FOOD WASTE TRANSITIONS

CONSUMPTION, RETAIL AND COLLABORATION TOWARDS A SUSTAINABLE FOOD SYSTEM
Food waste poses a significant challenge to the sustainability of food systems. In addition to the environmental and economic impacts of the food we waste, there are significant social costs that need to be addressed as a matter of urgency. The burden of responsibility for making the necessary changes is often placed on households and consumers. However, successful responses require collaboration across the supply chain. This must-read report shows that consumption matters, but highlights its relationships with the component parts of the food chain and the organisation of societies more generally. It acknowledges that the United Kingdom is leading the way in collaboration for waste reduction and notes that retailers are starting to take their responsibilities seriously. The authors identify the conditions that need to be addressed as a matter of urgency. The burden of responsibility for food waste is best understood as a product of household dynamics and routines, cultural expectations around cooking and eating, and the social organisation of food consumption. Patterns of household consumption and waste are shaped by forces outside of the home.

We suggest interventions in household food waste reduction should:

- Distinguish between the cause and location of food waste
- Focus on shared conventions around food and eating
- Think about where, when and how meals are eaten

Looking beyond households and consumers, we have explored the ways in which the challenge of food waste reduction is being framed, interpreted and responded to by a range of stakeholders – including retailers, policy makers, NGOs, campaigners and consultants. Our research suggests that a multi-stakeholder coalition has rapidly developed around the issue. Unlike many contentious social and environmental issues, in which there are rival problem framings, we found a broad consensus around an ensemble of shared ideas and understandings. Crucially, there is widespread recognition that responsibility for food waste reduction is distributed throughout the food chain and that the links between parts of the system are key. However, retailers have a pivotal role to play and are well placed to affect changes upstream (with suppliers) and downstream (with consumers).

This report summarises food waste research conducted by the Sustainable Consumption Institute (SCI), University of Manchester, and its implications for a transition towards a sustainable food system. The SCI’s research on food waste seeks to bring waste policy and research into closer dialogue with contemporary social science perspectives on consumption. Drawing on qualitative and quantitative data, we offer an account of household food waste which re-frames the question of how to change domestic practices from one of individual behaviours to one of the context of behaviour.

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We suggest interventions in household food waste reduction should:

- Distinguish between the cause and location of food waste
- Focus on shared conventions around food and eating
- Think about where, when and how meals are eaten

We think the story of food waste reduction in the UK is a positive one. The report goes on to consider the lessons we might draw from the SCI’s food waste research for the broader challenge of making a transition to a sustainable food system.

An important lesson is that we shouldn’t overemphasise responsibility at the level of households and individual consumers. We must move beyond ‘behaviour change’ and recognise, and advocate for, distributed responsibility.

Culturally, we need to reconnect with the food system. The good news is that we do have an existing moral and cultural repertoire around food to draw upon, which comes to the fore in debates around food waste.

The success of household food waste reduction in the UK draws our attention to the importance of ‘issue lifecycles’. Our research suggests the maturity of the wider issue enabled a rapid engagement with food waste. Widespread engagement with the food waste issue has the potential to push forward the broader issue of a sustainable food system to a more mature stage.

The enabling conditions of the ‘food waste coalition’ are instructive for thinking about the transition towards a sustainable food system. A sustainable food coalition must recruit allies and mobilise against industry and political resistance. The role of progressive businesses is crucial here. And so too is that of organisations that can play the roles of honest broker and trusted intermediary. It is the importance of organisations that can play these roles that draws in equalities into stark relief.

The role of progressive businesses is crucial here. And so too is that of organisations that can play the roles of honest broker and trusted intermediary as well as fostering a neutral forum for collaboration. The food waste coalition would not have been possible without WRAP – whose credibility with business, commitment to evidence and arm’s length connection to government facilitated awareness raising, consensus building and agenda setting.

Part of this lesson is to recognize the creative role that the state can play in institution building and in actively constructing public-private partnerships. More broadly, it is the importance of organisations that can play the roles of honest broker and trusted intermediary.
The food we waste

**Sources:** FAO, IMeche, WRAP

The world’s population is expected to grow to around 9bn by 2050, and demand for food is predicted to almost double.

Roughly 1/3 of food currently produced for human consumption gets lost or wasted — approximately 1.3bn tonnes each year.

Wasting 15m tonnes of food every year and nearly 50% of this arises in our homes.

One in four calories is wasted and yet from people do not consume enough calories on a daily basis.

The direct economic consequences of global food waste amount to $750bn annually.

The food wasted in the UK amounted to a staggering 13bn five-a-day portions.

Over 1/2 of the food wasted by UK households could have been avoided — equivalent to 8 meals per week, per household.

Throwing food away is costing the nation £12.5bn a year with a cost to business of at least £5bn.

If food waste was a country, it would rank top third greenhouse gas emitter after China and the USA.

The food wasted in the UK is the size of Wales to produce.

### Introduction

This report considers food waste reduction in relation to the broader ambition of fostering a more sustainable food system. Of course, it is not a straightforward matter to specify precisely what we mean by ‘sustainable food system’ and so we adopt a broad definition that acknowledges the task of producing sufficient safe and healthy food to meet the demands of feeding the world’s growing population, in a manner that respects environmental limits. In addressing the significant social, economic and environmental challenges that this entails, both now and in the future, the case for reducing food waste is not difficult to plead. We do not suggest that tackling food waste is sufficient, in isolation, to solve the problems currently facing the food system. We do however think that it is a necessary condition. Thankfully, the issue is high on the political agenda and there has recently been a swell of activity, involving a range of stakeholders, geared towards reducing waste throughout the food chain. The UK has been at the vanguard of these developments, thanks in part to its Waste and Resources Action Programme (WRAP), both in terms of raising awareness of food waste and identifying innovative solutions to this global problem.

Against this backdrop, the Sustainable Consumption Institute (SCI) at the University of Manchester has carried out a number of studies on food waste. In the first, a social scientific approach to household food waste was developed through in-depth fieldwork in people’s homes, exploring domestic practices of shopping, cooking, eating, storage and disposal. This was later complemented by analysis of data from a survey of c.70,000 Tesco customers as well as a survey of eating habits in the UK completed by c.2,800 online panel members. This allowed us to explore the relationships between the organisation of meal occasions, the production of leftovers, and waste generation. The first half of the report presents key findings from these two studies of household and consumer food waste, and we put forward some recommendations for thinking about changes in the social organisation of consumption.

From a slightly different angle, the SCI conducted 33 interviews with 38 stakeholders in order to explore the ways in which the challenge of food waste reduction is being framed, interpreted and responded to by engaged constituencies (including businesses, policy makers, third sector organisations, campaigners and consultants) with a specific focus on the interface of households and retailers. This was complemented by our observations at a number of food waste conferences, and by hosting our own multi-stakeholder workshop, in which over 40 delegates came together to discuss the relationship between research and policy, and evidence and action, and to reflect on collaborative responses to the imperatives of food waste reduction. The second part of our analysis reports on the multi-stakeholder coalition that has rapidly developed around the issue of food waste alongside the widespread recognition that food waste is a systemic problem requiring attention across the different parts of the system.

The report ends with consideration of the enabling conditions that underpin the observed food waste coalition. Our conclusions focus on what these can tell us about facilitating changes towards a sustainable food system more generally. Particular attention is paid to the role of retailers as agents of change, alongside the potential for transferring learning from the food waste experience to engage with the various sustainability challenges currently confronting the food system.
HOUSEHOLD AND CONSUMER FOOD WASTE

Despite current levels of activity around food waste reduction, the issue received comparatively little attention prior to the publication of WRAP’s landmark report The Food We Waste in 2008. The first study of its kind, it estimated that UK households at the time were throwing away one third of the food that they purchased.

This startling figure – coupled with global estimates of how much waste arises at different points in the food chain – served to position food waste as a matter of encouraging changes in behaviour at the level of households and consumers. As the issue gained momentum, a narrative emerged in which current levels of waste generation were attributed to consumers not caring about the food that they throw away, ignorance (and ambivalence) towards the consequences of doing so, and deficiencies in cooking and household management skills.

While WRAP’s solutions (such as the Love Food Hate Waste campaign) and the suggestions of prominent commentators such as Tristram Stuart and Feedback were refreshingly well-intentioned, they were still very much in keeping with the vogue to address complex global challenges by appealing to the choices made by individuals. In this view policy and intervention is the task of presenting choices made by individuals with information and incentives intended to make them behave better.

SCF research on food waste seeks to bring waste policy and research into closer dialogue with contemporary social science perspectives on consumption. We offer a different account with contemporary social science perspectives in mind.

WHY DO CONSUMERS WASTE FOOD?

The imperative to cook and eat ‘properly’ places food at risk of going to waste.

In the UK, eating properly is commonly understood to involve cooking meals from scratch using a variety of fresh ingredients. This is seen as important in terms of being healthy and taking care of significant others. However, a lot of ‘proper’ food is perishable and so at risk of wastage if it is not eaten within a narrow timeframe.

Our survey data demonstrates that leftovers are more likely when meals are made from ‘fresh’ ingredients and when they are prepared on the hob or in the oven. Meals containing ‘ready to eat’ items are less likely to result in leftovers.

Family meals are not necessarily the answer.

The family meal is a cultural ideal that many of us consider a good thing. However, ensuring the family eats together and eats ‘properly’ means both the continuous effort to push suitable meals on unwilling household members, and having to buy ‘fail safe’ ingredients as back up. Negotiating these conflicting imperatives can often lead to food waste.

Fridges and freezers can enable food waste.

Fridges allow for surplus food to be quickly forgotten whilst keeping open the possibility that it might be used for something. In the meantime, of course, it decays and people can feel less guilty about throwing away food that is no longer fit for human consumption.

The social significance of meal occasions is important.

Our survey data suggests that when more time is spent preparing and eating meals, the more likely they are to result in leftovers. Furthermore, we found that the likelihood of food being left over, and so at risk of going to waste, is affected by the people with whom we eat our meals. A quick microwave meal eaten alone is less likely to result in leftovers than an elaborate dinner party with family and friends.

COMPARED TO MEALS LASTING LESS THAN 10 MINUTES

<table>
<thead>
<tr>
<th>MEALS LASTING 10-19 MINUTES ARE</th>
<th>MEALS LASTING OVER AN HOUR ARE</th>
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<tbody>
<tr>
<td>53.4% MORE LIKELY TO PRODUCE LEFTOVERS</td>
<td>7 X MORE LIKELY TO PRODUCE LEFTOVERS</td>
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Surplus food is not the same as food waste.

Surplus food could be handed down (to children or pets), handed around (given to friends and neighbours) or otherwise saved from wastage (composting). In actuality, the vast majority of surplus food is disposed of through the waste stream via the bin. More optimistically, and contrary to common misconceptions about the relation between over-consumption and food waste, we found that when a bigger percentage of a meal is leftover, the less likely it is that the surplus will go to waste. The caveat here is that we are talking specifically about the leftovers of meals and this says nothing of the fate awaiting unused ingredients.

COMPARED TO MEALS WITH 30-50% LEFTOVER

<table>
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<tr>
<th>MEALS WITH 10-30% LEFTOVER ARE</th>
<th>MEALS WITH UNDER 10% LEFTOVER ARE</th>
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<tbody>
<tr>
<td>19 X MORE LIKELY TO WASTE SURPLUS FOOD</td>
<td>130 X MORE LIKELY TO WASTE SURPLUS FOOD</td>
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Well, if a recipe calls for, say, five different ingredients and you buy them all, they will last you all week. Well you don’t buy them in the quantities that you need them so there is always five lots of stuff left over.

Tamzin, 25
Taste the insights on the previous page demonstrate that current volumes of household food waste cannot be viewed as a simple matter of consumer choice or irresponsible behaviour. Our analysis suggests that the behaviours giving rise to waste are not necessarily waste-related, and that food waste arises as a consequence of households managing the complex and contradictory demands of everyday life. Conventions generally seen as positive – cooking from fresh ingredients, the nuclear family meal, and eating with friends and extended family – give rise to surplus food, which may become waste.

A NUMBER OF KEY LESSONS CAN BE LEARNED FROM OUR RESEARCH

**Consumers care**
Most people care about the food that they waste and the consequences of doing so. However, they also care about a lot of other issues and they care for people—particularly their significant others. Consumers have to negotiate a lot of food-related concerns—think of the tensions arising when trying to eat properly, eat as a family, and reduce waste—as well as a range of other pressures ranging from erratic working hours to finding time for shopping and leisure activities. Without denying the negative impacts of letting food go to waste, it is important to remember this very ‘bad’ household behaviour often arises from the very best of intentions.

**Household dynamics matter**
Individuals do not make ‘food choices’ in a vacuum. Patterns of household consumption are not a straightforward expression of the tastes, values and desires of the individuals who assume responsibility for ‘feeding the family’. The preferences, concerns and schedules of other household members need to be taken into account. In order to manage this, households very often develop routines of food consumption where they purchase food at relatively fixed intervals, buy roughly the same things each time, and have a fixed culinary repertoire. However, things can ‘come up’ (parents’ evenings, spontaneous nights out) which throw these routines out of balance meaning that what would normally be used up between shopping trips goes uneaten. It is important to remember that if people struggle to find a use for these leftover ingredients, it may not be a reflection of their attitudes towards waste and the environment, or their culinary skills. It could well be a result of other household members having a preference for ‘tried and tested’ recipes instead of ‘improved’ meals that would use things up and prevent their wastage. This means that even if a campaign is successful in changing individual attitudes or behaviours, it is not guaranteed to shift deeply entrenched household habits.

The social organisation of consumption is key
Going a step further, patterns of household consumption and waste are shaped by forces outside of the home. We have already suggested that cultural conventions and meanings—such as the importance of the family meal—influence the ways in which we eat. While we may have degrees of choice in the food we consume and waste, it is important to recognise the role of infrastructures (such as existing arrangements for assessing food) and institutions (such as the requirement to be at work for a large part of the day) in constraining our autonomy. In this view, household food waste can be explained—at least in part—by factors as diverse as cultural practices, changes in the labour market, technological development, global food prices, cultural expectations of ‘good food’, and the historical shift from a producer to a ‘consumer society’. Viewed as such, the task of intervention appears rather more complex than persuading individuals to behave differently.

While the table above is largely speculative, it is instructive to note that debates about household and consumer food waste have come a long way from where they were when they started gathering momentum in 2008. From where we are standing in 2016 we can see that significant departures have been made from conventional approaches to behaviour change, encompassing a more nuanced approach to consumers and household practice.

Unfortunately there is no silver bullet. However, we can offer a number of thinking points on making the shift from asking the question of ‘how do you influence the choices of individuals?’ to ‘how do you change the broader context in which household food waste arises?’ We also give a number of overlapping suggestions and reflections on what interventions in the social organisation of consumption and everyday life might involve.
The Perfect Storm

Austerity, food price inflation, food poverty and food banks, concerns about food security, environmental sustainability and climate change come together in food waste reduction, as one of our interviewees put it, as "a perfect storm of issues".

Distributed Responsibility

Whilst households are major contributors to the UK’s food waste, stakeholders recognise the causes of household food waste are complex. They recognise, as our evidence suggests, it isn’t all about individuals’ behaviours. We found a consensus that responsibility for food waste reduction is distributed throughout the food production-consumption system. This is because "where food is wasted is not necessarily where the causes and drivers are" (NGO representative).

I think we would definitely see it as a system-wide issue. It’s more around what’s the interaction between those different stages in the system.

Policy representative

It’s not the consumer’s fault that there’s food waste and it’s not the retailer’s fault. Looking at it through one lens is unhelpful. It’s absolutely a multi-stakeholder issue.

NGO representative

We’re not saying the problem is elsewhere, so even though the waste is physically happening at either end of the value chain, we are working in partnership with producers, suppliers and helping customers as well.

Retailer representative

While responsibility is distributed, however, retailers were seen as having a key role to play, because "they sit at a pivotal point and have an upstream and a downstream influence" (NGO representative).
FOOD WASTE TRANSITIONS

FROM FOOD WASTE TO A SUSTAINABLE FOOD SYSTEM

WHAT LESSONS MIGHT WE DRAW FROM THE SCI’S FOOD WASTE RESEARCH FOR THE BROADER CHALLENGE OF MAKING A TRANSITION TO A SUSTAINABLE FOOD SYSTEM?

BEYOND BEHAVIOUR CHANGE

We’re all familiar with debates about who is responsible for addressing environmental issues – individuals, business, government? These are often framed in terms of the appropriateness of behaviour change strategies directed at individuals’ behaviour.

This is important because framing complex problems in terms of individuals’ behaviour change has two key effects.

Firstly, it systematically underestimates the constraints of conventions, institutions and infrastructures on individuals’ behaviour, and fundamentally overestimates the degree to which much routine behaviour is the result of voluntary deliberation. In other words it misunderstands behaviour.

Secondly, it obscures systemic issues – as with food waste, where the problem occurs in often not where the causes and drivers lie – and thus where the solution is best sought.

An important lesson from the SCI’s food waste research is that we shouldn’t overemphasise responsibility at the level of individual consumers. We must address the context of behaviour.

Agenda setting: ‘the consumer’ as proxy

However, we also recognise the crucial importance of awareness raising campaigns – such as Love Food Hate Waste – in agenda setting. When ‘the consumer’ is addressed or evoked in campaigns this does not always have the effect of individualising responsibility for the issue. Using ‘the consumer’ as a tactical, rhetorical device can be important. Not least because business ‘buy-in’ to an issue rests, in part, on the sense that there is a problem that their consumers want them to solve.

From behaviour change to distributed responsibility

Our research shows that approaches to food waste reduction have moved beyond behaviour change to embrace distributed responsibility.

This is another important lesson for the transition to a sustainable food system: recognise, and advocate for, distributed responsibility.

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PART OF THIS LESSON IS TO RECOGNISE THE CREATIVE ROLE THAT THE STATE CAN PLAY IN INSTITUTION BUILDING AND IN ACTIVELY CONSTRUCTING PUBLIC-PRIVATE PARTNERSHIPS.

Mobilising a coalition for change

We think the story of the issue of food waste reduction in the UK is a positive one. Positive because of the multi-stakeholder coalition around the issue, positive because of the constructive search for solutions, and positive because the results speak for themselves – avoidable household food waste is down 21% since 2007. What are the key conditions that have enabled this and what might we learn from them?

The value of food

Food is too cheap for some – and too expensive for others. In the UK the retail cost of food has been driven down to the level that for many it doesn’t matter if good food is thrown away. And, at the same time, children of some working parents don’t have enough to eat. Consumers in the Global North waste almost as much food as is produced in the whole of sub-Saharan Africa. And yet globally millions go to bed hungry.

Food waste draws inequalities into stark relief. A sustainable food system cannot be for the few: it must address inequalities, both globally and within the wealthier countries.

Many of our stakeholder interviewees felt that food has become culturally de-valued.

“People are beginning to realise just how alienated society is become from the sources of food and any concept of where it comes from and what it takes to produce it.” (Consultant)

Culturally, we need to reconnect with the food system. The good news is that we do have an existing moral and cultural repertoire around food to draw upon, and it is coming to the fore in debates around food waste. There is a strong, widely held sense that wasting food is morally wrong because there is “something really fundamental about food that goes right to the human soul” (NGO representative). It is important to capitalise on these repertoires and ensure that they spill over into thinking about the broader sustainability challenges facing the food system.

Issue lifecycles

Food waste as an issue arose to prominence at a point when wider issues of waste had already reached a level of maturity. Household recycling is now the norm, and is supported by a well-developed waste management infrastructure. This is undoubtedly an enabling condition of the success in domestic food waste reduction.

Food waste draws our attention to the importance of ‘issue lifecycles’. Widespread engagement with the food waste issue has the potential to push forward the broader issue of a sustainable food system to a more mature stage.

Counter-constituencies

Crucial to the emergence of the food waste coalition has been the lack of a counter-constituency advocating a radically different, competing framing of the issue. This was not inevitable. As one of our interviewees commented: “If you imagine a situation where significant retailers were against the agenda, I think it would have been much harder to get messages out and get consumers to act. I think it might have played out quite differently.” (NGO representative)

For transition to a sustainable food system it would be naïve not to recognise counter-constituencies’ vested interests.

A sustainable food coalition must enlist allies and mobilise against industry and political resistance. The role of progressive businesses is crucial here.

Vehicles for coalition building

The ‘Food Waste Coalition’ in the UK would not have been possible without WRAP. WRAP has facilitated the process of coalition building, not just through expert advice but through acting as a trusted intermediary. This is all the more important when we need to find ways to help competitors co-operate.

Key factors in WRAP’s central role are:

• Credibility with business – an honest broker
• Commitment to evidence – a trusted intermediary
• Arm’s length connection to government – a neutral forum

Part of this lesson is to recognise the creative role that the state can play in institution building and in actively constructing public-private partnerships. More broadly, it highlights the importance of organisations that play the role of trusted intermediaries in coalition building.
The Sustainable Consumption Institute, University of Manchester

Our mission at the Sustainable Consumption Institute is to bring insight and clarity to a key part of the sustainability challenge: the role of consumption. We take original insights from the Social Sciences, insights that often challenge orthodox thinking, and subject them to critical empirical scrutiny. This, we believe, is essential for advancing fundamental understandings about processes of consumption and social change. Our research is organised around the following themes:

1. Provisioning, consumption and the organisation of daily life
2. System innovation and sustainability transitions
3. The cultural politics of sustainability
4. Re-framing policy and practice.

Through an ambitious research programme we tackle head-on the scale and urgency of societal responses required to address sustainability – responses that require collaboration between a wide-range of stakeholders, including businesses and policy-makers, who can both benefit from and contribute to our research.

Acknowledgements

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The following is a list of selected project outputs, sources used in the report and some suggestions for further reading:


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