

# Researchers call for consensus in the food supply chain

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A new study by researchers at Karlstad University and Lund University shows that there are both shortcomings and development potential in the food supply chain in terms of the environmental impact. For a continued decrease of the food supply chains' climate impact, there is a need for an increased systemic view of food, distribution and packaging, together with better insights on consumer behavior.

"Food accounts for about 30 percent of Swedish households' [environmental impact](#). For a reduction, we need major improvements, both in terms what type of [food](#) we eat and the packaging, says Helén Williams, Associate Professor of Environmental and Energy Systems.

Production and consumption are often separated in both space and time, packaging is required to protect food during distribution and storage. Properly designed packaging contributes to reduced food waste and thus reduced environmental impact. The packaging area is very complex, different type of foods require different types of protection, and cultural and demographic differences contributes to us using the packaging and food in different ways. In addition, recycling systems of end-of-life packaging also play a major part in the environmental analysis, says the researchers.

A review of 32 published articles on environmental impact of packaged foods during the last ten years show that the indirect environmental impact of packaging is inadequately handled. By indirect environmental impact, the researchers mean, how the design of the packaging affects

the efficiency of handling, transport and food waste in different ways. Although, many studies have shown the large scale and environmental [climate impact](#) of [food waste](#), only a very small part of it is taken in consideration when food and packaging is evaluated. To achieve a decreased environmental impact in the food sector, more studies need to focus on the complexity in the field, says the researchers.

"We must increase the knowledge of the distribution and management, and gain more and better insights into the consumers' interaction with [packaging](#) and food. Insights and impact from sorting and recycling should also be included," says Helén Williams.

**More information:** Katrin Molina-Besch et al. The environmental impact of packaging in food supply chains—does life cycle assessment of food provide the full picture?, *The International Journal of Life Cycle Assessment* (2018). [DOI: 10.1007/s11367-018-1500-6](https://doi.org/10.1007/s11367-018-1500-6)

Provided by Karlstad University

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