

# Fact bite #46



## Life Cycle Assessment (LCA)

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Food  
Packaging  
Forum

**Life Cycle Assessment (LCA) is a scientifically accepted framework to assess and compare the environmental impacts of products and services over their entire life, i.e. from cradle to grave.**

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**Materials are made from raw resources (like oil, ores, and plants), which are then transformed into technical materials (like plastics, metals, and paper). These technical materials are processed into parts or components that are later assembled into products (like food packaging). The products are then used by consumers before they reach their end of life and are eventually disposed of.**

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**At each of these life cycle stages (production, use, disposal), energy and materials are consumed (inputs), and emissions to air, water, and soil are generated (outputs). Both inputs and outputs can have a direct impacts on the natural environment and humans. These impacts can be quantified by metrics, such as the CO2 footprint, water usage, or ecotoxicity in a life cycle assessment.**

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**The UP Scorecard is a free, science-based life cycle assessment tool to compare common foodware and packaging items based on their climate impact, water usage, plastic pollution, sustainable sourcing, recoverability, and chemicals of concern.**



**Understanding Packaging  
Scorecard**

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