

# **Environmental Footprints and Eco-design of Products and Processes**

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Editor

# Social Life Cycle Assessment

An Insight

 Springer

*Editor*

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ISSN 2345-7651                      ISSN 2345-766X (electronic)  
Environmental Footprints and Eco-design of Products and Processes  
ISBN 978-981-287-295-1              ISBN 978-981-287-296-8 (eBook)  
DOI 10.1007/978-981-287-296-8

Library of Congress Control Number: 2014960333

Springer Singapore Heidelberg New York Dordrecht London  
© Springer Science+Business Media Singapore 2015

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Printed on acid-free paper

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# Preface

Impacts made by products on environmental and social fronts are becoming more and more important these days. Environmental and social impact assessment by various products is no longer an option, rather a necessity, and the time is not very far away when the environmental and societal impact assessment of products and their declaration will become mandatory. The environmental assessment of products with their life cycle-based approach using life cycle assessment (LCA) is at an advanced stage and is widely used in many industrial sectors today. The social assessment of products is relatively new and currently under development and is not as advanced as that of environmental life cycle assessment (ELCA). Social life cycle assessment (SLCA) is a complementary approach to ELCA, used to assess the impacts pertaining to the social and sociological aspects of the products in their entire life cycles; it looks at all the life cycle phases, such as raw material extraction, production, manufacturing process, transportation, its use and final disposal, and it looks at these impacts with the aid of a “social eye.” As the name implies, SLCA targets only social and sociological impacts through a range of impact categories. Methodological aspects and applications of SLCA is not yet completely developed and they are currently in the evolutionary stage.

On a comparative scale, the SLCA community is pretty small and is growing slowly. Still, there are many industrial sectors that have not touched social life cycle assessment at all and there are no studies on the SLCA of certain products. Only a limited number of product segments have ventured into SLCA, and again there is a dearth of studies even in those segments. Similarly, methodological choices and aspects have not quite been developed for various industrial sectors. Therefore, only a very limited number of studies on SLCA are available, and hence there is a scarcity of literature pertaining to SLCA as such. Only a few books are available on the subject, and this is the basis for the writing of this book, which, with seven very informative chapters, will become one of the important references in the area of SLCA.

The first chapter, “[A Review of Social Life Cycle Assessment \(SLCA\) Methodologies](#)”, presents an overview of the concept of SLCA by dealing with the historical development of the SLCA concept and a detailed review on well-known

SLCA methods developed so far; this chapter also presents some SLCA studies on specific industrial segments.

The second chapter, “[The Socioeconomic LCA of Milk Production in Canada](#)”, details the SLCA study of the Canadian milk production system. Exemplifying the core concepts of SLCA, it presents the complete application of the SLCA concept for the Canadian milk production system. Details of the hot-spot analysis of this SLCA study are also dealt with in depth in this chapter, along with the discussions pertaining to the merits, limitations and challenges faced in this study, which will be helpful for future researchers in this area of interest.

The third chapter, “[Social Life Cycle Assessment in the South African Sugar Industry: Issues and Views](#)”, details the SLCA study done on the South African sugar industry. Having a reference to the United Nations Environment Programme (UNEP)’s guidelines of SLCA, this chapter presents an in-depth case study that was conducted on the sugar industry in South Africa with manifold objectives.

The fourth chapter, “[Social Life Cycle Assessment Application: Stakeholder Implication in the Cultural Heritage Sector](#)”, deals with the discussions pertaining to the SLCA of the cultural heritage sector; it deals with the research that has developed a detailed theoretical framework to assess the social impacts pertaining to the cultural heritage sector.

The fifth chapter, “[The Assessment of Social Impacts of Chemical and Food Products in the Czech Republic](#)” discusses a study conducted on SLCA on chemicals and food products in the Czech Republic. It highlights the importance of assessing the social impacts of chemical and food products on stakeholders, along with the presentation of detailed aspects and results of the SLCA of chemical products and food products separately. Finally, the chapter also discusses the sources of uncertainty and the major limitations of these studies.

The sixth chapter, “[Partial Organization and Social LCA Development: The Creation and Expansion of an Epistemic Community](#)”, enumerates the social shaping of the SLCA technique and its institutionalization process in detail. Having discussed the organization of SLCA within corporate social responsibility (CSR) multi-stakeholder initiatives in detail, this chapter deals with the development of epistemic communities; it also presents the development and growth of the SLCA epistemic community, using the development of the social hotspot database (SHDB) as an example.

The seventh and final chapter, “[Social Life Cycle Assessment in a Managerial Perspective: an Integrative Approach for Business Strategy](#),” outlines the implications of SLCA in a managerial outlook by an integrative approach for improving business strategy. This chapter reviews the various instruments related to stakeholder management and CSR and makes an attempt to combine the tools of social responsibility, SLCA, and the stakeholder management approach for improved business strategies.

I would like to take this opportunity to thank the contributors of all seven chapters for their sincere efforts and the enriched technical content in their chapters that helped publish this book. I have no doubt that readers will greatly benefit from it, and, as stated earlier, it will certainly add a feather to the cap of the SLCA community in terms of becoming an important reference for the researchers, students, industrialists, and sustainability professionals working in this field.

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