

# **Looking forward to a sustainability LCA**

## **Workshop EESD08**

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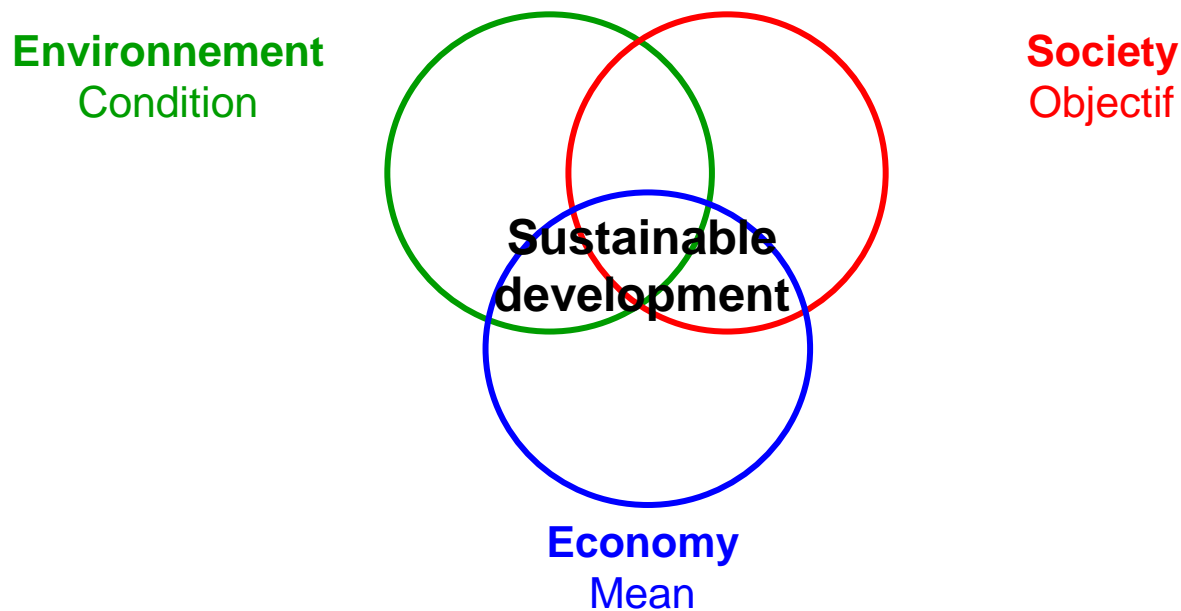
# Exercise (1)

Assess from the point of view  
of sustainable development :


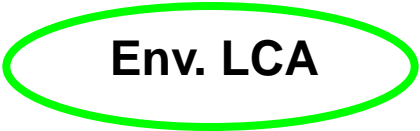
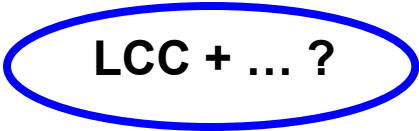

1. A textile factory in Dornbirn (Austria)
2. A T-shirt

What kind of criteria do you keep  
into account for your assessment?

*« Sustainable development is a process of change in which ...are all in harmony and enhance both current and future potential to meet human needs and aspirations. »*



# Tools for a process or product oriented assessment : a short overview

People	Planet	Profit/Prosperity	People & Planet & Profit/Prosperity
→	<b>Process Oriented</b>		←
<u>Social</u> <b>SA 8000</b>	<u>Environment</u> <b>ISO 14001,</b> <b>EMAS</b>	<u>Quality</u> <b>ISO 9000,</b> <b>6 Sigma,</b>	<u>General</u> <b>ISO guide 72,</b>
<u>Health and Safety</u> <b>OHSAS18001,</b> <b>ILO-OSH</b>		<u>Financial</u> ...	<u>Frameworks en models</u> <b>AA 1000,</b> <b>EFQM-model,</b> <b>ISO 26 000</b>
→	<b>Product Oriented</b>		←
 <b>Social LCA</b>	 <b>Env. LCA</b>	 <b>LCC + ... ?</b>	 <b>Sustainable LCA</b>

**a social-economical LCA (seLCA)  
as a complement to eLCA (and LCC)**

**and by doing so**

**contributing to the full assessment of goods and services  
within the context of sustainable development**

# Goals of such a seLCA

## **A seLCA is a decision making tool**

It assists in decision making in regard with the refinement of products, development of new products, life cycle management, development of public policies, marketing...

## **A seLCA can...**

Compare products

Give information on products for labelling

Identify social “hotspots”

Give directions for public policies

Help orient company’s choices of suppliers

Improve the social performance along the entire life cycle

Improve social conditions (increase social benefits, decrease social burdens)

Maximize the company value by reducing social risks

**For organizations, consumers, governments, NGOs, IGOs, investors, shareholders, products designers, ...**

# Task Force Terms of Reference

The aims of the Task Force are:

- to convert the current environmental tool LCA into a triple-bottom-line sustainable development tool,
- to establish a framework for the inclusion of socio-economic benefits into LCA,
- to determine the implications for LCI analysis,
- to determine the implications for LCIA,
- to provide an international forum for the sharing of experiences with the integration of social aspects into LCA.



# Task Force Members



Approximately 40 members / 15 co-authors

A multidisciplinary team with experts from universities, businesses, consultants, public authorities coming mostly from Europe, but also from America, Asia and Africa.



# Task Force Meetings

- 1st Meeting (April 2004, Prague)
  - Workshop (November 2004, Ghent)
- 2nd Meeting (January 2005, Bologna)
- 3rd Meeting (May 2005, Lille)
  - Seminar (November 2005, Brussels)
- 4th Meeting (June 2006, Lausanne)
- 5th Meeting (October 2006, Paris)
- 6th Meeting (March 2007, Sevilla)
- 7th Meeting (August 2007, Zurich)
- 8th Meeting (October 2007, Montréal)
  - Seminar (October 2005, Montréal)
- 9th Meeting (February 2008, Paris)
- 10th Meeting (June 2008, Freiburg)
- *11th Meeting (September 2008, Vienna)*
- *12th Meeting (January 2008, Paris)*

# Task Force Programme of Work

## Phase I (2004-2006):

- Literature study
- Case Studies
- Feasibility study

## Phase II (2006-2010):

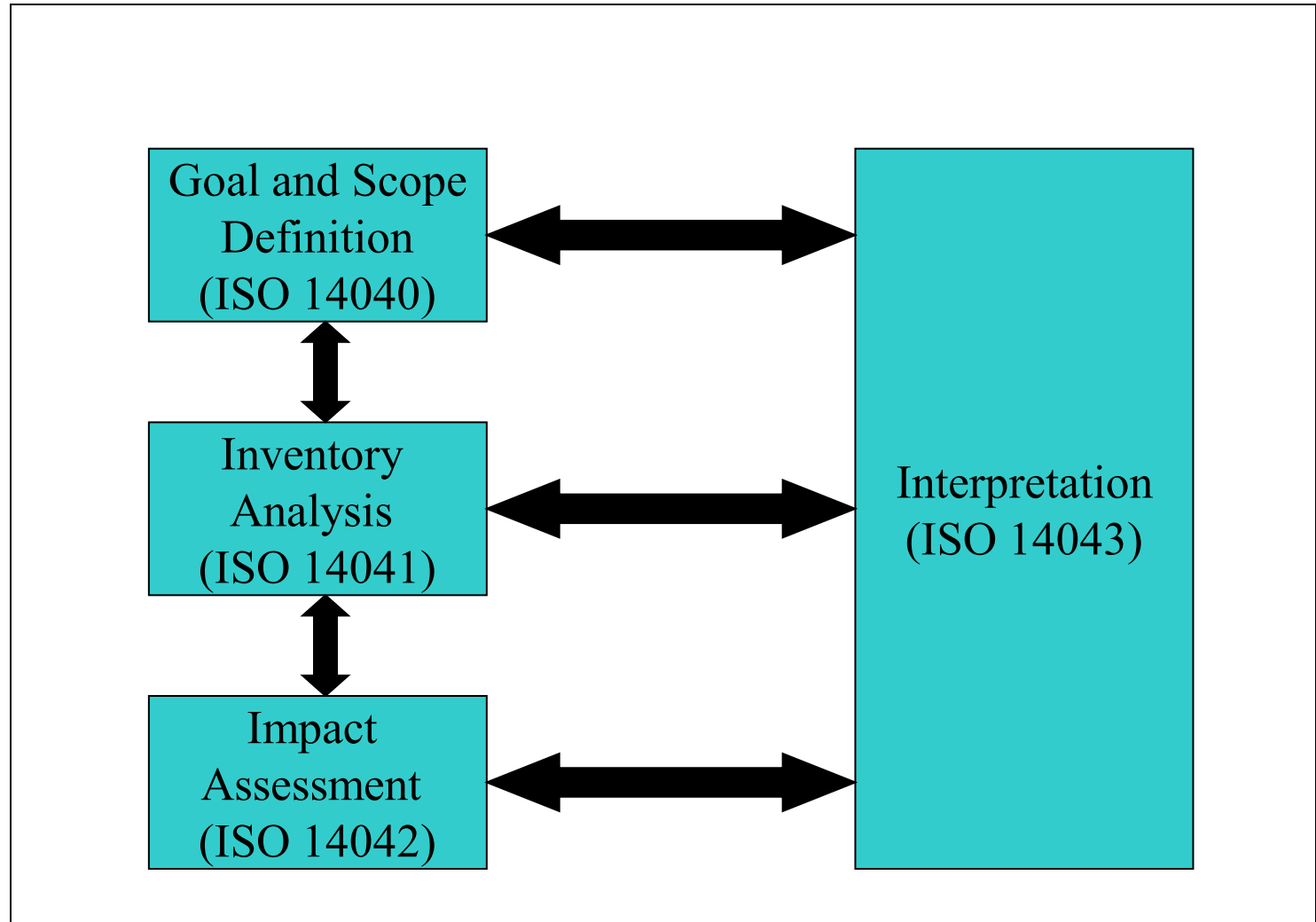
- ***Indicators (incl. methodological sheets)***
- Case studies
- ***Code of practice***

# Purpose of the Code of Practice

- First it promotes dialogue amongst the task force members on methodological issues, which can facilitate movement towards consensus.
- Second, it obliges seLCA developers to communicate their work to stakeholders and to collect their comments, hence enabling a positive feedback loop during the process of writing.
- Third, it will create the necessary basis and consensus on core issues to build databases and software.

***The code of practice will be the first international reference document on the subject of seLCA. It will present the methodologies broadly -- leaving place for innovation --but explicitly, representing its current state of development.***

# Life Cycle Assessment Framework ISO 1404x



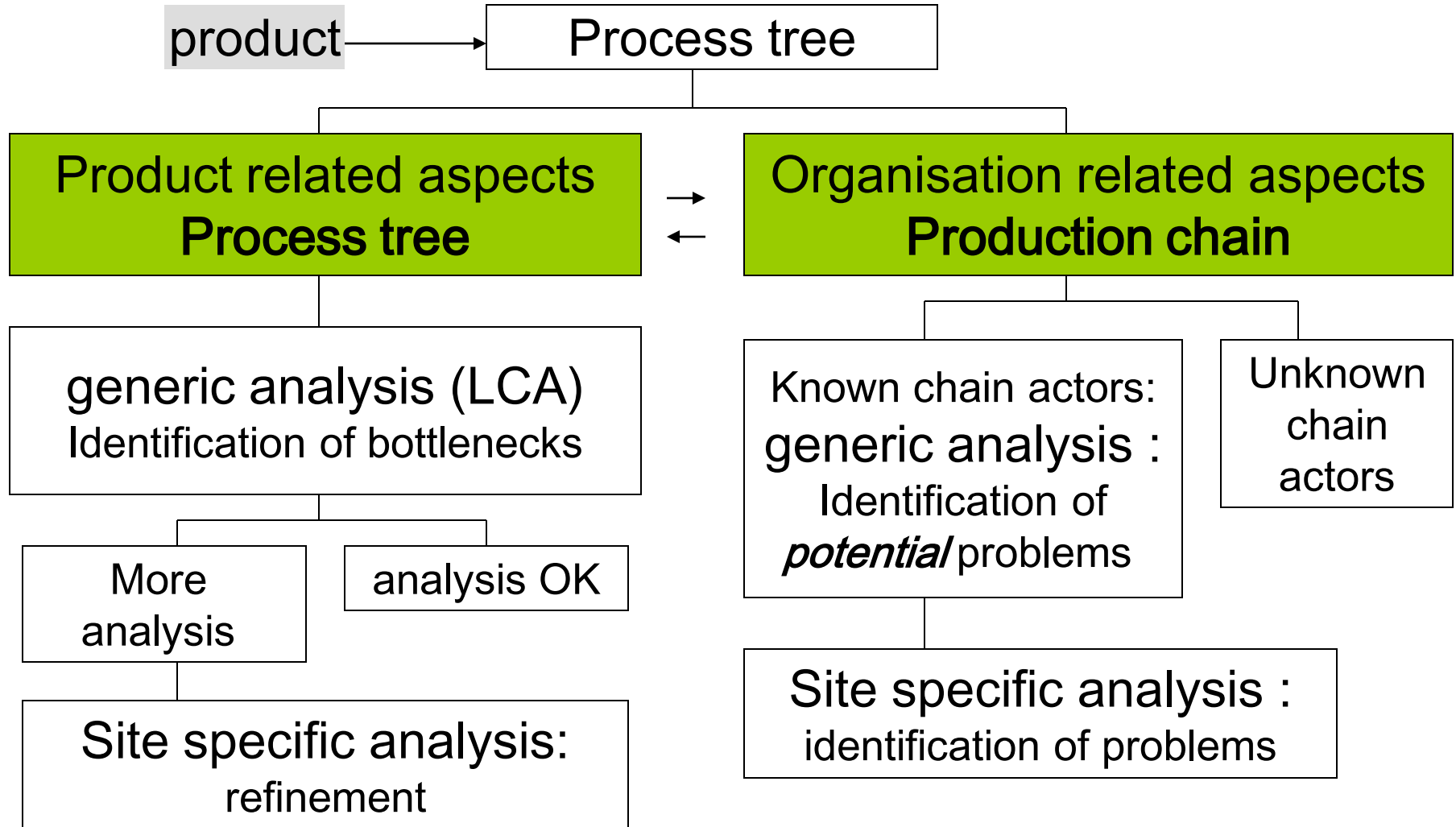
# Differences, similarities and complementarities with eLCA

- seLCA is a **social (and economical) impact assessment tool** that aims to assess the 'se' aspects of **products** and their **positive and negative impacts** along their **life cycle**
- An eLCA will focus on the product and production related aspects along the supply chain, while **a seLCA will additionally collect information on organization-related aspects along the chain**. For a seLCA it is more important to know the chain actors, even site-specific.
- It is the preference in eLCA for a greater uncertainty over subjectivity, while **in seLCA it is often preferable to have a greater level of subjectivity but a lower level of uncertainty**. High levels of uncertainty are making seLCA results obsolete in many cases.
- The impacts per functional unit can not be expressed if **semi-quantitative or qualitative data** are used. In a seLCA, there is a greater need to rely on those kind of data and indicators in order to provide a relevant and comprehensive portrait.
- **Geographic location of unit processes and information at the company management level is essential in seLCA.**

# For a sustainability LCA: a twofold analysis (1)

- Product related environmental criteria:  
framework for analysis = **process tree**:  
processes in sequence
- Organisation related social, economic and some environmental criteria:  
framework for analysis = **production chain**:  
enterprises in the chain

# For a sustainability LCA: a twofold analysis (2)



# **Indicators used in a seLCA**



# **The list of key indicators related to the stakeholder 'employee'**

- Freedom of Association and Collective bargaining
- Child Labour
- Wages
- Working Hours
- Forced Labour
- Equal opportunities/Discrimination
- Health and Safety
- Social Benefits/Social Security

# **The list of key indicators related to the stakeholder 'consumer'**

- Health & Safety
- Consumer Privacy
- Compliance
- Transparent business information
- Marketing communications
- Practices related Consumers Satisfaction

# **The list of key indicators related to the stakeholder 'local society'**

- Secure, Safe & healthy living conditions
- Land acquisition, delocalization and migration
- Respect of indigenous rights
- Community engagement
- Social and economic repercussions
- Access to resources
- Cultural heritage and traditional knowledge

# **The list of key indicators related to the stakeholder ‘society’**

- Public commitments to sustainability issues
- Employment creation
- Vocational training
- Contribution to the national economy and stable economic development
- Prevention & mitigation of armed conflicts
- Technology development

# The list of key indicators related to the stakeholder 'company'

- Organizational governance, translated in the adoption of management systems related to corporate social responsibility
- Corruption
- Responsible political involvement
- Fair competition (incl. sign. financial assistance received from government)
- Promoting social responsibility
- Respect for (intellectual) property rights
- Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.

# CSR themes

## **SA 8000 criteria**

- Child labour
- Forced labour
- H&S
- Freedom of Association / Right to Collective Bargaining
- Discrimination
- Disciplinary Practices
- Working Hours
- Remuneration
- Management Systems

## **Global Compact principles**

- Human Rights
- Labour
  - Freedom of association and collective bargaining
  - Forced and compulsory labour
  - Child labour
  - Discrimination
- Environment
- Anti-Corruption

## **GRI**

### **Economic:**

- Direct economic impacts (customers, suppliers, employees, providers of capital, public sector)

### **Social:**

- Labour practices and decent work
- Human rights
- Society
- Product responsibility

# Indicators: the methodological sheet

- **Indicator**  
(name, brief definition, unit of measurement, monitoring)
- **Policy relevance**  
(purpose, relevance to (un)sustainable development, international conventions and agreements, international targets/recommended standards, linkages to other indicators)
- **Methodological description**  
(underlying definitions and concepts, measurement methods, limitations of the indicator, status of the methodology, alternative definitions/indicators)
- **Assessment of data**  
(data needed to compile the indicator, national and international data availability and sources, data references)
- **References**  
(readings, internet site)

# Structure like an eLCA

- Goal and scope definition
- Inventory analysis
- Impact assessment
- Interpretation



# Definition of Goal and Scope

- Goal of the study
- Scope of the study
- Functional unit
- System boundaries

# More elaboration of the functional unit

- In environmental LCA, it is assumed that product utility can be characterized relatively simply and that it is captured sufficiently by the concept of functional equivalence when carrying out comparisons between different products or alternatives.
- But in a seLCA, beside 'technical' utility, a range of social aspects such as time requirement, convenience, prestige etc. are key aspects of product utility. Accordingly it is essential to describe the functional equivalence (technical utility) and the corresponding social and symbolic functions for the consumer.
- In fact, social impacts or benefits on the consumer should be described as part of the product utility and not as social impact along the life cycle.

# Exercise (2)

Formulate the functional unit,  
taking into account the product utility,  
for bottling beer.

# Life cycle inventory analysis

- General
- Handling co-products
- Data quality
- Data collection

# Inventory analysis – typical problems

- Only a smaller part of the data sought is available in processed form from statistical or other sources.
- No module data are yet available for several recurrent processes and activities (e.g. electronic component manufacturing, cotton production, railway use, web-based trading, etc.).
- Several dozen or even hundreds of upstream chains can be involved, particularly in the case of more complex industrial products.
- Two complementary classification systems: stakeholder approach (workforce, local community, consumers, society) and impact categories

# Exercise (3)

Complete part of the methodological sheet for the indicator 'working hours'.

- (a) Name
- (b) Brief definition
- (c) Unit of Measurement
- (d) Monitoring

Think about the example of a T-shirt.

# Life cycle impact assessment

- General
- Selection of impact categories, category indicators and characterization models
- Classification
- Characterization
- Development of a seLCIA

# Life Cycle Interpretation



**a social-economical LCA (seLCA)  
as a complement to eLCA (and LCC)**

**and by doing so  
contributing to the full assessment of goods and services  
within the context of sustainable development**

**... but why not talking  
about a social or a sustainability LCA ?**

# ISO 26000 : the 7 core issues at a glance



# Exercise (4)

You are in a grocery

and you want to buy a pound of coffee.

From a sustainable development point of view:

1. How do you choose?
2. In what way coffee can be 'sustainable'?
3. What kind of criteria do you take into account?

**For more information, remarks,  
suggestions:**

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