

## **Holistic evaluation of processes to create more sustainable solutions**

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Authors: Peter Saling<sup>1</sup>, Anahi Grosse-Sommer

<sup>1</sup> BASF SE, ZZS/S, Carl-Bosch-Straße 38, 67056, Ludwigshafen, Germany; peter.saling@basf.com

Abstract:

Besides economic reasons sustainability gains more and more importance in purchase decisions. But what does sustainability mean in this context? To get a clear idea on the sustainability of a product or process the whole supply chain from cradle to grave has to be taken into consideration. Additionally, alternative solutions have to be consulted as well – otherwise no objective opinion regarding the degree of sustainability resp. the ratio of sustainability criteria can be formed. But what basis has to be defined to make two or more different products comparable in an objective way regarding their environmental and economic performance in a life cycle evaluation? What is the most suitable way to provide scientific based evaluation results for decision making and to ensure avoiding green washing? What is an appropriate methodology leading to reliable results which in parallel are affordable?

The different types of analysis using a Life Cycle Assessment approach with the whole life cycle of a product – from cradle to grave – being considered. All three dimensions of sustainability can be covered with the updated toolbox of BASF. Questions of e.g. using renewable materials, biodegradable products or conventional products can be answered and support strategic processes.

Eco-Efficiency Analysis as well as SEEBALANCE<sup>®</sup> or AgBalance<sup>™</sup> analysis are tools that can support decision-making processes very efficiently. Next to the environmental impact, which is assessed based on ISO14040 and ISO14044 standards, economic factors are taken into account and implemented in the Eco-Efficiency Analysis, following ISO 14045. The SEEBALANCE and AgBalance (specifically for agriculture processes) also consider social impacts of products and processes.

Both, detailed in-depth results of individual impact indicators, as well as aggregated results and a single sustainability evaluation score are output of the sustainability Evaluation methods. Different types of footprinting in combination with other information can support decision-making efficiently. Specific developed Quick Scan tools can give a basic overview of the situation of alternatives in this context.

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