

# THE INTERNATIONAL JOURNAL OF LIFE CYCLE ASSESSMENT

Associated Journal of UNEP/SETAC Life Cycle Initiative

Official Organ of JLCA (LCA Society of Japan), ISLCA (Indian Society for LCA), KSLCA (Korean Society for LCA) and ALCAS (Australian LCA Society)

On September 25, 2001, ISI (Institute for Scientific Information) accepted Int J LCA for coverage beginning with Volume 6 (1) 2001. Int J LCA has been included in ISI Web of Science, Science Citation Index Expanded, ISI Alerting Services, and Current Contents/Agriculture, Biology, and Environmental Sciences.

ISI Science Citation Index, Impact Factor **2005: 1.483** in the subject categories Environmental Engineering and Environmental Sciences.

## Editor-in-Chief

Prof. Dr. Walter Klöpffer  
walter.kloepffer@t-online.de

## Subject Editors

Dr.-Ing. Martin Baitz  
**Responsible for: Data Availability,  
Data Quality in LCA**  
E-mail: [m.baitz@pe-europe.com](mailto:m.baitz@pe-europe.com)

Dr.-Ing. Andreas Ciroth  
**Responsible for: Uncertainties in LCA**  
E-mail: [ciroth@GreendeltaTC.com](mailto:ciroth@GreendeltaTC.com)

Dr. Gerard Gaillard  
**Responsible for: LCA for Agriculture**  
E-mail: [gerard.gaillard@art.admin.ch](mailto:gerard.gaillard@art.admin.ch)

Prof. David Hunkeler  
**Responsible for: Societal Life Cycle Assessment**  
E-mail: [david.hunkeler@aquaplustech.ch](mailto:david.hunkeler@aquaplustech.ch)

Dr. Niels Jungbluth  
**Responsible for: LCA for Energy Systems & Food Products**  
E-mail: [jungbluth@esu-services.ch](mailto:jungbluth@esu-services.ch)

Dr. Llorenç Milà i Canals  
**Responsible for: Land Use in LCA**  
E-mail: [L.Mic@surrey.ac.uk](mailto:L.Mic@surrey.ac.uk)

Dr. David W. Pennington  
**Responsible for: Waste in LCA**  
E-mail: [david.pennington@jrc.it](mailto:david.pennington@jrc.it)

Dr. Gerald Rebitzer  
**Responsible for: Life Cycle Management**  
E-mail: [Gerald.Rebitzer@alcan.com](mailto:Gerald.Rebitzer@alcan.com)

Dr. Jörg Schweinle  
**Responsible for: Wood & Other Renewable Resources**  
E-mail: [j.schweinle@holz.uni-hamburg.de](mailto:j.schweinle@holz.uni-hamburg.de)

Sangwon Suh  
**Responsible for: Input-Output and Hybrid LCA**  
E-mail: [sangwon@umn.edu](mailto:sangwon@umn.edu)

## Section: Life Cycle Management – Applications for decision-making, life cycle costing, social aspects

### Editor-in-Chief

Prof. Dr. Walter Klöpffer (see above)

### Section Editor

Dr. Gerald Rebitzer (see above)

### Editorial Board

Dr. Matthias Finkbeiner (see below)  
Dr. Yasunari Matsuno (see below)  
Dr.-Ing. Wulf-Peter Schmidt (see below)  
Thomas E. Swarr (see below)

## Editorial Board

Prof. Dr. Sebastian Alber (Dipl.-Ing.)  
E-mail: [sebastian.alber@wu-wien.ac.at](mailto:sebastian.alber@wu-wien.ac.at)

Associate Prof. Dr. Robert Anex  
E-mail: [rpanex@iastate.edu](mailto:rpanex@iastate.edu)

Ing. Gian Luca Baldo, PhD  
E-mail: [baldo@studiolce.it](mailto:baldo@studiolce.it)

Dr. Ian Boustead  
E-mail: [iboustead@aol.com](mailto:iboustead@aol.com)

Dr. Arthur Braunschweig  
E-mail: [abraunschweig@e2mc.com](mailto:abraunschweig@e2mc.com)

Dr. Rolf Bretz  
E-mail: [Rolf.Bretz@cibasc.com](mailto:Rolf.Bretz@cibasc.com)

Prof. Roland Clift  
E-mail: [R.Clift@surrey.ac.uk](mailto:R.Clift@surrey.ac.uk)

Dr. Frank J. Consoli  
E-mail: [FJConsoli@aol.com](mailto:FJConsoli@aol.com)

Dr. Sarah J. Cowell/McLaren  
E-mail: [sj.mclaren@yahoo.co.nz](mailto:sj.mclaren@yahoo.co.nz)

Mary Ann Curran  
E-mail: [curran.maryann@epamail.epa.gov](mailto:curran.maryann@epamail.epa.gov)

James Fava, Ph.D.  
E-mail: [j.fava@fivewinds.com](mailto:j.fava@fivewinds.com)

Dr. Matthias Finkbeiner  
E-mail: [matthias.finkbeiner@daimlerchrysler.com](mailto:matthias.finkbeiner@daimlerchrysler.com)

Göran Finnveden, Ph.D.  
E-mail: [goran.finnveden@infra.kth.se](mailto:goran.finnveden@infra.kth.se)

Prof. Dr.-Ing. Günter Fleischer  
E-mail: [lca@itu301.ut.tu-berlin.de](mailto:lca@itu301.ut.tu-berlin.de)

Dr. Marina Franke  
E-mail: [franke.m@pg.com](mailto:franke.m@pg.com)

Dr. sc. techn. Rolf Frischknecht  
E-mail: [frischknecht@esu-services.ch](mailto:frischknecht@esu-services.ch)

Dr. Pere Fullana  
E-mail: [pfullana@randagroup.es](mailto:pfullana@randagroup.es)

Dr. Gérard Gaillard  
E-mail: [gerard.gaillard@art.admin.ch](mailto:gerard.gaillard@art.admin.ch)

Dr. Carl-Otto Gensch  
E-mail: [gensch@oeko.de](mailto:gensch@oeko.de)

Mark Goedkoop  
E-mail: [goedkoop@pre.nl](mailto:goedkoop@pre.nl)

Prof. Dr. Birgit Grahl  
E-mail: [grahl@fh-luebeck.de](mailto:grahl@fh-luebeck.de)

Dr. ir. Jeroen B. Guinée  
E-mail: [guinee@cml.leidenuniv.nl](mailto:guinee@cml.leidenuniv.nl)

Dr. techn. Ole Jørgen Hanssen  
E-mail: [Ole.J.Hanssen@sto.no](mailto:Ole.J.Hanssen@sto.no)

Prof. Per-Anders Hansson  
E-mail: [per-anders.hansson@bt.slu.se](mailto:per-anders.hansson@bt.slu.se)

Ass. Prof. Dr. Michael Hauschild  
E-mail: [mic@ipl.dtu.dk](mailto:mic@ipl.dtu.dk)

Dr. Reinout Heijungs  
E-mail: [heijungs@cml.leidenuniv.nl](mailto:heijungs@cml.leidenuniv.nl)

Prof. Dr. Konrad Hungerbühler  
E-mail: [hungerb@tech.chem.ethz.ch](mailto:hungerb@tech.chem.ethz.ch)

Dr. Robert G. Hunt  
E-mail: [rhunt@fal.com](mailto:rhunt@fal.com)

Tak Hur, Ph.D., Prof.  
E-mail: [takhur@kkucc.konkuk.ac.kr](mailto:takhur@kkucc.konkuk.ac.kr)

Dr. Atsushi Inaba  
E-mail: [a-inaba@aist.go.jp](mailto:a-inaba@aist.go.jp)

Prof. Dr. Hisashi Ishitani  
E-mail: [ishitani@sfc.keio.ac.jp](mailto:ishitani@sfc.keio.ac.jp)

Dr. Norihiro Itsubo  
E-mail: [itsubo-n@yc.musashi-tech.ac.jp](mailto:itsubo-n@yc.musashi-tech.ac.jp)

Dr. Allan Astrup Jensen  
E-mail: [aaj@force.dk](mailto:aaj@force.dk)

Dr. Niels Jungbluth  
E-mail: [jungbluth@esu-services.ch](mailto:jungbluth@esu-services.ch)

Seungdo Kim, PhD  
E-mail: [kimseun@msu.edu](mailto:kimseun@msu.edu)

Prof. Dr. Zbigniew Stanislaw Klos  
E-mail: [zbigniew.klos@put-poznan.pl](mailto:zbigniew.klos@put-poznan.pl)

Dr. Hans-Jürgen Klüppel  
E-mail: [hans-juergen.kluettel@henkel.de](mailto:hans-juergen.kluettel@henkel.de)

Prof. Lester Lave  
E-mail: [ll01@andrew.cmu.edu](mailto:ll01@andrew.cmu.edu)

Dr. Civ. Eng. Jean-Francois Le Teno  
E-mail: [jean-francois.le-teno@sgcib.com](mailto:jean-francois.le-teno@sgcib.com)

Dr. Lars-Gunnar Lindfors  
E-mail: [l.g.lindfors@ivl.se](mailto:l.g.lindfors@ivl.se)

Dr. Manfred Marsmann  
[manfred.marsmann.mm@bayer-ag.de](mailto:manfred.marsmann.mm@bayer-ag.de)  
Associate Prof. Dr. Yasunari Matsuno  
E-mail: [matsuno@material.t.u-tokyo.ac.jp](mailto:matsuno@material.t.u-tokyo.ac.jp)

Dr. Barbara Nebel  
**Responsible for: Wood & Other Renewable  
Resources**  
E-mail: [Barbara.Nebel@scionresearch.com](mailto:Barbara.Nebel@scionresearch.com)

Prof. Zuoren Nie  
E-mail: [zrnie@bjut.edu.cn](mailto:zrnie@bjut.edu.cn)

Gregory A. Norris, PhD  
E-mail: [norris@sylvatica.com](mailto:norris@sylvatica.com)

Dr. Philippe Osset  
E-mail: [philippe.osset@fr.pwglobal.com](mailto:philippe.osset@fr.pwglobal.com)

Dr. Dennis Postlethwaite  
E-mail: [DENNIS@postlethwaited.fsnet.co.uk](mailto:DENNIS@postlethwaited.fsnet.co.uk)

Dr. ir. José Potting  
E-mail: [J.Potting@fwn.rug.nl](mailto:J.Potting@fwn.rug.nl)

Dipl.-Chem. Isa Renner  
E-mail: [i.renner@cau-online.de](mailto:i.renner@cau-online.de)

Dr.-Ing. Konrad Saur  
E-mail: [K.Saur@Fivewinds.com](mailto:K.Saur@Fivewinds.com)

Dr. Wulf-Peter Schmidt  
E-mail: [wschmi18@ford.com](mailto:wschmi18@ford.com)

Dipl.-Ing. Stefan Schmitz  
E-mail: [Stefan.Schmitz@uba.de](mailto:Stefan.Schmitz@uba.de)

Prof. Vinod K. Sharma  
E-mail: [vks@igdr.ac.in](mailto:vks@igdr.ac.in)

Dr. Guido Sonnemann  
E-mail: [guido.sonnemann@unep.fr](mailto:guido.sonnemann@unep.fr)

Ass. Prof. Kees Sonneveld  
E-mail: [kees.sonneveld@vu.edu.au](mailto:kees.sonneveld@vu.edu.au)

Ing. Carolin Spirinckx  
E-mail: [Carolin.Spirinckx@vito.be](mailto:Carolin.Spirinckx@vito.be)

Dr. Gustav Sundström  
E-mail: [miljobal@algonet.se](mailto:miljobal@algonet.se)

Thomas E. Swarr  
E-mail: [swarrte@corphq.utc.com](mailto:swarrte@corphq.utc.com)

Dr. Arnold Tukker  
E-mail: [Arnold.Tukker@tno.nl](mailto:Arnold.Tukker@tno.nl)

Prof. Dr. Helias A. Udo de Haes  
E-mail: [udodehaes@cml.leidenuniv.nl](mailto:udodehaes@cml.leidenuniv.nl)

Dr. Bruce W. Vigon  
E-mail: [vigonb@battelle.org](mailto:vigonb@battelle.org)

Bo Pedersen Weidema, PhD  
E-mail: [bow@lca.dk](mailto:bow@lca.dk)

Dr. Frank Werner  
**Responsible for: Wood & Other Renewable  
Resources**  
E-mail: [frank.werner@gmx.ch](mailto:frank.werner@gmx.ch)

Dr. Keith Weitz  
E-mail: [kaw@rti.org](mailto:kaw@rti.org)

Dr. Peter White  
E-mail: [white.pr@pg.com](mailto:white.pr@pg.com)

Prof. Itaru Yasui  
E-mail: [yasui@iis.u-tokyo.ac.jp](mailto:yasui@iis.u-tokyo.ac.jp)

Steven B. Young, PhD, Peng  
E-mail: [sby@shyong.com](mailto:sby@shyong.com)

**Publisher-Editor: Almut Beate Heinrich** ([almut.heinrich@hjr-verlag.de](mailto:almut.heinrich@hjr-verlag.de)) · **Assistant: Moira Ledger** ([moira.ledger@t-online.de](mailto:moira.ledger@t-online.de))  
ecomod publishers (Verlagsgruppe Hüthig Jehle Rehm GmbH)  
Im Weiher 10, D-69121 Heidelberg, Germany • T: +49-6221-489-154; F: -407; <http://www.scientificjournals.com>