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IMPACT

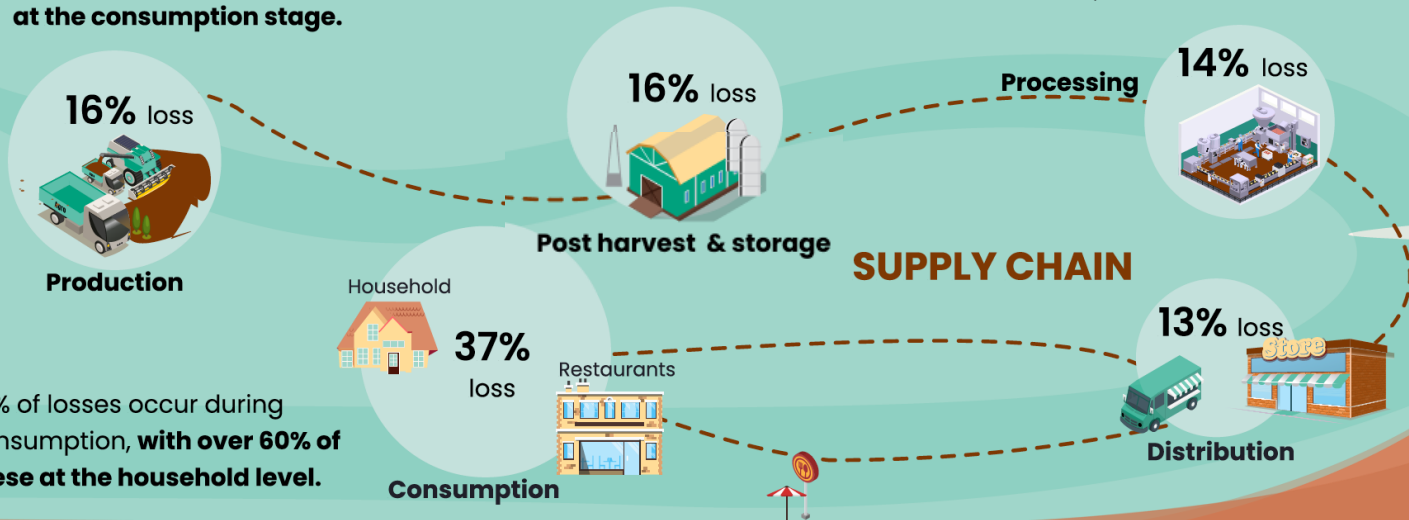
Environmental and Economic Impact of Food Waste

Food waste's environmental and economic impact is a growing concern, especially as climate change worsens food insecurity. Despite disruptions to food production, large amounts of food are wasted at various stages of the supply chain. This disconnect between scarcity and waste highlights a global issue: while millions face hunger, resources like water, land, and energy are wasted on food that ends up in landfills. To address this, we must work together to reduce food waste, using resources wisely to nourish the growing population and reduce environmental harm.



Food Waste Throughout the Supply Chain: Impacts and Implications

Reducing food loss and waste is key to ensuring a healthy diet for the growing global population. **Annually, one-third of all food—about 1 trillion tonnes—is wasted, with the majority occurring at the consumption stage.**



Environmental Impact

GHG Emission

8-10% of global GHG emissions come from food waste, roughly five times the emissions of the aviation industry.



Water Use

1/4 of all freshwater used annually is wasted on food that is never consumed.



Land Use

28% of the world's agricultural area is used annually to produce food that is lost or wasted



Deforestation

This is due to the increased need to produce food to compensate for losses and waste.



Economic Impact

In addition to **\$1 Trillion** USD of economic costs per year, environmental costs reach around **USD 700 billion** and social costs around USD **900 billion**.



WATER POLLUTION

Intensified farming to compensate for food loss and waste boosts pesticide and nitrate fertilizer use, causing phosphorus eutrophication that pollutes water and incurs treatment costs.

HEALTH RELATED COST

\$150B in annual health-related costs result from the rising use of pesticides and nitrates in food production, contributing to water pollution and health risks.



Rising land use costs for food production have led to deforestation to make room for growing food to offset losses.

MITIGATION STRATEGIES

Sustainable food systems play a vital role in ensuring the availability of safe and nutritious food for human consumption while enhancing climate resilience. Achieving this requires proactive measures to prevent food losses and waste across the entire food supply chain, coupled with innovative strategies to re-purpose waste for use in food production.

FARMER EDUCATION AND TRAINING

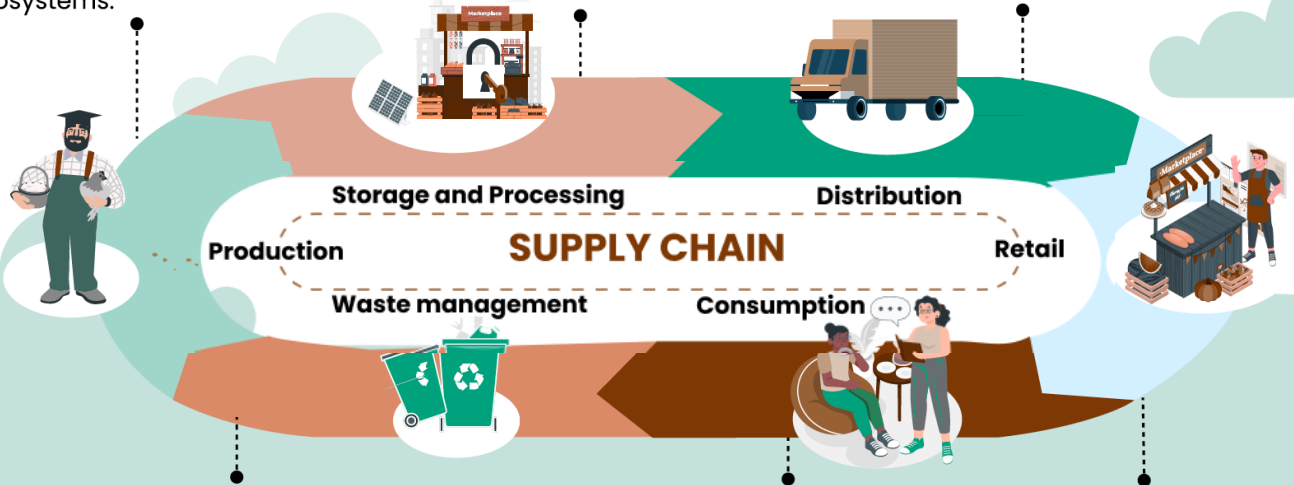
Training farmers in regenerative practices to enrich soil, cut waste, store carbon, and restore ecosystems.

ACCESS TO MODERN MARKET AND MODERN ENERGY

Improving storage, processing, and transport to minimize spoilage.

BETTER LOGISTICS

Local producers connect with consumers through short supply chains, sourcing from farms, markets, and global suppliers.



CIRCULAR FOOD ECONOMY

Waste prevention and recycling, along with the reuse of wastewater and organic waste on farms, contribute to sustainability.

CONSUMER EDUCATION AND FOOD UTILIZATION

Educating consumers on food storage, planning, and cooking to reduce waste and promote sustainable diets.

BETTER LABELING & MARKETING

Clear labeling and marketing help reduce food loss and waste in retail by informing consumers and minimizing spoilage.

SOURCES

[UNEP Food Waste Index 2024](#)

[FAO Food/Loss Waste Platform](#)

[Economic Impact of Food Waste](#)

[FAO Food Balance Sheet](#)

[USDA: Effect of Food Waste on Climate Change](#)

[Food Waste Footprint: Impact on Natural Resources](#)