



Addressing Food Waste at Home and Abroad: *A Case for Circular and Sustainable Materials Management Systems*

**National Environmental Youth Advisory Council
Public Meeting: February 28, 2024 – February 29, 2024**

Food Loss and Waste (FLW): The Global Picture

- Globally, about one third of all food produced for human consumption is wasted rather than eaten.
- Food loss and waste represent 8% of global anthropogenic greenhouse gas emissions.
- Food loss and waste is responsible for wasting 25% of all water and fertilizer used in the production of food.
- 690 to 780 million people around the world face hunger and food insecurity.
 - In the US, 36% of US households with income below the poverty line experience food insecurity.



FLW at United Nations Security Council



- On February 13, 2024, Administrator Regan spoke to the United Nations Security Council on climate change, food security, and EPA's mission to reduce food loss and waste.
- Emphasized how the impacts of climate change exacerbate food insecurity and instability for many, especially the most vulnerable among us.
- Reducing food loss and waste not only helps combat climate change, but also provides social and economic benefits that can lead to an increase in stability and security around the world.

FLW at the UN (COP28 and UNEA)

- COP28 – Dubai, United Arab Emirates – December 2023
 - EPA Administrator Regan announced the Draft National Strategy for Reducing Food Loss and Waste and Recycling Organics at the annual UNFCCC climate conference, emphasizing the connection between food waste and greenhouse gas emissions.
- United Nations Environment Assembly – Biennially since 2014
 - UNEA-4 (Nairobi, Kenya - March 2019): All UN countries present agreed to a resolution on “Promoting sustainable practices and innovative solutions for curbing food loss and waste.”
 - UNEA-2 (Nairobi, Kenya - May 2016): The US sponsored a resolution on "Prevention, reduction and reuse of food waste," which all UN countries present agreed to and which was the first ever resolution on this topic.

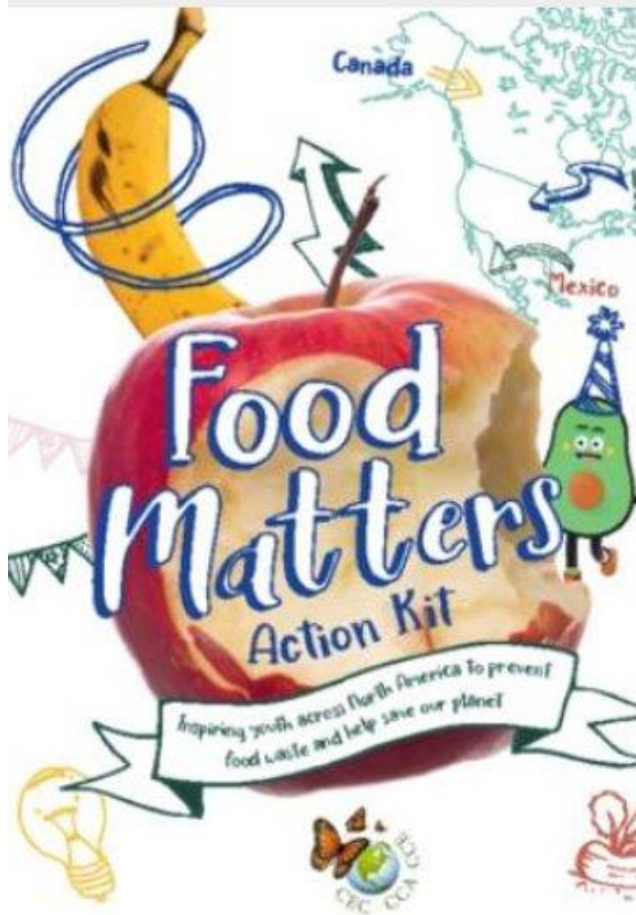


FLW at the G7/G20

- G20 Environment Ministerial – Chennai, India – July 2023
 - All G20 countries present agreed to an outcome document which included promoting sustainable and resilient food systems.
- G7 Environment Ministerial – Sapporo, Japan – April 2023
 - All G7 countries present agreed to a communique which included reducing food loss and waste to achieve the SDGs and global food security and nutrition.
 - G7 Alliance for Resource Efficiency hosts regular dialogues on sustainability which includes FLW.



Commission for Environmental Cooperation (CEC): Youth Action Kit



- The CEC was established by the US, Canada, and Mexico to implement the North American Agreement on Environmental Cooperation.
- CEC developed the Food Matters Action Kit to inspire youth in North America to reduce food waste.
- Teaches youth about impact of food waste on our planet and highlights ways that youth can change their attitudes about food and develop new habits and skills.
- Promotes tools that youth can use to raise awareness and share tips at home, school and within their communities to help address food waste.

Partnership with UNEP to Combat FLW in Brazil and Colombia

- EPA partnering with UN Environment Program (UNEP) to promote programs, partnerships, best practices, public education, and other resources that address FLW in rapidly urbanizing cities in developing countries (Brazil and Colombia)
 - Activity 1: Support the development of public-private partnerships to enable collaborative action across supply chains
 - Activity 2: Organize regional workshops that promote knowledge sharing in urban hubs
 - Activity 3: Improve, replicate, and tailor existing promotional and behavior change campaigns that are locally and culturally relevant



EPA in Mozambique and Ghana

- In January 2024, Administrator Regan visited Mozambique and Ghana and made the issue of circular economy – and especially with youth – a priority.
- Mozambique:
 - Visited BioMec, a woman-owned biomedical manufacturing company that repurposes plastic collected from the coast to create custom prosthetics.
 - Met with waste collectors who have removed over 500 tons of waste and turned it into bricks for infrastructure projects.
- Ghana:
 - Visited Electro Recycling Ghana, which has developed an innovative approach to refurbish, reuse, and recycle electronic waste.



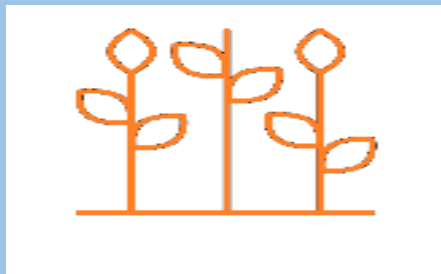
Natural resource extraction and processing contributes:



50% of global climate change impacts



90% of global biodiversity loss and water stress



11% of global species loss

What is a Circular Economy?

A circular economy keeps materials and products in circulation for as long possible.

*The **Save Our Seas 2.0 Act** refers to an economy that uses a systems-focused approach and involves industrial processes and economic activities that are restorative or regenerative by design, enables resources used in such processes and activities to maintain their highest value for as long as possible, and aims for the elimination of waste through the superior design of materials, products, and systems (including business models).*



Linear Economy versus Circular Economy

LINEAR ECONOMY

Materials in a **Linear Economy** create waste after use.



VS.

CIRCULAR ECONOMY

Materials in a **Circular Economy** are collected and reused after each use.



Support for Building a More Circular Economy



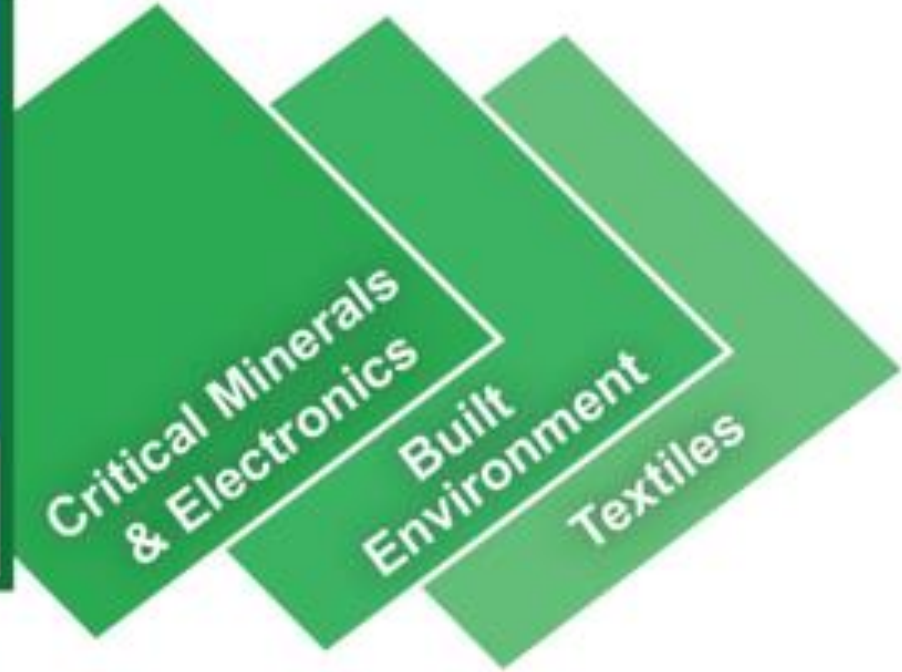
National Recycling Strategy



National Strategy to Prevent Plastic Pollution



National Strategy to Reduce Food Waste & Organics



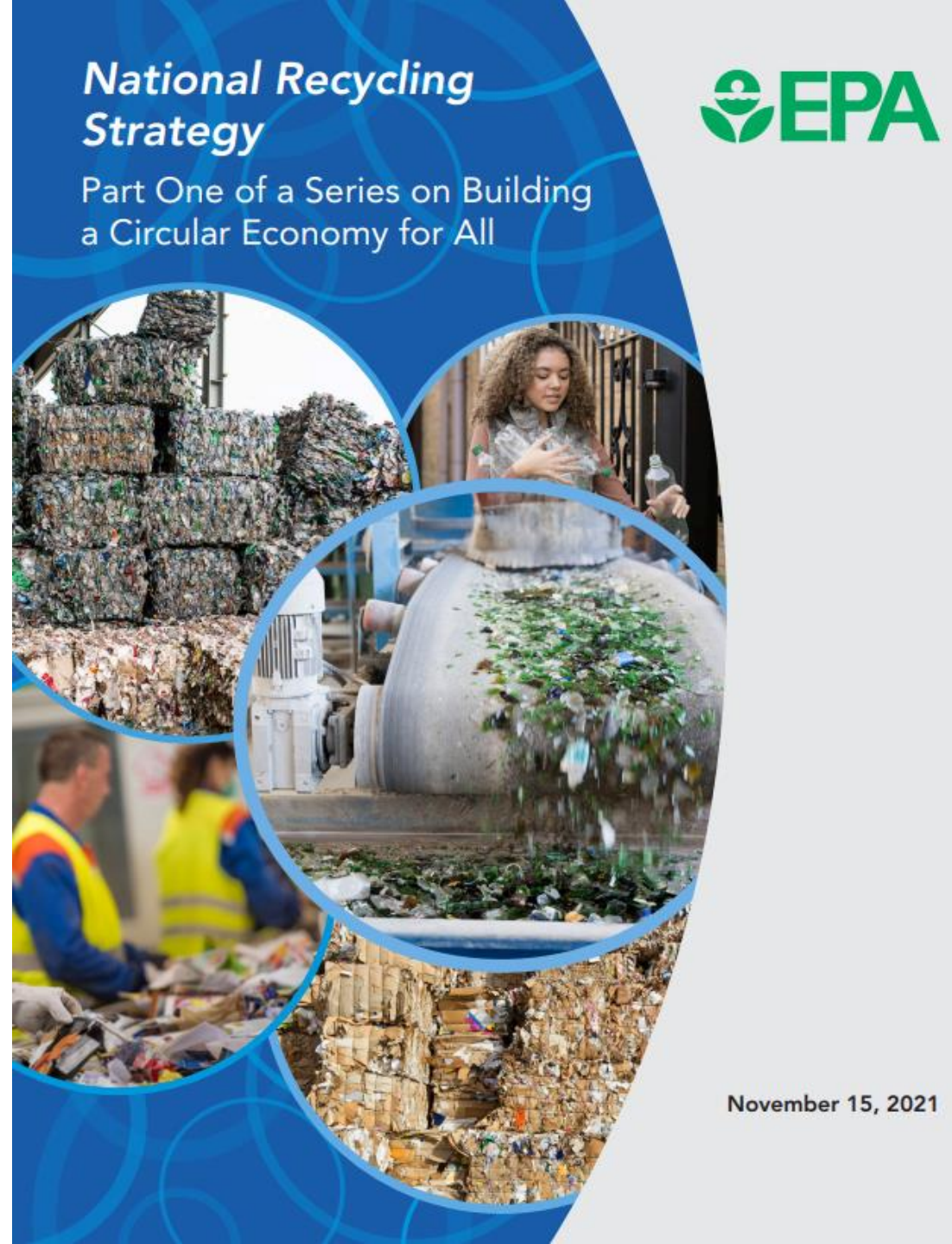
To Come

In Place

National Recycling Strategy

Objectives

- A. Improve Markets for Recycled Commodities
- B. Increase Collection and Improve Materials Management Infrastructure
- C. Reduce Contamination in the Recycled Materials Stream
- D. Enhance Policies and Programs to Support Circularity
- E. Standardize Measurement and Increase Data Collection

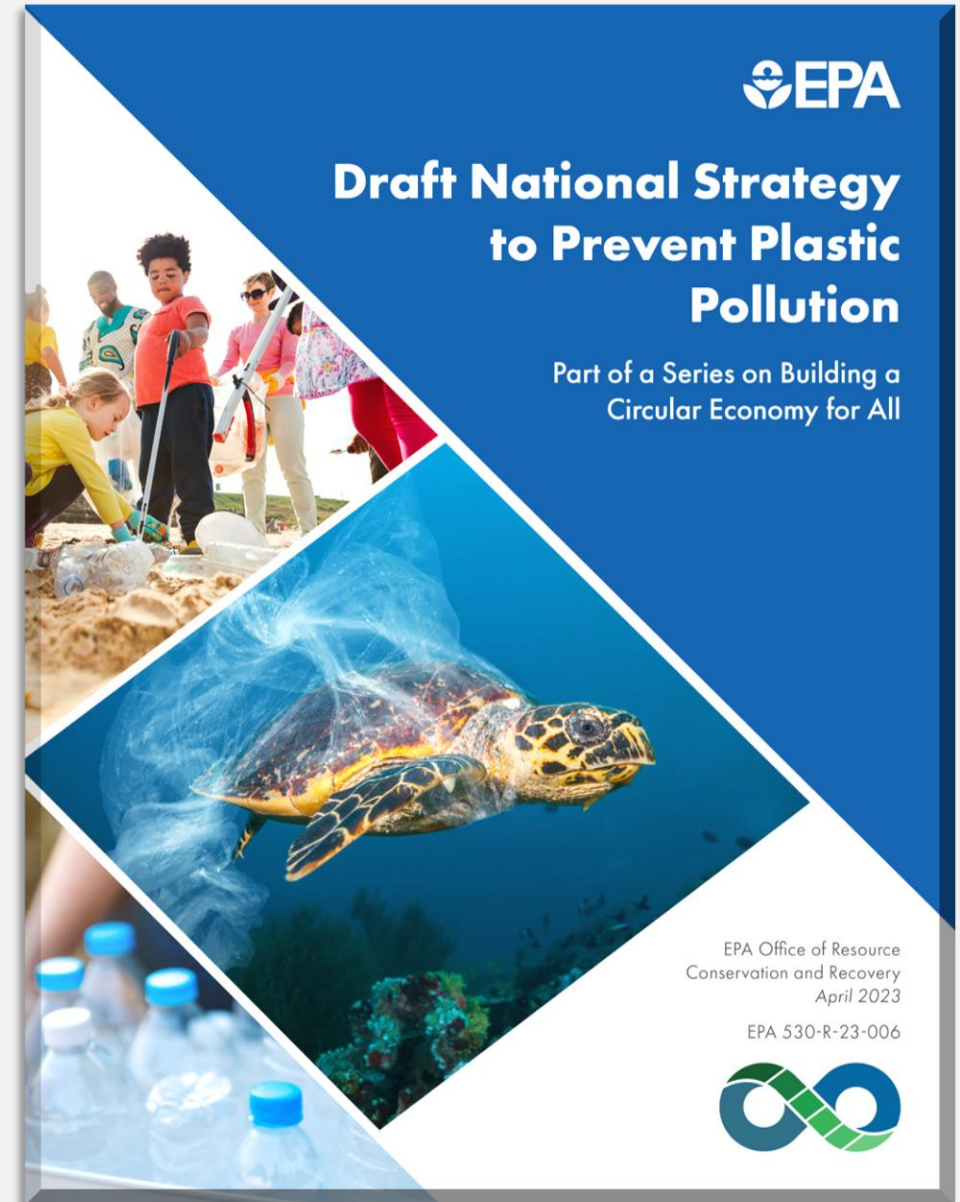


November 15, 2021

Draft National Strategy to Prevent Plastic Pollution

Objectives

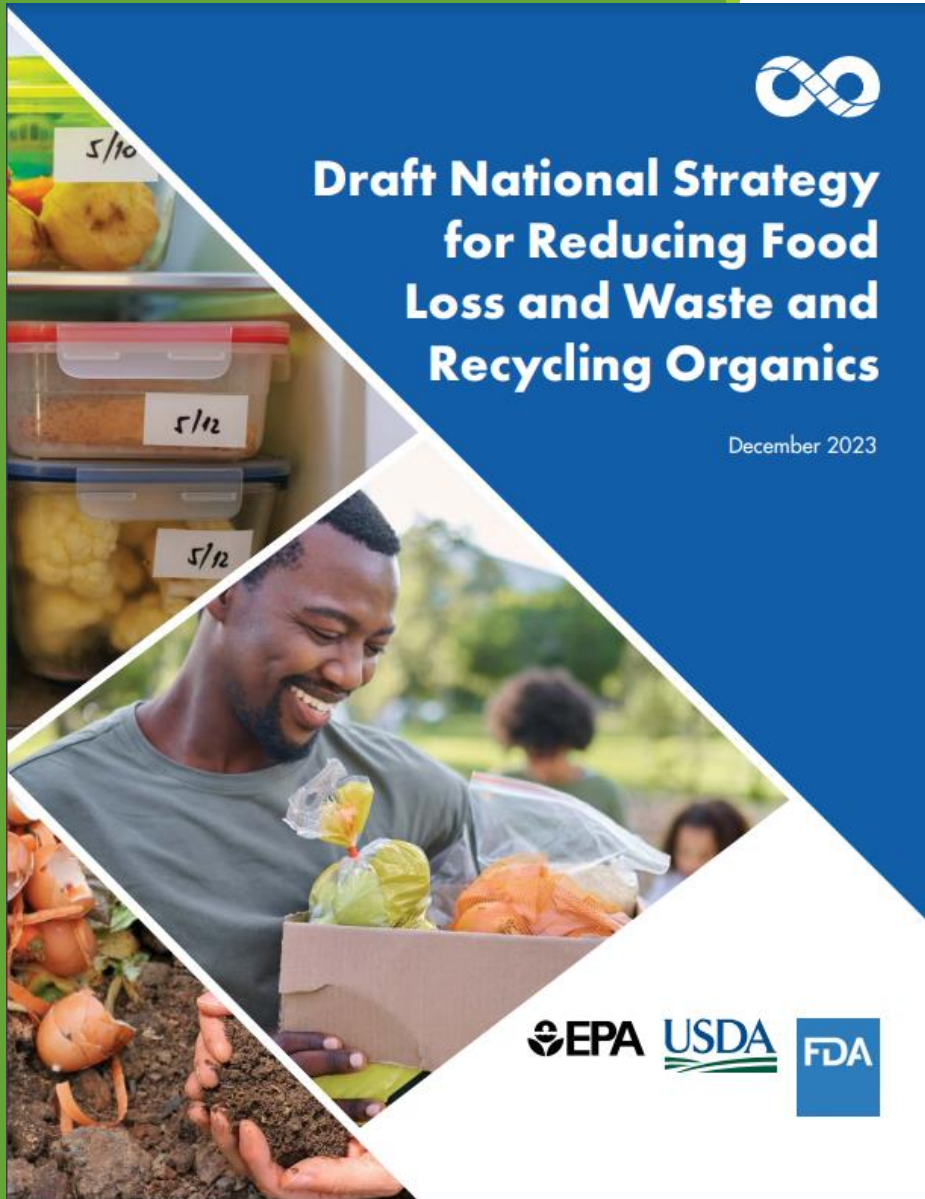
- A. Reduce pollution during plastic production
- B. Improve post-use materials management
- C. Prevent trash and micro/nanoplastics from entering waterways and remove escaped trash from the environment

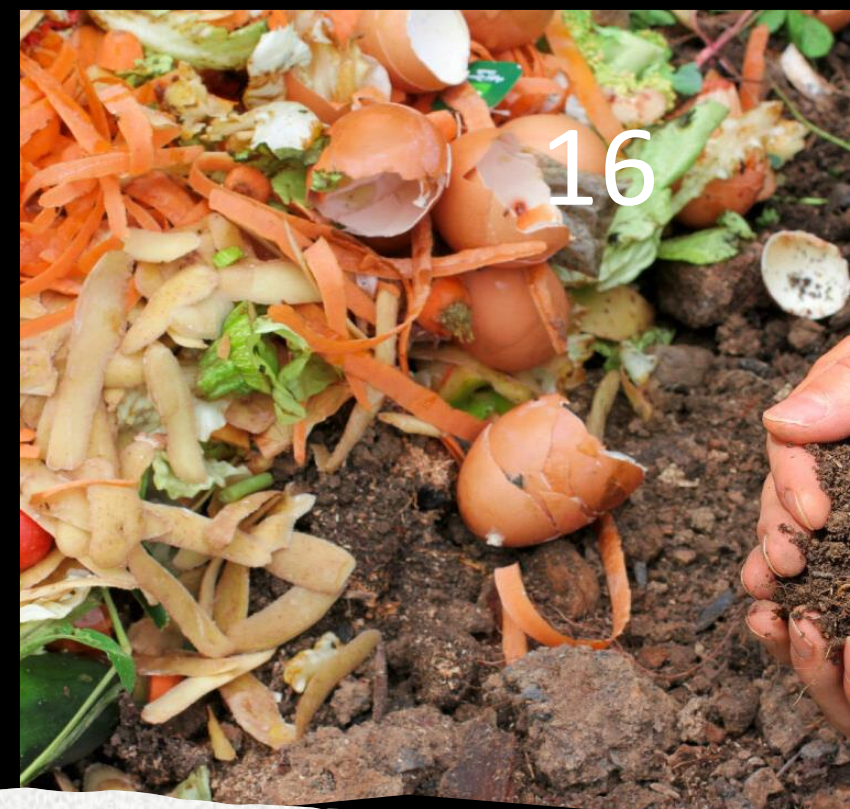


Draft National Strategy for Reducing Food Loss and Waste and Recycling Organics

Objectives

1. **Prevent** the loss of food.
2. **Prevent** the waste of food.
3. **Increase** the recycling rate for all organic waste.
4. **Support** policies that incentivize and encourage food loss and waste prevention and organics recycling.





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Sustainable Management of Food

Definitions

Sustainable Management of Food is an approach that seeks to reduce wasted food and its associated impacts over the entire life cycle, starting with the use of natural resources, manufacturing, sales, consumption, and ending with decisions on recovery or final disposal.

Food loss and waste (FLW) happens when food intended for human consumption is not ultimately consumed by humans.

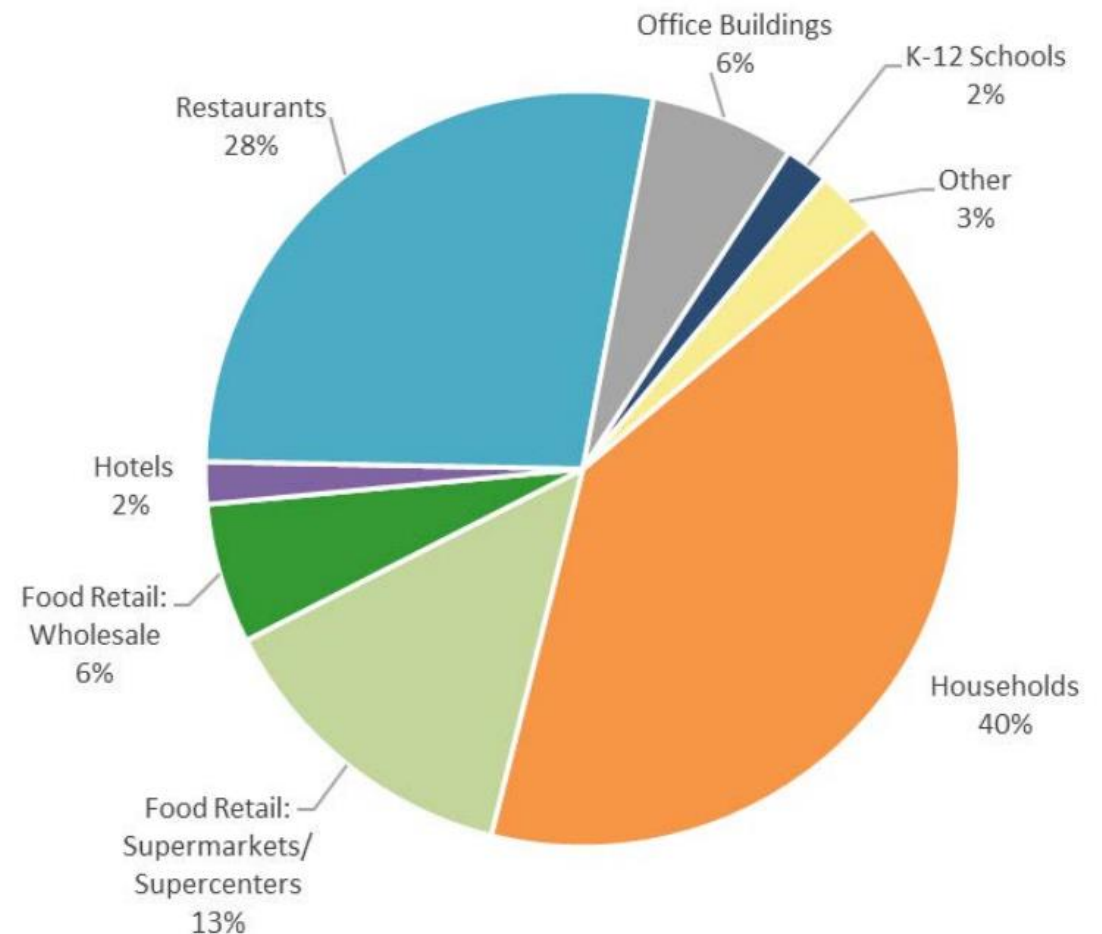
Food loss happens when food leaves the human food supply chain on the farm, following harvest, or in the processing or distribution sector.

Food waste leaves the human food supply chain in the retail, food service or household sector.

Food Waste in the U.S.

- **66 million tons** of wasted food was generated in the food retail, food service, and residential sectors.
- **Most of this waste was sent to landfills.**

Distribution of Wasted Food Generation from the Food Retail, Food Service, and Residential Sectors (2019)



Environmental Impacts of U.S. Food Waste:



What resources go into a year of food loss and waste in the U.S.?

*excluding impacts of waste management, such as landfill methane emissions



Greenhouse gas emissions of more than 42 coal-fired power plants

Enough water and energy to supply more than 50 million homes



The **amount of fertilizer** used in the U.S. to grow all plant-based foods for U.S. human consumption

An **area of agricultural land** equal to California and New York



Learn more: www.epa.gov/land-research/farm-kitchen-environmental-impacts-us-food-waste

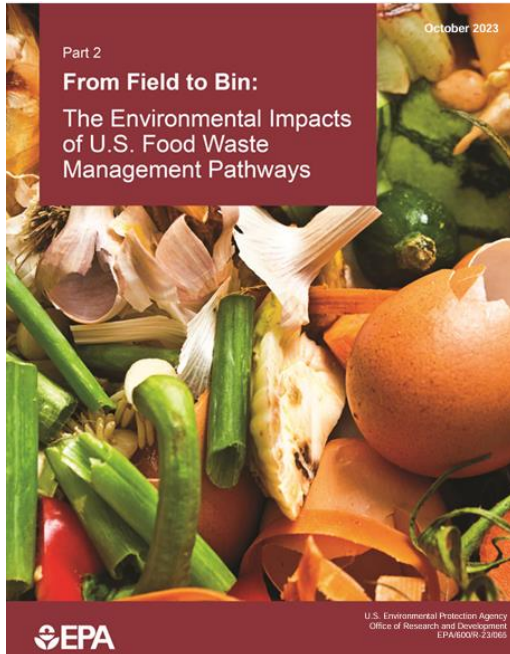
Quantifying Methane Emissions from Landfilled Food Waste

- In 2020, food waste was responsible for approximately **55 million metric tons of CO₂ equivalents (mmt CO₂e)** emissions from U.S. MSW landfills.
- An estimated **58 percent of the fugitive methane emissions** from MSW landfills are from landfilled food waste.



Environmental Impacts of Managing U.S. Food Waste:

New Wasted Food Scale

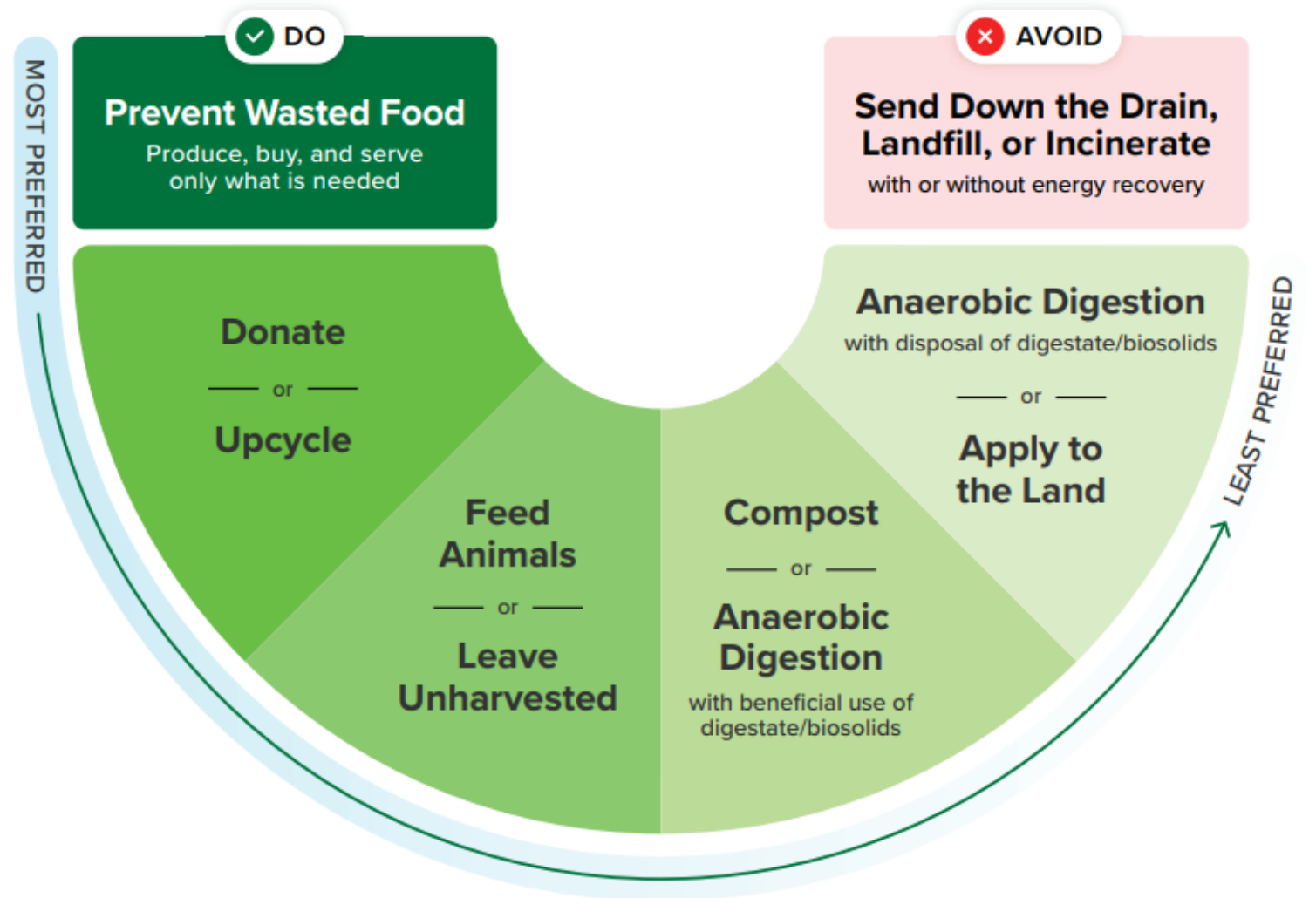


[From Field to Bin: The Environmental Impacts of U.S. Food Waste](#)



Wasted Food Scale

How to reduce the environmental impacts of wasted food



October 2023

Charge Questions

- **How can EPA and its partners more effectively engage young people to help reduce food waste at home and abroad?**
- How can EPA's efforts on sustainable management of food be improved to benefit and work for youth?
- **How can outreach and education on making the most of food and preventing food from going to waste at home be most effective in disadvantaged communities? What strategies would be most effective in disadvantaged communities?**
- How can food retailers and food service providers play in helping young people and those living in disadvantaged communities waste less at home?