

Is it appropriate to use surplus food to feed people in hunger? Short-term Band-Aid to more deep-rooted problems of poverty¹

Professor Martin Caraher, City, University of London and Dr Sinéad Furey, Ulster University²

- There has been a rise in campaigning and attention focused on food waste in the domestic home setting and across industry in terms of production, manufacturing, distribution and retailing.
- At the same time, the proliferation of food banks and more general emergency food aid across the UK has drawn attention to the problem of household food insecurity.
- Calls for actions to reduce food waste and reduce food insecurity have led to recommendations for enhancing systems to increase the redistribution of surplus food to emergency food aid charities as a solution to food insecurity.
- Our analysis of the benefits and drawbacks of the use of surplus food to feed food insecure people highlights how this practice undermines calls for direct actions to both reduce the production of surplus food and to address upstream drivers of food insecurity and ensure the right to food.
- Recommendations call for civil society and policymakers to focus on systemic solutions to both food waste and household food insecurity as separate entities.
- While the redistribution of surplus food to emergency food aid providers provides immediate relief in the short-term, there is no evidence to show that it addresses food insecurity.
- There is evidence from other countries that the use of surplus food for emergency food aid ‘depoliticises’ hunger and allows governments not to address the gap between income and food costs.

1. Objective and scope

This paper explores the intertwining of two critical issues, where the redistribution of abundant surplus, unsaleable and donated food is being put forward as a solution to meeting the food needs of food insecure people. This is an issue which has been subject to debate for many years in developed economies: scholars have argued that this “surplus food redistribution” is not an effective way to resolve problems associated with poverty and food, nor excess food production (1, 2). Nevertheless, in recent years, in the context of increased attention on the sheer volume of food wasted across the UK every year and the recent rapid expansion of people being fed by food charities in the UK, there have been calls to enhance and expand the practice of using surplus food to feed hungry people. Here we ask who really

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benefits from diverting surplus food from landfill to feed food insecure people, and whether this practice fulfils the ‘Right to Food’ (3-7).

The paper has a primary focus on the UK but draws on lessons, experience and research in other developed countries. We offer it to stimulate an informed debate at a moment when all sorts of solutions to reduce food insecurity are being put forward. Specifically, we see the recent passing of legislative approval in Europe (France and Italy) that requires supermarkets to donate surplus food to charity as a possible impetus for similar discussions to be held in the UK. In Italy the Food Bank movement – Banco Alimentare – is also offering its expertise to food and drink producers, retailers, the hospitality sector and wholesalers to divert food to the most deprived in Italy, following introduction of ‘Gadda Law’ in September 2016, which incentivises such charitable food donation. Recent reports such as *Feeding Britain* that recommend strengthening the diversion of surplus food from landfills to food charities, require these types of actions be critically evaluated before being more widely promoted as ways to “eliminate hunger” in the UK (8).

We begin by examining the problem of food surplus and waste in the food system. Next we examine evidence of increasing demand for charitable food assistance in the UK. We highlight how the co-existence of these two problems has fuelled recommendations for mechanisms to foster increasing the amount of surplus food diverted toward hunger-relief in high-income countries. We go on to examine the merits and drawbacks of using surplus food to feed food insecure people, and conclude with reflections on whether or not this practice is in line with the Universal Declaration of Human Rights, that “everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food...” and that governments be responsible for ensuring this right (9). We end with discussion of the need for a concerted effort to reduce the amount of food going to landfill, as well as an urgent need to address the problem of insecure and insufficient access to food in the UK; however, we argue that these distinct problems each deserve to be tackled in their own right. We highlight concerns that interlinkages between these problems may serve to undermine food poverty as a critical issue of human rights that requires upstream solutions (10). Furthermore, we explore how linking food waste to food insecurity demands to be evaluated from a social justice perspective, as this practice can serve to diminish people’s choice and their right as citizens to access food in socially acceptable ways (11).

2. The problem of food waste and food surplus

Food waste is a significant issue globally and in the United Kingdom. Globally, around 30% of food grown for human consumption is never eaten (12). This equates to about 1.3 billion tonnes of food per year (12). As shown in Figure 1, food is wasted along the food chain from field to table (13). Excluding agricultural food waste and fish discards, about 90 million tonnes or 180 kg per capita per year are wasted in Europe (14). The United Kingdom alone discards 10 million tonnes of food every year – enough to fill six Wembley Stadiums (15). Recently, Tesco revealed that 59,400 tonnes were thrown away, equivalent to 119 million meals (16).

In countries such as the UK a significant amount of food waste is generated on the farm by the use of commercial cosmetic standards for food. These are related to the demands of retailers for standard products, so for example, apples must meet both size and appearance standards. Inefficient manufacturing also results in discarded food, as can the transport of perishable food to retailers. But unlike developing

nations where the issues of harvesting, poor storage etc. contribute the greatest amount of waste, in countries like the UK the greatest proportion of waste occurs at the retail and consumption ends of the chain.

Figure 1: Food waste produced at each stage of the food chain

Production	Handling and storage	Processing and packaging	Distribution and market	Consumption
Definition				
During or immediately after harvesting on the farm	After produce leaves the farm for handling, storage and transport	During industrial or domestic processing and/or packaging	During distribution to markets, including losses at wholesale and retail markets	Losses in the home or business of the consumer, including restaurants/caterers
Includes				
Fruits bruised during picking or threshing	Edible food eaten by pests	Milk spilled during pasteurisation and processing	Edible produce sorted out due to quality	Edible products sorted out due to quality
Crops sorted out post-harvest for not meeting quality standards	Edible produce degraded by fungus or disease	Edible fruits or grains sorted out as not suitable for processing	Edible products expired before being purchased	Food purchased but not eaten
Crops left behind in fields due to poor mechanical harvesting or sharp drops in prices	Livestock death during transport to slaughter or not accepted for slaughter	Livestock trimming during slaughtering and industrial processing	Edible products spilled or damaged in market	Food cooked but not eaten

Reproduced from: Bagherzadeh, M., M. Inamura and H. Jeong (2014), "Food Waste Along the Food Chain", OECD Food, Agriculture and Fisheries Papers, No. 71, OECD Publishing (13)

As highlighted in Figure 2, of the 10 million tonnes of food and drink waste produced each year in the UK, the grocery and retail sectors accounted for 1.67% of waste food, while 7 million tonnes are estimated to be ‘wasted’ by households each year, about one third of all food purchased (17). In households, food waste is produced before, during and after meal preparation. Although some waste is unavoidable, over 4 million tonnes are estimated to be unnecessary. Much may result from the purchase of excessive quantities of food because of special offers and deals on food categories. The labelling of foods with “best before” or “sell-by dates”, which are not tied to food safety risks, but rather set to guide sale of foods when they are at their optimal appearance (cosmetic standards), also results in households wasting foods that are still perfectly safe to eat (18).

Within the UK food system waste from the farm gate to the consumer end of the chain is impacted by retailer power and concentrations in the food chain. We live in what has been called a ‘*consumptive environment*’ where the demands of the customer take precedence and so the food system is geared to delivering consumers’ needs and wants. Such a system will always have surplus and waste food in it as the demands and behaviours of consumers change daily.

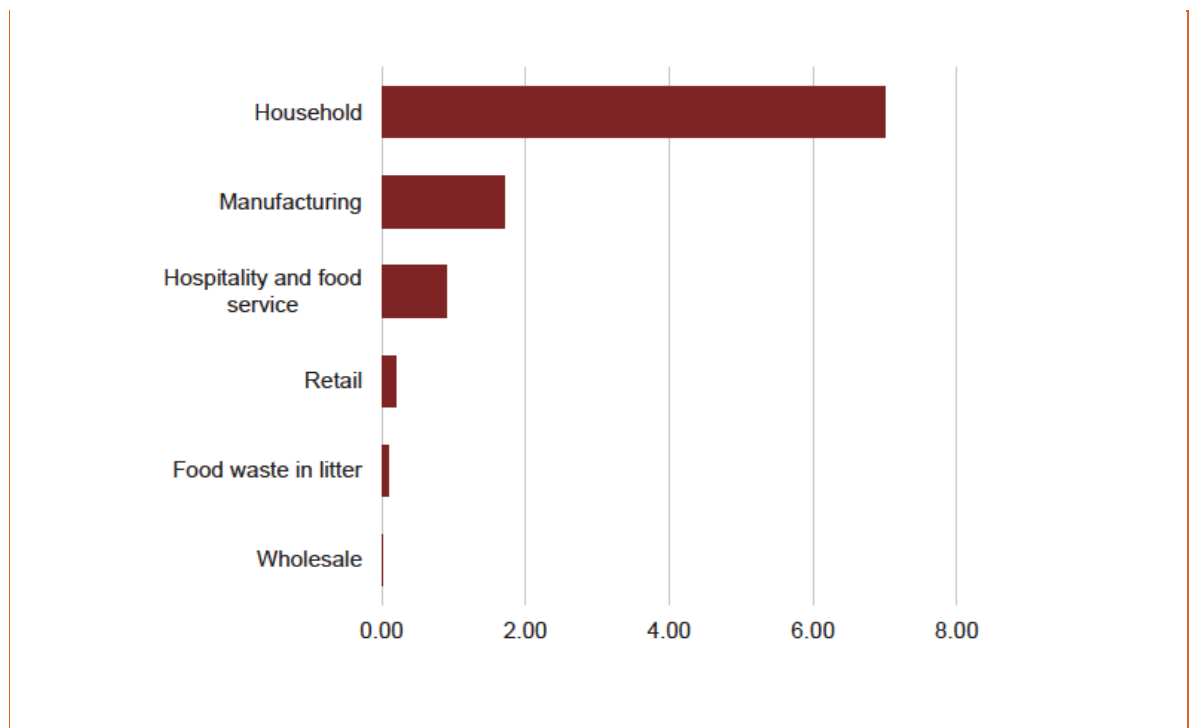
In addition and not counted in the DEFRA figures are 0.7 million tonnes of food surplus from manufacturing and retail redistributed to charitable and commercial outlets (0.05 million tonnes), or diverted to make animal feed (0.66 million tonnes). This material was not formally classified as waste as it goes to landfill (12).

We do not discuss the detail of food waste as an ecologically unsustainable activity; others have done this in more detail than we have space (19, 20). Recognition of the ecological consequences of the sheer quantity of food being wasted and surplus to demands along the food chain however, has led to a rise in campaigning and

attention to reduce food waste in the UK (for example, see <http://www.wrap.org.uk/food-waste-reduction>). This has included awareness campaigns to improve households’ use of food in the home and to promote the reduction of surplus food production, losses due to manufacturing and distribution, and oversupply by food retailers.

Civil society groups have run high-profile campaigns to feed people from surplus food; these often take the form of city events to feed large crowds (for example, see <http://feedbackglobal.org/campaigns/feeding-the-5000/>). On a smaller scale “freeganism” (for example, see <http://www.freegan.org.uk/ukfreegans/>) and “dumpster hopping” have helped highlight the extent and absurdity of food waste and surplus food (21). All this is very positive and has helped raise public awareness as well as driving food industry responses. The DEFRA Food Statistics Pocketbooks from 2015 and 2016 note a 5 million tonnes reduction in food waste. Clearly much remains to be done but the food industry is working on this problem.

Figure 2: UK food and drink waste through the food chain (million tonnes)

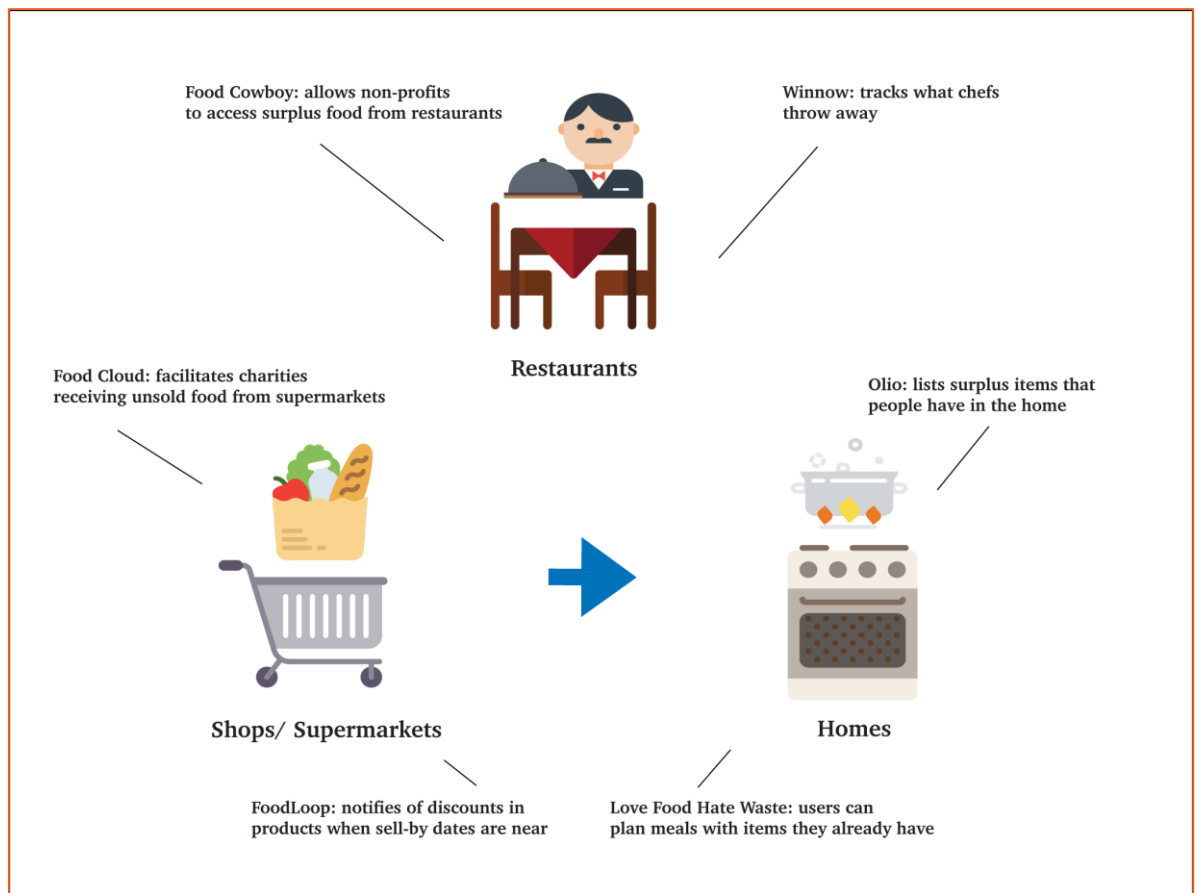


A recent announcement by Tesco to have all their edible food waste redirected toward food charities highlights an increasing interest in linking the problem of food waste to the problem of household food insecurity in the UK (16). Here, interest lies in the redistribution of “surplus” food – defined as edible, saleable food within its “use by” date that is not sold. In London there is a similar move led by the London Evening Standard to promote food waste as a solution to food poverty, which by November 2016 had raised £1.5 million pounds, (see <http://www.standard.co.uk/news/foodforlondon>). Food surplus includes food from supermarkets, wholesalers, foodservice industry, delis/restaurants, agricultural production or food manufacturers that has been rejected for sale to consumers due to mislabelling, being end of line or damaged palettes, or not meeting cosmetic standards such as imperfect size/shape. Surplus food can also result from food production trials that do not meet consumers’ tastes, preferences and/or expectations.

Much waste and surplus in the food system is due to mismatches in supply and demand; this occurs at both ends of the supply chain – farm gate and across the counter. This issue of supply and demand is now being located within a commercial response through the sale of surplus and waste food at low prices to those who are concerned about waste and have adopted austerity lifestyles as a way of ‘saving the planet’, a worthy aspiration. This has led to the opening of shops and online websites which commercially sell surplus and waste food. See this website for an example from Denmark- <https://www.nextnature.net/2016/12/surplus-food-supermarket/>.

Other examples of the increasing scale of redistribution practices are evident in the development of technology which help link surplus/waste food created at various stages in the food chain to end users, whether a food bank or an individual, as illustrated by the examples in Figure 3.

Figure 3: Apps matching food surplus/waste from retailers, restaurants & in homes to end users



There has been a commercialisation of this issue with lifestylers choosing to buy surplus food and eat in restaurants that promote the use of surplus/waste food. This is in many respects a welcome trend aided by the development of Apps such as Winnow and by supermarkets selling such surplus food at discounted prices. The recent debates in Italy and the taking home of surplus food from restaurants have hinged on issues of cultural acceptability of this practice. The overall impact of these consumer developments could mean that food previously diverted to charities may well find its way to commercial outlets.

3. Household food insecurity in the UK

The UK does not measure and monitor household food insecurity as is done in Canada and the United States (23, 24). However, the FAO Food Insecurity Experience Scale used in the 2014 Gallup World Poll, found that about 10.1% of people over the age of 15 were food insecure in the UK (25). This included 4.5% of people who reported that they went without eating for a whole day at least once. While these figures are based on a small sample size, they do indicate that a significant proportion of the UK population faces insecure and insufficient access to food (25). Results from the *Low Income Diet and Nutrition Survey* undertaken in 2005 prior to the economic crisis found that among low income households, 39% reported having worried that their money food would run out during the previous year, and a fifth that they reduced or skipped meals regularly because of lack of money (26).

The issue of food insecurity, when people do not have sufficient food to eat (or concern that they may not do so in the future), has been brought to the fore of public and policy debate as it underlies the recent rapid growth in use of emergency food provisioning in the UK (27-32). In particular, the rapid expansion of the Trussell Trust Foodbank Network in the UK has raised concerns among health professionals that food insecurity is an emerging public health emergency (33). Trussell Trust statistics have shown a rise in people being provided with food aid by their network from about 60,000 users in 2010 to over 1.1 million users in 2015/16 (34). FareShare, another charitable food assistance agency which redistributes food from the food industry to meal programmes in the UK, estimated they provisioned enough food for their community/charitable partners to provide 16.6 million meals from October 2014 to September 2015, a rise of 26% from the previous year (35). There are also a number of independent and smaller scale emergency food aid charities and social enterprises operating outside of these main chains such as FoodCycle (see <http://foodcycle.org.uk>) and Food Nation in Newcastle upon Tyne (see <http://www.foodnation.org>) although there is no comprehensive data on these independent operators. The increased use of food banks and other charitable outlets for food (31) have been linked to cuts in spending on local welfare schemes and social security payments, increased sanctions applied to benefit claimants and the fallout of the global economic crisis that caused rising food prices and stagnating wages (28, 31, 36, 37).

Considerable research available from countries with a longer history of food banks than the UK show no evidence that such approaches help lift people out of poverty; at best they provide some immediate respite to those who are hungry (6, 38). Others such as Lorenz (1) argue that such initiatives distract from the underlying issues of food insecurity and that systems encouraging the use of waste and surplus food, including donations, exacerbate exclusion and excess rather overcoming them, as they do not ultimately address the underlying socio-economic causes. Riches calls countries using food banks and donations as a major food provider to the poor “food bank nations” (38).

Relying on donations from individuals or companies and their distribution through charity does not meet the needs or rights of citizens. Van der Horst and colleagues (39) outline the “shame” that food bank users experience in using such services, a point reiterated by the then UN Special Rapporteur De Schutter in a talk in London (40):

“In emergency situations people turn to foodbanks. Foodbanks, however, are a testimony to the failure of public authorities to deliver on the right to food and should be neither a permanent feature nor a

substitute for more robust social programs. Food assistance in the form of the right to social security, such as cash transfers, food stamps or vouchers, can be defined in terms of rights, whereas foodbanks are charity-based and depend on donations and good will. There can also be a sense of shame attached to foodbanks.” (p.9 40)

This sentiment was echoed by Winne (39) in his book on the US food system who says:

“In the same vein we must seriously examine the role of food banking, which requires that we no longer praise its growth as a sign of our generosity and charity, but instead recognize it as a symbol of our society’s failure to hold government accountable for hunger, food insecurity and poverty” (p. 184 41)

The inconsistencies in supply and demand in the food system itself contribute to inconsistencies in supply to the emergency food sector, as illustrated by the example in Figure 4 (42). There are problems with providing a food parcel and/or healthy option via a meal as the offer is dependent on what is donated or is surplus to commercial demands. This can further contribute to feelings of exclusion since users of a food bank are constrained in their choice to goods that happen to be surplus and available each week. The food on offer may not be appropriate to their nutritional, family or cultural needs and as both Winne and De Schutter above point out, is certainly not conducive to their human rights.

Figure 4: Christmas for the poor in Australia 2012

“Vegemite sandwiches to feed Australia’s hungry”, December 5, 2012, Kate Carey

“Australia’s largest food relief agency Foodbank is expected to receive substantial donations of Kraft Food’s Vegemite and Goodman Fielder’s Helgas and Wonder White bread to feed Australians over the Christmas period.

However, no donor has yet stepped forward to supply Foodbank with a major donation of butter.

Goodman Fielder’s donation of around three million loaves of bread coincides with a gift of 100,000 jars of Vegemite to Foodbank. These donations come at a time when demand from food relief is growing and welfare agencies are struggling to cope. A recent survey of Foodbanks welfare agencies found that on average a charity will turn away 62 adults’ and 72 kids’ requests for food every month due to insufficient supplies.

Business and communications manager at Foodbank, Sarah Pennell, has called for a butter supplier to come forward and help Foodbank make an “Australian icon” to feed those in need.

“Obviously we do receive surplus donations from time to time that include butter, but we are always looking for companies to make an ongoing commitment to donate such staples”, Ms Pennell told Australian Food News....”

Extract taken from Australian Food Network (AFN) press article (42)

4. The linkage of food surplus to food insecurity in high-income countries

Recognition of the growing number of people seeking emergency food aid in the UK resulted in the launch of an All-Party Parliamentary Group (APPG) inquiry into hunger and food bank use, which gathered and reported on evidence from frontline



food providers, researchers, and civil society organizations over 2014 (8). While the report recommended over 70 actions to address food poverty, a major focus of it was on the need to enhance the redistribution of surplus food, perhaps because of the simultaneous increased awareness of this issue (8). Motivated by the “scandal” that both food waste and hunger could exist at the same time in the UK, six of the APPG’s recommendations focused on strengthening infrastructure and systems to support the diversion of food surplus from food retailers to charitable food providers. They wrote:

“It is in harvesting from (the surplus or wasted food) that we believe the next big breakthrough will be made in eliminating hunger in this country.”

This quote reflects a widely found tendency to link the issue of people facing insecure and insufficient food access to the issue of food waste/surplus, often expressed with conviction that the joint occurrence of these problems in the same country is “scandalous”. The idea of linking surplus food from the food chain with meeting the needs of marginalized groups is not new, and there are numerous examples of these practices across high-income countries, which have been supported by legislative and technological developments. One example is *Good Samaritan* legislation, which limits liability for those providing emergency aid to another on a voluntary basis i.e. food donors. Such laws are already in place in Canada and United States (6, 43). In France, a recent law has been passed requiring supermarkets to donate food to charity (44) and as noted earlier, Italy has recently introduced similar legislation via a law known as “Gadda Law” (45). Here, debates over the morality of sending food to landfill or destroying it while people go hungry have been especially vocal and emotive. There has been similar interest in both England and Scotland where Private Members’ Bills on tackling food waste and food waste reduction have been debated (46, 47)

Other campaigns have focused on the introduction of corporate tax credits for companies linked to the fair market value of their surplus food donations to food banks. This is already done in France and Spain (48), and proposals for this legislation have been proposed by Food Banks Canada and debated in municipal councils across Canada (49).

Efforts to tackle food insecurity have also been supported by EU policies such as the new Social Fund³ as a response to people in social need, although this has not been taken-up in the UK to any great extent (50).

In practice, there are a number of ways that surplus food reaches food insecure people. These broadly include the following types of food programmes. In everyday situations these programmes have varying practices when it comes to accepting surplus food and activities may overlap, so a food bank may also organise a soup or meal kitchen or even a mobile food service for the street homeless.

Food banks: The term “food bank” can refer to one of two types of service: “a large redistributor of rescued food to smaller charities that provide cooked and/or uncooked food to food insecure populations or a service that provides grocery items directly to clients” (51). In the UK context, a food bank most commonly refers to the

³ The European Social Fund (ESF) replaced the programme for the Most Deprived Persons (MDP) in 2013 and consists of a pot of money - €2.5 billion - for Member States to draw on for the most deprived in their communities. This new fund, the ESF, was justified by the increase in the numbers in poverty within the European Union. Food poverty is mentioned in the document but how priorities would be set are unclear. The document identifies the problem that food poverty and more general cohesion issues cannot be solved at an EU level but must be driven by Member States.

latter direct service and is operated by a range of volunteer-based organisations. Typically, emergency food parcels consist of 3-5 days' worth of non-perishable food such as sugar, soup, pasta, jam and tinned products to families. The Trussell Trust, the largest and only national network of food banks in the UK, operate their food banks using a system of referral from a frontline health or care professional. The Trussell Trust specifies that clients be limited to receiving a total of three referrals, after which they attempt to plug clients into other systems of support, although this depends on the scale of operation of a local food bank and the expertise available locally as most are staffed by volunteers and have limited resources at their command. It has been noted that there are many food banks that operate independently of the Trussell Trust in the UK, which may or may not have comparable practices for referral and food distribution.

The extent to which food being distributed in foodbanks currently comes from surplus food sources is not known. The Trussell Trust emphasizes that most of the food they distribute is donated by members of their local foodbanks' communities according to a standardised shopping list of non-perishable food. This model of supply has resulted in what has become known as *donation-based food supply chains*. In countries such as Brazil, this is formalised so that donations feed into an existing state-sponsored structure, but in the UK, this relationship remains informal. Recent partnerships with large supermarket chains suggest a direction toward recouping surplus food from these sources. Reports from independent food banks operating in the UK also illustrate instances of fresh surplus food being incorporated into emergency food parcels in the UK (52). Current barriers to scaling up this practice may be the lack of *Good Samaritan* legislation in the UK and the lack of facilities in many food banks to store and handle fresh produce. In contrast, in Canada, where a national network of food banks has been in operation since the 1980s, a highly sophisticated system of surplus food collection and redistribution has been developed: up to 85% of food distributed through food banks can be surplus food from large corporate food retailers and producers (32).

Social supermarkets: These food distributors source free surplus food and consumer products that are still fit for human consumption but are no longer of saleable quality from the retail sector, and sell them to customers who are people who are living in poverty or at risk of poverty (53).

In social supermarkets products are sold at significantly reduced prices thus reducing the proportion of household budget needed to be spent on food by low-income households using them. Since food costs can be up to 20% of low-income households' budgets, this lowering of food spend can potentially significantly reduce financial strain. Many social supermarkets follow a membership model, for example those in receipt of means-tested benefits or living in the area but for a limited time period. These two factors are meant respectively to deal with the problem of dependency and jeopardising other local businesses.

One example of such a model in the UK is the Community Shop (<http://www.community-shop.co.uk>), a shop where surplus food is offered for sale at greatly reduced prices to members. Community shop is the social arm of a commercial enterprise called Company Shop, which has a network of staff shops, stores and 'click and collect' services, providing food at reduced costs to members that work in the food manufacturing industry and emergency services. At the moment there is some confusion over the approach and many do not realise that the Community Shop model is a franchise. The impact of these initiatives on food security and poverty are not yet clear as the development of such enterprises remains at an early stage.

Across high-income countries, these supermarket models are not common, although similar models exist in France and Belgium. The French state, unlike other European models, has embedded food aid in a relationship with the agricultural sector and through a modified retail sector (54). The state, through social supermarkets, aims to reconnect agriculture with food aid on the basis of a model based on mutual self-interest (55). Variations on the model are being explored in Northern Ireland and Scotland and by a number of local authorities, so we are likely to see more of this type of outlet.

Organisations providing prepared meals: Lastly, a number of community and charitable organisations, ranging from soup kitchens to community meal programmes may receive surplus food to supplement the ingredients for meals they prepare for individuals and families. Similar to food banks, there is wide variation in the forms these programmes take. For these organizations, surplus food reduces the amount they have to spend on food purchases, enabling them to focus more of their resources elsewhere (8), but again, the extent to which surplus food is used across these agencies is not known.

FareShare, the main organization that collects and redistributes food in the UK, estimates that in 2015 they saved 10,795 tonnes of food from landfill and redistributed to 4,652 meal programmes in 2015 resulting in 21.9 million meals being provided to those in need (see <http://www.fareshare.org.uk/about-us/>). As one example of an organisation operating a similar model in a local geographic region, the Oxford Food Bank redistributes mostly wholesale fresh food to local organisations that provide cooked meals to their clientele, but also to organisations that give away food parcels (52). Another model is operated by FoodCycle which uses ‘surplus food, volunteers and spare kitchen spaces to create nutritious three-course meals for people at risk of food poverty and social isolation’ (see <http://foodcycle.org.uk>). Such models of operation assume staff have the skills, and facilities exist, to handle perishable foods (56).

5. The benefits and drawbacks of using surplus food to feed food insecure people

As already highlighted, the timing of recent increased awareness and advocacy on surplus food has been linked by many to the need to supply food to charities across the UK. To enable critical debate about the drawbacks and merits of using surplus food to feed those in need, focusing on food banks and meal programmes, we ask what are the outcomes of this activity for six potential beneficiaries: people experiencing hunger, food industry, volunteers working within food charities, charitable organisations running food programmes, the government, and society at-large. Table 1 below considers each stakeholder group in turn and provides commentary in terms of to whom the benefits accrue.

Table 1: Benefits and drawbacks of using surplus food to feed food insecure people for different stakeholders, focusing on food banks and meal provisioning

Stakeholder	Benefits	Drawbacks
People who are hungry/struggling to make ends meet	<ul style="list-style-type: none"> • Contributes to alleviating hunger in the short term • Delivery of fresh surplus food may enable a wider variety of foods, particularly nutritious fruit and vegetables to be consumed • May enable provision of social activities by the food charity 	<ul style="list-style-type: none"> • Impacts on health and food insecurity have not been robustly evaluated; research suggests some short-term impact for those willing and able to access this support, but no impact on the problem at population-level • Variability in supply means that surplus food cannot be relied upon to meet needs • Choice limited by what is “surplus” in the food chain • Logistical challenges may limit surplus donated food to canned or processed foods that can be stored easily, leading to concerns about nutritional quality and adequacy • Relies on the ‘needy’ accessing local services and referral (where available and if accessible) and so many who are food insecure may not be able to access this form of assistance • Clients using emergency food services may feel demeaned and stigmatised by having to receive surplus/waste food • Suggests to recipients that using surplus food is an acceptable way for their food insecurity to be addressed • Clients receiving emergency food aid are denied the right to shop for affordable food like his/her counterparts • Does not address social justice or people’s right to food • Encourages the move from cash benefits to food benefits, so reducing choice from buying food and the ability to meet non-food needs
Food industry (grocery stores, food manufacturers, farmers)	<ul style="list-style-type: none"> • Reduces the amount of food waste industry has to pay for landfill, thereby reducing operating costs • Provides assurance to the public that food is not being wasted • Reduces the amount of food waste to be reported annually • Part-fulfils retailers’ corporate social responsibility commitments 	<ul style="list-style-type: none"> • Devolves responsibility from Government to the private sector • Requires significant infrastructure and logistical support to coordinate distribution across variety of agencies receiving surplus food • May discourage changes in food production and manufacturing processes that bring environmental benefits
Volunteers working in charities	<ul style="list-style-type: none"> • Provides volunteers with a greater variety of foods to distribute to their clients • Can broaden activities to include cooking activities, providing greater integration between “provider” and “receiver” 	<ul style="list-style-type: none"> • Time and food donations are a finite and unpredictable resource due to donor fatigue and so may demoralise volunteers and put them in a difficult position with service users

	<ul style="list-style-type: none"> • Feel better able to contribute and help those in need in their community, while also making use of surplus food 	
Charitable organisations running food programmes	<ul style="list-style-type: none"> • Provides a focal point for donation and dissemination of food aid • Eases charities’ budgets by reducing the money needed for food purchasing, enabling a focus on providing other services and/or assisting more people 	<ul style="list-style-type: none"> • Places responsibility of ensuring food access on charitable organizations • Users receiving food can be determined by interests of charities • Potential danger of undermining public welfare provision and creating divides in society • Ability of charities to rely on surplus food determined by donor willingness to continue to cross-subsidise the loss of revenue to industry as a result of food waste • Increased reliance on unpredictable supply of surplus food reduces ability to provide standardised nutritionally balanced rations • Specific storage facilities needed to store fresh perishable surplus food
Government	<ul style="list-style-type: none"> • Government can make a claim to have supported the reduction of food waste and food poverty • Easy apparent win for Government – legislate for others to deal with the issue 	<ul style="list-style-type: none"> • Absolves the Government from its moral obligation to provide social security – depoliticizes the issue
Society	<ul style="list-style-type: none"> • Appearance of a responsible society, caring for its most vulnerable citizens and dealing with food waste 	<ul style="list-style-type: none"> • Civil society cannot sustain long-term the role of social security benefactor • Divides society into groups who have to rely on “leftovers” and those who can afford to choose what they eat • Does not address the environmental and societal problem of over-production.

Table 1 above outlines how reliance on surplus food has both positive and negative implications. While there are clear benefits to diverting surplus food away from landfill, the reasons for pessimism outweigh those for optimism. This is because the benefits of using food waste to feed people accrue primarily to the food industry whilst absolving responsibility of the government to address food insecurity. Essentially this serves to distract from the systematic problem of food surplus and waste in the broader food chain and does little to deliver a sustainable, long-term, effective, pragmatic and morally appropriate solution to eradicating food insecurity. Below, we further detail the main concerns about increasing the practice of distribution of surplus food to emergency food aid organizations.

5.1 Reliance on surplus food is demeaning and stigmatising

Citizens, irrespective of their economic standing, are entitled to a choice of healthy and affordable quality food. The primacy of the basic principles of social justice and equity are under threat when surplus food is relied upon to feed low-income people. People should have the right to choose food that is adequate and appropriate to their needs. Having less money than their higher-income counterparts does not refute the right to choose food that meets their tastes and



preferences in socially acceptable ways, without attachment of social stigma or relegation to inferior choice, accessibility and (nutritional) quality. This critique applies both to food that is donated from the food industry as surplus and to food donated by individuals. The end result is one that is the same for the recipient, no matter how grateful they are (56).

Numerous studies have documented the feelings of shame and stigma felt by users of charitable food programmes (31, 32, 57-59). While few have focused on what users feel about receiving surplus food specifically, the practice of redistributing such food may exacerbate feelings of exclusion and worthlessness. Another risk is that reliance on surplus food that might appear unfit to eat and that is unmatched to the recipient's specific needs and preferences, can further impact negatively on the feelings of food insecure people. A study from Canada, where food banks heavily rely on surplus food and have little control over what foods they offer (43), highlighted that limited and poor quality of foods offered at food banks together with a the perception that food banks only offer "junk" food were reasons why food insecure families did not use their local food banks. Among families who were food insecure in this sample, less than one third had used food banks in the past 12 months (32).

5.2 **Little evidence linking provision of surplus food to relieving hunger in the short or long term**

Poppendieck in the US and Riches and Tarasuk in Canada show how food insecurity has not been addressed in over 30 years of food banks in their respective countries (6, 7, 48). The various contributions in Riches and Silvasti's book show how hunger pains have instead increased when systems have relied on food banks as the main source of food aid (38).

The limitations of relying specifically on surplus food are well recognized by food bank managers and volunteers, see Figure 4 (42). The concern is that shifting toward such type of support will negatively impact on the ability of volunteers to provide what they desire to deliver. This argument is paralleled by what Riches and Silvasti (p. 197, 38) identify as the industrialisation and corporatisation of the food charity sector with the involvement, support and sponsorship of transnational food companies. While emergency food providers may strive to offer nutritious food parcels often with the support of nutrition advisors, they remain dependent on an erratic supply from various commercial and private food donators that cannot guarantee nutritional adequacy nor meet the specific dietary needs of those relying on them (43, 60, 61). Another key point here is that the recipients often do not have the resources to make use of some of the food received. In recent times for example, the Trussell Trust has highlighted the tension between 'heating or eating' where families have to make decisions about heating the house, paying other bills or buying and cooking food. So the ability of beneficiaries to benefit from food parcels also depends on other resources they have at their disposal.

Furthermore, reliance on surplus food reduces the ability to plan on any medium- to long-term basis, due to it, by its very nature, being erratic, uncertain and non-guaranteed as a source of supply, which means it is difficult for volunteers to forecast how many clients they can see each week and how they can best support them. The stock of surplus food is constantly changeable, resulting from failure to match the supply of food to consumer demand or misinterpreting future purchasing patterns. Because surplus food could pose a threat to profits, it is often preferable for business to discard of it, even when this requires absorbing the cost of production and waste disposal. A classic problem facing food aid charities is



therefore the uncertainty of supply from week to week, which can vary according to the weather and consumer demands (43, 60-63).

We note here that studies of volunteers working in food banks have highlighted that for some, being able to provide any food support *at all* is their aim and that the quality of food is not a major concern (60). Therefore, if using surplus food means volunteers have larger food supplies to distribute, regardless of its quality or surplus nature, increasing the supply of it to food charities may result in them accruing benefit from being able to give out more food, without necessarily meeting the food needs of food insecure people. We also are concerned that there is little evidence to suggest that emergency food aid is able to provide those living in hunger with the sense of having access to a secure and sufficient source of food to meet their needs (32, 63). As noted above, there is work on what van der Horst et al (39) has called the ‘*dark side*’ of food banks (56).

The amount of effort required to collect and redistribute surplus food compared to the magnitude of the problem of food insecurity in high-income countries also raises questions about whether this is an efficient and effective way to address insufficient food access (25). While some efforts have been made to steer the nature of donations, food banks are limited in their ability to store healthier perishable foods such as fruits and vegetables, and donors will have little incentive to focus on foods that require more specialized attention and storage facilities (56). This means that donated surplus food is unlikely to supply nutrient-dense foods in sufficient amounts to meet dietary needs.

5.3 Encourages industry action – but at the expense of right to food

The scale of the problem of food waste is indefensible and so it is to be welcomed that the food industry is addressing avoidable food waste (64). Retailers and manufacturers have invested in technological solutions to reduce food waste (65) that are both practical and meet customer expectations at the right price. Policymakers and commentators should encourage such continued action across the food chain to reduce food waste. However, this should not be at the expense of the right to food. The right to food is compromised if people have to approach or depend on food distributed through the charity economy, whether a food bank, a social supermarket or a soup kitchen. This is not just about adequate food but also food that is culturally appropriate and relevant to their needs and preferences (40).

The formation of the United Nation’s Food and Agriculture Organization (FAO) in 1945 allowed leaders from across the globe to meet and agree upon strategies to help establish the conditions for a stable global food supply by improving the economic and environmental sustainability of food systems and tackling hunger and inequality. However, only when the right to food for all is fulfilled in all its aspects can a population be considered food secure. Article 11 of the 1966 United Nation’s International Covenant on Economic, Social and Cultural Rights states that every human on earth has the right to an “...adequate standard of living... including adequate food, clothing and housing” (66). According to the FAO,

“Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.” (67)

The former United Nations Special Rapporteur on the Right to Food mapped out best practice for all countries on the legal and institutional steps to realise food security and fully implement the right to food (68, 69). He estimated in his final report that 23 countries had explicitly incorporated



the right to food in their Constitutions and another 33 recognised the right to food implicitly as part of broader human rights guarantees. A further 19 had adopted or were drafting a framework law to implement the Constitutional right to food; several had adopted national food and nutrition strategies and established institutions charged with their oversight. In some countries the right to food has been legally enforced through the courts, providing citizens an opportunity to hold their governments to account. The Constitution of the United Kingdom of Great Britain and Northern Ireland however, does not explicitly guarantee the right to adequate food. (Source <http://www.fao.org/right-to-food-around-the-globe/countries/gbr/en/>)

Charitable food donations to emergency food aid providers have a limited place in a community development model of facilitating meal and social provision to our most vulnerable citizens. It is unsustainable and socially inequitable to diminish an individual's human right to nutritionally adequate food by relying on charitable food distribution. It is worth repeating De Schutter's observation in London in 2013 (41) that although the use of social security, such as cash transfers, food stamps or vouchers for people to access food can be defended, charity based food banks are dependent upon surplus/donated food and good will and so are not meeting a human right. In this way, charitable food assistance cannot substitute for social security protection to ensure the right to food. And indeed, these points were recently espoused by the Trussell Trust Foodbank Network, who emphasized that their distribution of food to hungry people must not become the 'new normal' (70). These points are also covered by Dowler and O'Connor (71) in their commentary on the UK and Ireland.

While more work could be done to enhance and enable the supply of surplus food to the food insecure, enhancing the redistribution of surplus food to emergency food aid charities does not afford human dignity to the everyday practices of food choice, access and consumption of a nutritionally adequate meal in socially acceptable ways. The immediate benefit of an emergency food parcel is undermined by the knowledge that it is not always nutritionally balanced and that the short-term nature of the intervention does not address the structural causes of food poverty, nor is it guaranteed to deliver the specific dietary needs and health outcomes needed by this vulnerable cohort. Meanwhile, the benefits accrue to the food industry and environmental compliance, whilst the risks are borne by the hungry client and the charitable sector.

5.4 Food waste is an issue in its own right

Proposing the use of surplus food as a response to food insecurity is problematic because it serves to distract political and popular opinion away from the food waste issue. It is therefore important to lobby and advocate against food waste as an issue of merit in its own right. Food waste is a hugely important problem with many identifiable actions that may be taken to discern and promote the fact that reducing food waste is the responsibility of everyone. Importantly, while there is a food waste hierarchy that clearly advocates prevention over disposal (see <http://www.wrap.org.uk/food-waste-reduction>) and while there will always be a certain amount of (unavoidable) residual food waste in any food system, the current level needs to be lowered and everyone has the potential to play a contributing role in its continuing reduction. Some examples of how this can be done follow:

Primary producer: There is merit in further exploring the potential for unused harvests to be used for feeding animals (although due diligence must be practiced in accordance with appropriate public health and food safety issues related to BSE). If

retailers relax cosmetic standards for food then more will find its way onto the shelves (see below).

Retailers: At the merchandising and sales level, retailers should consider their stock control/planning, communications with suppliers, packaging and promotional offers to reduce waste. There is a policy imperative to simplify duration indicators (“Best before”, “Use by” and “Sell by” dates) on food labels to render them more meaningful to consumers and further reduce the potential for avoidable food waste at home.

Consumers: Today’s food culture means produce is often wasted in the effort to meet consumers’ high expectations. There should be a concerted effort to encourage people to lower their cosmetic demands for fruit and vegetables and end the use of cosmetic standards for food in the retail sector. One example of such a recent campaign is the @UglyFruitandVeg campaign (see <http://www.endfoodwaste.org/ugly-fruit---veg.html>). Consumers should also be encouraged to reduce domestic waste.

Society/community: There is scope for a community approach to alleviating food waste via community/solidarity and engagement. This model is gaining traction among policy makers with reviews being commissioned in two of the UK devolved administrations. Whilst there is some evidence available from Europe of this alternative model, the danger that it becomes another model of distributing food to the ‘deserving’ and able poor, requires vigilance and monitoring before its transference to the UK. The Community Shop referred to earlier is one but not the only model emerging.

We will continue to see citizen responses to food waste and surpluses and these are to be commended, but the fundamental difference is that these community/ citizen responses are often driven by a concern with environmental issues. Some of these differ in that they are not proposing that the solution to food insecurity lies in the redistribution of surplus food, (see Olio <http://olioex.com> for such an example of neighbours sharing surplus food).

Policymakers: Governments, development agencies and organisations like the UN must work together to help change people’s mind-sets on waste and discourage wasteful practices by farmers, food producers, supermarkets and consumers. In addition, there is a moral obligation on policymakers to redefine food waste/surplus food. Any new definition should, as a first priority, dissociate waste/surplus food from the food insecurity debate as one issue does not improve the situation of the other.

We note that while much remains to be done and technology is helping to predict consumption patterns, it is likely that there will always be food surplus at the retail end. The problems of the developed world can be seen as more closely linked to what Dixon and colleagues have called ‘consumptogenesis’ (72). We live in a consumptive environment where manufacturers and retailers overproduce to meet consumer demand as what it is deemed unacceptable is a consumer asking for a product and it not being available (72).

5.5 Solutions to food insecurity do not lie in enhancing the supply of emergency food assistance

Here, we point to the need for root causes of food insecurity to be addressed as the use of surplus food by food banks is not an effective or sustainable solution to improving the situation of our most vulnerable citizens.

A recent report by the Fabian Society focused on upstream determinants of food insecurity concluded that the solutions are to be found in what they call the ‘poverty premium’ which is about ensuring people on low-incomes have an adequate income and affordable housing (59). For key living costs the ‘poverty premium’ means that people on limited incomes pay more proportionally for food, utilities, housing, household appliances, and transport. There is also a need to identify and address problems in the benefit system that mean benefit recipients experience delayed payments or payments being cut-off all together. Importantly, given the recent rise of in-work poverty, there is a need to address low-paid and insecure work. Monitoring food insecurity at a national level would help lead to identification of policies that prevented and reduced food insecurity (25).

As noted earlier, citizens should have the right to choose food that is adequate and appropriate to their needs. Having less money than their higher-income counterparts does not refute the right to choose food that meets their tastes and preferences in socially acceptable ways, without attachment of social stigma or relegation to inferior choice, accessibility and (nutritional) quality.

6. Conclusions and recommendations

Food waste is a significant global issue and so the current debate on how to reduce it across the entire food chain needs to continue. Whilst there has been a similar focus on reducing food insecurity, it does not naturally follow that one is the solution to the other, irrespective of the political and legal momentum to combine the two issues as complementary. Popular and political media need to disaggregate the two distinct separate issues (food insecurity and food waste) and consider each as sufficiently significant as to merit its own informed and sophisticated debate.

Having considered the pros and cons of this practice, the analysis points to the fact that it is demeaning to suggest a two-tier approach to a rights-based food issue whereby some citizens are able to choose food in socially acceptable ways while others have that choice made on their behalf, fulfilled by surplus food that is not considered saleable by the retail sector. We need to urgently get the public health community and politicians on board with the idea that legislation to compel food retailers to send more food surplus to food banks is not a way to address hunger. It will solve neither food insecurity, nor a dysfunctional food system. The system of philanthropy based donations from individuals does not provide a solution either. Some argue that both donations and the use of surplus foods from supermarkets contribute to surplus food production and are located in a world of commodities and the consumer nature of the food system (1, 2, 38, 41). Such systems run the danger of allowing governments to avoid the issue of income transfers to individuals and families to address food insecurity and poverty. Food transfers whether distributed through the state or through charities are not the most efficient or effective way to deliver on food security (38, 71).

While there have always been food banks, setting up systems which mandate that food surplus be given to food charities institutionalises a process which does not meet the rights of citizens in need; it does not meet their social right to food and in many instances does not address their nutritional needs. In the short term, it is likely that food donations, food banks and other emergency outlets will continue but it is important that these do not become by default the mainstay of food provision for those in need. As Lorenz (1, 2) notes, a model based around food banks and other charitable food distribution does not in the longer term avoid food waste as such a model of operation is based on more disposable waste and surplus food in the



system, driven by supply not demand. Additionally it runs the danger of addressing a problem which has deeper roots with a short-term Band-Aid. Food insecurity can only be addressed by governments guaranteeing their citizens a standard of living which includes a right to food.

We note however, that the ability to fully weigh the merits and drawbacks of using surplus food to meet the needs of food insecure people is limited by the lack of studies exploring the impact of such food on the quality and quantity of food aid distributed in the UK over time and whether it exacerbates feelings of shame and stigma. The health and safety concerns of using surplus food also need to be assessed, as do the costs/benefits of the volunteer effort, transportation and storage requirements and in turn evaluated against upstream solutions aimed at preventing household food insecurity and improving health.

It bears repeating that it should not be the duty of individuals or our community and voluntary sectors to perform the social security functions of our Government, as has been entrenched as systematic in our North American (USA and Canada) counterparts. To continue to normalise this approach is truly regressive. The Government needs to provide the political leadership, courage and conviction to address the structural causes of poverty and hunger by considering the impracticality, morality and distraction of using food surplus as a legitimate response to household food poverty.

So in the short term, while the redistribution of food waste to emergency food aid providers may provide immediate relief, there is no evidence to show that it adequately addresses food insecurity. There is evidence from other countries that the use of food waste by emergency food aid providers 'depoliticises' hunger and allows governments not to address the gap between income and food costs. Instead, the problem of food insecurity needs to be addressed by government action to ensure that benefit delays and sanctions do not lead to families seeking aid from food banks and that the gap between income and food costs is closed. Food banks cannot and should not be seen as a substitute for a comprehensive social security provision. Likewise solutions to food waste are not to be found in redistributing food surplus and waste from supermarkets to food banks and other emergency food aid outlets.

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