



ISSUE BRIEF

# **REDUCING FOOD WASTE:**

## Emissions, Environmental, and Food Waste Reporting Policies

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## About The Global Food Donation Policy Atlas

The Global Food Donation Policy Atlas is a first-of-its-kind initiative to promote better laws on food donation to help address food loss and food insecurity. This project maps the laws affecting food donation in countries across the globe to help practitioners understand national laws relating to food donation, compare laws across countries and regions, analyze legal questions and barriers to donation, and share best practices and recommendations for overcoming these barriers. The project is a collaboration between the Harvard Law School Food Law and Policy Clinic (FLPC) and The Global FoodBanking Network (GFN). To learn more and compare the food donation laws and policies for the countries FLPC has researched to date, visit [atlas.foodbanking.org](https://atlas.foodbanking.org).

## About the Harvard Law School Food Law and Policy Clinic

The Harvard Law School Food Law and Policy Clinic (FLPC) serves partner organizations and communities by providing guidance on cutting-edge food system legal and policy issues, while engaging law students in the practice of food law and policy. FLPC focuses on increasing access to healthy foods, supporting sustainable food production and food systems, and reducing waste of healthy, wholesome food. For more information, visit [www.chlpi.org/FLPC](https://www.chlpi.org/FLPC).



## About The Global FoodBanking Network

The Global FoodBanking Network (GFN) supports community-driven solutions to alleviate hunger in more than 50 countries. While millions struggle to access enough safe and nutritious food, nearly a third of all food produced is lost or wasted. GFN is changing that. GFN believes food banks directed by local leaders are key to achieving Zero Hunger and building resilient food systems. For more information, visit [www.foodbanking.org](https://www.foodbanking.org).



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# ABOUT THIS ISSUE BRIEF

Food loss and waste (FLW) is one of the world's greatest food system challenges. FLW occurs at every stage of the supply chain and generates significant social, environmental, and economic costs.<sup>1</sup> An estimated one-third of food produced globally is ultimately lost or wasted along the supply chain, amounting to approximately 1.3 billion tons of food each year.<sup>2</sup> Much of this wasted food ends up in landfills where it emits methane, a potent greenhouse gas that is up to 80 times more harmful than carbon dioxide because of its intense short-term impacts on global warming.<sup>3</sup> Although carbon dioxide is more abundant than methane in the atmosphere, a single molecule of methane more effectively traps heat than a single molecule of carbon dioxide.

At the same time, the number of undernourished people in the world increased to 828 million in 2021—an increase of about 46 million since 2020 and 150 million since the outbreak of the COVID-19 pandemic.<sup>4</sup> Around 2.3 billion people (29.3 percent of the global population) were moderately or severely food insecure in 2021—350 million more compared to before the outbreak of the COVID-19 pandemic—with 924 million people (11.7 percent of the global population) facing food insecurity at severe levels, an increase of 207 million in two years.<sup>5</sup> Food donation offers a solution to these parallel issues. By redirecting safe, edible food that would otherwise be lost or wasted to those who are hungry, stakeholders can address the related issues of FLW and hunger while decreasing methane emissions' contribution to the rise in global temperature.

Thoughtful public policies can help address the troubling mismatch between rates of food waste and rates of extreme hunger. In addition to the environmental benefits described above, reducing food loss and waste results in sizable economic benefits to society, as it minimizes the costs associated with producing and discarding food that is never consumed. Food donation also helps mitigate the costs of hunger and stimulates the economy: food recovery organizations provide jobs and catalyze community development, and recipients of donated food can spend limited financial resources on other basic goods and services.<sup>6</sup>

Scaling food donation requires aligned incentives or requirements that motivate individuals and companies to donate rather than discard safe, surplus food. Reporting interventions that require the measurement of food loss and waste streams help entities identify ways to take advantage of the economic benefits of improved food loss and waste management. The remainder of this brief focuses on how reporting policies can promote food donation as an emissions reduction tool. The types of reporting discussed include environmental, social, and governance (ESG) reporting; Scope 3 emissions reporting; and food waste reporting.





# RECOMMENDATIONS IN BRIEF

The recommendations presented in this brief provide a starting point for stakeholders across the globe to introduce and strengthen their reporting policy framework to increase food donation and decrease methane emissions through diverting FLW from landfill. Food banks and other organizations with the mission to reduce FLW and increase food donation (collectively referred to as “food recovery organizations”), donors, and policymakers should consider additional opportunities to advance food donation and reduce food waste. The recommendations are as follows:

*To Illuminate the Amount of Food Waste and Identify Opportunities to Increase Food Donation, Governments Should:*

- **Require Companies to Measure & Report Their Emissions;**
- **In the Absence of Broader Emissions Reporting, Require Standardized Food Loss and Waste Reporting;**
- **Incentivize ESG, Scope 3 Emissions, or Food Loss and Waste Reporting When Otherwise Not Required.**

*To Help Entities Navigate the Varying Reporting Standards and Promote Clarity and Consistency in Reporting, Governments Should:*

- **Endorse a Specific Reporting Standard;**
- **Increase Access to Shared Data Frameworks, To Make Reporting More Manageable for Smaller Companies.**

# BACKGROUND

The past decade saw an exponential increase in attention toward food loss and waste (FLW), with the international community committing to halve FLW in the 2030 Agenda for Sustainable Development, reflected in Sustainable Development Goal 12.3 (SDG 12.3).<sup>7</sup> FLW occurs at every stage of the food system: during the initial harvest due to fluctuating market prices, high labor costs, inadequate infrastructure, and demand for flawless produce;<sup>8</sup> by grocery stores and restaurants that overestimate customer demands and misunderstand shelf life and product date labels;<sup>9</sup> and by consumers that engage in inefficient shopping and cooking practices.<sup>10</sup> These behaviors have significant environmental, economic, and social consequences. Food that is lost or wasted has a massive carbon footprint of 3.3 gigatons, using roughly 28% of agricultural land and accounting for 8%, or 70 billion tons, of total global greenhouse gas emissions.<sup>11</sup> This damage is estimated at \$700 billion in environmental costs and more than \$900 billion in social costs per year.<sup>12</sup> This waste is expensive,<sup>13</sup> squanders natural resources, causes lasting environmental damage, and presents a missed opportunity to redistribute safe, surplus food to the more than 820 million people experiencing hunger.<sup>14</sup>

Food banks and other food recovery organizations are essential players in reducing the environmental and economic costs of FLW. They make a significant impact on emissions reductions by recovering and redistributing safe, surplus food. In 2019, food banks in more than 70 countries recovered an estimated 3.75 million metric tons of safe, wholesome food.<sup>15</sup> The food recovery helped avoid an estimated 12.39 billion kilograms of greenhouse gas emissions from unnecessary food waste in landfills and provided food access to 66.5 million food-insecure people.<sup>16</sup> Food banks' food recovery activities have the potential to be a key driver in the effort to slow the global temperature rise.

While FLW results in economic loss, food donation can generate sizeable economic gains. First, donating safe, edible food reduces the economic costs of producing food that otherwise goes uneaten.<sup>17</sup> Second, donating safe, edible food alleviates hunger, reducing health care expenses associated with malnutrition<sup>18</sup> and increasing productivity, educational fulfillment, and economic potential.<sup>19</sup> Third, food recovery operations create job opportunities at food banks and intermediaries and stimulate the economy by increasing the spending power of food recipients. Indirect gains such as reduced hunger costs and more resilient supply chains that flow to society ultimately help build stronger communities. Finally, donating safe, nutritious food to food banks reduces the environmental costs of methane emissions resulting from the food decomposing in landfills.<sup>20</sup> Unlocking this spectrum of benefits requires clarity and sufficient incentives for donors to safely redistribute rather than discard surplus food.

Reporting interventions are one solution that can incentivize entities to target and measure their waste streams, helping them identify areas where they could reduce the costs of FLW through food donation. There are three main types of reporting structures that can help companies address information gaps related to climate risks and clarify strategies for FLW management: environmental, social and governance (ESG) reporting; Scope 3 emissions reporting; and FLW reporting. ESG reporting can—but does not always—include Scope 3 emissions reporting and FLW reporting. Alternatively, entities could assess and report on Scope 3 emissions or FLW independently of a broader ESG reporting scheme. Reporting can be mandatory, or legally required, or entities can voluntarily report as part of an entity's corporate social responsibility strategy.

**ESG reporting** refers to a broad assessment of an entity's sustainability impacts across three categories: environmental, social, and governance.<sup>21</sup> The environmental category includes the risks that a business's activities pose to the environment, including its impacts on natural resources, and contributions to pollution and waste.<sup>22</sup> The social category evaluates community impacts, working conditions, organizational diversity, human rights, equity, and justice. Governance focuses on factors like management practices and organizational authority, board structure, firm policies, compensation, and corruption mitigation.<sup>23</sup> The increased transparency that results from reporting may encourage the entity to engage in climate-focused actions, such as donating safe, surplus food to reduce the entity's emissions. ESG reporting also is important

to a business because it can inform investors, regulators, and consumers about the entity's climate impacts; however, there are varied frameworks and methodologies to assess ESG, making it challenging to compare companies' performances under different frameworks.

The environmental component of ESG can encompass greenhouse gas (GHG) emissions reporting. There are three scopes of GHG emissions that companies can target and measure for their reporting initiatives. Scope 1 emissions are direct emissions from the entity (e.g., emissions from boilers in the entity's building).<sup>24</sup> Scope 2 emissions are indirect emissions from an entity's energy consumption (e.g., emissions from the electricity that the entity purchases from the power company).<sup>25</sup> Scope 3 emissions are all the rest of an entity's indirect emissions in its operations and along its value chain, including upstream and downstream emissions.<sup>26</sup>

**Methane is the world's second largest contributor to global warming after carbon dioxide, contributing 20–30% of the global climate change over the last 200 years. Methane emissions from landfills alone are expected to increase by about 70% as the population increases through 2050.<sup>27</sup> Methane traps over 80 times more heat than carbon dioxide over the first twenty-year period, making it a much more concerning climate pollutant in the short-term.<sup>28</sup> Decreasing the amount of methane released into the atmosphere could have a significant and nearly immediate impact on reducing the near-term effects of climate change and could contribute to keeping global temperature change below 2 degrees Celsius.<sup>29</sup> Redirecting edible food from landfills to feed hungry people has co-benefits of mitigating methane emissions' contribution to the rise in global temperature and reducing food insecurity.**

Depending on regulatory requirements or a company's reporting goals, a company could report its emissions through its broader ESG reporting, or it could isolate its measurement and reporting to emissions, including Scope 3 emissions. **Scope 3 emissions reporting** thus could be included in ESG reporting, or it could be the sole focus of a reporting framework, as it requires complex and distinct measurement and evaluation. Scope 3 emissions typically make up most of an entity's GHG emissions, and they are much larger than Scopes 1 and 2 across all sectors.<sup>30</sup> They can be difficult for companies to comprehensively measure because Scope 3 emissions originate not from sources owned by the reporting company, but from the various partners in the reporting company's value chain.<sup>31</sup> Most importantly here, Scope 3 emissions include emissions from the company's waste, including food waste. Thus, reducing food waste can reduce Scope 3 emissions and make an impact on a company's overall emissions goals.<sup>32</sup>

For sectors like the food and beverage industry, food waste is a major contributor to Scope 3 emissions.<sup>33</sup> The food and beverage industry includes all companies involved in processing, packaging, and distributing food materials, including packaged food, fresh food, prepared foods, and alcoholic and non-alcoholic beverages.<sup>34</sup> Within the Greenhouse Gas Protocol's Corporate Value Chain Accounting and Reporting Standard—a methodology for reporting Scope 3 emissions—food waste falls under two categories: waste generated in operations and end-of-life treatment of sold products.<sup>35</sup> Waste generated in operations is defined as the disposal and treatment of waste generated in the reporting company's operations in the reporting year.<sup>36</sup> Scope 3 emissions accounted for ~87% of total emissions within the food, beverage, and tobacco industry in 2021, according to an analysis of 162 companies in the sector by CDP (formerly Carbon Disclosure Project).<sup>37</sup>

Companies can identify and report on their FLW separately from emissions through **food loss and waste reporting**, which generally quantifies FLW by weight. Companies that isolate their FLW reporting can better understand the causes of food loss and waste, which allows them to more accurately pinpoint opportunities and strategies for FLW reduction. A commonly used tool is the Food Loss and Waste Accounting and Reporting Standard, created by the Food Loss and Waste Protocol.<sup>38</sup>

Food recovery is an integral strategy to help entities meet their food waste and emissions reduction targets

while also providing the humanitarian benefit of offering food to food insecure populations. Donating wholesome, surplus food that otherwise would have been discarded reduces the amount of food entering the waste stream, and reducing FLW disposal in landfills translates to methane emissions reductions.<sup>39</sup> The United Nations Food and Agriculture Organization (FAO) applies a food-use-not-waste-hierarchy to FLW reduction, prioritizing recovery and redistribution after reduction at the source, then moving to animal feed, then composting and energy recovery toward the end disposal stages.<sup>40</sup> The most preferred activities—prevention, recovery, and redistribution—make the biggest impact on emissions reductions.<sup>41</sup> Sending food to landfill, even with energy recovery, should be avoided. Measuring and reporting FLW provides companies with the data they need to identify the touchpoints where they can pivot to food donation as a FLW management strategy that will also lead to emissions reductions.

## KEY ISSUES

Despite the economic and environmental benefits of reducing FLW, many companies do not see sufficient incentives to reduce FLW because they perceive food recovery activities as logistically and financially burdensome and view the costs of FLW as absorbed into the cost of doing business.<sup>42</sup> With limited incentives for companies to reduce food waste, entities tend to believe that the costs of food recovery activities, such as storage and transportation, outweigh the benefits of FLW reduction. Furthermore, without regulatory or market incentives to reduce emissions, companies are often unmotivated to modify business practices that they perceive to be beneficial.

In addition, companies cannot effectively reduce their FLW if they are not aware of how much FLW they cause or where it occurs within their operations or along their supply chains. While some companies may track their waste, companies that do not report their waste are likely not tracking it with as much detail as they would need to make comprehensive change.<sup>43</sup> Reporting mechanisms—like ESG, Scope 3 emissions, and FLW reporting—provide companies with a process to target and measure their waste (and resulting emissions), which will help them to determine opportunities for waste reduction and food recovery. When companies understand where FLW originates in their supply chain, they can change their business practices to reduce the economic and environmental costs of FLW and implement solutions like donating safe, nutritious food to food recovery organizations.

National and subnational governments could adopt regulations that mandate ESG, Scope 3 emissions, or FLW reporting. When no mandatory reporting requirements exist, companies can voluntarily report—and many often do—on their ESG, Scope 3 emissions, or FLW activities. Regulated entities can also voluntarily report more than the regulations require if they choose. Generally, companies select a reporting strategy and framework, but the choice is not easy.<sup>44</sup> Some companies may use more than one standard because the reporting frameworks prioritize different metrics, while others may choose not to report at all because it is too overwhelming to select a standard from the varied choices. Navigating the fragmented landscape of voluntary reporting frameworks can be costly, confusing, and challenging for reporting entities, causing friction that may make them abandon any reporting efforts. Furthermore, the absence of coordinated, standardized reporting methodologies means that data across companies is inconsistent and incomparable, leading to an inadequate understanding of the FLW problem, an inability to compare progress across companies, and pervasive assumptions from third parties that the reporting is merely greenwashing.<sup>45</sup>

The following table describes examples of voluntary reporting frameworks across ESG, Scope 3 emissions, and FLW reporting.



## Examples of voluntary reporting frameworks

Type of Reporting	Standard	Description	Who uses it?
FLW	Food Loss and Waste Accounting and Reporting Standard (Food Loss and Waste Protocol multi-stakeholder initiative)	In 2016, the Food Loss and Waste Protocol developed the FLW Accounting & Reporting Standard, the first global standard for measuring and reporting FLW across the supply chain. Most recently updated in 2021, the Standard breaks down FLW by food and inedible parts and includes where the FLW goes (landfill, compost, etc.) <sup>46</sup> Diverting safe, edible food from landfill to food recovery reduces Scope 3 emissions in the “waste generated” category and possibly help a company meet its science-based targets. <sup>47</sup>	Barilla, Nestlé, Kellogg’s, IKEA, and Tesco are examples of companies that use the Standard. <sup>48</sup> The FLW Accounting and Reporting Standard is also the basis for the EU Fusions Quantification Manual, <sup>49</sup> the US Food Loss and Waste 2030 Champions, <sup>50</sup> and the Consumer Good Forum’s Food Waste Resolution. <sup>51</sup>
Emissions Reporting, Scope 3	Greenhouse Gas Protocol	The Greenhouse Gas Protocol is an international “multi-stakeholder partnership of businesses, nongovernmental organizations (NGOs), governments, and others convened by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD).” The Greenhouse Gas Protocol has published two protocols relating to Scope 3 emissions—the GHG Protocol Corporate Accounting and Reporting Standard (2004) and the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard. The 2004 protocol mandates reporting of Scopes 1 and 2 emissions data but makes optional the reporting of Scope 3 emissions. The latest Scope 3 standard additionally mandates the reporting of Scope 3 emissions data. <sup>52</sup> In March 2024, the GHG Protocol proposed an update to the Scope 3 Standard based on survey feedback from 350 stakeholders. <sup>53</sup>	Australia uses 15 Scope three categories in the GHG protocol as examples companies could use instead of International Sustainability Standards Board (ISSB) categories in its proposed climate disclosure requirements that would require Scope 3 emissions starting in the second reporting year (2025–2026). <sup>54</sup>
ESG, Scope 3	Global Reporting Initiative (GRI)	GRI launched its Waste Standard in 2020 that includes food waste and allows the reporting entity to report its waste diversion, such as recovery and redistribution activities. <sup>55</sup>	One of the most widely used frameworks in ESG reporting. There are more than 14,000 entities that use GRI across over 100 countries. <sup>56</sup>
ESG, Scope 3	Sustainability Accounting Standards Board (SASB)	The SASB started in 2011 to provide uniform criteria for sustainability reporting. In November 2020 SASB merged with the International Integrated Reporting Council (IIRC) to form the Value Reporting Foundation. In 2022, the International Sustainability Standards Board (ISSB) assumed responsibility for the SASB.	In 2022, over 2,200 companies used the SASB Standards in their reporting strategies. The SASB publishes a list of reporters online that can be filtered by sector, such as food and beverage. <sup>57</sup> As of March 25, 2024, 211 companies in the food and beverage sector have used the SASB Standards. <sup>58</sup>

Type of Reporting	Standard	Description	Who uses it?
ESG, Scope 3	International Sustainability Standards Board (ISSB) (the International Financial Reporting Standards Foundation formed the ISSB in 2021 at COP 26 in Glasgow. The ISSB develops standards that integrates work of other frameworks, such as SASB and TCFD)	The ISSB assumed responsibility for the SASB in August 2022. The ISSB builds on the SASB, the TCFD recommendations, the Integrated Reporting Framework, and the Climate Disclosure Standards Board (CDSB) Framework. In 2023, the ISSB released International Financial Reporting Standards, IFRS S1 and IFRS S2, a voluntary GHG reporting standard. <sup>59</sup>	<p>The G7, G20, and the International Organization of the Securities Commissions support the ISSB efforts to create a comprehensive and standardized reporting framework.<sup>60</sup> As of 2022, 144 jurisdictions adopted the IFRS Standards.<sup>61</sup> Brazil plans to adopt regulations using ISSB's IFRS Sustainability Disclosure Standards, and Brazil's mandatory climate disclosure will take effect in 2026.<sup>62</sup></p> <p>Australia Accounting Standards Board proposed three reporting standards based on the ISSB standards (with some modification). The United Kingdom also based its forthcoming Sustainability Disclosure Standards on the ISSB standards, transitioning away from the Task Force on Climate-related Financial Disclosure (TCFD) standards.<sup>63</sup> Canada, Singapore, South Africa, and Japan are also considering endorsing the ISSB Standards for voluntary climate reporting.<sup>64</sup></p>
ESG, Scope 3	Task Force on Climate-related Financial Disclosure (TCFD)	G20 Finance Ministers and Central bank Governors within the Financial Stability Board established the TCFD in 2015. G7 publicly committed to mandating TCFD disclosure. TCFD released recommendations in 2017 in four areas: governance, strategy, risk management, and metrics and targets.	The United Kingdom endorsed the TCFD as an effective framework for private and public sector organizations to use in their climate-related reporting. <sup>65</sup>
Emissions Reporting, Scope 3	Science Based Target Initiatives (SBTi) (multistakeholder initiative that includes WRI, CDP, UNGC, WWF)	Companies submit emission reduction targets to SBTi, and SBTi assesses them for compliance with its science-based criteria. Science-based targets align with limiting the global temperature rise to 1.5 degrees Celsius. SBTi lists compliant targets on its dashboard and uses the GHG Protocol to report the measurements. <sup>66</sup> SBTi has varying standards for different sectors.	Japan had the highest number of companies setting SBTs in 2022, followed by the United Kingdom and the United States. <sup>67</sup>
ESG	United Nations Global Compact (UNGC)	The UNGC promotes Ten Principles to guide corporations toward meeting the United Nations Sustainable Development Goals (UNSDGs). <sup>68</sup> UNSDGs 2 (No Hunger), 12 (Responsible Consumption and Production), and 13 (Climate Action) relate to actions corporations can take to reduce FLW and redistribute safe, surplus food to reduce methane emissions and improve their climate impacts. <sup>69</sup>	The UNGC has over 17,000 participating companies across 160 countries and various sectors. <sup>70</sup> Participants commit to the Ten Principles, and the UNGC provides them with resources and support to evaluate their business practices and incorporate the principles into their ESG strategies. <sup>71</sup>

# RECOMMENDATIONS

## 1. REQUIRE COMPANIES TO MEASURE & REPORT ON THEIR EMISSIONS

Voluntary reporting has gaps and is often inconsistent. Within a voluntary framework, companies can pick and choose which emissions to report, if they report at all. Because different companies use different frameworks, it is impossible to compare across businesses. Additionally, there are so many voluntary reporting standards that it is hard for consumers and investors to distinguish credible information from greenwashing. Some governments have passed laws mandating companies of specific sizes or from certain sectors to report on their GHG emissions. Typically, ESG and emissions reporting regulations target larger companies, and some newer regulations are starting to require reporting on Scope 3 emissions, which could promote change in reporting practices globally.

Companies need to know how much food waste exists and where it occurs in their supply chain before they can implement an effective solution. Increasing emissions and waste reporting rates within the food and beverage sector through mandatory reporting would enable companies to identify the points within their operations or along their supply chains that are responsible for the most food waste, thereby highlighting avenues for waste reductions and therefore reduced emissions.<sup>72</sup> In general, as companies report on their waste and resulting emissions, they are likely to take steps to reduce their waste, which is especially beneficial in the context of FLW reductions, considering the impact that reducing methane emissions has on the overall effort to reduce global temperature rise.

Given that most emissions within the food and beverage sector fall under the category of Scope 3 emissions, there is a need to fill the gap in Scope 3 reporting rates among large food and beverage companies. The inconsistent reporting on Scope 3 emissions among food and beverage companies is likely due to the difficulty and expense of acquiring data on upstream and downstream activities.<sup>73</sup> The global nature of food manufacturing, processing, and transportation also lends itself to the complexity of measuring Scope 3 emissions.<sup>74</sup> Because Scope 3 emissions are, by definition, outside of the company's direct activities, accurate and consistent reporting will require collaboration among the various players in the food supply chain. These reporting issues are especially relevant for small and mid-sized food companies given the relative lack of resources to collect consistent and accurate data compared to large, multi-national companies. Food and beverage companies must take action to reduce Scope 3 emissions—otherwise the Paris Agreement's commitment to slowing global temperature rise is unattainable.<sup>75</sup>

Some countries have attempted to clarify and streamline ESG and Scope 3 emissions reporting for companies through regulations mandating climate disclosure. At the start of 2023, the **European Union** implemented the Corporate Sustainability Reporting Directive (CSRD). Under the CSRD, entities are required to provide sustainability disclosures if they (a) are "large" entities or groups, (b) have securities listed on an EU-regulated market, or (c) are non-EU entities with significant revenues and an EU branch or subsidiary.<sup>76</sup>

To comply with sustainability disclosures, regulated entities must provide environmental disclosures regarding climate change mitigation, which includes data on their Scope 1, Scope 2, and Scope 3 emissions.<sup>77</sup> Companies subject to the CSRD must also disclose information about their social and human rights efforts and governance practices.<sup>78</sup> When exact measurements are not available, a company can refer to industry averages or proxies. But companies have the burden of showing that they invested "reasonable efforts" into obtaining information directly from its supply chain.<sup>79</sup> One challenge is that relying on industry averages could affect the accuracy of a company's overall assessment because of the likely differences between actual emissions and industry averages.

On July 31, 2023, the European Commission adopted the European Sustainability Reporting Standards (ESRS) for the CSRD.<sup>80</sup> The European Financial Reporting Advisory Group (EFRAG) developed the ESRS framework.<sup>81</sup> The standards will cover topics such as environmental impact, human rights, anti-corruption, and diversity based on the Global Reporting Initiative (GRI) standards for sectors like agriculture, coal mining, and oil and gas.<sup>82</sup> In addition, the sectorial standards will cover sectors that EFRAG considers high impact on the climate, which include the food and beverage industry. On February 7, 2024, the European Council and the European Parliament agreed to push the deadline for adopting the sector-specific standards from Fiscal Year 2024 to June 30, 2026, to allow regulated EU companies more time to adapt to the CSRD requirements.<sup>83</sup>

In addition to the CSRD framework for sustainability reporting, the EU also requires regulated business to establish due diligence strategies to address the environmental and social impacts that they identify through the CSRD reporting process. In December 2023, the EU Council and Parliament agreed to preliminary rules to implement the Corporate Sustainability Due Diligence Directive (CSDDD), which would require regulated entities to establish due diligence plans to ensure their business activities align with the goal to limit global temperature rise to 1.5 degrees, as well as mitigate climate and human rights impacts along its entire value chain.<sup>84</sup> After delays and two failed attempts in early 2024, the European Council adopted a revised CSDDD on March 15, 2024, and the Legal Affairs Committee of the European Parliament approved the text on March 19, 2024.<sup>85</sup> The EU will implement the CSDD in three phases, requiring compliance between 2027-2029 based on company size, and the rule will apply to EU and non-EU companies.<sup>86</sup> Together, the CSRD and the CSDD can help companies target and measure FLW in a systematic way so they can understand their FLW problem and form impactful solutions such as donating nutritious, surplus food.

In 2012, **Mexico** passed the General Law on Climate Change (Ley General de Cambio Climático, LGCC), establishing the National Emissions Registry and an emissions reporting platform used by companies to calculate their GHG emissions, attach verification and validation reports, enter information on GHG mitigation actions, and determine emissions.<sup>87</sup> Many large companies have used the platform to calculate their emissions.<sup>88</sup> Since 2017, Mexico has required companies to verify their emissions data by a recognized third party every 3 years.<sup>89</sup> The law requires entities to report on their methane emissions, and while originally intended to target methane emissions mostly from the energy sector, the requirement presents an opportunity for regulated entities to get credit for reducing their methane emissions from FLW by donating edible food to food banks, thereby improving the results for their emissions reporting.<sup>90</sup>

In the **United States**, the Securities and Exchange Commission (SEC) proposed amendments to a U.S. SEC Rule on Mandated Disclosures that would have required Scope 3 emissions disclosures for large accelerated filers by 2024 and other accelerated and non-accelerated filers by 2025.<sup>91</sup> The proposal would have required public companies to report Scope 3 emissions by 2024 or 2025 if the emissions were material or if the regulated company had set an emissions target that included Scope 3 emissions.<sup>92</sup> However, members of Congress and the public pushed back against the rule.<sup>93</sup> On March 6, 2024, the SEC adopted its final rule, which notably removed the proposed requirement for companies to report Scope 3 emissions.<sup>94</sup> The SEC paused the rule on April 4, 2024, pending the outcome of ongoing litigation brought in opposition to the rule in the United States Court of Appeals for the Eight Circuit.<sup>95</sup>

In the absence of mandatory reporting requirements, Scope 3 emissions reporting is sparse among food and beverage companies. A 2019 Ceres report on Scope 3 emissions disclosures among United States food and beverage companies analyzed fifty of the top food and beverage companies that sell value-added, consumer-ready goods processed in the United States and Canada.<sup>96</sup> Of the fifty companies, only 16 companies reported on Scope 1, 2, and 3 emissions.<sup>97</sup> Of the companies reporting on all three emission scopes, Scope 3 emissions accounted for an average of 87% of their total reported emissions.<sup>98</sup> Only nine of the reporting companies had explicit targets to reduce Scope



3 emissions.<sup>99</sup> In a separate report conducted by CDP in 2021, an estimated 53% of companies in the food, beverage, and agriculture industry in the United States reported on Scope 3 emissions.<sup>100</sup> In 2023, the World Benchmarking Alliance released its second Food and Agriculture Benchmark, raking 350 companies' ESG performance.<sup>101</sup> Of the 350 companies, 13 set a science-based Scope 3 target aligned with the 2015 Paris Agreement (up from 7 companies in the first report), 93 companies had some disclosure on Scope 3 emissions, and 165 companies failed to make any commitments related to Scope 3 emissions.<sup>102</sup> The current barriers to widespread Scope 3 emissions reporting demonstrate the need for a regulated reporting framework that supports additional resources, collaboration, and clarity within the reporting process.

## 1A.

### IN THE ABSENCE OF BROADER EMISSIONS REPORTING, REQUIRE STANDARDIZED FOOD LOSS & WASTE REPORTING

Considering the complexities of ESG and Scope 3 emissions reporting, and the fact that food waste is such a potent GHG emitter, isolating mandatory reporting to FLW could be an effective first step for governments hoping to ensure that food entities quantify their FLW and identify points where reduction is possible. When companies know where and how much food they are wasting, they are more likely to take action to reduce the food waste and resultant emissions. Relying on voluntary reporting commitments results in incomplete data and obstructs progress in FLW reduction. Considering the impact that FLW reduction has on emissions reduction and the efforts to limit warming to 1.5 degrees Celsius, actions that promote progress in FLW reduction, like mandatory FLW reporting, can be vital tools in meeting global and national emissions reduction goals.

Countries should require FLW reporting using a standard protocol, such as the Food Loss and Waste Protocol's **Food Loss and Waste Accounting and Reporting Standard**. In 2016, the Food Loss and Waste Protocol developed the FLW Accounting & Reporting Standard, the first global standard for measuring and reporting FLW across the supply chain. Most recently updated in 2021, the Standard breaks down FLW by food and inedible parts and includes where the FLW goes (landfill, compost, etc.).<sup>103</sup> Diverting safe, edible food from landfill to food recovery reduces Scope 3 emissions in the "waste generated" category and could help a company meet its science-based targets.<sup>104</sup> Barilla, Nestlé, Kellogg's, IKEA, and Tesco are examples of companies that use the Standard.<sup>105</sup>

Despite the benefits, there currently are few governments that mandate FLW reporting from companies. Between June and September 2022, the Department for the Environment, Food & Rural Affairs (DEFRA) in the **United Kingdom** conducted a consultation to solicit comments on possibilities for legislation requiring medium and large sized food businesses to report food waste, including which processes the regulated businesses should follow.<sup>106</sup> Respondents to the consultation largely supported mandatory food waste reporting for bigger businesses. However, due to fears that mandating reporting could be costly for food business and lead to increased food prices, DEFRA abandoned the plans in June 2023, choosing instead to pursue ways to expand voluntary food waste reporting.<sup>107</sup> Parliament subsequently tabled the motion on the topic in September 2023.<sup>108</sup> The abandonment led to backlash from advocates and supporters of mandatory reporting, who strongly feel that mandatory reporting is necessary to meet the UN SDG 12.3 and halve global food waste by 2030.<sup>109</sup> In November 2023, the new DEFRA Secretary announced that DEFRA would reconsider mandatory food waste reporting in consultation with food businesses, leaving open the possibility for future legislation.<sup>110</sup>

While there is no national FLW reporting mandate in the United States, several states have adopted reporting or recordkeeping requirements to show their food donations. **California** requires specific types of food businesses to donate safe, edible food to recovery organizations and record how many pounds of food they donate monthly.<sup>111</sup> The recordkeeping requirement forces companies to identify where FLW occurs in their operations, which will also illuminate areas where food donation is possible and provide an opportunity to collect and report data showing food donation's impact. Also, **New York** requires operations annually producing an average of two tons of food waste weekly to report to the regulating agency how much food they donate to recovery organizations each year.<sup>112</sup>

The **European Union** adopted the revised Waste Framework Directive (WFD) in 2018, amending the original WFD it passed in 2008.<sup>113</sup> Acknowledging that FLW measurement is critical information for devising effective FLW solutions, the 2018 WFD clarified the requirement for Member States to measure and report on FLW at each level of the food supply chain—from primary production and processing to retail, restaurants, and households—by 2020 and directed the European Commission to adopt a common methodology for Member States to conduct their food waste measurement, which it did in 2019.<sup>114</sup> While the WFD targets Member States rather than businesses, it requires Member States to measure and report on food waste from food businesses in their country.<sup>115</sup>

Companies cannot manage unknown issues. Requiring companies to measure and report on their FLW will illuminate the problem and help companies identify the touchpoints within their own operations where they can implement food recovery strategies to reduce food waste. Mandatory FLW reporting has the potential to be less burdensome on companies than broader ESG or Scope 3 emissions reporting while still achieving significant food waste reduction.

## **1B.** INCENTIVIZE ESG, SCOPE 3, OR FOOD LOSS & WASTE REPORTING WHEN OTHERWISE NOT REQUIRED

When mandatory reporting is not politically or administratively feasible, voluntary agreements, certifications, or other incentives to measure and track ESG, Scope 3 emissions, and FLW commitments can incentivize reporting as an initial step toward standardized reporting. Voluntary agreements encourage countries, companies, and consumers to take collective action to reduce FLW and related GHG emissions through transparent public commitments. Certifications are another incentive for companies to measure and report ESG, Scope 3 emissions, or FLW activities.

Voluntary agreements that include measuring and reporting are one mechanism that several countries have used to promote FLW reduction at companies. Businesses have also collaborated on voluntary agreements to have FLW by 2030. **Champions 12.3**, a coalition of executives from the public and private sectors committed to achieving United National Sustainable Development Goal 12.3 (halve global per capita food waste and reduce food losses across supply chains by 2030), developed the **10x20x30** initiative in 2019 to encourage companies to reduce FLW.<sup>116</sup> The initiative is a partnership of at least ten of the leading large food retailers, such as Kroger, Wal-Mart, Tesco, Ikea, and Sodexo, plus at least twenty of their suppliers, committed to halving FLW by 2030.<sup>117</sup> Champions 12.3 created the Target-Measure Act approach.<sup>118</sup> All 10x20x30 participants implement the Target-Measure-Act protocol that includes committing to reducing FLW in their operations by 50% by measuring and reporting their FLW and mitigating their FLW through activities like food donation.<sup>119</sup>

Voluntary agreements may incentivize companies that want to avoid reporting regulations to track their FLW because the companies would rather control how they report. The Waste and Resources Action Programme (WRAP) developed its flagship voluntary agreement, **the Courtauld Commitment 2030**, bringing together businesses, governments, and households in the United Kingdom to reduce food waste by 50%, reduce GHG emissions from the food and beverage sector by 50%, and ensure that the food and beverage industry sources 50% of fresh food from water efficient areas.<sup>120</sup> It requires participants to report on their food waste and

food recovery activities. The participating entities adopted the voluntary commitment in an effort to avoid mandatory reporting regulations.<sup>121</sup>

The Courtauld Commitment established a database for Scope 3 emissions and GHG Measurement and Reporting for the food and beverage industry. WRAP also created the **Food Waste Reduction Roadmap** for companies in the United Kingdom to track their progress toward their Courtauld Commitment's food waste reduction targets.<sup>122</sup> The Food Waste Reduction Roadmap provides guidance for the food industry to measure and report their FLW using guidance that aligns with the Food Loss and Waste Reporting and Accounting Standard.<sup>123</sup> As of 2022, 351 businesses committed to the Food Waste Reduction Roadmap, including 300 food businesses and all major grocery retailers.<sup>124</sup> Impacts of the Roadmap include a 16% increase in food donation between 2020 and 2021 (253 million meals).<sup>125</sup> Based on the success of the Courtauld Commitment, WRAP has also worked to support voluntary agreements on food waste in the **Australia, Indonesia, Mexico, South Africa, Canada, and the United States**.<sup>126</sup>

There are several examples of voluntary agreements from across the globe.

- **The Australian Food Pact** is a voluntary, multi-year agreement among businesses committed to halving food waste in Australia by 2030 join to receive sector-specific support and a tailored food action plan that identifies FLW streams and opportunities for reduction and food donation.<sup>127</sup>
- In 2020, WRAP launched **Halving Food Loss and Waste by Leveraging Economic Systems (FLAWLESS)**<sup>128</sup> in **Indonesia, Mexico, and South Africa** as part of the South African Food Loss and Waste voluntary agreement.<sup>129</sup> FLAWLESS targets the financial sector to consider environmental performance in lending and investments, such as funding for FLW reduction infrastructure.<sup>130</sup> WRAP provides signatories with technical assistance for FLW measurement and reporting.<sup>131</sup>
- **The Pacific Coast Collaborative (PCC)** is a public-private partnership between food businesses and cities in on the Pacific Coast in Canada and the United States (Vancouver, British Columbia; Seattle, Washington; Portland, Oregon; and San Francisco, Oakland, and Los Angeles in California). The PCC intends to reduce GHG emissions “at least 80 percent by 2050,” and it includes a Reducing Wasted Food initiative that commits to reducing FLW by 50% by 2030 with help from the food industry.<sup>132</sup> The PCC supports coalition members with technical assistance to meet the PCC's requirement to establish a standardized methodology to measure baseline FLW data and identify waste streams.<sup>133</sup> The success of the PCC led ReFED and the World Wildlife Fund to initiate the **U.S. Food Waste Pact**, a voluntary commitment for food businesses to measure and report on their food waste using the Target Measure Act approach.<sup>134</sup>

Certifications and labeling are another avenue to incentivize companies to measure their FLW reduction activities, and the presence of the label provides information to consumers. In the **United States**, Senators Durbin and Grassley introduced the *Reduce Food Loss and Waste Act* to incentivize businesses to reduce FLW in their operations. The Act would create a Food Loss and Waste Reduction Certification from the United States Department of Agriculture (USDA). Entities that meet the certification requirements would be able to use the certification label on their products and promotional materials.<sup>135</sup>

## 2. ENDORSE A REPORTING STANDARD TO HELP ENTITIES NAVIGATE THE VARYING STANDARDS AND PROMOTE CONSISTENCY IN REPORTING

Governments can make it more likely that companies report if they help set a baseline for what standards companies should use, thereby clarifying the starting place (and process) for reporting and helping the companies distinguish among the many frameworks that might be intimidating without guidance. Companies might be hesitant to start voluntarily reporting until their governments signal that a particular standard is appropriate; otherwise, companies might assume that they would be unnecessarily expending resources setting up a reporting framework only to have their government mandate or endorse a different standard in the future.

As mentioned above, all three categories of reporting can be mandatory or voluntary. Companies voluntarily report for a variety of reasons, including improved investment potential and reputation benefits.<sup>136</sup> Voluntarily reporting on climate impacts can increase trust with the public, shareholders, and employees. It may also create a competitive edge for the company because consumers may select companies to patronize based on efforts to reduce climate impacts.<sup>137</sup> But the reality is that companies often do not report less favorable metrics unless regulations require them, and the number of companies that report vary across sectors<sup>138</sup>, making it challenging to compare companies and rendering the voluntary frameworks ineffective. Even widely used voluntary protocols, like the Greenhouse Gas Protocol, do not allow for comparison across companies because companies choose which categories they want to report, and therefore individual companies may report on emissions in different ways.<sup>139</sup>

When countries endorse a reporting standard, they help clarify the confusion caused by multiple frameworks—streamlining the reporting process for companies and building trust in the data. As more countries endorse a particular standard, momentum builds behind it, and the standard receives more attention and potentially gains credibility among companies, investors, and consumers. When a set of standards is widely accepted and endorsed by several countries, it is also easier for companies to report their ESG, Scope 3 emissions, and FLW activities consistently across jurisdictions.

Currently momentum appears to be moving toward the **International Sustainability Standards Board (ISSB)** IFRS Standards. For example, the G7, G20, and the International Organization of the Securities Commissions endorse the ISSB efforts to create a comprehensive and standardized reporting framework, and as of 2022, 144 jurisdictions have adopted the ISSB's IFRS Standards.<sup>140</sup> **Brazil** plans to adopt regulations requiring ISSB's IFRS Sustainability Disclosure Standards for all publicly traded companies, and Brazil's mandatory climate disclosure will take effect in 2026.<sup>141</sup> **Canada, Singapore, South Africa, and Japan** are also considering endorsing the ISSB Standards for voluntary climate reporting.<sup>142</sup>

**Australia's** Accounting Standards Board proposed three reporting standards based on the ISSB standards (with some modification) in 2023.<sup>143</sup> Additionally, Australia uses 15 Scope 3 categories in the GHG protocol as examples companies could use instead of ISSB categories in its proposed climate disclosure requirements that would require Scope 3 emissions starting in the second reporting year (2025-2026).<sup>144</sup> The **United Kingdom** also based its forthcoming Sustainability Disclosure Standards on the ISSB standards, transitioning away from the Task Force on Climate-related Financial Disclosure (TCFD) standards after the ISSB absorbed them in 2024.<sup>145</sup> While there is not enough information yet to determine the impact of the countries adopting the ISSB standards, it is worth noting the momentum building behind the ISSB's efforts to standardize reporting frameworks.



## Food Recovery Organizations Often Lack the Resources & Infrastructure to Collect Robust Emissions Data Required for Emissions Reporting

The primary revenue stream for food recovery organizations is philanthropic donations. They use the bulk of their limited resources to manage complex logistics to ensure that they can recover and redistribute safe, nutritious food to people experiencing hunger, leaving limited capacity to devote to collecting data for donating companies to use in their emission reporting. Emissions reporting requires robust data collection, and if reporting frameworks require entities to obtain data from food recovery organizations to confirm what (and how much) food was received and whether the food was actually diverted from the landfill, then food recovery organizations will need to figure out how to dedicate time and administrative resources to calculating the emissions reductions from their food donation activities, which could be quite burdensome for an organization with already limited resources.

Countries that require emissions or FLW reporting should consider ways to support food recovery organizations that will need to provide entities with data related to the food donations and the resulting emissions reductions.

### 3. INCREASE ACCESS TO SHARED DATA FRAMEWORKS, TO MAKE REPORTING MORE MANAGEABLE FOR SMALLER COMPANIES

Mandatory reporting regulations typically target larger companies, but smaller companies should also aim to decrease their FLW and resulting methane emissions. Considering Scope 3 emissions represent the bulk of an entity's emissions, leaving smaller companies out of the mandatory reporting regulations creates a gap in our understanding of total emissions and limits the ability to take action to reduce emissions as these smaller companies continue to suffer from lack of data about their FLW and emissions and thus lack motivation to change.

Food and beverage companies might struggle to provide all of the information required for credible emissions and FLW reporting due to a lack of data. Collecting data requires collaboration between a retailer and its supply chain partners, and there is a risk that the data is inaccurate. If primary data is not available, food and beverage companies will likely need to rely on secondary data such as averages for retailer recycling rates gathered from public databases.<sup>146</sup>

Given the challenges that companies face when trying to collect standardized emissions data from their upstream and downstream value chain partners, coalitions are emerging to support food businesses in accessing shared, robust, emissions data on food products. For example, the **BRC Mondra Coalition** brings together industry, governments, technology partners, and NGOs to build a unified emissions data platform that coalition members can access for their Scope 3 emissions reporting needs.<sup>147</sup> The Mondra Coalition works with the food companies to create a system that prioritizes accessing high quality data from suppliers along their value chain within a shared framework of rules on how to use the data while protecting the companies' proprietary knowledge.<sup>148</sup> Tesco, a food retailer in the United Kingdom, has joined the Mondra Coalition to help the company meet its commitment to be net-zero across all scopes (1, 2 and 3) by 2050.<sup>149</sup>

Tracking and reporting on FLW is a key step for companies to know where they can take actions to reduce it. Still, tracking emissions requires resources and capacity to manage large data sets, and reporting

requirements could impose a burden on smaller companies. Smaller companies need support to meet the data management needs, and increasing access to shared data frameworks, like the Mondra Coalition mentioned above, could help smaller companies measure, track, and report their FLW emissions. Like larger companies, smaller companies can make an impact on their emissions reductions by reducing FLW in their operations and redistributing safe, surplus food to food recovery organizations.

Policymakers should contemplate ways to support and incentivize smaller companies to target, measure, and report their FLW emissions, such as offering grants to support the smaller companies' reporting efforts or to help them build supportive networks to collect the needed reporting data. For example, governments could offer grants to support data organizations to provide technical assistance to smaller businesses. Grants could also support nonprofits or coalitions among food companies, agencies, technology companies, and nongovernmental organizations to work toward a standardized, shared data framework and protocol for ESG and Scope 3 emissions reporting.

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## **CONCLUSION**

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Measuring and reporting on FLW through ESG, Scope 3 emissions, or FLW reporting are powerful actions that companies can take to combat FLW and resultant emissions globally. Mandatory reporting regulations streamline the reporting process by clarifying how companies should measure and report emissions and FLW, and standardized reporting adds credibility to the data, allowing for comparison across companies and mitigating greenwashing claims. Voluntary reporting agreements or business certification programs are good first steps to incentivize companies to report their FLW. However, governments can strengthen voluntary reporting by endorsing a reporting standard and providing technical assistance to smaller companies that need data management support. ESG, Scope 3 emissions, and FLW reporting frameworks are informational tools that reveal the solvable FLW problem and lead companies to workable solutions like food donation, helping to reduce emissions, increase food security, and better use our natural resources.

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