

Promoting Life Cycle Thinking at the global level - Perspective of the Life Cycle Initiative and linkages with the Marrakech Process

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Abstract

UNEP and SETAC, aware of the need to support a global dissemination and implementation of Life Cycle approaches, set-up in 2002 the Life Cycle Initiative. This Initiative aims at facilitating the knowledge exchange of around 200 experts and 4 regional networks associated and at promoting Life Cycle Thinking worldwide. The first phase concludes this year with important achievements and the completion of a series of products. Renewed goals and action plans are being outlined for the second phase in line with the activities of the 10-year Framework of Programmes on Sustainable Consumption and Production (Marrakech Process).

Keywords

Life Cycle Initiative, Marrakech Process, ISO 14040, Life Cycle Approaches, Sustainable Consumption and Production

1 INTRODUCTION

After the publication of the ISO 14040 (1998) series, a real need for supporting the dissemination and implementation of this approach in industrialized and non industrialized countries was identified. UNEP and SETAC, aware of this need, conjointly began to work on the articulation of existing efforts around Life Cycle Approaches resulting in the setting-up of the Life Cycle Initiative in 2002. This Initiative aims at promoting Life Cycle Thinking worldwide and at facilitating the knowledge exchange of almost 200 experts worldwide and 4 regional networks from different continents. SETAC commits to provide technical advice and UNEP to facilitate the processes involving all kind of stakeholders and from different regions as well as to communicate achievements (i.e. by means of training). UNEP plays the role of the Secretariat (<http://lcinitiative.unep.fr/>) of this Initiative, which is running the last months of its first phase that began the year 2002. During this phase three important fields of work (Life Management, Life Cycle Inventories and Life Cycle Impact Assessments) as well as 1 cross-cutting area (Inclusion of Social Impacts in LCA) were established. Achievements and products from the first phase are being presented and disseminated for open use. For the second phase, a renewed mission ("promotion of global Life Cycle Thinking") and goals and action plans have been outlined. This second phase will cover the period until 2010 and the planned tasks are being articulated with the activities of the 10-year Framework of Programmes on Sustainable Consumption and Production (Marrakech Process). The Marrakech Process is directly dealing with substantive issues that are within the scope of work of the Initiative (i.e. Sustainable Lifestyles, Sustainable Products, Sustainable Procurement, Sustainable Tourism and Sustainable Building and Construction). The implementation of the Marrakech Process is being pursued by UNEP and the United Nations - Department of Economic and Social Affairs (UN DESA) and started in 2003. Linkages between the Initiative and the Marrakech Process are being strength.

2 THE LIFE CYCLE INITIATIVE – FIRST PHASE (2002 - 2006)

A summary on the growing performance in the Initiative and results until now are given in this chapter.

Participation in the Initiative and representativeness of the members

Since 2002, there has been a considerable growth in the Initiative membership. Currently, around 1000 interested members are registered in the UNEP Initiative's database and 200 experts are actively working in three Working Programs (Life Management, Life Cycle Inventories and Life Cycle Impact Assessments) and 13 Task Forces.

Around 300 out of 1000 interested members come from Latin America, Africa and Asia. The largest group of members (almost 700) are from other regions/continents like North America, Europe and Asia/ Pacific and from international private companies u other organizations. An approximate distribution of the participation of interested members is given in Figure 1.

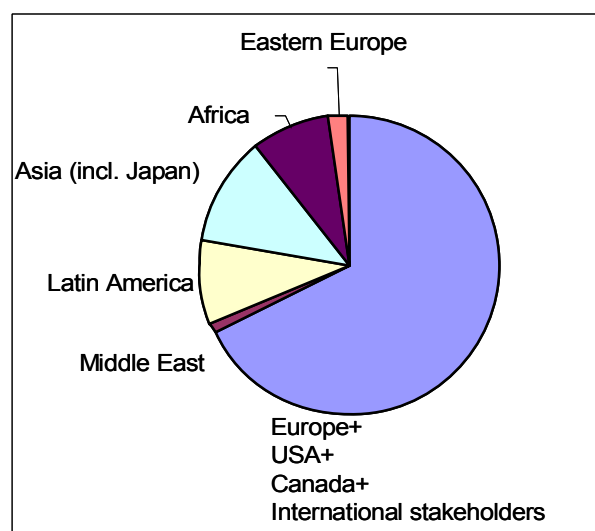


Figure 1: Distribution of regional memberships

80% of the members come from academic and research institutions, 15% from NGOs and consulting firms and 5%

from private companies, governmental institutions and other kind of organisations.

It is, hence, evidenced that the Initiative has moved towards a global network; however, there is still the need to intensify actions to include more members from developing countries and from the private sector.

Achievements of the Life Cycle Initiative

The most relevant achievements and deliverables from the Initiative through its Secretariat, its 3 programs (Life Management, Life Cycle Inventories and Life Cycle Impact Assessments) and 13 Task Forces are the following ones.

Achievements:

- Building capacities and an international Life Cycle community, including more and more developing country experts, facilitating global exchange of information.
- Making available free awareness-raising and training material for global use.
- Setting the scene for Sustainable Product Life Cycle Management based on triple-bottom line approach.
- Enhancing consensus among LCA experts in methodological and data availability questions.
- Providing direct input for the recently launched European LCA platform.
- Supporting the set-up of a global Resources Panel with the European Commission.
- Raising awareness among Life Cycle experts for the particularities of resources, in particular metals.
- Ensuring that initiatives facilitated by UNEP such as UNEP Finance Initiative, Global e-Sustainability Initiative, Tour Operators' Initiative and the Sustainable Building & Construction Initiative take Life Cycle Approaches.
- Being in contacts with Multilateral Environmental Agreements, in particular Basel Convention, to base waste policies (i.e.: e-waste) on Life Cycle Thinking.

Key Deliverables:

- Worldwide network of around 1000 experts of which 200 actively participated in Initiative.
- Regional and national 'centres of excellence' for capacity building and technology transfer.
- Support of around 50 open meetings on LCA worldwide.
- Set-up of an open management content system: website ESTIS for the Life Cycle Initiative and its task forces and regional networks.
- Free licenses of LCI databases and LCA softwares for 22 organisations from 14 developing countries to support LCA case studies.
- LCA and LCM training materials (draft versions).
- International LCM guide (draft version).
- Feasibility studies for Extended LCA (incl. social aspects).
- 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).

3 MARRAKESH PROCESS

UNEP is pursuing the development of a 10-year Framework of Programmes on Sustainable Consumption and Production (Marrakech Process) supporting regional and national initiatives. The Marrakech Process is a follow-up of the 2002 [Johannesburg World Summit on Sustainable Development](http://www.unep.fr/pc/sustain/10year/home.htm) (<http://www.unep.fr/pc/sustain/10year/home.htm>).

UNEP has prioritized following areas to initiate the overall activities under the Marrakech Process:

- Industrial Development: new models of development (circular economy and safer production).
- Waste management: 3Rs
- Bali Strategic Plan and Sustainable Consumption and Production capacity building: LCA, National Cleaner Production Centers, Product-service.
- Sustainable Trade: looking at SMEs
- Education & communication
- Sustainable energy & mobility

Consequently, Task Forces are being set-up to support the implementation of specific themes, which are being lead and supported by different countries:

- Sustainable lifestyles (Sweden)
- Sustainable products (UK)
- Cooperation with Africa (Germany)
- Sustainable procurement (Switzerland)
- Sustainable tourism (France)
- Sustainable building and construction (Finland)
- Sustainable education (Italy)

Co-operation Dialogue Sessions ensure the involvement of development agencies and development banks into the Marrakech Process. The development of the framework consists of the following phases:

- a) Organizing regional consultations to promote awareness and identify priorities and needs for Sustainable Consumption and Production;
- b) Building regional strategies and implementation mechanisms with regional and national ownership;
- c) Implementing concrete projects and programmes at the regional, national and local levels;
- d) Monitoring and evaluating progress.

The consultations' phase has been concluded and priorities have been identified at a regional level. A bottom-up approach is a key principle for the development of all activities.

4 THE LIFE CYCLE INITIATIVE – SECOND PHASE (2007 - 2010)

A renewed mission, priorities for the second phase, and a selection of new activities are described in the next lines.

New mission of the Life Cycle Initiative:

“To be the recognized facilitator to bring Life Cycle Approaches into practice world wide”

New mission of the Life Cycle Initiative:

The work in the second phase of the Life Cycle Initiative will be structured in five work areas:

- 1) *Life Cycle Capacity Building*
- 2) *Life Cycle Management: Natural Resources*
- 3) *Life Cycle Management: Chemicals*
- 4) *Life Cycle Management: Consumption Clusters (structured in housing, mobility, food and consumer products)*
- 5) *Life Cycle Approaches methodology*

The relationship between the five work areas can be seen in the Figure 2. Thus, it is pursued that the impact of the Life Cycle Initiative goes beyond the work on methodologies and capacity building and contributes in a more practical and effective way to the economies and to the ongoing international efforts to change unsustainable patterns of Production and Consumption.

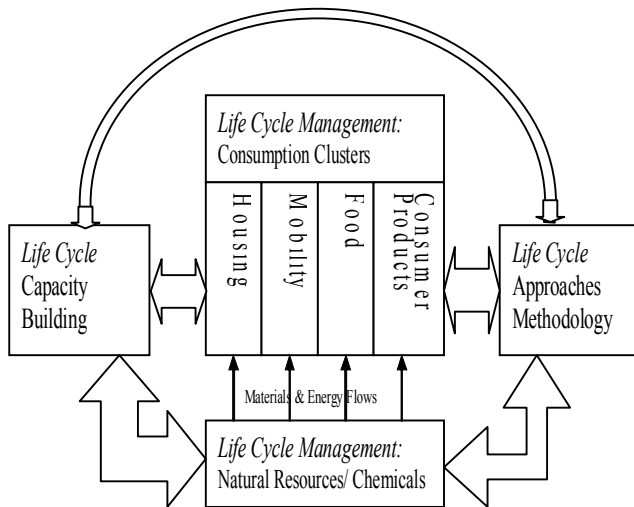


Figure 2: Linkages among the work areas

New projects:

It is expected to continue, among others, with the following projects:

- *Improvement of Characterisation Factors in Life Cycle Impact Assessment of Ecotoxicity (Fate – Exposure – Effects)*. This project is aiming at improving characterisation factors for metals ecotoxicity.
- *Long term development and maintenance of a LCI database registry*. This activity will allow structured collection and dissemination of meta data about running projects and developments achieved so far.
- *Extended LCA: Integration of social aspects into LCA framework*. This project will identify whether and in what manner social aspects can be

integrated into LCA methodologies, and to shape the process towards agreement in the expert community (Code of Practice) and towards standardization in the long term. Furthermore, core elements of and core requirements upon the integration of social aspects shall be formulated.

5 PERSPECTIVES

Synergies are fundamental for the success of the programs on Sustainable Consumption and Production. In line with this, the Initiative and the 10-year Framework of Programmes on Sustainable Consumption and Production are identifying complementary or supplementary spaces to coordinate and strengthen their capacities and to act in a more effective and efficient way.

UNEP's current activities on both sides will be complementary and coordinated through following actions:

- Exchange of knowledge and experiences.
- Mutual feedback between the task forces.
- Identification of common projects and common deliveries.
- Identification of complementary projects and deliveries.
- Share of resources.

10-year Framework of Programmes on Sustainable Consumption and Production comprises a comprehensive range of activities towards the final implementation of Sustainable Consumption and Production; this process is moving more on the political arena and integrates tools that are still being handled in a separate way (Cleaner production, 3R, safer production, etc.). The Initiative facilitates the links between the separated approaches. Being both activities under UNEP's mandate, synergies between them based on the exchange of knowledge and experiences, mutual feedback, conjointly work for common goals and share of all kind of resources will be built. The Life Cycle Initiative aims at permanent report on the progress of these activities.

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