



Holding Retail Corporations Accountable for Food Waste: A Due Diligence Framework Informed by Business and Human Rights Principles

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Abstract

Retail corporations orchestrate much of what happens in today's food supply chains. From setting sky-high cosmetic standards for fresh produce to bundling off close-to-expiry products at discounted prices, retail's contribution to food waste often extends beyond its in-store numbers. By occupying a powerful position in a globalised food system, these corporations enable chronic overproduction and consequently, the removal of surplus food from supply chains. This, in turn, contributes to the unfair distribution and overexploitation of food resources, further exacerbating the globally pervasive problem of food insecurity. To realise the right to food and the United Nations' Sustainable Development Goal of halving global per capita food waste by 2030, we argue that retail corporations must be held accountable for their direct and indirect contribution to food waste. We posit that to make a tangible difference, they must move away from the current voluntary corporate social responsibility approach to food waste reduction and instead invest in robust due diligence mechanisms and transparent reporting systems in line with the UN Guiding Principles on Business and Human Rights and the upcoming EU Corporate Sustainability Due Diligence Directive. Based on Pillar II of the Guiding Principles, we propose a five-step approach to accountability for food waste that may lead to serious actions towards the relaxation of cosmetic standards, abolition of unfair trading practices, and improvement in demand forecasting, thereby reducing the volume of food that ends up as waste.

Keywords Food waste · Retail power · Private standards · Corporate social responsibility · Business and human rights

Abbreviations

BHR	Business and human rights
CSR	Corporate social responsibility
FAO	Food and agriculture organisation of the United Nations
NGO	Non-governmental organisation
SDGs	Sustainable development goals
UN	United Nations
UNEP	United Nations environment programme
UNGPs	United Nations guiding principles on business and human rights

Introduction

A rapidly growing body of scientific literature suggests that food waste exacerbates climate change, negatively impacts food security, and causes grave economic harm (Papargyropoulou et al., 2014; Vermeulen et al., 2012; West et al., 2014). In the last decade, food waste has made its way to the top of policy agendas around the world. From national and regional institutions to the United Nations, there has been palpable political will to take action to reduce the amount of food that ends up in landfills and incinerators.

Calculating food waste volumes at various stages of the supply chain is a critical first step towards implementing prevention and valorisation strategies (Parfitt et al., 2010). The most reliable global estimates for food waste are currently provided by the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Environment Programme (UNEP), who are custodian agencies for the Food Loss Index and the Food Waste Index, respectively. Both these indexes were developed in connection with the United Nations Sustainable Development Goal (SDG) target

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12.3, which aims to halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains by 2030. Food material that gets removed from the food supply chain before the retail stage is referred to as food loss (UNEP, 2021). When food is removed during or after retail, it is known as food waste (UNEP, 2021). However, the scope of this commentary does not necessitate the use of such a dichotomy. Therefore, we use the term ‘food waste’ to refer to both, food loss and food waste.

As per the latest measurements, the annual food loss and waste volume is estimated to be around 1.3 billion tonnes (UNEP, 2021). This is one third of all food grown on the planet every year. The Food Waste Index which monitors and reports on waste from the last stages of the food supply chain including retail, food service, and households estimates that 931 million tonnes of food is wasted at these stages every year. As per the 2021 Food Waste Index report, 61.1% of these 931 million tonnes comes from households (UNEP, 2021). A further 26.2% comes from food service operations. And lastly, a modest 12.6% from retail (UNEP, 2021). The remaining 369 million tonnes of the total volume is lost before it even reaches the retail or food service stages. These numbers have inspired several consumer-focussed interventions and a broad range of studies that aim to understand the drivers of household food waste and reduce its occurrence (Hebrok & Boks, 2017). Meanwhile, food loss reduction efforts have been working towards optimising post-harvest techniques and improving storage infrastructure (Hodges et al., 2011). Studies examining retail-level food waste often focus on the quantities of food discarded by supermarkets (Xue et al., 2017).

It has been established in existing literature (see Section ‘Retail power in food supply chains’) that retail’s impact on food waste extends much beyond its own tangible waste. By holding a pivotal position in today’s food system, retail corporations influence how much food is discarded by actors throughout the chain. In this commentary, we further argue that CSR strategies are of limited use in this context and conceptualise the possibility of addressing the issue of food waste through an accountability-based system rooted in the realisation of the human right to food. The piece is organised as follows. Section ‘Retail power in food supply chains’ describes the various ways in which retail corporations exert power over upstream actors in the food supply chain as well as consumers and political processes. In the section titled ‘Corporate social responsibility and food waste’, we investigate corporate social responsibility strategies employed by retailers to address food waste in their supply chains and examine the shortcomings of this approach. This is followed by a section on ‘Conceptualising a human rights-based due diligence framework to address food waste’ wherein we look at food waste through a business and human

rights lens and propose an accountability-based system to address it. The commentary ends with concluding remarks.

Retail Power in Food Supply Chains

A major advantage that retailers have over other actors in the supply chain is their proximity to consumers. Having access to consumer preferences allows retail to take on the guardianship of consumer interests and dictate what and how much to produce to upstream actors. Since the late 90 s, retail corporations have gained considerable market power, creating an oligopolistic market structure (Rossignoli & Moruzzo, 2014). Retail conglomerates from developed countries in the Global North, especially those incorporated in the European Union, command immense influence over producers and processors all over the world (Bui et al., 2019; Fuchs & Kalfagianni, 2009; Rao et al., 2021; Rossignoli & Moruzzo, 2014). These corporations dictate safety and quality specifications through contractual agreements with their suppliers, often through various ‘voluntary’ private standards developed by them (Rao et al., 2021).

Private standards started out with the aim of harmonising food safety requirements in a rapidly globalising market in the late 90 s and early 2000s. However, wanting to establish export credentials made them de facto mandatory among suppliers throughout the world. Eventually, private standards became the minimum requirement for simply existing in the market, and retailers started using them to create product differentiation and enter new markets (Konefal et al., 2005; Trienekens & Zuurbier, 2008). To retain their compliance certification for these standards, producers and other actors are compelled to adhere to new and changing demands regarding their products and processes. These requirements can range from specifications regarding the cosmetic standards for fresh produce to the use of certain packaging materials for finished products. While actors in developed countries are often offered flexibility regarding the adoption of new requirements, those in developing countries are compelled to accede (Naiki, 2014).

Although the connection between private standards and food waste has not been studied as extensively as some other aspects of food waste management, it is known that the prescriptive and demanding nature of these standards leads to the wastage of food that is fit for human consumption. Consignments of food are known to be rejected and produce is known to get left unharvested on fields if found to deviate from standard requirements even slightly (Hansen & Trifković, 2014; Parfitt et al., 2010; Rao et al., 2021). Retail corporations are also known to use private standards to carry out unfair trading practices (Thompson & Lockie, 2013), both at the international as well as national and local levels (Ghosh & Eriksson, 2019). Retailers are also able to reject

perfectly compliant products if cheaper options are accessible elsewhere. Due to ‘take-back agreements’, manufacturers are obligated to take back unsold products without retail corporations having to pay for the now unsaleable products. Overall, it is well recognised that cosmetic standards for food products enforced by retail corporations play a key role in the sustenance of unfair trading practices that in turn lead to food waste generation (Devin & Richards, 2018; Messner et al., 2022; Piras et al., 2018; Richards et al., 2012).

Next to directly impacting supply chain actors through business relations, retail corporations are known to influence the governance of the food system more broadly as well. Fuchs and Kalfagianni (2009) for instance, show that retailers define and mould the discourse on sustainability in public policies and political processes. Certain sustainability issues are thereby prioritised over others, in a manner that fits the agenda of the retail corporations (Fuchs & Kalfagianni, 2009). Given food waste’s absence from the sustainability reports of some of the world’s biggest retail corporations (Pulker et al., 2018), it appears to be among the issues that have been assigned low priority. The work of Wakeman et al., (2022) explores this phenomenon through the lens of bounded ethicality. They suggest that heterogeneity of moral values combined with limited time and resources to address a plethora of sustainability objectives allows actors to be selective about the causes they address. Despite being aware of the social and economic consequences associated with food waste, retailers may not act on it if they do not see it as an ethical dilemma requiring urgent attention (Wakeman et al., 2022). Considering the complex and scattered nature of the food waste problem, Wakeman and colleagues conclude that retailers may not understand how their (in)actions are in fact morally charged and contribute to food waste. Additionally, they may also not think of food waste to be as critical a sustainability goal as other social, economic, and environmental issues in the food system.

Retail’s relationship with consumers is worth discussing here as well. It is well known that retailers transfer close-to-expiry products from their stores to consumers’ homes through multi-buy promotions, up-sizing coupons, and high-pressure marketing tactics (Aschemann-Witzel et al., 2015; Calvo-Porrall et al., 2017). In response to recent studies indicating that such promotions cause consumers to purchase more food than they can consume before the expiration date, some retailers have moved away from ‘buy one get one free’ schemes (Aschemann-Witzel et al., 2016; Evans et al., 2017). However, the sector continues to inform consumer choices in other ways. Dixon (2007) suggests that supermarkets have taken on a paternalistic role in today’s society by subtly but proactively taking charge of various aspects of consumers’ lifestyle choices. Evans et al., (2017) observed this in the context of food waste management as well. In their study, retailers sought to position themselves as cultural

and lifestyle authorities who benevolently offered to help consumers solve the problem of domestic food waste in their households through generic food storage tips and low waste recipes. Thus, as illustrated in Fig. 1, it is clear that the retail sector exerts its power in not only its upstream relationships but also downstream, with its customers.

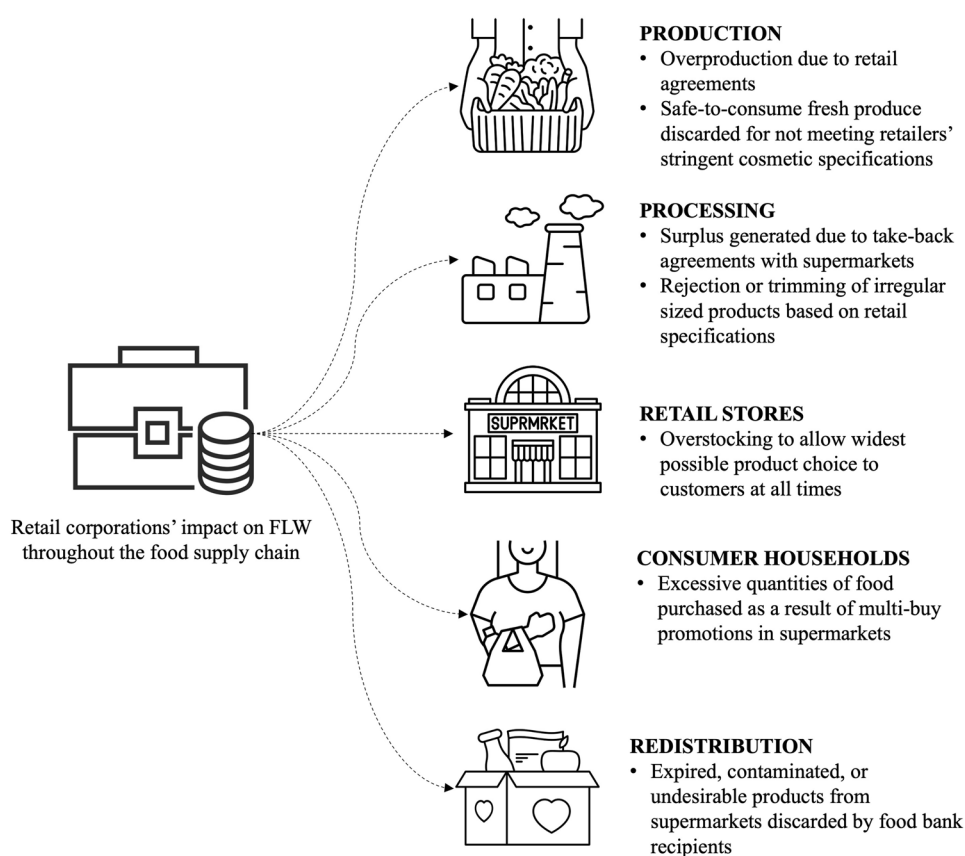
Several of the studies discussed in this section study retailers from the periphery. To gain a better understanding of the sector’s views on the issue of food waste, results from case studies and theory-based literature must be supplemented by additional cross-sectional research on the subject. However, empirically studying retail’s contribution to global food waste levels and its plans to act on the problem will require the sector’s participation. Through personal attempts to recruit participants for such studies as well as accounts described by other researchers (Devin & Richards, 2018; Parfitt et al., 2010), we know that the retail sector is reluctant to divulge information about the negative impacts of its market power. Often, suppliers are also hesitant to participate in this kind of research or speak up against retail’s impact on their food waste volumes so as to not ‘bite the hand that feeds’ (Devin & Richards, 2018).

Corporate Social Responsibility and Food Waste

Carroll’s foundational work on Corporate Social Responsibility (CSR) suggests that a business may be considered socially responsible if it fulfils society’s economic, legal, ethical, and philanthropic expectations (Carroll, 1979, 1991). Several commentators have contested this definition over the years (Sheehy, 2015), but most agree that CSR focuses on causes that are marketable, ‘good for business’, and allow for the improvement of business relations with stakeholders and customers (Cantrell et al., 2015; Rodriguez-Gomez et al., 2020; Rost & Ehrmann, 2017). Some guidelines on CSR, such as the ISO 26000, seek to frame CSR as an accountability tool by stating that organisations must take on responsibility for the impact of their decisions and activities on society and the environment (Moggi et al., 2018). However, considering that such guidelines remain legally non-binding, a shift in the definition or scope of CSR is unlikely to change the fact that corporations can choose which social or environmental issues they engage with.

The food industry’s strong dependence on natural and human resources offers it several CSR avenues to act upon (Hartmann, 2011; Maloni & Brown, 2006). Anselmsson and Johansson (2007) identify human, product, and environmental responsibility as the three dimensions of CSR relevant for food retailers. In the context of this analysis, food waste reduction can be classified as an environmental responsibility since the connection between food waste

Fig. 1 Retail corporations' impact on food waste throughout the food supply chain



and environmental degradation has been well established. Food waste's connection with food insecurity also makes it a human responsibility. However, given that CSR is deeply rooted in corporate volunteerism, food waste reduction competes with several other environmental and human responsibility issues for a place on retailer's CSR agendas.

Of all the ways in which retail corporations contribute to food waste, in-store food waste is the most noticeable to its customers. With activists and NGOs bringing public attention to supermarket food waste volumes, retailers are pressured into managing their surpluses in a way that society deems appropriate (Aschemann-Witzel et al., 2022). Donating to food banks, social supermarkets, and other charitable organisations has been a popular CSR strategy for managing in-store surpluses in a socially acceptable manner while earning 'green credit' (Filimonau & Gherbin, 2017; Hermsdorf et al., 2017; Shaw & Shaw, 2019). However, studies investigating the contents of food banks parcels have reported that they often contain products that recipients are unable to or do not wish to consume (Shaw & Shaw, 2019; van der Horst et al., 2014). Next to unpopular formulations that get left behind on supermarket shelves, expired and even contaminated products are known to end up in food bank parcels, a phenomenon that deeply impacts recipients' dignity and sense of self-worth (Shaw & Shaw, 2019; van der

Horst et al., 2014). Food banks' reliance on donations from private actors such as retailers has also been criticised as failure of state welfare mechanisms, especially in developed countries (Dowler & O'Connor, 2012; Lambie-Mumford, 2017; Poppendieck, 1999; Riches & Silvasti, 2014). Therefore, while donation does aid in the mitigation of hunger and offer a practical solution for using surplus food, dumping excess food onto socio-economically marginalised populations can neither be seen as a long-term solution to food insecurity nor can it effectively address the root causes of food waste (Messner et al., 2020). Other valorisation strategies that retailers employ include sending surplus food to farms to be used as animal feed or to digesters for conversion to biofuel. These strategies, although better than sending food waste to landfills, are environmentally inefficient when compared to preventing surplus food from being generated or using it for human consumption (Papargyropoulou et al., 2014).

Recent empirical findings suggest that CSR initiatives employed by retail corporations may create a façade regarding their commitment towards reducing food waste without requiring them to make systemic changes (Devin & Richards, 2018; Pulker et al., 2018). The most recent and comprehensive study analysing the CSR reports of the 100 biggest food retailers around the world found that only 22

of these organisations reported on their food waste reduction initiatives (Pulker et al., 2018). Some promised to be more transparent about their food waste numbers and others described partnerships with food rescue platforms and charities that allow consumers to take home their surplus food for free or at a reduced price (Pulker et al., 2018). Only one retailer, Tesco Plc, discussed plans to address food waste throughout its supply chain (Pulker et al., 2018). When retail corporations attempt to address the problem of food waste by focusing on solely reducing their own waste volumes, they merely treat a symptom of the systemic problem of overproduction. In wanting to appease consumer wishes for perpetually full supermarket shelves, a wide range of product variety, and perfectly shaped produce, retailers continue to enable a system that suffers from chronic overproduction.

Conceptualising a Human Rights-Based Due Diligence Framework to Address Food Waste

Free-market capitalism allows retail corporations to operate with the singular aim of maximising profits, without having to address the issue of overproduction. Some scholars believe that the socio-environmental nature of the food waste problem warrants government action via economic incentives and sanctions. This view often excludes businesses from having to take responsibility beyond voluntary CSR initiatives. An opposing view, captured in the business and human rights discourse (Ramasastry, 2015) and legal and policy developments (European Commission, 2022; United Nations, 2011), contends that corporations must be held to account for not acting on business practices that actively harm the wellbeing of communities and obstruct the fulfilment of human rights.

The right to food has been recognised in two international human rights instruments, the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights (hereafter the Covenant). Like other economic and social rights, the right to food is often misunderstood. It is not about the ‘government doing everything for everyone’, nor is it ‘the right to be fed’ (Riches, 2018), except in situations of emergency such as war or natural disasters. The right to food is multifaceted, and includes four interrelated elements: availability, adequacy, accessibility, and sustainability, which have been developed by the Committee on Economic Social and Cultural Rights (hereafter the Committee), the UN body tasked with monitoring the implementation of the Covenant (General Comment no 12 of the Covenant). Under the Covenant, states have the primary legal responsibility to ensure the right is fulfilled.

As argued by Telesetsky (2013), minimising food waste should be regarded as a means of realising the right to food. The Covenant does not explicitly mention food waste.

However, it does require states to take measures to “improve methods of (...) conservation and distribution of food by making full use of technical and scientific knowledge, (...) and by developing or reforming agrarian systems in such a way as to achieve the most efficient development and utilisation of natural resources” (Article 11(2)(a)). Telesetsky (p. 483) thus contends that “while this language may have been intended to be narrowly tailored to the food waste that happens as food loss in the fields as part of agricultural systems, it can also be read to apply to a lack of storage, markets, commodity networks, and small-scale processing industries since the obligation includes developing or reforming agrarian systems”. Building on her argument, we also note the availability component of the right to food, which is defined in the General Comment as “the possibilities (...) for well-functioning distribution, processing and market systems that can move food from the site of production to where it is needed in accordance with demand”. There too, the language used can be read as a recommendation to minimise food waste in order to realise the right to food.

Having connected food waste and the right to food, Telesetsky’s paper focuses on suggested public policy interventions to reduce food waste. The interplay between corporate activity and the right to food framework is generally not well researched, with some exceptions. For instance, Černič (2018) posits that the corporate obligation to avoid causing any harm to individuals’ enjoyment of food is irrefutable and that corporations in the food industry must strive to guarantee the protection of the right to food across their supply chains and business relationships. In the European context, Corini (2015) argues that the increasing attention paid to food safety has possibly led to state as well as non-state actors ignoring economic issues pertaining to food security, thereby failing to fulfil citizens’ right to food. Other scholars such as Riches (2018) and Narula (2006) have criticised corporate food banking from the perspective of the right to food and discussed the role of state and civil society actors in holding corporations responsible for infringing the human right to food, respectively. Based on these arguments, we establish that food waste is a right to food issue, and thereby, a human rights issue.

Building on the existing literature, we go one step further, and conceptualise food waste as a right to food issue, and in turn as a topic relevant to the business and human rights agenda. The Committee itself recognised as early as 1999 that the private sector has responsibilities in the realisation of the right to adequate food (General Comment, paragraph 20), but did not elaborate on this point. However, we now know that by enabling chronic overproduction, and consequently the removal of surplus food from food supply chains, retail corporations contribute to the unfair distribution and overexploitation of food resources, which hinders the right to food. Moreover, since 1999, the normative landscape on

business and human rights (BHR) has strengthened significantly, notably thanks to the adoption of the 2011 UN Guiding Principles on Business and Human Rights (UNGPs), thus allowing us to argue that food retailers should tackle food waste as a human rights issue in order to meet their existing and future responsibilities.

The UNGPs establish that corporations have a responsibility to respect human rights. To discharge this responsibility, they should have due diligence processes in place to identify, prevent, and mitigate their human rights impacts (United Nations, 2011). This responsibility extends beyond their own internal operations. It entails the scrutiny of the entire supply chain to ensure that the corporation is not linked to human rights harm through its business relations (United Nations, 2011). While CSR focuses on self-guided corporate volunteerism and philanthropy towards social causes, BHR aims to hold corporations accountable for harmful behaviours (Ramasastry, 2015). The UNGPs also emphasise that states have a duty to ensure that corporations respect human rights for example through the adoption of corporate due diligence legislation as a way to operationalise the corporate responsibility to respect human rights. We note recent legislative developments in this direction in France, Germany, and Norway, as well as the publication by the EU Commission of a Draft Directive on Corporate Sustainability Due Diligence (European Commission, 2022; Krajewski et al., 2021; Savourey & Brabant, 2021).

The connection between SDG 12.3 and BHR principles is pertinent here as well. Since their establishment in 2015, the SDGs have received an enthusiastic response from businesses. With organisations such as the World Business Council for Sustainable Development and PricewaterhouseCoopers highlighting the economic benefits of aligning business models with the SDGs, industry associations and business think tanks have been able to build a ‘business case’ narrative around the sustainable development agenda which is inherently linked to several human rights issues (Vives Gabriel & Wettstein, 2020).

In relation to reducing food waste, the impact of the UN SDG agenda is evidenced by the proliferation of voluntary agreements created with the aim of achieving SDG 12.3. Examples of such agreements include the UK Courtauld Agreement, the French national pact on combating food wastage, and initiatives led by organisations like Stop Food Waste Australia and Denmark Against Food Waste. While the goal of environment-focussed voluntary agreements is to take substantive actions to minimise the negative impacts of business operations, it is the prospect of public recognition of their efforts and a convincing business case around financial savings that often motivates firms to join them (Delmas & Terlaak, 2001; Piras et al., 2018). Participation in voluntary agreements allows businesses to alert consumers about their willingness and ability to provide products or

services with enhanced environmental credentials, thereby creating the opportunity for product differentiation (Arora & Cason 1999; Reinhardt, 1998). Furthermore, given the non-binding nature of such agreements and the lack of penalties for non-compliance, concerns regarding free riding cannot be overlooked (King & Lenox, 2000; Rivera & DeLeon, 2004). Similar to CSR, as discussed in Section ‘Corporate social responsibility and food waste’, businesses are likely to join voluntary agreements to improve the marketability of their brands and enhance business relations. In the context of SDG-inspired voluntary agreements, this is unsurprising given that the UN frames the role of businesses in the accomplishment of SDGs very broadly, mirroring the CSR rhetoric of voluntary actions, discretionary measures, and the absence of accountability mechanisms (Vives Gabriel & Wettstein, 2020).

However, a BHR reading of paragraph 67 of the UN’s agenda for SDGs creates the possibility for an accountability-based framing of the role of businesses in achievement of the SDGs. Paragraph 67 highlights the responsibility of the private sector in helping solve sustainable development challenges while ‘protecting labour rights and environmental and health standards’ in accordance with relevant international agreements and guidelines, including the UNGPs (United Nations, 2011). Some BHR scholars regard this as an exciting opportunity to steer business efforts to achieve the SDGs in a human rights-principled direction (Buhmann et al., 2018). Others suggest that unless the UN explicitly integrates a BHR approach into its SDG agenda, the UNGPs and SDGs will not overlap significantly despite several of their end goals being obviously complementary (Vives Gabriel & Wettstein, 2020).

Pillar II of the UNGPs establishes the corporate responsibility to respect human rights and asks companies to carry out human rights due diligence in order to meet this responsibility (UNGP 15). Under the UNGPs, the process includes five steps: (a) identify and assess adverse human rights impact of their own, or with which they may be connected through a business relationship (UNGP 18); (b) integrate their findings and take appropriate action (UNGP 19); (c) track how effective their actions have been (UNGP 20); (d) communicate about their due diligence process (UNGP 21); and (e) provide remediation in case they have caused or contributed to adverse impact (UNGP 22). While companies themselves have this responsibility and should drive the process, the UNGPs stipulate that (potentially) affected rights-holders must be included and empowered.

Applying this framework to food waste, we propose a five-step approach that retail corporations could take on to reduce the occurrence and negative impacts of food waste in their supply chains. The first step would be to map the drivers of food waste generation along the supply chain followed by an assessment of their negative impacts, focusing

especially on the impediment to citizens' right to food. The scope of this step must extend not only to direct impediments but also more broadly to communities and food system stakeholders who are indirectly impacted by food waste in the short as well as long term. Following such an assessment, the next step would be to develop and implement policies and procedures that integrate the reduction of food waste into all aspects of business operations while complying with state-stipulated food safety requirements. Any additional safety or quality requirements will need to be justified along with an explanation regarding the steps taken to ensure that they do not contribute to food waste. Retailers would also need to account for how their food waste management practices (or lack thereof) impact those of their suppliers and set targets for reducing food waste along the supply chain. The devised policies and procedures must have a robust connection to improved food security and must help advance citizens' access to food. The third step would require retailers to monitor and evaluate the effectiveness of their policies and procedures by tracking and analysing data on food waste reduction and its impact on food security. At this stage, retailers must meaningfully engage with stakeholders to gather feedback on their actions and progress. Relevant inputs provided by stakeholders should inform the next cycle of due diligence that the business will carry out. At the fourth step, retailers should provide remediation, wherein any identified drivers of food waste are addressed and affected actors are compensated. Depending on the context, remediation could encompass a variety of measures

such as taking (at least partial) financial responsibility for wasted food, partnering with food banks to improve food security in the long term, offering incentives to suppliers who make efforts to reduce food waste, and undertaking actions to offset the climate impacts of food waste. Finally, at the last step, identified food waste drivers, their social and environmental impacts, and business efforts to address them should be communicated to stakeholders, including investors, customers, and affected communities. Relevant inputs provided by stakeholders should inform the next cycle of due diligence that the business will carry out. Figure 2 provides a graphical summary of the accountability-based five-step approach to food waste reduction.

Several of the steps described above are often part of voluntary agreements as well. However, a key difference is that creators of voluntary agreements are able to cherry-pick measures that suit the CSR agendas of signatories, shielding them from the more tedious or profit-impeding measures. In the BHR-based approach we suggest, this is not a possibility. In order to align with Pillar II of the UNGPs, all five steps must be undertaken as opposed to only those that help public relations and bolster profits. Food as a human rights issue takes centre stage in this approach, thus calling for accountability from actors who obstruct the fulfilment of this right. Additionally, by centring its attention exclusively on retail corporations, the focus of the five-step approach significantly differs from that of voluntary agreements where all involved stakeholders are seen as equally responsible without much regard to power dynamics. Unlike

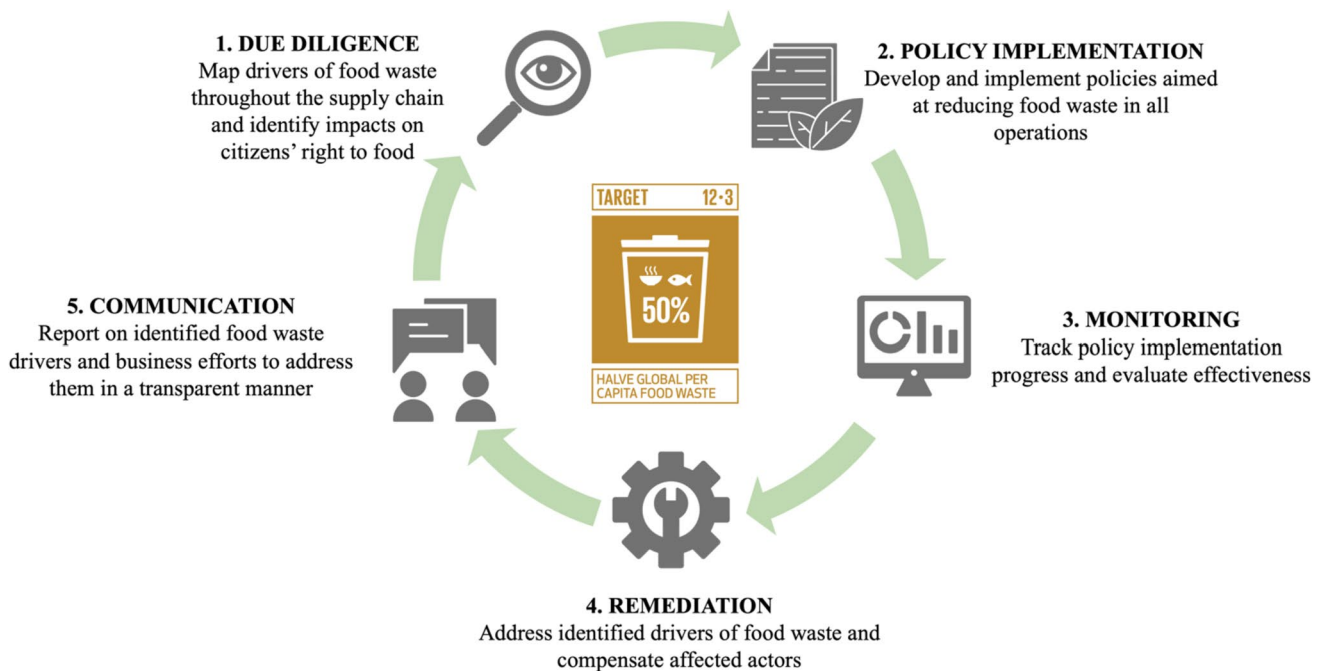


Fig. 2 BHR-based five-step approach to retail accountability for food waste

the CSR-adjacent approach of voluntary agreements, this framework is centred around retailers being answerable to relevant stakeholders, supply chain partners, and the state actors regarding their efforts to reduce food waste. These distinctions play a pivotal role in distinguishing our approach from voluntary agreements. In contrast to the fragmented and discretionary form of involvement promoted by voluntary agreements, our framework charts a coherent trajectory that harmonises the ambitions of sustainable development, human rights, and ethical business practices. The dynamic and cyclical nature of this approach also allows for continuous improvement and adaptation to changing circumstances, policy and regulatory measures, and technology in the field of food waste management. Considering the serious lack of attention to the human rights practices of retailers, the application of the five-step approach would pave the way for improved transparency regarding the business ethics of food retailers. Given the upcoming EU Corporate Sustainability Due Diligence Directive, large EU corporations, including food retailers, will be obligated to take responsibility for human rights issues and environmental harms throughout their supply chains. A framework such as the one we suggest will aid in the implementation of this legislation.

Furthermore, by specifically considering the human right to food, the five-step approach addresses a social and economic right often overlooked in traditional corporate social responsibility strategies. It recognises that food waste not only has environmental implications but also ethical and social consequences. By emphasising the responsibility of retailers to respect and protect the right to food, we underscore the importance of fair distribution and access to nutritious food for all right-holders.

BHR in the context of the food industry often focuses on other acute issues such as forced labour, displacement of indigenous communities and generally poor working conditions (Boudreaux & Schang, 2019; Lebaron, 2021; Rao & Bernaz, 2020). More generally, corporate accountability for economic and social rights such as the right to food remains elusive (Černič, 2018). This commentary, which presents food waste as a BHR issue due to its impact on the right to food while suggesting ways for companies to address it through a due diligence process, is a timely proposition in the light of the Draft Directive on Corporate Sustainability Due Diligence. If adopted, the Directive will bring human rights issues in supply chains to the fore in the European Union. It would require businesses to trace and identify the risks related to human rights and the environment throughout their operations, further strengthening the accountability-based system that we suggest in this commentary. The involvement of public authorities would help alleviate the steep power asymmetries prevalent in the agri-food sector, mitigating the possibility of retail corporations pushing the burden of due diligence onto weaker upstream actors.

Concluding Remarks

This commentary is the first to explore the connection between retail corporations, business accountability for human rights, and food waste. The bridge that we have created between food waste reduction and retail accountability opens a Pandora's box, for it leaves several questions unanswered. Is it feasible for businesses to accurately measure and monitor waste in today's complex, globalised food supply chains? Should emerging due diligence legislation be accompanied by industry-specific guidance addressing human rights issues, beyond those most commonly discussed? How can the fields of CSR and BHR coalesce to improve the state of global food waste? We invite scholars and practitioners whose work intersects with such questions to build on the discourse initiated in this commentary.

Our work also invites business ethics scholars to further investigate the powerful position retail corporations hold in today's food supply chains and what this means for broader discourse on the responsibility of businesses towards the environment and connected societal issues. Located at the interface between consumers and the rest of the chain, retailers have strategically used their understanding of consumer wishes to establish themselves as dominant actors who are able to influence global food production. By illustrating the extent of retail corporations' influence on other actors in the food supply chain, we highlight how they contribute to food waste in more ways than discarding in-store surpluses. Retailers employ private safety and quality standards to dictate intrinsic and extrinsic qualities of food products. These standards allow only the most perfect foods to enter supermarkets, leaving behind imperfect products as surplus or waste with upstream actors. Retailers are also able to further reduce their food waste numbers by shifting close-to-expiry products from their stores to the garbage bins of their customers.

If one were to check global food waste numbers, the retail sector appears to be among the least culpable actors in the supply chain. However, a closer look at their operations reveals that the sector indirectly contributes to food waste in several ways. Food chain actors that accrue food waste due to this are rarely able to act on the issue by themselves due to retail's position in the market. While some retailers are investing in CSR initiatives to minimise the occurrence of food waste, they focus almost exclusively on their own waste volumes and rely on arbitrary solutions such as donation to charities to appease their customers and stakeholders. Furthermore, the non-binding nature of CSR guidelines enables corporations to choose which social and environmental issues they engage with. This often results in other trendier sustainability challenges beating food waste to retailers' corporate agendas.

Having underscored the deficiencies of CSR strategies in this context, we conceptualise the possibility of addressing the issue of food waste through an accountability-based system. Based on Pillar II of the UNGPs, our proposed framework serves as a preliminary measure to increase accountability at the company level, acting in synergy with potential state or sector-based interventions. By mapping human rights impacts, developing guidelines tailored to business operations, monitoring progress, carrying out remediation, and transparently reporting business impact and ongoing efforts, this approach harnesses the pivotal position of retail corporations in the food system to instil accountability for their actions, while acknowledging the need for broader, complementary interventions to effectively tackle the persisting issue of food waste.

Declarations

Conflict of Interest The authors have no conflict of interest to declare.

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References

- Anselmsson, J., & Johansson, U. (2007). Corporate social responsibility and the positioning of grocery brands: An exploratory study of retailer and manufacturer brands at point of purchase. *International Journal of Retail & Distribution Management*, 35, 835–856. <https://doi.org/10.1108/09590550710820702>
- Aschemann-Witzel, J., De Hooge, I., Amani, P., Bech-Larsen, T., & Oostindjer, M. (2015). Consumer-related food waste: Causes and potential for action. *Sustainability*, 7, 6457–6477. <https://doi.org/10.3390/su7066457>
- Aschemann-Witzel, J., de Hooge, I., & Normann, A. (2016). Consumer-related food waste: Role of food marketing and retailers and potential for action. *Journal of International Food & Agribusiness Marketing*, 28, 271–285. <https://doi.org/10.1080/08974438.2015.1110549>
- Aschemann-Witzel, J., Randers, L., & Pedersen, S. (2022). Retail or consumer responsibility? Reflections on food waste and food prices among deal-prone consumers and market actors. *Business Strategy and the Environment*. <https://doi.org/10.1002/bse.3202>
- Boudreaux, K., & Schang, S. (2019). Threats of, and responses to, agribusiness land acquisitions. *Business and Human Rights Journal*, 4, 365–371. <https://doi.org/10.1017/bhj.2019.13>
- Buhmann, K., Jonsson, J., & Fisker, M. (2018). Do no harm and do more good too: Connecting the SDGs with business and human rights and political CSR theory. *Corporate Governance: The International Journal of Business in Society*, 19, 389–403. <https://doi.org/10.1108/CG-01-2018-0030>
- Bui, S., Costa, I., De Schutter, O., Dedeurwaerdere, T., Hudon, M., & Feyereisen, M. (2019). Systemic ethics and inclusive governance: Two key prerequisites for sustainability transitions of agri-food systems. *Agriculture and Human Values*, 36, 277–288. <https://doi.org/10.1007/s10460-019-09917-2>
- Calvo-Porrá, C., Medín, A. F., & Losada-López, C. (2017). Can marketing help in tackling food waste?: Proposals in developed countries. *Journal of Food Products Marketing*, 23, 42–60. <https://doi.org/10.1080/10454446.2017.1244792>
- Cantrell, J. E., Kyriazis, E., & Noble, G. (2015). Developing CSR giving as a dynamic capability for salient stakeholder management. *Journal of Business Ethics*, 130, 403–421. <https://doi.org/10.1007/s10551-014-2229-1>
- Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *AMR*, 4, 497–505. <https://doi.org/10.5465/amr.1979.4498296>
- Carroll, A. B. (1991). The pyramid of corporate social responsibility: Toward the moral management of organizational stakeholders. *Business Horizons*. [https://doi.org/10.1016/0007-6813\(91\)90005-g](https://doi.org/10.1016/0007-6813(91)90005-g)
- Černič, J. L. (2018). Corporate accountability under socio-economic rights. *Routledge, London*. <https://doi.org/10.4324/9781315267685>
- Corini, A. (2015). Human right to food: some reflections. In *Envisioning a future without food waste and food poverty: Societal challenges* (pp. 372–381). Wageningen Academic Publishers. https://doi.org/10.3920/978-90-8686-820-9_39
- Croci, E., Pesaro, G. (1998). Voluntary agreements in the environmental sector—the Italian experience. In 1st CAVA workshop The world-wide use of voluntary approaches: state of the art and national patterns, held in Gent, November 26th–27th.
- Delmas, M. A., & Terlaak, A. K. (2001). A framework for analyzing environmental voluntary agreements. *California Management Review*, 43(3), 44–63. <https://doi.org/10.2307/41166088>
- Devin, B., & Richards, C. (2018). Food waste, power, and corporate social responsibility in the Australian food supply chain. *Journal of Business Ethics*, 150, 199–210. <https://doi.org/10.1007/s10551-016-3181-z>
- Dixon, J. (2007). Supermarkets as new food authorities. Supermarkets and agri-food supply chains: transformations in the production and consumption of foods 29–50.
- Dowler, E. A., & O'Connor, D. (2012). Rights-based approaches to addressing food poverty and food insecurity in Ireland and UK. *Social Science & Medicine, Part Special Issue: Sites for Health Rights: Local, National, Regional and Global*, 74, 44–51. <https://doi.org/10.1016/j.socscimed.2011.08.036>
- European Commission (2022). Proposal for a Directive of the European Parliament and of the Council on Corporate Sustainability Due Diligence and amending Directive (EU) 2019/1937.
- Evans, D., Welch, D., & Swaffield, J. (2017). Constructing and mobilizing 'the consumer': Responsibility, consumption and the politics of sustainability. *Environment and Planning A*, 49, 1396–1412. <https://doi.org/10.1177/0308518X17694030>
- Filimonau, V., & Gherbin, A. (2017). An exploratory study of food waste management practices in the UK grocery retail sector. *Journal of Cleaner Production*, 167, 1184–1194. <https://doi.org/10.1016/j.jclepro.2017.07.229>
- Fuchs, D., & Kalfagianni, A. (2009). Discursive power as a source of legitimation in food retail governance. *The International Review of Retail, Distribution and Consumer Research*, 19, 553–570. <https://doi.org/10.1080/09593960903445434>
- Ghosh, R., & Eriksson, M. (2019). Food waste due to retail power in supply chains: Evidence from Sweden. *Global Food Security*, 20, 1–8. <https://doi.org/10.1016/j.gfs.2018.10.002>

- Hansen, H., & Trifković, N. (2014). Food standards are good – for middle-class farmers. *World Development*, 56, 226–242. <https://doi.org/10.1016/j.worlddev.2013.10.027>
- Hartmann, M. (2011). Corporate social responsibility in the food sector. *European Review of Agricultural Economics*, 38, 297–324. <https://doi.org/10.1093/erae/jbr031>
- Hebrok, M., & Boks, C. (2017). Household food waste: Drivers and potential intervention points for design – An extensive review. *Journal of Cleaner Production*, 151, 380–392. <https://doi.org/10.1016/j.jclepro.2017.03.069>
- Hermesdorf, D., Rombach, M., & Bitsch, V. (2017). Food waste reduction practices in German food retail. *British Food Journal*, 119, 2532–2546. <https://doi.org/10.1108/BFJ-06-2017-0338>
- Hodges, R. J., Buzby, J. C., & Bennett, B. (2011). Postharvest losses and waste in developed and less developed countries: Opportunities to improve resource use*. *The Journal of Agricultural Science*, 149, 37–45. <https://doi.org/10.1017/S002185961000093>
- King, A. A., & Lenox, M. J. (2000). Industry self-regulation without sanctions: The chemical industry's responsible care program. *Academy of Management Journal*, 43(4), 698–716. <https://doi.org/10.5465/1556362>
- Konefal, J., Mascarenhas, M., & Hatanaka, M. (2005). Governance in the global agro-food system: Backlighting the role of transnational supermarket chains. *Agriculture and Human Values*, 22, 291–302. <https://doi.org/10.1007/s10460-005-6046-0>
- Krajewski, M., Tonstad, K., & Wohltmann, F. (2021). Mandatory human rights due diligence in Germany and Norway: Stepping, or striding, in the same direction? *Business and Human Rights Journal*, 6, 550–558. <https://doi.org/10.1017/bhj.2021.43>
- Lambie-Mumford, H. (2017). *Hungry Britain: The rise of food charity*. Policy Press.
- Lebaron, G. (2021). Wages: An overlooked dimension of business and human rights in global supply chains. *Business and Human Rights Journal*, 6, 1–20. <https://doi.org/10.1017/bhj.2020.32>
- Maloni, M. J., & Brown, M. E. (2006). Corporate social responsibility in the supply chain: An application in the food industry. *Journal of Business Ethics*, 68, 35–52. <https://doi.org/10.1007/s10551-006-9038-0>
- Messner, R., Johnson, H., & Richards, C. (2022). Towards systemic solutions to food waste: Creative destabilisation and escaping food waste lock-in. *Journal of Rural Studies*, 92, 180–188. <https://doi.org/10.1016/j.jrurstud.2022.03.023>
- Messner, R., Richards, C., & Johnson, H. (2020). The “Prevention Paradox”: Food waste prevention and the quandary of systemic surplus production. *Agriculture and Human Values*, 37, 805–817. <https://doi.org/10.1007/s10460-019-10014-7>
- Moggi, S., Bonomi, S., & Ricciardi, F. (2018). Against food waste: CSR for the social and environmental impact through a network-based organizational model. *Sustainability*, 10, 3515. <https://doi.org/10.3390/su10103515>
- Naiki, Y. (2014). The dynamics of private food safety standards: A case study on the regulatory diffusion of GLOBALG.A.P. *International & Comparative Law Quarterly*, 63, 137–166. <https://doi.org/10.1017/S0020589313000389>
- Narula, S. (2005). The right to food: Holding global actors accountable under international law. *Colum. J. Transnat'l L.*, 44, 691. <https://digitalcommons.pace.edu/lawfaculty/1112/>
- Papargyropoulou, E., Lozano, R., Steinberger, K., & J., Wright, N., Ujang, Z. B. (2014). The food waste hierarchy as a framework for the management of food surplus and food waste. *Journal of Cleaner Production*, 76, 106–115. <https://doi.org/10.1016/j.jclepro.2014.04.020>
- Parfitt, J., Barthel, M., & Macnaughton, S. (2010). Food waste within food supply chains: Quantification and potential for change to 2050. *Philosophical Transactions of the Royal Society b: Biological Sciences*, 365, 3065–3081. <https://doi.org/10.1098/rstb.2010.0126>
- Piras, S., Garcia Herrero, L., Burgos, S., Colin, F., Gheoldus, M., Ledoux, C., Vittuari, M. (2018). Unfair Trading Practice Regulation and Voluntary Agreements targeting food waste: A policy assessment in select EU Member States.
- Poppendieck, J. (1999). *Sweet Charity?: Emergency Food and the End of Entitlement*. Penguin.
- Pulker, C. E., Trapp, G. S. A., Scott, J. A., & Pollard, C. M. (2018). Global supermarkets' corporate social responsibility commitments to public health: A content analysis. *Globalization and Health*, 14, 121. <https://doi.org/10.1186/s12992-018-0440-z>
- Ramasastri, A. (2015). Corporate social responsibility versus business and human rights: Bridging the gap between responsibility and accountability. *Journal of Human Rights*, 14, 237–259. <https://doi.org/10.1080/14754835.2015.1037953>
- Rao, M., Bast, A., de Boer, A. (2021). European private food safety standards in global agri-food supply chains: A systematic review. *International Food and Agribusiness Management Review* 24, 1–16. <https://doi.org/10.22434/IFAMR2020.0146>
- Rao, M., & Bernaz, N. (2020). Corporate responsibility for human rights in Assam tea plantations: A business and human rights approach. *Sustainability*, 12(18), 7409. <https://doi.org/10.3390/su12187409>
- Reinhardt, F. L. (1998). Environmental product differentiation: Implications for corporate strategy. *California Management Review*, 40(4), 43–73. <https://doi.org/10.2307/41165964>
- Richards, C., Lawrence, G., Loong, M., & Burch, D. (2012). A toothless chihuahua? The Australian Competition and Consumer Commission, neoliberalism and supermarket power in Australia. *Rural Society*, 21(3), 250–263. <https://doi.org/10.5172/rsj.2012.21.3.250>
- Riches, G., & Silvasti, T. (2014). *First world hunger revisited: Food charity or the right to food?* Springer.
- Rivera, J., & DeLeon, P. (2004). Is greener whiter? The Sustainable Slopes Program and the voluntary environmental performance of western ski areas. *Policy Studies Journal*, 32(3), 417–437. <https://doi.org/10.1111/j.1541-0072.2004.00073.x>
- Rodríguez-Gomez, S., Arco-Castro, M. L., Lopez-Perez, M. V., & Rodríguez-Ariza, L. (2020). Where does CSR come from and where does it go? A review of the state of the art. *Administrative Sciences*, 10, 60. <https://doi.org/10.3390/admsci10030060>
- Rosignoli, C. M., & Moruzzo, R. (2014). Retail power and private standards in the agri-food chain. *Agroecology and Sustainable Food Systems*, 38, 1108–1124. <https://doi.org/10.1080/21683565.2014.925530>
- Rost, K., & Ehrmann, T. (2017). Reporting biases in empirical management research: The example of win-win corporate social responsibility. *Business & Society*, 56, 840–888. <https://doi.org/10.1177/0007650315572858>
- Savourey, E., & Brabant, S. (2021). The French law on the duty of vigilance: Theoretical and practical challenges since its adoption. *Business and Human Rights Journal*, 6, 141–152. <https://doi.org/10.1017/bhj.2020.30>
- Shaw, H.J., & Shaw, J.J.A. (2019). Food Retailing and the Environment. In: *Corporate Social Responsibility, Social Justice and the Global Food Supply Chain*. Routledge.
- Sheehy, B. (2015). Defining CSR: Problems and solutions. *Journal of Business Ethics*, 131, 625–648. <https://doi.org/10.1007/s10551-014-2281-x>
- Telesetsky, A. (2013). Waste Not, Want Not: The Right to Food, Food Waste and the Sustainable Development Goals 46th Annual Leonard v.B. Sutton Colloquium: International Legal Perspectives on the Future of Development. *Denver Journal of International Law & Policy*, 42, 479–512.

- Thompson, L.-J., & Lockie, S. (2013). Private standards, grower networks, and power in a food supply system. *Agriculture and Human Values*, 30, 379–388. <https://doi.org/10.1007/s10460-012-9404-8>
- Trienekens, J., & Zuurbier, P. (2008). Quality and safety standards in the food industry, developments and challenges. *International Journal of Production Economics, Research and Applications in E-Commerce and Third-Party Logistics Management*, 113, 107–122. <https://doi.org/10.1016/j.ijpe.2007.02.050>
- UNEP (2021). UNEP Food Waste Index Report 2021.
- United Nations (2011). Guiding principles on business and human rights: implementing the United Nations “Protect, Respect and Remedy” framework. United Nations, Office of the High Commissioner for Human Rights, New York.
- United Nations (2015). Transforming our world: the 2030 Agenda for Sustainable Development.
- van der Horst, H., Pascucci, S., & Bol, W. (2014). The “dark side” of food banks? Exploring emotional responses of food bank receivers in the Netherlands. *British Food Journal*, 116, 1506–1520. <https://doi.org/10.1108/BFJ-02-2014-0081>
- Vermeulen, S. J., Campbell, B. M., & Ingram, J. S. I. (2012). Climate change and food systems. *Annual Review of Environment and Resources*, 37, 195–222. <https://doi.org/10.1146/annurev-envir-020411-130608>
- Vives Gabriel, J., Wettstein, F. (2020). “Business and Human Rights” and the United Nations Sustainable Development Goals: Complementary or Conflicting Agendas. In: The Palgrave Handbook of Global Sustainability. Springer International Publishing, Cham, pp. 1–16. https://doi.org/10.1007/978-3-030-38948-2_63-1
- Wakeman, S. W., Tsalis, G., Jensen, B. B., & Aschemann-Witzel, J. (2022). Seeing the Issue differently (or not at all): How bounded ethicality complicates coordination towards sustainability goals. *Journal of Business Ethics*, 178, 325–338. <https://doi.org/10.1007/s10551-021-04823-2>
- West, P. C., Gerber, J. S., Engstrom, P. M., Mueller, N. D., Brauman, K. A., Carlson, K. M., Cassidy, E. S., Johnston, M., MacDonald, G. K., Ray, D. K., & Siebert, S. (2014). Leverage points for improving global food security and the environment. *Science*, 345, 325–328. <https://doi.org/10.1126/science.1246067>
- Xue, L., Liu, G., Parfitt, J., Liu, X., Van Herpen, E., Stenmarck, Å., O’Connor, C., Östergren, K., & Cheng, S. (2017). Missing food, missing data? A critical review of global food losses and food waste data. *Environmental Science & Technology*, 51, 6618–6633. <https://doi.org/10.1021/acs.est.7b00401>

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