

FRAUNHOFER INSTITUTE FOR ENVIRONMENTAL, SAFETY, AND ENERGY TECHNOLOGY UMSICHT



INTEGRATED APPROACH TOWARDS SMART AND SUSTAINABLE USE OF RAW MATERIALS

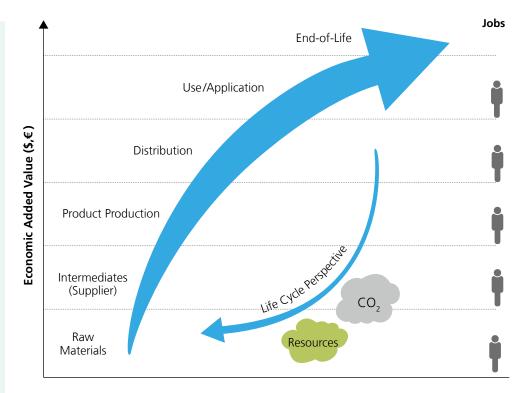
Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT

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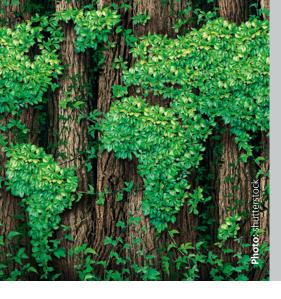
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With our technical know-how, and research excellence through our multidisciplinary research groups such as bioplastics, biochemicals, and process development, we analyse the activities and performance of your products in light of sustainable development. We help you measure, quantify and capture value in all three areas of sustainable development – Social, Environmental and Economic.





Methodology

Our integrated assessment makes a scientific, quantified and comprehensive analysis to estimate and or to compare the total impact caused by competitive raw material use. This assessment comprises of the following:

- Environmental impact assessment (using Life Cycle Assessment tools)
- Economic impact assessment
- Social impact assessment (from jobs generated to a full-fledged Social Life Cycle Assessment (S-LCA) along the product or process supply chain)

Our service

- Technology assessment
- Market and feasibility studies
- Integrated biorefinery concepts
- Economic added value estimations
- Resource management (e.g. CO₂ balances, carbon footprints, water footprints and Life Cycle Assessment and Management)
- Circular Economy potential assessment
- Social impact assessment
- Sustainability Reporting (CSR & IR)

Your benefit

An integrated assessment can support political and industrial decision makers by comprehending the paradigm of sustainable development through the three pillars of sustainability (economic, environmental and social).

This approach will help measure the generated direct and indirect added value, aid in improvement of processes, and enhance market positioning through better understanding of risks and opportunities. In addition, this approach will also account for the trade-offs and imbalances that will ensure the long term sustainability of process technologies.

Industrial Sectors

- Biofuel industry
- Bio-based chemical industry
- Commodity industry
- Oleochemical industry
- Dairy industry
- Plastics industry
- Rubber industry