

# Sustainable business models infused with agri-innovation systems can reduce post-harvest food loss and waste

June 6 2024

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Reducing post-harvest food loss and waste is a major sustainability challenge in low- and middle-income countries, some of which are

major agrarian economies supplying global value chains. However, there is insufficient research in this field even today.

A new study [published](#) in *Supply Chain Management: An International Journal* by the University of Eastern Finland and international partners found that developing sustainable [business models](#) that are multi-actor networked for integrating them with agricultural innovation systems initiatives can enable a systemic approach for reducing food loss and value loss at the post-harvest stage.

The study was carried out in India, which is an emerging economy and has food loss challenges in the post-harvest supply chain. Data was collected through multiple rounds of field work, interviews, and focus groups over four years. The study participants were several [value chain](#) actors with long experience of working in the agri-food supply chain with multiple stakeholders (both public and private) at the local and regional level.

It was found that the challenges faced in the current business model led to losses that happened through cumulative effects, hampering everyday value creation. The experiences of the actors facing these losses tell us what kinds of strategies are needed for transitioning to a networked sustainable business model, which need to be aligned with agricultural innovation systems initiatives for reducing the multiplier and stacking losses.

"The study offers a framework for enabling agri-sector practitioners, agri-innovation entrepreneurs, and regional authorities in their aim at reducing food loss and waste at early stages of the agri-food supply chain and value chain, which is the first step towards a regenerative economy in the sector," says Postdoctoral Researcher Subhanjan Sengupta from the University of Eastern Finland.

It was found that a sustainable business model at the ground-level for reducing food loss would mean moving from being a single-actor-centric business model to a multi-actor-networked business model in the agri-food value chain.

The actors in control need to re-organize the supply chain by including actors that are small and informal, and re-align themselves with increased interconnectedness for operationalizing food systems innovations.

The institutional implications of the study are crucial as the small- and medium-sized actors are affected most by the loss of [food](#) and value but have lesser agency in bringing systemic change.

"We offer future researchers a set of testable propositions and future research questions to explore this topic further, in different country contexts, and contribute to developing business-oriented and innovative solutions to the problem," Subhanjan Sengupta further adds.

**More information:** Subhanjan Sengupta et al, Reducing food loss through sustainable business models and agricultural innovation systems, *Supply Chain Management: An International Journal* (2024). [DOI: 10.1108/SCM-01-2023-0059](#)

Provided by University of Eastern Finland

Citation: Sustainable business models infused with agri-innovation systems can reduce post-harvest food loss and waste (2024, June 6) retrieved 23 June 2024 from <https://phys.org/news/2024-06-sustainable-business-infused-agri-harvest.html>

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