

# Food waste and food waste prevention - estimates

Statistics Explained

Skip to the content

[Page contents](#)

## Highlights

Amounts of food waste at EU level

In the supply and consumption sectors, food waste generation may represent 10% of food supplied in the EU

Methodology

Data interpretation

Source data for tables and graphs

Data sources

Context

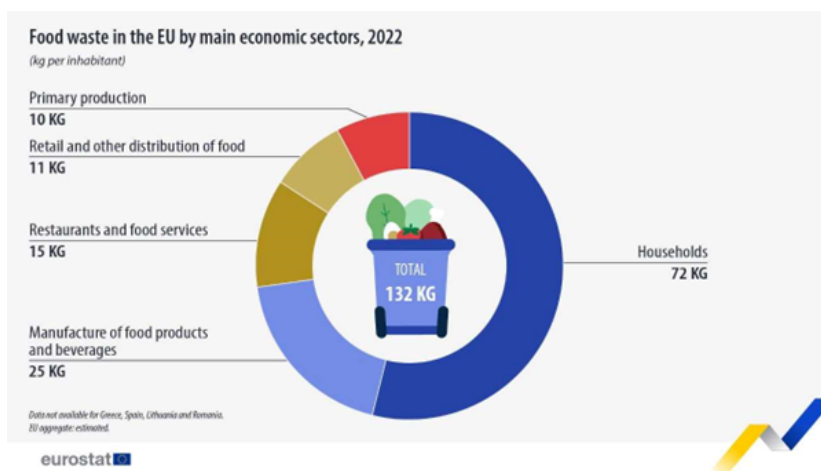
Explore further

Data extracted in September 2024  
Planned article update: September 2025

## Highlights

" **Food waste: 132 kg per inhabitant in the EU in 2022.** "

This article provides the results of the third reporting obligation of the amount of [food waste](#) in the [European Union](#) by sector of activity according to the [NACE rev.2](#) classification and by households, excluding food losses (food not harvested or food not authorised to be marketed for safety reasons), for the year 2022.



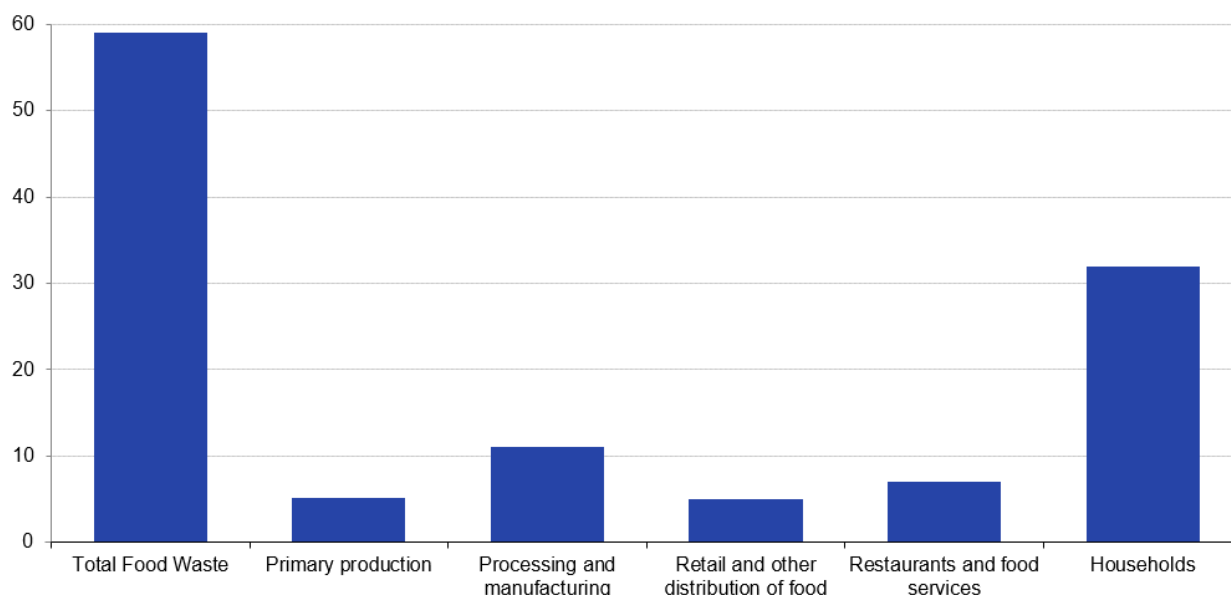
In 2022 around 132 kg of food waste per inhabitant were generated in the EU. Households generated 54% of food waste, accounting for 72 kg per inhabitant. The remaining 46% was waste generated upwards in the food supply chain. Household food waste is slightly more than twice the amount of food waste arising from the sectors of primary production and manufacture of food products and beverages (10 kg and 25 kg per inhabitant; 8% and 19%, respectively), sectors in which strategies exist for reducing food waste, for instance with the use of discarded parts as by-products. Finally, the sectors restaurants and food services and retail and other distribution of food accounted for 15 kg and 11 kg of food waste per person (11% and 8%, respectively); however, the impact of the end of the COVID-19 lockdowns on these two sectors is still being analysed.

## Amounts of food waste at EU level

At EU level, the total food waste measured in 2022 was slightly more than 59 million tonnes of fresh mass. Household food waste represented 32 million tonnes of fresh mass, with a 54% share of the total. The second sector in terms of share (19%) was processing and manufacturing, where the amount of measured food waste was slightly more than 11 million tonnes of fresh mass. The remaining share, slightly more than a quarter of the total food waste, was from primary production sector (below 5 million tonnes, 8% share towards the total amount of food waste), restaurants and food services (below 7 million tonnes, 11% share towards the total) and retail and other distribution of food sectors (slightly below 5 million tonnes, 8% share). These amounts are presented in Figure 1.

### Food waste estimations in the EU, 2022

(million tonnes of fresh mass)



Note: Data are estimated.

Source: Eurostat (online data code: env\_wasfw)

eurostat

**Figure 1: Food waste estimations in the European Union, 2022 Source: Eurostat (env\_wasfw)**

Table 1 presents the amounts of food waste declared by the countries for reference year 2022, measured in tonnes of fresh mass, by sector of activities.

## Food waste by sector of activities, 2022

(tonnes of fresh mass)

	Total food waste	Primary production	Processing and manufacturing	Retail and other distribution of food	Restaurants and food services	Households
<b>EU</b>	<b>59 200 000</b>	<b>4 600 000</b>	<b>11 100 000</b>	<b>4 800 000</b>	<b>6 600 000</b>	<b>32 100 000</b>
Belgium	1 758 589	33 863	737 026	125 564	111 250	750 886
Bulgaria	614 928	63 904	145 918	38 149	99 792	267 165
Czechia	1 080 608	14 670	165 414	67 296	180 773	652 455
Denmark	1 497 958	116 629	695 475	100 355	75 634	509 865
Germany	10 781 835	177 766	1 564 071	773 598	1 977 549	6 288 851
Estonia	180 747	21 555	39 088	19 681	12 930	87 493
Ireland	749 243	52 837	230 100	89 103	157 045	220 158
Greece <sup>(1)</sup> <sup>(2)</sup>	2 044 324	362 275	403 568	149 911	214 559	914 011
Spain <sup>(2)</sup> <sup>(3)</sup>	4 260 845	845 620	1 419 257	348 219	213 023	1 434 726
France	9 450 000	1 179 000	2 406 000	830 000	1 091 000	3 944 000
Croatia	278 838	39 084	9 424	4 086	14 736	211 508
Italy <sup>(2)</sup>	8 201 419	652 914	540 442	629 154	474 241	5 904 668
Cyprus	268 398	47 887	65 916	54 517	30 131	69 947
Latvia	232 442	27 226	29 917	15 759	25 183	134 357
Lithuania <sup>(1)</sup>	390 645	81 202	29 271	33 951	4 651	241 570
Luxembourg	79 406	7 582	11 430	8 614	9 626	42 154
Hungary	810 600	11 847	139 135	57 862	21 869	579 887
Malta	86 295	555	7 371	4 716	26 934	46 720
Netherlands <sup>(2)</sup>	2 290 000	322 206	884 373	152 732	83 035	847 654
Austria	1 184 447	6 226	204 358	83 138	256 040	634 683
Poland	4 545 178	724 875	552 823	474 461	264 546	2 528 473
Portugal	1 926 484	110 980	64 572	227 908	239 000	1 284 025
Romania	:	:	:	:	:	:
Slovenia	150 839	58	10 587	14 070	55 839	70 285
Slovakia	574 824	36 225	141 776	30 144	11 918	354 760
Finland	607 709	29 439	139 297	52 828	81 182	304 963
Sweden	1 230 000	92 000	305 000	102 000	144 000	587 000
Norway	902 731	184 911	142 238	68 105	120 793	386 684
Iceland	60 587	29 065	1 596	1 927	3 856	24 143

(:) not available

Figures in italic are estimates

<sup>(1)</sup> 2022 data not reported, 2021 data presented

<sup>(2)</sup> Definition differs in some figures

<sup>(3)</sup> 2021 and 2022 data not reported, 2020 data presented.

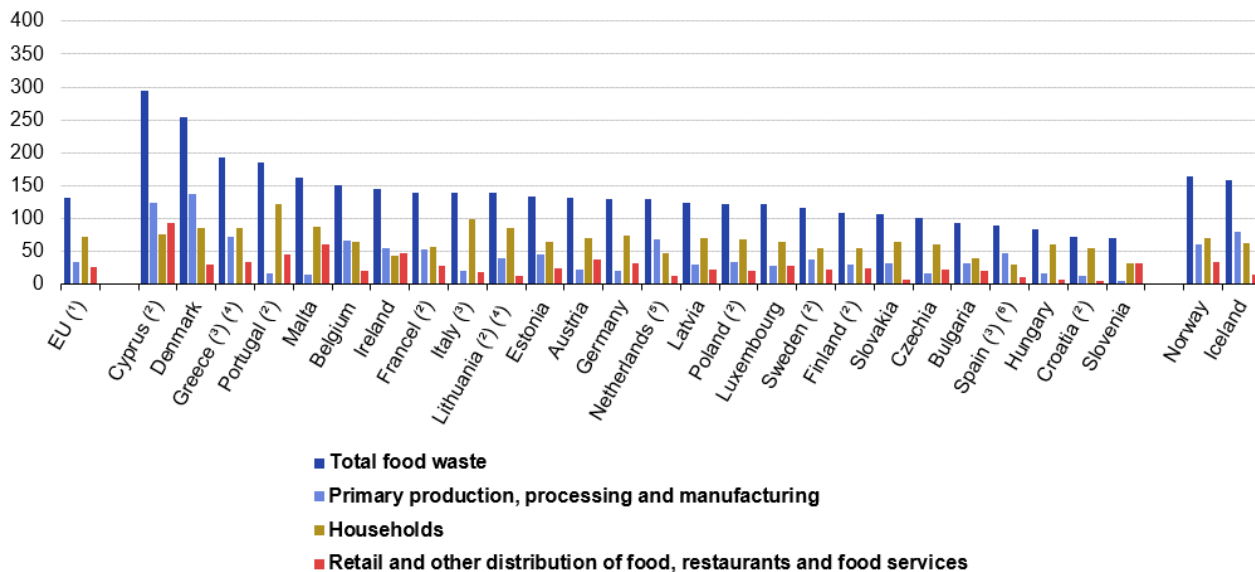
Source: Eurostat (online data code: env\_wasfw)

**Table 1: Food waste by sector of activities, 2022 Source: Eurostat (env\_wasfw), definitions**

Figure 2 summarises, by aggregated sectors, food waste in terms of kilogrammes per inhabitant; as compared with Figure 1 and Table 1. Figure 2 also presents data from the sectors primary production and processing and manufacturing aggregated in a single class; data from sectors retail and other distribution of food and restaurants and food services are also aggregated in a single class. Figure 2 displays, therefore, for each country, the five sectors collapsed into three sectors, presented side by side with the total food waste, all in kilogrammes per inhabitant.

## Food waste by sector of activities, 2022

(kg per inhabitant)



(\*) Estimated data.

(2) Estimates in some figures.

(3) Definition differs or estimates in some figures.

(4) 2022 data not reported, 2021 data presented.

(5) Definition differs in some figures.

(6) 2021 and 2022 data not reported, 2020 data presented.

Source: Eurostat (online data code: env\_wasfw)

eurostat

**Figure 2: Food waste by sector of activities by EU Member State, 2022** Source: Eurostat (env\_wasfw), definitions

## In the supply and consumption sectors, food waste generation may represent 10% of food supplied in the EU

Table 2 illustrates that generated food waste may count for 10% of food supplied to EU consumers in the supply and consumption sectors ("Retail and other distribution of food", "Restaurants and food services" and "Households"). To arrive at this assumption, Eurostat has roughly estimated the food placed on the market from the 2022 FAO data on food supply quantity (source: [Food Balances Sheet, FAO database](#)) provided in kilogrammes per inhabitant, and compared it with food waste amounts in the supply and consumption sectors.

## Comparison of food waste quantities from selected sectors and food supply quantities in the EU

(kg per inhabitant)

Food waste amounts for selected sectors, 2022	Estimated consumed food, 2022	Food supply quantity, FAO, 2022
97	899	996

Note: selected sectors for food waste: "Retail and other distribution of food", "Restaurants and food services" and "Households".

Data are estimated.

Source: Eurostat (online data code: env\_wasfw)

Source: FAO (online link: <https://www.fao.org/faostat/en/#data/FBS>)



**Table 2: Comparison of food waste quantities from selected sectors and food supply quantities in the European Union, 2021** Source: Eurostat (env\_wasfw) and FAO (Food Balances Sheet)

### Methodology

EU Member States measure the amount of food waste for all stages of the food supply chain using the methodology set out in Annex III of [Commission delegated decision \(EU\) 2019/1597](#).

In the context of this data collection, food means any substance or product, whether processed, partially processed or unprocessed, intended to be, or reasonably expected to be ingested by humans. Food waste consists of parts of food intended to be ingested (edible food) and parts of food not intended to be ingested (inedible food). Food waste is any food that has become waste under these conditions:

1. it has entered the food supply chain,
2. it has then been removed or discarded from the food supply chain or at the final consumption stage,
3. it is finally destined to be processed as waste.

In order to ensure comparability, food waste has to be reported as it was in its fresh mass state. In fact, in many countries there are seasonal effects on the measures of weight of food waste, due to the loss of water originally contained in the food by evaporation or drained from the waste bin, especially occurring in summertime or whenever the food waste is not collected on a daily basis. Therefore, food waste data require measurements and estimations as tonnes of fresh mass. The source of these data is the [Waste Framework Directive \(2008/98/EC\)](#), which establishes an annual reporting obligation on measurements of the levels of food waste, on [Commission delegated decision \(EU\) 2019/1597](#), that defines the common methodology and minimum quality requirements for the uniform measurement of levels of food waste, and finally on [Commission implementing decision \(EU\) 2019/2000](#), that provides the reporting format.

Annex III (Methodology for the in-depth measurement of food waste) of [Commission delegated decision \(EU\) 2019/1597](#) foresees the use of one or more of these methodologies, by sector of activity:

- "Direct measurement" and/or "Waste composition analysis": for all sectors of activities

- "Mass balance": for sectors "Primary production", "Processing and manufacturing" and "Retail and other distribution of food"
- "Questionnaires and interviews" and/or "Coefficients and production statistics": for sectors "Primary production" and "Processing and manufacturing"
- "Counting/scanning": for sectors "Retail and other distribution of food" and "Restaurants and food services"
- "Diaries": for sectors "Restaurants and food services" and "Households"

In the third reporting year, Iceland transmitted data for the first time (currently, only data for reference year 2022). Several countries have improved their measurement methodology, with 8 Member States and Norway revising both 2020 and 2021 reference years' data; 4 Member States have not yet transmitted data for reference year 2022: amongst these, one Member State has not reported 2021 data and one Member State never reported any data. Some countries have used estimates or have indicated that for some data points their definitions differ; estimates and differences in definitions are due to limitations in sample size, exclusion of small subsectors or of small companies or activities, incompleteness of sector surveys, suboptimal estimation of coefficients for the fresh mass calculation, misinterpretation of definitions by data reporters, difficulties in attributing the waste measurement in between two or more sectors. An analysis was conducted on the countries that reported all years by calculating the averaged total amount of food waste (in kg per inhabitant), with the result that the three reference years (2020, 2021 and 2022) almost have the same averaged total amount of food waste (131 kg, 132 kg and 132 kg per inhabitant); therefore, the data from the reporting compliant countries are considered stable. Due to lack of information from the missing reporting countries the EU aggregates are rounded up to 100 thousand tonnes of fresh mass, as revisions and first reporting are expected to change the EU aggregates. EU aggregates data for each reference year are calculated, by each sector, as the ratio between the sum of the reported waste amount divided by the total population of the reporting countries in the year, and finally multiplied by the EU population of the year.

## Data interpretation

Countries with a population of less than 10 million inhabitants that are net exporters of raw and manufactured food products may show high amounts of food waste, especially in the processing and manufacturing sector. Data are considered stable and several countries have improved the measurement methodology.

## Source data for tables and graphs

\* [Download Excel file](#)

## Data sources

2022 was the third reporting year of the food waste reporting obligation according to [Commission delegated decision \(EU\) 2019/1597](#) . Information and data are based on the [Waste Framework Directive \(2008/98/EC\)](#) that establishes an annual reporting obligation on measurements of the levels of food waste, on [Commission delegated decision \(EU\) 2019/1597](#) , that defines the common methodology and minimum quality requirements for the uniform measurement of levels of food waste, and finally on [Commission implementing decision \(EU\) 2019/2000](#) , that provides the reporting format. Detailed information are available in the [Guidance on reporting of data on food waste and food waste prevention according to Commission Implementing Decision \(EU\) 2019/2000](#) .

## Context

Food waste measurement has a key role to play in the strategies for [food waste reduction](#), that have enormous potential for diminishing the resources used along the whole food supply chain. Reducing food waste would help:

- farmers, companies and consumers to save money;
- decrease the environmental impact of food production, transport, processing and consumption.

Given its important environmental and economic impacts, food waste prevention and the need to adopt a more sustainable production and consumption model is a priority area in the EU's Circular Economy Action Plan. The Action Plan called on the Commission to establish a multi-stakeholder platform dedicated to food waste prevention. Established in 2016, the [EU Platform on Food Losses and Food Waste](#) has supported the Commission in its work to adopt EU guidelines to facilitate food donations and the use of food no longer intended for human consumption as animal feed. They also develop food waste measurement methodology and undertake work to improve date marking practices.

View this article online at [http://ec.europa.eu/eurostat/statistics-explained/index.php/Article\\_name](http://ec.europa.eu/eurostat/statistics-explained/index.php/Article_name)

## Explore further

### Other articles

- [Waste statistics](#)
- [Waste management indicators](#)
- [Municipal waste statistics](#)

## Database

- [Waste](#) , see:

Waste streams (env\_wasst)

Food waste and food waste prevention by NACE Rev. 2 activity - tonnes of fresh mass ([env\\_wasfw](#))

## Dedicated section

- [Waste overview](#)

## Publications

- [All publications on waste](#) issued by Eurostat.
- [Energy, transport and environment indicators — 2020 edition](#)

## Main tables

- Food waste and food waste prevention by NACE Rev. 2 activity - tonnes of fresh mass ([env\\_wasfw](#))

## Methodology

- [Guidance on reporting of data on food waste and food waste prevention according to Commission Implementing Decision \(EU\) 2019/2000](#)
- [Food waste and food waste prevention by NACE Rev. 2 activity - tonnes of fresh mass](#) (ESMS metadata file — env\_wasfw\_esms)
- [Waste statistics methodologies](#)

## External links

- [EU Platform on Food Losses and Food Waste](#)
- [Food waste](#)

## Legislation

- [Waste Framework Directive \(2008/98/EC\)](#)
- [Commission delegated decision \(EU\) 2019/1597](#)
- [Commission implementing decision \(EU\) 2019/2000](#)