



NUTC Fall 2024 Industry Technical Workshop: Logistics of Food Waste and Loss Management

Food Loss and Waste Management – Partnering with Food Banks to Turn Food Loss to Food Gain

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The unacceptable paradox of the food system

The **unacceptable** paradox:

The world produces **enough food for everyone** on the planet.
More than 1.5 times as much.

Yet **one-third** of all food never gets to the **people who need it most**.

The food that is lost or wasted across the value chain each year is **enough to feed all the world's hungry people**.

The unacceptable paradox of the food system, cont'd

The number of hungry people worldwide has **increased** to a level “**eroding all progress**” bringing the world back to **hunger levels** that prevailed before 2005.

Today 733 million people face chronic hunger with **1 in 3 children** under age 5 **severely malnourished**. Worldwide, an est. **2.3 billion people** experience moderate or severe food insecurity.

In the US, **47 million people** are food insecure including **1 in 5 children**. Globally **1 in 3 children** under age 5 are severely malnourished.

Access to an affordable, healthy diet is simply **out of reach** to hundreds of millions of people.

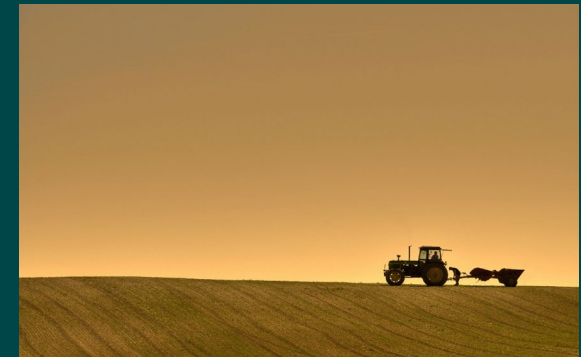


The food loss and waste in food systems

An estimated **1.3 Billion tons of food – 30-40% of all food produced for human consumption** – is lost across the supply chain.

The excessive volume of 1/3 of all food produced entering waste streams has an **immense cost to business and society** – an estimate more than **\$1 trillion+ annually** – from lost revenue, carrying cost of excess food inventory, removal and landfill fees.

FLW worsens food system inefficiencies: squandering labor, energy, and raw materials to produce, process, store and distribute food and then contributing to environmental degradation, 8-10% of greenhouse gas emissions annually, and increased hunger denting food access to those in need.



Logistics and FLW Management – Flipping Food Loss to Food Gain

Hunger isn't a food issue. It's a logistics issue.

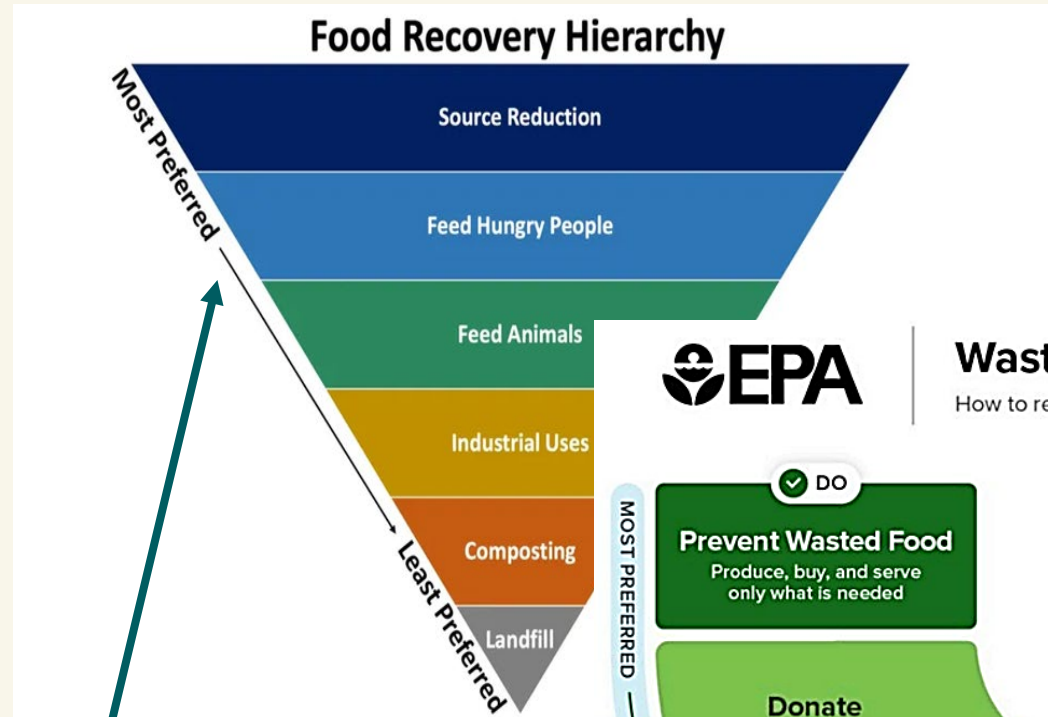
Esther Ndichu, UPS, humanitarian supply chain director. TED Institute presentation, 2015

The Logistics of FLW Management should be viewed in the context of a **WIN-WIN** for businesses either looking to donate surplus product or provide logistics services (transport, storage, suppliers) to support recovery and redistribution of **wholesome excess food inventory** for hunger relief.

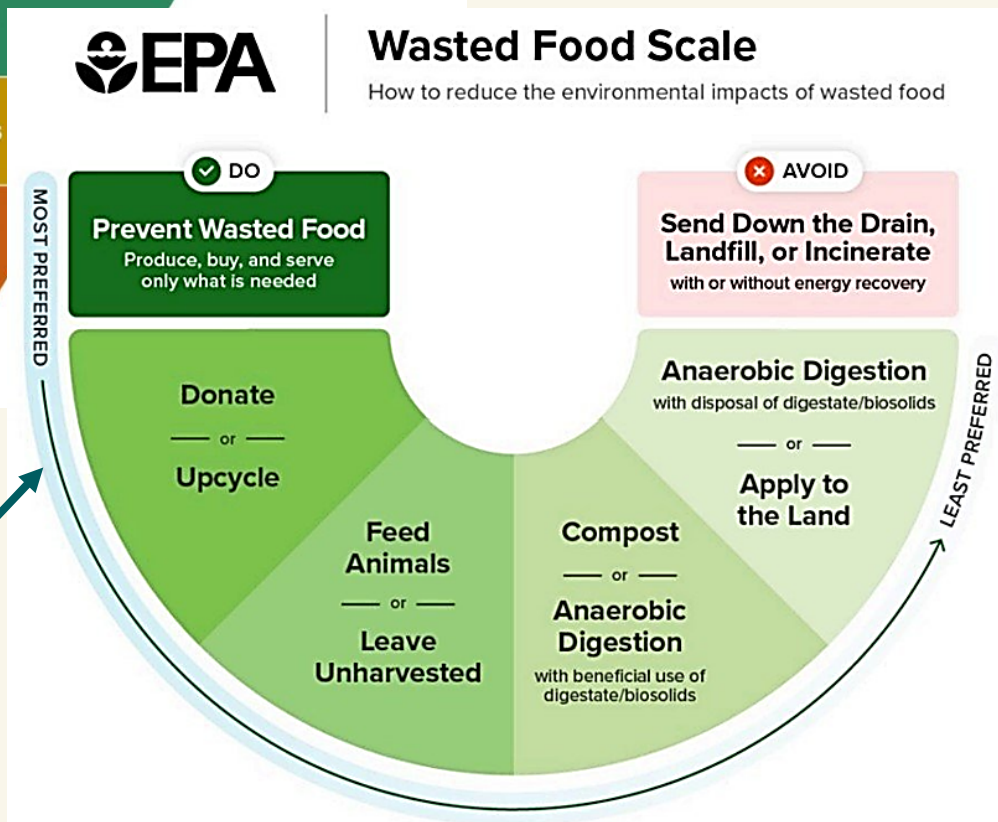
Food recovery from FLW streams **flips potential food loss to realized food gain** – along with quantifiable social, economic, and environmental impact.



Food loss and waste (FLW) Management Hierarchy Models



After Source Reduction – Food Donation is the preferred management option for food.



If 25% of the food currently lost or wasted globally could be saved, it would be enough feed 828 million hungry people in the world.

(Source: FAO Food Loss Index)

Logistics and FLW Management – Flipping Food Loss to Food Gain

Food Recovery can help Logistics Firms or your business customers to be credited through Food Recovery with Scope 3 Emissions Reductions

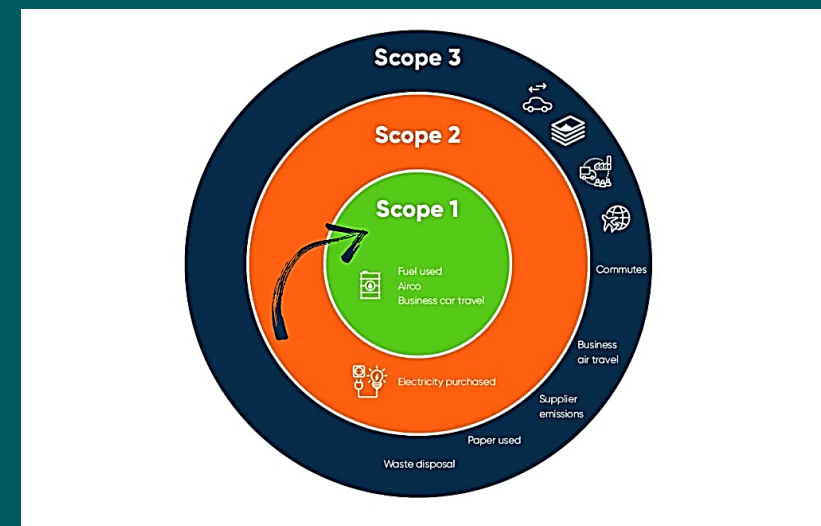
Scope 1: Emissions from scope 1 are direct emissions (e.g. fleets, and other company-controlled resources or activities).

Scope 2: Emissions in scope 2 cover the indirect emissions (e.g. energy emissions from purchased sources, mainly utilities).

Scope 3: Emissions from scope 3 include all the other indirect emissions within your entire value chain, including upstream supply chain (agriculture, food processors, suppliers), as well as downstream GHG emissions e.g. occurring with customers – including credited for reducing FLW emissions by partnering with Food Banks for food redistribution.

Sources: EcoChain and CarbonChain.

GHG Emissions Accounting established in Paris Climate Accords (2015)



GHG Accounting Methodology allows a common global standard to measure emissions across industries.

Practical FLW Reduction for effective Food Systems

The Logistics of FLW Management offers a myriad of options for B2B logistics companies, agri-businesses, food company logistics operations, retailer logistics, and others that align to the FLW Management Preferred Option of **Food Donation/Up Cycle for feeding people.**

Partnering with food banks is an effective and proven path to achieve FLW reduction goals.



Food Banks and practical FLW Reduction for effective Food Systems



Recover wholesome/safe excess food inventory from the food system for redistributions, reduce FLW, and mitigate harmful GHG/Methane emissions from FLW



Increase dietary diversity, especially related to foods that are unaffordable to millions of individuals and families



Offer an informal social safety net and accelerate the impact of civil society groups offering vital human services to vulnerable populations



Increase community resilience to respond to shocks

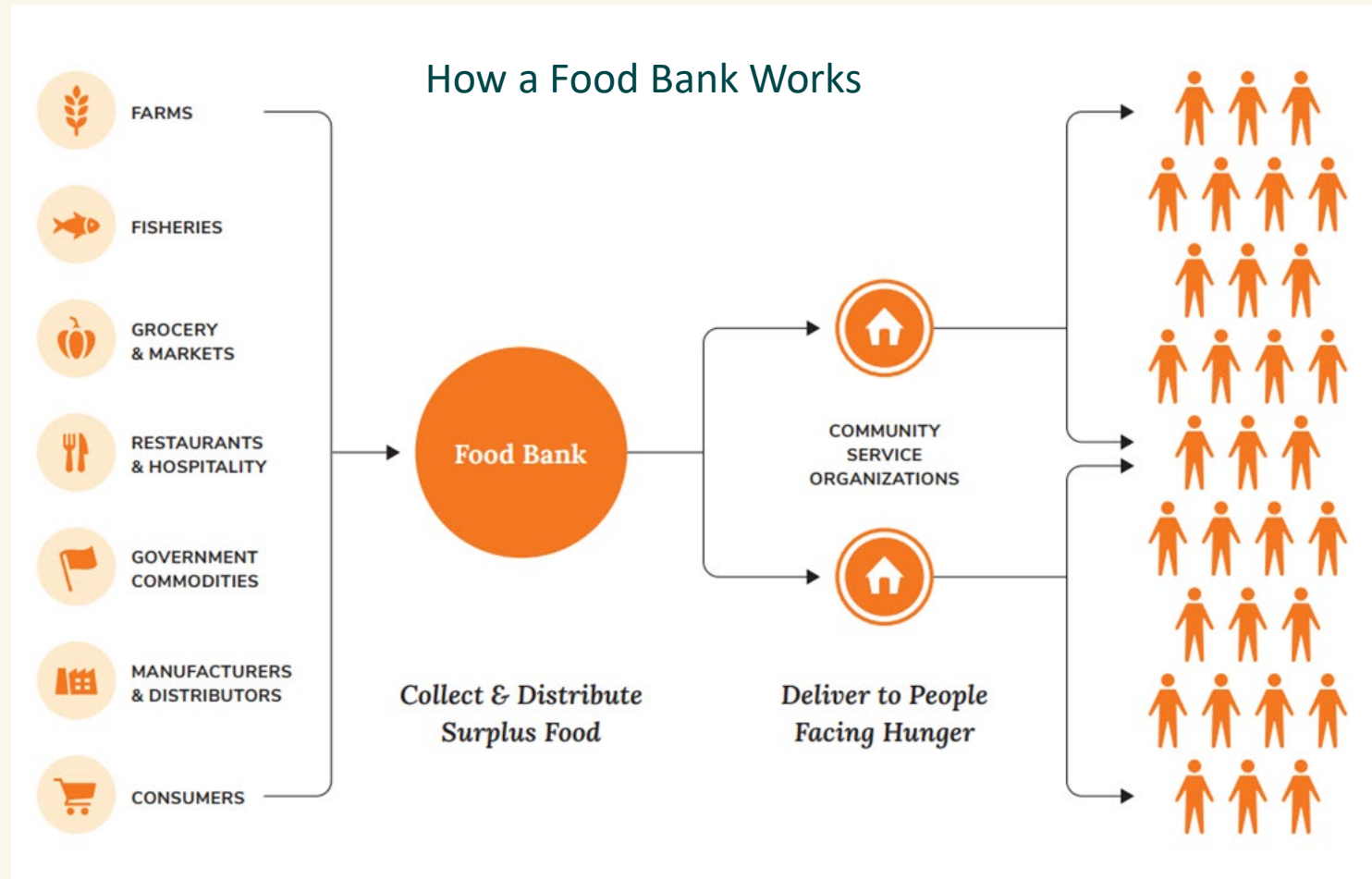


Food Banks and practical FLW Reduction for effective Food Systems

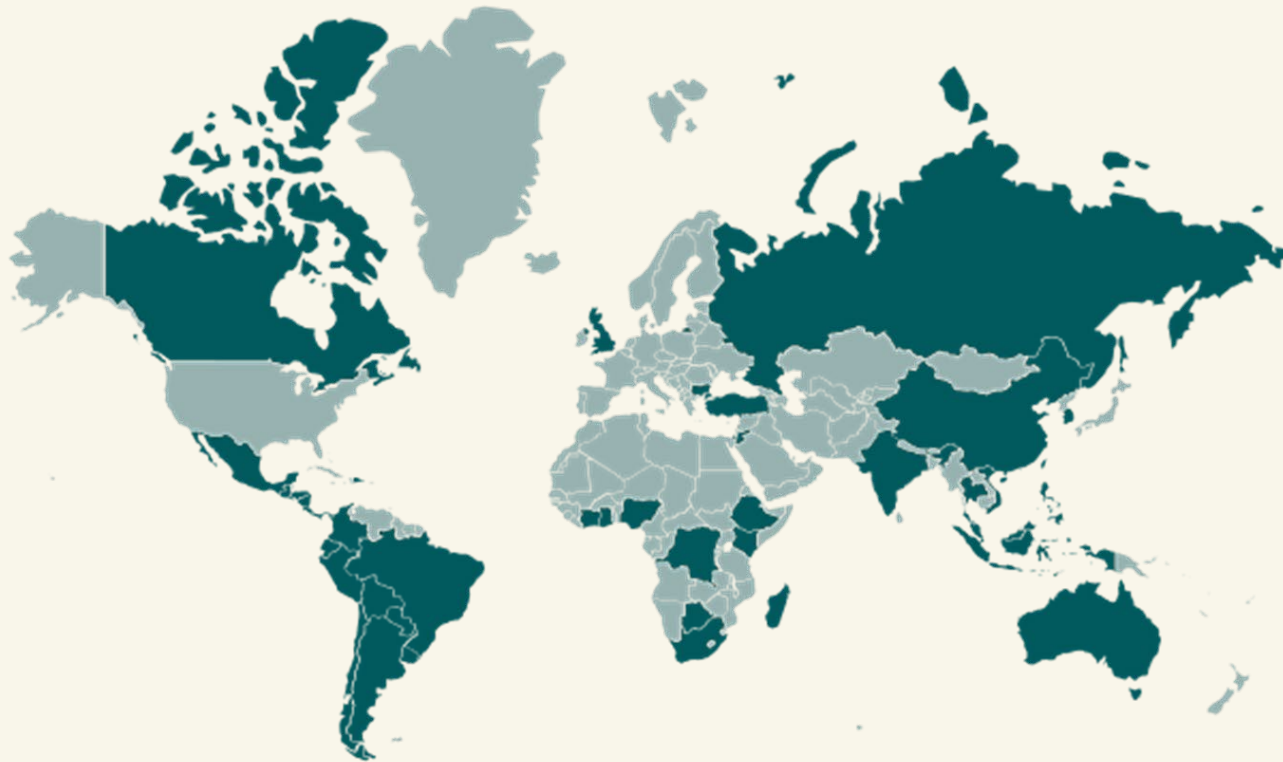
Food banks operate at the nexus of surplus food supply and food access demand.

Food banks are community-based organizations operating in 100+ countries worldwide.

The Food Bank model is based on a common purpose of community food security, hunger relief, and circularity for the efficient use of resources, adapted to local food system contexts, with similar operational infrastructure and logistics for food recovery and redistribution to vulnerable populations.



The Global FoodBanking Network – an example of FLW Logistics



- The Global FoodBanking Network was established in 2006.
- The Network includes 65 Food Banking Members comprised of 700+ community food banks worldwide
- Members established in 54 countries – primarily emerging and developing market economies.

IN 2023 GFN Member Food Banks

- Served 41M people worldwide
- Distributed 654M kilos of food
- Mitigated 1.8M metric tons of GHG/Co2e emissions from food waste

Food For Thought from Recent Research on FLW Reduction for effective Food Systems

Preventing just half of global food losses and redirected for hunger relief could feed one billion more people (WFP)

Food loss in the agricultural sector can be reduced by 70% or more with two-thirds of the reduction coming through food recovery and redirected for human consumption (McKinsey)

Half of global food loss occurs postharvest, agriculture sector accounting for the highest rates of loss. Reducing food loss early in the supply chain – on the farm - in countries with high levels of food insecurity is likely to yield the strongest positive result for greater food security (UNEP)

Food Bank model can reduce food insecurity and at the local level and prevent a considerable amount of food surpluses to turn into food waste which consequently reduces the GHG emissions from food production and food waste management. (Wageningen University)

Food recovery yields greater environmental offset benefits of food production than all other pathways of food waste management apart from source reduction (EPA)

Halving FLW may contribute an additional 2% increase in GDP, lift millions of people out poverty, while improving diets and overall food security – with the greatest gains originating from reduced FLW in the on-farm production stage (IFPRI)

I hope what has been shared about logistics and food loss and waste has helped you think about the unacceptable paradox in our Global Food System. The solution to less hunger, more food secure communities and less food waste is right before us if we choose take it.



Thank you for your time