

Estimating the Hidden Sustainability Contributions From Food Sharing Initiatives at the Municipal Scale

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Abstract

Establishing the impacts of municipal food systems is essential for guiding policy, ensuring accountability and promoting just, resilient, and sustainable food system transformation at this scale. However, knowledge of these systems remains partial. While the goals of food sharing initiatives (FSIs), such as community gardens, kitchens, and surplus food redistribution organisations, often support more equitable and sustainable food systems, their impacts are rarely documented and therefore remain invisible to municipal food governance. In response, this article presents a methodology for estimating sustainability impacts from FSIs and applies this to the municipality of Dublin, Ireland. Using FSI mapping, surveys, and a sample of sustainability impact assessments from growing, cooking, and redistribution initiatives, the approach enables estimations of social, economic, and environmental impact for municipalities. This gives greater visibility to the impacts FSIs create collectively, but alone cannot guarantee that these impacts are considered by decision-makers. In the context of developing a post 2030 sustainability agenda, we call for the development of municipal governance systems that both incentivise impact data collection for all food organisations and ensure the resulting impact data is meaningfully considered in decision-making.

Keywords

community gardens; community kitchens; Corporate Sustainability Reporting Directive; food sharing; justice; surplus food redistribution; sustainable development goals; sustainability impact assessment; sustainability reporting; urban food governance

1. Introduction

Global attention to sub-national food sustainability is not a new phenomenon. In 2015, the Milan Urban Food Policy Pact (MUFPP) was formalised. Within 10 years, 250 municipalities had signed up to the pact, committing to develop sustainable and inclusive food systems. Meanwhile, the FAO launched its framework for urban food systems transformation in 2019, identifying a key role for municipal governments. Over the same period, governance drives to expand impact assessment and reporting beyond financial metrics emerged, with the Corporate Sustainability Reporting Directive adopted by the European Union in 2022. This aimed to expand and standardise beyond-financial reporting practices for large companies. While the directive has faced pushback leading to a dilution of its reach (Ferrarini, 2025), expanding impact assessment beyond corporate actors to include all municipal food actors remains an important step towards sustainability (HLPE, 2025). Certainly, establishing the full impacts of municipal-scale food systems provides essential knowledge for guiding policy, ensuring accountability, and promoting equitable, resilient, and sustainable practices.

Food sharing initiatives (FSIs), such as community gardens, neighbourhood kitchens, and surplus food redistribution groups, have been identified across municipalities globally and shown to articulate overlapping goals centred on improving sustainability, despite adopting diverse exchange practices and organisational forms (Davies, 2019; Davies et al., 2017b). Research on FSIs has focused primarily on individual enterprises (e.g., Fragapane & Mortara, 2022; Mackenzie & Davies, 2019; Marovelli, 2019) or specific types of activity, such as growing, cooking, or redistributing (see Morrow, 2019; Rut et al., 2021; Weymes & Davies, 2019). This article makes a novel contribution to this body of work by focusing on the municipal-scale impacts created by all FSI activity types. These impacts are rarely documented and therefore often remain invisible to municipal food governance. In response, a simple but flexible methodology for estimating municipal-scale sustainability impacts from FSIs is presented and applied to the municipality of Dublin, Ireland. This allows us to answer the central question of this study: What sustainability impacts do FSIs collectively make at the municipal scale?

In the following sections, we first distil key issues for municipal-scale food governance and sustainability impact assessment (SIA), before detailing the methodological approach developed. The approach is then applied to the municipality of Dublin City in Ireland as a case study, with findings presented and discussed in the context of developing a post-2030 agenda for sustainability.

2. Municipal Food Governance for Sustainability: The Need for Just Transformations

A transformation of the global food system towards sustainability will also demand a transformation of governance at all scales. As outlined by Donner et al. (2024, p. 3), food system governance for sustainability requires “the continuous process of orchestration of policies and (multiple) food systems consisting of diverse interacting actors, respecting (in)formal rules and striving to provide food for all, in equitable and environmentally friendly ways, at any time and in any context.” Certainly, municipal-scale food governance capable of addressing socio-economic inequalities, health, and wellbeing, and environmental degradation is required (Moragues-Faus & Battersby, 2021; Sonnino, 2019). Further developing this position, the City Region Food System framework (Dubbeling et al., 2017) emphasises the need for mapping, assessment, and monitoring of food system landscapes as a basis for well-informed policy decisions.

While municipal food governance approaches differ, research has found that areas with established food networks, food policy officers, and food policy councils are better able to develop and implement locally informed strategies, provided they use inclusive, adaptive, and reflexive governance approaches (Polman & Bazzan, 2023). Multi-stakeholder collaboration, cross-sector alignment, shared vision, and adequate resources, supported by polycentric structures that break down siloes and encourage interdepartmental connectivity, are identified as key to effective governance (Candel & Pereira, 2017; Donner et al., 2024). An understanding of all local actors and organisations is therefore pivotal (Moragues-Faus et al., 2024), including niche or non-mainstream activities like FSIs that hold potential for building sustainability and resilience (Vieira, 2023), but which are often invisible to policymakers (Davies, Cho, & McGeever, 2025; HLPE, 2025). Certainly, sustained action at the municipal scale depends on integrating sustainable food goals into strategies, securing multilevel and multi-actor buy-in, soliciting evidence-based impact assessments, and conducting ongoing monitoring (Valette et al., 2023).

Building on the goal of achieving sustainable and resilient municipal food systems, there is an emerging body of research focused on the nature of change required to achieve this in a just manner. This work centres matters of equity, inclusion, and power as core elements of transition processes that seek to define and actualise a radical transformation. This is commonly articulated through an integrated concept of justice that has multiple dimensions (see EEA, 2024), which when applied to municipal food systems would include: distributive justice, such as ensuring equitable food outcomes (de Bruin et al., 2024); procedural justice, including opening up access to, and influence within, decision making about food (Holland, 2017); and recognition or restorative justice, that recognises inequities regarding access to and influence over food matters to ensure reparative action is undertaken (Robinson & Carlson, 2021; Smaal et al., 2021).

Research has begun to flesh out what is required to achieve transformative food justice goals, with one strand focusing on FSIs within municipal food systems. For example, geolocated mapping of FSIs in the cities of Milan in Italy and Barcelona in Spain supported distributional justice analysis (Davies, Cho, Vedoia, et al., 2025). In another study, mapping the distribution of FSIs was shown to give visibility to this actor group for policy-makers, enhancing possibilities for co-governance and greater procedural justice (Davies, Cho, & McGeever, 2025). As FSIs also tend to focus their activities on undervalued resources (such as surplus food), marginalised sectors of society (for example, the elderly, young people, or ethnic minorities), and underused spaces (e.g., vacant land), mapping can also help urban governments reflect on persistent inequalities, elevating recognition justice within food systems governance transformation (Cho & Davies, in press). Such mapping also provides an essential foundation on which an assessment of sustainability impacts of FSIs at the municipal scale can be built.

3. FSIs and Sustainability

While food sharing has long been seen as a bedrock of human civilisation (Feinman, 1979; Gurven & Jaeggi, 2015), contemporary food sharing beyond friends and family has evolved to include a cohort of initiatives that offer opportunities to come together around food. While there is no agreed definition of what counts as an FSI in policy settings (Fragapane & Mortara, 2022), in this article we focus on initiatives which support collective growing, cooking and eating, and redistribution activities. Research has found that these types of FSIs often focus on one or more environmental, social, and economic goals, such as reducing food waste, supporting inclusion, and increasing food security (Davies, Cho, Vedoia et al., 2025; Davies et al., 2017a).

FSIs with environmental goals around resource recovery, waste reduction, and sustainable production align closely with efforts to develop more circular economies and regenerative cities (Davies, 2020; Martinez et al., 2025). Research highlights the active role of FSIs in improving resource efficiency, while also drawing attention to the inherent operational and social challenges they face in doing so (Lever & Sonnino, 2022; Morrow & Davies, 2022; Sadvoska et al., 2025). Social and economic goals often foreground equity, inclusion, and community resilience (Lombardizzi, 2022; Tharrey & Darmon, 2022), drawing on ideas of the commons (Morrow, 2019), food justice (Loh & Agyeman, 2019; Smaal et al., 2021), and cooperative or social enterprise (Dedeurwaerdere et al., 2017). This research finds that inclusive and community-based forms of food governance can support FSIs with these goals (Herrero & Moragues-Faus, 2026); however, to do this effectively often requires broader system change (Sonnino, 2023), enhanced citizen empowerment (Tornaghi, 2017), and improved understandings of FSIs as care infrastructures (Giraud, 2021; Strüver & Franz, 2025; Williams & Tait, 2023).

FSIs frequently lack visibility in government directories or on public maps and are only beginning to be considered as sources of sustainability impact. Expanding processes to map FSIs globally is ongoing (Davies, Cho, & McGeever, 2025; Davies, Cho, Vedoia et al., 2025; Davies et al., 2017a, 2017b; Wu et al., 2024), although citizen and policy engagement with this data is embryonic. FSIs have also struggled to use existing SIA frameworks, such as the Global Reporting Initiative toolkit, to document their impacts. They report finding them complex, costly, and not tailored to food sharing goals (Mackenzie & Davies, 2019). In response, efforts to establish relevant SIA processes for FSIs have been initiated. The Toolshed framework (see Mackenzie & Davies, 2019, 2022), developed with and for FSIs, provides a free, flexible, and accessible means for initiatives to report relevant environmental, social, economic, and governance outcomes via 104 qualitative and quantitative indicator questions aligned to the Sustainable Development Goals (SDGs) across four pillars of sustainability: social, economic, environmental, and governance.

A suite of SIA reports from FSIs using The Toolshed are already collated on the Sharing Solutions website (see <https://www.sharingsolutions.eu/talent-garden>). For example, one growing initiative, Upfarming, in Lisbon, Portugal, reported empirical evidence on impacts across all four pillars, responding to 30 indicator questions in total. Beyond the 3,600 kg of food produced annually and the 2,500 portions of fresh fruit and vegetables this created, they also detailed the social impacts their growing activities facilitate. They reported an increased appreciation of different cultures across and within communities amongst the 850 people they engaged and how participants improved their communication skills through their engagements. Additionally, they donated part of their vegetable production to local food banks and sold produce within local markets at an affordable price, creating positive economic impacts by easing the stress on food budgets. Moreover, the ecological growing practices adopted ensure positive environmental impacts from their operations, diverting waste from landfill and reducing the carbon footprint of the food system.

Meanwhile, a cooking and eating initiative, Nesehnutí, located in Brno, Czechia, creates spaces where newcomers and locals can come together around food to eat and establish connections. Activities focus on preparing and enjoying food together, sharing sustenance but also experiences, tastes, and values. Their SIA reports on more than 50 indicators from The Toolshed. While there is an explicit link to community building and the social impacts of cooking and eating together, positive environmental impacts were also created. Beyond the 1,350 meals shared annually, the decision to systematically use recipes with low levels of embodied carbon and plant-based meals helps to reduce the carbon footprint of the food system in Brno.

In Dublin, Ireland, the redistribution initiative FoodCloud reported impacts on 58 indicator questions. While the impacts of reducing food waste and, by association, the carbon footprint of food are unsurprising, the FSI also details its diverse social impacts on community integration through sharing, which leads to improved access to, and the affordability of, food. This contributes to health and wellbeing, as well as providing food education and supporting positive food choices. Indeed, 70% of the 148 community groups FoodCloud works with in Dublin are able to provide food that recipients would otherwise not be able to afford as a result of engaging with the initiative. Beyond this, FoodCloud also brings other economic impacts. They support the acquisition of skills, training, and employment, with several members of staff funded through government labour activation schemes. All staff are paid at least the current living wage, 9% above the statutory minimum. Through a multifaceted engagement strategy that seeks to create shifts in cultural responses to surplus food, FoodCloud has more than 10,000 Dublin-based followers on social media platforms. They also actively engage with policymakers, testifying before committees like the Oireachtas Committee on the Environment and Climate Change on food waste and participating in the European Union's platform on food loss and waste. Crucially, they make a clear public statement on their objectives through a formal sustainability plan.

The exemplars above provide an overview of the breadth of impacts FSIs report. However, while SIA reporting is seen as valuable by FSIs (Mackenzie & Davies, 2019), they often have limited capacity to collect data systematically and little time to compile and disseminate reports. Efforts to expand FSI engagement with SIA processes are ongoing and supported by an emerging community of food sharing practice through the EU-funded CULTIVATE project (Louvain et al., in press), but without external actors mandating or facilitating such reporting and with initiatives often run largely by volunteers, SIA activities can remain marginalised. Given these practical constraints, combining sample FSI SIA data with automated mapping of FSIs, not every FSI needs to conduct an SIA to provide an estimate of the impacts created by all FSIs within municipalities. While sub-optimal, such extrapolations are commonly used in global food analyses in the absence of complete data (UNEP, 2021). The methodology to achieve this is outlined in the following section.

4. Methods

The approach for estimating sustainability impacts from FSIs outlined in this section was developed by the authors of this article. These are all researchers at Trinity College Dublin, Ireland. One had previously worked with Dublin City Council in the Climate Action Unit, and another is a qualified chef and member of Community Gardens Ireland. First, a semi-automated mapping approach was used to systematically identify, categorise, and geolocate FSIs that have a digital trace, such as websites, social media profiles, or apps (Wu et al., 2024) in Dublin City municipality. The automated element of the mapping tool utilises large language model-based prompt queries drawn from the Food Sharing Dictionary (Phelan et al., 2023; Phelan & Davies, in press) to identify candidate FSIs with a digital presence. It then classifies these by (a) food sharing activity (e.g., growing, cooking and eating, or distribution activities) and (b) the modes through which sharing occurs (e.g., collecting, selling, gifting, and bartering). Using this approach in the test case of Dublin, 83 FSIs were identified, then manually checked and verified. As the mapping tool only identifies FSIs with a dedicated digital presence, there could be further FSIs flying under this digital radar, and so this figure should be seen as a conservative estimate.

As digital profiles of FSIs rarely detail their scale, which clearly influences impact, the mapped initiatives were contacted with an email survey to ascertain this. The survey also requested annual data on five core indicators. Two indicators were posed to all FSIs:

- The number of people attending educational events;
- The number of volunteers engaged.

Others were specific to the main activity of the FSIs mapped:

- Cooking and eating initiatives: The number of meals shared;
- Growing initiatives: The amount of food produced (tonnes);
- Redistribution initiatives: The amount of food redistributed (tonnes CO₂e avoided).

Where FSIs were flagged as multifunctional, meaning they undertake more than one area of activity, their profiles were manually reviewed to establish the balance of effort given to their activities. If one area clearly dominated, they were assigned to that category; otherwise, they were identified as contributing equally to each activity type. To avoid larger initiatives responding to the survey potentially skewing the average impact estimate, an inverse size-weighting was applied to the impacts according to their size. These weighted figures for each indicator were then averaged and multiplied by the number of relevant FSIs present in the city (see Lyons et al., 2025 for full details).

As only 14 FSIs responded, representing a 17% response rate, there are clear limitations to this approach, although responses came from across the spectrum of FSIs' activity types. A partial account of the size of FSIs inevitably creates uncertainty when extrapolating data from a small sample population of FSIs to the municipal scale. Additionally, due to limited data collection conducted by the majority of FSIs in Dublin, the approach estimates FSI impact across just a limited set of indicators. It does not reflect the full range of impacts reported by FSIs who have completed the full Toolshed SIA. Expanded reporting capabilities within FSIs are required to improve data quality and comprehensiveness. Nonetheless, it is a significant improvement from having no impact data from FSIs at all.

5. Food Sharing in Dublin Municipality

This section reflects on the findings of operationalising the approach detailed in the previous section in the Dublin municipality.

5.1. Dublin's Food Governance Landscape

Research shows that municipal food governance shapes the experiences of FSIs (Herrero & Moragues-Faus, 2026). As with many other municipalities internationally (Moragues-Faus et al., 2024), Dublin's municipal governance of food occurs through disparate departments, which makes the system hard to navigate, particularly for multifunctional FSIs. For example, food redistribution falls under the remit of waste management in the environment and transportation services section, while governance of community gardens is situated within culture, community, leisure, and area services. However, unlike other locations which have moved to develop specific policy architecture for governing food at the municipal level, such as

through food policy officers and councils (Schiff et al., 2022), Dublin has neither. It only established its inaugural (but non-statutory) food strategy in 2024—Edible Dublin after joining the MUFPP in 2022 and the European Union’s Urban Agenda Partnership on Food in 2023. Responsibility for enacting the Edible Dublin Strategy was noted in the Dublin City Climate Action Plan and was developed by the Climate Action Unit of the municipality. The alignment of food system actions with climate action in this way allowed for interdepartmental contributions as well as input across civil society and the public and private sectors. This suggests the seeds of polycentric food governance exist in Dublin, which has been seen as productive for more just and sustainable decision-making (Halliday, 2022), but as there is no dedicated food policy officer, there is a risk that food issues could remain marginalised.

Edible Dublin focuses on “food justice and nutritional equity” to ensure “that all residents of Dublin City will have access to healthy food within a 15-minute walk, cycle or journey by public transport from their home by 2030” (DCC, 2024, p. 50). Moreover, the overall objective is for the strategy “to guide the implementation of a systems approach to address multiple issues, namely food security, public health, nutritional equity, climate action, biodiversity and social cohesion while contributing to Dublin City’s long-term vision, as stated in our Corporate Plan” (DCC, 2024, p. 23). Aligning with its vision of a 15-minute city outlined in the Development Plan 2022–2028 (DCC, 2022), one key Edible Dublin objective is to “[b]uild on the City’s land-use, green infrastructure, and economic and community development policies to make the City and its residents resilient to climate change’s impact on the food system” (DCC, 2024, p. 5). However, there are just two action points that explicitly reference FSIs: Action 1 seeking to “ensure citizens have access to a community learning kitchen where needed, to engage and to partake in community cooking, skills and nutrition programmes” (DCC, 2024, p. 34) and another (Action 4) to “expand the availability of community gardens ” (DCC, 2024, p. 36). Overall, the strategy has potential to generate more holistic thinking on food in the municipality, although there is still no dedicated funding stream to operationalise it. Certainly, the lack of comprehensive data on all food actors, including FSIs, and the impacts that they create, is a limitation which the approach outlined in this paper seeks to address.

5.2. Dublin FSI Mapping Results

The 83 FSIs identified in Dublin are shown in Figure 1. The overall distribution reveals hot spots of activity in the inner city, particularly to the North. The geolocated distribution of FSIs by activity is available on the live Food Sharing Map (see <https://www.sharingsolutions.eu/food-sharing-map>), with growing initiatives concentrated in Dublin City centre, but with notable clusters in the Northern suburbs and Western peripheries. Cooking, eating, and distribution FSIs are also primarily located within the inner city, with considerably fewer and more dispersed initiatives on the periphery. Extensive areas of Dublin, particularly in outer suburban zones, have no mapped FSIs with a dedicated digital profile. While a small number of FSIs operate mobile hubs, which might cover some of these areas, the overall distribution highlights uneven provision across the city.

By overlaying the location of FSIs in Dublin onto spatial deprivation statistics provided by Pobal (2022), a state-sponsored, not-for-profit intermediary that manages a variety of government programmes focusing on inclusion, equality, and community development, it is possible to examine whether social need matches provision of FSIs. Figure 2 zooms into specific areas of the municipality and shows that while many FSIs are situated in or near areas of socioeconomic disadvantage, supporting local community needs, there remain

under-served zones in outer urban areas, particularly to the North and West. It is notable that few FSIs are directly located in areas of extreme disadvantage, reflecting previous studies which have found that areas facing the greatest challenges rarely have the capacity to initiate grassroots-led sustainability infrastructures (Davies & Mullin, 2011).

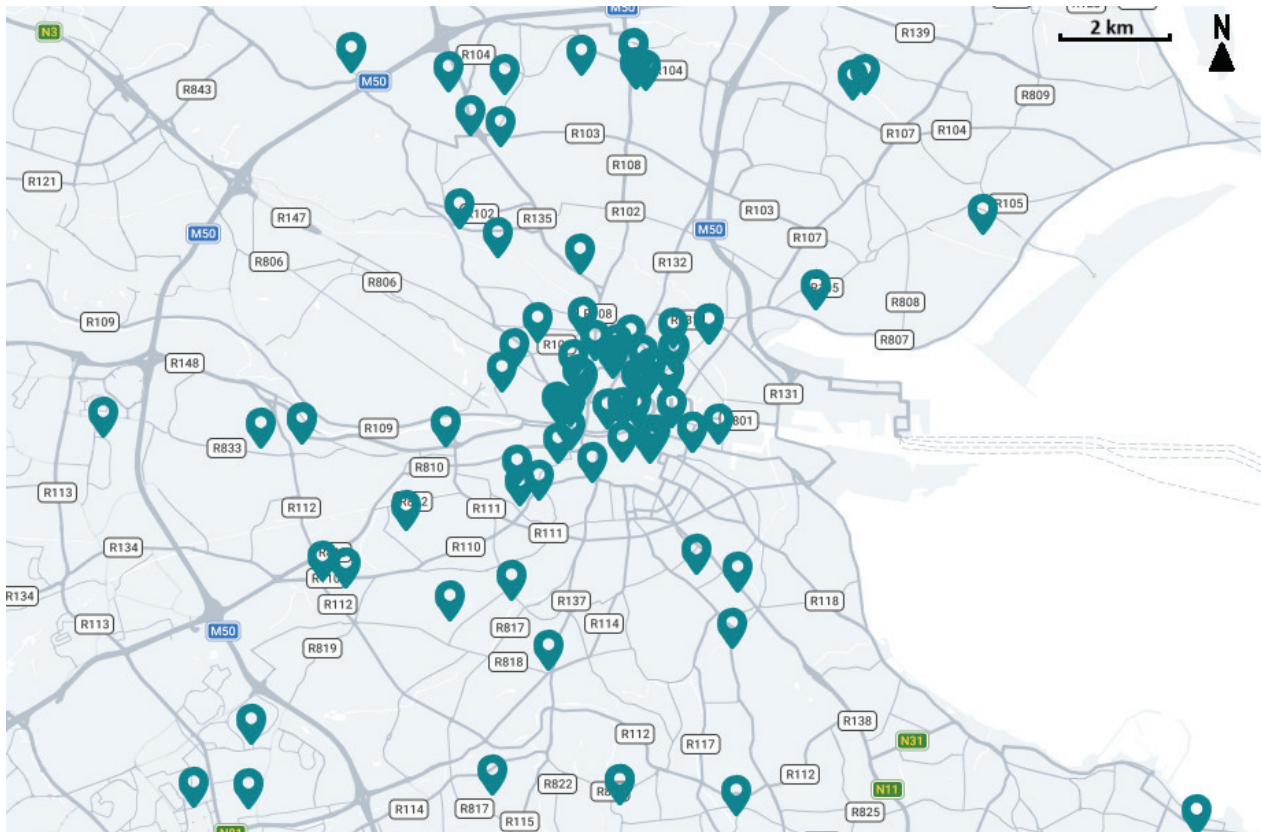


Figure 1. Dublin FSI landscape as shown on the Food Sharing Map. Notes: The map is available at <https://www.sharingsolutions.eu/food-sharing-map> and was accessed in January, 2026; two FSIs on the city perimeter are not shown.

As shown in Figure 3, Dublin has relatively similar numbers of FSIs focusing on each of the food sharing activity categories, with a slight preponderance of redistribution and growing activities. Just under a quarter of all identified FSIs in Dublin exhibit multifunctionality, combining activities such as food growing with redistribution or cooking with the distribution of community meals, illustrating the integrated nature of food sharing practices. In terms of the mode of sharing adopted by these initiatives, most use gifting (89.2%), while only a few (7.2%) sell products and services as part of their operations, with no FSIs engaging in bartering. One FSI combines selling and gifting. Collecting, including gleaning and foraging activities, is only present alongside gifting in two FSIs. Many factors have been shown to influence the organisational form and persistence of FSIs, such as access to land and buildings, regulatory conditions, and socio-cultural norms (Sadovska et al., 2025). Further research on histories and cultures of food and food sharing is required to fully understand these dynamics in Dublin.

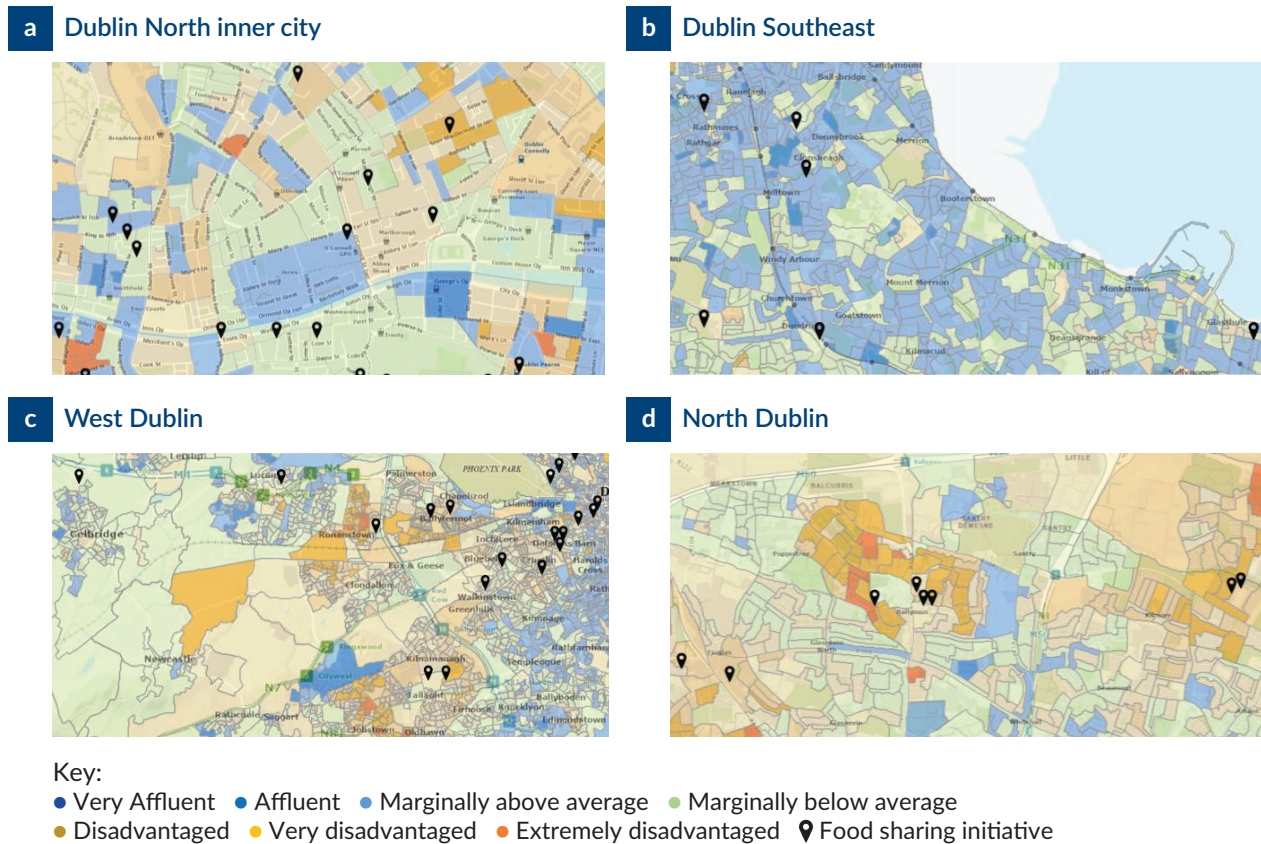


Figure 2. FSIs in the Dublin region by specific city zones overlaid on Pobal (2022) deprivation small area statistics.



Figure 3. Venn diagram and bar chart showing the number of FSIs categorised by activities. Note: The numbers in the intersections between circles in the Venn diagram indicate the nature of multifunctional FSIs in Dublin.

5.3. Core Sustainability Impacts From FSIs in Dublin

Estimates of sustainability impacts in Dublin from FSIs at the municipal scale across the five selected indicators are presented in Table 1.

Table 1. Average estimated impact from mapped FSIs in Dublin.

FSI activity category	Impact metric	Adjusted no. of FSIs involved in the activity	Weighted average impact per FSI (annual)	Estimated municipality-level impact (annual total)
Cooking & eating	Meals shared (number)	26	8,377	217,802
Growing	Food produced (Tonnes)	32.5	.538	17.49
Redistribution	CO ₂ e avoided (Tonnes)	24.5	373.8	9,158.1
All	Attendees at events (number)	83	199	16,517
	Volunteers engaged (number)	83	10	830

The growing initiatives mapped in Dublin are estimated to produce 17.49 tonnes of food annually. As this food is grown close to where it is eaten, related transport emissions are small, and dependency on global imports of fruit and vegetables, which is high across Ireland, is reduced (Teagasc, 2021). Additionally, these initiatives are often located on previously vacant public land (Corcoran et al., 2017), bringing them into productive use for local people, even if this is under conditions of insecure land tenure. However, optimising yield from a garden is rarely the goal of community growing. Growing together supports health and well-being impacts for participants (Tharrey & Darmon, 2022), while the gardens themselves can help to regulate water flow, increasing infiltration capacity, improving air circulation, and cooling through shading, whilst providing habitats for wildlife and recreation (Hemmelgarn & Munsell, 2021). Cooking and eating initiatives are estimated to provide 217,802 meals for people in Dublin annually, providing sustenance and expanding opportunities for social interactions. While such benefits are hard to quantify, research conducted in Dublin has demonstrated the benefits of such combined social and nutritional support for older people living alone who may be at risk of social isolation (Power et al., 2016). Redistribution initiatives are projected to save 9,158.1 tonnes of food from going to the bin, instead providing meals for people and ensuring the resources underpinning food production are not wasted. While there is no academic research detailing what this redistribution means for the ultimate recipients in Dublin, a case study conducted by Nelis, a global sustainability non-profit organisation, found that in 2017 just one recipient charity, Rosepark Independent Living, was able to save £17,600 (approximately €20,770) in food costs, enabling them to extend their services for residents in other ways (Hobson, 2020).

The citizen engagement and volunteer estimates indicate a community-powered infrastructure focused on local needs and contexts, helping to improve food literacy and creating a wide range of well-being benefits (Nichol et al., 2024; Rut & Davies, 2024). Volunteers are the engine behind the FSIs.

5.4. Discussion

Before this research was conducted, FSI activities and impacts were largely invisible to Dublin municipality, creating hidden sustainability. The approach laid out in this article helps visualise and aggregate FSI impacts. When sustainability metrics from FSIs are translated into standardised indicators, they become part of a broader economy of data-driven governance (Chandler, 2020), with visibility conferring legitimacy, funding, and political traction (Valette et al., 2023). However, this visibility can be double-edged. While it enables recognition and comparison, it also risks rendering relational, affective, and place-based forms of value into units amenable to circulation and exchange within the current urban food system rather than transforming it. Digital mapping and impact assessment tools are not neutral representations but active components of these relationships, shaping what can be seen, measured, and understood (Davies, Cho, & McGeever, 2025). To ensure municipal food systems are transformed towards sustainability as part of a post-2030 sustainability agenda, the co-designed indicators in The Toolshed need to be recognised not only as valid and valuable by municipal food governance but also utilised to inform decisions and actions (Mont et al., 2026; Moragues-Faus et al., in press). There is much work still to be done here, as research demonstrates a historical undervaluing of community care infrastructures, like FSIs, by neoliberal capitalism (Lombardizzi, 2022; Mould et al., 2022), and FSIs remain entangled with unequal histories of gendered and racialised responsibility (Spade, 2020).

The data collated can help Dublin municipality understand and govern FSIs better. It can be used to identify gaps in provision relative to need and target resources more accurately to close these. It can also be employed to establish the contribution FSIs are making to mandatory national targets, such as reducing food waste by 30% from retail and consumption within the European Union by 2030, and support the extension of FSIs to meet shortfalls if needed. This article is focused on the impacts that FSIs create; however, the data can also be used to gauge what would be lost when community gardens, kitchens, and redistribution initiatives are forced to close. FSIs are more-than-food initiatives (Milbourne, 2024), creating positive social, economic, and environmental impacts through sharing, with participants being far more than just passive recipients of food. The activities of FSIs complement and contribute to the prevention and reduction of demands on other public services, such as doctors, hospitals, employment centres, schools, and colleges (Clare et al., 2023; Hume et al., 2022).

While only a partial picture of the full impacts created by FSIs, it is possible to compare these results with other locations where a similar approach has been activated (see Lyons et al., 2025). Dublin has a comparatively low density of FSIs, with just one FSI per 7,141 people, compared with Utrecht (1 per 4,255). This suggests a provision gap in Dublin, making it harder to meet local needs, contribute to the SDGs, and ensure a just and resilient urban food system. To match Utrecht's number of FSIs per head of population, Dublin would require 56 additional FSIs. However, setting targets for expanding FSI numbers in Dublin should go beyond quantity and reflect the specific needs of local populations in particular neighbourhoods, recognising the full range of impacts that FSIs create. This requires not only the existence of data on the incidence of FSIs and their impacts, but also interdepartmental collaboration to share data related to population needs in the city and an organising structure to discuss findings and create action plans (Moragues-Faus et al., 2024). A lack of municipal actors with food as a key responsibility in Dublin municipality currently impedes action here.

Overall, the approach provides three key insights: the diverse sustainability contributions that FSIs are making in Dublin; the scope to strengthen and expand FSIs in Dublin to meet sustainability obligations, such as reducing food waste; and the opportunity to improve Dublin's food system governance by incorporating FSIs into decision-making.

6. Conclusion

Responding to a knowledge gap within municipalities, this article set out to estimate what sustainability impacts FSIs collectively make at the municipal scale. The approach developed provides an estimation of core impacts in Dublin by combining FSI mapping with sample SIA data as an intermediate step towards full SIA analysis at the municipal scale. While acknowledging the limited availability of data, these estimations provide a conservative baseline of impacts that can become more accurate and comprehensive over time if data collection by FSIs expands. Providing and combining supporting mechanisms, such as the Food Sharing Map (<https://www.sharingsolutions.eu/food-sharing-map>) and SIA tools like The Toolshed, can encourage action in this area, but reporting inevitably requires time, skills, and resources. The absence of any mandatory sustainability reporting around food in Dublin means such activities are not currently seen as a priority for municipalities or food organisations.

However, if Dublin is to fulfil its goal of “food justice and nutritional equity” (DCC, 2024, p. 50), then it will require mechanisms that are able to identify the location of all food activities within the municipality, including FSIs, to ensure distributional food justice. Certainly, FSIs require a voice at policy-making tables to ensure greater procedural food justice in Dublin, and their impacts need to be visible to policymakers to be considered. Establishing a food policy council, or a dedicated food policy officer, would allow Dublin to harness local expertise, connect with international best practice, and demonstrate leadership in shaping a more resilient and equitable food system (Nunes & Lamine, 2025; Polman & Bazzan, 2023). Including FSIs as stakeholders within an action-oriented update to the Edible Dublin Strategy, alongside mechanisms to assess the sustainability contributions of all food initiatives in the city, would embed stronger recognition justice in planning processes. So, while a multivalent justice framework can seem abstract, the processes of mapping and impact assessment considered in this article lay important foundations to operationalise it.

What this article demonstrates is that FSIs can and do provide vital mechanisms to improve food security, support local growing, and reduce food waste, whilst also providing spaces for connection. In the context of developing a post 2030 agenda, there are then clear possibilities for incorporating a broader range of initiatives and their impacts into municipal food policy processes, but this will require governing architecture designed with this in mind alongside resource streams and tools to enable data collection and analysis.

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Conflict of Interests

Daisy Gallagher was previously employed by Dublin City Council as part of the Climate Action Unit.

Data Availability

The Food Sharing Map detailing the urban landscapes of FSIs across 105 cities is available at: <https://www.sharingsolutions.eu/food-sharing-map>

The Toolshed SIA is available at: <https://www.sharingsolutions.eu/food-sharing-initiatives>

Publicly available SIA reports are available at: <https://www.sharingsolutions.eu/talent-garden>

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