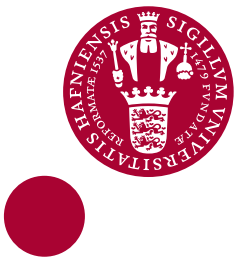

Greenhouse gas emissions hotspots along vegetable value chains in Thailand

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Greenhouse gas emissions hotspots along vegetable value chains in Thailand

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Introduction and Objective

Traditional-to-modern food value chain transformations are widely occurring in the Global South. The transition to food retailing often involves higher use of resources to comply with quantity and quality requirements, which might modify the environmental profile of products. **This study aims to quantify carbon footprints and food losses value chains in Thailand.**

Material and methods

We used a methodological framework based on **Life Cycle Assessment** (LCA) of two horticultural products, onion (*Allium cepa L.*) and Chinese cabbage (*Brassica rapa, subsp. Chinensis*). Following a systemic approach, we gathered **primary data using resource flow diagrams, mass balances and surveys at each node of traditional and modern value chains**, from the farm, to traders-distributors and finally wholesale markets and retailers.

Preliminary Findings

- **No differences** were encountered **between production for modern and traditional markets**.
- **Cradle-to-farm gate stage was identified as the main greenhouse gas hotspot along the value chain**, primarily due to fertilizer production and application.
- **Food losses/waste occurred at all stages**. Drivers differed from price at the farm level to quality requirements at traders, wholesale markets and supermarkets.
- Among the food waste management options, the **disposal in agricultural fields had the highest potential to reduce carbon footprints**.