

National LCA Databases: A Panel Discussion of Activities, Successes, and Challenges

Session chairs: Joyce Cooper (University of Washington) and Michael Deru (NREL)

Panel members: Rolf Frischknecht (EcoInvent), Sangwon Suh (University of Minnesota), Atsushi Inaba (Japanese National Institute of Advanced Industrial Science and Technology), David Pennington (European Platform on Life Cycle Assessment), and the session chairs

In the past, LCA has been data poor: inventory data have been held as proprietary, have been expensive, inconsistent, lacked of independent review, and/or been subject to publication restrictions. Similarly, impact assessment data have been held in unlinked and hard-to-find sources with little attention paid to regional specificity. Such limitations may hinder the development of transparent/ reproducible methodological advances and the evaluation of case study results. More recently, inventory and impact data are available through numerous database projects, some of which represent national data collection and dissemination efforts, are either free to access or accessible with a fee, and include variations in meta data (describing data quality, review, etc.). National efforts that reflect either a nation-wide effort open to participation for all LCA groups or an officially governmentally recognized or coordinated national data effort include:

- The Canadian Raw Materials Database (crmd.uwaterloo.ca/)
- The European Union's European Reference Life Cycle Data System ELCD (<http://lca.jrc.ec.europa.eu>)
- The Korea National LCI Database (www.kncpc.re.kr/eng/topics/Lci.asp)
- The LCA-National Project in Japan (described at unit.aist.go.jp/lca-center/lca-activity/symposium/04_sympto/041026_paper/session2/inaba_summary.pdf)
- The Swiss National LCI Database EcoInvent (www.ecoinvent.ch/)
- The United States Database Project (www.nrel.gov/lci/)

This discussion forum will focus on the development, use, and dissemination of national and other LCA databases. The scope of the database session will include:

- How all phases of LCA (goal and scope definition, inventory analysis, impact assessment, and interpretation) are facilitated by current and emerging database systems
- The role of data quality assessment and peer review
- The role of database compatibility for exchange among LCA practitioners
- Challenges for interdisciplinary data preparation and use
- How database development will effect existing and emerging LCA-software and sector-specific tools
- Database use in academic settings
- The role of databases; demand; cooperation between industry, government, and academia; and work-flow support in increased LCA practice

Each panel member will provide a 10 minute presentation concerning their database activities. Presentations will be followed by a panel discussion with the goals of identifying on-going challenges and potential solutions and partnership opportunities.