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Agriculture and Food Systems

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# Food waste

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# Myths

- Food waste is not preventable.
- All food waste is preventable.
- Food waste is the same at the consumer level and the production/processing level
- Eliminating food waste will solve world hunger.

Photo by [Markus Spiske](#) on [Unsplash](#)



# What is food waste?

- Edible food may be lost during production, processing, or storage
- Edible food may be wasted if it could be consumed safely but is instead discarded.
- Not all parts of plant foods or animal foods are edible
- Non-edible portions of food may include skin, bones, stems, shells, and peels.
- “Food loss” is used to refer to food that becomes unable to be eaten **before** it gets to the consumer.

Photo by [Anca](#) from [Pexels](#)



# Why is food waste a concern?

- Food wasted can end up in landfills
- When food decomposes, it produces greenhouse gases
- Excessive food waste is a signal that there may be insufficient food safety and storage infrastructure, inequity in food distribution, and inefficient supply chains.

Photo by [Stijn Dijkstra](#) from [Pexels](#)



# Food waste contributes to the climate crisis

6% of global greenhouse gas emissions come from food losses and waste



Emissions from food that is never eaten accounts for 6% of total emissions



Note: One-quarter of food emissions comes from food that is never eaten: 15% of food emissions from food lost in supply chains; and 9% from consumer waste.

Data source: Joseph Poore & Thomas Nemecek (2018). Reducing food's environmental impacts through producers and consumers. *Science*.

OurWorldinData.org – Research and data to make progress against the world's largest problems.

Licensed under CC-BY by the author Hannah Ritchie.

Hannah Ritchie (2020) - "Food waste is responsible for 6% of global greenhouse gas emissions" Published online at OurWorldInData.org.

Retrieved from: '<https://ourworldindata.org/food-waste-emissions>' [Online Resource]



# What is the optimal amount of food waste?

- People might try new things, and not like them
- People might listen to their bodies when eating food away from home, and stop eating before their plates are empty
- People may not have safe ways to store food for later
- Some parts of foods are not edible or safe to eat
- No processing or storage system is perfect
- Eliminating all food waste would be very costly

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## *Is 'Food Waste' Really Such a Waste?*

The optimal amount of waste is not zero.

By Marc F. Bellemare

Aug. 24, 2017 7:31 pm ET

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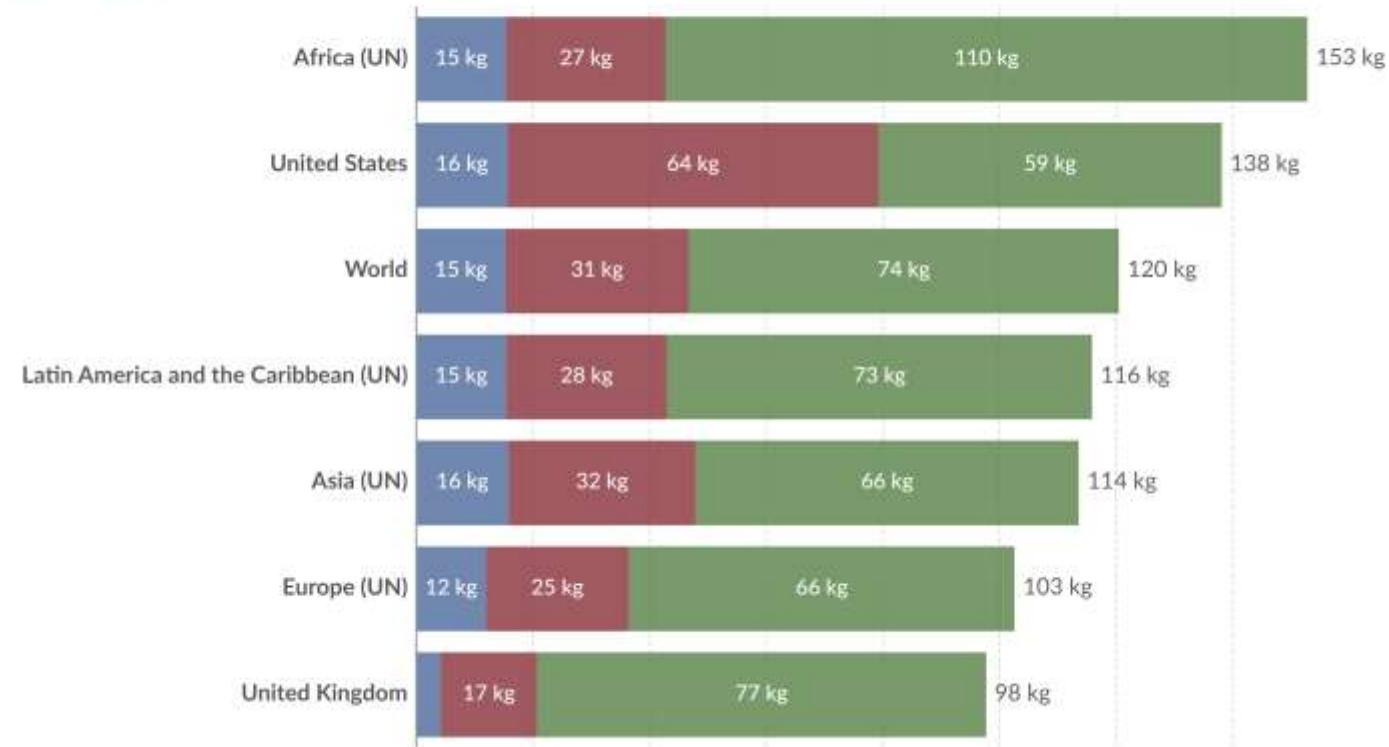
# How much food is wasted per person around the world?

## Food waste per capita, 2019

Amount of food wasted per capita, measured in kilograms.

Our World  
in Data

■ Retail ■ Out-of-home consumption ■ Household



Data source: United Nations Statistics Division.

[OurWorldInData.org/food-supply](https://OurWorldInData.org/food-supply) | CC BY



# Food waste at the consumer level differs by income levels



Resources, Conservation and  
Recycling

Volume 168, May 2021, 105332





Review

## Global primary data on consumer food waste: Rate and characteristics – A review

[Zhengxia Dou](#)<sup>a</sup>  , [John D. Toth](#)<sup>b</sup>

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<https://doi.org/10.1016/j.resconrec.2020.105332> ↗

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# The FAO has data on food loss and waste




Food and Agriculture Organization  
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## Technical Platform on the Measurement and Reduction of Food Loss and Waste

 Background [Food loss](#) - [Food waste](#) - [Community of Practice](#) - [News](#) [Events](#) - [Resources](#) - [In action](#) -

### Food Loss and Waste Database

Take an in-depth look at what food is being lost and wasted, and where



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# The UN Environment Programme has a database on food waste

REPORT

## UNEP Food Waste Index Report 2021

04 March 2021



The fact that substantial amounts of food are produced but not eaten by humans has substantial negative impacts: environmentally, socially and economically. Estimates suggest that 8-10% of global greenhouse gas emissions are associated with food that is not consumed.

Reducing food waste at retail, food service and household level can provide multi-faceted benefits for both people and the planet. However, the true scale of food waste and its impacts have not been well understood until now. As such, the

opportunities provided by food waste reduction have remained largely untapped and under-exploited. If we want to get serious about tackling food waste, we need to increase efforts to measure food and inedible parts wasted at retail and consumer level and track food waste generation in kilograms per capita at country level. Only with reliable data, we are going to be able to track progress on Sustainable Development Goal (SDG) target 12.3, which aims at halving per capita global food waste at the retail and consumer levels and reducing food losses along production and supply chains, including post-harvest losses.

Download

### UNEP Food Waste Index Report 2021

- [Full report](#)
- [Full report - Portuguese](#)
- [Full report - Spanish](#)
- [Appendix](#)
- [Database](#)



# USDA – Economic Research Service Food Loss



# The USDA describes some easy steps to prevent food waste

1. Plan ahead



Before you go to the grocery store or order online, make a list so you don't buy more than you need.

2. Serve smart



Portion control is good for your waistline, and good for reducing plate waste.

3. Love your leftovers



Pack leftovers in small portions in shallow containers, mark the contents and date, refrigerate and use within 3 to 4 days or freeze immediately.

4. Compost, don't trash



Food scraps can be recycled into compost, an organic material that can be added to soil to help plants grow. Set up a home compost bin or drop your food waste at a local compost center.

Source: <https://www.usda.gov/foodlossandwaste>



# Data and resources

- [FAO: Food Loss and Waste](#)
- [USDA Food Loss Database](#)
- [UN Environment Programme \(UNEP\) 2021 Report](#)
- [Dou and Toth \(2021\), database built from 322 publications on consumer food waste](#)



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# Thank you

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