

## **The Contribution of Life Cycle Assessment to Global Sustainability Reporting of Organizations**

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The three dimensions of sustainability are economy, socio-economy and ecology. In enterprises as well as public authorities the interaction of these aspects is of more and more interest. Economic decisions are often made with a close look on environmental and social aspects and in the fields of public relation and corporate identity all three dimensions are important.

In the area of environment the first step is already done: management systems with an explicit focus on environmental viewpoint, as specified for example in ISO 14001, are established. Thereby the organizations become aware of their local environmental effects. The consideration of the whole life cycle broadens the view to cover also Extended Product Responsibility (EPR). So environmental reports, which describe the situation of companies and their products in the global context, are a byproduct of the consequent internal environment protection of an organization. Parallel to the efforts of the companies to protect the environment, also the economic progress and the social improvement can be considered and an integrated global sustainability report can be published by the organization.

In enterprises the economic aspects are very well known, but often it is a problem to consider environmental and social aspects. Environmental aspects can be covered for example by Life Cycle Assessment (LCA). LCA is a proved scientific method to get quantitative results to environmental questions. With a manageable initial effort for a database using existing databases as a good starting point and a modular and parameterized model, regularly updates for yearly reports are practicable, quick and easy. With a case study of an SME it can be shown, that LCA provides very useful results in reference to environmental management systems and sustainability reports.

It will be shown, that results of impact assessments as central parts of an LCA are a good basis to create significant indicators for sustainability reports. They show environmental performance on a scientific basis and with the claim to include all relevant environmental problems. An other point is to show how results of LCA can contribute to an environmental management system (support decisions, define environmental goals, verify environmental improvements quantitatively, include indirect aspects, ...) and to show that LCA today is a tool highly efficient and relatively easy to use that combines scientific based results and manageability.