'Eco-Benchmark' for consumer-oriented LCA-based environmental information on products, services and consumption patterns

NorLCA Conference
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NATIONAL CONSUMER RESEARCH CENTRE

S Y K E

MTT

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PROJECT

Background

- Action programmes for sustainable consumption and production (UN, Finland, etc.)
- IPP, integrated product policy (EU)
- The Finnish Environmental Cluster Research Programme, www.environment.fi > Research > Research programmes > Finnish Environmental Cluster Research

Time frame of the project

1.9.2003 – 30.4.2006

PROJECT

Purpose

- to promote the use of LCA-based product information and sustainable consumption.

Aim

- to develop benchmarks to which the LCA results of various products can be compared.

TASKS

'Popularise' LCA

Study how people understand results / presentations

Develop presentation formats

Develop benchmarks for LCA-based results

Develop quality assessment of LCA

Survey LCA-studies

Brochures website

Seminars

Articles, reports

Survey LCA-studies

- CSA, Int J LCA etc.

Develop quality assessment of LCA for the benchmarking-purpose

- criteria, assessment in expert group
- contact Yrjö Virtanen, yrjo.virtanen@mtt.fi

Develop benchmarks for LCA-based results

- damage points, based on the average daily environmental impacts of Finnish people
- a product:

  ‘everyday product’ familiar to consumers, LCA-study of good quality & possible to modify and update to Finnish conditions

Modify and update LCA studies to Finnish conditions

Rye bread (Grönroos and Seppälä 2000)
- updated nutrient leaching, electricity in Finland

Cheese (Voutilainen et al. 2003)
- updated nutrient leaching, electricity in Finland

Laundry (Saouter et al. 2002)
- modified washing machine, electricity and water
- updated electricity and wastewater treatment in Finlan

Car drive (Scheimer and Levin, VW Golf)
- modified fuel consumption and emissions, EURO 3
- modified gasoline production in Finland

Apartment (Koskela et al. 2002)
- updated electricity and district heating in Finland

Characterisation factors and impact assessment: Seppälä et al.

Develop presentation formats and study how people understand them

MITTATIKKU

VÄLINE TAVAROIDEN JA PALVELUJEN YMPÄRISTÖVAIKUTUSTEN HAVAINNOLLISTAMISEEN

Aineistoa kuluttajapaneelin työskentelyyn syksyllä 2004

Kulutus vaikuttaa ympäristöön. Käyttämämme tavarat ja palvelut on tuotettu luonnosta otetuista raaka-aineista, ja samalla on kuormitettu luontoa erilaisten saasteiden päästöillä ilmaan, vesistöihin ja maaperään.

Esimerkiksi ilmastomuutos on maailmanlaajuinen ympäristöongelma. Vesistöjen rehevöityminen on erityisesti Suomessa ongelmallinen paikallinen ympäristömuutos.

Perusmenetelmä tuotteen ympäristövaikutusten arviointiin on elinkaariarviointi eli LCA, 'Life Cycle Assessment'. Tuotteen erilaiset ympäristövaikutukset arvioidaan sen elinkaaren kaikissa vaiheissa.

LCA:n tulosten esittämistä tavallisille ihmisille ei ole vielä tarpeeksi mietitty. Mittatikkuhankkeessa LCA-tutkijat ja kulutustutkijat kehittävät yhdessä ympäristövaikutusten havainnollistamista.

Kuva: Suvi Vertanen.

Brochure for consumer panel (20 p):

- motivation
- *alternative presentation formats*
- environmental problems
- LCA
- project

Consumer panel:

- 58 people discussed
- in 10 focus groups

Presentation format: A
Benchmark: average daily impacts per person

ABBREVIATIONS:

CC = climate change
EA = eutrophication, aquatic
A = acidification
O = formation of trophospheric ozone
EN = primary energy consumption

Presentation format: C
Benchmark: cheese

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Presentation format: D
Benchmark: cheese

WEIGHTS:

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The final outcome / The benchmark

What are the components of the Eco-Benchmark?

How can it be used?
- One example

Whole consumption (input-output method)

100 = daily per capita environmental impacts of Finland
64 = daily per capita environmental impacts of consumption

Consumption commodity groups:
1 Food and non-alcoholic beverages
2 Alcoholic beverages and tobacco
3 Clothing and foodwear
4 Housing (including electricity and fuels)
5 Furnishing and household maintenance
6 Health
7 Purchase of vehicles
8 Operation of personal transport equipment
9 Transport services
10 Communication
11 Recreation and culture
12 Education
13 Hotels, cafes and restaurants
14 Miscellaneous goods and services

Nissinen et al. 9.-10.10.2006 NorLCA, Lund

International benchmarks?

Product /service	Is it a familiar product to Finnish people?	Are the various impacts of the same size (= impor-tance)?	Are the impacts small or large?	International aspects: Is it a familiar product to people in other countries?	International aspects: Would the emissions and energy use be similar in other countries?
Rye bread	Yes	No, large differences	Small impacts	No (only in few countries)	No? (agriculture and conditions different)

International benchmarks?

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Rye bread	Yes	No, large differences	Small impacts	No (only in few countries)	No? (agriculture and conditions different)
Emmental cheese	Yes	No, large differences	Small impacts	Yes	No? (however possi-bility to international brand)
Laundry	Yes	Yes, quite similar	Small impacts	Yes	No (electricity in use phase)
Apartment 41 m^2 in a block of flats	Yes	No, large differences	Large impacts	Yes	No (electricity in use phase)
Car drive	Yes	No, large differences	Large impacts	Yes	Yes

The road ahead?

New project ’ConsEnv’, that focus on foodstuff and housing (2006-2008)

Interest for international projects about

- national and international eco-benchmarks
- including land use (biodiversity) and ecotoxicity
- valuing environmental impacts
- Internet-game about environmental impacts of consumption choices and life-styles (LCA-based information)

For more information, visit:

www.environment.fi/eco-benchmark