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Coordination of surplus food redistribution in a wholesale market setting in the UK: a social practice theory analysis

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Introduction

- There is growing interest in surplus food hubs as a way to improve access to food for community food sector organisations. These hubs have the joint goal of preventing food waste.
- While there is an increasing amount of research on food hubs (Cleveland et al., 2014; Papargyropoulou et al., 2024), the everyday routine practices, mechanisms, and material resources that shape implementation and functioning of food hubs have not been explored.
- There is also limited research analysing the socio-technical, material infrastructures and contextual factors that may influence outcomes, functioning and capacity of surplus food hubs.

Surplus Food redistribution activities in a wholesale market setting

- This project is a sub-project of the Mandala Consortium. We partnered with The Active Wellbeing Society (TAWS) to study the piloting and implementation of their new Surplus Food Redistribution Hub (SFRH), which launched in the Birmingham Wholesale Market (BWM) in February 2024.
- The principal function of the SFRH is to receive surplus fresh produce, primarily fruit and vegetables, from wholesale market traders at no cost and redistribute to CFS.
- The intervention involves additional key stakeholders including the BWM management, a surplus food kitchen, market traders who supply fresh fruits and vegetables to SFRH and CFS organisations who collect fresh fruits and vegetables, and meals from SFRH and kitchen.

Aims of the study



To understand the mechanisms, structures, and resources that shape and enhance surplus food hub's practices in a wholesale food market setting.



To understand the practices and experiences of the surplus food hub, community food organisations (CFS) and wholesale food market stakeholders.

Understanding surplus food redistribution hub through social practice lens

- Zooming in into everyday activities and integration of practice-elements within the food hub
- Zooming out to understand how food hub connects to other related stakeholders' practices

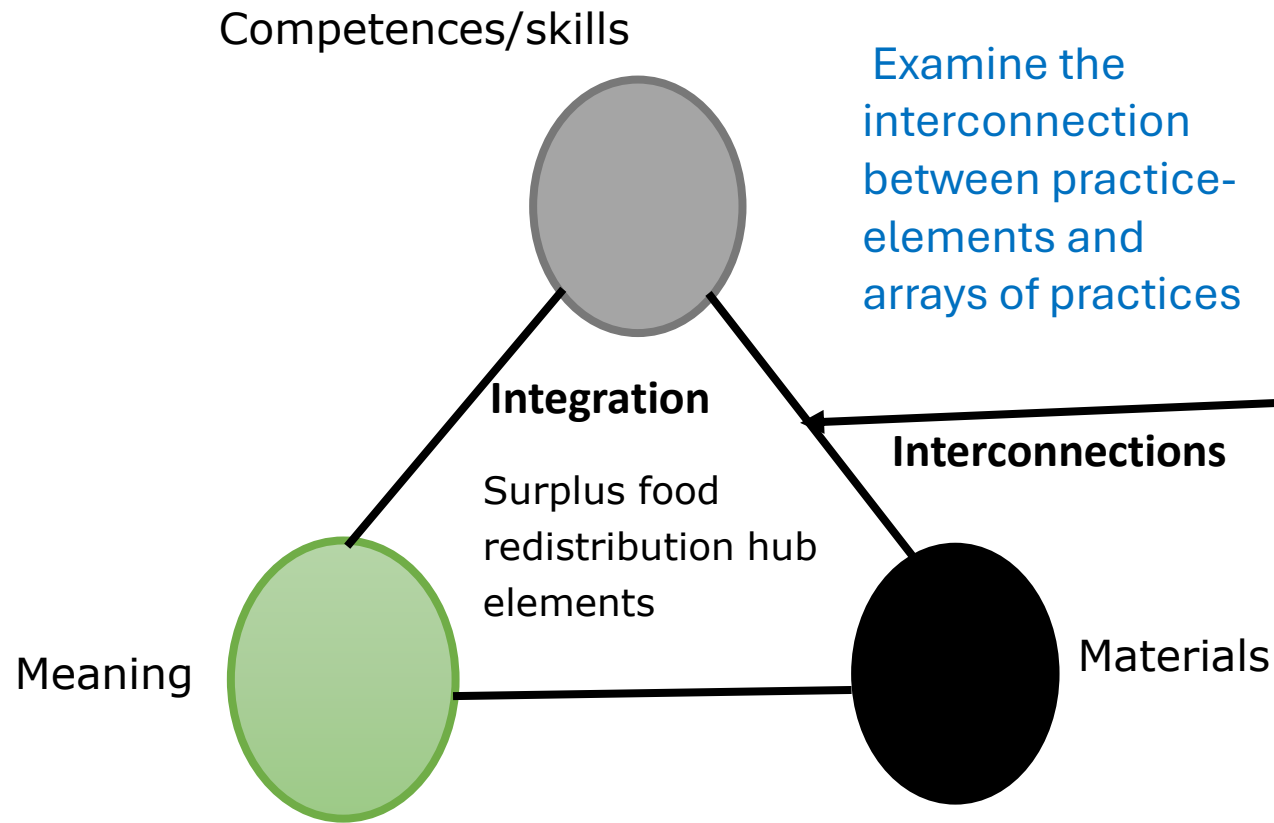


Figure 1. Integration of practice-elements

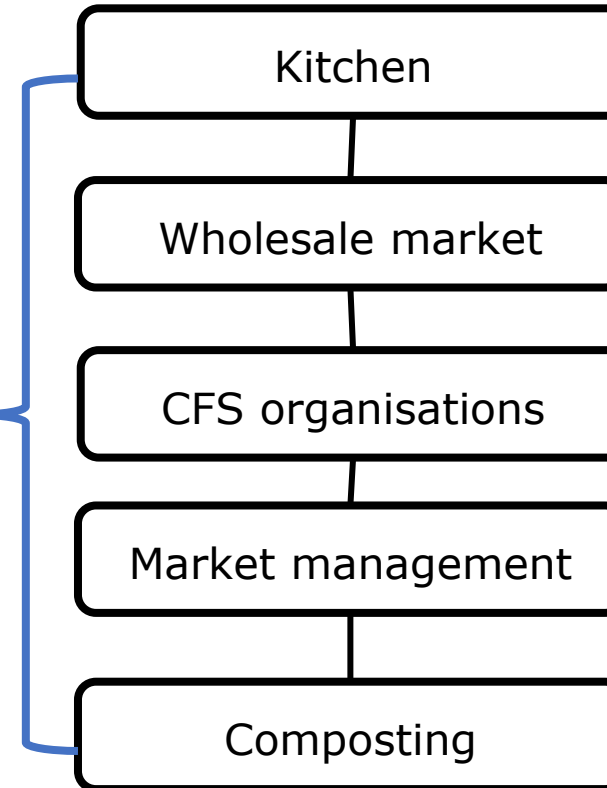


Figure 2. Interconnection of arrays of practices

Methods

- Study context
 - The study sites included the BWM, the SFRH, the TAWS kitchen, and CFS organisations.
- Data collection at food hub and CFS organisations outlet
 - Unstructured and structured observations
 - Observation was carried out in SFRH, 3 CFS organisation outlets, TAWS kitchen outlet and BWM between the period of late April, May, June, and August 2025
 - Type of activities observed:
 - How surplus food moves into and out of the SFRH?
 - How food is collected or delivered, how it is sorted and weighed, and how it is packed for distribution?
 - Interactions between the hub coordinator and community food organisations, visiting several community food aids outlets?
 - Types of food donated, the time spent collecting and sorting the food, the resulting quality and quantity of food made available to the community food sector.
 - Subjective ranking of surplus food materials based on texture and physical appearance.
 - Semi-structure interviews (6 traders, 5 CFS organisations, 3 staff from TAWS, 1 BWM management staff)
 - Types data collected:
 - How surplus food redistribution hub works in practice?
 - How the relationship between different stakeholders of SFRH are up taken?
 - Perceptions of traders and CFS about the establishment of SFRH?
- Sampling
 - A purposive sampling strategy was used to select participants for this study. We recruited stakeholders including BWM traders, CFS organisations, BWM management staff, TAWS SFRH and kitchen staff.

Results

➤ Integration of practice elements in the surplus food redistribution hub

- Meaning, material resources and skills/competences
 - The practice of surplus food redistribution is shaped by the integration of multiple practice elements. These include *competences and skills* such as sorting surplus food, weighing food items, identifying products that require immediate processing, distinguishing edible from inedible food, negotiating with traders, exercising diplomacy, managing hub operations, and driving vans for food distribution.
 - The practice also relies on *material resources*, including trolleys for moving food materials to the hub, fridges for storing rescued surplus food, and vans for distributing food to community organisations.
 - The *meaning* includes transforming fresh surplus food into meals for immediate consumption, and providing access to quality, healthy, and fresh fruits and vegetables.

Surplus food redistribution hub pathways

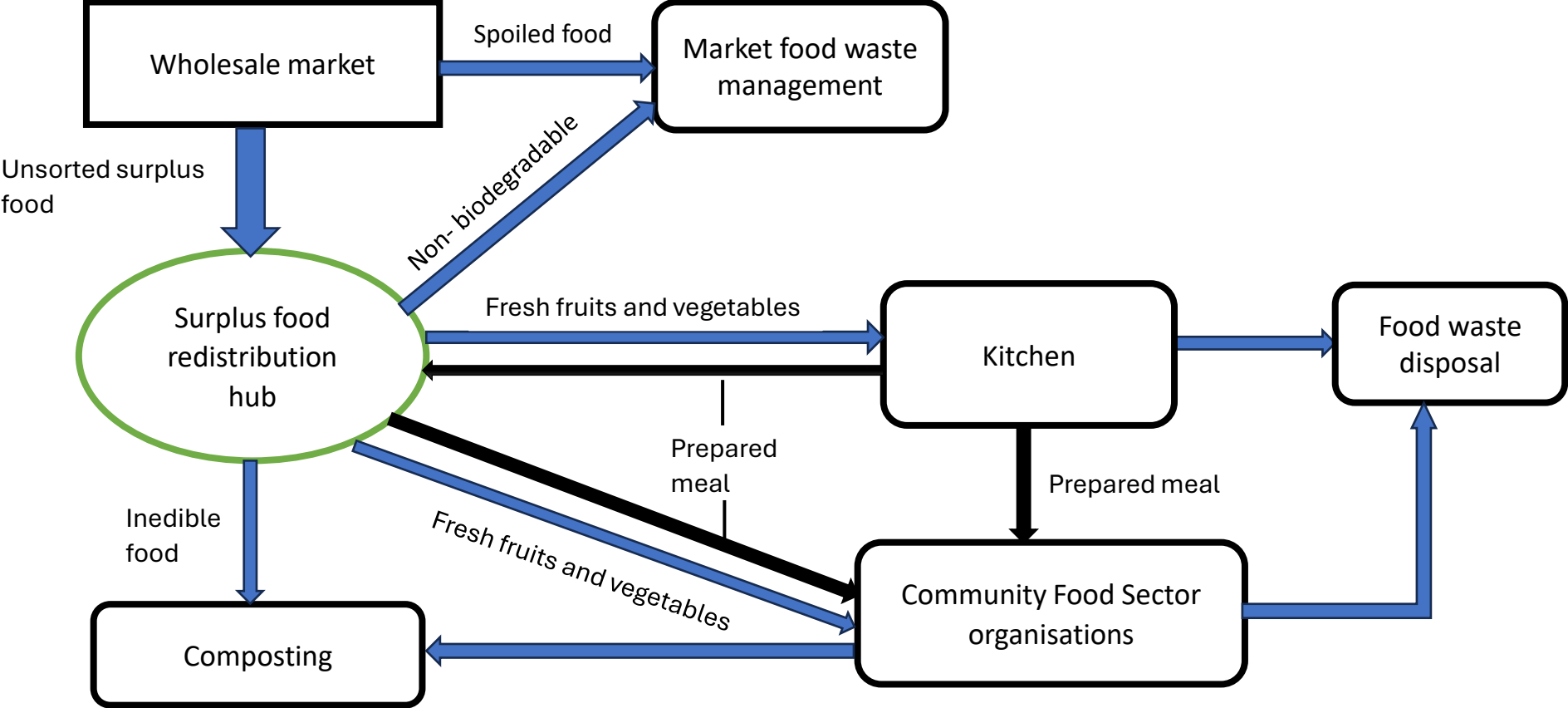


Figure 3. Surplus food redistribution network

• Observations of surplus food redistribution

- Everyday food collection by the food hub
 - *"We walk around the market asking traders for any food they intended to discard. We do a quick sorting and then move then to food hub for detailed sorting."*
- Collection by CFS organisation
 - *"When CFS organisation comes to the food hub, we point to them the food materials that are available to collect. Then, they make their choices by pointing to the ones they want, then we will help them load it inside their car. "*
- Delivery by food hub coordinator
 - *".....We packed some of the surplus food into the van, which made transporting the food easier. and was used to deliver food to the kitchen and community food organisations outlet."*
- Surplus uncollected
 - Store in the fridge
- Negotiation and purchase of low-grade food material from traders
 - Observed food hub staff negotiating with traders, and she was able to purchase some foods at a cheaper price from a trader.

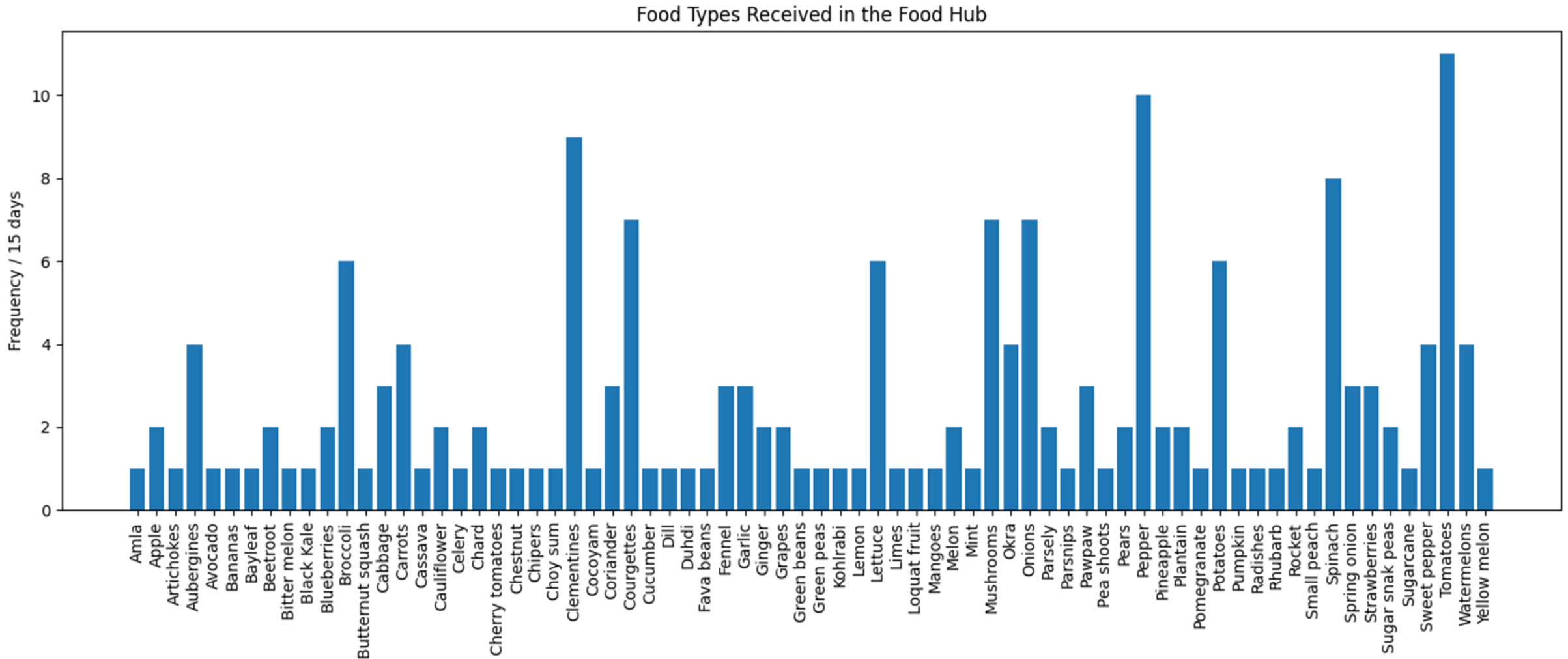
• Observations of composting practices

- Surplus food is sorted to remove the inedible ones from it.
- Food waste is placed inside plastic boxes, which are dropped off at a nearby compost sites.



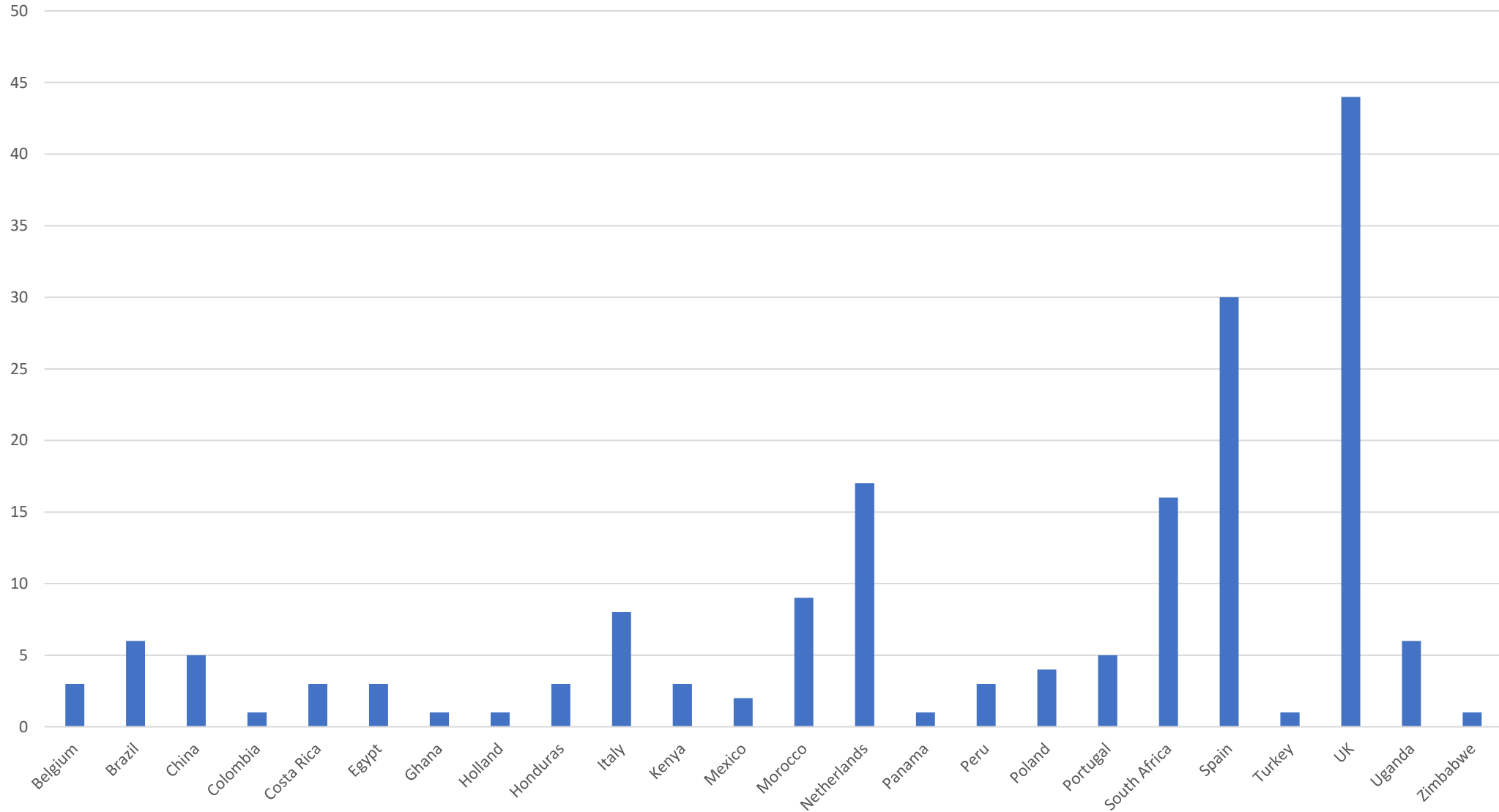
Fruits and vegetables types received in the food hub per 15 Days

- This is a representative of variety of food types received in the SFRH (observed during the period of April to August 2025).



Countries where fruits and vegetables in the food hub were produced

Frequency of food types received in the food hub
per country of production



Surplus food quality (fruits and vegetables sorted in the food hub)

Quality ranking	Freq	%
Good for immediate preparation	7	2.80
Approximately three days to end of life	124	49.6
Good	118	47.2
Very good	1	0.40

- This is the quality ranking of 250 food materials received within the 15 days period of observation in the SFRH.



CFS organisation food redistribution practices

- Organisation procedure

- Clients do pay a token to register when they come to collect surplus food, while in some organisations food is distributed to anyone who comes to the food bank without payment.
- CFS organisations source their food materials from different sources. The supplies do come from Morrisons, Aldi, Tesco, FareShare but for fresh fruits and vegetables the majorly source it from the Food Hub in the Birmingham Wholesale Market

- Food sharing arrangements

- The surplus food is displayed in one corner of the hall or on a set of tables or shelves in the CFS organisation outlets, where members can take what they want. Each food product is clearly marked so clients know what quantities they are allowed to take from each section.

- Food waste management

- "If any of the food is spoiled, it is taken to allotment gardens for composting, thanks to these arrangements, food waste is kept to a minimum during the week".

Traders' dispositions and food hub interactions

- Traders do ask food staff for help in case they have what they need such as pallet wood, boxes.
- Traders are friendly and allows food hub staff into their stalls to rapidly sort through the surplus food.
- Traders do bring surplus food to the food hub themselves
- The unusable food was gathered behind the stalls, awaiting disposal at the waste site. From what I observed, a substantial amount of food continues to end up at the waste site.
- No food waste is left behind in the market, as the market management doesn't allow food waste to remain outside the market.

Kitchen operation

- Menu planning
 - There is no pre-set menu; they simply prepared whatever food materials were available in the kitchen. They prepare whatever food materials are available in the kitchen at the time.
- Sources of food materials
 - They rely on both purchasing and surplus food donations, approximately a 50/50 split between the two. The surplus food materials come from SFRH and FareShare.
- Meal preparation and storage
 - Once the meal is prepared, they are portioned using the disposable plates and labelled. Each label includes the menu, the preparation date, and any allergy information. After labelling, they cover them and move them into the freezer.
- Meal delivery to food hub
 - Boxes of prepared meals were transported from the kitchen to the food hub, where they were stored in the freezer.
 - Some community food organisations come directly to the kitchen to collect prepared meals.



BWM management support practices

- The BWM management supported the food hub by allowing them to dispose of one tonne of food waste per month at the waste site free of charge.
- This support enables SFRH to recover more surplus food from the market.
- The management provides the space currently use by SFRH in the market.
- The management liaises with the traders on behalf of the SFRH.
- The management has also newly provided a space where the kitchen is located.

Conclusion

- The integration of different practice elements shape and form the surplus food redistribution hub practices.
- There is significant quality of fresh fruits and vegetables deliver to CFS organisations.
- Our findings show complex network of surplus food redistribution practices as it interconnects with wider key stakeholders, i.e SFRH operates as a bundles of interconnected practices.
- The location of SFRH is likely to influence increase the recovery of more fresh fruits and vegetables for CFS organisations.



Thank you

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Questions?



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