services (*Farmers, SME*)
 - NGO (environment, consumer organisations) and media (*Citizen, Consumers*)



Impact

- **Influencing the Environmental agenda of Decision-makers**
 - **Examples**
 - **Meat** (beef)
 - **Recycled fertilisers** (sewage sludge, compost)
 - LCI as **Decision element for political processes** (EPD)
- **Objectifying the environmental discussion**
 - More differentiated discussions on **processes**, **techniques** and **strategies**, less ideologically led **striking comparisons**
- **Illusion of reality?**



Conclusion

- The topic is even more **relevant**
- Three main **discussion issues** in society
 - Promotion of a **more environment-friendly food chain**
 - **Environmental product declaration**
 - Environmental design of **land use strategies**
- Three **different perspectives**
 - **Producer**
 - **Consumer**
 - **Citizen**
- **Communication strategy**: **stakeholder** vs. „**normal person**“
- **Impact** of LCA in the food chain: **Illusion or reality?**



Thank you!

