



# RESEARCH ON WASTE POLICIES AND SYSTEMS REPORT

Desk research for UK



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## INTRODUCTION

The last decade has seen an exponential increase in interest on the issue of food loss and waste (FLW), in policy circles, academia, and even the private sector. Food loss and waste are defined as the decrease in quantity or quality of food along the food supply chain (FAO, 2019). Quantitative FLW refers to food that exits the food supply chain, while qualitative FLW refers to the decrease in food attributes that reduces its value in terms of intended use. Following FAO, in practice food losses are considered as occurring along the food supply chain from harvest (or slaughter/catch) up to, but not including, the retail level. Food waste, on the other hand, occurs at the retail and consumption level (Annex I). This definition aligns with the distinction implicit in SDG Target 12.3, which focuses on halving per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains (SDG Report, 2022).

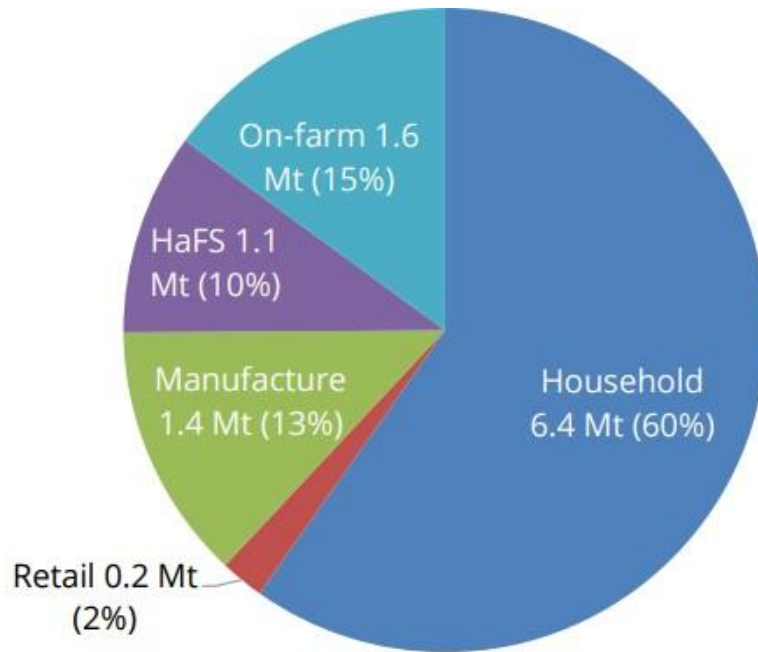
Essentially, the extent of reported FLW raised concerns about food availability, farm and food supplier revenues, natural resource sustainability, food safety, and the global ramifications of their impacts. Even though, those research studies emphasized the need for more data, the notion that “one third of food produced is wasted” has prevailed among many observers and policymakers as a “stylized fact (Cattaneo et.al., 2021).”

However, apart from the alleged simplified presentation of empirical findings, the spread of the novel coronavirus disease (COVID-19) in 2020 has drawn further attention to the risks of substantial food loss, particularly those of dairy, meats, fruits and vegetables, as social distancing measures have caused supply chain disruptions and demand to drop in many countries with a potential to increase losses specially in high value and nutrient-rich food commodities (Torero, 2020; Laborde et al., 2020). Taking under consideration these parameters, the pandemic and inadequate food access, can contribute significantly to morbidity (FAO et al., 2020).

At the time of writing, it was unclear whether these immediate impacts would have lasting effects on supply chains and consumption behavior, but no doubt they raise the importance of addressing FLW as part of the food policy agenda (Cattaneo et.al., 2021).

## FOOD WASTE- THE SITUATION IN UK

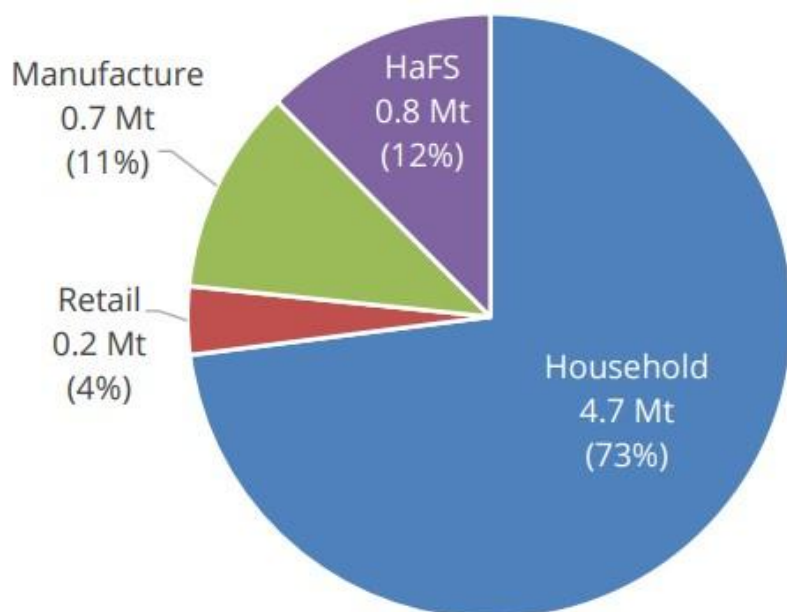
WRAP estimates food waste arisings in the UK in 2021 at 10.7 million tonnes. This estimate covers households, hospitality & food service (HaFS), food manufacture, retail, and farm sector. Figure 1 shows the breakdown of this food waste. By weight, household food waste makes up 60% of the total, on-farm 15%, manufacturing 13%, hospitality and food service 10%, and retail 2%..



Graph 1: UK Total waste by sector (UK Food waste & Food surplus, 2023)

To put these amounts of food waste in context, approximately 42 million tonnes of food are purchased in the UK1 (the majority for consumption in the home). Therefore, total food waste in the UK (10.7 million tonnes) is approximately one quarter of this total. The amount of food waste generated by households and the hospitality and food service sector, as a percentage of the amounts of food purchased, are similar at between 16% and 18% respectively. For manufacturing the percentage food waste as a proportion of food handled is 3.8%, whilst for retail the figure is 0.44%. (WRAP, 2023)

The inclusion of on-farm waste influences the percentages in Graph 1. For instance, previous analysis showed that around 70% of post-farm-gate food waste (i.e., excluding on-farm waste) came from households. In the new analysis, household food waste makes up a lower proportion (60% of the total) due to the inclusion of on-farm waste. Overall, food waste is made up of 'edible parts' and "inedible parts" (e.g., eggshells, animal bones, inedible fruit peel). Estimates are available for the split between edible and inedible parts for households, manufacturing, and hospitality and food service. For retail it is assumed that all food wasted is edible. For these sectors (i.e. excluding on-farm waste), 6.4 million tonnes (71% of the total) is wasted food and 2.6 million tonnes was inedible parts (29% of the total). At the Graph 2 below shows the breakdown of wasted food, totalling 6.4 million tonnes. Wasted food relating to wholesale and litter is omitted, and an estimate of on-farm wasted food is excluded as the percentage of inedible parts is unknown. Data for households also includes waste to sewer, which is not currently available for other sectors. 73% by weight of this wasted food arises in households. (WRAP, 2023)



Graph 2: UK Total waste by sector- including inedible parts (UK Food waste & Food surplus,2023)

In monetary terms, the wasted food shown in Graph 2 (i.e. post-farm gate food waste) had a total value of over £21.8 billion a year (Table 1). In terms of the environmental effects, the edible parts of food waste generated in households is associated with at least 18 million tonnes of greenhouse gas (GHG) emissions. However accurate estimates for supply chain sectors are not currently known at present.(WRAP, 2023)

Sector	Tonnes	Value £ billion (using 2021 prices)
Retail	234,000	0.74
Manufacture	706,000	0.85
Hospitality and Food Service	800,000	3.21
Households*	4,700,000	17.0
<b>Total</b>	<b>6,440,000</b>	<b>21.8</b>

Table 1: Monetary value of wasted food (UK Food waste & Food surplus,2023)

#### UK'S FOOD SUSTAINABLE APPROACH- COURTAULD COMMITMENT 2030 TARGET

SDG 12.3 was announced in 2015 and states that “By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses”. In the EU, a number of Voluntary Agreements (Vas) have been set up to tackle Food Loss and Waste (FLW), either covering a wide variety of sectors and stakeholders across the food chain (e.g. the

Courtauld Commitment in the UK, ForMat Project in Norway and Taskforce Circular Economy in Food in the Netherlands) or focusing on specific sectors (e.g. Dairy Roadmap and the Hospitality and Food Service Agreement in the UK). (WWF-WRAP,2020).The Courtauld Commitment food waste target is aligned with SDG 12.3 in that it has a 50% per capita reduction by 2030 target and is aligned with the Food Waste Index in that the target is applied to both wasted food and the inedible parts (i.e. total food waste). (WRAP, 2022)

In essence, the Courtauld Commitment 2030 is an ambitious voluntary agreement that brings together organisations from across the food system to make food and drink production and consumption more sustainable. The UK's largest retailers, food producers, manufacturers, and hospitality and food service companies have committed to milestones laid out in the Food Waste Reduction Roadmap, developed by IGD and WRAP to tackle food waste in the UK. (WRAP, 2022)

Following on the success of the Courtauld 1 (2005–2009), Courtauld 2 was a VA administered by WRAP that ran for three years (2010–2012), with 53 signatories (including retail, brands and suppliers) in the UK. The main aims of Courtauld 2 were to reduce primary packaging and household food and drink waste. It also included reductions in 1) secondary and tertiary packaging, and supply chain waste, and 2) reducing the carbon impact of packaging. The influence of Courtauld 2 resulted in a 10 % reduction in packaging carbon impact, a 3.7% reduction in household food and drink waste and 7.4% less supply chain waste (this represents a total of 1.7 million tonnes of waste). This impact has a monetary value of £3.1 billion and equates to a reduction of 4.8 million tons of CO<sub>2</sub>. Courtauld 2 was run in conjunction with the consumer facing campaign of Love Food Hate Waste, and part of the effectiveness of Courtauld 2 can be attributed to this joint approach.

Overall, the VA approach has helped the UK to reduce its total food waste by 19% (up to 2015). In January 2020 WRAP reported that edible food waste in the UK had declined by 27 %/person since the baseline year, saving 1.7 Mt food waste/y valued at around 5 billion Euro/y. The activities of the Courtauld Commitments 1, 2, 3 and recently Courtauld 2025, together with the Love Food Hate Waste Campaign have helped deliver these substantial reductions. (WRAP, 2023)

## THE PROGRESS OF THE COURTAULD COMMITMENT 2030

For the UK to halve food waste from a 2007 baseline, in line with the Courtauld 2030 target, total food waste from these sectors will need to be 71 kg per person in 2030 (i.e., half of the 142 kg per person in 2007). In 2021, there was 26 kg per person less food waste than in 2007, a reduction of around 18%. Therefore, a reduction of a further 45 kg per person is required to meet the target, or 32% of the 2007 baseline. (WRAP, 2023)

Evidence shows that businesses signed up to Courtauld for more than 2 years are witnessing greater reductions than the newest members. This reflects the positive journey of our tried and tested 'target, measure, act' approach. It likely reflects a typical journey for less experienced businesses whereby initial focus is on improving accuracy and scope of food waste measurement – which can result in an apparent increase in reported food

waste – before uncovering reduction opportunities and delivering on those. This is why it is critical that all large food businesses join Courtauld 2030 as soon as possible, to accelerate their contribution to SDG 12.3 and realise the associated cost savings. (WRAP, 2022)

As such, the Courtauld Commitment 2030 emphasis is on total food waste (edible and inedible and inedible parts).

	Food waste (kg / capita / year)			Change 2018 to 2021		Change 2007 to 2021	
	2007	2018	2021	kg / capita/ year	%	kg / capita/ year	%
<b>Household<sup>16</sup></b>	<b>90.9</b>	<b>66.5</b>	<b>75.5</b>	<b>+9.0</b>	<b>+13.5%</b>	<b>-15.5</b>	<b>-17.0%</b>
<b>Supply chain</b>	<b>50.7</b>	<b>43.0</b>	<b>40.2</b>	<b>-2.8</b>	<b>-6.5%</b>	<b>-10.5</b>	<b>-20.7%</b>
Retail	4.7	3.8 <sup>17</sup>	3.5	-0.3	-8.5%	-1.2	-26.0%
Manufacture	31.0 <sup>18</sup>	22.7	20.6	-2.1	-9.2%	-10.4	-33.6%
HaFS <sup>19</sup>	15.0 <sup>20</sup>	16.5	16.2	+0.8	-2.2%	+1.2	+7.7%
<b>Total</b>	<b>141.7</b>	<b>109.5</b>	<b>115.7</b>	<b>+6.2</b>	<b>+5.6%</b>	<b>-26.0</b>	<b>-18.3%</b>

Table 2: UK waste food sources and per capita changes over time (UK Food waste & Food surplus,2023)

## CONCLUSIONS

- The Courtauld Commitment 2030 is the UK’s voluntary agreement enabling collaborative action across the entire food chain to deliver farm-to-fork reductions in food waste, greenhouse gas (GHG) emissions and water stress
- The Courtauld Commitment food waste target is aligned with SDG 12.3 in that it has a 50% per capita reduction by 2030 target and is aligned with the Food Waste Index in that the target is applied to both wasted food and the inedible parts (i.e. total food waste).
- In total, food waste per capita in the UK amounted to around 116 kg in 2021, around 26 kg per person lower than in 2007. This represents an 18.3% reduction compared to 2007 (the Courtauld 2030 baseline year).
- For the UK to halve food waste from a 2007 baseline, in line with the Courtauld 2030 target, total food waste from these sectors will need to be 71 kg per person in 2030 (i.e., half of the 142 kg per person in 2007).
- The Courtauld Commitment 2030 and the Food Waste Reduction Roadmap have a farm to-fork ambition and there is an vision that businesses will act in this important area. The current evidence is not strong enough to serve as a benchmark against which progress can be assessed and it is for this reason that primary production is not within the scope of the Courtauld Commitment 2030 food waste target .

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