Annex 2: Table of datapoints

Household datapoints

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Alayam 2018)	Bahrain		The source link is to a newspaper that which refers to a report by the Center for Waste Management. The original report could not be found. However, the infographic (clearly copied from the original report) and the article make clear that a waste compositional analysis was undertaken, referring to the sorting of "huge quantities of household waste collected from the various region of Bahrain." The inability to find the source paper means we cannot have high confidence in the results.
(Salam et al. 2012)	Bangladesh	Chittagong	55 households in five different socioeconomic groups across three different areas had their waste sampled daily, using plastic bags provided to them. It was unclear for how long the sampling ran for each household. This small sample size and unknown duration means we cannot have high confidence.
(Sujauddin, Huda and Hoque 2008)	Bangladesh	Chittagong	75 households across five socioeconomic groups in the Rahman Nagar Residential Area had their waste sampled. The length of sampling is unknown. The small sample with unknown duration means we cannot have high confidence in the results.
(Inter-American Development Bank [IDB] 2011)	Belize	San Ignacio / Santa Elena	174 households across three socioeconomic groups had their waste sampled, with at least 100 kilograms collected each sampling day. Measurement was for eight days.
(IDB 2011)	Belize	Caye Caulker	132 households across three socioeconomic groups had their waste sampled, with at least 100 kilograms collected each sampling day. Measurement was for eight days.
(IDB 2011)	Belize	San Pedro	169 households across three socioeconomic groups had their waste sampled, with at least 100 kilograms collected each sampling day. Measurement was for eight days.
(IDB 2011)	Belize	Belize City	183 households across three socioeconomic groups had their waste sampled, with at least 100 kilograms collected each sampling day. Measurement was for eight days.
(Environment and Climate Change Canada 2019)	Canada		56 different waste compositional analyses studies were analysed and averaged to form a national average. The studies analysed involved a mixture of analysis at curbside and at sorting facilities. The share that is food waste was multiplied by the total residential waste to form a food waste estimate.
(Gu et al. 2015)	China	Suzhou	140 households participated in a compositional analysis. This involved their waste being collected each day for a week, and was repeated in each season. They also completed a survey. The household sizes are considered representative of the wider city.
(Lo and Woon 2016)	China, Hong Kong Special Administrative Region	Hong Kong	The paper cites the Hong Kong Environment Bureau's official statistics. It is assumed to be from Waste Compositional Analysis but is not made explicit, nor were other details of the method provided (such as sample).
(Qu et al. 2009)	China	Beijing	113 households across six districts in Beijing city had their waste collected and analysed daily for a period of 10 days.
(Zhang et al. 2020)	China	Urban China total	The household estimate uses a huge range of local municipal solid waste (MSW) figures and studies, estimating the share of household food waste in the entire MSW. 196 samples were obtained from the literature across 2001-2016. (Supplementary Info, Table S21-2). All literature values cited reported the value of Household Food Waste in MSW, although it is unclear how it was disaggregated if samples were taken at landfill or transport sites. The per capita figure only applies to the urban population, as this was where the study was concentrated.
(JICA 2013a)	Colombia	Bogota	The paper cites 3,259 samples, although it is unclear if this is referring to households or individuals, taken across a single 24-hour period, across 19 localities and 6 socioeconomic categories. While the duration of sampling was small, the size was considered to compensate for this.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Assefa 2017)	Ethiopia	Laga Tafo Laga Dadi town, Oromia	Bags were distributed to 92 "residential households" in Laga Tafo Laga Dadi (sometimes written Legetafo Legedadi) town, in a small area on the outskirts of Addis Ababa, for waste collection and sorting every day. From this waste compositional data, food waste can be derived. It is unclear for how long this compositional analysis took place. Note: different "residential" groups are included in the paper, including "real estate residential" and "ropack village residential." Due to some confusion over the terminology and these types having very high bone waste, only "residential households" were considered here.
(Denafas et al. 2014)	Georgia	Kutaisi	Each month for a period of a year, 400-600 kilograms of residual waste from residential areas was taken and sorted. Compositional information combined with MSW data to understand total waste. The paper does specify these samples came from residential areas, but they were collected from waste trucks rather than homes directly, leading to some increased uncertainty.
(Miezah et al. 2015)	Ghana		1,014 households representing 6,083 people were randomly selected in 10 different districts across three socioeconomic groups (low, medium, high). The households were provided with two bags, one for biodegradable waste and one for other waste, and were taught how to separate accordingly. Employed sorters then collected and did further sorting and disaggregation between every two days and twice a week for a period of five weeks, including sorting the biodegradable waste into a food subcategory. The per capita figure taken is the average across the socioeconomic groups provided in the paper.
(Grover and Singh 2014)	India	Dehradun	144 households across three different socioeconomic groups in Dehradun city were given a large bag in which to dispose their waste, which was then sorted and classified. It is unclear for how long the survey took place, so is assumed to have not met the "700 waste day" baseline and we therefore cannot have high confidence in the estimate.
(Ramakrishna 2016)	India	Rajam, Andhra Pradesh	25 households from 5 different segments of Rajam town were given two bags; one for wet and one for dry waste, collected each day. Participants segregated their waste for seven consecutive days, which was then taken for sorting.
(Suthar and Singh 2015)	India	Dehradun	144 households from 11 major blocks of Dehradun city were provided with waste bags in which to put their waste from a 24-hour period, which was then sorted and classified.
(Dhokhikah, Trihadiningrum and Sunaryo 2015)	Indonesia	Surabaya	100 households in Surabaya were provided with bags in which to put all of their daily waste for a period of 8 consecutive days. This was then collected and sorted, including into a separate food waste category.
(Al-Rawi and Al-Tayyar 2013)	Iraq	Mosul	60 households, 10 from each sector of Mosul, were given plastic bags and told to collect their waste over a 24-hour period. It is unclear if this was repeated for individual houses and for how many days, although the paper said the study period was between February and July, which would suggest it was repeated for households for some duration. A total of 1,680 solid waste samples were collected.
(Al-Mas'udi and Al-Haydari 2015)	Iraq	Karbala	70 households in Karbala were given plastic bags in which to put their waste from a 24-hour period. This was repeated once a month for three months in winter and three months in summer.
(Sulaymon, Ibraheem and Graimed 2010)	Iraq	Al-Kut City	80 households across three income groups in Al-Kut had their waste collected daily for a period of one week, which was repeated one week per month for seven months. While this is a large sample, there remains some uncertainty around definitions as to whether food or organic waste was measured, which could explain the substantial waste generation. As a result, we cannot have high confidence in the estimate.
(Yasir and Abudi 2009)	Iraq	Nassiriya	65 households representing 417 people across three income groups in Nassiriya were randomly selected. They were given plastic bags in which to put waste, which were collected daily and replaced over a period of seven months.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Elimelech, Ayalon and Ert 2018)	Israel	Haifa	192 households across three neighbourhoods in Eastern Haifa, primarily middle-class households, were provided with waste bags that were collected daily for the period of one week. Because the study was within a specific unrepresentative area, we only have medium confidence.
(JICA 2010)	Kenya	Nairobi	150 households were sampled across five income groups (High, Middle, Low-Middle, Low, Slum), which are grouped into three residential groups (High, Middle, Low), with a subset of those sampled for composition. Collection occurred over a total of eight days, but the first one was discounted as not representing daily generation, so the result was seven days of sample. A subset of this waste was then sorted and classified.
(Takeuchi 2019)	Kenya	Nairobi	90 households across three income areas (high, middle, low) received plastic bags for disposing daily waste. Collection occurred over a total of eight days, but the first one was discounted as not representing daily generation, so the result was seven days of sample. This waste was then sorted and classified.
(Jereme et al. 2013)	Malaysia		Table 1 cites the Ministry of Housing and Local Government (2011), estimating food waste generation by source. This was not findable by the bibliography nor through a direct internet search. As a result, we cannot have high confidence in the estimate.
(Watanabe 2012)	Malaysia	Bandar Baru Bangi	282 households were sampled across four neighbourhoods, which represent a mixture of different housing types (terraced housing, bungalows, flats). These were all in Selangor, described as a typical suburban area in the Kuala Lumpur area. Waste from a single day was sampled in each area, sourced from the normal disposal routine rather than asking households to dispose of their waste differently. Panel 3 shows a breakdown of food into "Unused food" (7.71% of total household waste), "General kitchen waste" (24.83% of total household waste), "big fruit peels" (10.32% of total waste). Although this has a large sample, it is geographically restricted to one area so can only have medium confidence when used for the whole of Malaysia.
(Kneller et al. 2019)	Mexico		This figure combines a number of sources, detailed in Appendix 5 of the report. Studies were identified in 3 states and 5 municipalities that directly measured the share of waste that was food waste at the household level. This was then scaled up using figures from the urban solid waste, which is primarily but not exclusively household waste: some small businesses and some larger ones (operating illegally) dispose of waste in the household municipal waste. The scale of non-household contamination is not known. As a result, it is no more than a medium confidence estimate for household food waste that likely slightly exaggerates its extent (in urban solid waste).
(Sunshine Yates Consulting 2018)	New Zealand		597 households across six different local authorities had their waste audited. This only considers the curbside domestic waste.
(Orhorhoro, Ebunilo and Sadjere 2017)	Nigeria	Sapele	100 households covering a total of 334 people were selected by stratified random sampling, all in the Sapele area. Waste was collected from households after seven days and sorted.
(JICA 2015b)	Pakistan	Gujranwala	60 urban households across three income groups (high, middle and low) were provided with plastic bags that were collected daily for eight days, although the first bag was disregarded for containing more than one day's waste. The sample was repeated across three seasons to account for variation. Rural households were considered in the study and treated as a separate datapoint. Because the study is specific to a smaller geographic area, it is considered medium confidence for analysing the whole of Pakistan.
(JICA 2015b)	Pakistan	Gujranwala	10 households in rural areas were provided with plastic bags in which to deposit waste, which was collected for eight days, although the first day was discounted due to covering more than a day's waste. The survey was repeated across three different seasons to account for variation. The small sample means we cannot have high confidence. Urban households were also studied but treated as a separate datapoint.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Tiarcenter 2019)	Russian Federation		The paper cites what is assumed to be a waste composition analysis by the Higher School of Economics (which was not found when searched for) and data from Rosstat. The shares of waste at each stage were calculations based on data from Russian Agriculture Ministry (2017). The estimate provides a total food waste estimate as well as the amount of waste at each stage of the chain; these were then combined to form sector-specific estimates. The inability to trace the original source data and the lack of transparency on the calculations means we cannot have high confidence in this estimate.
(Mucyo 2013)	Rwanda	Kigali	90 households were surveyed in 3 districts, including, for each district, 10 households from each socioeconomic group (low, medium, high). Bags and scales were distributed to the households, which were told to separate food waste and other waste. The households weighed this each day for a period of two weeks but regularly received visits from the researchers.
(SAGO 2019)	Saudi Arabia		This study forms the Saudi waste Baseline, conducted by Saudi Grains Organisation (SAGO). 20,090 samples of domestic consumption were taken across 19 food products across 13 regions in Saudi Arabia. These were separated and weighed. Although it is unclear from how many households these samples arise. This compositional analysis was supplemented by a behavioural study. The household estimate is the share of waste attributed to "Consumption." Additional information and images to supplement the main study can be found at: *https://www.macs-g20.org/fileadmin/macs/Activities/2020_FLW_WS/4_Session_3_FW_at_HH_level_small.pdf*.
(Nahman et al. 2012)	South Africa		This paper combines a literature review of waste compositional analyses disaggregated by income group across three cities (Cape Town, Johannesburg and Rustenburg). These are then scaled by the waste generation of those specific income groups nationally. Due to the comparison with other datapoints from South Africa and their large variation, this was not considered an estimate in which we could have high confidence.
(Oelofse, Muswema and Ramukhwatho 2018)	South Africa	Johannesburg	44,927 households across 74 collection routes were sampled during a six-week period, with random-grab subsamples from municipal waste collection trucks in residential areas, which were then analysed for composition. The result is particularly low, which is notable when compared to other studies in nearby countries. This could suggest that some other waste (such as from small businesses, or illegal dumping) is being collected as part of the household waste stream.
(Oelofse, Muswema and Ramukhwatho 2018)	South Africa	Ekurhuleni	20,439 households across 41 collection routes were sampled during a six-week period, with random-grab subsamples from municipal waste collection trucks in residential areas, which were then analysed for composition. The result is particularly low, which is notable when compared to other studies in nearby countries. This could suggest that some other waste (such as from small businesses, or illegal dumping) is being collected as part of the household waste stream.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Ramukhwatho 2016)	South Africa	Tshwane Metropolitan Municipality	123 households across 5 areas had their food waste collected separately and weighed on a weekly basis for a period of 3 weeks. The sample of 123 are out of 133 respondents on a survey who indicated that they wasted food. Another 77 respondents indicated that they did not waste food, and were seemingly not asked to weigh their waste. This may bias the results by only auditing those who self-describe as those who waste food, and not including measurements from much smaller waste generators. The paper does not present a single waste figure. Instead, it has been derived from Table 4.9 using the waste generation rate per household, number of people in household and share of that household size in the sample to get a weighted per capita estimate (the sum of [household waste / number of people in household] * [share of total sample which is this household size] for each household size). The paper does include some disposal method information but not enough to adjust the figures. For example, 14 per cent of respondents claimed they fed food waste to pets, but this does not clearly translate to 14 per cent of food waste being fed to animals. As a result, no adjustment was carried out.
(JICA 2016)	Sri Lanka	Jaffna	The study refers to a range of locally conducted surveys on waste generation units and waste composition, combined with waste generation rates obtained by SATREPS (Science and Technology Research Partnership for Sustainable Development) in 2014, a previous JICA project. The methodological details of the locally outsourced surveys are not clear. Although the waste generation rates are captured at a household level, it appears as though the compositional analysis may have been done at an aggregated level, such as at the landfill. This and the methodological uncertainty reduces our confidence in the estimates, so they are rated "medium confidence."
(JICA 2016)	Sri Lanka	Nuwara Eliya	The study refers to a range of locally conducted surveys on waste generation units and waste composition, combined with waste generation rates obtained by SATREPS in 2014, a previous JICA project. The methodological details of the locally outsourced surveys are not clear. Although the waste generation rates are captured at a household level, it appears as though the compositional analysis may have been done at an aggregated level, such as at the landfill. This and the methodological uncertainty reduces our confidence in the estimates, so they are rated "medium confidence."
(JICA 2016)	Sri Lanka	Kataragama	The study refers to a range of locally conducted surveys on waste generation units and waste composition, combined with waste generation rates obtained by SATREPS in 2014, a previous JICA project. The methodological details of the locally outsourced surveys are not clear. Although the waste generation rates are captured at a household level, it appears as though the compositional analysis may have been done at an aggregated level, such as at the landfill. This and the methodological uncertainty reduces our confidence in the estimates, so they are rated "medium confidence."
(JICA 2016)	Sri Lanka	Thamankaduwa	The study refers to a range of locally conducted surveys on waste generation units and waste composition, combined with waste generation rates obtained by SATREPS in 2014, a previous JICA project. The methodological details of the locally outsourced surveys are not clear. Although the waste generation rates are captured at a household level, it appears as though the compositional analysis may have been done at an aggregated level, such as at the landfill. This and the methodological uncertainty reduces our confidence in the estimates, so they are rated "medium confidence."
(JICA 2016)	Sri Lanka	Katunayake	The study refers to a range of locally conducted surveys on waste generation units and waste composition, combined with waste generation rates obtained by SATREPS in 2014, a previous JICA project. The methodological details of the locally outsourced surveys are not clear. Although the waste generation rates are captured at a household level, it appears as though the compositional analysis may have been done at an aggregated level, such as at the landfill. This and the methodological uncertainty reduces our confidence in the estimates, so they are rated "medium confidence."

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(JICA 2016)	Sri Lanka	Moratuwa	The study refers to a range of locally conducted surveys on waste generation units and waste composition, combined with waste generation rates obtained by SATREPS in 2014, a previous JICA project. The methodological details of the locally outsourced surveys are not clear. Although the waste generation rates are captured at a household level, it appears as though the compositional analysis may have been done at an aggregated level, such as at the landfill. This and the methodological uncertainty reduces our confidence in the estimates, so they are rated "medium confidence."
(JICA 2016)	Sri Lanka	Kesbewa	The study refers to a range of locally conducted surveys on waste generation units and waste composition, combined with waste generation rates obtained by SATREPS in 2014, a previous JICA project. The methodological details of the locally outsourced surveys are not clear. Although the waste generation rates are captured at a household level, it appears as though the compositional analysis may have been done at an aggregated level, such as at the landfill. This and the methodological uncertainty reduces our confidence in the estimates, so they are rated "medium confidence."
(JICA 2016)	Sri Lanka	Dehiwala Mt Lavinia	The study refers to a range of locally conducted surveys on waste generation units and waste composition, combined with waste generation rates obtained by SATREPS in 2014, a previous JICA project. The methodological details of the locally outsourced surveys are not clear. Although the waste generation rates are captured at a household level, it appears as though the compositional analysis may have been done at an aggregated level, such as at the landfill. This and the methodological uncertainty reduces our confidence in the estimates, so they are rated "medium confidence."
(JICA 2016)	Sri Lanka	Kurunegala	The study refers to a range of locally conducted surveys on waste generation units and waste composition, combined with waste generation rates obtained by SATREPS in 2014, a previous JICA project. The methodological details of the locally outsourced surveys are not clear. Although the waste generation rates are captured at a household level, it appears as though the compositional analysis may have been done at an aggregated level, such as at the landfill. This and the methodological uncertainty reduces our confidence in the estimates, so they are rated "medium confidence."
(JICA 2016)	Sri Lanka	Trincomalee	The study refers to a range of locally conducted surveys on waste generation units and waste composition, combined with waste generation rates obtained by SATREPS in 2014, a previous JICA project. The methodological details of the locally outsourced surveys are not clear. Although the waste generation rates are captured at a household level, it appears as though the compositional analysis may have been done at an aggregated level, such as at the landfill. This and the methodological uncertainty reduces our confidence in the estimates, so they are rated "medium confidence."
(Oberlin 2013)	United Republic of Tanzania	Kinondoni municipality, Dar es Salaam	75 households in middle- and low-income settlements, mainly in high population density informal settlements, were provided with waste bags for three different days, which were collected and sorted.
(Thanh, Matsui and Fujiwara 2010)	Viet Nam	Mekong Delta	100 households across ten different sampling points were selected. The sample is considered to be representative of Can Tho City in terms of household size. They had their waste analysed once in the dry season for a month, and once in the rainy season for a two-week period.
(Zakarya et al. 2022)	Viet Nam	Da Nang	120 households were provided with plastic bags in which to put household waste, which were collected daily for the period of one week. Satellite imagery on the distribution of housing types in Da Nang were used to scale the data according to those housing types and form an estimate for the city.
(Edema, Sichamba and Ntengwe 2012)	Zambia	Ndola	60 households across three areas (distinguished by housing density) sorted their waste weekly for a period of one month. The households were given plastic containers for different wastes: food, plastics, paper, textile, grass and other wastes. They therefore separated it themselves, but did not weigh or estimate it themselves.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Kulleh and Manaf 2023)	Malaysia	Sungai Asap, Belaga, Sarawak	In this study among Orang Ulu community, a total of 150 households across three different longhouses were sampled (50 households from each). Each longhouse represented a different ethnicity group. Households were given plastic bags to separate wet and dry wastes, from which the waste was categorized into six categories and weighed. Waste was measured daily for 14 days. Results presented are overall. The authors state that "the food waste was mostly composed of vegetable stalks, fruit and vegetable peelings, and a little rice residue, which they would eventually use as their rearing and pets' food," and "some of the food wastes were also used as fertilizers by the villagers."
(Saidu, Musa and Akanbi 2022)	Nigeria	Bida town, Niger State	400 households in eight wards were classed as either "core traditional" or "modern" settings. Household waste was weighed in these houses "for three consecutive days for four months." This is assumed to mean that measurements took place over a four-month period, but each household had only three days of waste measured. The waste was sorted and weighed. Results are presented by each ward and the overall average generation presented in the paper is the average of these results. The average food waste results are calculated from Table 1. The authors state that "Food waste mainly includes leftover food residue, vegetable waste, leaves and decayed vegetables." They also note that "Modern" areas had lower shares of food waste and lower waste generation, and this may be due to using more processed food materials than those in "core traditional" settings.
(Eurostat 2023)	Belgium		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both EU Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Bulgaria		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Czechia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Denmark		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Germany		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Estonia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Ireland		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Greece		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Spain		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. It is flagged by Eurostat as being "estimated," and the Eurostat metadata describes that this datapoint used the "Food Waste Panel" survey (it is unclear if this is a survey, diary or other approach), and that it only partly takes account of inedible food waste; it accounts for food "thrown away as purchased" and "food thrown away as cooked (including their inedible parts" but does not include inedible parts of uncooked foods (banana peel) or discarded in cooking or inedible parts like bones. As a result, this datapoint is adjusted to try and counteract the underreporting.
(Eurostat 2023)	France		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Croatia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Italy		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," and the Eurostat metadata explains that this estimate came from weighing waste arisings (i.e. MSW) and subtracting the retail and food service estimates, so it has not been directly measured at households.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Cyprus		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way. The Eurostat metadata mentions that information came from 68 households, but offers no further information.
(Eurostat 2023)	Latvia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Lithuania		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Luxembourg		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Hungary		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Malta		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Netherlands		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Austria		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Poland		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Portugal		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Slovenia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Slovakia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Finland		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Sweden		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Household, it allows direct measurement, waste composition analysis and diaries). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Norway		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(UNEP 2023)	Japan		The Ministry of the Environment conducts annual surveys on the amount of generation and recycling of household food waste that are issued to municipalities. Some municipalities conduct separate food waste collection; in some cases the household waste is collected as mixed waste and then sorted in composition analyses. Some municipalities conduct additional research on the amount of edible parts of food waste, which are used to form the national estimate of edible food waste. Data reported here was reported to UNEP as part of the SDG 12.3.1(b) pilot data collection.
(U.S. EPA 2023)	United States of America		Data are taken from studies conducted on food waste in specific sectors (state, municipal governments, industry groups, academics, etc.) that are correlated to facility-specific characteristics. This develops equations expressing generation factors, which are scaled up by applying national, sector-specific statistics. Multiple estimates are formed per sector, from which an average is taken. No new literature was identified for the 2019 estimates, so sectors retained the same generation factors as in the 2018 "wasted food report," and key changes will be in national statistics for each sector. Totals are taken from Table 3 then adjusted to remove the shares going to "non-waste" destinations. The authors discuss limitations of data associated with using existing generation factors, with inaccuracies for certain destinations such as food sent to the sewer. Data reported here was reported to UNEP as part of the SDG 12.3.1(b) pilot data collection. NOTE: this includes estimates of food waste going to the sewer, which is not believed to be covered in most of the datapoints reported here, so comparison is not advised.
(Ullah et al. 2022)	Afghanistan	Kabul City	Waste was collected in plastic bags from 60 households each day for 10 days in January 2021 and weighed. Of these 60 households, 15 were from high-income areas, 15 from middle-income areas, 15 from low-income areas and 15 from rural areas. For physical composition analysis, standard method ASTM-D5231-92 was used, and a reduction process was used to get a sample of 200 kilograms which was then divided into 15 waste types (including food waste) and weighed.
(Jadoon, Batool and Chaudhry 2014)	Pakistan	Gulberg Town, Lahore	Solid waste from 45 households (15 each from low income, middle income and high income) was collected for 7 consecutive days in four seasons in 2008-2009 (a total of 1,260 sample days). The selected households were given collection bags (capacity 10-15 kilograms), which were then collected and classified into 19 main fractions, based on physical composition, and weighed on a digital scale.
(Tsheleza et al. 2022)	South Africa	Mthatha city	206 households (98 from informal settlements and 108 from formal settlements) were provided with one refuse bag to collect all of their solid waste for a period of one week. All types of solid waste were mixed in one bag except food waste. A team of researchers visited each selected household after seven days to record the waste generated, which was then manually sorted, classified and weighed using a spring balance for each household.
(Kamran, Chaudhry and Batool 2015)	Pakistan	Shalimar Town, Islamabad	In Lahore, household waste is mainly collected by the City District Government Lahore from communal containers placed in different parts of the town. For this study, waste samples were collected for a period of one week from these open steel containers. A total of 84 samples were collected, covering three socioeconomic levels (4 low income, 3 middle income and 3 high income) for all four seasons, with a total sample size of 8,400 kilograms. The study used ASTM Method D5231-92 to conduct a waste composition analysis with 13 waste types. As the waste was collected from open containers, there is a risk of that some non-household waste could have been included. It was also observed that scavenging was very active between 7:00 a.m. and 9:00 a.m., but the effects of this were minimized by collecting samples early in the morning, starting at 6:00 a.m.
(Alias et al. 2014)	Malaysia	Sabah	Plastic bags were distributed to 150 households in three water villages in Sabah. Households put their waste in the plastic bag and this was then collected and weighed daily. Once the waste was collected, the samples were sorted into six categories (food waste, paper, plastic, glass, metal and others), and the weights for each category was recorded.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Khan, Kumar and Samadder 2016)	India	Dhanbad	30 households were selected to represent the overall socioeconomic status of the study area. Each household was given two plastic bags (one for biodegradable and non-biodegradable), which were retrieved after 24 hours and replaced. Wastes were segregated and weighed. This was repeated every day for seven days.
(Nell, Schenck and De Waal 2022)	South Africa	Stellenbosch Local Municipality	Household solid waste was collected from 1,543 households from 10 suburbs. Samples were collected on the same day as scheduled municipal refuse removal day, representing seven days' waste, and were then sorted into seven major waste fractions including organic. Organic waste was then sorted further into food waste, garden waste and leachate.
(Kihila, Wernsted and Kaseva 2021)	United Republic of Tanzania	Dar es Salaam City	80 houses were provided with plastic bags for waste. Waste was collected and sorted into 10 waste categories and weighed. It is unclear how many times waste was collected from each household: the paper states, "The average solid waste generation rate for Kimara was established to be 0.53 Kg/capita/day (n = 470, sd 0.26)," but a sample of 470 is not clearly divisible by the 80 households, so it is unclear where this comes from, unless some households did not provide waste on every day of the study. The total waste recorded was 401.62 kilograms. If 470 is the number of waste days, this would suggest only 1.61 people per household, which would be very low.
(Balilo et al. 2023)	Ethiopia	Shone Town	120 households were given two plastic bags, one for dry waste and one for wet waste. Each morning for eight consecutive days, the solid wastes were collected from selected households using donkey carts, transported to a temporary sorting site, sorted and weighed.
(Aziz et al. 2011)	Iraq	Erbil	72 solid waste samples were collected from households in plastic bags over the period of a year. The number of samples collected from high-, medium- and low-income quarters were 27, 21 and 24, respectively and the number of days waste collected varied between households from 1 to 7 days, with 129.65 days in total (summed from the table). The methodology for the collection and sorting of waste is unclear, but values are provided for the weight of food, plastic, paper, metal, glass and clothes.
(Ojeda-Benítez, Vega and Marquez-Montenegro 2008)	Mexico	Mexicali	125 families were given 48-gallon plastic bags in which they were asked to deposit their daily waste in for nine days, with eight days included in the final study. Of the final sample, 67 were nuclear families, 45 were extended families, and 13 were monoparental families. Plastic bags were collected between 6:30 a.m. and 9:30 a.m. and replaced by project staff. Samples were collected during March and April, and different income levels were analysed at different times. A total of 682 plastic bags, containing 2,674 kilograms of waste, were collected. Waste was sorted into five main categories and further subcategories and weighed. Only family units or households that provided a minimum of five 48-gallon plastic bags containing the solid waste generated were included in the study (125 out of an original 197).
(Rawat and Daverey 2018)	India	Rishikesh, Uttarakhand	47 households from 5 areas of Rishikesh, Uttarakhand were sampled. Each household was given two polythene bags for biodegradable and non-biodegradable wastes, which were collected daily for eight consecutive days, with the waste from the first day excluded from the measurements.
(Emeka et al. 2021)	Nigeria	Port Harcourt	The household waste from 4,931 street buildings and 16,016 houses was sampled. "The waste generated weekly by each household was being determined by direct measurement with weighing scale (measuring up to 50kg). Wastes were sorted into the various sources of generation: Food, Tins, Can, Plastics, Sachets, Paper (including Cardboard), Electrical Items, Green Waste and Others (nappies, wood and glass); and the weight of each type determined from the different bin liners they were collected." Waste was collected from houses, community bins, or the curbside, or delivered directly to disposal sites or transfer stations. The methodology is not completely clear as to whether houses were trusted to accurately sort their own waste, or whether researchers conducted their own waste composition analysis from a sample of the wastes. There is no description of the latter, so it is likely the former, which may underestimate food waste if people have not sorted waste streams correctly.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Parizeau, Maclaren and Chanthy 2006)	Cambodia	Siem Reap	Residents of 49 households were asked to collect their waste (any materials they would normally burn, bury, or throw in the river or other public spaces) each day for a week in the summer of 2004. Eight plastic collection bags were provided to each household, one for each day of the study and one extra bag in case it was required. Researchers weighed the collected waste at each household, then brought it to a sorting area where it was separated and weighed again. Materials were sorted into 12 categories including "high nitrogen organics (such as fruit peels and other kitchen wastes) and high carbon organics (such as dry leaves)." Only the "high nitrogen organics" is included here, on the assumption that this corresponds to food waste and "high carbon" to garden waste. Sixteen households had 1-2 days of non-participation, and values for these days were not included in the analysis. Being during the dry season, it was noted that the wastes may be lower than other times of the year.
(Elimelech, Ert and Ayalon 2019)	Israel	Haifa Municipality (Neve Sha'anan, Ramat Remez, and Yizraelia)	Waste from 187 households was collected from the household's doorstep each day for one week. Samples were unloaded at a sorting tent located at an operational site of Haifa Municipality, and food waste samples were classified into avoidable and unavoidable food waste and were weighed. The paper only provides a figure for avoidable food waste, so an appropriate weighting factor has been applied to estimate total food waste.
(Adelodun, Kim and Choi 2021)	Republic of Korea	Daegu	Waste samples were collected from 84 households (33 from apartments, 31 from villas, and 20 from single-family houses) for two weeks each season for four seasons, with a total of 336 samples. A shelf was placed beside each of the shared food waste bins in the apartment and the villa. Plastic food waste containers of 2-litre capacity were arranged on the shelf, each with tags bearing the house numbers of the participating households. Each household was asked to put its daily food waste in the plastic container with their house number tag instead of disposing it in the shared food waste container for the study period. For households in single-family housing with no shared food waste collection system, their food wastes were sampled and characterized three times per week, according to their existing food waste collection schedules. The food wastes were characterized on a flat plastic table, and the components were weighed using electronic scales.
(Moftah et al. 2016)	Libya	Tripoli City	Household solid waste was collected from 150 families (947 people) in three areas (low, middle and high income) during one week in summer, autumn and winter 2011/2012. A total of 4,650 kilograms of household solid waste was collected. from each sample area, 10-15 plastic bags were chosen randomly, then opened and emptied, spread on the plastic sheet, separated and weighed. This procedure was repeated every day during the study week each season. In total, 1,464.5 kilograms (around a third of total waste collected) was separated and weighed.
(JICA 2003)	Panama	Panama City	This report includes a Waste Amount Survey in which the waste from 60 households (20 high income, 20 middle income, 20 low income) was sampled over seven days in the dry season and seven days in the rainy season. Not all households produced samples for both seasons for all days, so the effective sample was 826. The wastes used in the Waste Amount Survey were then used for the Waste Composition Survey. Wastes from each source were gathered and mixed by category, and one sample was extracted from each category by using a waste reduction method. The physical composition was measured in the "wet base" (as discarded state, before the waste had a chance to dry), and samples were divided into 10 components (including kitchen waste) and weighed.
(Warmadewanthi and Kurniawati 2018)	Indonesia	Sukomanunggal Subdistrict	Waste was collected from 110 households over eight consecutive days, then the composition of the waste was analysed.
(J-PRISM II 2018)	Vanuatu	Port Vila	Waste from 105 households (32 low income, 29 middle income, 41 high income, 3 unknown) was collected over a period of eight days, discarding the first day to reduce biases/waste accumulation. All samples were weighed, with waste volume and composition studied in randomly selected bags.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Environment Unit n.d.)	Solomon Islands	Tulagi Town	The study covered 32 households and collected waste samples for eight days, discarding the first day to reduce biases/waste accumulation. The sample size was based on a total population of 1,251 people. Samples were weighed, then a subsample was selected for compositional sorting. It included sorting into kitchen waste, but this was not reported in all figures: calculated figures are based on a Household Waste Composition table in Annex 4.
(J-PRISM II 2017)	Micronesia (Federated States of)	Pohnpei	The study sampled 20 households (10 in Kitti, 10 in Kolinia), although it is unclear for how many days. The report estimates "kitchen waste" as 75 grams per capita per day, but it also gives kitchen waste as a share of household waste (29.4%), which, if combined with the reported total waste (356 grams per capita per day), is not equal to the reported 75 grams. The figures here are the (higher) estimate based on data available in Figure 9.
(Guerber and Gursed 2021)	Mongolia	Khishig-Undur	The study sampled 36 households in summer and 35 households in winter, or around 10% of the town centre of 367 households sampled each period. Participating households were asked to keep all the waste produced over one week and to sort it themselves into 14 different categories. The waste was then collected and analysed alongside some survey information. Results were reported per household, per person in the household and per adult. The per person figures are used here. Only sedentary households were quantitatively studied, with nomadic villagers qualitatively studied. There was a notable seasonal difference, with food waste two times larger in winter, which the authors suggest is due to more meat being eaten in winter (and associated bones), versus more vegetables eaten in summer. The output report says that it is "already very common to give vegetable peels to livestock," which might explain the low figures as this waste would not have been collected.
(Moosa 2021)	Maldives		Household estimate combines data on waste generation from the National Solid Waste Management Policy on waste generation, divided by waste composition for households from an audit undertaken by public waste collection company WAMCO, and a separate feasibility study. This audit study was not accessible online, but archived information (*https://archive.mv/en/articles/Vx908*) suggested that around 336 households were audited. The report was submitted to the United Nations Economic and Social Commission for Asia (UN ESCAP) and the Pacific by the Maldives National Bureau of Statistics. The figures are written as both "tons" and "tonnes" at different points in the report, and metric tonnes have been assumed.
(Moosa 2021)	Maldives		Household estimate combines data on waste generation from the National Solid Waste Management Policy on waste generation, divided by waste composition for households from an audit undertaken by public waste collection company WAMCO, and a separate feasibility study. This audit study was not accessible online, but archived information (*https://archive.mv/en/articles/Vx908*) suggested that around 336 households were audited. Report submitted to UN ESCAP by the Maldives National Bureau of Statistics. The figures are written as both "tons" and "tonnes" at different points in the report, and metric tonnes have been assumed.
(Bhutan National Statistics Bureau 2021)	Bhutan		The results presented in the Bhutan Waste Accounts report cite the National Waste Survey study. Stakeholders received a questionnaire about their perception of waste generation and management. They were provided bags to store generated waste. For households, it was for seven days. Collected wastes were then sorted and weighed. Households were sampled across seven dzongkhags (administrative districts) across multiple regions, with households then sampled from those. In total, 1,584 households were sampled for waste generation, and all samples were taken in November-December 2019, so the study lacks seasonality. The Waste Accounts report states that, "In rural areas where there are no waste collecting facilities [...] they use food wastes as either animal food or dumped in vegetable gardens directly." If some households continued to use waste for feed or dumping rather than providing waste for the researchers, the waste could be underestimated.
(Letshwenyo and Kgetseyamore 2020)	Botswana	Extension 7 Suburb, Palapye	Waste bags were collected twice a week for composition analysis from 30 households (10 each from low-, middle- and high-income households).

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Abdallah et al. 2020)	Egypt	Gharbiya	Household waste was collected for 8 consecutive days from a sample of 300 households from the urban centre, and around 25 per cent of the collected waste was randomly selected and sorted to determine composition. The paper states that "low-income households in the surveyed areas dispose of their livestock wastes as MSW." It is believed that this was captured in the "Other" category (16-23 per cent of waste), but there is a chance this has impacted the results
(Abdallah et al. 2020)	Egypt	Asyout	Household waste was collected for 8 consecutive days from a sample of 300 households from the urban centre, and around 25 per cent of the collected waste was randomly selected and sorted to determine composition. The paper states that "low-income households in the surveyed areas dispose of their livestock wastes as MSW." It is believed that this was captured in the "Other" category (16-23 per cent of waste), but there is a chance this has impacted the results
(Abdallah et al. 2020)	Egypt	Kafr El-Sheikh	Household waste collected for 8 consecutive days from a sample of 300 households from the urban centre, and around 25 per cent of the collected waste was randomly selected and sorted to determine composition. The paper states that "low-income households in the surveyed areas dispose of their livestock wastes as MSW." It is believed that this was captured in the "Other" category (16-23 per cent of waste), but there is a chance this has impacted the results
(Abdallah et al. 2020)	Egypt	Qena	Household waste collected for 8 consecutive days from a sample of 300 households from the urban centre, and around 25 per cent of the collected waste was randomly selected and sorted to determine composition. The paper states that "low-income households in the surveyed areas dispose of their livestock wastes as MSW." It is believed that this was captured in the "Other" category (16-23 per cent of waste), but there is a chance this has impacted the results
(Ali et al. 2023)	Pakistan	Peshawar	Primary data was collected from waste management services for 78 households, with 27 each from high- and middle-income families and 24 from low-income families. The collected waste was weighed, and per capita generation calculated. Composition was determined using "load count analysis."
(The Asia Foundation 2019)	Mongolia	Ulaanbaatar	Waste was collected from households over two weeks, one in the summer (from 131 households) and the other in the winter (from 130 households), in six central districts. Participants were trained how to segregate their waste into separate categories and were provided with different bags for each, which were then collected from the households every day for a week for further segregation.
(Dikole and Letshwenyo 2020)	Botswana	Palapye	Waste was collected on Mondays and Fridays from households for waste characterization over a four-week sampling period, to evaluate weekday and weekend waste generation. Households were grouped by income., although it is unclear how many households were sampled. Generation rates and waste composition are presented separately by each income group and weekday/weekends. The generation rates are presented on a graph without figures, and only some of the numbers are in the text. The remaining figures were read from the graph (using the "WebPlotDigitizer" website), so may have inaccuracies. Information on the size of the three income groupings was not provided, so the average was taken.
(JICA 2022)	Ethiopia	Addis Ababa	The paper cites a survey of waste generation by Global Environmental Solution (a consultancy). The original file was not able to be identified or accessed online. As a result, the sample size of the study is unknown. However, the JICA report presents some information for the household results. Table 4-10 has residential per capita solid waste generation; Figure 4-7 has household waste composition.
(JICA 2015a)	Lao People's Democratic Republic	Vientiane	Limited detail was available in the publication. Section 1.1.1 of Project Completion Report Supplement 1 refers to a Waste Amount and Composition Survey (WACS) conducted in September 2011 at the household level, but does not detail the sample size of households or length of study. Results are presented in Tables 3-2 and 3-3. The report states that most households do not separate organic wastes, but some do feed their animals with it.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(JICA 2015a)	Lao People's Democratic Republic	Luang Prabang	Limited detail was available in the publication. Section 1.1.1 of Project Completion Report Supplement 2 refers to a Waste Amount and Composition Survey (WACS) conducted in September 2011 at the household level, but does not detail the sample size of households or length of study. Results are presented in Tables 3-3 and 3-4. The report states that most households do not separate organic wastes, but some do feed their animals with it.
(UNEP and Uganda Cleaner Production Centre 2021)	Uganda	Kampala	The study involved direct weighing of food waste across seven days from 100 randomly selected households in Kampala districts. The project aimed to include edible/inedible separation. It discusses causes for waste, with 65 per cent happening in the "kitchen," 20 per cent being "plate waste" and 15 per cent in "store" (i.e. food that has gone off or was rejected).
(Beretta and Hellweg 2019)	Switzerland		The results combine two methods. One approach uses Swiss-based waste compositional analyses, with adjustments to apply to 2017 and using insights from studies from multiple countries (Switzerland, the United Kingdom, Austria) to inform the "avoidable" and "unavoidable" waste shares. The second approach uses insights from the United Kingdom on waste rates per food category, combined with Swiss consumption data. The mean of the two approaches is taken. The report only presents "avoidable" waste, and the approximate "unavoidable" waste was supplied through personal communications from the authors.
(Higgins and Harris 2022)	Indonesia	Cianjur	The study sampled 100 households in each of six regencies for eight days, with the samples then weighed and sorted by composition. The results, broken down by income groups, are in Table 1. They include subdivision into edible/inedible split by income group, which is combined with share of population to get an average edible/ inedible split (Tables 2 and 3).
(Higgins and Harris 2022)	Indonesia	Cirebon	The study sampled 100 households in each of six regencies for eight days, with the samples then weighed and sorted by composition. The results, broken down by income groups, are in Table 1. They include subdivision into edible/inedible split by income group, which is combined with share of population to get an average edible/ inedible split (Tables 2 and 3).
(Higgins and Harris 2022)	Indonesia	Pekalongan	The study sampled 100 households in each of six regencies for eight days, with the samples then weighed and sorted by composition. The results, broken down by income groups, are in Table 1. They include subdivision into edible/inedible split by income group, which is combined with share of population to get an average edible/ inedible split (Tables 2 and 3).
(Higgins and Harris 2022)	Indonesia	Purbalingga	The study sampled 100 households in each of six regencies for eight days, with the samples then weighed and sorted by composition. The results, broken down by income groups, are in Table 1. They include subdivision into edible/inedible split by income group, which is combined with share of population to get an average edible/ inedible split (Tables 2 and 3).
(Higgins and Harris 2022)	Indonesia	Blueleng	The study sampled 100 households in each of six regencies for eight days, with the samples then weighed and sorted by composition. The results, broken down by income groups, are in Table 1. They include subdivision into edible/inedible split by income group, which is combined with share of population to get an average edible/ inedible split (Tables 2 and 3).
(Higgins and Harris 2022)	Indonesia	Karangasem	The study sampled 100 households in each of six regencies for eight days, with the samples then weighed and sorted by composition. The results, broken down by income groups, are in Table 1. They include subdivision into edible/inedible split by income group, which is combined with share of population to get an average edible/ inedible split (Tables 2 and 3).

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(UNEP Regional Office for West Asia 2022)	Qatar		The study was conducted in Doha, which represents about 42% of the country's population. Food waste estimates were taken from 437 households across 10 zones of Qatar in two phases (one during Ramadan). Eight days of waste were collected across a nine-day period. The differing Ramadan and non-Ramadan estimates were scaled to a year-wide estimate based on the number of holidays or social/religious occasions per year and the number of regular days. The study results were normalized based on different housing types (villas and apartments), which are then scaled by national figures of those housing types to form the national estimate.
(Yakubu, Woodard and Aboagye-Nimo 2023)	Nigeria	Jos	Waste was collected for one week from 74 households in 6 low-income areas, then weighed and sorted. By only looking at households in low-income areas, the results may not be representative of the wider country.
(Emeka et al. 2021)	Nigeria	Port Harcourt	Waste from 4,931 street buildings and 16,016 households (all residential) was determined by direct measurement, then sorted to determine composition.
(La Rosa Caballero 2022)	Peru	Punta Hermosa, Lima	Waste from 113 households was collected daily for eight days, with the first day removed from the sample to reduce biases from accumulation before the study period. Collected waste was then sorted into a wide range of categories. The figures on kilograms per capita are from Table 6, and the shares of food waste are from Table 10.
(Auquilla 2015)	Ecuador	Zaracay, Santo Domingo	Waste compositional analysis was conducted within a single housing development, with 54 families separating their organic and inorganic waste for six days. The first day was a test and was removed from the sample (five days were included in the analysis). The organic waste was then quartered and assessed for composition. The captured figures contain both the share that is "restos vegetales" and "residuos de comida." "Restos vegetales" is defined elsewhere as being vegetable and fruit remains and peels "made in the kitchen," with a separate category for garden waste.
(Castro 2023)	Ecuador	Balsapamba, San Miguel	Samples were taken of 34 households (in a town with around 3,000 inhabitants total). Waste was collected daily for eight days, with the first day removed from the sample to reduce biases from accumulation before the study period. Compositional analysis by quartering of collected waste. Annex 6 contains the percentage of waste which is food waste.
(García 2018)	Dominican Republic	Salcedo Municipality	Sample taken from 87 households, selected from three different socioeconomic groups based on the municipal population. Waste collected daily for eight days, with the first day removed from the sample to reduce biases from accumulation before the study period. The waste was then analysed for composition.
(Sánchez et al. 2014)	Venezuela	Chacao, Miranda State	The study sampled 52 households, randomly selected within three socioeconomic groupings weighted by population size, and categorized by the construction materials of their households. Participants were requested to separate their waste during eight consecutive days of measurement, which was then weighed and visually inspected for consistency with results. Table 2 reports the composition findings by social grouping. The shares for "restos de cocina" and "restos de vegetales" are combined and used to form a share of the arisings/capita/day (also in Table 2) per social grouping, which is then weighted by the share of population in each grouping from Table 1. Note that the overall waste/capita presented in the paper does not equal the weighted average using data from Table 1. The figures included here are a calculation from Table 1.
(Cutipa 2016)	Peru	Macusani	Waste was collected from a sample of 335 homes for seven consecutive days across four zones, then sorted for composition. Figures reported here include both kitchen remains and bones.
(Aguilar, Moreno and Moreno Pérez 2017)	Mexico	Berriozábal, Chiapas	Waste was collected from 91 households daily for eight days, with the first day removed from the sample to reduce biases from accumulation before the study period. The composition, in Table 5, refers to being "domestic solid waste," but elsewhere the same figures are referred to as the composition of municipal solid waste.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Aguilar Virgin et al. 2010)	Mexico	Ensenada, Baja California	Waste composition analysis was conducted at a landfill based on arriving trucks that had been collecting domestic waste. Five consecutive days of sampling occurred from trucks from three socioeconomic strata. This was scaled to total estimates for the city and divided by population to provide a per capita estimate
(IDB et al. 2022)	Jamaica		Samples were taken over three seasons (moderately wet, wet, dry) at four waste disposal sites, one in each watershed in Jamaica. The household samples (described as "municipal solid waste") were taken from three socioeconomic groupings, with separate samples of business waste (institutional-commercial-industrial, ICI). The samples were 250 kilograms in size, taken from waste disposal trucks, and therefore capture multiple households. Bike-men followed the collection trucks on their route to record the number of households and, where possible, number of residents, to derive kilogram per capita estimates. In total, 102 samples of household (MSW) were taken across the three seasons. Some of the results are presented as both household and ICI, but Appendix 3 splits out the composition into subcategories for household separately. Results taken from the weighted averages for Jamaica as a whole are presented in the report.
(Bontinck, Grant and Lifecycles 2021)	Australia		Mass balance model of the whole Australian food supply chain was conducted, building on and adjusting the 2019 baseline study. A total of 169 sources were used throughout the whole supply chain analysis, including industry data, government data, scientific publications and official statistical data. For households, this includes a compilation of state and official data from direct measurement, with the addition of waste being composted at home and discarded to the sewer.
(Ghaforzai, Ullah and Asir 2021)	Afghanistan	Kabul City	For this research, solid waste was sampled for one day each from 216 households (4 households per location, with 18 locations in high-income, 18 in middle-income and 18 in low-income areas). The quantity and material composition of the waste was determined using the standard method ASTM D5231-92. A reduction technique was applied to the original sample to produce a representative sample, and this was then sorted and the different waste types weighed. The wastes were only sampled for one day and so may not be representative. The authors also note that "the higher proportion of food waste was mainly attributed to the occurrence of huge quantities of cores of locally grown seasonal honey melons and water melons that were consumed in higher amounts during the survey period due to their cheaper availability," but that food waste included "both the unavoidable food waste" and "the avoidable unconsumed fraction."
(Leket Israel 2022)	Israel		Footnote 23: "Based on the food value chain model developed by BDO, using weighted data from the Central Bureau of Statistics for 2021, a national survey of the composition of household garbage conducted by the Ministry of Environmental Protection for 2012-13, the findings of a Geocartography survey conducted in January 2019, and a study on household garbage in Israel conducted by Dr. Ofira Ayalon and Efrat Elimelech, "What gets measured gets managed: A new method of measuring household food waste." Waste Management 76 (2018): 68-81."
(Singapore National Environment Agency 2017)	Singapore		A press release for the study suggests 279 households had waste samples collected over three days in a week in 2016-17, which were then sorted into avoidable and unavoidable food waste. Data on the exact results were not reported in the webpage, and the original study cannot be accessed online. The press release does not give detailed figures, only that the "Avoidable" waste was equivalent to 2.5 kilograms per household per week and that 3.35 people are in the average household. These figures are combined to form a per capita estimate for edible/avoidable waste, which is then adjusted to try and create a full estimate.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(JICA 2013b)	Zimbabwe	Chitungwiza	The report includes a waste amount survey in which waste samples were taken each day for eight days from 60 households (20 high income, 20 middle income, 20 low income), with the sample for the first day excluded from the analysis. The survey intended to sample 480 household samples, but 455 samples were collected. For the waste consumption analysis, three samples (one from each income group) were taken each day for eight days.
(Noufal et al. 2020)	Syrian Arab Republic	Homs	Household waste was collected from 300 households for 14 consecutive days and hand sorted.
(UN-Habitat 2021a)	Dominican Republic	Santo Domingo	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
UN-Habitat 2022b)	Senegal	Dakar	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2021f)	Nigeria	Lagos	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet..
(UN-Habitat 2021c)	Democratic Republic of the Congo	Bukavu	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(UN-Habitat 2021h)	Zimbabwe	Harare	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2023c)	Rwanda	Musanze	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2021g)	United Republic of Tanzania	Dar es Salaam	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2023a)	United Republic of Tanzania	Iramba District	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2023b)	Kenya	Homa Bay	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(UN-Habitat 2020a)	Kenya	Kiambu County	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2020b)	Kenya	Mombasa County	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2019a)	Kenya	Nairobi City County	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2022c)	Kenya	Taita Taveta County	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2019b)	Seychelles	Victoria	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(UN-Habitat 2021d)	Ethiopia	Addis Ababa	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2021e)	Ethiopia	Bahir Dar	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2022a)	Egypt	Alexandria	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2021b)	Tunisia	Sousse	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2021k)	Pakistan	Karachi	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(UN-Habitat 2021i)	Bangladesh	Khulna	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2021l)	Thailand	Chonburi	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2021m)	Viet Nam	Hội An	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2021n)	Viet Nam	Tam Kỳ	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.
(UN-Habitat 2021j)	Malaysia	Seremban	The method is not detailed in the "factsheet," but the Waste Wise Cities Tool has a separate methodology guidance document. This suggests a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/ park" and "wood." Separate results are presented for each income grouping, with the average kilograms per capita of food waste taken from the data presented in the factsheet.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(UN-Habitat unpublished)	Cambodia	Kep	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Cambodia	Sihanoukville	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Egypt	Dakahlia	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	India	Mangalore	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	India	Thiruvananthapuram	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Indonesia	Bogor	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(UN-Habitat unpublished)	Indonesia	Depok	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Lebanon	Tyre	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Philippines	Cagayan de Oro	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Philippines	Legazpi	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Philippines	Ormoc	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Thailand	Hatyai	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(UN-Habitat unpublished)	Thailand	Samui	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Thailand	Songkhla	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Thailand	Surat Thani	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Uganda	Kampala	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."
(UN-Habitat unpublished)	Viet Nam	Hue	The datapoint is not yet in a published report, but results were shared by UN-Habitat for the purposes of the Food Waste Index. The Waste Wise Cities Tool methodology guidance document explains the common approach: a sample size of 90 households (10 households from 3 survey areas, with 3 income groups each), increasing to 150 households (5 survey areas) in megacities. Bags were given to households to store all waste generated in the home for eight days, with the first day discarded as it may involve wastes generated before the start of the survey. The waste was sorted into 12 categories, including "kitchen/canteen" as distinct from "garden/park" and "wood."

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Xue et al. 2021)	China		The paper considers food loss and waste across the entire food system. Household food waste was quantified by two approaches. One is top-down, based on mass balance, using the quantity of food entering consumption in household and food service sectors, with waste ratios from field surveys and literature data. The second approach is bottom-up, based on primarily data estimation in rural and urban households. This second approach scales up per capita food waste amounts from sampled rural and urban households to the national scale. The sample for direct weighing in rural households was 210 households in 21 villages in Shandong in 2017, with each tracked for three days. The sample for urban households was 309 households in three districts in Zhengzhou in 2018, weighing and recording food discarded for three days. The tonnes of food waste per sector was taken from the supplementary information for Figure 2c. The average population for 2014-18 is used to derive kilogram per capita estimates. All wasted food is converted to agriculture food-product equivalents based on conversion factors from the literature, i.e. to account for the addition/ loss of water in cooking. Only edible food waste is considered, so an adjustment is made to scale this up to total food waste.
(Gilbert and Ricci 2023)	Brazil	Rio de Janeiro	Food waste was collected from households for eight consecutive days, with data collected for seven (discarding the first day). A total of 86 households completed the assessment across three income levels and five districts in Rio. Food waste was assessed into four categories (Fruit & Veg; Meat & Fish; Dairy; Bakery). A subsample was also evaluated for edibility each day, for each of the subcategories.
(Devine et al. 2023)	United Kingdom of Great Britain and Northern Ireland		Household data comes from a combination of data on the composition and weight of residual and organic recycling schemes from local authorities. This estimate contains only waste streams collected by local authorities, and therefore does not include the estimated amount being composted at home or going to sewer. The report states that uncertainties in the 2021 estimates of sewer and home composting waste lead these to being excluded as they are not sufficiently accurate to track over time.
(Vujić et al. 2021)	Serbia	Belgrade	Four municipalities across Belgrade were chosen based on different income level and housing type (based on the split of individual households and apartment blocks). A total of 100 households were sampled for a period of seven days. The households were provided bags for their food waste, which they collected separately and handed to researchers each day. Food waste was sorted into six food categories. Using data on household size and number in all city municipalities, a projected composition of food waste for Belgrade was estimated. This projected result for Belgrade, weighted by the population, is the figure recorded here. A separate survey to classify food categories as edible or inedible based on the methodology in Nicholes et al. (2019) was applied, although this was not combined with results to get an estimate of how much waste was edible or not.

Food service datapoints

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Zhang et al. 2020)	China	East China	The paper aggregates 47 "catering waste" papers in total from various areas of China. It uses a mixture of surveys, official statistics, author's calculations, etc. to create data on catering food waste across different regions. This is then associated to a number of correlates that are used to predict growing food waste in future. The authors worked with datapoints from a range of years and other data to form a 2019 estimate, which is what is used here.
(Zhang et al. 2020)	China	Middle China	The paper aggregates 47 "catering waste" papers in total from various areas of China. It uses a mixture of surveys, official statistics, author's calculations, etc. to create data on catering food waste across different regions. This is then associated to a number of correlates that are used to predict growing food waste in future. The authors worked with datapoints from a range of years and other data to form a 2019 estimate, which is what is used here.
(Zhang et al. 2020)	China	West China	The paper aggregates 47 "catering waste" papers in total from various areas of China. It uses a mixture of surveys, official statistics, author's calculations, etc. to create data on catering food waste across different regions. This is then associated to a number of correlates that are used to predict growing food waste in future. The authors worked with datapoints from a range of years and other data to form a 2019 estimate, which is what is used here.
(Zhang et al. 2020)	China	Urban China Total	The paper aggregates 47 "catering waste" papers in total from various areas of China. It uses a mixture of surveys, official statistics, author's calculations, etc. to create data on catering food waste across different regions. This is then associated to a number of correlates that are used to predict growing food waste in future. The authors worked with datapoints from a range of years and other data to form a 2019 estimate, which is what is used here. The total waste figure itself is not listed in the text but was confirmed with the authors as being 38 million tonnes. This refers only to urban catering waste.
(Zhang et al. 2020)	China	Northeast China	The paper aggregates 47 "catering waste" papers in total from various areas of China. It uses a mixture of surveys, official statistics, author's calculations, etc. to create data on catering food waste across different regions. This is then associated to a number of correlates that are used to predict growing food waste in future. The authors worked with datapoints from a range of years and other data to form a 2019 estimate, which is what is used here.
(JICA 2010)	Kenya	Nairobi	Across retail and out-of-home consumption, the waste from 90 locations was analysed for a period of seven days; this which was preceded by a one-day test measurement, which was excluded from analysis. The figure presented is the sum of Restaurants, Hotels, and Public Facilities, each of which had a distinct waste generation rate and food waste generation share. The original study scales this by the number of institutions in Nairobi.
(Jereme et al. 2013)	Malaysia		Table 1 cites the Ministry of Housing and Local Government (2011), estimating food waste generation by source. This was not findable by the bibliography nor through a direct internet search. As a result, we cannot have high confidence in the estimate.
(Bogdanović et al. 2019)	Serbia		Interviews were conducted with around 100 hotels, restaurants and caterers to determine the share of food waste at the stages of kitchen preparation and plate waste. It is unclear to what extent survey respondents were estimating or the results were based on internal measurement. The waste generation factors from this were applied to CEVES estimates on food purchases in Serbian Hotels, Restaurants and Canteens.
(Eurostat 2023)	Belgium		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Bulgaria		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Czechia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Denmark		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Germany		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Estonia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Ireland		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Greece		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Spain		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	France		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Croatia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Cyprus		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," and the metadata explains that it is based on statistical data related to number of companies and production value, as COVID-19 limitations meant direct measurement was not possible.
(Eurostat 2023)	Latvia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Lithuania		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Luxembourg		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Hungary		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Malta		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Netherlands		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Austria		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Poland		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Portugal		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Slovenia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Slovakia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Finland		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Sweden		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Norway		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Food Service, it allows direct measurement, waste composition analysis and counting/scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(UNEP 2023)	Japan		Food-related businesses generating more than 100 tonnes of food waste per year are required to report quantities generated to the national government in accordance with the Food Recycling Law. For businesses producing less than 100 tonnes, the amount if separately estimated by multiplying the results of a sampling survey by the growth rate of waste generated by those businesses reporting 100 tonnes or more. Questionnaire surveys are used for those submitting reports to understand the share of edible parts. The amount of food waste is calculated for each of 12 subsectors in the Food Service industry. Data reported here was reported to UNEP as part of the SDG 12.3.1(b) pilot data collection.
(U.S. EPA 2023)	United States of America		Data are taken from studies conducted on food waste in specific sectors (state, municipal governments, industry groups, academics etc.) that are correlated to facility-specific characteristics. This develops equations expressing generation factors, which are scaled up by applying national, sector-specific statistics. Multiple estimates are formed per sector, from which an average is taken. No new literature was identified for the 2019 estimates, so sectors retained the same generation factors as in the 2018 "wasted food report," and key changes will be in national statistics for each sector. Totals are taken from Table 3, then adjusted to remove the shares going to "non-waste" destinations. The authors discuss limitations of data associated with using existing generation factors, with inaccuracies for certain destination such as food sent to the sewer. Data reported here was reported to UNEP as part of the SDG 12.3.1(b) pilot data collection.
(Zakarya et al. 2022)	Malaysia	Desa Pandan Kuala Lumpur	In the study, 10 restaurants in Kuala Lumpur were given 120-litre garbage bags every day for a six-day period, into which they were asked to put all food waste. The food waste was then sorted into food categories and into cooked and uncooked food. Note that the weighing was over the period in which Chinese new year celebrations occurred so may not be representative of a "normal" week.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Filimonau et al. 2023)	Iraq	4 major cities: Mosul, Tikrit, Babel, Al-Muthana	Food waste from 18 restaurants was measured on four consecutive days (Wednesday-Saturday) from January to April 2021. The research team members separated the edible food waste from non-edible fractions in-situ and then split the edible food waste into different food types. Interviews with food industry workers were used to establish whether the food waste measurements obtained may have been affected by seasonality. The authors then scaled this to an Iraq-wide estimate based on the total number of food service operators (i.e. applying the waste per establishment to other subsectors as well). The data was collected during COVID-19 restrictions and may not be representative of normal conditions, and only edible food waste was included so a scaling factor has been applied.
(Filimonau and Ermolaev 2021)	Russian Federation	Study in Kemerovo, figures scaled to nation-wide	In the Russian Federation, food waste is collected and organizations pay for the weight of waste collected. For the study, 21 food service businesses (for-profit restaurants only, public sector excluded) provided their financial records for an estimate of food waste generated to be calculated. In-situ observations were also made. The figures are then scaled by data on the number of restaurants in the country to form a national estimate.
(Moosa 2021)	Maldives		The "Tourism" sector estimate used waste generation factors by resort and guest houses from the National Solid Waste Management Plan, divided using composition information from a separate feasibility study. It indicates that these are "assumptions given" in the feasibility study, so may not be directly measured. However, the feasibility study could not be accessed, so the exact methodology is not clear. The report was submitted to UN ESCAP by the Maldives National Bureau of Statistics, so is authoritative. The figures are written as both "tons" and "tonnes" at different points in the report, and metric tonnes have been assumed.
(Moosa 2021)	Maldives		The "Tourism" sector estimate used waste generation factors by resort and guest houses from the National Solid Waste Management Plan, divided using composition information from a separate feasibility study. It indicates that these are "assumptions given" in the feasibility study, so may not be directly measured. However, the feasibility study could not be accessed, so the exact methodology is not clear. The report was submitted to UN ESCAP by the Maldives National Bureau of Statistics, so is authoritative. The figures are written as both "tons" and "tonnes" at different points in the report, and metric tonnes have been assumed.
(Beretta and Hellweg 2019)	Switzerland		The study combines data from multiple sources: Baier and Deller (2014) based on 83 catering establishments in Switzerland, and additional data from establishments in Austria, England, Finland, Germany, and Switzerland, with loss rates for specific products applied to Swiss consumption data. Data are provided in Figure 11. The report only presents "avoidable" waste, and approximate "unavoidable" waste is supplied from personal communications with authors.
(Bontinck, Grant and Lifecycles 2021)	Australia		This is a mass balance model of the whole Australian food supply chain, building on and adjusting the 2019 baseline study. A total of 169 sources were used throughout the whole supply chain analysis, including industry data, government data, scientific publications and official statistical data. For food service, this was updated from the 2019 report with audit data from schools, data from higher education and hospitals, as well as new data for hospitality based on a more in-depth audit than the previous baseline estimate.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Leket Israel 2022)	Israel		The study integrates a combination of some measurement and other data into a flow model: "A comprehensive value chain model for various food production and consumption stages was designed to assess food waste and the potential for food rescue in Israel. The model is based on a bottom-up approach, and includes analysis of data relevant to agricultural production, import, export, industry, distribution and a sample of consumption patterns of 50 different types of food." [...] "For each type of food, the volume of input and output was measured in terms of gross agricultural product and loss rate for every stage of the value chain in the food production, distribution and consumption process." [...] "This data is indicative and intended to serve as the basis for public debate, and for further research and study."
(Garduño et al. 2023)	Mexico	Baja California Sur	The authors distributed questionnaire surveys to actors across the food chain, based on statistical records of businesses, in an attempt to be representative of the various establishment types. Perceptions of wastage rates by specific product groups at specific business types were gathered. These were then used as waste factors for those products/business types, and scaled by relevant business data to get an estimate for the sector. It included 52 surveys across food service businesses. The authors highlight the limitations of being built on the perceptions of the stakeholders.
(Gooch et al. 2019)	Canada		The study uses Canadian Industry Statistics to gather data on the food service industry for Hotels, Food Service Contractors, Restaurants/QSR, Catering/Event services and Beverage. Surveys were sent to industries asking if they measured their food waste and to provide data. Around 68 responses from Food Service (based on a total of 618 responses across the whole value chain, of which 11% were from Food Service, in Appendix 2 section 3.3). Around 20% of Food Service participants responded and gave data. As part of a whole-chain Mass Balance model, the % loss factors on a product level were used to inform estimates of food waste. Table G (Appendix 1) shows the summary loss factors for each stage in the supply chain. Results are split into preparation and plate waste. Results were subsequently tested and validated through interviews. Note: the "scope" (Figure C, Appendix 2) suggests that food sent to animal feed and biomaterial processing was included; this has been manually removed based on the utilisation of food loss and waste destinations across the value chain, as reported in Figure 3-9. These % shares were read from the graph (using computer software) so may be imprecise. Due to possible issues with self-reported loss rates (acknowledged in the paper) and differences in scope, this is assigned "medium confidence."
(Xue et al. 2021)	China		The paper considers food loss and waste across the entire food system. Food service is quantified by two approaches. One is top-down, based on mass balance, using the quantity of food entering consumption in food service sectors, with waste ratios from field surveys and literature data. The second approach is bottom-up, based on primarily data estimation in restaurants. This second approach scales up per capita food waste amounts from sampled restaurants to the national scale. The sample for restaurants was 6,983 tables across small, medium and large restaurants in Beijing, Shanghai, Chengdu, and Lhasa across 2013-2015, recorded separately for residents and tourists, and scaled separately based on resident and tourist populations. This restaurant figure is then scaled to account for other food service settings, such as canteens, by using an adjustment figure from a separate literature source that suggests that food loss and waste in other Food Service settings was around 61% of that created in restaurants. The tonnes of food waste per sector was taken from the supplementary information for Figure 2c. The average population for 2014-18 is used to derive kilogram per capita estimates. All wasted food is converted to agriculture food-product equivalents based on conversion factors from the literature, i.e. to account for the addition/loss of water in cooking. Only edible food waste is considered.
(Devine et al. 2023)	United Kingdom of Great Britain and Northern Ireland		Food waste data is re-modelled based on WRAP's 2013 analysis of food waste in the hospitality and food service sector, a study that employed waste compositional analyses and analysis of survey information from the Department for Environment, Food and Rural Affairs. This data was re-weighted to account for the change in number and size of premises, number of pupils served by school catering, etc.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Vujić et al. 2022)	Serbia	Belgrade	Four municipalities across Belgrade were chosen based on different income level and housing type (based on the split of individual households and apartment blocks). Data was gathered through combination of direct measurement methods and questionnaires. A database of businesses/enterprises in Serbia was used to identify the types and distribution of Food Service in the selected municipalities. The sample included 6 hotels/accommodations, 15 restaurants and fast-food services, and 2 schools and kindergartens. Those businesses were given bags for separating daily their generated food waste, and the total mass of food waste generated was measured daily for seven days by separating it from other wastes and weighing. A separate estimate of other commercial outlets – which appear to be a mixture of Food Service and Retail wastes–- was estimated but is not included here. This amounted to 30% of the total food waste. Results are from the sample projected to the whole of Belgrade for Hotels, Restaurants and Fast food, and Schools and Kindergartens. Waste was sorted into six categories. Data was normalized based on number of employees. The share of edible and inedible parts is presented for each business type grouped by size (number of employees), although the interpretation of inedible parts may include edible parts that were expired and "can't anymore be consumed by humans."

Retail datapoints

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(JICA 2010)	Kenya	Nairobi	Across retail and out-of-home consumption, 90 locations had their waste analysed for a period of seven days, preceded by a one-day test measurement, which was excluded from the analysis. The figure is a sum of Shop and Market, which are measured separately. The original study scales this by the number of institutions in Nairobi.
(Jereme et al. 2013)	Malaysia		Table 1 cites the Ministry of Housing and Local Government (2011), estimating food waste generation by source. This was not findable by the bibliography nor through a direct internet search. As a result, we cannot have high confidence in the estimate.
(Love Food Hate Waste NZ 2020)	New Zealand		This summary document refers to a University of Otago Master's student having conducted waste audits at three supermarket chains. It also presents the final destinations of retail waste, which has been used to adjust the waste figure. The share going to Animal Feed, Donation and Protein Reprocessing has been removed from the waste figure.
(Tiarcenter 2019)	Russian Federation		The paper cites what is assumed to be a waste composition analysis by the Higher School of Economics (which was not found when searched for) and data from Rosstat. In addition, the shares of waste at each stage are calculations based on data from the Russian Agriculture Ministry (2017). The estimate provides a total food waste estimate as well as the amount of waste at each stage of the chain; these have been combined to form sector-specific estimates. The inability to trace the original source data and the lack of transparency on the calculations means that we cannot have high confidence in this estimate.
(SAGO 2019)	Saudi Arabia		This study forms the Saudi waste Baseline, conducted by Saudi Grains Organisation (SAGO). For Retail, over 7,000 samples across 19 product groups were taken. It is unclear from how many retailers samples were taken. Wholesale is not disaggregated from Retail so is included. Samples were taken across 13 regions in Saudi Arabia. The value taken is the share of total waste attributed to "Distribution." Additional information and images to supplement the main study can be found at *https://www.macs-g20.org/fileadmin/macs/Activities/2020_FLW_WS/4_Session_3_FW_at_HH_level_small.pdf*.
(Eurostat 2023)	Belgium		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Bulgaria		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Czechia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Denmark		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Germany		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Estonia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Ireland		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Greece		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Spain		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	France		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Croatia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Eurostat 2023)	Italy		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Cyprus		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," and the Eurostat metadata includes explanation that it is modelled from statistical data of companies and production value of select main sectors.
(Eurostat 2023)	Latvia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Lithuania		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.

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(Eurostat 2023)	Luxembourg		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Hungary		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Malta		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Netherlands		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Austria		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

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(Eurostat 2023)	Poland		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Portugal		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Slovenia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Slovakia		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(Eurostat 2023)	Finland		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.

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(Eurostat 2023)	Sweden		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints. Flagged by Eurostat as being "estimated," but it is unclear in what way.
(Eurostat 2023)	Norway		Reported to Eurostat (indicator env_wasfw). Common methodologies required are defined by Commission-delegated decision (EU) 2019/1597, which is consistent with the Food Waste Index (in Retail settings, it allows direct measurement, mass balance, waste composition analysis and counting/ scanning). Quality assurance is the responsibility of both Member States and Eurostat. Eurostat declared that overall, the "data are of good quality." However, at the time of writing, information on specific methodologies, sample sizes, etc. to determine specific estimates were not available. As a result, all Eurostat data are presented as a separate confidence classification that represents alignment of the overall dataset, although there remain uncertainties about specific datapoints.
(UNEP 2023)	Japan		Food-related businesses generating more than 100 tonnes of food waste per year are required to report quantities generated to the national government in accordance with the Food Recycling Law. For businesses producing less than 100 tonnes, the amount if separately estimated by multiplying the results of a sampling survey by the growth rate of waste generated by those businesses reporting 100 tonnes or more. Questionnaire surveys are used for those submitting reports to understand the share of edible parts. The amount of food waste is calculated for each of nine subsectors in the Retail industry. Data reported here was reported to UNEP as part of the SDG 12.3.1(b) pilot data collection.
(We Team, Consumer Goods Forum and GS1 Argentina 2021)	Argentina		Detailed data is provide from retailers on sales and wastage of 16 food categories. Data was collected from supermarkets representing 41% of the total market share. The data was projected over the remaining market share to estimate the entire sector nationwide. The results are presented as total tonnage waste, as a share of total sales, total tonnages wasted and financial value. The report also includes breakdowns of waste into the 16 product categories, total waste by region and waste by cause. More recent data on food waste in some supermarkets is available via an online dashboard and accompanying reports, but this data only covers particular retail subsectors and does not scale estimates to the remainder of the country. Data reported here was reported to UNEP as part of the SDG 12.3.1(b) pilot data collection. Data reported here was reported to UNEP as part of the SDG 12.3.1(b) pilot data collection.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(U.S. EPA 2023)	United States of America		Data taken from studies conducted on food waste in specific sectors (state, municipal governments, industry groups, academics, etc.) that are correlated to facility-specific characteristics. This develops equations expressing generation factors, which are scaled up by applying national, sector-specific statistics. Multiple estimates are formed per sector, from which an average is taken. No new literature was identified for the 2019 estimates, so sectors retained the same generation factors as in the 2018 "wasted food report," and key changes will be in national statistics for each sector. Totals taken from Table 3, then adjusted to remove the shares going to "non-waste" destinations. They discuss limitations of data associated with using existing generation factors, with inaccuracies for certain destination such as food sent down the drain. Data reported here was reported to UNEP as part of the SDG 12.3.1(b) pilot data collection.
(Brancoli et al. 2022)	Brazil	São Paulo	Waste generated by the stalls of four street markets (total of 156 stalls) in São Paulo was swept and bagged by the municipality. The waste was later collected and transported to a site where it was sorted into 27 waste categories and weighed. Waste was collected on one day per street market.
(Beretta and Hellweg 2019)	Switzerland		Combines data from multiple sources: Baier and Deller (2014) for retailers, then extrapolated based on supermarket and discounter sales and population changes. This estimate combined with separate modelling by Beretta et al. (2017) based on confidential write-off rate data and supermarket shares. Figure 26 splits "retail trade" and "trade" (wholesale), which are aggregated in some other figures. Only the retail trade (detailhandel) is included here. The report only presents "avoidable" waste; approximate "unavoidable" waste was supplied from personal communication with authors.
(Bontinck, Grant and Lifecycles 2021)	Australia		This is a mass balance model of the whole Australian food supply chain, building on and adjusting the 2019 baseline study. A total of 169 sources were used throughout the whole supply chain analysis, including industry data, government data, scientific publications and official statistical data. For retail, this was updated from the 2019 report based on information from audits conducted for Sustainability Victoria.
(Leket Israel 2022)	Israel		This study involved a combination of some measurement and other data into a flow model: "A comprehensive value chain model for various food production and consumption stages was designed to assess food waste and the potential for food rescue in Israel. The model is based on a bottom-up approach, and includes analysis of data relevant to agricultural production, import, export, industry, distribution and a sample of consumption patterns of 50 different types of food." [...] "For each type of food, the volume of input and output was measured in terms of gross agricultural product and loss rate for every stage of the value chain in the food production, distribution and consumption process." [...] "This data is indicative and intended to serve as the basis for public debate, and for further research and study."
(JICA 2013b)	Zimbabwe	Chitungwiza	This report includes a waste amount survey, in which waste from three samples were taken from each establishment type (including Corner shops, Supermarkets, Markets) each day during a survey period of five days. Out of 45 intended samples, 43 were successfully taken. For the waste composition analysis, one sample per establishment type was taken each day for five days.
(Garduño et al. 2023)	Mexico	Baja California Sur	The authors distributed questionnaire surveys to actors across the food chain, based on statistical records of businesses, in an attempt to be representative of the various establishment types. Perceptions of wastage rates by specific product groups at specific business types were gathered. These were then used as waste factors for those products/business types, and scaled by relevant business data to get an estimate for the sector. The study involved 50 surveys across wholesale and retail businesses. Authors highlight that it is limited by being built on the perceptions of the stakeholders, and that they struggled to engage supermarkets.

SOURCE	COUNTRY	STUDY AREA	DESCRIPTION
(Gooch et al. 2019)	Canada		The study uses data from Canadian Industry statistics to inform the number of food retailers across the country. It includes 204 responses from Retail (based on a total of 618 responses across the whole value chain, of which 33% from Retail, in Appendix 2 section 3.3). Around 43% of respondents collected and gave data in the Retail sector. As part of a whole-chain Mass Balance model, the % loss factors on a product level were used to inform estimates of food waste. Table G (Appendix 1) shows the summary loss factors for each stage in the supply chain. Results were subsequently tested and validated through interviews. Note: the "scope" (Figure C, Appendix 2) suggests that food sent to animal feed and biomaterial processing was included; these have been manually removed based on the utilization of food loss and waste destinations across the value chain, as reported in Figure 3-9. These % shares were read from the graph (using computer software) so may be imprecise. Due to possible issues with self-reported loss rates (acknowledged in the paper) and differences in scope, this is assigned "medium confidence."
(Xue et al. 2021)	China		The paper considers food loss and waste across the entire food system. For Retail, questionnaires and interviews were held with 108 retailers, based on a stratified sampling method. It also included data on pre-consumer waste rates for specific products from 107 publications. The tonnes of food waste per sector was taken from the supplementary information for Figure 2c. The average population for 2014-18 is used to derive kilogram per capita estimates. These were combined in a mass-balance model. Only edible food waste is considered.
(Devine et al. 2023)	United Kingdom of Great Britain and Northern Ireland		Data were provided by Retail signatories to Courtauld 2030, which cover more than 95% of the food retail sector (by sales). This was scaled up based on market coverage.
(Vujić et al. 2022)	Serbia	Belgrade	Four municipalities across Belgrade were chosen based on different income levels and housing types (based on the split of individual households and apartment blocks). Data was gathered through a combination of direct measurement methods and questionnaires. A database of businesses/ enterprises in Serbia was used to identify the types and distribution of Retail businesses in the selected municipalities. The sample included three "Retail sale in non-specialized stores" and three "Retail sale in specialized stores." Those businesses were given bags for separating daily generated food waste. The total mass of food waste generated was measured daily for a period of seven days by separating it from other wastes and weighing. A separate estimate of other commercial outlets – which appear to be a mixture of Food Service and Retail wastes – was estimated but is not included here. Waste was sorted into six categories. Data was normalized based on the number of employees. It includes estimates of edible and inedible wastes, although the interpretation of inedible parts may include edible parts that were expired and "can't anymore be consumed by humans."

Annex 3: Table of household estimates

This table is repeated in the Appendix, where tables of estimates for food service and retail can also be found.

REGION	M49 CODE	COUNTRY	HOUSEHOLD ESTIMATE (KG/ CAPITA/YEAR)	HOUSEHOLD ESTIMATE (TONNES/ YEAR)	CONFIDENCE IN ESTIMATE
Australia and New Zealand	36	Australia	98	2 559 065	High confidence
Australia and New Zealand	554	New Zealand	61	316 590	High confidence
Central Asia	398	Kazakhstan	88	1 708 990	Very low confidence
Central Asia	417	Kyrgyzstan	86	568 288	Very low confidence
Central Asia	762	Tajikistan	86	852 861	Very low confidence
Central Asia	795	Turkmenistan	88	566 433	Very low confidence
Central Asia	860	Uzbekistan	86	2 968 299	Very low confidence
Eastern Asia	156	China	76	108 667 369	Medium confidence
Eastern Asia	344	China, Hong Kong SAR	101	759 923	Medium confidence
Eastern Asia	446	China Macao SAR	76	53 016	Low confidence
Eastern Asia	408	Democratic People's Republic of Korea	81	2 104 855	Low confidence
Eastern Asia	392	Japan	60	7 398 006	High confidence
Eastern Asia	496	Mongolia	18	60 364	Medium confidence
Eastern Asia	410	Republic of Korea	95	4 921 086	Medium confidence
Eastern Europe	112	Belarus	71	674 104	Low confidence
Eastern Europe	100	Bulgaria	26	176 280	Eurostat
Eastern Europe	203	Czechia	69	723 810	Eurostat
Eastern Europe	348	Hungary	66	658 020	Eurostat
Eastern Europe	616	Poland	60	2 391 600	Eurostat
Eastern Europe	498	Republic of Moldova	71	231 061	Low confidence
Eastern Europe	642	Romania	67	1 323 991	Low confidence
Eastern Europe	643	Russian Federation	33	4 829 772	Medium confidence
Eastern Europe	703	Slovakia	65	366 600	Eurostat
Eastern Europe	804	Ukraine	69	2 758 037	Low confidence
Latin America and the Caribbean	660	Anguilla	95	1 892	Very low confidence
Latin America and the Caribbean	28	Antigua and Barbuda	88	7 922	Low confidence
Latin America and the Caribbean	32	Argentina	91	4 156 798	Low confidence
Latin America and the Caribbean	533	Aruba	88	9 682	Low confidence
Latin America and the Caribbean	44	Bahamas	88	36 089	Low confidence
Latin America and the Caribbean	52	Barbados	88	24 646	Low confidence
Latin America and the Caribbean	84	Belize	53	21 596	Medium confidence
Latin America and the Caribbean	68	Bolivia (Plurinational State of)	90	1 101 625	Low confidence
Latin America and the Caribbean	535	Bonaire, St. Eustatius & Saba	95	2 838	Very low confidence

REGION	M49 CODE	COUNTRY	HOUSEHOLD ESTIMATE (KG/ CAPITA/YEAR)	HOUSEHOLD ESTIMATE (TONNES/ YEAR)	CONFIDENCE IN ESTIMATE
Latin America and the Caribbean	76	Brazil	94	20 289 630	Medium confidence
Latin America and the Caribbean	92	British Virgin Islands	88	2 641	Low confidence
Latin America and the Caribbean	136	Cayman Islands	88	6 162	Low confidence
Latin America and the Caribbean	152	Chile	88	1 725 226	Low confidence
Latin America and the Caribbean	170	Colombia	70	3 653 302	Medium confidence
Latin America and the Caribbean	188	Costa Rica	91	473 131	Low confidence
Latin America and the Caribbean	192	Cuba	91	1 023 900	Low confidence
Latin America and the Caribbean	531	Curaçao	88	16 724	Low confidence
Latin America and the Caribbean	212	Dominica	91	6 394	Low confidence
Latin America and the Caribbean	214	Dominican Republic	160	1 799 544	Medium confidence
Latin America and the Caribbean	218	Ecuador	96	1 727 535	Medium confidence
Latin America and the Caribbean	222	El Salvador	91	579 084	Low confidence
Latin America and the Caribbean	238	Falkland Islands (Malvinas)	95	-	Very low confidence
Latin America and the Caribbean	254	French Guiana	95	28 375	Very low confidence
Latin America and the Caribbean	308	Grenada	91	11 874	Low confidence
Latin America and the Caribbean	312	Guadeloupe	95	37 834	Very low confidence
Latin America and the Caribbean	320	Guatemala	91	1 629 472	Low confidence
Latin America and the Caribbean	328	Guyana	88	71 298	Low confidence
Latin America and the Caribbean	332	Haiti	90	1 044 831	Low confidence
Latin America and the Caribbean	340	Honduras	90	940 257	Low confidence
Latin America and the Caribbean	388	Jamaica	86	243 364	High confidence
Latin America and the Caribbean	474	Martinique	95	34 996	Very low confidence
Latin America and the Caribbean	484	Mexico	105	13 368 447	Medium confidence
Latin America and the Caribbean	500	Montserrat	95	-	Very low confidence
Latin America and the Caribbean	558	Nicaragua	90	626 538	Low confidence
Latin America and the Caribbean	591	Panama	101	445 347	Medium confidence
Latin America and the Caribbean	600	Paraguay	91	619 272	Low confidence

REGION	M49 CODE	COUNTRY	HOUSEHOLD ESTIMATE (KG/ CAPITA/YEAR)	HOUSEHOLD ESTIMATE (TONNES/ YEAR)	CONFIDENCE IN ESTIMATE
Latin America and the Caribbean	604	Peru	88	2 983 735	Medium confidence
Latin America and the Caribbean	630	Puerto Rico	88	286 071	Low confidence
Latin America and the Caribbean	652	Saint Barthélemy	95	946	Very low confidence
Latin America and the Caribbean	659	Saint Kitts and Nevis	88	4 401	Low confidence
Latin America and the Caribbean	662	Saint Lucia	91	16 441	Low confidence
Latin America and the Caribbean	663	Saint Martin (French part)	88	2 641	Low confidence
Latin America and the Caribbean	670	Saint Vincent & Grenadines	91	9 134	Low confidence
Latin America and the Caribbean	534	Sint Maarten (Dutch part)	88	3 521	Low confidence
Latin America and the Caribbean	740	Suriname	91	56 630	Low confidence
Latin America and the Caribbean	780	Trinidad and Tobago	88	134 673	Low confidence
Latin America and the Caribbean	796	Turks and Caicos Islands	88	4 401	Low confidence
Latin America and the Caribbean	850	United States Virgin Islands	88	8 802	Low confidence
Latin America and the Caribbean	858	Uruguay	88	301 034	Low confidence
Latin America and the Caribbean	862	Venezuela	93	2 626 859	Medium confidence
Melanesia	242	Fiji	90	83 945	Very low confidence
Melanesia	540	New Caledonia	87	25 215	Very low confidence
Melanesia	598	Papua New Guinea	89	903 213	Very low confidence
Melanesia	90	Solomon Islands	43	31 242	Medium confidence
Melanesia	548	Vanuatu	141	46 687	Medium confidence
Micronesia	316	Guam	60	10 173	Very low confidence
Micronesia	296	Kiribati	62	8 056	Very low confidence
Micronesia	584	Marshall Islands	63	2 526	Very low confidence
Micronesia	583	Micronesia (Fed. States of)	38	4 205	Medium confidence
Micronesia	520	Nauru	60	598	Very low confidence
Micronesia	580	Northern Mariana Islands	60	2 992	Very low confidence
Micronesia	585	Palau	63	1 263	Very low confidence
Northern Africa	12	Algeria	113	5 057 909	Very low confidence
Northern Africa	818	Egypt	163	18 085 437	Medium confidence
Northern Africa	434	Libya	84	572 937	Medium confidence
Northern Africa	504	Morocco	113	4 219 805	Very low confidence
Northern Africa	729	Sudan	116	5 414 527	Very low confidence

REGION	M49 CODE	COUNTRY	HOUSEHOLD ESTIMATE (KG/ CAPITA/YEAR)	HOUSEHOLD ESTIMATE (TONNES/ YEAR)	CONFIDENCE IN ESTIMATE
Northern Africa	788	Tunisia	172	2 121 810	Medium confidence
Northern Africa	732	Western Sahara	140	80 958	Very low confidence
Northern America	60	Bermuda	79	4 718	Very low confidence
Northern America	124	Canada	79	3 019 925	High confidence
Northern America	304	Greenland	79	4 718	Very low confidence
Northern America	666	Saint Pierre and Miquelon	76	758	Very low confidence
Northern America	840	United States of America	73	24 716 539	High confidence
Northern Europe	208	Denmark	79	464 520	Eurostat
Northern Europe	233	Estonia	61	81 130	Eurostat
Northern Europe	234	Faroe Islands	75	3 768	Low confidence
Northern Europe	246	Finland	53	293 620	Eurostat
Northern Europe	352	Iceland	75	27 886	Low confidence
Northern Europe	372	Ireland	48	240 960	Eurostat
Northern Europe	833	Isle of Man	75	6 029	Low confidence
Northern Europe	428	Latvia	82	151 700	Eurostat
Northern Europe	440	Lithuania	86	236 500	Eurostat
Northern Europe	578	Norway	78	423 540	Eurostat
Northern Europe	752	Sweden	61	643 550	Eurostat
Northern Europe	826	United Kingdom	76	5 097 005	High confidence
Polynesia	16	American Samoa	81	3 258	Very low confidence
Polynesia	184	Cook Islands	86	1 724	Very low confidence
Polynesia	258	French Polynesia	81	25 252	Very low confidence
Polynesia	570	Niue	86	-	Very low confidence
Polynesia	882	Samoa	86	18 857	Very low confidence
Polynesia	772	Tokelau	86	-	Very low confidence
Polynesia	776	Tonga	88	9 690	Very low confidence
Polynesia	798	Tuvalu	88	881	Very low confidence
Polynesia	876	Wallis and Futuna Islands	86	862	Very low confidence
South-eastern Asia	96	Brunei Darussalam	76	34 109	Low confidence
South-eastern Asia	116	Cambodia	85	1 419 831	Medium confidence
South-eastern Asia	360	Indonesia	53	14 728 364	Medium confidence
South-eastern Asia	418	Lao People's Dem. Rep.	89	673 831	Medium confidence
South-eastern Asia	458	Malaysia	81	2 754 808	Medium confidence
South-eastern Asia	104	Myanmar	78	4 221 946	Low confidence
South-eastern Asia	608	Philippines	26	2 954 580	Medium confidence
South-eastern Asia	702	Singapore	68	409 182	Medium confidence
South-eastern Asia	764	Thailand	86	6 180 468	Medium confidence

REGION	M49 CODE	COUNTRY	HOUSEHOLD ESTIMATE (KG/ CAPITA/YEAR)	HOUSEHOLD ESTIMATE (TONNES/ YEAR)	CONFIDENCE IN ESTIMATE
South-eastern Asia	626	Timor-Leste	78	104 419	Low confidence
South-eastern Asia	704	Viet Nam	72	7 079 811	Medium confidence
Southern Asia	4	Afghanistan	127	5 229 654	Medium confidence
Southern Asia	50	Bangladesh	82	14 101 956	Medium confidence
Southern Asia	64	Bhutan	19	15 072	High confidence
Southern Asia	356	India	55	78 192 338	Medium confidence
Southern Asia	364	Iran (Islamic Republic of)	93	8 208 360	Low confidence
Southern Asia	462	Maldives	207	107 877	Medium confidence
Southern Asia	524	Nepal	93	2 831 907	Low confidence
Southern Asia	586	Pakistan	130	30 754 726	Medium confidence
Southern Asia	144	Sri Lanka	76	1 656 148	Medium confidence
Southern Europe	8	Albania	86	243 657	Low confidence
Southern Europe	20	Andorra	82	6 598	Low confidence
Southern Europe	70	Bosnia and Herzegovina	86	277 117	Low confidence
Southern Europe	191	Croatia	53	213 590	Eurostat
Southern Europe	292	Gibraltar	82	2 474	Low confidence
Southern Europe	300	Greece	87	903 930	Eurostat
Southern Europe	336	Holy See	83	-	Very low confidence
Southern Europe	380	Italy	107	6 317 280	Eurostat
Southern Europe	470	Malta	92	48 760	Eurostat
Southern Europe	499	Montenegro	86	54 051	Low confidence
Southern Europe	807	North Macedonia	86	179 311	Low confidence
Southern Europe	620	Portugal	124	1 273 480	Eurostat
Southern Europe	674	San Marino	82	2 474	Low confidence
Southern Europe	688	Serbia	108	780 482	Medium confidence
Southern Europe	705	Slovenia	36	76 320	Eurostat
Southern Europe	724	Spain	61	2 895 272	Eurostat
Sub-Saharan Africa	24	Angola	89	3 171 950	Low confidence
Sub-Saharan Africa	204	Benin	89	1 189 816	Low confidence
Sub-Saharan Africa	72	Botswana	50	132 594	Medium confidence
Sub-Saharan Africa	854	Burkina Faso	92	2 085 610	Low confidence
Sub-Saharan Africa	108	Burundi	92	1 185 863	Low confidence
Sub-Saharan Africa	132	Cabo Verde	89	52 584	Low confidence
Sub-Saharan Africa	120	Cameroon	89	2 487 472	Low confidence
Sub-Saharan Africa	140	Central African Republic	92	513 353	Low confidence
Sub-Saharan Africa	148	Chad	92	1 630 217	Low confidence
Sub-Saharan Africa	174	Comoros	89	74 865	Low confidence
Sub-Saharan Africa	178	Congo	89	532 075	Low confidence
Sub-Saharan Africa	384	Côte d'Ivoire	89	2 509 753	Low confidence
Sub-Saharan Africa	180	Dem. Rep. of the Congo	62	6 147 778	Medium confidence
Sub-Saharan Africa	262	Djibouti	89	99 820	Low confidence
Sub-Saharan Africa	226	Equatorial Guinea	90	150 824	Low confidence

REGION	M49 CODE	COUNTRY	HOUSEHOLD ESTIMATE (KG/ CAPITA/YEAR)	HOUSEHOLD ESTIMATE (TONNES/ YEAR)	CONFIDENCE IN ESTIMATE
Sub-Saharan Africa	232	Eritrea	92	338 555	Low confidence
Sub-Saharan Africa	748	Eswatini	89	106 950	Low confidence
Sub-Saharan Africa	231	Ethiopia	69	8 543 382	Medium confidence
Sub-Saharan Africa	266	Gabon	90	215 849	Low confidence
Sub-Saharan Africa	270	Gambia	92	249 316	Low confidence
Sub-Saharan Africa	288	Ghana	84	2 812 571	High confidence
Sub-Saharan Africa	324	Guinea	89	1 235 269	Low confidence
Sub-Saharan Africa	624	Guinea-Bissau	92	194 117	Low confidence
Sub-Saharan Africa	404	Kenya	81	4 351 168	Medium confidence
Sub-Saharan Africa	426	Lesotho	89	205 878	Low confidence
Sub-Saharan Africa	430	Liberia	92	487 593	Low confidence
Sub-Saharan Africa	450	Madagascar	92	2 724 081	Low confidence
Sub-Saharan Africa	454	Malawi	92	1 877 693	Low confidence
Sub-Saharan Africa	466	Mali	92	2 078 251	Low confidence
Sub-Saharan Africa	478	Mauritania	89	422 451	Low confidence
Sub-Saharan Africa	480	Mauritius	90	117 408	Low confidence
Sub-Saharan Africa	175	Mayotte	93	30 536	Very low confidence
Sub-Saharan Africa	508	Mozambique	92	3 033 197	Low confidence
Sub-Saharan Africa	516	Namibia	90	232 106	Low confidence
Sub-Saharan Africa	562	Niger	92	2 411 286	Low confidence
Sub-Saharan Africa	566	Nigeria	113	24 791 826	Medium confidence
Sub-Saharan Africa	638	Réunion	93	89 759	Very low confidence
Sub-Saharan Africa	646	Rwanda	141	1 937 761	Medium confidence
Sub-Saharan Africa	654	Saint Helena	93	925	Very low confidence
Sub-Saharan Africa	678	Sao Tome and Principe	89	20 499	Low confidence
Sub-Saharan Africa	686	Senegal	77	1 328 487	Medium confidence
Sub-Saharan Africa	690	Seychelles	183	20 089	Medium confidence
Sub-Saharan Africa	694	Sierra Leone	92	792 109	Low confidence
Sub-Saharan Africa	706	Somalia	92	1 619 177	Low confidence
Sub-Saharan Africa	710	South Africa	47	2 819 981	Medium confidence
Sub-Saharan Africa	728	South Sudan	92	1 003 706	Low confidence
Sub-Saharan Africa	768	Togo	92	814 188	Low confidence
Sub-Saharan Africa	800	Uganda	110	5 209 076	Medium confidence
Sub-Saharan Africa	834	United Rep. of Tanzania	152	9 960 496	Medium confidence
Sub-Saharan Africa	894	Zambia	78	1 559 958	Medium confidence
Sub-Saharan Africa	716	Zimbabwe	48	791 249	Medium confidence
Western Asia	51	Armenia	102	283 222	Low confidence
Western Asia	31	Azerbaijan	102	1 055 462	Low confidence
Western Asia	48	Bahrain	132	193 612	Medium confidence
Western Asia	196	Cyprus	71	88 750	Eurostat
Western Asia	268	Georgia	101	377 643	Medium confidence
Western Asia	368	Iraq	143	6 378 198	Medium confidence
Western Asia	376	Israel	97	874 433	Medium confidence