

Comparative Analysis of Life Cycle Assessment Methodologies in the Built Environment

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January 10, 2012



Life Cycle Assessment (LCA)

- Is a technique that can be used to assess the potential environmental impacts of a product or system over its life cycle.
- Four Stages: Goal and Scope Definition, Life Cycle Inventory (LCI), Life Cycle Impact Assessment (LCIA), Life Cycle Interpretation

Motivation for this Research

- LCA is an important tool in determining the overall environmental impact of a product as well as parts of the life cycle which are contributing most. However, since many different methodologies are being used to assess the life cycle of products, comparisons between studies can not be made.
- LCA methodologies include process, input-output, and hybrid techniques.
- Which is the best technique and can a uniform method be applied in the built environment?

Objectives

- Assess existing methodologies by identifying strengths and weaknesses
- Carry out a case-study to compare different methods
- Determine a suitable methodology for the build environment