



Practice Abstract #10: Methods for assessing biodiversity loss in LCA studies of food waste



WASTEWISE
Waste Avoidance Strategies for
Environmental Sustainability

One of the primary aims of the WASTEWISE project is to deepen knowledge about the environmental benefits achievable through food waste prevention and reduction. In order to develop more robust methods for assessing environmental impacts, researchers from the Swedish University of Agricultural Sciences (SLU), AGROSCOPE, and the Natural Resources Institute Finland (LUKE) conducted a study on methods for assessing biodiversity impacts, which are often overlooked in conventional attributional life cycle assessments (LCA).

Food waste impacts global biodiversity loss by driving unnecessary land use, climate change and pollution, which threaten species existence. Although many LCA methods have emerged in recent years to account for biodiversity loss, they remain insufficiently integrated into the majority of environmental assessments of food products, especially in relation to food waste. This study provides an overview of existing and applied methods to assess biodiversity through a semi-structured literature review and consultations with experts in LCA. The consultations were also used to create a set of evaluation criteria for selecting the most suitable biodiversity assessment method for use in the WASTEWISE project.

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The comparative evaluation of biodiversity assessment methods resulted in the recommendation of three methods: GLAM, ReCiPe2016, and LC-IMPACT, depending on feasibility and project development. GLAM is the first choice for its novel and detailed assessment approach. If the project develops in such a way that using the GLAM method is unfeasible, LC-IMPACT and ReCiPe2016 offer reliable alternatives. All three methods provide valuable insights into potential species loss caused across supply chains.

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