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Chapter II

Life Cycle Assessment Databases as Part of Sustainable Development Strategies: The Example of Ecoinvent

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Abstract

This article describes the importance of standardized, comprehensive and up-to-date life cycle inventory (LCI) databases for implementing policies that point towards sustainable development (SD). Taking present-day Swiss politics as an example, this article shows the interrelations among SD, an integrated product-policy (IPP) and a comprehensive LCI database. For this reason, the Swiss government states in its report on SD that IPP is one of the measures that will be put into practice as new instruments for fiscal policy. As it is essential to be able to calculate real existing value-added chains to arrive at a real application of the IPP concept, the creation of a

Swiss competence centre for LCI data is one of the different measures foreseen for the application of IPP. Therefore several LCA institutes within the ETH domain of engineering institutions along with the Swiss Federal Research Station of Agroecology and Agriculture and several Swiss offices/ agencies founded the Swiss Centre for Life-Cycle Inventories called ecoinvent.

Introduction

One can discern several successive stages over the development of environmental politics. Environmental thinking had a heyday in the 1960s with the appearance of the first ecological NGOs – regarded by industry mainly as people that disturb their work, and thus people to be rejected for their ideas and convictions. Therefore this epoch is nowadays looked back on as the age of "confrontation". In the '70s, when the recession hit industry, ecological thinking was mainly seen as a constraint that costs a lot, but returns a little, and therefore, in an ecological sense as well as in economic history this period can be associated with "recession". This often unfounded impression of ecology as an additional cost factor did not change until the end of the '80s/the beginning of the '90s – and there especially at the summit in Rio in 1992, where the word "sustainability" started to be used instead of "ecology". This change in terminology reflected a shift in industry from a stance of rejecting everything that detracts from the main goal (i.e., earning money) to a broader, more cooperative form of politics, for example, in relation to one's neighbourhood, and one's government at its various levels (from the municipal up to the federal) and to NGOs.

Principles of Sustainable Development

Looking back in history shows that the principle of sustainable development is much older than Rio '92. Conceptually, it was developed in the early 18th century, when population growth and industrialization had increased pressure on the resource wood to an extent that threatened further supply. Hans Carl Carlowitz claimed in 1713 in *Sylvicultura Oeconomica* that *"(...) man mit dem Holtz pfleglich umgehe, und wie eine sothane Conservation und Anbau des Holtzes anzustellen, dass es eine continuirliche, beständige und nachhaltende Nutzung gebe"* (Carlowitz, 1713, quoted in Grober, 1999). Actually, sustainable development has a much broader meaning, including and