

Corner: UNEP/SETAC Life Cycle Initiative

Strengthening capacity building through regional networks

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Declaration of Apeldoorn on Life Cycle Impact Assessment of Non-Ferrous Metals

Experts on Life Cycle Impact Assessment (LCIA) of non-ferrous Metals reached an agreement that the aspects of major relevance that need further elaboration in LCIA for a correct understanding of the fate and toxicity of non-ferrous metals are: speciation, persistence, essentiality, bioavailability, characterisation, compartments in the multimedia model and spatial aspects. The Life Cycle Initiative was asked to provide recommendations on the integration of the above factors into LCIA methodology. On some issues, further research may be necessary beyond these recommendations. Even though LCIA can use the models and the methodologies developed for Risk Assessment, LCA is designed to compare different products and systems, and not to predict the maximal risks associated with single substances. However, LCIA models are still in development and do not yet take all important metal-specific properties and processes into account. They can be improved to provide a more meaningful result in ecotoxicity assessment by critically adopting and adapting advanced knowledge and models from risk assessment.

On April 15th, 2004, a group of specialists in the areas of LCA, LCIA and Risk Assessment met at TNO in Apeldoorn, the Netherlands, to discuss the current practices and complications of LCIA methodolo-

gies for non-ferrous metals (including essential metals such as zinc and copper). The workshop was commissioned by ICMM (International Council on Mining and Metals), ECI (European Copper Institute) and DBM (Dutch Duurzaam BouwMetaal Foundation), co-sponsored by the UNEP/SETAC (United Nations Environment Programme / Society of Environmental Toxicology and Chemistry) Life Cycle Initiative. It was organized by TNO (Netherlands Organisation for Applied Scientific Research) and CML (Institute of Environmental Sciences, Leiden University).

The purpose of the workshop was to provide input to the UNEP/SETAC Life Cycle Initiative on issues surrounding the characterisation of metals by currently available, ecotoxicity-based LCIA methods. The group, originating from industry, academia, government, research and consultancy, recognised that current ecotoxicity LCIA methods often produce a probably incorrect emphasis on the impact of metals and prepared a declaration, the Declaration of Apeldoorn, on LCIA of Non-Ferrous Metals that can be downloaded from the Life Cycle Initiative website at:

A full report of the workshop, the underlying scientific report and presentations will soon be available at the TNO website www.mep.tno.nl by using the search function for 'Apeldoorn Declaration'.

African LCA Network identifies actions and initiatives for upcoming months and years

The African LCA Network (ALCAN) has identified a set of actions and initiatives that it will pursue in the coming months and years:

- Collaboration among the academic network participants and exchange of publications
- Organisation of LCA awareness-raising and/or training workshops for policy-makers
- Linkage of ALCAN to the National Cleaner Production Centres and eco-design efforts in Africa
- Involvement in and contribution to the Task Forces of the Life Cycle Initiative
- Regional LCA requires a survey and outreach to introduce ALCAN to stakeholders in the region
- Use of Input/ Output LCA as a very promising approach to LCI data development for many African countries
- Creation of an ALCAN website, perhaps linked to ARSCP and UNEP's Regional Office for Africa
- Development of a list of priority impact categories for Africa and its regions, and to identify the available methods for life cycle impact assessment for each of these categories
- Capture of traditional knowledge on environmental and resource management
- 75% reduction rate on subscription for International Journal of LCA due to membership in Life Cycle Initiative
- Fundraising to make identified actions happen

Brainstorming and planning meetings to identify these topics were held in conjunction with the Third African Roundtable on Sustainable Consumption and Production (ARSCP) in Casablanca, Morocco, 17–20 May 2004. For more details on the Roundtable; <http://www.un.org/esa/sustdev/sdissues/consumption/Marrakech/Africa-roundtableAgenda-10YFPFINAL.pdf>. Please contact Toolseeram Ramjeawon at ramjeawon@uom.ac.mu (University of Mauritius, Mauritius) for more information.

Latin American Life Cycle Network gets off the ground

Several experts on life cycle approaches in Latin America have established the Latin American Life Cycle Network with the general objective of promoting the application of LCA and the concept of Life Cycle Thinking in the practices of sustainable material management in Latin America. Specific aims are raising awareness on LCA and Life Cycle Thinking in Latin America through courses and seminars, exchange of information on conditions for the successful application of life cycle approaches and stimulating the involvement of Latin American countries in the Life Cycle Initiative.

As a first product of this network, it is proposed to integrate existing knowledge through the exchange of existing information within the countries of Latin America and the preparation of education material, in the following sectors:

- Mining exploitation
- Mineral extraction and metal production
- Generation of hydroelectric and thermal energy

This will enable projects to be based in two or more countries, and to discuss and disseminate the information, preparing the creation of a future Latin American Life Cycle Inventory database. Please contact Armando Caldeira-Pires at armandcp@unb.br (University of Brasilia, Brazil) for more information.

UNEP/ SETAC Partners

UNEP/ SETAC partners in the Life Cycle Initiative are AIST (National Institute of Advanced Industrial Science and Technology), Japan, Alliance for Beverage Cartons and the Environment (ACE), American Plastics Council (APC), Association of Plastics Manufacturers in Europe (APME), EcoRecycle Victoria, International Council on Mining and Metals (ICMM), General Motors, Governments of Canada, Germany, the Netherlands, Quebec and Switzerland, and the CIRAIG/ Government of Quebec.