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Committee on World Food Security (CFS)

Research Report

Topic 3: Creating a framework to reduce post-harvest waste in the food
supply system



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Introduction

The CFS, along with other UN agencies and global partners, has been trying to address post-harvest waste in the food supply system. This report will outline key initiatives and frameworks being developed to reduce food loss and waste. Post-harvest food loss and waste is a significant challenge affecting food security, economic development, and environmental sustainability. Addressing these post-harvest losses and food waste is very important not just to achieve food security, but to also mitigate climate change and to promote the Sustainable Development Goals, particularly S.D.G. 2 (Zero Hunger) and S.D.G. 12 (Responsible Consumption and Production).

Definition of Key Terms¹

Post-harvest waste: Food loss that occurs after harvesting and before reaching consumers

Food security: The state of having reliable access to sufficient, affordable, nutritious food

Sustainable Development Goals (SDGs): A set of 17 global goals established by the United Nations for achieving a more sustainable future

Champions 12.3 Coalition: Coalition of leaders progressing toward achieving SDG Target 12.3 (halve global food waste and reduce food losses by 2030.)

Background Information

Post-harvest food loss and waste is a critical issue affecting global food security, economic development, and environmental sustainability. Approximately 39% of the world's food supply is lost or wasted annually, amounting to over 2 billion metric tons. This occurs across the entire food supply chain, from farms to consumers.

Researchers estimate the lost food calories from food waste amount to roughly 24% of the total available food calories, and the level of food wasted globally has been projected to rise by another third within 5 years.

In some developing countries, farmers regularly lose 40 percent of their harvest due to improper storage. Consequently, every year, the decomposing thrown-away food emit around 3.3 billion metric tons of greenhouse gasses (GHG), or 7 percent of total emissions globally, hence if food waste were a country, it would be the third largest producer of carbon dioxide globally. Food losses can happen at any stage of the supply chain, resulting from commodities being damaged, spoiled or lost while they were being harvested, handled, processed, stored or transported.

¹ Definitions by Perplexity AI

Major Countries and Organisations Involved²

- **United Nations Environment Programme (UNEP):** Leads global efforts to measure and reduce food waste through initiatives like the Food Waste Index Report. UNEP is the custodian of the SDG 12.3 indicator.
- **World Resources Institute (WRI):** Contributes to research and initiatives aimed at reducing food loss and waste globally. WRI serves as co-secretariat of the Food Loss and Waste Protocol and Champions 12.3.
- **Champions 12.3 coalition:** The coalition works to create political, business and social momentum to reduce food loss and waste around the world.
- **European Union:** Implementing policies and targets to reduce food waste across member states, with countries like Italy, France, and Spain enacting specific anti-food waste laws. The EU has committed to meeting SDG Target 12.3 and has proposed legally binding food waste reduction targets to be achieved by Member States by 2030.
- **United States:** The U.S. is part of initiatives like the Pacific Coast Food Waste Commitment, which works with local jurisdictions and regional food businesses on piloting intervention projects.
- **China:** Implemented the Anti-Food Waste Law in 2021 which requires all sectors to identify food waste reduction targets, collect and measure data, implement reduction efforts, and report progress annually.
- **Germany:** Launched a National Strategy to Reduce Food Waste in 2019, aiming to halve food waste at retail and consumer levels by 2030. Germany has also taken a leadership role in assessing progress made by EU Member States in their work against food waste.

Relevant UN Resolutions

UNEA Resolution 4/2 which requested UNEP to facilitate knowledge exchange and best practices among member states and stakeholders.

UNEA Resolution 2/9 on Prevention, reduction and reuse of food waste, which requested UNEP to collaborate with other organizations on initiatives like “*Think.Eat.Save*”.

The European Commission’s Resource Efficiency Roadmap (2011), established a milestone of halving edible food waste disposal by 2020.

Resolution 74/209, which was adopted on December 19, 2019, designated September 29 as the International Day of Awareness of Food Loss and Waste.

² <https://www.stopfoodlosswaste.org/about/unep-efforts?t&utm>

Previous Attempts to Solve the Issue

One solution has been the Target-Measure-Act Approach, which was developed by UNEP and Champions 12.3. The framework was successfully implemented in countries like the United Kingdom, resulting in significant reductions in post-farm gate food loss and waste.

Another attempted solution was FAO's Technical Cooperation Programme which introduced improved bulk packaging materials and guidance for post-harvest management practices in various countries, significantly reducing food losses and leading to economic benefits for farmers, retailers, and consumers.

Lastly, the final chosen attempted solution is the Food Waste Index Report which is published by UNEP, and which provides crucial data on global food waste across retail, food service, and household sectors, offering guidance on food waste measurement methodologies.

Possible Solutions

- Enhance storage capabilities by investing in cold storage facilities and advocating for the use of sealed storage technologies to minimize losses after harvesting.
- Improve modes of transportation by encouraging the use of packaging and transportation materials to ensure the delivery of produce, to far, off markets.
- Support the use of food preservation methods, like drying foods or smoking meat to help them longer and stay fresh.
- Enhance the transportation system. Make investments, in logistics and supply chain networks to strengthen infrastructure development.

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