



## **LC Initiative Workshop on the Life Cycle Impact Assessment Definition study**

**Vienna - Thursday 16 May 2002**

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### **Workshop aims**

The Life Cycle Impact Assessment (LCIA) programme of the Life Cycle Initiative is proposing an interesting and practical challenge towards recommended practice: the need to bring together science and pragmatism, to obtain a framework, characterization factors and data sets that are scientifically defensible, relevant to the decision endpoints, and practical.

Within this general objective, the LCIA definition study will design the LCIA program and involve collaboratively LCA stakeholders to produce a 2 years detailed plan with a prospect of 4 years. The present workshop initiates the definition study concentrating on the following tasks:

- a) Identify user needs for LCIA and case studies (in collaboration with the LCI and LCM programme) to test and improve the method feasibility. Needs of different "LCA stakeholders" will be considered, including Users of LCA results, users of LCA data and software tools, providers of LCA software tools, LCA consultant or academia.
- b) Determine the consequences of different representations of Area of Protection (AoP) on the list of impact categories and indicators identifying advantages and limitations of these representations). Propose draft guidelines for the the decision-making framework (e.g. how to deal with time integration)
- c) Make a first proposal of impact categories to be addressed, starting from the results from the SETAC-Europe Working Group and from the Japanese framework. Propose potential indicators and describe their level of availability and further achievement required to make them operational
- d) Address as high priority different impacts than the one typically applied in "OECD country LCAs", like e.g. erosion or biodiversity

### **Workshop format**

The workshop will be organized as follows:

- General introduction and description of the subgroup missions
- Work in 4 working subgroups according to the above-described aims a) to d) (see appendix 1 for more information)
- Presentation of subgroup results and discussion to all participants

- Depending on available time: discussion on the guidelines & criteria for the identification of recommended practice and first prioritization of research needs & program emphasis

## **Participants**

Each subgroup work will be prepared in advance by a (pair of) chairperson(s) and be eventually discussed within an Internet forum opened one month beforehand (middle of April). Each person who is eager to contribute actively to one of these subgroups is welcome to join the workshop and will be invited to submit in advance its main proposal, ideas and potential contributions. The mission of each subgroup is detailed in appendix 1.

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**Application form**

Family name:	First name:
Affiliation:	
Address:	
Zip code:	City:
Country:	
Telephone:	E-mail:

**Inscription**

- Yes I want to contribute to .the LCIA workshop in Vienna, on Thursday 16 May 2002-03-21

**Workgroup**

I would like to contribute in the following subgroup and I enclose a first description of my potential input in the abstract below

- a) User needs  
 b) Area of Protection and basic guidelines  
 c) Starting list of impact categories & potential indicators  
 d) Additional impact categories

**Working materials:**

- Program and abstracts will be sent by e-mail
- Abstract to be submitted **before April 26 2002:**

**Author and affiliation:**

**Short description of my potential contribution in the working group (max 200 words):**

Please send the registration form to:  
olivier.jolliet@epfl.ch with cc to anne.solgaard@unep.fr.

## Appendix 1: subgroup missions

Work in each of these subgroups will be prepared by inputs from the different participants. Chairpersons will prepare in advance a starting document to structure discussion and enable a maximal efficiency during the workshop. Inputs are also to be obtained from an Internet forum before or after the workshop.

In addition to the below predefined tasks, each subgroup will try to collect information on related initiatives on existing projects & experts which could contribute to the Initiative goals.

### a) User needs and case studies

The first goal is to identify user needs for LCIA and case studies (in collaboration with the LCI and LCM programme) to test and improve the method feasibility

This includes the following steps:

- Identify main needs as expressed by the workshop participants
- Design the first draft of a questionnaire to be sent to different "LCA stakeholders" including Users of LCA results, users of LCA data and software tools, providers of LCA software tools, LCA consultant or academia
- Make a first proposal for case studies (or for a selection process), which would enable to test method feasibility, for example applications in private sectors that have a strong interest in the initiative, or applications of special interest in relation to the initiative objectives. 4 studies could be finally retained, some of these cases being common with the other LCM and LCI programs to ensure a coordinated development of the different programs.

#### *User needs additional info (extract of the LCIA ToR)*

*The field of life cycle assessment is facilitated and carried out by a wide array of different parties. The LCIA definition study will center on and start with user needs assessment. Specifically, the LCIA definition study will design the LCIA program by collaboratively involving representatives of, and inviting and reviewing widespread input from, each of these groups about their needs and concerns. "LCA stakeholders" include:*

- *Users of LCA results to make decisions within, and provide decision guidance and information to private sector, government (policy), NGOs and final demand purchasers (governments, companies, and consumers);*
- *Users of LCA data and software tools to conduct LCAs in private sector, government, NGOs and academia;*
- *Providers of LCA software tools, both for-profit and not-for-profit;*
- *LCA consultants;*
- *Academia (instructors, students, researchers)*

### b) Area of Protection and basic guidelines

In its final report, The SETAC working group on LCIA has proposed different ways to structure and present AoP's. After incorporation of possible other alternatives (e.g. from the Japanese project), the mission of the subgroup is to look at the practical consequences of these different representations looking at their advantages and limitations in respect to:

- Communication purposes to the different stakeholders and to other environmental scientist

- Choice of the impact categories and categories indicators (e.g. what does the introduction of Climate equilibrium (or Life Support Systems) as an AoP changes on the indicator choice ?)

If possible, a first discussion and proposal will be made on the draft guidelines for the decision-making framework (e.g. how to deal with time integration, spatial integration, population distribution, etc.), looking again at the practical consequences of these choices.

Results of this subgroup will be closely discussed with those of subgroups c) and d), considering the relation of LCIA to sustainability indicators, which also include the economical and social dimensions of sustainability

### **c) Starting list of impact categories & potential indicators**

For a whole list of impact categories, a thorough review work has been performed by the SETAC working group on impact assessment and it constitutes an excellent basis for the determination of recommended practice. Additional topics such as the compatibility between midpoint and endpoint indicators need to be addressed in more detail and should be implemented as an operational framework. The Japanese project offers an interesting starting point for this. Therefore the following tasks are foreseen:

- 1) Starting from both the SETAC Working Group and the Japanese framework make a first proposal of impact categories to be addressed
- 2) Propose potential indicators at both midpoint and endpoint levels:
- 3) Describe the level of availability of these indicators and eventually the further achievement required to have them operational
- 4) Identify related initiatives on existing projects & experts which could contribute to the determination of indicators & factors.

### **d) Additional impact categories**

If "classical" impact categories have been addressed in previous works of different working groups, it is of high priority within the Life Cycle Initiative to address different types of impact than the one typically applied in "OECD country LCAs", like e.g. erosion or biodiversity.

The aim of this group is to list these categories and makes a first review of existing or possible methods and indicators to address them. It also aims at seeing how available knowledge could enter the LCA framework, e.g. how biodiversity changes could be normalised to a functional unit.

## **Appendix 2 : Definition study objectives and deliverables**

The definition study aims:

- 1) To identify user needs for Life Cycle Impact Assessment
- 2) To provide a clear picture of the overall framework and of the impact categories (assessment endpoints) to address as high priority, including different impacts than the one typically applied in "OECD country LCAs", like e.g. erosion or biodiversity
- 3) To provide guidelines for the starting points, the decision-making framework (e.g. how to deal with time integration, spatial integration, population distribution, etc.) and guidelines for the identification of recommended practice.
- 4) To identify the main research needs and to produce a 2 years detailed plan, with a prospect of 4 years for the LCIA programme.
- 5) To identify worldwide experts from relevant fields, as potential candidates to ask for peer review, workgroups or task forces.
- 6) To identify case studies, and industrial partners, to test and improve the method feasibility.
- 7) To identify the links with the Life Cycle Inventory and Life Cycle Management programmes, including the relation of LCIA to sustainability indicators, which also include the economical and social dimensions of sustainability.

Starting with the transfer from different projects from different parts of the world (e.g. the Japanese National LCA project or EcoIndicators 99) and from results of the SETAC-Europe working group on Life Cycle Impact Assessment, the definition study will define to what extent existing approaches and databases can be adopted to meet the requirements of these deliverables and where there are gaps requiring further research. This procedure will be carried out in a very open process; involving worldwide stakeholders from private sector, academia, governments and NGOs.

### **Summary of expected results and deliverables**

The following results will be delivered in the LCIA definition study:

- 1) D1: Report on user needs.
- 2) D2: Operational forum for internet consultation
- 3) D3: a) Proposal for a consistent framework, including a first prioritised list of areas of protection, related impact categories, desirable impact indicators at midpoint and endpoint levels, including impacts relevant to non OECD country. b) Relation of LCIA to sustainability indicators
- 4) D4: A 2 year plan for the LCIA programme, with a 4 year perspective; including the key milestones and the budget requirements; ensuring compatibility with the other LCI and LCM programmes. This includes a list of development needs in different impact categories, identifying readily achievable priorities and long-term research objectives. This also includes a proposal of 4 case studies, for example applications in private sectors that have a strong interest in the initiative, or applications of special interest in relation to the short-, mid-, and long-term objectives.
- 5) D5: Synthesis report of review including change proposals
- 6) D6: The final report of the LCIA definition study will consist of an updated compilation of the previous deliverables.