

Special Issue on
Life Cycle Assessment Approach Applied to Circular Economy

CALL FOR PAPERS

Industrial symbiosis principles, as in industrial ecology definition, are recently embraced by circular economy concept as the basis for characterization of cradle-to-cradle approach, with particular interest on global markets with growing environmental issues in many sectors such as food, waste management, and construction.

The circular economy concept is a response to sustainable growth in the context of the growing pressure of production and consumption on the world's resources and environment. Until now a linear model was applied, where every product is bound to reach its "end of life." A transition to a circular economy shifts the focus to reusing, repairing, refurbishing, and recycling existing materials and products: what used to be regarded as 'waste' can be turned into a resource. Products are intentionally designed to fit into material cycles, and as a result materials flow in a way that keeps the value added for as long as possible and residual waste is close to zero.

This call for papers investigates potential innovative application of Life Cycle Assessment related to circular economy approach, in terms of environmental sustainability. Comparative Life Cycle Assessment can also be used to evaluate the possible potential benefits of replacing conventional production system with circular economy approach system.

The results of investigation of use of secondary resources and supply chains are particularly relevant for highlighting bottle-necks, main environmental impacts, and possible barriers to application.

We invite authors to contribute review and original papers describing recent application of Life Cycle Assessment to circular economy. The expected contributions should aim to address how the practices in industrial engineering and Life Cycle Management could evolve in the context of circular economy.

Potential topics include but are not limited to the following:

- ▶ Circular economy approach for closing loops in different production systems: agricultural and zootechnical, building, and waste management
- ▶ Comparison between conventional production system with circular economy approach system
- ▶ Establishing of by-product markets
- ▶ Circular economy and sustainability of products
- ▶ Reverse logistics, closed-loop supply chains, and green logistics
- ▶ Application of ICT for circular economy
- ▶ LCA methodology data and calculation

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/je/industrial.engineering/lcac/>.

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First Round of Reviews

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