NORLCA: Market Opportunities in Life Cycle Thinking, October 9-10, 2006, Lund, Sweden

The UNEP / SETAC Life Cycle Initiative

- Bringing science-based life cycle approaches into practice

by

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http://lcinitiative.unep.fr/

The Life Cycle Initiative

Established in 2002

- Aim
  - Promotion of life cycle thinking and life cycle approaches world wide
- Organization
  - UNEP DTIE is secretariat and facilitate the process and communication. Chairs the International Life Cycle Panel
  - SETAC provides technical advice and the Scientific Director and co-chairs the ILCP

The first phase
2002-2006

Three programs were initiated:

- A Life Cycle Management Program
  - Application of LCA and life cycle thinking
- A Life Cycle Inventory Program
  - Development and enhancement of sound LCI data and methods and
- A Life Cycle Impact Assessment Program
  - Development and enhancement of sound LCIA data and methods.

The first phase
2002-2006

- These program activities were practiced by three Working Groups with each several Task Forces established in 2004
- Work was based on Definition Studies finished in 2003
- Many meetings and workshops have been organized
- The whole work was coordinated by the International Life Cycle Panel (ILCP).

Partners

- Sponsoring
  - Worlds plastics industry (APC, PWMI & Plastics Europe)
  - EC DG Research
  - Sustainability Victoria
  - Germany
  - International Council on Mining and Metals (ICMM)
  - Switzerland

- Supporting
  - ISO
  - GM
  - Netherlands
  - Quebec
  - US EPA
  - Danish EPA
  - Japan
  - Canada
  - FORCE Technology

Membership

- Since 2002, there has been a considerable growth in the membership.
- Currently, around 1000 interested members are registered in the UNEP Initiative's database and about 200 experts are actively working in the three Working Programs with 13 Task Forces
- In June 2005 – 4 Regional networks became associated
- 2006 NORLCA cooperation

Membership distribution

Regional distribution

Type of institution

Achievements and deliverables

1. Enhancing consensus among LCA experts -

- Regarding methodological and data availability questions.
- Global LCI database registry.
- Guidance documents on how to set up LCI databases for capacity building in all regions.
- Guidance on how to move from current practices to global recommended practice in LCIA (in preparation)
- Feasibility studies for extended LCA (incl. social aspects)

Achievements and deliverables

2. Building capacities and a Life Cycle Community -

Including developing country experts (15 %), and facilitating global exchange of information.

- 4 regional networks
- Global network of around 1000 members with 200 active participants in meeting and workshops
- Support of around 50 open meetings on LCA worldwide, including this

Achievements and deliverables

3. **Free materials and tools**

- LCM Background Report and slide show
- LCM training materials (draft)
- International LCM guide (draft)
- Set-up of an open management content system: website ESTIS (http://jp1.estis.net)
- Making available awareness-raising training materials and LCA software/databases.
- 22 LCA Awarded projects from developing countries

Regional distribution of awarded proposals

Further achievements

4. Setting the scene for Sustainable Product Life Cycle Management based on triple-bottom line approach and providing input to the Marrakech TF on Sustainable Products.

5. Providing input for the recently launched European LCA platform.

6. Supporting the set-up of a Global Resources Panel with the European Commission.

7. Ensuring that initiatives facilitated by UNEP take Life Cycle Approaches such as UNEP Finance Initiative, Global e-Sustainability Initiative, Tour Operators' Initiative and the Sustainable Building & Construction Initiative.

8. Being in contact with Multilateral Environmental Agreements, in particular Basel Convention, to develop waste policies (e.g.: e-waste) based on Life Cycle Thinking.

The Second Phase
(2007-2010)

To bring science-based life cycle approaches into practice

Objective 1: **Enhance the global scope** of life cycle approaches methodology;

Objective 2: Collect, develop, maintain and disseminate information on **successful applications of life cycle approaches** (together with the interface to other tools – e.g. certifications) to 'resources', including natural resources, chemicals, energy, water, etc.;

Objective 3: **Facilitate the use of life cycle approaches worldwide** by influencing management decisions in business and administration related to key consumption clusters and strengthening product policies and product stewardship programs by working closely with the respective leading actors;

Objective 4: **Create capacity** in the use of life cycle approaches in key public policy and business stakeholders worldwide, in collaboration with regional life cycle networks and other organizations

Lesson learnt from Life Cycle Approach

"Human needs should be met by products and services that are aimed at specific 'functions' such as food, shelter and mobility, and that are provided through optimized consumption and production systems that do not exceed the capacity of the ecosystem."

EIPRO, Environmental Impact of Products, EU, 2005

Need area or function	Direct and indirect energy use per person*
Shelter	39 %
Food	18 %
Mobility	18 %
Personal care	9 %
Leisure	8 %
Clothing	6 %
Education	2 %
Total	100 %
Total in GJ/person	116
Person per household	1,84

*Average for Groningen/ the Netherlands as reported by Tukker (2003) based on data from Moll and Noordmans (2002)

Areas of work in 2nd phase

New projects - Examples

- *Improvement of Characterization* Factors in Life Cycle Impact Assessment of ecotoxicology of metals.
- *Long term development and maintenance of a LCI database registry*. This activity will allow structured collection and dissemination of *meta* data about running database projects and developments.
- *Dissemination of latest developments in LCA methodology.* Participation in the EC Coordinated Action on Life Cycle Assessment (CALCAS)
- *Extended LCA: Integration of social impacts into the LCIA framework.*
- *Further development of LCM concepts on sustainable management along the product lifecycle and value chain, product innovation, stakeholder relationships and communication.*
- *Founding a business roundtable* as a forum for exchange of experiences and views - may be in cooperation with WBCSD.
- *Building Capacity in Global Supply Chains.* The focus of the project will be producers in the production chains for extraction and processing of natural resources, primarily in less-industrialized countries and regions.
- *Relationship and partnership* with the International Panel on Natural Resources, the Sustainable Building and Construction Initiative, the Marrakech taskforces and the Global e-sustainability Initiative.

New projects - Examples

- *Co-organization of the International Conference on Life Cycle Assessment CILCA 2007, 26-28 February, in Brazil* with the Latin American Lfe Cycle Network
- *Cooperation with organizers of LCM2007 in Zürich, 27-29 August 2007* and other European networks e.g. NORLCA.
- *Second phase of LCA awarded projects.* Workshop to recognize the participants who have been awarded LCA software
- *Training workshops on LCA and LCM in Mexico and Vietnam.* Regional expert meetings where capacity building with the latest UNEP/SETAC materials and world class trainers will take place.
- *Start of public web-based system.* This will allow LCA practitioners free access to updated information and knowledge on commercial and free databases and LCA tools.
- *Consumption pattern.* Raise awareness of product policy as a means of achieving development, innovation and environmental objectives.

New organization

Conclusions

- UNEP-SETAC Life Cycle Initiative's role is consolidating as catalyst of efforts on putting life cycle thinking into practice in business around the world, as support in the development of international policies that include life cycle thinking in developing and developed economies, and as the linking element to promote training and case studies in various areas, including in SMEs.
- The Initiative brings together key actors from all the regions, and it is providing the platform and opportunity to share visions on activities for the promotion Life Cycle Thinking worldwide.
- Everybody attending this meeting is encouraged to participate in the work and support the Initiative. Both UNEP and SETAC are not-for-profit organizations, and the Life Cycle Initiative relies fully on voluntary works and on support and sponsorship, especially from government, business and industrial associations. Without sufficient support all these ideas for new projects, I have presented, will not be accomplished.
- Therefore, only when the Initiative makes something useful for society and business, it will survive!