Final proceedings AESOP-SFP22-Almere

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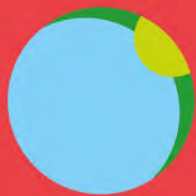# Feeding the melting pot: agroecological urbanism for inclusive and sustainable food practices

Conference proceedings of the:
10th annual Conference of the AESOP
Sustainable Food Planning group

Almere, 19-22 October
AERES University of Applied Sciences | Wageningen University & Research

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Introduction

The AESOP Sustainable Food Planning conference took place in Almere, the Netherlands, from the 19th until the 22nd of October 2022. The title of the conference was 'F*eeding the melting pot: agroecological urbanism for inclusive and sustainable food practices*'. As organizers of this conference, thinking back fills us with pleasure, pride and lots of fond memories. The AERES building, light and full of plants, offered a pleasant atmosphere in which we spent two days learning and gaining insights from numerous oral presentations in parallel sessions, but also from poster discussions, keynote speeches, book presentations, deliberations in the AESOP sustainable food planning community, a policy get-together, and of course all the informal conversations enjoyed over coffee, lunch, dinner and wine. We thank all participants for making this conference work, as we really enjoyed the great atmosphere, the lively conversations and the general enthusiasm for, interest in and expertise on the conference's topics.

These conference proceedings are organised as follows: the following four sections contain the short papers belonging to the four tracks that made up the conference (social inclusion; urban agriculture; urban planning, design and development; food governance). The last section consists of the abstracts of the book and poster presentations, a short report on the YAP workshop held at the first day of the conference, and a short report on the excursion organised at the last conference day.

We trust that you will enjoy reading the papers collected in this document as much as we have, and that they bring you back to this inspiring conference.

With regards,

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  Title keynote: *Changing food routines in multicultural Almere*
- **Petr Jehlička**
  Senior Researcher at the Institute of Sociology of the Czech Academy of Science, Prague
  Title keynote: *Urban agriculture as an already existing sustainability: Lessons from the epistemic peripheries*

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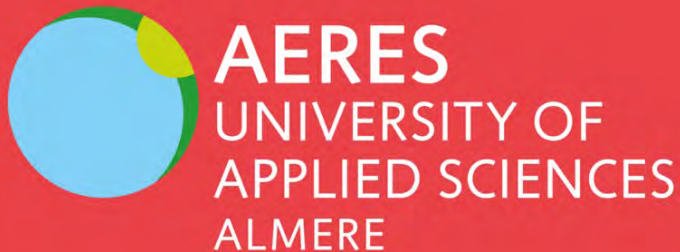
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Track 1: Social Inclusion

With urbanisation, the cultural landscape of major European cities has been upturned, with increasing diversity in ethnic backgrounds and ethnic minorities collectively comprising the majority of the population. In such super-diverse so-called 'majority-minority' cities, many culturally-diverse food consumption practices take place. This diversity in food consumption practices is extremely relevant when we talk about regional food systems, as such regional systems strongly encourage the replacement of global food models for alternative, regional food networks. The papers in this track study social inclusion and food from different angles, taking a variety of concepts as the focus of attention, such as inclusivity, food democracy, food sovereignty, food accessibility, food poverty and diverse food economies. They do so in a variety of contexts, both urban and rural: the papers discuss amongst others farms, gardens, dachas, community kitchens and food markets. This diversity in topics and contexts cannot hide, however, a shared focus on what is needed for more inclusive (regional) food systems.

Analysing food democracy within university-led communities of practice
The case of the Stadsacademie

Steyaert A., Prové C., Dessein J.[1]

Abstract – **In order to ensure food democracy, a more democratic approach to the creation and sharing of knowledge is essential. We believe that universities can be a crucial actor in this approach. Through their central role in knowledge production, they bear the potential to enhance the access to – and reframing of – knowledge. However, in order to do so, they need to be provided with the right structures. An evolution that could be promising in this regard is the development of university-led communities of practice. However, conceptual clarity to analyse the contribution of these kinds of arrangements to food democracy is still missing. In this paper we lay the conceptual basis for a framework to explore food democracy dynamics within a specific university-led community of practice which is the Stadsacademie in Ghent. Meanwhile, we pay specific attention to the perception and use of knowledge in these processes. The framework builds on the principles of transformative food system research (responsibility, plurality, collaboration, and openness) and includes four dimensions: Sharing of knowledge about the food system with others, Co-creation of food system knowledge, Knowledge as a tool for food system action and Knowledge as a driver for community-building. The next step is to validate the framework through empirical research and expert feedback.**

Keywords – **Food Democracy; Communities of Practice; Knowledge Democracy; Food System Transformations**

INTRODUCTION

There is a growing body of literature that draws attention to food democracy as an answer to immense power imbalances in food system decision-making. Food democracy scholars and activists argue that decisions about the sustainability of our food and agricultural systems are inherently value-based and as such, should not be left to a small and elite group of actors (Behringer & Feindt, 2019).

This has led to a vast amount of studies using a food democracy lens to assess the potential of initiatives such as food policy councils (Baldy & Kruse, 2019; Bassarab et al., 2019; Sieveking, 2019) and alternative food networks (Renting et al., 2012) in transformations towards food democracy. While in general, the studies conclude that these initiatives have a great potential to contribute to food democracy transformations by including actors such

as policymakers, NGOs and local businesses, a recent systematic review by Candel (2022) has also shown that direct citizen involvement is generally low, especially when it comes to marginalized groups such as ethnic minorities and people living in poverty.

Additionally, much of the research up to now has paid insufficient attention to the role knowledge plays in the transformation toward food democracies, especially when it comes to the involvement of universities in these processes. This is not unimportant since studies in other fields (Biesta, 2007; Hong & Rowell, 2019) have come to establish that universities contribute to a clear hierarchy of knowledge in which academic knowledge is seen as the only valid way to see and understand the world, which in turn leads to the exclusion of other types of knowledge and of the actors possessing this knowledge in decision-making. However, these studies also show that universities have the potential to enhance the access to - and (re)framing of - knowledge necessary for successful citizen participation. However, the structures to capitalize on this potential are very limited.

An evolution that could be promising in this regard is the development of university-led communities of practice (UCOPs) as they are a way for universities to experiment with a more inclusionary way of doing research. A community of practice is a group of people that engages in a social learning process. Through continuous interaction, they develop, and progressively deepen, a collective understanding of a shared issue of interest (Wenger, 2010). Adelle et al. (2021) have experimented with a UCOP on food in South Africa. After three years of studying this process, they concluded that the process can contribute to operationalizing food democracy from below. However, due to the lack of conceptual clarity in this study, it is difficult to find out how food democracy is operationalized.

In this paper, we discuss an analytical framework to explore food democracy dynamics within UCOPs. In order to do so, we look at a specific UCOP which is an ongoing trajectory on food democracy within the Stadsacademie[2]. The trajectory was launched in June 2021 with the purpose to explore and have an impact on the issue of food democracy in Ghent. The next

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part of this paper has been divided into three sections. In the first part, we describe the set-up of the trajectory and our first experiences with working in a transdisciplinary manner. In the second part, we discuss the different building blocks that have led to the development of our analytical framework. Finally, the conclusion section will address the next steps that have to be taken to validate the framework.

THE CASE OF THE STADSACADEMIE'S TRAJECTORY ON FOOD DEMOCRACY

The Stadsacademie, founded in 2017, is a collaboratory for transdisciplinary research and education about complex and urgent sustainability issues from the city of Ghent and Ghent University. Within the Stadsacademie different trajectories are organised. Each trajectory is led by a small team of researchers (and, ideally, urban stakeholders) and focuses on an urgent, real life/concrete wicked issue (Lönngren & Van Poeck, 2021). Activities organised within the trajectories can be various, however, the majority of the trajectories include a Master Thesis Atelier (MTA), in which master students and their supervisors from different disciplines work together on a complex issue and shape their research in collaboration with the urban community. In this sense, the Stadsacademie is a good example of a UCOP, since people engage with the objective of social learning and co-creation of knowledge about the wicked issue central to the trajectory. For specific insights on the setting of the Stadsacademie, the organization of Master Thesis Ateliers and their contribution to trans-disciplinary research and learning, we recommend the paper of Block et al. (2022). Due to the limited length of our paper, we will skip this part and focus solely on the trajectory about food democracy.

This trajectory was started in 2021 by the three authors of this paper. As for many other trajectories, we decided to work towards an MTA. The topic of food democracy was selected by the authors in line with the Ph.D. subject of the first author. This topic was deliberately kept broad, since delineating the topic would happen within the UCOP. At the moment the UCOP does include seven supervisors and ten master students from different faculties at the university of Ghent, civil servants working at the departments of social services and environment, staff of organizations providing food support and organizations working on food security. However, the community is still growing. Together with the organizations providing food support, we will also work on strategies to involve food support receivers.

Since preparations for an MTA take more or less a year, we planned to start in October 2022. A first step in the preparation was to organise a Stadsacademie session for which we invited organizations, policymakers and researchers from Ghent to an open discussion. In this session, we started from the four dimensions of food democracy as formulated by Hassanein (2008) and discussed their significance within the city of Ghent. Based on these definitions we formulated a future vision, possible actions, obstacles and knowledge gaps for each dimension. In the end, this led to three common themes "Policy work with citizens", "Everyone included" and "Connection around food". In the second session, we started from these themes with the goal to formulate a wicked issue. This goal was not achieved during the session, which led us to the conclusion that the topic of food democracy was too abstract to work with in this trajectory. If we wanted to work with marginalized communities and find out how to include them in policy work and create a connection around food, we needed an issue that spoke directly to them. This led us to decide on food support as a wicked issue. The wickedness of this issue relates to the fact that it is situated on a tensity between addressing food insecurity and food injustice, as is further discussed in Holmes et al. (2018) and that it affects a group of people that is generally not involved in policy-making.

As soon as the issue was decided upon, we started to look for an interdisciplinary team of supervisors and students. An important note here is that although a lot of effort is made to involve different disciplines, in reality, it is difficult to foresee who decides to join and who doesn't. Since the Stadsacademie is still gaining recognition within the research community of Ghent University, most connections have to be made through the personal networks of the trajectory coordinators. This inevitably leads to more promotors in the same research field as the coordinators (in this case bio-science engineering). The final step in the preparation of the MTA was selecting and inviting the urban community. For this, we did a stakeholder mapping based on information found online, supplemented by informal conversations with key actors in the local food system of Ghent. All stakeholders that came out of the mapping received an invitation to the kick-off event in October, which will be the first UCOP meeting.

THE DEVELOPMENT OF AN ANALYTICAL FRAMEWORK

For a deeper exploration of food democracy dynamics in UCOPs, several of these concepts need to be operationalized. As mentioned above within the trajectory on food democracy, we not only want to explore, but also have an impact on issues related to food democracy in Ghent. This intention will be included in our analytical framework by using the principles for transformative food system research as formulated by Duncan et al. (2022). Secondly, to allow for an exploration of food democracy dynamics, we need to clarify what these dynamics entail within an academic context. In order to do so, we will complement the four dimensions of food democracy as formulated by Hassanein (2008) with the literature on knowledge democracy.

Democratic directionality
In 2019 the European Commission assembled an expert group to formulate guidelines for scientific work to support transformations towards a safe and just food system. Based on the discussion in this group Duncan et al. (2022) formulated four principles (Responsibility, Plurality, Collaboration and Openness) to give democratic direction to transformative food system research and guide relations between society, science, knowledge, policy and politics. In table 1 these four principles are

disentangled further and applied to the context of the case described above.

Food democracy dynamics

While the concept of food democracy was first mentioned by Lang (1998), it was Hassanein (2008) who laid out the foundation of a conceptual repertoire for analysing food democracy by formulating four dimensions of practicing food democracy: (1) Becoming knowledgeable about food and the food system, (2) sharing ideas about the food system with others, (3) developing efficacy with respect to food and the food system and (4) acquiring an orientation toward the community good.

From the perspective of knowledge democracy, especially this first dimension can be criticized since it assumes a passive role for the citizen as a receiver of knowledge. In a knowledge democracy, knowledge is collectively constructed, which entails the recognition of different types and representations of knowledge. Types of knowledge link to the way knowledge is created and is generally judged by criteria of rigor and validity. Through their dominant role in determining these criteria universities still claim a kind of knowledge monopoly. However, there are other types of knowledge (e.g. lay, corporate or indigenous knowledge) that deserve recognition. Representations of knowledge are about the way knowledge is expressed. For instance, through text, stories, cooking, poetry, music, painting, political discourse or theatrical pieces.

This also links to the second dimension of Hassanein, since dialogue between knowledges is an essential component of co-creation (Santos, 2015).

When it comes to the third dimension, knowledge is a powerful tool for action to deepen democracy and create a fairer world. (Tandon et al., 2016). According to Adelle (2019), this can either happen through collaborative research approaches such as participatory action research, as outside of a formal research context. However, for this to happen, knowledge needs to be openly available to everyone who can benefit from it. Finally, when looking at the case featured in the paper of Adelle et al. (2021) where the sharing and co-creation of knowledge lead the COP to evolve into a larger food governance network, we can conclude that the relation between knowledge and community goes both ways and knowledge serves as a driver for community building.

When integrating the relevant critiques and additions from the knowledge democracy literature, four remodelled dimensions appear. These dimensions are displayed in table 2, which also features relevant research questions to assess these dimensions in empirical work.

CONCLUSION

This analytical framework was developed building on the existing literature about food democracy, knowledge democracy and transformative food system research. That said, this is just the first step in the development process. In the following months, the framework will be exposed to several rounds of (academic and non-academic) expert feedback. At the same time, empirical validation will take place by applying the framework to the ongoing trajectory on food democracy within the Stadsacademie.

Table 1. *Part one of the analytical framework: principles for transformative food system research inspired by Duncan et al. (2022)*

Responsibility	The UCOP has an ethical commitment to intended and unintended consequences.
	The assumptions behind the research questions are openly discussed within the UCOP.
	The limits of claims to (scientific) objectivity and neutrality are recognized within the UCOP.
	Narratives and pathways of change are defined collaboratively.
Plurality	The UCOP is a space where there is room for disagreement and controversy.
	The UCOP identifies people marginalized by the food systems and gives them a voice.
Collaboration	Research within the UCOP follows trans-disciplinary approaches
Openness	The UCOP provides free access to research outputs, data and tools that can multiply collaborative opportunities between researchers and citizens.

Table 2. *Part two of the analytical framework: Own elaboration of dimensions of food democracy by Hassanein (2008) to include the perspective of knowledge democracy and connected research questions*

Sharing of knowledge about the food system with others	▪ Whose knowledge is considered valid to share? ▪ Which types of knowledge are shared? ▪ In which forms is knowledge shared? ▪ Which criteria does the UCOP use to assess rigor and validity of knowledge?
Co-creation of knowledge about the food system	▪ Who is included in the process of knowledge creation? ▪ Are different types of knowledge included in the creation process? ▪ Is knowledge created in multiple forms?
Knowledge as a tool for food system action	▪ Does the co-creation and sharing of knowledge lead to action either executed or initiated by UCOP members? ▪ Who benefits from the actions that stem from the sharing and co-creating of knowledge? ▪ Does the UCOP facilitate open access to the knowledge necessary to take action?
Knowledge as a driver for community building	▪ Does the UCOP allow for new connections between academic and non-academic actors? ▪ Does the UCOP create possibilities for taking an engaged position related to food system issues?

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Assessing food accessibility in rural areas
From a local food environment approach to a foodscape lens

Claire Néel, Olivia Carbone, Coline Perrin, Christophe Soulard[1]

Abstract – This paper aims to assess food accessibility in a rural setting by articulating a place-based and a people-based approach through the case studies of three small localities located in the South of France (Hérault department). Interviews were conducted with residents, mayors and local food retailers, and were complemented with observation. The results show that analysing local food retail environments is insufficient because it does not take into account the significant role of informal food supply places and the high mobility of residents. Indeed, the foodscape lens demonstrates that individuals can navigate through several local food environments by developing various mobility strategies. Mobility thus appears as one of the main drivers of food accessibility in rural areas, with the economic and the social drivers.

Keywords – foodscape, local food environment, food access, rural areas

INTRODUCTION

Food insecurity levels have risen during the Covid-19 crisis, emphasizing the need to address food systems through a socio-equity lens. Studies underline that food accessibility is the result of a socio-spatial dialectic. Food access depends on various dimensions: economic resources, spatial-temporal access to food supply sources, quality and diversity of the food sold, socio-cultural aspects… (Freedman et al., 2013; Frugal, 2022). To this date, the majority of food access studies have been located in an urban setting (McEntee and Agyeman, 2010). However, despite the commonplace belief that it is easier to eat well in the countryside than in the city (Delfosse, 2019), various obstacles constrain food access in rural areas. Thus, this research paper analyses food accessibility in a rural setting. What kind of barriers and assets characterize food access? Who are the most vulnerable populations among rural residents? How can food accessibility be assessed and improved locally?

To understand the socio-spatial dialectic at the root of food accessibility in rural areas, we articulate a place-based and a people-based approach (Vonthron, 2021). In three rural localities, we analyse the food environment, considered as all the locally available food provisioning places. We complete this approach by using the foodscape notion, that is a powerful tool to understand how individuals perceive and experience the different food environments they are exposed to through their daily mobility.

METHODS

Our research is based on an in-depth study of three small and remote localities of the South of France (Hérault department), concerned by socioeconomic deprivation and ranging from 180 to 1 600 residents. We studied both the local food environments of these localities and the foodscapes of their residents by conducting 29 semi-structured interviews between April and June 2022. We interviewed residents with diverse profiles to understand the constraints they face in terms of food access and to analyse their individual foodscape in relation to the local food environment they are exposed to. We complemented with interviews of all the mayors and a large part of local food retailers to get a more general view of residents' practices and to understand the role of local food environments in food accessibility. Finally, we used observation methods to characterize local food environments, especially to identify informal food supply places, and to analyse how residents practice them.

RESULTS

Local food environments and food accessibility: a place-based approach

The notion of food desert has been widely used in many studies to assess food accessibility and identify areas characterized by poor access to healthy and affordable food (Beaulac et al., 2009). The access is usually considered as spatial – proximity to food retailers – but also temporal (Widener and Shannon, 2014; Chen and Clark, 2016). According to this approach, which focuses on retail food environments, food accessibility is low in the three localities studied. The geographical distribution of food retailers is characterized by a low density ; one of the villages does not even have a single food store. The integration of temporal data shows a great variability of food access over time. The operating hours are often limited, with for example a small grocery store open two hours per day and only during week days. Mobile retailers, only coming once a week, are complementary food sources (Fig. 1). The variety of the products is limited by the few food stores and their small size. Finally, the retail food environments are characterized by a low affordability mainly due to the additional logistics costs in rural areas.

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Figure 1. A mobile butchery in the center of a village (O. Carbone, 2022)

However, considering the retail food environment is not sufficient. The interviews and the observation underline the role of informal food supply places. On the one hand, some local farmers informally sold part of their production. On the other hand, home gardening, harvesting or hunting remain an important part of domestic food supply for some households, who often donate, trade or sometimes sell their food surplus in their local social network. These informal practices are based on interpersonal solidarities and depend on the social structure of villages. They can mitigate partly the constraints linked to the lack of retail food supply and greatly improve food accessibility. However, access to these food resources depends on the bonding social capital of individuals, defined as intra-community social capital (Sørensen, 2016). Therefore, this dimension of local food environments is unequally accessible to the population.

Foodscapes and food accessibility: a people-based approach

The limits of assessing food accessibility through a place-based approach have been pointed out in several studies (Horst et al., 2016; Shannon, 2016; Brinkley et al., 2017; Hammelman, 2018). The food desert notion is especially criticized for not taking into account that individuals can develop complex mobility strategies in their food shopping. Thus, we develop a people-based approach analysing individual foodscapes to complement the study of local food environments. Foodscape includes a physical dimension – the food supply places an individual goes to – but also a socio-cultural dimension – how these places are experienced and perceive (Vonthron et al., 2020).

The interviews show that the foodscape of most individuals is much more extended than the local food environment of their place of residence. Many residents navigate between numerous food supply places, and can travel long distances to get specific products or more affordable prices. However, mobility costs – including money but also time – are high in rural areas. Therefore, residents develop different strategies to reduce these costs. They organize themselves with other community members for carpooling or bulk purchasing schemes. They also tend to embed food provisioning within their everyday

practices, either by including other daily activities in food-related trips or by positioning food shopping in other mobility patterns, for example to work or medical appointments.

Thus, the residential food environments play a limited role in residents' food provisioning practices, except for a few individuals with low mobility. However, they are often in the center of residents' foodscapes. Indeed, even if local grocery stores or mobile food retailers are mainly used to complement their main shopping made in larger stores, residents save on transportation using them, and therefore consider them as local amenities. In addition, local food retail places play a significant social role in the community. They are places where people meet and socialize. This social dimension was especially highlighted during the Covid-19 crisis. During the lockdown, local food stores got crowded because residents were coming to flee social isolation. These convenient and social functions explain why local governments act to maintain or attract food retailers. The foodscape lens thus appears as a useful tool to highlight the gap between food provisioning practices – where people buy their food – and representations – which places people consider as important for food supply.

DISCUSSION AND CONCLUSION

Different approaches are used to assess food accessibility. The local food environment approach focusing on retail places suggests that food accessibility is very low in the rural areas studied. But it is blind to informal food supply places, which play a significant role in villages and really contribute to improve food accessibility. Moreover, the foodscape lens shows that individuals are highly mobile and can navigate through several local food environments and take advantage of the specificities of each one of them.

The analysis of food provisioning practices also underlines that food accessibility is socially differentiated, and depends on several individual capitals: social, economic and mobility capitals (Fig.2). People with a low capital for these three dimensions are the most vulnerable and may suffer from food insecurity.
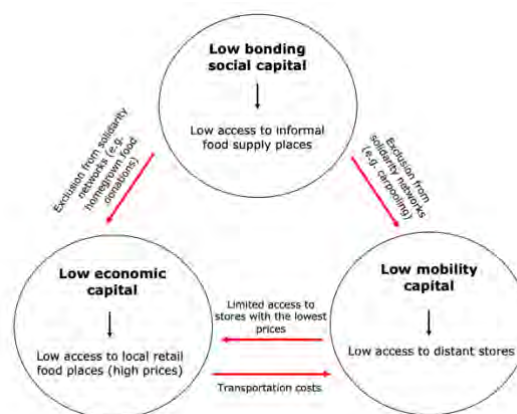
Figure 2. Drivers of low food accessibility (C. Néel)

These results provide guidance to policymakers. It suggests that analysing food retail environments is

insufficient for two reasons. Firstly, it hides the important role of informal food supply places, especially in rural areas. However, little data exists on this aspect (Marie, 2019), making it difficult to include in food planning strategies. Secondly, individuals can be highly mobile in their food provisioning practices, as shown by other studies (Shannon and Christian, 2017; Hammelman, 2018; Essers and Poulot, 2019). Thus, food accessibility is intertwined with broader mobility practices that can only be analysed with a foodscape approach. But it also largely depends on economic and bonding social capitals, confirming that food accessibility is multidimensional and cannot be addressed by considering only one aspect (Freedman et al., 2013). Finally, the foodscape lens shows that local small food retailers have to be maintained. Indeed, even if they do not account for a great part of residents' food supply, they play a major role for some individuals with low mobility and are important as amenities and social spaces.

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Building alliances for agroecological urbanism
The comparison of Vitoria-Gasteiz and Preston

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Abstract – There is an increasing argument for integrating strategies of local food initiatives to build greater social integration and more inclusive place-making processes. This is because alliance-building may support the construction of new meanings around local food and promote self-reflection to address current limitations if diverse local food initiatives, particularly including those formed by and for ethnic minority groups, are part of this process. In this context, studies are increasingly elucidating the challenges that prevent the formation of alliances across diverse groups. This paper aims to contribute to these debates by identifying the main challenges in collectively building agroecological urbanism in cities. It applies a case study methodology including online semi-structured interviews, participant observation, and document analysis to draw from lessons learnt from two cities (Preston, England, and Vitoria-Gasteiz, Basque Country). The study highlights that the building of interconnected networks of local food initiatives has three main barriers: limited resources, depoliticised engagement with food citizenship, and bifurcated conceptualisations of food questions. In discussing what this means for promoting agroecological urbanism, the paper points to possible pathways to surpass these limitations.

Keywords – agroecological urbanism, local food initiatives, collective food transformation

INTRODUCTION

Local food initiatives (LFIs) have been championed as an alternative and solution to reconfigure food supply chains and relations, with the potential of building resilient, just and sustainable food systems (Cleveland et al., 2015; Forssell & Lankoski, 2015). The proliferation of LFIs has generated many debates across the years, as critical scholars started to unpack the dynamics of these practices beyond their attributed potentials and new permutations of the phenomenon materialised as a reaction to new challenges in society. In particular, many argue that dispersed efforts or activities are not enough, as LFIs are influenced by different power and decision-making processes and interdependencies at multiple scales that constrain their potentials (DuPuis & Goodman, 2005; Goodman et al., 2012; Misleh, 2022).

In this regard, some scholars are calling for alliances between LFIs working on diverse issues to be able to pool resources and address food system challenges from multiple perspectives (Blay-Palmer et al., 2016; Holt-Giménez & Altieri, 2013). Significantly, the need for integrating the struggles of LFIs have led to recent discussions on promoting agroecological urbanism, which fosters the construction of a collective alternative journey that strategically organises mutual interdependencies of the food system to dismantle disempowering and oppressive structures (Deh-Tor, 2017; Tornaghi & Dehaene, 2019).

This has led to an emerging strand of literature focusing on what prevents or supports the coalition of LFIs. In particular, the identification of diverse viewpoints and strategies of LFIs with regards to food system change questions whether LFIs can surpass their ideological constraints to effect collective change (Rivera-Ferre et al., 2014). Most of these studies, use social movement theories to analyse spaces of possible convergence. The collection of local food initiatives is conceptualised in this literature as a 'movement of movements', involving a specific form of purposeful collective action for social change where actors involved in this process share common opponents, are linked by dense informal networks and relations, and share a collective identity (della Porta & Diani, 2006; Lorenzini, 2022).

Nevertheless, a key issue of this literature is that by focusing on movement building, studies are missing the investigation of the real-life dynamics of the collectivisation of strategies beyond the construction of coherence between LFIs. As Sbicca et al. (2019) argue, "*with hundreds of case studies of food movement organisations and campaigns, the diversity of the movement is clear. However, our understanding of how communities self-organise into networks at the meso level of cities and the implications for food movements are mudd*y" (p. 2). In this regard, this study builds on emerging literature that views the connections between LFIs as the reflection of self-organised networks or systems, paying particular attention to regional and local formations (Lamine et al., 2019). That is, it focuses on the ideological, resource-based, and relational connectedness of LFIs by unpacking the controversies and trade-offs in the alignment of LFIs and what this means for food systems change. This study addresses this gap by analysing the challenges to form interconnected networks of LFIs at the local level, building on research conducted under a PhD project for the University of Central Lancashire.

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The analysis presented here draws on a combination of two theoretical frameworks: a food systems approach and urban political ecology (Allen & Prosperi, 2016; Heynen et al., 2005; Lamine, 2015; Moragues-Faus & Marsden, 2017; Sonnino et al., 2019; Swyngedouw, 2006). The integration of these approaches views networks of LFIs as complex entities composed of diverse LFIs and food-related activities. These components are in constant interaction through the circulation of different discursive, material, social and capital flows that produce and transform localities. These complex dynamics then shape certain conditions and processes that influence their potential to contribute to the alternative collective journey proposed by agroecological urbanism (Tornaghi & Dehaene, 2021).
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METHODOLOGY

The research adopted a qualitative case study methodology (Stake, 1995). Specifically, if follows a collective case study approach, which includes analysing several cases to form a collective understanding of a phenomenon (Simons, 2012). In doing so, the research examines the meaningful realities that networks of LFIs within a place construct, the conditions that affect their dynamics and the consequences of these processes. The two case studies discussed in this paper were selected to represent how different LFIs might align in diverse socio-institutional settings. Preston and Vitoria-Gasteiz are cities with complex socio-economic landscapes. In the last decade, Preston, the administrative centre of Lancashire, England, has been affected by post-industrial decline and increased public austerity (Lockey & Glover, 2019). It is within England's 20% most deprived local authority areas (LCC, 2019). This has led to a new approach to economic development focusing on community wealth building, often referred to as the 'Preston Model' (CLES, 2017). Preston sits in the middle of the agricultural hub of Lancashire, engaging in a variety of food production activities, including livestock, dairy farming, field vegetables and crops. Vitoria-Gasteiz is the de-facto capital of the Basque Country, one of the wealthiest autonomous communities in Spain that holds relative economic and political autonomy, where the Basque identity is acknowledged as separate. Vitoria-Gasteiz is ranked as one of the best cities to live in Spain and has been awarded the titles of European Green Capital 2012 and Global Green City Award in 2019. It is also at the centre of agricultural production, and there is a stronger emphasis on the development of agroecological agri-food systems, demonstrated by the creation of an urban food strategy in 2016.

This research used multiple sources of evidence and data collection methods to gain an in-depth understanding about the studied areas and enhance the study's credibility. Data collection methods included document analysis; semi-structured interviews with representatives of LFIs and other organisations, and local food experts (30 in Preston and 28 in Vitoria-Gasteiz); and participant observation (4 occasions in Preston and 2 in Vitoria-Gasteiz).

All gathered data was analysed and interpreted using thematic analysis (Braun et al., 2019). For this research, the analysis was conducted in two levels. Level one concentrated on the separate analysis of cases. The second level of analysis is related to the interpretation of findings across cases, aiming to identify cross-case themes that could provide new insights in the understanding of the formation of networks of LFIs.

RESULTS

Cross-case analysis explores the findings of individual case studies at a higher level of theoretical conceptualisation by identifying cross-case themes that help meet the research study's objectives (Stake, 2005). This section discusses three themes that cut across both cases that illustrate the main challenges in building an interconnected network of LFIs in each locality: limited resources, depoliticised engagement with food citizenship, and bifurcated conceptualisations of food questions. In doing so, it illustrates a range of processes derived from the contested circulation of material, social and capital resources within LFSs, mediated by multiple forms of power asymmetries and divergent values between LFIs and with other actors.

Limited resources, informal connections

The analysis of both cases highlights that one of the main barriers to creating associations between LFIs is the uneven distribution of resources within cities. In this regard, LFIs in Preston referred to a constant struggle to survive. Many are from the voluntary or third sector, thus heavily reliant on volunteers and external funding. Even for-profit LFIs, such as local food retailers, explained that they work in a very challenging environment, dominated by supermarkets and industrialised farms, which constraints their work. Similarly, in Vitoria-Gasteiz, LFIs explained a slower process of implementing projects and difficulties scaling up due to limited resources. This is related to the consolidation of the conventional food system and economic prioritisation in the territory, perceived by participants as creating a system permeated by an unfair distribution of resources and marginalisation of agroecological practices.

In this context, LFIs in both localities must reconcile their priorities with searching for collaborations because of their limited capacity. Significantly, comparing both cities highlights the importance of influential organisations, such as the university and local authorities, in leveraging resources to support links between LFIs. As not all LFIs are equally able to position themselves within these structures, a competitive environment is created in the search for resources. In this context, collaborations are mainly sought for individual practical gains, leading to short-term alignments. Irregular information exchange and punctual projects are the main ways the material, social, and capital flows between LFIs are organised in both localities. Significantly, in both cases, LFIs form informal and dynamic self-organised networks that come together sporadically based on a transversal aim of building collective awareness around food.

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Depoliticised engagement with food citizenship

The analysis identified considerable differences in the overarching orientation between the LFIs in Vitoria-Gasteiz and Preston, highlighting the diverse histories, ecologies, needs and issues of local spaces. In Preston, LFIs have a stronger focus on food poverty due to the higher levels of deprivation and the influence of several national austerity and market-driven policies. In contrast, most LFIs Vitoria-Gasteiz channel efforts towards promoting localised consumption and small-scale production due a connection with the Basque culture and overall broader civic engagement towards environmental change. However, a transversal focus was identified in both cities; to increase people's awareness and participation in changing the food system. In other words, a collective commitment to food citizenship. While this provides a starting point to create connections, it also challenges the integration of LFIs towards a deeper search for fundamental change in the food system.

In both cases, when LFIs build connections around this issue there is an overall focus on building people's capabilities to develop new relationships with the food system. However, as much of these interactions focus on changing individual behaviours, there is no real collective reflection on how to develop an integrated approach to drive change in the food system. In particular, there is no consideration of how food citizenship could be used as joint political mobilisation to build collective power to counteract the current unjust underlying structures of the food system. For example, in Vitoria-Gasteiz, even if LFIs working on agroecology and food poverty collaborated in this matter, issues of access to sustainable and healthy food for marginalised communities were not necessarily discussed. Significantly, some participants mentioned a need to politicise inter-organisational relations beyond these sporadic acts. Doing so would embed LFIs with collective political reflection and content and understanding that individual and collective projects are part of a more comprehensive change.

Bifurcated conceptualisations of food questions

Although resource constraints are a crucial determinant in the interactions of LFIs, ideological and value alignment fundamentally drives the articulation of the networks of LFIs. Even though many LFIs must operate within challenging and resource-constraining environments in both cases, many small networks still emerge. Notably, the divergent underlying assumptions of LFIs challenge the search for more inclusive transformation and, thus, the collective construction of avenues to change the food system.

The implications of this in both cases are the formation of small clusters of LFIs that share the same understanding, with little contestation, of the fundamental problems to be addressed (and strategies to address them) in the food system and society. For example, in Vitoria-Gasteiz, even if LFIs share a similar discourse of agroecology, they do not necessarily come together because of divergent views on how to oppose corporate food system logic.

A key characteristic that cuts across both cases is the presence of two sub-systems due to bifurcated conceptualisations of food questions. While one focuses on relocalising food to support rural farmers, the other addresses issues of urban poverty and food access in cities. In this context, most LFIs focusing on food access seek to reduce hunger in the city by using surplus and donated food to address immediate food needs, usually accompanying this with allied services to address broader socio-economic challenges. This is often linked to conceptualising local and sustainable food as distant from their activities due to their primary focus on addressing the multi-layered determinants of food access. On the other hand, LFIs focusing on relocalising food argue that the main issue of the food system is the structure of supply chains, which position farmers in a disadvantaged position. These LFIs' discourses usually revolve around changing consumption practices and food production models to foster sustainable or agroecological food systems. Significantly, issues of who can access these systems are not necessarily considered.

While this separation per se is not problematic, the problem relies upon LFIs positioning these problems as incommensurable realities, missing opportunities to integrate vulnerable communities into the transition towards sustainable food systems. This separation influences the inclusion and exclusion of LFIs and ideas, constraining interactions to circumstantial food donations. Notably, this is related to a particular view of the main issues to be addressed in the food system: access or supply. In both cities, only a few LFIs are actively working on merging these struggles by adopting models and discourses in which access to sustainable or agroecological food is not only catered to middle-class consumers. A common feature of these LFIs is their focus on the lived experiences of food and fostering the search for mutual benefits across the food system.

DISCUSSION

The analysis of the cases points to several issues that need to be addressed first before LFIs align with transformative agroecological urbanism. Two dimensions emerge as crucial for this: the politicisation of LFIs and fostering a collective reflection on lived experiences of food within a territorial perception of change.

A closer look at the organisation of LFIs in both cities demonstrates that issues around the underlying assumptions of LFIs primarily challenge the search for more inclusive transformation (Di Masso et al., 2014), and thus the collective search for agroecological urbanism. The implications of this are the formation of small clusters of LFIs with similar understanding, with little contestation, of the fundamental problems to be addressed (and avenues to address them) in the food system and society. Significantly, even if there is a common frame around food citizenship across these networks, it does not lead to the building of solidarities and investment in collective organisation and infrastructure advocated by agroecological urbanism

(Tornaghi & Dehaene, 2019). A vital issue in advancing food citizenship in this context is the tendency of LFIs to individualise change if not framed under a more political imaginary, leading to exclusionary practises (Di Masso & Zografos, 2015; Guthman, 2008a, 2008b). Significantly, this does not lead to collective reflections on how to change food injustices. In this context, LFIs sacrifice the building of collective-just working models, a goal of agroecological urbanism (Tornaghi & Dehaene, 2021), for their survival and progressive change.

Previous scholars have argued that one strategy to avoid this issue is framing food citizenship within a collective process of change embedded in diverse, interconnected strategies that create territorial communities of care (Beacham, 2018; Moragues-Faus, 2017). These notions can potentially politicise LFIs and any individual or collective future strategy. As such, any activity is embedded within a collective and more fundamental transformative framework. Collaborations between LFIs would then not be focused on sporadic informal interactions but on discussing their collective role in addressing the underlying issues of the food system, thus developing critical assessments of actions. However, the usefulness of (re-)politicising LFIs will only prove successful in building bridges between LFIs if bifurcated conceptualisations of food are addressed.

One issue to be addressed in this context is the separation between rural and urban realities in the work of LFIs, which other scholars have also identified (González De Molina & Lopez-Garcia, 2021). On the one hand, by uncritically fostering food relocalisation and emphasising consumption change, some LFIs reify urban citizens based on economic terms. As Tornaghi and Dehaene (2019) explain, the city is then imagined as a consumption container that can support rural areas without recognising urbanisation and place-based processes that actively create urban inequalities. At the same time, the lack of problematisation of food sources by many LFIs focusing on food access also constructs cities as food receivers, with rural areas as distant and everlasting suppliers. Ultimately, these discursive interpretations relate to whose justice matters: urban consumers or rural farmers. In this selective framing, LFIs undermine the reality that the marginalised position of both farmers and urban consumers derives from the same uneven urbanisation processes and subsequent challenges (Deh-Tor, 2021).

Nevertheless, the presence of LFIs that actively work to bridge this gap in both cases provides valuable insights. As seen in the results, a potential strategy could be adopting a people-centred approach that focuses on the place-based experiences of food (Figueroa, 2015). However, although this provides a starting point to merge the narratives of LFIs, there could be a risk of missing the ecological centrality of food, potentially disregarding the critical assessment of practices that negatively affect the environment. As argued by agroecological urbanism (Tornaghi & Dehaene, 2019), , LFIs should foster ecologies of care and more-than-human solidarities. Recent calls for

conceptualising territorial food systems provide a valuable framework to address this issue (Lamine et al., 2019; Reina-Usuga et al., 2022). 'Territory' in this context recognises the complex material and non-material interactions between diverse food system actors, including ecologies, within a place that constructs multiple interconnected identities.

However, adopting a comprehensive notion of 'territory' for the integration of LFIs is not an easy task; it needs collective reflection. This process is particularly imperative given current discrepancies based on underlying values and discourses between LFIs, as seen in the cases. As suggested by previous scholars, the collectivisation of change needs the creation of spaces to discuss, define, and redefine a shared language and collective vision while at the same time acknowledging politics, differences, and injustices (Goodman et al., 2012; Sonnino et al., 2014). Building synergies between LFIs for agroecological urbanism thus entails an alignment of LFIs at the conceptual level – beyond practical – under a common goal or 'master frame' with a unifying message (Rivera-Ferre et al., 2014; Rossi, 2017).

CONCLUSIONS

This paper has focused on understanding the articulation of networks of LFIs and what may be needed to harness their potential for food systems change, using agroecological urbanism to discuss these dynamics. In doing so, the paper has recognised the need for the (re-)politicisation of LFIs and collective reflection towards a people-centred and territorial approach to food. Adopting such approach would move associations between LFIs away from self-organised informal networks that only converge for practical mutual gains towards empowered territorial configurations that foster transformative collective actions.

With the increasing concern of how to reorganise food differently due to conflict, climate and ongoing crises, it is imperative that challenges are analysed, and future strategies are identified to form interconnected territorial strategies for agroecological urbanism. Both for theory and practice, this paper then raises the need to move beyond the identification of differences between LFIs to focus on the complex processes of articulation and re-articulation of networks of LFIs, drawing attention to the relationality of their practices.

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Building synergies around urban food poverty
The potential of collective and inclusive public facilities for food

Simón-Rojo, Marian[1]

Abstract – Food insecurity and energy poverty are but two symptoms of deep-rooted systemic failures. In urban dense areas, the rising frequency of heat waves adds up to these problems. They pose the risk of turning some deprived neighbourhoods in Mediterranean-arid zones into pressure cookers. We look at both phenomena simultaneously to frame feasible and quick responses to adapt to these changing conditions, while exploring community-based solutions. We develop a case study in one of most deprived neighbourhoods in Madrid. We identify which factors of the urban environment and which elements in a public facility qualify to develop Centres for food culture (community kitchens). These centres are expected to host food-related actions that deploy as synergic satisfiers of different fundamental human needs: subsistence (food insecurity and energy poverty), protection, affection, creation, participation, identity, understanding, and leisure.

Keywords –development at a human scale, energy poverty, food culture, heat island, public facilities

INTRODUCTION

We have entered a high-speed age in which crisis happen with greater frequency. Ecological, economic, and social crisis are interwoven. In spite of the Agenda 2030's moto "Leave no one behind" (United Nations, 2016), increasing amounts of people are at risk of exclusion and poverty, also in western societies.

In this gloomy scenario, food insecurity and energy poverty are but two symptoms of deep-rooted systemic failures. And they are especially vivid in deprived neighbourhoods. In urban dense areas, the rising frequency of heat waves adds up to these problems. They pose the risk (among others) of turning some deprived neighbourhoods in Mediterranean-arid zones into pressure cookers. We look at both phenomena simultaneously to frame feasible and quick responses to adapt to these changing conditions, while exploring community-based solutions.

We focus on a case study in the outskirts of Madrid, in a neighbourhood with very poor economic performance, and stigmatised as highly conflictive.

CONCEPTUAL APPROACH AND METHODS

We adopt the Development at a human scale approach (Max-Neef et al., 1992) and the lessons from working with informal settlements and popular collective experiences (Hirschman, 1984). We look for those resources that are available, existing capacities present at large (mainly related to local people and their energy) to face scarcity of resources.

In this sense, there are groups addressing the problem from an emancipatory approach, and proposals to reconstruct "food as a common" (Vivero Pol, 2013). Antipower theory challenges current hierarchies and advocate for mitigating power by expanding decommodified spaces (Calvário & Kallis, 2017; Holloway, 2002). In this sense, we find the concept of food commons useful in advancing this decommodification and building emancipatory forms of addressing food insecurity.

We find the concept of food commons useful in advancing decommodification and building emancipatory forms of addressing food insecurity. Urban food commons are defined as a "shared immaterial or material resource in urban spaces that is food-related, which is co-owned and/or co-governed by its users and/or communities according to their own rules and norms. The community sustains, builds up, and uses the food resources via growing, distributing, processing, storing, gathering, monitoring, or knowledge-generating" (Scharf et al., 2019, p. 3).

Through an urban planner lens, we ask how the material practices of different food assistance models "enable social change and improve everyday life" (Morrow & Parker, 2020).

We focus on deprived neighbourhoods in Madrid, the capital city of Spain, that has 3.1 million inhabitants. A survey conducted by Caritas (one of the Spain's main charity institutions), which includes specific questions about hunger and factors of food insecurity, shows that in 2018 over 14% of Madrid's population were food insecure. Whereas food insecurity in its lighter form has been reduced, severe food insecurity has worsened (Serrano Pascual et al., 2020). The problem has been exacerbated by the COVID-19 pandemic (Mesa Derechos Sociales, 2020).

We have analysed the public policies in place (Urban Agenda, Food Strategy, Plan SURES and public actions aimed at social inclusion). In these neighbourhoods we look for places as a compound home to the relational environment to tackle food insecurity. Social movements request Food culture centres or community kitchens. We consider ongoing initiatives such as traditional food banks, solidarity pantries, and alternative networks, and contested spaces reclaimed for collective purposes, whether already achieved (community gardens) or not (community kitchens or food commons in municipal markets), a demand from social movements such as Madrid Agroecologico (Simón-Rojo, 2021).

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After a previous general analysis (Simón-Rojo, 2015) we focus on San Cristóbal, in the south of the city. It hosts almost 17.000 inhabitants, 42.8% of them being immigrants. The final goal of this research is to identify which factors of the urban environment and which elements in a public facility qualify to develop Centres for food culture (community kitchens). These centres host food-related actions that deploy as synergic satisfiers of different fundamental human needs: subsistence (food insecurity and energy poverty), protection, affection, creation, participation, identity, understanding, and leisure.

RESULTS AND DISCUSSION

Although it is a work in process some preliminary results can be shared: so far urban regeneration plans and actions in deprived neighbourhoods have not considered food as a transformative tool. Nevertheless, food provision can not be taken for granted. 17.9% of children aged between 3 and 12, experienced food insecurity by 2017, a figure that rises to 25.1% in San Cristóbal district -named Villaverde- (Madrid Salud, 2019).

Figure 1. San Cristobal de los Angeles

During the summer, indoor discomfort exacerbates, residential blocks were built with poor and inadequate construction systems (Aguila et al., 2016). San Cristobal is one of the six neighbourhoods with worse conditions in terms of energy poverty in the city of Madrid (Martin-Consuegra et al., 2020). It was built in the 50s targeting the working class made up of immigrants from rural areas in Spain. Nowadays households cannot afford energy intensive cooking, let alone air conditioning. Indeed, cooking worsens indoor thermal conditions. Therefore, finding alternative ways to satisfy the basic need for food is increasingly important.

Public Centers of Food Culture with kitchens and multifunctional spaces are one of these alternatives. Several social movements have been claiming for years to have access to public facilities with food and social related functions. Carta contra el Hambre (Charter against Hunger) reclaims public cooking facilities made available for social groups as places for community building, meeting around food, sharing culinary practices, and improving cooking, nutritional, and domestic management know-how to handle energy poverty (avoid meals that rely on an intensive use of energy like baking in oven). Madrid Agroecologico (agroecological movement) argues that people at risk of exclusion need gradual steps toward the labor market, and reclaims public facilities to handle solidarity economy projects. These facilities would include logistics and refrigeration, commercial kitchens, ovens, and so on. Multiple projects could make use of them in shifts. That enables them to follow the normative and guarantees traceability, overcoming the usual economic barrier of initial investments in facilities. It implies moving public budgets to low-cost, high-effective inversions (Simon-Rojo, 2019).

People in low-income neighborhoods highlight "the lack of financial resources to purchase healthy foods" as one of the main factors that prevent them from eating healthy (Díez et al., 2017). Food culture centres and community kitchens are expected to provide a meeting, training, exchange, and advisory hub for residents. These food centres have the potential to solve fundamental human needs in a cooperative and transformative way. This is not a new idea: Forty years ago, Hayden advocated for collective and inclusive urban infrastructure and services related to food (Hayden, 1982) seeking to "to shift the relationship between production and social reproduction" (Morrow & Parker, 2020).

Transformative practices must be grounded in what already exists and is being done (Holloway, 2002), and spatial analysis helps to uncover resources and imagine a better future. According to agroecological and right to food movements, this future will be one of social resilience and equity, based on community ties, autonomy, self-reliance, and stability.

In San Cristobal de los Angeles we find different resources to which the food centre could be connected: a large community garden (self-management spaces for social experimentation, open to anyone interested, and free of charge), a municipal market (it has the status of establishments of public services, municipal markets were built to ensure the food supply of urban populations), and a rich social tissue of NGOs.

Oher challenges sum up: the heat island effect, and the need to build (community-based) resilience against disruptions. The concept of climate shelter fits well for these claimed community-commensality places. They are envisioned as meeting spaces for knowledge exchange around food and culinary experiences, as well as strengthening civil society networks, and providing means to develop solidarity and mutual care. This is of utmost importance in a neighbourhood with high rates of residents' turnover. This is an "entry point" for immigrants arriving in the city. When they make progress, many of them tend to move to "better" neighbourhoods. Food centres with community kitchen would contribute to fulfil the fundamental needs of participation, understanding and affection.

They are also envisioned as hubs to resolve basic problems of food provision in a practical and healthy way. They act as food hubs, facilitating cooperative management of food with storage capacity, cold room, order management and distribution areas along with small scale facilities for collective cooking or self-processing of food, and connection with agroecological projects. These are conceived as meeting spaces for knowledge exchange around food and culinary experiences, but especially for strengthening civil society networks.

Regarding heat island effect in urban dense environment, urban agriculture is not the best solution in terms of mitigating high temperatures; in some case agroforestry potentially has a good performance. San Cristobal, as most deprived neighbourhood in Madrid are in the outskirts and can be connected to periurban agricultural areas. In this sense, some urban plans have a clear stance to offer inner spaces for agroecological training.

CONCLUSIONS

Awareness about vulnerability to food shortages and/or disruption in the food chain is also rising.
Framing food as a common in public policies could be a catalyst to leverage local potential, and synergic satisfiers instead of highlighting scarcity and competition, it can build on those resources that flourish and multiply when shared, such as knowledge, joy, communality and mutual support.

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Coupling urban gardens and community kitchen to build agri-cultural community and food sovereignty
A case study from Ile-de-France region

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Abstract **– Urban gardens are very diverse and provide many ecosystem services (local food, social link, biodiversity, rainwater collection...). Interest for these gardens is booming but question the access of these places for all. Besides this access, the co-benefits to precarious people resulting from the coupling of food production/processing is still lacking.**
We hypothesised that the association of self-production and collective food processing activities can lead to food sovereignty.
To test this hypothesis, an action-research project called PAM "*du Potager A la Marmite*" / "from garden to cooking pot" was designed by the Laboratory - Soils, Knowledges, Savours (LAB3S) and the Urban Agriculture Chair. This action aims to promote and develop projects combining community gardens and community kitchens within the municipality of Bondy, located in the north of Paris metropolitan region. The project was carried out in collaboration with few local public and private partners to enhance the action anchoring.
We present the method used to project co-construction with local partners as well as the first feedback from the field survey carried out during the gardening and food processing activities. Those findings could be useful on the one hand to replicate this action and on the other hand to identify the limit (city-dweller's mobilisation, logistics) and the potentials (autonomy, space's mutualisation, collective learning) of action from the point of view of food sovereignty.

Keywords – **urban gardens, community kitchen, action-research, solidarity, networks, and Bondy.**

INTRODUCTION

In France, nine out of ten people live in the catchment area of a city (INSEE, 2020)[5] and food aid concerns 7 million people (Cocolupa, 2020)[6].
Recently, the health crisis of Covid19 has amplified within the cities the socio-environmental inequalities regarding access to good and sustainable food[7] but also to green spaces and nature in general (Nikolli and Girault, 2021). This situation has revealed an increasing demand for implementing urban gardens in neighbourhoods, and interest for self-production. In particular, it is clear that we need to construct territorial responses to contribute to territorial resilience that are not based on urgency (like the food bank).
In a way, urban agriculture (UA) in its diversity can respond to these demands/expectations (Lal, 2020).

A wide diversity of UA forms has been developed (Aubry et al., 2022) contributing differently to food supply. Although, a greater contribution of family or private gardens more than community gardens is frequently highlighted (Pourias, 2014; Marie, 2019; Darly et al., 2021), the participation in these projects leads precarious people to enhance their diet increasing the consumption of fruits and vegetables (Darmon et al., 2018). Moreover recent studies demonstrate that project that combine food production and processing improve psychosocial skills (e.g. decision-making, stress management, organisation) to precarious people (Giacchè and Baudelet, in press) as well as vector of emancipation on food issues and more broadly (Scherer, 2018).

At the same time, there are still few studies to go into depth to the links between these projects coupling production and transformation that still need to be analysed and improved. It should also be emphasised that there are many possible configurations : from the food garden and street cooking workshop to more professional forms oriented to integration workshop projects (Giacchè and Baudelet, in press).

We decided to focus on a particular coupling configuration based on articulation of food production plots (as collective gardens) and community kitchens to better understand their functioning and co-benefits generated.
The existing literature on community kitchens mainly focus on some aspects like social emancipation, personal or collective development and mental and physical health. If the nourishing function is primordial (many organisations declare an improvement in the food security of their participants) it is rarely quantified (Doglio, 2022).
The action-research named "From garden to cooking pot" was designed to focus on those linkages and related benefits. We hypothesised that the association of (self)production and collective food processing activities can contribute to food sovereignty.
We mobilised "food sovereignty" in order to detect the right for people to decide about their own supply by access to healthy and sustainable food based on their preferences. Furthermore, We assume that :

- the choice of planting could be made in better adequacy with eating patterns and desires of populations (participating in the activities).
- it can contribute to an exchange of knowledge that leads to mutual enrichment.

Our main question is how the combination of production and food processing can build agri-cultural community and food sovereignty in a precarious neighbourhood ?

To answer this question, we choose one territory particularly concerned by these food security challenges: the city of Bondy located in the Seine-Saint-Denis Department.

Strategy approach and methods

In 2021, the Paris Habitat Foundation launched a call for project on "Common areas : shared time and space" for sharing and optimising urban spaces in order to (re)create social links, to give space to empowerment, and to share and develop new patterns of living together.

The Lab3S (Box 1) and the Urban Agriculture Chaire (Box 2) proposed an action-research project promoting the community kitchens linked with urban food gardens for social link and knowledge transmission.

BOX 1- LAB3S Sols Savoirs Saveurs (Soils, Knowledge, Savours) is an association that works on transition issues in Bondy and Seine-Saint-Denis. Its fields of intervention are urban ecology, with a strong focus on urban agriculture, and food transition. The mode of action of LAB3S is developing collective projects to address the issues of the territory : via action-research, pedagogical activities, support missions for collectivities, and an urban collective and experimental farm.

Box 2- The Urban Agriculture Chair supported by the AgroParisTech's Foundation was created in 2018 to support the development of urban agriculture for cities' resilience. The chair is an innovative group to produce knowledge and tools on emerging subjects in cooperation with various complementary partners. The Chair develops three different axis to respond to urban agriculture issues. One on business models and sustainability of UA's forms, another one on ecosystemic services and a specific axis on "food accessibility for all" by coordinating a multi-actor network on "urban agriculture and food insecurity".

In this paragraph we detail the project's topic (what), territory of action (where), the actors involved (who) and the materials and methods adopted (how).

WHAT- The project "From garden to cooking pot" was founded and it started in September 2021. The actions took place in the city of Bondy, an urban city of the department of Seine-Saint-Denis (north-east outskirts of Paris). Our main objective was to implement, during 2 years, 3 gardens and 3 community kitchens in the neighbourhood of north Bondy.

WHERE- This experimentation takes place in the very urban Department of Seine-Saint-Denis. 90% of the land is artificialized and it's the third most densely populated in France with nearly 7000 inhabitants/km². The city of Bondy (9 km from Paris) has a very multicultural population - 26% of foreign population, more than 150 nationalities - and a high poverty rate (32%). Bondy is also characterised by a lack of access to green spaces (only 1,5 m²/inhabitant). North Bondy where the project takes place has only one shared garden, but also a very well rooted network of associations in the social field. An

exploratory study (Truglia, 2020) showed the wealth of multi-ethnic culinary knowledge and advocated the creation of gardens to allow the inhabitants to produce their own food. The access to food stores appears to be also quite limited, with only one hard discount supermarket (Lidl), one open air market, and a few « exotic » stores. Hence we found it very relevant to address the joint issues of self-production in gardens and transformation by cooking.

WHO The project conceived by LAB3S and Urban Agriculture Chair foresaw the involvement of local partners (the associations La Marmite, Rayons de Soleil, Activille and the social landlord Seine-saint-Denis Habitat, as well as the city of Bondy with the Community Center Balavoine) which they had accepted.

The LAB3S was the coordinator of the project and the Urban Agriculture Chair was a scientific partner to observe mechanisms of co-construction and give advice for the implementation of community kitchens and urban gardens. The public concerned by our action is directly the public connected to the partners associations i.e adults in majority and especially women with childs.

HOW We structured this first year of action research into 3 steps : first we organised co-design/co-construction groups to share the goal of the project, to identify and fix the role of each partner and imagine all together the actions to settle during the year. Then we organised cooking and gardening sessions between April and July 2022 with our target group. Finally we discussed with all the partners to do a statement of the previous activities organised and collect the main difficulties encountered and gather learning.

Our participatory action-research approach aims to co-produce knowledge and new practices, but also to strengthen capacities to participants. It means giving them the choice to decide which products to cook, which organisation, which frequency.

In order to observe the co-construction process (in the garden or in the kitchen) we adopted different techniques and tools. The coordinator of the project created a shared folder to group all the files generated during the project and sessions of collective work : reporting of activities, reporting of meetings to details the main issues and discussions, communications materials and a schedule of work. Each partner noted some basic information (number of participants, activities, materials and tools adopted, food supply...) concerning all cooking and gardening sessions. At the same time, two internships (March-September 2022) observed the share of knowledge during the workshops and detailed the diversity of community kitchens' food supply. They used participant observation's techniques, did interviews and visits.

In this article, we based our analysis on all reporting materials and shared discussions among the partners that occurred during the project. We focus our analysis on three aspects : actors (involvement, empowerment,...), practices (knowledge transmission, mobilisation) and spaces (appropriation and linkages between those spaces).

Results

The 4 local partners provide a space to grow food (LAB3S or Rayon de Soleil) or to cook (Community Center Balavoine, La Marmite) (Fig.1). Unfortunately, the access to those spaces was limited in terms of timetables or type of public. An agreement has been

drawn up between the partners to allow members of the various associations to access the other structures. Except the space used by Rayon de Soleil which was reserved in priority to the inhabitants of the Seine-Saint-Denis Habitat property.

Figure 1 - geographic location of the different places for gardening and food processing

From April to July, around 35 sessions were organised including 15 cooking sessions and 20 gardening sessions gathering about 4-5 people per session. Despite the relatively limited number of participants, there were some people who participated with some consistency. The cooking sessions were led by a dietician working for MIAM Association[8] and the gardening ones by the head gardener of LAB3S.
Each session lasted 2 hours and was planned during the week in cooperation with each group.
In order to organise logistically the sessions, we created 4 different groups represented by the 4 main local partners involved in our project : Rayon de soleil, La Marmite, LAB3S and the Community Center Balavoine.
Each group had its own schedule for gardening and cooking sessions. The distinction into groups is due both to the different schedules and commitments of the participants but also to the limited kitchen capacity.
In almost all the groups there was a predominance of women, but in the LAB3S garden as well as in the cooking sessions at Marmite with migrant audiences men also participated.

The frequency was different due to the inequality of investment which is linked also to the level of "coaching" (e.g the group belong to Rayon de Soleil was always accompanied by an animator of the association who also participated in all the meetings of the project committee) and the stability of the group (e.g. migrants who attend the Marmite Association stay for variable periods and often have other priorities). Some sessions have been cancelled due to the absence of the dietician or the participants. Some participants as well as the organiser became discouraged by seeing the workshops cancelled and influencing negatively the mobilisation process. This fact has also led the project partners to question ourselves about engagement (individual and collective) and communication. The communication was mainly oral with a drop in posting, and we observe a lack of relay of our communications by the city of Bondy (despite our requests). The networks mobilised have therefore proved unsuitable to the population target. This necessary and continuous recall of participants by telephone also requires a lot of time and organisation.
Another issue concerns the role and profile of the animator of the cooking sessions who did not respond to the expectations of the partners. The main remarks

concern the recipes chosen and workshops facilitations techniques. Indeed, some recipes (ex. quiche with artichokes and walnuts) were considered not very easy to reproduce (especially for the cost of the ingredients) and not very much in phase with the idea of using local and seasonal products.
Although the project partners perceived the dietician as someone too directive, not using co-construction methods giving space for self-expression, the participants have more nuanced or even favourable opinions. Other reasons such as inspiration, sociability were appreciated by the participants during the sessions. One of the participants states that the cooking sessions are "*an added value*" for her diet, even a "*cooking and gardening therapy*" which allows her to ponder her professional retraining project.

Regarding the link between garden and kitchen, it proved to be complicated in logistical and organisational terms. The utilisation of garden products resulted limited in quantity and diversity (some vegetables and aromatic herbs). Furthermore they were also used essentially for the workshop of the group belonging to the LAB3S structure. This was possible both for a greater involvement of the garden manager who together with another participant took charge of the products harvested. Moreover, the largest harvest in a vegetable garden also occurs in a period, the summer, in which the kitchen workshops have been interrupted. The distance between the kitchen and garden space, despite being limited in practice (few minutes), was too important considering the schedule (cooking sessions lasted no more than two hours). However, it had to be organised first to guarantee the logistics both in the harvest but also in the choice of the recipe. The latter was based more on nutritional criteria than on the presence of the products in the garden.

Some insights to improve the action project emerged by collective discussion. We mobilised the method of the speedboat to identify our goals (the lighthouse), obstacles (the anchor) and strengths (the wind) (Fig.2).
The two main goals for next year are : increasing the number of participants and putting forward the idea and project of a community kitchen rather than a cooking session.
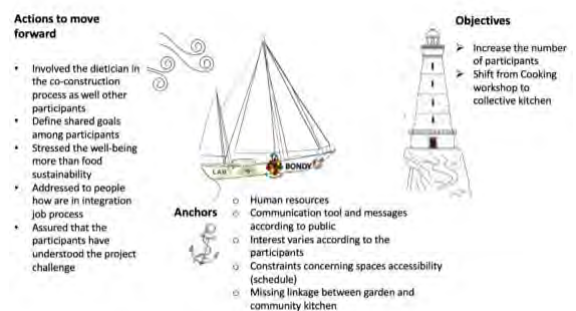
Figure 2 - Pattern used during our collective meeting to resume our goals, obstacles and levers

Concerning the actions we should improve to reach these goals, we have the communication (focusing more on well-being than sustainability related to healthy diet) and the mobilisation process (adapted message to target and shared the project challenges).

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[8] The *Miam* association was created in March 2016 to enhance awareness on more sustainable consumption (e.g.seasonal fruits and

vegetables on a daily basis). The association provides at national level several workshops addressed to school childrens or adults.

DISCUSSION

Discussing the significance of our results in light of other published work is complicated for two reasons. On one hand, although the bibliography on community gardens is very extensive and the one on community kitchens is relatively important, the survey focussing on coupling those activities almost does not exist. On the other hand, it will take some time to achieve consistent evidence.

The hypothesis issued, that the association of self-production and collective food processing activities can contribute to food sovereignty, cannot be considered verified.

For the moment, the level of mobilisation of the participants is limited and they are not yet the main actors in the production / consumption process.

At the same time, the first year ambition was already reduced. The appropriation process of the spaces was imagined to be gradual. The idea was to encourage their knowledge and the exchange of knowledge by sharing common spaces proposing some cooking and gardening sessions.

The access to these spaces is not sufficient to build real food sovereignty. At the moment those groups are more of participants in a series of gardening and cooking sessions. The appropriation of space and the construction of a community of practices improving mutual learning need time to be reinforced.

The LAB3S will develop in 2022-23 a new project named «BondyTropiques» that will work on the possibility of growing «exotic» fruits and vegetables in an urban context, and of developing a dedicated food production sector, based on the assumed needs of a multicultural population. These project goals are closely nested with the "PAM" project and some linkages could be built to improve mutual effectiveness of those actions . Furthermore, the Seine-Saint-Denis Department is particularly interested in working on food precarity and multiculturality issues. The «Territory Food Project '': among its strategic directions underline «food security», «food cultures», «quality food offer» as axes of intervention. Other actions may therefore come to reinforce these strategic objectives.

To conclude, this first year of action-research highlighted the importance of governance, temporality and organisation in a project like this to reach our goals. In order to mobilise various actors and create a long term dynamic it is important to have time to appropriate the subject and to create a relationship between the partners and the public. Moreover, time and skills in facilitation and consultation may be useful to mobilise local inhabitants and co-construct the project. It is a key to sustainability which needs us to clearly communicate about our objectives and interests to link gardens and kitchens.

ACKNOWLEDGEMENT

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Dachas and food democracy:
what makes a (good) food citizen?

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Abstract – **In the backdrop of multiple crises the role of global food systems demands urgent attention. In this context, the concept of food democracy is regarded simultaneously as a *process* towards, and as a desired *outcome* of, socially just and environmentally friendly food systems, shaped by active citizens.**
In this article we will shed light on the aspects of food citizenship and food democracy within the practice of Food Self-Provisioning (FSP) in Eastern Estonia as our case study. Our empirical data is based on semi-structured interviews conducted in 2019-2021 with 45 persons on their so-called *dachas* - a Russian term for a plot of land with a seasonal allotment house, mostly used for food production. The analysis focuses on the three dimensions of food democracy (input, throughput, output) and explores to what extent can the FSP in the dachas serve as a vivid example of food democracy.
On the one hand FSP encompasses essential characteristics of food democracy, increases citizens' resilience and serves as an example of food sovereignty. On the other hand, it may weaken (food) democracy when serving as a basis for an escape into an apolitical terrain or by buffering up possible negative side-effects of the prevalent political system.

Keywords – **Food Self Provisioning, Alternative Food Networks, Food Sovereignty**

INTRODUCTION

Amidst multiple crises within - and due to - the current industrial agri-food system, food has become increasingly political. It serves as a point of reference for initiating, shaping and experiencing transformation processes. In addition to these socio-ecological aspects that have dominated agricultural and food related discourses so far, food has recently come to be perceived as an object and terrain of democratic practice.

Resulting from experiences of increased alienation from their food base and limited or barely existing opportunities to shape food-related systems, consumers are either forced into a passive role, where they can, at best, "vote with their forks" (Pollan, 2006) when choosing one market product over another, or they are deprived of their land, seeds, and livelihoods as agricultural producers. These developments have given rise to numerous counter-movements which demand either equal access to food ("food justice"), more autonomous food production ("food sovereignty"), or increased possibilities for all "food citizens" (Wilkins, 2005, p. 271) to shape food-related systems ("food democracy") (Hassanein, 2008; Bornemann, 2022, p. 351).

Countless examples of alternative food systems, including demands and initiatives for food democracy, food justice and sovereignty as well as most forms of AFN (Alternative Food Networks), originate from the Western context, or – increasingly from the South (e.g. Thornton, 2020). However, as various scholars, including Jehlička (2021) and Müller (2020) have demonstrated, the knowledge originating from, and already existing alternative practices prevalent in the East are systematically overlooked. Notably, classic examples of food democracy in the academic literature include food policy councils, food banks, food co-ops, Community Supported Agriculture (CSA) and else. Hitherto, all case studies on food democracy have focused on one of these – 'Western' – examples. As such, we ask: is food democracy also applicable in CEE in the case of the FSP, and does it fulfil its criteria? What properties make such a region-specific practice an example of food democracy, what are its characteristics that can be found within the FSP practice, or which are possibly missing? Can (or *should*) we approach the rather 'private' practice of FSP with concepts such as (food/agrarian) citizenship, civic participation and democratization of food systems? Therefore, our *research question* is the following: Can FSP in the Estonian dachas serve as an illustrative example of region-specific food democracy?

CASE STUDY, RESEARCH DESIGN AND DATA BASE

Eastern Europe is an interesting and important case for the study of food democracy in general, as between 30 % and 60 % of its population grow and consume a considerable share of their own food (Smith and Jehlička, 2013) in comparison to, for instance, 6% in Denmark and 5% in the Netherlands (Alber et al., 2003, pp. 11–12). As the reduction of distance between producers and consumers is essential in food democracy, in this case the roles overlap to a considerable extent. Despite the initial framing of FSP as a 'survival strategy of the poor' who "muddle[s] through economic transition with garden plots" (title by Seeth et al., 1998), scholars have increasingly emphasized the wide spectrum of other motives and benefits of the FSP practice in the CEE (Jehlička et al., 2020) in general, and in Poland (Smith et al., 2015), Hungary (Balázs, 2016), the Czech Republic (Sovová

et al., 2021), Croatia (Ančić et al., 2019), Baltic countries (Mincytė, 2011; Aistara, 2015; Pungas, 2019) and Moldova (Piras, 2020), in particular.

Our case study of dacha cooperatives and gardeners in Eastern Estonia is a complex yet intriguing example of the study of food democracy. 85% of the inhabitants of the Eastern Estonian county Ida-Viru is a Russian speaking minority, many of whom were resettled there during the Soviet era from thousands of kilometers away between 1950 and 1970 to work in the local industry (Raun, 1997, p. 336). After regaining independence in 1991, Estonia enforced rigorous neoliberal economic reforms that disproportionately affected the Russian-speaking minority in Estonia in terms of unemployment and poverty (Pungas, 2017; Lauristin, 2003). Attempting to shake off the unwanted past, Estonia's political elite opted for "an intentional and complete break with the Soviet past and everything that reminds us of it" (Lauristin, 2003, p. 610), including socialist structures and institutions, but also equality and solidarity norms. This culminated in 1992 in the so-called Citizenship Act, which resulted in the loss of citizenship for most of the local Russian minority. In 2020, Estonia still counted approximately 70 000 stateless citizens, many of whom live in Eastern Estonia (BNS 2020). As such, the FSP in the Eastern Estonian dachas constitutes a curious case with regard to food democracy. Can there be a food democracy among stateless citizens without democratic participation rights, who lack the most basic political trust? If so, to what extent does it differ from the 'Western' conceptualizations of food democracy? Furthermore, as the FSP practice in our case study started as a need-driven and crisis-induced practice (to ensure food security and diversify food supply), can we consider FSP in CEE a self-chosen and determined form (or was it "enforced" on the gardeners due to socio-economic hardship)?

This article builds on in-depth interviews conducted during fieldwork visits in 2020 and 2021 in and around the Estonian city of Sillamäe (dacha cooperatives Sputnik and Druzhba) and Narva (dacha cooperatives in Kudruküla, Olgina and Kulgu). The interviews focused on (1) gardening practices, user groups and their motives, (2) the socio-economic, historical and political context of the gardens in the respective region, as well as (3) the gardeners' concerns, views on, and (emotional) perceptions of food and agriculture. In addition to the interviews, the research included on-site observations, photographic material and informal conversations with the gardeners. These conversations were documented with written and visual field notes. We used semi-structured interview guidelines developed during the initial fieldwork visit. A total of 45 interviews were conducted with 50 gardeners (ranging from 10 to 180 minutes, mostly 45-90 minutes). Furthermore, we analyzed protocols of the biggest garden cooperative Sputnik near Sillamäe (Sputnik 2022) and local newspapers "Sillamäeski Vestnik" (Vestnik 1993-2017) and Infopress (2006) with regard to the garden cooperatives. The interviews were mostly conducted in Russian, transcribed, translated into English, and anonymised by the authors. For the coding, for which we used MAXQDA, we followed the principles of content analysis according to Mayring (2010). The subsequent qualitative content analysis based on the frameworks of Hassanein (2008) and Bornemann (2022) was used to form major categories, and to define and differentiate links between them.

For the analysis of our empirical data, we built upon the frameworks by Bornemann (2022) and Bornemann and Weiland (2019), who apply Schmidt's (2013) system-theoretical concept of complex democracy, along with its three central features. Schmidt (2013) differentiates between the input, throughput and output dimension of democratic processes. We supplemented respective frameworks with our specific focus on *food* democracy and defined the three following dimensions in more specific terms as follows:

Input – Possibility, access and infrastructure that empowers and enables people to articulate interests, ideas and to participate, co-create and design self-determined and preferred alternatives in relation to food systems.

Throughput – procedural quality, transparency and deliberative capacity in order to sensitize for, discuss, negotiate, and develop alternatives, build coalitions/oppositions and coordinate strategies to balance or reshuffle existing power relations.

Output – effectiveness and efficiency in dealing with the malfunctioning of the food system, or alternatively, constituting alternative models.

FINDINGS – INPUT, THROUGHPUT, OUTPUT

In the analysis of our empirical data we distinguished between two varying dimensions (social as well as material) of input, throughput, and output categories of food democracy as essential properties of and/or preconditions for food democracy. We found out that the material dimension (which is essentially embedded in structures of power/power relations) can *enable* or *hinder* food democracy, regardless of existing social aspects such as knowledge, participation, deliberative procedures or effective institutions. Through the analysis of our empirical data the following properties of and preconditions for food democracy crystalized.

As an *input*, we consider various social and material inputs as a *precondition* for active engagement in self-determined food systems. As scholars such as Hassanein (2008) underline, *knowledge and skills* are the prerequisite and in the dacha gardens are usually passed on to new gardeners by (grand)parents or shared with neighbors. *Community support, solidarity and mutual aid* play an essential role, on one side in the form of the cooperative as an official structure that represents the interests of the gardeners and on the other, as rather informal community that shares and exchanges their seed(lings), garden produce, helps with know-how and physical work or borrows tools. Finally, the *desire* to consume and provide one's family with 'untreated' food is a strong motive for many gardeners, and explains the willingness to invest a lot of physical labor and *time* into the FSP practice, as explained to us by gardeners. Material *access to the land* (including ownership properties) is maybe the most important precondition for food democracy

that can enable all further characteristics of food democracy but implies *infrastructural accessibility* (with regard to affordable and need-oriented transport, and vicinity to the city). Furthermore, we found *the infrastructure in and around the cooperative* – the roads, electricity, plumbing, drinking, and watering water as well as canalization to be a further indispensable material input.

In throughput, the *processual* aspects are in focus and include the variety of interactions among food producers, cooperative community and city administration, but also the processual aspects of physical, mental, and emotional labor of food production and preparation itself. Furthermore, Hassanein (2008) emphasizes the aspect of community with regard to sharing ideas and know-how with each other, building coalitions and building solidary networks for the common good with regard to food system. *Sharing know-how, experiences, ideas and values* can be found everywhere along FSP in the dacha gardens and, according to Hassanein (2008, p. 290) strengthens the 'democracy' aspect of food democracy. We countered *vivid solidary networks* in which the *community aspect* was essential, despite the gardens not being called the community gardens. The process of building up *self-efficacy* but also experiencing a sense of *collective efficacy* were essential, both with regard to the personal relationship to food (ability to determine and obtain the produce one wants) as well as having an impact on the food system in general, for instance engaging for community food concerns. Finally, *negotiation, decision making and conflict solving processes* constituted an essential deliberative part of a food democracy within dacha communities, often in the cooperative meetings, informal meetings with neighbours or organized petitions.
As a material manifestation of throughput in food democracy we regard mostly intensive and exhausting *physical* (but also mental and emotional) *labor* that is invested in the practice of FSP but also the required *infrastructure and space* for cooperative meetings and events.

The output focuses on the *goals* of food democracy (to enable sustainable food production under self-determined and jointly coordinated conditions) and on its impact on food and food systems (Hassanein 2008, p. 290). As democratic power over the means of production is one of the essential goals with this regard and FSP requires a wide variety of means, we considered both, *acquired knowledge and skills* as well as *strong and solidary networks* to be essential outputs. Furthermore, orientations towards *common and community good*, increased *efficacy and socio-economic resilience* and enhanced *psychological wellbeing, resilience and (mental) health* were important outputs if FSP as a form of food democracy. As a material output, naturally the quantity of self-produced *healthy and fresh food supply* is the main goal but also contributes to *food sovereignty and food security*. In addition, various *ecological benefits* (hummus creation, biodiversity protection, agro-ecological methods) demonstrate a further material output of this specific form of food democracy.

DISCUSSION AND CONCLUSION

We explored the wide spectrum of diverse properties that according to scholars such as Hassenein (2008), Bornemann (2022) and Bornemann and Weiland (2019) are indispensable for a food democracy. Furthermore, we have reflected upon the difference and the need of both, social and material dimension in each sphere of food democracy (input, throughput, output) and complemented with further features that we consider important when exploring the exercise of food democracy in concrete examples, especially among communities that produce food themselves. However, during the analysis of our empirical data we also countered aspects of FSP that are different to most food democracy examples already discussed by scholarship. These aspects have constituted FSP in CEE as a region-specific form of food democracy that most probably is not replicable in such form anywhere else. Furthermore, some of the aspects also demonstrate factors that hinder food democracy or for emancipatory reasons are undesirable ways of maintaining or strengthening present day food democracy examples.

The first aspect is *time* (or time resources) – this was reflected by the gardeners a lot as the main reason why most people could not 'properly' practice FSP or spend more time in their gardens. Retired people have more (free) time for growing food whereas younger generations with wage labour and care obligations rather have recreational areas with fruit trees, berry bushes, flowers, and herbs which do not demand much labour. The second aspect is material access and the *(private) property.* In case the food gardens are not in private hands, exchange value of a peri-urban area suitable for FSP often exceeds its use value. This is especially the case with the peri-urban areas around bigger cities and capitals in which without certain support by the city authorities, such as supportive regulations or subsidies, buying (or even leasing) an area big enough for FSP would be unthinkable for most people. Despite demonstrating high economic, ecological and cultural use values for the communities their whole existence seems to depend on the exchange value of the area. In Narva and Sillamäe almost every family has an own garden or at least an access to a garden, which makes it a quite spectacular example. Furthermore, the peri-urban area's exchange value does not exceed its use value. Third problematic aspect of the FSP is the historical context of how and why the dacha gardens were established in the first place in most of the CEE region. As most gardeners got into the practice of FSP due to the need to guarantee, improve and diversify their food supply, the FSP in various parts of CEE is reasoned and partly also perceived as 'enforced' by socio-economic hardship (Southworth, 2006). In other words, the willingness for FSP is internalized among the gardeners due to the multiple crises that gardeners have gone through which obviously cannot be a desired momentum for flourishing food democracy examples in the future. The most important aspect, however, is that of *political power*, as Lohest et al. (2019) call it with regard to food democracy.

For various historical and cultural reasons the democratic structures and spaces for open discussion and deliberation within the dacha cooperative, and motives for political engagement among the gardeners are probably the most problematic aspect of this specific form of food democracy in Eastern Estonia. In a country in which democratic initiatives and engagement were suppressed by the Soviet regime for decades and then followed by an overnight transition to neoliberal free market and national state the political disillusionment and frustration prevails, particularly among the 'transformation losers' and 'stateless citizens'. This makes FSP in certain garden cooperatives (but not in all) in Eastern Estonia again a very weak example of food democracy and warns against a unconditional over-romanticizing of dacha cooperatives as role models of food democracy. However, as FSP practice in the dacha gardens includes all essential properties of food democracy, often to a much larger degree than the 'Western' examples, it is epistemologically a valuable case to study and complement the theories of food democracy with that hitherto originate in Western scholarship.

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Farm Tours and their Public Pedagogies:
Connecting to Nature, Foraging for Imaginaries

Jesse Hsu[1]

Abstract – **The 'Soil in the City' Project involves bringing community food project (CFP) members in Brighton and Hove, England, on a day visit to a regional farm. CFPS are network of social supermarkets, lunch clubs, and local food support schemes, supported by Brighton and Hove Food Partnership and other food organisations . During their visit, participants are intended to join activities such as farming and cooking experiences, therapy and leisure, and employability training. The project aspires to accomplish several educational, social, and political aims. The visits are assumed to nurture a connection between participants to the 'land' and local food production, develop food systems knowledge, and strengthen local food networks. Furthermore, disadvantaged groups are expected to gain some measure of control over the food system through the farm experience.**

This paper explores the extent and nature of these claims by understanding the broad learning experiences of participants on the farm visits. Through participant observation and photographs of the six farm tours taking various CFPs and interviews with key stakeholders, this research uncovers the tensions between programmatic objectives and on-the-ground realities of the farm visits. Field notes, photographs, and interviews are analysed to understand the relationships between the farm tour structure, spaces, and practices; participant encounters; and narratives/knowledges. I focus especially on how the farm tour's spatial and programmatic structures afford and constrain various forms of learning. Extending previous academic literature framing farm tours as sites of environmental learning, this research considers the extent in which the public pedagogies of farm visits contribute to social and political outcomes desired by their organisers. By 'public pedagogies', I am adopting the perspective that everyday sites and encounters have educational salience, yet are arenas of discursive struggle.

Keywords – **education, food inequalities, community food projects, inclusion, futures**

INTRODUCTION

There is growing recognition of the key role grassroots food initiatives have in pressuring the dominant structures of the industrial food system. Scholars note that these community-led food projects potentially developing community capacity (Kirwan et al. 2013) and alternative provisioning networks (Vativelli and Rusciano, 2020) while serving as serving as niche spaces for experimentation which might culminate in food-based social innovation (Gernert, El Bilali, and Strassners, 2018; Rossi, 2017). However, research around the role of local food initiatives in generating new visions of the food system and whether these novel aspirations can move from niche to normality remains sparse. This paper explores the tensions around these themes through examining a grassroots collaborative food project initiated in Brighton and Hove, England. Specifically, I explore the social imaginaries of the *Soil in the City* project, which connects disadvantaged groups in the city to a rural farm. I understand imaginaries to be the 'social expectations of the shape and nature of the food system' which are situated in emergent practices and spaces (Hsu 2018, 3, 42). This research aims to explore the public pedagogy, or 'educational potency' of the farm and the extent it mediates new imaginaries for its program visitors.

Soil in the City is a Brighton and Hove based collaborative project involving nine project partners including the local food partnership, a farm, and eight community food initiatives (CFI) — a network of social supermarkets and lunch clubs serving disadvantaged populations within the city. The project, broadly speaking, intends to nurture a connection between CFI participants and nature through bringing the participants on a tour to a rural market garden called Rock Farm. Though experiencing the activities on the farm, the project intends to stimulate further grassroots food system activity.

APPROACH & METHODOLOGY

This research's data relies from on ongoing data collection begun in August 2022 which will be completed in November 2022. The first data source comes from 12 semi-structured interviews with organisers of the program. The interviews sought to understand the organisers' desired aims for the program and their potential future impact. For the three community joined the six farm tours as participant observers. Together, ethnographic field notes and photos were taken with the objective of understanding the participants' overall learnings, broadly speaking, on the farm visit. We focused specific attention to the tour's structure, farm's spaces, and the participants social and spatial interactions. Nine to nineteen CFP participants, which came diverse ethnic, race, age backgrounds, joined each tour, representing either one or two CFPs.

Theoretically, this research is situated in the construct of public pedagogy which brings attention to the educational salience of everyday spaces. American educational theorist, Elizabeth Ellsworth's work (2005) describes the relationship between physical spaces of the everyday and their affordance for learning. She highlights he notion of learning being an unfolding encounter as one is immersed in a space's architecture. With respect to food, British and Australian food studies theorists, Swan and Flowers (2015), in their 'food pedagogies' definition, note the array of learning processes associated with food:
'a congeries of educational, teaching and learning ideologies and practices carried out by a range of agencies, actors, institutions and media that focus variously on growing, shopping, cooking, eating and disposing of food (Flowers & Swan, 2012a, 2015a).

In relation to learning, the term *pedagogies* points to various forms, sites and processes of formal, informal and incidental education, and learning inside and beyond the classroom (147).

Elsewhere, Hickey-Moody, Savage, and Windle (2010) also suggest that any medium as inherently pedagogical through its 'intent', 'substance', and 'process', which vaguely correspond to a site's overall aims, content, and learning stages. From this vantage point, the farm tour is a pedagogical encounter through participants being immersed in a space and its activities. The farm tours therefore have a tailored 'intent', 'substance' and 'process' which the CFP participants engage with throughout their visit. Furthermore, learning occurs through assemblages of elements such as the tour's structure, farm staff's guidance, social/spatial interaction, and physical objects within site. Applying this framework, data collected in the farm tours—interview transcripts, field notes, and photographs—have been coded and analysed according to these broad thematic categories.

RESULTS

Through the analysis of our data via the three categories of 'intent', 'substance', and process', several key themes emerged. Specifically, this analysis uncovered the food system imaginaries that undergird the farm tours, their link to the participants overall learnings, and on-the-ground tensions that might impede the transmission of these visions.

The farm tours revolved around two overall aims. First, the visits aim to reconnect people with nature, food, and land. This triad of nature-food-land are closely intertwined through the concept of edible horticulture therapy. The nature that participants experience on the tours revolves around wilderness, ecology, and agriculture. Growing food is presented as cooperating the ecological rhythms and conditions. The plants cultivated in the farm are not neatly arranged and meticulously pruned, but rather 'organised chaos' where crops are encouraged to establish robust root structures and flourish together with another. The resulting aesthetic is one of controlled edible wilderness. The close proximity of edible shrubs, root vegetables, vining plants, and trees coupled with the narrow winding pathways form a complex multilayer forest for exploration. Participants' experience on the visit is not simply one of 'learning where food comes from', but rather interacting with a forest ecosystem with its potential delights and harms. Because of the seemingly unkempt state of the 'forest', there are brambles, thorny plants, inedible weeds, nettles, and even an occasional animal carcass. In short, the tours actively encourage a human-ecosystem mediated via interacting with an edible wilderness.

For the second aim, the tours are supposed to ultimately contribute to an envisioned local food infrastructure in or near the deprived areas of Brighton and Hove. This infrastructure is imagined to be a robust network of local farms, community/household gardens, distribution hubs, delivery schemes, and food entrepreneurship. This infrastructure is meant to inherently supply more sustainable and healthy food to less affluent areas of the city. Learnings through the tour, in the form of interacting with the farm staff and participants; and mediated through communal sensory encounters with the farm spaces and edible plants are meant to stimulate activity towards this urban-regional vision. Specifically, these activities are meant to spark new gardening ideas, household/community food projects,

interest in connecting further with the farm or other growing sites, food entrepreneurship, and serendipitous relationships to further this food system future. The farm tours are inherently a form of social innovation experimentation to see if repeated exposure of deprived groups from Brighton and Hove to the farm's space, ethos, and activities can 'sow seeds' to catalyse local food systems transformation.

Despite the utopian underpinnings of the farm tours, two tensions were doundthat might potentially hinder the progress of this vision. First, there was a tension of participants experiencing the allure of navigating a 'wild' edible space but doing so in a manner safe and accessible for all. This tension was underscored when several visually and mobility-impaired participants and families with small children would join the tours. Some of these participants struggled to safely move through farm space due to the winding narrow pathways that were interrupted by occasional tree branches, weeds, and brambles. Also, though farm staff invited participants to pick and sample plants, basic foraging guidelines were not provided that might safeguard against the eating of an inedible plant. Concurrently, even if farm staff offered specific guidance, the narrow pathways which sometimes allowed only two or three participants nearby often prevented listening by the whole group. This tension was also reflected in the space's makeshift-built structures. Some participants, especially with very young children, found the compost toilet challenging due to its odour and perceived unsanitary conditions. Also, while participants sometimes marvelled at the rugged ingenuity of some of the structures, it is not clear whether building codes were followed or maintained. For instance, one of the central building's roof pillars supports was found detached from the ground. Second, researchers observed a tension between the farm having to be a functioning business and catering to a farm visit that has flexibility in its design. Specially, participants were sometimes unclear about the nature of being free to 'pick to bring home' . Farm staff typically instructed to harvest for the purposes of sampling, lunch preparation, and taking home. The third purpose was particularly problematic—the amount and scope of what could be brought home differed according to each visit and staff member's directions. Also, there were clearly a hierarchy of vegetables according to their market value and ease of growth which affected the degree in which participants could harvest.

CONCLUSION

This research aimed to understand grassroots food initiatives' imaginaries and the process of bringing that vision to the communities they serve. Imaginaries can be powerful mobilizers for civil society activity towards sociotechnical systems change (Sengers, 2016). For transitions to more sustainable *and* equitable food system, these visions of desired futures should also be radically inclusive and participatory. The farm tour featured in this study has especially grand expectations for transforming local food infrastructure for disadvantaged populations. Though these tours offered the possibility of participants to join this work in a more sustained capacity, there still are valid questions around what types of people may shape and contribute to this vision. The public pedagogical lens used for this research highlights the potential gaps between community project aims, activities, and implementation, as well as an approach for drawing out specific site's distinct affordances and limitations for learning. While education is widely acknowledged

in food systems literature as crucial for inclusive transition outcomes (Fan and Swinnen, 2021), this paper brings attention to the more unstructured and casual forms of learning that are equally vital for realising and scaling up emerging food system aspirations. In some cases, pedagogies implicit in a space or structure may have unexpected effects, frustrating progress towards envisioned futures.

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Innovation for weekly food markets after the Covid-19 pandemic

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Abstract – The Covid-19 pandemic has accelerated the search for innovative solutions throughout the food chain. Open innovation challenges must be resolved in line with current needs for food transitions according to the Farm and Fork strategy, which is included in the European Green Deal objectives to make food systems fair, healthy and environmentally friendly. The radical transformation of the food system under the banners of agroecology urbanism requires a reconfiguration of the social and cultural connection between agricultural producers, urban consumers and their relational and inclusive space. The purpose of this research is to recognize the adaptation and innovation mechanisms of the local food system over the last two years and, in particular, to identify sustainable practices at weekly food markets which could be used to foster the food transition. A total of 149 semi-open questionnaires were given to food market vendors and factor analysis was used to highlight latent factors and how much the open market is rooted in the territory. The results shows that a territorial approach can foster "innovation" in these traditional weekly food markets, which otherwise could lose their social potential for food transition.[1]

Keywords – open food markets, factor analysis, innovation, Girona Province

INTRODUCTION

This article presents part of a study carried out in the framework of a Territorial Specialization and Competitiveness Project (PECT) entitled the Sustainable Food System, funded by the Province of Girona and the European Union, with the collaboration of the Mediterranean University in Italy. As part of PECT, our project is called MeDiTrac (Markets, Distribution and Traceability). Our research group "Architecture and Territory" is working on the role of weekly food markets in food distribution in the Province of Girona to determine how to introduce innovation into the "traditional way of selling" in order to be attractive for workers and young people who are used to going to the supermarket because of opening times, the diversity of products including food, groceries and others, and the presence of sales or offers.

The Covid-19 pandemic made visible the unsustainability and vulnerability of the global food system at all societal levels, highlighting its weaknesses and fragility (Clapp et al., 2020; Fanza et

al., 2020). At the same time, it revealed great resilience in Europe. weekly markets (WM) demonstrated their resilience and role as a source of supplies and as a public space and space for socialization, which is known as the third nature of the market (Marsden, Banks and Bristow, 2000; Renting, Marsden and Banks, 2003).

The pandemic accelerated the search for innovative solutions to food distribution in the context of short and long food chains. Open innovation challenges must be resolved in line with current needs for food transitions according to the Farm and Fork strategy, which is included in the European Green Deal objectives to make food systems fair, healthy, and environmentally friendly. The trend is for transformation of the food system under the banners of sustainability, resilience and agroecology urbanism. To achieve this requires a reconfiguration of the social and cultural connection between agricultural producers, vendors and urban consumers. Our project focuses on their relational space with the territory, considering not only the market as a public space, but also the functional and cultural connection with productive areas and the threshold of producers and consumers at the weekly food market. For this reason, we consider the market at two levels: as a contextualised agency at municipal level, and as a potential agency at territorial level, considering the area delimited by the "range" of distance that consumers and vendors are prepared to travel to purchase or sell goods.

The cluster concept was adopted by Walter Christaller in his Central Place Theory for interpreting the system of markets at territorial level in south Germany. This concept was also adopted by geographer Pau Vila (Burgueño, 2003) in Catalunya when he was defining new criteria to demarcate the natural *comarques* (1931), using a survey sent to all municipalities in Catalonia. He suggested three questions, two focused on the relationship between citizens and the place where they usually bought food. The questions were: Which region do you think belongs to your people? Which market do you usually go to? Do you go to another market? The results of the survey led to the first map of Catalonia in which public food markets (open air or covered) were the main pole structure of the region and the main pole of every *comarca* (Fig.1).

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Figure 1. Results of the survey conducted by Pau Vila in 1931 in which you can appreciate the attraction exercised by the market. From Burgueño, 2003.

We decided to adopt the cluster of markets concept to take a territorial approach to the presence of markets (Kassai et al., 2018), instead of focusing exclusively on diversity or the context difference of every municipality. Cluster analysis has been used to study farmers markets from a social perspective and in performance economic metrics. We are interested in territorialising the cluster analysis to verify the relationship with productive areas.

This research explores the extent to which WM clusters could help to understand if the WMs reflect the relationship between rural and urban territory; whether they represent fair, healthy and environmentally friendly food systems; and what their relationship is with the territory.

Our hypotheses were as follows. First, in the province of Girona WMs are a complex network that could respond to the objectives of the European policy but are not valued by the local municipality or provincial administration. Second, the WMs could be included in clusters in relation to the mobility system and the "range" of attraction of the vendors, consumers and food production. Third, WMs adaptability during the Covid-19 pandemic should be studied to determine what innovations to implement.

For this region, our research questions were as follows. What does this market provincial system consist of? What could be defined as market clusters and for which region could this concept be relevant? What could be the indicators of the "health" of a market or in line with EU policies? Does the market serve as a retail incubator for farmers/ranchers to start up? What is the market's ability to attract and serve new farm vendors?

METHODOLOGY

Our study is focused on the Province of Girona in Spain, adjacent to the border with France. It is composed of nine *comarques*, which in total have 788 inhabitants (2020), in a territory of 5,910 km^2 and a density of 132.28 inhab/km, with the highest density of population along the coast and in the capital of the *comarca*. The province has a highly diverse landscape, with mountains at the border with France, an agrarian plain in the central zone and the touristic coast of Costa Brava.

The mobility system has a main north-south corridor which connects France with Barcelona and central Spain, and a more capillary system that connects the inner or coastal area from east to west. Since the Middle Ages, Girona Province has had open markets that in some cases have continued until today with great resilience.

The methodology used was a combination of qualitative and quantitative analysis. Urban planning and open market analysis (Nicolosi, Pulina and Laganà, 2016; Wolnik, Cheek and Weaver, 2018; Fava, Laganà and Nicolosi, 2022) use mostly quantitative and geographical analyses to provide statistical results that are contextualised in the territory and social space. Meanwhile, qualitative research gave us information about innovation carried out in the pandemic period. To determine the number of markets to analyse out of a total of 96 (Fig. 2), we used the sample size with a confidence interval in an estimated 95% ratio with 10% accuracy. The resulting sample was of n=49 markets. Before we used the random system to define which market to visit, we prioritised visiting at least 40% of every cluster, the biggest market in every cluster, all the markets in the *comarcal* capital and the markets that are recognised for good practice. So far, we have visited 27 markets and interviewed over 60% of the sellers. The main role was attributed to actors involved in the life of the market sellers and consumers. To date, we have carried out onsite 149 semi-open interviews with the sellers. We divided the sellers into three categories: food retailers (FR), seller producers (SP) and sellers of local producers (SLP). This division helps us to understand the relation between WM and the territory. Ten-minute personal interviews with sellers were conducted anonymously and face-to-face, based on semi-structured questionnaires. The questionnaires were administered between January and September and July 2022.

The methods used for gathering data were:

1. Participant observation: on-site examination of the food retail urban structure in the centre of the town and in the food markets.
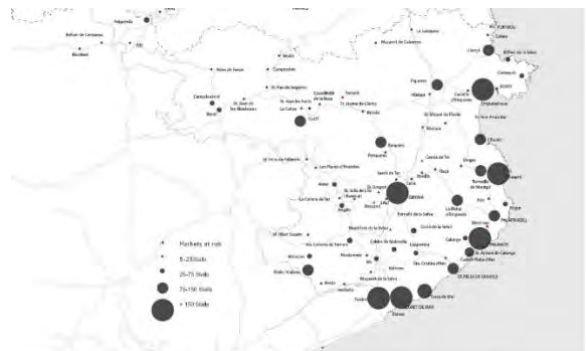
Figure 2. Weekly markets (WMs) in Girona Province according to the total number of stalls, 2018.
From: Fava N. et al. (2022).

2. One-to-one interviews with food retailers (FR), seller producers (SP) and sellers of local producers (SLP).
3. Statistical and geographical analysis of the results.

PROVISIONAL RESULTS

The weekly markets along the touristic coast of the Costa Brava are the biggest and most active. In remote areas, some of them are at risk and some of them could not withstand the pandemic in 2019. For these reasons, the first step in the analysis was to identify the active markets, because no updated list was available and the last publication of the Generalitat of Catalunya was from 2005 (Llibre Blanc, 2005).This shows the lack of interest in this social and economic capital in the territory. We detect 96 weekly active markets, even if with very different number of stalls.
The second step was to identify the cluster (Fig. 3), in relation to connection by road and the weekly day of market opening. We identified 17 clusters, with widely varying size.
In each cluster, each market is connected to the other by no more than a 15-minute drive, and the surrounding production landscape is similar.

Figure.3 Market cluster hypothesis, Girona Province. Author: Marta Carrasco i Bonet.

Demographic
Of the 149 people interviewed, 90 were men and 59 were women. A total of 28.3% of the sellers interviewed were over 46 years old. A total of 30% of the stallholders had been working for over 40 years on the market, because it was a family business. Eighty per cent of sellers stated that their stall was a family business.

Type of sellers
A total of 59% of sellers are resellers, while only 32% are direct producers.

Table 1. Type of sellers

Type of sellers	N.	%
Food reseller	82	57%
Sellers Producers	47	32%
Sellers of Local Producers	13	9%
No answer	3	2%
Total	**145**	

Origin of the food purchase

A total of 46% are resellers from the wholesale market, of which 7% are from Mercabarcelona (MB), 15% form Mercagirona (MG), 9% from both MB and MG, and 15% a mix of MB and MG and producers. The 32% are SP and 9% are SLP

Table 2. Origin of purchased food. FR: food retailers, SLP: seller from local producers, SP: sellers producers.
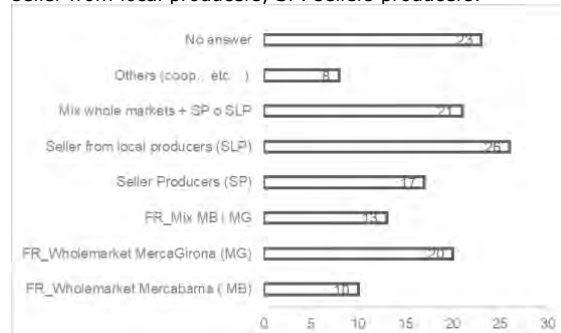
Factor Analysis
Participants were asked for their perceptions of difficulties due to the pandemic as well as how they dealt with the changes that had taken place, for example, with respect to willingness to take orders by phone, make home deliveries. Other parts of the seller questionnaire were designed to highlight aspects problems and changes that the sellers faced in the period of the COVID-19 health emergency. Questions that we focused on for the factor analysis and subsequent processing are indicated in Table 1. In the study, 18 variables were considered (indicated in Table 3). The factor analysis applied to sellers/producers identified six main components which in combination represented 69.99% of the total variance. (Table 3). Factor analysis allowed us to visualize latent factors that can capture a significant percentage of the overall variability of the starting data.

Table 3. Variables identified in the factor analysis.

	Communalities	Initial	Extraction
1	Years of activity	1	0,656
2	IT- App	1	0,696
3	Hub mob	1	0,751
4	IT activities	1	0,678
5	Afeternoon work	1	0,613
6	City	1	0,746
7	Age	1	0,657
8	COVID: what changes	1	0,766
9	COVID19: different ways of buying after confinement	1	0,81
10	COVID19: online distribution	1	0,568
11	COVID19: number of consumers changes	1	0,883
12	Family business	1	0,696
13	Membership of associations	1	0,563
14	COVID19: purchase changes after confinement	1	0,703
15	Variety of products	1	0,797
16	Stand size	1	0,596
17	Reseller/producer	1	0,729
18	Markets of origin or own production	1	0,69

To simplify the reading of the results, only the values that characterise the six major extracted components are considered and illustrated in Table 4.

Table 4. Results from the factor analysis. Rotated component matrix a—factors extracted by component. Extraction method: principal component analysis. Rotation method: Varimax with Kaiser normalization. a Rotation converged in 8 iterations

% variance		Factors					
		1	2	3	4	5	6
19.8%	Years of activity	0,656	0,444	0,119	-0,065	-0,104	-0,002
	IT- App	0,684	0,054	0,225	0,414	-0,041	0,044
	Hub mob	0,8	-0,175	0,209	0,144	-0,12	0,037
	IT activities	0,806	-0,111	0,084	0,074	0,046	0,028
	afternoon work	0,745	-0,081	0,145	0,175	-0,017	0,003
12.4%	City	-0,332	0,748	0,234	0,111	0,042	0,088
	Age	-0,053	0,736	0,186	-0,065	0,231	-0,142
	COVID: what changes	0,323	0,584	-0,2	0,468	0,2	0,149
11.6%	COVID19: different ways of buying after confinement	0,199	0,12	0,855	0,067	0,132	0,055
	COVID19: online distribution	0,467	0,104	0,512	0,271	-0,027	0,057
	COVID19: number of consumers changes	0,28	0,194	0,845	0,205	0,1	0,038
11.6%	Family business	0,243	-0,085	0,189	0,757	0,019	0,141
	membership of associations	0,087	0,092	0,126	0,716	-0,017	-0,136
	COVID19: purchase changes after confinement	0,437	0,466	0,114	0,5	0,139	0,113
11.5 %	Variety of products	-0,086	0,098	0,054	0,202	0,858	-0,005
	stand size	0,055	-0,343	-0,199	0,268	-0,603	0,005
7.8%	Reseller/producer	0,02	-0,219	-0,042	-0,128	0,244	-0,777
	Markets of origin or own production	0,099	-0,256	0,072	-0,131	0,277	0,718
	Percent of total variance explained	19.8%	12.4%	11.6%	11.6%	11.5%	7.8%

The first latent factor extracted (19.8% of variance explained) identifies the "Important innovations for sellers". The grouped items are the years of established activity of the sellers, the importance attributed to the following technological innovations: App; Hub mob., consumer attraction activities (tastings, fun activities for children and families, music, and others)

The second latent factor retrieved (12.4%), concerns the location of the market, the age of the seller, and the changes implemented to satisfy consumer demands (taking requests online, by phone, etc.) and can be defined as "readiness for change".

No less important are the third and fourth factors, which also account for similar percentages to the third and respectively 11.6% and 11.5% of variance explained, and which deal with the presence of consolidated family businesses and diversified way of selling products.

The fifth and sixth factors extracted (7.8% and 6.8% variance respectively) emphasise the importance of the variety present in the stalls and the size of the stalls.

DISCUSSION AND CONCLUSION

Clusters are examined as a hypothesis to consider the WM such as territorial system. When coupled with the mobility system, this approach could give rise to a redefinition of market territories and the concept of daily food shopping. In addition, clusters are designed so that consumers have alternative places on weekdays to buy fresh products, without using a car if they are at a distance that can be reached by bicycle or, in any case, without having to increase CO2 footprint.

The data collected to date show that over half of the sellers are not linked to the territory, even though approximately 40% are producers or resell products bought from local producers. More concern is the average age of the sellers. The issue of generational turnover arises usually for the buyers, who are usually elderly, but in this case also the sellers have the same problem. The one-to-one interviews revealed that some young producers perceive the WM such as an opportunity, not only for selling, but also for promoting the territory and experimentation, as they feel in contact with other agricultural realities, and they feel to belong to the community of small producers.

The data processing is in a preliminary state because we are waiting to complete the interviews, which are difficult because there is real/perceived vendor reluctance to share information. Furthermore, we have to carry out the interviews when the market is open and consequently there is consumers presence. In addition, the WMs can have considerable seasonal variations, especially in a province like Girona with strong influxes of tourism. However, the sellers decides to go to one place or another, and analysing the global system, it is not a real problem for the purpose of analysing the data.

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Outside the market, in tune with the seasons
Diverse food economies of urban gardeners

Lucie Sovová, Petr Jehlička[1]

Abstract – **Research concerned with more sustainable food provisioning has become more sensitive to the socio-economic relations underpinning the conventional food system as well as its alternatives. In this paper, we use Gibson-Graham's diverse economies framework to study food practices of urban gardeners in Brno, Czechia. Our exploration of the interactions between market-based, alternative and non-market food sources reveals that gardeners' food choices are strongly shaped by their engagement in food self-provisioning. Apart from providing a significant amount of harvest, food self-provisioning plays a key role in how other food sources are mobilized. Specifically, the gardens' natural seasonality establishes a temporal order which determines how and when different food sources are used. We thus expand the exploration of diverse food economies to a temporal dimension. We argue that the distinction between the agro-industrial system (where financial value is created through fast commodity circulation) and the agro-ecological system (where ecological care relates to slower natural processes) links to their time ontologies.**

Keywords – **food self-provisioning, temporality, diverse economies, urban gardens, seasonality**

DIVERSE FOOD ECONOMIES

Research concerned with more environmentally sustainable and socially just ways of food provisioning (often labelled as Alternative Food Networks or AFNs) has become gradually more sensitive to the socio-economic relations underpinning the current food system (Rosol, 2020). Unlike industrial agriculture and corporate food supply chains, AFNs typically do not view food primarily as a commodity and are not motivated by profit maximization. Instead, these initiatives can foreground distinctive economic relations based on solidarity and the acknowledgement of the often hidden social and environmental costs of food (Feola and Koretskaya, 2020).

The diverse economies approach, based on the work of JK Gibson-Graham (2006), offers a useful tool to interrogate the economic diversity of food provisioning and to "clarify the extent to which AFNs perform the economy otherwise" (Rosol, 2020: 68). Building on this approach, this paper challenges the narrative of the globalized market as a dominant site of food provision. Instead, we investigate the already existing economic diversity of food practices on the household level through a case study of urban gardeners and highlight the centrality of gardening's slower, cyclical temporality for the households' wider patterns of food provisioning.

RESEARCH DESIGN AND METHODS

This paper draws empirically on a qualitative study conducted in cooperation with 27 households involved in food self-provisioning in Czechia's second largest city Brno (population 380 000). The goal of the research was to understand the functioning of urban gardens as food sources in people's everyday life, and their interactions with other food sources. To this aim, participants were asked to record all fruits and vegetables that entered their household with their respective source, (estimated) weight, and usage. Using Gibson-Graham's (2006) diverse economies matrix, food sources were subsequently categorized as non-market (gardening, foraging, gifts and barter), alternative market (farmers' markets, direct sales, organic shops) and market-based (supermarkets and grocery shops).

Assuming that seasonality would influence the amount of home-grown food, we structured the data collection in four rounds spread throughout the year. On each occasion, participants kept food logs for a period of one month. In each round of data collections, food logs were accompanied by semi-structured interviews. This provided a detailed insight into respondents' food provisioning practices as well as their motivations and understandings.

RESULTS

Although urban gardening is often portrayed as a marginal practice which serves community building and leisure more than food provision, our results reveal a synergy between both functions. While all respondents practiced gardening as a hobby, it also constituted an important food source. On average, 33 per cent of fruits and vegetables consumed in respondents' households came from their gardens.

Besides providing significant amounts of produce, the gardens also played a key role in shaping respondents' understanding of food quality. Home-grown food was perceived as the best in terms of taste, freshness, healthiness and transparent origin. Conversely, food from supermarkets was described as chemical, artificial and tasteless, and only used as a last resort. In respondents' understandings, non-market sources were therefore clearly preferred over market-based food provision.

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This hierarchy results in distinctive seasonal patterns in respondents' food provisioning and their households' diets. Garden harvest was concentrated in the summer months, following the natural seasonality of food production. However, having home-grown food as a quality standard also shaped respondents' food habits outside the summer season, when they applied diverse strategies to provide good food for their households. These included storing the garden harvest or processing it into diverse preserves, lowering the consumption of fruits and vegetables or choosing the ones which could be obtained from commercial sources of a relatively comparable quality.

The influence of food self-provisioning on broader consumption patterns is best exemplified by tomatoes. This crop was produced by all respondents, and commonly mentioned as an example of the difference in taste between home-grown and purchased food. Food logs confirmed that tomatoes were almost exclusively consumed when they were available from the gardens. Although supermarkets offer tomatoes year-round, these do not meet gardeners' quality standards. Similar patterns were observed for other crops and hold relevance for the local food system's environmental footprint, particularly considering the large number of Czechs engaged in food self-provisioning.

DISCUSSION

Our exploration of the diverse food economies of urban gardeners shows that despite the wide availability of cheap and convenient foods, the traditional practice of food self-provisioning remains a strong part of urban households' food portfolios. This practice is not only valued as a meaningful hobby, but also as the source of top-quality food. This constitutes an important contribution to the literature on diverse food economies, as we show that non-market food provisioning is not only an extensive and popular practice but also an important factor that influences households' wider food strategies.

Previous research has highlighted that sustainable food systems do not only entail environmentally friendly production methods but also socially just economic relations (Rosol, 2020). Our paper links both features to a distinctive type of temporality: the slower, cyclical pace of the growing seasons, which contrasts with the fast commodity circulation of the agro-industrial supply chains. Our results show that the experience of natural time shapes the social rhythm of food provisioning, even for gardeners living in a contemporary urban context where all foods are, in principle, available at all times. This in turn provides a counter-narrative to the seemingly inevitable speed of just-in-time delivery models justified by the fast-paced modern lifestyle.

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Socio-spatial analysis of food poverty
A research in Turin

V. Allegretti, A. Toldo, C. Genova[1]

Abstract – **The research, carried out as part of the Food Atlas of Torino project, aims to investigate the phenomenon of food poverty, focusing on the dimensions, forms, and dynamics that this condition assumes in the city of Torino (Italy). The general aim is to provide a theoretical advance in the scientific debate and propose policy indications for local institutions and actors. Over the past two years, the food poverty rate and its intensity have dramatically changed, exacerbating the conditions of those groups who are already experiencing deprivation, by eroding their ability to be protected from extreme vulnerability, due to the rising unemployment and other forms of income deprivation and rising prices of basic goods as well, due to the pandemic emergency and the Russia-Ukraine conflict. Following a multi-method research strategy, the study explores the three main dimensions of food poverty, the material, the social and the psycho-relational, using survey and qualitative interviews as main empirical sources. The data show the serious deterioration in the living conditions of the participants, the severe emotional burden that comes with poverty and the increase in new vulnerability profiles, such as in-work poverty and underemployment of college graduates. On a theoretical level, the study permits to contextualize the phenomenon, by tailoring the concept of food poverty to the Italian local case, within a multidimensional and multidisciplinary theorization.**

Keywords – **Food insecurity; food policy; right to food.**

INTRODUCTION

The research, conducted as part of the Food Atlas project of Torino, aims to investigate the phenomenon of food poverty, focusing on the dimensions, forms and dynamics that this condition takes on in the city of Torino (Italy). The general objective is to provide a theoretical advancement in the scientific debate, to better contextualise the phenomenon also at a local level, in order to propose policy indications for local actors.

In the last two years, the incidence and intensity of food poverty have dramatically changed, worsening the conditions of those who were already experiencing it, and eroding the ability of a large segment of the population to protect themselves from material deprivation, due to the increase in unemployment and other forms of income reduction and the rise in the prices of basic necessities. Indeed, for the first time since the beginning of FIES data collection (2014), the incidence of food insecurity has increased in Europe (FAO et al., 2021). In Southern Europe, 9.2 per cent of the population lives in moderate or severe food poverty, while 2.3 per cent are severely food insecure (ibid.), an increase compared to the previous year, as well as the number of people who cannot access nutritionally adequate food. It is also noted (Eurostat, 2019) that 9.9 per cent of Italian households state that they do not have the possibility of eating a protein meal every other day, a fundamental dimension to measure material deprivation. Istat (2022) estimates that in 2021, in the North-West distribution about 7,9% of households and 9.3% of individuals live in absolute poverty. In the region Piemonte, whose capital city is Torino, the incidence among individuals is 8% (Istat, 2022), i.e., 380 thousand people. Finally, according to Marchetti and Secondi (2022), the number of people at risk of food poverty in Italy is 11.5 million, while the metropolitan city of Torino is in an intermediate position, with a lower incidence than other large cities, such as Milano for example.

The economic and social outcome of the health emergency and the conflict have yet to fully explode, but, especially among the most vulnerable groups of the population, the possible magnitude of the effects are already visible: loss of precarious and/or informal jobs, physical and psychological health issues, not only related to Covid-19 infection, digital inequalities (especially for school age kids), loneliness, especially for older people, few residual resources to meet the everyday necessities, delays and discontinuities in the distribution of financial and material assistance, generate at risk of poverty conditions for a consistent part of society, even for those who never experienced poverty and insecurity. The core experience of poverty, according to Bray and colleagues (2019), comprises also the contraction of agency, given by the condition of inequality, inactivation and marginalization experienced together with poverty, which is expressed through the disempowerment of people, the lack of control on one's own life, the suffering on body, mind and heart, and, finally, struggle and resistance to the extreme living conditions that poverty brings with it. Food poverty, or food insecurity, often used as synonym in policy and academic debate (Lambie Mumford, 2012, Dowler and O'Connell, 2012), acts as a strong indicator of overall poverty (Dachner and Tarasuk, 2018), which is still a relevant issue in Western Countries and Italy as well; as defined by Dowler (2003): "food poverty is the inability to consume an

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adequate quality or sufficient quantity of food that is useful for health in socially acceptable ways, or the uncertainty that one will be able to do so".

The question of the adequacy of food is not only a matter of quality, but also, and even more, a social and cultural question: in Italy the right to access cultural adequate food is guaranteed by many institutions, such as school canteens, city charters, local food strategy pacts and so on . Access to food is guaranteed as well, often through the activities of charities or private/public projects (Toldo, 2018), which collect food surpluses from food companies, supermarkets, local markets, private donors, and, only partly from the Fund for European Aides to the most Deprived (FEAD), which contributes to the purchase of basic goods, though the Italian Agenzia per le Erogazioni in Agricoltura (Agea). As is clear, the issue of guaranteeing the right to food involves different actors, not only the public one: charities are the majority of food providers for food insecure people, such that public social services direct claimants to them, and the European Commission, in accordance with the Italian government, put them in charge for the distribution of public food aides, as well as giving them an important role in the social inclusion of beneficiaries. At the beginning of the new millennium the scientific community, especially geographers, started to discuss the necessity to guarantee the right to nutritious and sustainable food (Pothukuchi and Kaufman, 1999); Special Rapporteur on the right to food in 1999 defined the right to food as: "the right to have regular permanent and unrestricted access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs , and which ensure a physical and mental, individual and collective, fulfilling and dignified life free of fear ". As Lambie-Mumford (2016) pointed out, the right-based approach gives the opportunity to put at the centre the public action, which traditionally leaves the care of food insecure people almost entirely to private charities.

Considering the Italian debate, the first element that emerges is the interdisciplinary nature of the construction of the concept of food poverty that, thanks to some important defining works on the subject (see, for example, Action Aid 2020, 2021, Corezzi and Faraoni, 2022, "Food Poverty in Torino" project, 2021), is being declined in some dimensions borrowed from international studies (O'Connell and Brannen, 2021) and includes the material dimension, which includes the qualitative/quantitative adequacy of food and economic and physical accessibility; the social dimension, which concerns the socio-cultural adequacy of food and marginalisation from the widespread practices of conviviality and commensality, which provokes processes of disaffiliation (Castel 1997); the psychosocial or emotional dimension, which focuses on the experiences of stigma, stress and psychological malaise that often accompany the experience of food poverty and of the beneficiary user of assistance. This relationship between beneficiary and institution/body/association generates a stratification of poverty (and of the poor themselves), which, in

turn, leads to processes of social disqualification and labelling (Paugam 1991).

METHODOLOGY

The 205 interviews were collected from 1 October to 23 December 2021, surveying people from 30 associations and organizations, intercepting the surprising heterogeneity of Torino's third sector.

The questionnaire, which includes 92 questions, focuses on five spheres of daily experience: eating habits, shopping, usage and practices, physical health, and psycho-emotional stress and socio-relational aspects. The FIES questionnaire, developed by the FAO (Cafiero, Viviani and Nord, 2018), which measures the intensity of food insecurity, was also included at the end of the interview

The collection of the testimonies was entrusted to a group of male and female students from master's degree courses in the socio-political area, suitably trained in the role of interviewers and interviewers.

Working with marginalized populations often does not allow for probability sampling, as there is no list of all individuals receiving food assistance and, for reasons of privacy, it is often not possible to request this from the agencies. In order to partly overcome this limitation, which does not allow the results of the research to be generalized, it was decided to create a complete list (as complete as possible) of all Torino's food assistance agencies, taking advantage of the already mentioned mapping work carried out in 2020 by Atlante del Cibo and Salvacibo. The sampling, therefore, is more like an attempt at a census, within which the sample survey is also framed. All entities on the list were contacted, with the same proposal. As anticipated, although most organizations were contacted, the response rate was not high. In summary, the sampling was carried out using non-probabilistic and non-random techniques, so it is not possible to extend the results to the target population. All the beneficiaries present at the time of the distribution activities were asked to participate, with extremely variable daily response rates (between entities and on different days). The results have been elaborated with Stata 16.

MAIN RESULTS

The study made it possible to locate and qualify more precisely the causes of the increase in the number of food assistance recipients and the consequent worsening of the living conditions of men and women in Torino. The majority of the respondents are women, about 70 per cent, while the average age of the sample is 44, half of whom are from a non-EU country. The first elements of interest concern the sample composition by educational qualification, since as many as 20% have a university degree, and the employment situation, whereby one-third have a job, but still cannot meet all the expenses essential for survival. The average income, including income from work and transfers from public authorities, is 800€, for a sample whose average household size is about 3 persons and among whom 25% are homeless. Concerning spending and eating habits, on average, respondents say they spend about 45€ per week on food purchases, 180€ per month, which is

about half the average monthly expenditure of a three-person household (ISTAT 2020). The most consumed foods are related to the main cultural and geographical origins of the sample (Italy, North Africa, Sub Saharan Africa, Eastern Europe): tea, coffee, olive oil, vegetables, pasta or rice and fruit are the basis of the daily diet for more than half of the respondents. In terms of practices and utilisation, the majority state that they have daily access to a fully equipped kitchen and have enough time to prepare and consume an adequate meal, although those who are homeless, a form of poverty that is extremely connected to the food sphere, are excluded from this majority. For most of those suffering from physical illness, it is difficult to follow an adequate diet, due to the limited resources (economic, housing, food from assistance) on which they can rely. The questionnaire also reconstructs the worries, stress, sense of shame and sacrifice experienced on a daily basis by many who, however, declare that they find a moment of satisfaction and tranquillity when they eat their meals.

Finally, the FIES questionnaire reconstructs the intensity of poverty, which in the sample ranges from moderate to severe in almost all cases.

DISCUSSION

The results show a severe deterioration in living conditions, revealing the precariousness the participants have to deal with in everyday life.

From a *material point of view*, given the lack of resources and access they experience, more than half of the participants are long-term unemployed, while those who have a job incur in the so-called phenomenon of "in-work poverty", as they do not receive a sufficient income for covering expenses related to basic needs. The pandemic emergency made even more evident the worsening situation of an entire stratum of new poor people, who have never faced poverty before, and they are forced to ask for material assistance for the first time. In general, the questionnaire depicts the rise of multiple vulnerabilities, which not always are intercepted by the public actor, as they are often excluded from traditional welfare measures. Considering the spatial access to food, interviewees have generally few occasions for exploration, limiting their foodscape to their strict area of living, experiencing a sort of spatial segregation; despite the narrow space in which the majority of participants acquire and consume food, generally, their nutritional habits are in line with those of general population in Italy, that is, food poverty in the national context might not mean automatically lack of access to nutritious food, as it is largely available at supermarkets and local market chains, as well as many food aid initiatives focus only on distributing fresh food surpluses. Consequently, the lack of healthy and nutritious food in individual diets could be seen as a population-wide issue, not only related to specific groups[2].

From a *social point of view*, interviewees are often restrained in their agency and the possibility to perform practices related to food in the way they consider acceptable and normal: food poverty is, thus, responsible for reducing the possibility of performing food, from purchasing to eating, following desires and preferences. As reported in the interviews, for example, people who have lived long periods as houseless, had few opportunities to perform, prepare and eat the food they felt l to be adequate for them, losing progressively interest in food. Considering the experience of men and women accessing food aid initiatives, a highly genderized relationship between food organizations and recipients persists, as two third of the sample identify as female.

From a *psycho-relational point of view*, a conspicuous number of participants live a condition of social exclusion, isolation, and lack of sustaining social networks, which further increases their vulnerability to food poverty and marginality (Brannen and O'Connell, 2021), along with the negative outcomes of long periods of stress, anxiety and shame.

In the last two years, the attention on the rise of food poverty has brought to the necessity to have deeper knowledge about how people experience extreme deprivation, by contextualizing the phenomenon at the local level, by returning to the multidimensionality of the concept. A better understanding of how food poverty works locally, gives, thus, new evidence for the public institutions (Quaglia, Toldo and Vittone, 2019): although Torino's welfare had moved the first steps toward a re-publicization of food assistance, the need to an organic food policy at every level of decision is still urgent, in order to have guidelines for accessing food welfare, putting more attention to what is donated, enhancing non-emergency food programs, by adopting a right based approach to the access to healthy and nutritious food.

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Track 2: Urban Agriculture

The submissions to this conference show that lots of work on sustainable and just food systems in cities takes urban agriculture in its various forms as a starting point. Hence, where food growing used to be mainly associated with rural areas, there is now ample attention for the benefits (and to a lesser extent the drawbacks) of food growing in an urban context. In fact, the number of presenters focusing on some form of urban agriculture was so large, that urban agriculture as a topic warranted its own track. The papers in this track discuss urban agriculture in varied places, ranging from Colombia and Brazil, to China, France, Italy and Spain. The topics discussed are just as diverse: some papers take a specific form of urban agriculture as a starting point - urban gardens, pastoralism, productive green infrastructure, cooperatives – others start from what urban agriculture can bring to urban food systems: either by discussing benefits and unwanted effects in general, or by specifically discussing issues like organic waste management, food justice and insecurity, social inclusion, urban just transition, food system transformation, and reducing the distance between the city and the countryside.

Food insecurity among students and food justice
Example of a French University

Léna Jégat, Morgane Esnault[1]

Abstract – During the health crisis linked to Covid-19, the French media highlighted the problem of precariousness, particularly food insecurity (numerous reports in food distributions). The student population then stands out as particularly precarious.

The calculation of the household vulnerability index to food insecurity in Caen's neighborhoods led us to focus the study on the student population, which appears to be particularly vulnerable. Our working hypothesis is then to question the food practices of the student population through the prism of their social origins.

Among the results, a spatial analysis of the "food mile" based on the census of food stores allowed us to learn that the neighborhoods with the fewest stores are those with a large student population.

The results analysis of a large survey of students on their eating habits identified several student consumption profiles (lunch/dinner practices). Finally, the students' food insecurity seems to be depending on urban morphology and on the integration of the student population in the city of Caen.

Keywords – Food consumption, food vulnerability, food mile, students' food issue

INTRODUCTION

In the last two years, the issue of precariousness has been highlighted successively by the health crisis linked to the Covid-19 pandemic followed by the general inflation of consumer prices. During the lockdowns, food insecurity was particularly mentioned by the media, which made many reports and interviews in the food distribution lines. The student population is particularly affected by precariousness, which is superimposed on the long closure of universities and the loss of jobs (often in sectors closed due to sanitary measures, such as the restaurant industry). In Caen, various food distributions will be organized on campuses, in parallel with national measures such as the 1€ meal in university restaurants.

While the census of food shops in the agglomeration carried out two years earlier by the promoter of one of us remained unexploited, the idea of testing methodologies on the notions of food deserts and vulnerability to insecurity emerged. A few months later, as colleagues in an L3 geography course, we suggested that students include questions about their food practices in the annual survey of the university's students. All of these methodologies were considered in the light of the following working hypothesis: the precariousness and food practices of the student population would be linked above all to their social origins.

The city of Caen currently has a population of just over 100,000. Its population is truly marked by the presence of students, who represent a little over 30,000 people. The university campuses are concentrated in the northeast of the municipality, three of which (north of the ring road) are located in commercial areas. The student population resides primarily near these university campuses and in the downtown (cf. Fig. 1).

Figure 1: Students per neighborhood in Caen (France)

RESEARCH APPROACH AND METHODOLOGY

Faced with forms of precarization at all levels of society, we seek to understand how students are affected, particularly in terms of their food practices. As there is little scientific production on this subject,

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it is essentially a matter of identifying exploratory research tracks.

The methodology used combines three data sources and various methods (see Fig. 3).

First, we processed socio-demographic data of the population, provided by INSEE (national institute of statistics and economic studies) to calculate the household food insecurity vulnerability index (based on the methodology developed by Paturel *et al.*, 2019). This produced the Figure 2, helping us in identifying the precariousness risks in Caen neighborhoods and making us realize that the students' vulnerability to food insecurity is quite important.
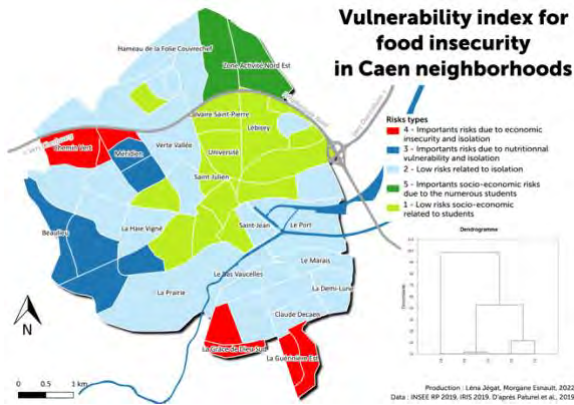
Figure 2: Vulnerability index for food insecurity in Caen neighborhoods (France)

Then, we mobilized the food shops census in the commune of Caen, to calculate the food mile (based on the methodology of Gordon et al., 2011) on a selection of supermarkets (we consider specialized food shops such as butchers being too out of step with student practices).

Finally, a large survey of 763 students at the University of Caen on their food practices was conducted in 2021. The co-construction of the survey with L3 geography students allowed us to get closer to the real situation.

The proposed multivariate statistical analyses focus only on the stratum of decohabitating students (568), based on the hypothesis that the population living at home is too influenced by their parents' food practices. We are thus interested in the way in which the practices of distinctions are made (or not), and how the situation of food insecurity is experienced by the students.

RESULTS

Consumption practices in our survey vary mostly according to the place of study, especially for lunch. Students from the city center campus (that take social sciences, arts, literature, or law courses) can access a large commercial offer. The students from the other off campus (medicine, sciences, and technology students) are not as well-endowed with lunch options. That said, we identify three consumption profiles, depending on where the students eat (in or outside the campus, at home or not, if they buy pre-made food or if they cook from scratch, and if they eat alone, with friends or with their family). Those practices criteria divide the student body according to their social properties, in three categories representing each approximately a third (cf. Table 1).
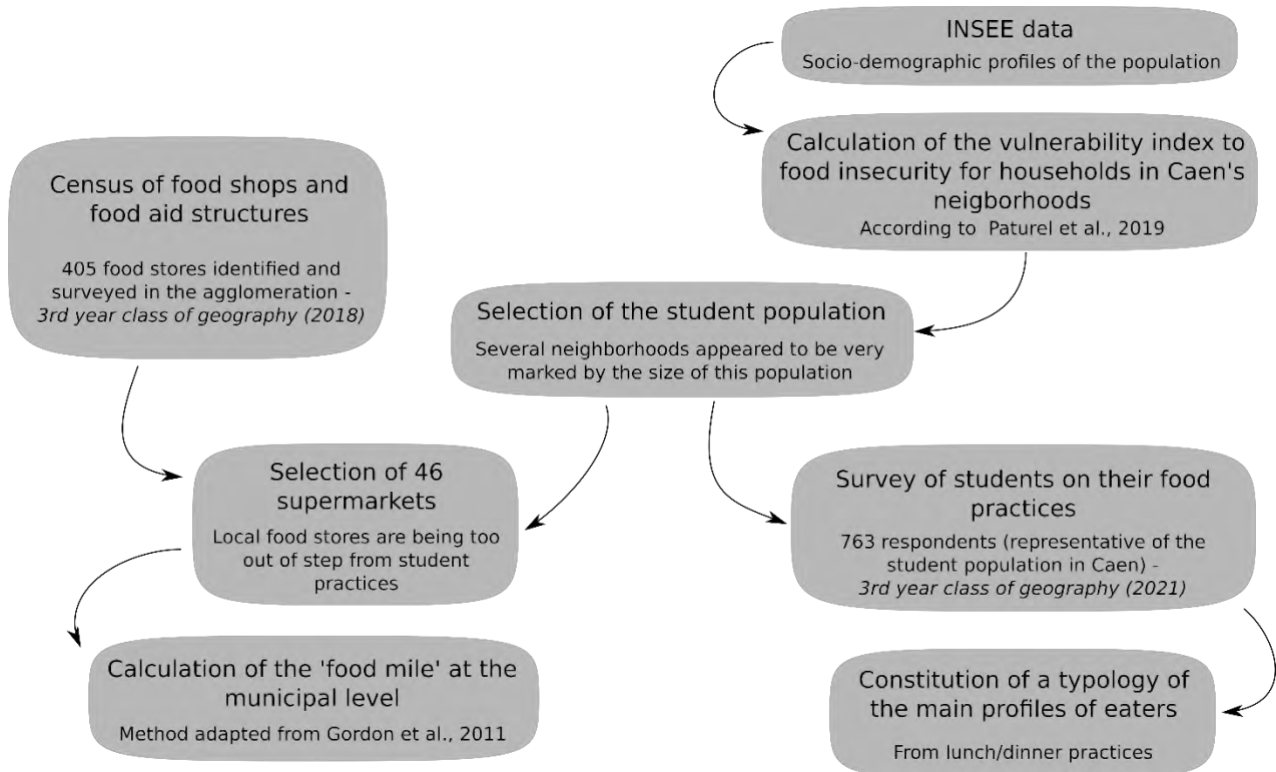
Figure 3: Method diagram (realization: Léna Jégat, 2022)

Table 1: Lunch habits and food consumption profiles for the students in Caen, France

Profile	Share	Practices	Overrepresented	Underrepresented
A	35%	Consumption always on campus Either at the campus cafeteria, with friends or not; Or made from scratch or bought premade	Medicine, sciences and technology students; Part-time working students	Arts, literature, linguistic students
B	32%	Lunch made from scratch, eaten alone or with family, at home	Social science, humanities, arts, literature, linguistic students; Students with summer jobs	Medicine students; Scholarship students
C	28%	Lunch always at the campus cafeteria, always with friends	Law and economics students; Scholarship students; Students with campus housing	Arts, literature, linguistic students; Individual off-campus living

Table 2: Dinner habits and food consumption profiles for the students in Caen, France

The dinner habits do not rely as much on the place of study as the lunch habits. At the end of the day, where and how students eat mostly depends on their living situation. As we excluded the students living in their family home, the four profiles that we identified (cf. Table 2) do not depend on the parents' dinner practices. Many of the students in our survey (40%, profile A) eat dinner alone, at home, and is made from scratch (whether it might be elaborated or not was not included in our questionnaire). This population is constituted of social sciences and humanities students, living off-campus, and are beneficiaries of housing governmental subsidies (APL: *aide personnalisée au logement* meaning "personalised housing subsidies"). The B profile (23%) is an opposite, as they never eat alone, and they have a food budget above the average, meaning they do not restrict themselves on food as much as the A profile. The D profile (13%) is constituted of scholarship students who benefit from a social rate of one euro per meal taken at the campus facilities, explaining the dinner habits exclusivity of this group.

INTERPRETATION

We crossed the social origins of the students (social data of their parents) with their food consumption practices, but no major correlation was found. The topic studied, however, appears to be the main determinant in the meal habits. We can presume a social determination in the choice of topic, but it was not the essence of our survey, and many researchers do investigate this subject.

The campus housing is partly located next to the city center, but most of it is within the northern parts of the city. A large part of the Caen students lives there (cf. Fig. 4), as it is quite affordable in comparison to the city center. The commercial food retail is not very diverse, as students are almost the only ones to live there. This phenomenon is accentuated by the difficulty to access the other shops, located in commercial areas in some other neighborhoods.

In the city center, where most of the students live, the commercial food retail is denser, but not so diverse. Most of it are small shops, where the food is expensive and with very limited choice.

Profile	Share	Practices	Overrepresented	Underrepresented
A	40%	Dinner made from scratch, eaten alone, never bought outside or premade.	Off-campus living; Social sciences and humanities students; Recipients of housing benefit	Part-time working students; Shared housing; Medicine students
B	23%	Dinner with family or friends, never alone, never at the campus facilities	Shared housing; Part-time working students; Food budget above the average	Scholarship students; Campus housing; Social sciences and humanities students
C	18%	Dinner bought or made from scratch, never at the campus facilities, always alone	Shared housing	Science and technology students; Campus housing
D	13%	Dinner always at the campus facilities, always with friends	Scholarship students; Medicine students	Individual off-campus housing Arts, literature, linguistic students

To access a better food offer, they have a few options. One is to move to the peripheral neighborhoods to get to the cheapest supermarkets. One is to increase their food budget and use the expensive city center supermarkets. One is to bring back food from their parent's house. We cannot list all the possibilities here, but the food banks are overflowing with students asking for help.
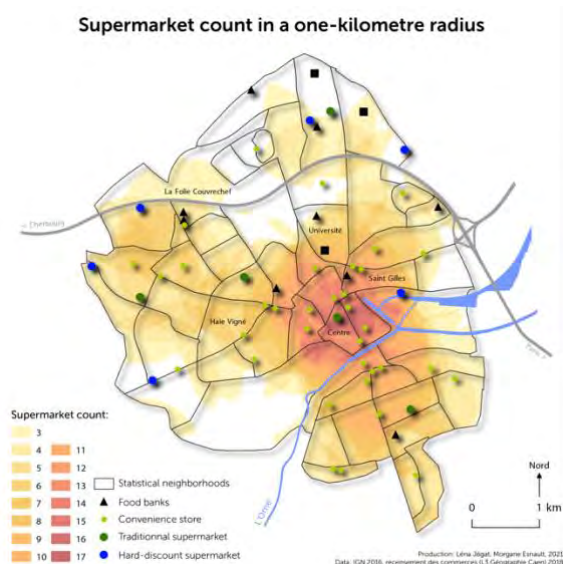
Figure 4: Supermarket count in a one-kilometre radius, Caen (France)

CONCLUSION

The students' food insecurity issue in France was enlightened especially during the first outbreak of Covid-19, as many students lost their jobs. Researchers had not completely investigated this issue, and particularly not with this approach inspired by the food desert theory. The food consumption profiles are specific to the Caen students, as they are linked to the housing specifics and the campus locations. The insecurity is global among this population, but the conditions to access food are different city to city.

To answer our main hypothesis, we will conclude that the precariousness of the students' food practices may not be linked to their social origin as much as we thought, but mainly to their housing status and the campus they are studying. The students who are still living at home with their parents are in a different situation. The rest of the student population living in a precarious situation, regarding their food practices, is then a structural issue that doesn't vary that much from student to student.

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Governance framework conditions hindering and supporting cooperative models for regional food supply

Andreas Obersteg, Jörg Knieling

Abstract –From a perspective of the municipal level framework conditions for municipalities to support the shift to regionalized and more sustainable food systems are examined. Thematic focusses are the topics safeguard and access to agricultural land and the support of short food chains through public tendering and community catering.

Keywords – urban-rural cooperation, governance framework conditions

INTRODUCTION

While historically regional agriculture and food supply were integral parts of the functional relationship between cities and rural areas, today cities are hardly fed by their hinterland due to the globalization of agricultural systems. A reconnection of urban and rural areas could contribute to regional transformation towards sustainability and create more environmentally friendly, resilient supply structures.

A potential solution to support the re-regionalization of agricultural and food systems, lies in cooperation and pooling models. These models can enable the shared use of resources such as land, production and processing facilities, services, capital and network structures (Piorr et al., 2018, Opitz et al. 2018, Martens et al., 2022).

Therefore, the research project KOPOS examines such cooperation and pooling models in two German regions: in Berlin-Brandenburg with a focus on the access to land and its maintenance for a sustainable agricultural use and in Freiburg im Breisgau and its surrounding region with a focus on short value chains. Municipalities are regarded as crucial actors for the transition towards more sustainable regional food systems (Sipple, D. and Schanz, H., 2019, Stierand, 2014) and therefore are also considered as important for supporting cooperation and pooling models.

Nevertheless, the framework conditions for municipalities as well as the possibilities of municipalities to cooperate to support a shift to more sustainable regional food systems often remain unclear.

This contribution aims to examine the governance framework conditions that can support respectively hinder the establishment of cooperation and pooling models from the perspective of the municipal level and the possibilities of cooperation between (urban and rural) municipalities or of municipalities with other public or private actors (Jacuniak-Suda et al., 2014, Knieling et al., 2017, Obersteg et al., 2019)

METHODS

This contribution analyses the governance framework conditions that can support respectively hinder the establishment of cooperation and pooling models. It aims to analyse the complexity of the governance framework to support / hinder regional agriculture and food supply: multi-level governance spanning from municipal to EU levels; cross-sectoral governance concerning a variety of public policy sectors (agriculture, environment, climate, economy, social affairs, education…); horizontal governance crossing between municipalities, counties, regions, nations; quadruple helix governance between economic, public, scientific and civil-society stakeholders.

In a first step an analysis of municipal and regional plans, policies and strategies was conducted.

In a second step interviews were and will be conducted in both regions with mayors of municipalities, representatives of the administration, federal state and regional planning authorities, federal state authorities in the field of rural development and agriculture development, inter-municipal and regional cooperation bodies.

It is planned to discuss the results of the interviews in workshops in both regions with the interview partners and further regional actors.

RESULTS

As the interviews are still ongoing only intermediate results can be presented.

Public tendering and Community catering

Municipalities could support regional food systems respectively short value chains through their own demand. Public tendering of food for example for public festivals and more important community catering e.g. in schools, pre-schools, public canteens, elderly care, hospitals could aim for higher shares of regional and / or organic products.

There are hindering factors like the unclear legal definition of region or regionality. Nevertheless, there are alternative ways how to tender for more regional products pedagogic reasons (possibility for pupils to visit the producers), freshness and seasonality or regional quality labels. But it turns out that these alternative ways are not well known and are not sufficiently shared between municipalities.

Another hindering factor is that the field of sustainable food and nutrition is not yet well

integrated into the climate and sustainability policies of municipalities. Here a gap between larger cities and rural counties can be observed, while cities already integrated the topic of sustainable food, the counties still lack of doing so.

Overall the topic of regional food systems is not yet a major topic of inter-municipal respectively regional cooperation, but there are already platforms that support regional cooperation like the regional food council and the Biomusterregion (eco-region) Freiburg.

Access to land

The lack of access to agricultural land is a main problem for young farmers and career changers who want to start new agricultural businesses. These types of farmers are important for shifting agriculture towards more regional and sustainable production.

Therefore, it is important to provide access to agricultural land to these types of farmers.

Although only a limited share of agricultural land is owned by the municipalities themselves (in Brandenburg circa 5%), municipalities could have a role model function by leasing their land under criteria of sustainability.

There are several guidelines for more sustainable lease of land that show legal ways of enabling municipalities not to use only the highest price but also other criteria and some municipalities already adopt them. Nevertheless, more municipalities need to be informed about their possibilities to lease land differently and convinced that by doing so they can support more regional and sustainable food production.

With regard to access to agricultural land

Safeguard of agricultural land use

Agricultural land is continuously being lost to other land uses as there is a growing land demand for settlement development, transport and other infrastructures, but also for natural compensation areas. Recently the land demand for ground-mounted photovoltaics (solar farms) has rapidly grown.

Spatial planning on federal state and regional level can steer to prevent open spaces from being turned into settlement or infrastructure areas.

In one planning region in Brandenburg there is a new attempt to prevent agricultural land also by using the argument of the capacity of water storage with regard to climate change.

Nevertheless, the federal state and regional level can not steer the exact land use of open spaces. It is in the decision power of municipalities whether agricultural land can be used for solar farms or not. Therefore, again the municipal level is an important addressee.

In the metropolitan core of Berlin-Brandenburg two types of cooperative inter-municipal and regional institutions already exist. The inter-municipal fora establish cooperation projects between the municipal level in Berlin and Brandenburg mainly on topics of settlement and economic development with a focus on the development axes reaching from Berlin into its surrounding areas. Meanwhile the network of regional parks aims at maintaining and qualifying open spaces located between the development axes. While the inter-municipal fora so far did not work on food and agriculture topics, the regional parks e.g. work on marketing regional products and on combining agricultural land use with leisure and recreation. Both institutions could potentially support the safeguard of agriculture land as intermediaries towards the municipalities.

In the more rural parts of Brandenburg the LEADER regions could take over the function of an intermediary towards the municipalities. Furthermore, the LEADER program could support projects that aim at saving agricultural land as well as making access to land more sustainable.

CONCLUSION AND OUTLOOK

As the contribution presents intermediate results of the research it is to early to make final conclusions.

It became clear that the municipal level could play an important role to support regionalised and more sustainable food systems. A barrier on the municipal is the lack of awareness and information.

In the further research the needs for support on the municipal level will be further examined. A focus will be set on the necessary and possible support by higher administrative and political levels (county, region, federal state) and on the possibilities of inter-municipal cooperation.

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Overcoming urban issues through urban agriculture
Key benefits and some possible unwanted effects

Gottero E., Cassatella C.[1]

Abstract – **The benefits of Urban Agriculture (UA) are manifold and concern different spheres of urban sustainability. If properly addressed, UA can contribute significantly to the achievement of the main goals of urban agendas. In this paper the authors present an overview of the key benefits and unwanted effects of UA, including tools to evaluate them, the main relationships with different UA forms, as well as how UA can address many urban policy themes.[1]**

Keywords – **urban agriculture, benefits, unwanted effects, urban policy agenda**

INTRODUCTION

Several scholars from various scientific fields claim that Urban Agriculture (UA) can address many urban policy themes and policy targets. Understanding how to encourage and support decision makers to promote and sustain UA (in order to overcome some city-related issues) is crucial for urban planning. According to recent literature, the benefits of agriculture in the urban and peri-urban areas are manifold and concern social, environmental and economic spheres. This topic has been extensively discussed, especially in the fields of urban sustainability (Feola et al., 2020; Langemeyer et al., 2021; Tapia, et al., 2021; Vásquez-Moreno & Córdova, 2013), agroecosystem services and disservices (Zabala et al., 2021), multifunctionality (Jansma et al., 2015) and governance of UA (Provè, 2018). The benefits of UA have also been partially addressed in previous research projects such as the COST Action UAE[2] and the UPAU study on UA[3]. However, a systematic and comprehensive analysis and overview of the potential benefits of UA that also includes any undesirable effects, is lacking. In addition, how to evaluate these benefits and what benefits are produced by the various types of UA, are frequently overlooked issues. In this paper the authors present some results of the research carried out in the context of "European Forum on Urban Agriculture (EFUA)" funded by the European Union's Horizon 2020 research and innovation programme[4]. The aim of this paper is to identify not only the main benefits, but also possible disservices of UA related to the environmental, social, economic, health, well-being and food domain. The relationship between different UA forms and benefits, with respect to primary urban policy targets is also emphasized.

In order to achieve these goals, the second section of this paper explains the approach and methods that the author used, as well as the material and data collection and analysis processes. The third section presents the results of the research and describes the major findings, including the key benefits and major unwanted effects, how these benefits are monitored and assessed, as well as the relationships between UA typologies and their related benefits. In the last section, the authors explain how to interpret these results and the significance of the work, in particular in terms of the lessons learned for urban policy makers.

METHODS

UA is a varied and complex phenomenon which takes several forms, including professional urban and peri-urban farming, urban gardening and not professional agricultural activities. In order to capture various dimensions of UA, we identified, classified and systematized benefits not as compartments, but as overlaps and connections between different categories and typologies. Based on the initial unstructured literature review, previous research projects and the consultation of the partners involved in the EFUA project, we considered five potential dimensions of UA benefits: socio-cultural, environmental and climate, food, health and well-being, and economic.

We subsequently conducted a systematic literature review and project review that produced a comprehensive list of UA benefits, potential unwanted effects and indicators. This process included a search with the Scopus database, some records identified through partner suggestions and through CORDIS and the EU database search. The systematic review process was based on 17 queries and a list of key words that combined for example "Urban Agriculture" together with the terms "benefit" or "indicator" or "unwanted effects". In order to answer the research questions and identify the main benefits of UA, we also conducted 15 interviews[5] with stakeholders (mainly decision-makers and experts), and two online surveys[6]. The first focused on the main benefits of

specific UA initiatives. Instead, the second survey contained a section for city officials and a section for experts. It mainly concerned the categories of benefits and unwanted effects at city level, indicators or sets of indicators to assess the UA benefits, urban demands which can be addressed through UA and the importance given to each type of benefit resulting from UA initiatives (based on those selected by the entire review process).

MAIN RESULTS

General findings

After a screening phase, that also included the classification of 57 papers and 29 research projects, the review process produced a list of UA benefits and unwanted effects. It collected 37 benefits and 15 unwanted effects, more than half of the benefits relate to the social and environmental sphere. Some of these benefits are inter-related and sometimes produce trade-offs.

The first on line questionnaire involved 106 responses, while the second survey produced 75. Both confirmed that the most widespread and popular benefits were socio-cultural and environmental-climate dimensions. In addition both on line questionnaires showed that urban food gardening initiatives were more likely to create social, and health and well-being benefits. In the urban farming types, social, environmental and nutritional benefits prevailed.

Key benefits

According to the stakeholders and survey participants, some of the benefits identified in the previous list through the review process were more recognisable and widespread than others. Interviews and online questionnaires allowed us to identify the key benefits for each domain (table 1).

Table 1. Key benefits of UA (Source: Cassatella and Gottero, 2022)

Benefits category	Benefits
Socio-cultural	Improvement of social cohesion and developing feelings of belonging and a sense-of-place
	Development of education, knowledge, innovation and awareness on food, agriculture and environment
	Improvement of leisure, recreation activities and tourist attractions
Environment and climate	Reduction of the urban heat island effect
	Increased quality and quantity of urban green spaces and green infrastructures
	Preservation of urban biodiversity
Food	Improvement of food security
	Improvement of food quality
Health and well-being	Improvement of physical and mental health
Economic	Improved local economies
	Creation of job opportunities

According to the literature, UA can contribute to improve social inclusion and the involvement of socio-cultural vulnerable groups, especially in the use of public spaces (Provè, 2018; Sanyé-Mengual et al., 2018). Urban gardening can also be useful to develop

feelings of belonging and a sense of place or community (Veen, 2015). The development of education and knowledge, particularly on the relationship between food, agriculture and environment, is another benefit produced by different forms of UA, especially social farms and community gardens (Artmann & Sartison, 2018). Urban farming and gardening can contribute to improved leisure, recreation activities and strengthened ecotourism (Giacchè et al., 2021; Kingsley et al., 2021).

The literature review also highlighted that UA makes a major contribution to the environment and climate by reducing the urban heat island effect and by increasing the quality and quantity of urban green spaces and green infrastructures (Gómez-Villarino & Ruiz-Garcia, 2021; Kirby et al., 2021; Langemeyer, et al., 2021; Provè, 2018). Organic or environmentally-friendly farming can also maintain urban biodiversity (Gómez-Villarino & Ruiz-Garcia, 2021; Kirby et al., 2021; Martin et al., 2016). Furthermore UA addresses food insecurity, as well as giving access to quality, fresh and healthy food (Artmann & Sartison, 2018; Kingsley et al., 2009; Kirby et al., 2021; Specht et al., 2014), especially through local farms, organic and/or traditional production systems or high-tech farming. Urban food gardening can improve physical and mental health of gardeners and practitioners (Kingsley, et al., 2009; Martin et al., 2016; Provè, 2018; Sanyé-Mengual et al., 2018). Finally, Urban oriented farming can support and develop local economies and create job opportunities (Provè, 2018; Sanyé-Mengual et al., 2018).

Main potential unwanted effects

Few scholars have conducted studies on the possible undesirable effects of UA initiatives. This research highlighted that gentrification is a potential risk. According to recent literature (Aptekar & Myers, 2020; Artmann & Sartison, 2018) and many survey respondents, some urban gardens can fuel social conflicts, race and/or class-based disparities, and increase social exclusion. The introduction of alien and invasive species is a heavily discussed risk of UA practices for the environment, especially due to horticulture and urban forest initiatives (Escobedo et al., 2011; von Döhren & Haase, 2015). It was also one of the most recognized risks in our survey.

How are these benefits monitored and assessed?

The literature and research projects review identified 230 indicators for the evaluation of the main UA benefits and unwanted effects. Indicators were collected in a list concerning mainly environmental-climate and socio-cultural dimensions. Starting from this list, we selected a set of key performance indicators, in order to represent the most important categories of benefits and typologies, as well as to consider the results of previous steps (table 2). It was created mainly for decision makers, and includes 16 state and impact indicators.

Table 2. The set of key performance indicators to assess UA benefits (Source: Cassatella and Gottero, 2022)

Benefits category	Indicators
Socio-cultural	Participation rate in UA initiatives Number of educational and/or participatory activities Number of school-gardening initiatives Recreational value of blue-green spaces Gentrification
Environment and climate	Urban Heat Island index Ratio of open spaces to built form Land use change and green space configuration Increased biodiversity Number of invasive alien species
Food	Food production and demand Local and organic food
Health and well-being	Physical and mental impact of UA
Economic	Local economic development New businesses created Number of new jobs created

Which UA types produce the most benefits and how to communicate them?

All types of UA produce benefits. In order to understand and highlight the relationship between the different forms of UA - such as urban farms, community gardens/parks, social farms, zero acreage farms, as well as DIY gardens[7] - and benefits, we used evidence and expert opinion. Generally speaking, DiY and community gardens seem to achieve more socio-cultural and environmental benefits (fig. 1). In nutritional terms UA forms such as zero acreage farms and DiY gardens/farms appear more likely to produce food-related benefits. The economic sphere is mainly involved in professional farming such as zero acreage farms and urban farms (fig. 2). Finally, the UA types that produce the most health and well-being benefits are DiY and community gardens, as well as social farms. In order to highlight the main benefits of UA typologies, we collected a number of UA practices connected to each category and produced 5 "benefits leaflets" that contain a brief description of the key benefits and the main issues for attention when planning these UA initiatives.

Figure 1 – Orti Generali, a community garden in the south area of Turin (Italy) (photo by Umberto Costamagna). A good example of a nature-based solution and regeneration of degraded areas that produced environmental and socio-cultural benefits.

[7] These typologies were defined by task 3.1 of EFUA project (see: Jansma et al., 2021).

Figure 2 – The Milan Agricultural South Park (Italy) (photo by Giacomo Pettenati). In this peri-urban area the Consorzio DAM involves many farms that feed the urban area by producing different local agri-food products, sold directly on-farm or at retail.

DISCUSSION AND CONCLUSION

General remarks

In conclusion, the research confirmed that there is a lot of evidence which supports the benefits of UA, but some fields have yet to be fully explored. Some dimensions of the benefits, such as food, heritage domain, health and well-being, as well as quantitative analysis on measured benefits require further studies. In the literature, approaches based on perceived benefits and unmeasured benefits prevail. Finally, studies on the unwanted effects of UA are less prevalent than others and require more attention.

Lessons learned: how and which urban policy targets can the benefits of UA help to achieve?

Understanding which urban demands and urban policy themes can be addressed through UA is a crucial issue in the definition of targeted policy recommendations and supporting policy makers. This research showed that the benefits of UA can contribute to achieving some specific policy targets of European Urban Agenda. Figure 3 summarizes these relationships. As can be seen, the benefits of UA initiatives in the socio-cultural sphere can contribute to tackling social inequalities, making the city inclusive, improving the value of recreation and creating learning about UA initiatives, in urban and peri-urban areas. UA practices, including professional and not professional forms, can green the city, by contrasting land consumption and soil sealing, maintaining green spaces and the urban biodiversity. Local urban and peri-urban farms, short supply chains promoted by UA initiatives, as well as greening practices and plants related to UA, can favour the reduction of the food carbon footprint and urban heat island effect, which further contributes to climate mitigation. Feeding the city and improving quality of food are other urban issues that UA can contribute to, not only by increasing food production but also by offering wider diet opportunities. Furthermore, the quality of life, mental and physical health of citizens and well being in urban areas can be improved, especially through different forms of urban gardening

such as community gardens and DIY gardens. In economic terms, urban farming can offer new opportunities for local employment and strengthen local economies, especially by connecting producers and consumers.
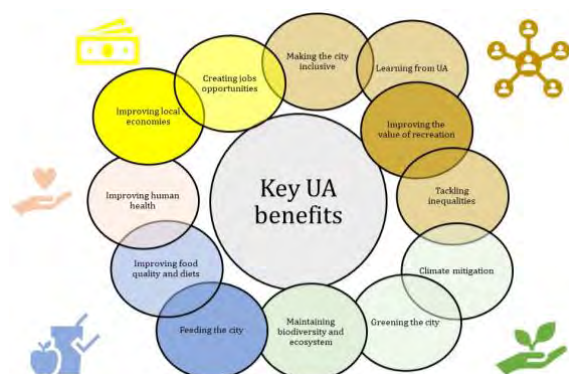
Figure 3. Possible contributions of UA benefits for urban policies (Source: Cassatella and Gottero, 2022).

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Practicing urban agriculture positively influences household organic waste management habits
A quantitative study from Florianópolis, Brazil

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Abstract – **Proper organic waste management practices are crucial for limiting its negative environmental and health impacts. Among the several organic waste treatment strategies, composting it for urban agriculture (UA) use has become increasingly popular. The present paper is then analyzing how practicing UA in influences citizens' household organic waste management behaviors in the city of Florianópolis, Brazil. The results showed a strong positive influence of practicing UA on self-composting and thereby highlighted the role of such practice in sensitizing urban residents to waste management issues and supporting local organic waste management strategies.**

Keywords – **compost, home gardens, community gardens, food waste.**

INTRODUCTION

The appropriate management of household waste is a challenging task affecting municipalities worldwide. Organic waste can range to 20% to 50% of the total municipal solid waste production, and it is associated with several health and environmental threats (Chen 2018). Organic waste management is an important part of the urban system and therefore impacts several dimensions of the urban metabolism (Kibler et al., 2018; Bahers & Giacché, 2019, Scanlon et al., 2017). Organic waste is considered an output derived from anthropic activities, and its use as an input for agriculture in urban environments has been assessed by McClintock (McClintock, 2010: 2). Case studies show that compost use in UA is being considered by various municipalities and could be a cornerstone of more sustainable organic waste management systems in terms of carbon emissions, reduced risk of water and soil contamination, municipal budget savings and better habits among citizens (Weidner & Yang, 2020; Mohareb et al., 2017, Bahers & Giacché, 2019). The city of Florianopolis is now implementing a regulation supporting the use of organic waste as fertilizer for urban agriculture (Law n°10501/19). To this end, the aim of this paper is to analyze Florianópolis citizens' organic waste management behaviors, particularly focusing on whether practicing UA has an impact on citizens' waste management and whether it can help improve household organic waste management.

Specifically, our analysis answers the following two research questions: Which factors influence household organic waste management? Are there any differences in organic waste management behaviors between UA practitioners and citizens who are not involved in UA activities?

MATERIALS AND METHODS

The study was conducted in Florianópolis, the capital of Santa Catarina state in southern Brazil, in 2019. The sample was a convenience sample, and more than 500 people were approached at bus stations. The sample consisted of 206 respondents in total: 102 who practice UA and 104 who do not. Three logistic models were performed for each of the waste management behaviors previously assessed in the literature. The dependent variables were represented in turn by: i) the separation of organic waste; ii) use of public services (COMCAP) for organic waste management; iii) self-composting habits.

RESULTS

The first model was used to assess the factors influencing the separation of organic waste. A stepwise process was used to excluded variables with no influence on the dependent variable in the models. The results show a positive influence of practicing UA and of living in an apartment on organic waste separation.

Recycling habits were assessed through a question asking whether the individuals used the public organic waste collection service provided by the public company COMCAP. The model's dependent variable was the use or nonuse of COMCAP services, while the independent variables were practicing UA and the demographic variables (age, education, gender, income, housing type). The stepwise model included living in an apartment and income as independent variables. Living in an apartment had a significant positive influence on the use of COMCAP services, with a p value lower than 0.05.

The habit of self-treatment waste was related to the habit of self-composting household organic waste.

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The dependent variable in this case was whether practitioners were self-composting their organic waste. The independent variables were participation in UA and the demographic variables. The stepwise logistic model related to the composting habit showed a significant influence of practicing UA on self-composting behaviors.

Table 1: Logistic regression results after stepwise process.

Separation	Estimate	Pr (>Chisq)
Participation in UA	1.77	0.001**
Apartment	1.71	0.005**
Use of Public Service		
Income	-	0.103
Apartment	1.26	0.005**
Self-composting		
Participation in UA	4.18	7.904e-11***
Age	0.01	0.612
Income	-	0.388

DISCUSSION AND CONCLUSIONS

The strong positive influence of practicing UA on self-composting was revealed through the logistic model. This confirmed the hypothesis that practicing UA can be both an environmental educational tool and a facilitating tool for organic waste treatment. This confirms part of what emerged from the literature on the impact of environmental education activities and the support that an easy access to waste management facility can give to the willingness of correctly manage household waste (Tonglet et al. 2004). The models showed an influence of some demographic variables on the three waste management behaviors. In particular, higher income slightly influenced the use of COMAP services, while living in an apartment had more impact on using COMCAP services. Surprisingly, when the use of COMCAP service model was run with the full set of independent variables, practicing UA negatively influenced the use of public services. The model showed a better R square when the variable of practicing UA was excluded and reported a positive influence of living in an apartment. This showed that the use of COMCAP services was motivated by the lack of opportunity to treat organic waste in other ways, at least for the non-UA practitioners. In other words, there were no significant differences in the composting and public service use habits for UA practitioners living in an apartment or in a detached house. UA practitioners living in apartments tended to self-treat their organic waste by purchasing household facilities such as small composting boxes. Our results showed that UA practitioners have different approaches to recycling and reusing household organic waste and prefer to autonomously treat their organic waste regardless of whether they live in an apartment. This leads us to consider the role of UA in sensitizing citizens to waste disposal issues and highlights the importance of UA as a supporting tool for i) managing waste, ii) increasing citizens' environmental education, and iii) adding value to organic waste by turning it into fertilizer for UA through composting. Our study, in addition to confirming the findings of similar studies, suggests that practicing UA directly influences household waste

management behaviors. Furthermore, the results support the existence of a circular input/output relationship between food production and organic waste. This is particularly relevant in the context of Florianópolis, where the concept of circular urban metabolism has been pursued in the practices of both civil society and local government. Public administrators should continue this trend and advocate for the role of UA and community organic waste treatment in reducing untreated organic waste. Citizens using community treatment areas or treating their organic waste themselves should be supported with differentiated tax treatment. Moreover, the areas supported by COMCAP should be extended. Finally, the findings have several potential implications for the way the relations among urban food production, urban waste management and fertilizer provision are conceived. UA could become a cornerstone of an efficient municipal solid waste management system and empower citizens and local communities to implement organic waste management practices.

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Social inclusion in local food planning of Nanjing, China

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Abstract- **This study analyses the features of top-down local food planning initiatives and their impact on social inclusion in the case of Nanjing. Firstly, it discusses planning initiatives that involve vulnerable groups in local food supply chains, including production, marketing, and consumption. Secondly, the impacts and challenges of local food supply chains on social inclusion under the influence of these planning initiatives are analysed. Finally, suggestions for local food planning toward social inclusion are proposed. This study argues that current local food planning positively impacts social inclusion. Indicators in local food planning, such as the lowest limit of arable land area, urban food self-sufficiency rate, food accessibility, and food affordability, can help disadvantaged groups, especially low-income consumers. But current food localization plans ignore the bottom-up initiatives that contribute to social inclusion. Therefore, local food planning could encourage various urban agriculture activities like social farming and community gardening and provide a formalization and legalization path for informal urban food production and informal local food markets to involve diversified groups.**

Keywords – **Local food, top-down planning, disadvantaged groups**

INTRODUCTION

China gradually formed a dual structure of urban and rural areas in the early twentieth century and has been committed to breaking this model since the beginning of the twenty-first century. Although the national planning direction has changed from "rural areas serve cities" to "integrating urban and rural areas", ensuring national food security has always been the most important task for rural areas. Food planning in China is a top-down system in which the central government establishes national goals and plans, whereas the provincial governments and municipalities achieve corresponding goals in territories under their jurisdiction (Zhong et al. 2020). Local food planning at the city level addresses urban food security by linking local food supply chains from production to consumption.

Local food planning initiatives in China, including the Household Contract Responsibility System, Basic Farmland Protection, Vegetable Basket Programme, and Rice Bag Programme, have promoted the land-use right of peasants, job opportunities for migrant workers, and food security for low-income consumers, but the top-down system ignores the contribution of informal urban food production practitioners and street vendors. Food localization could be a promising solution to improve social inclusion.

This study analyses local food planning programs that contribute to disadvantaged groups through literature research. These programs guarantee small-scale local farmers and low-income urban dwellers the opportunity to produce and access food, but the top-down system ignores the contribution of the informal sector. Integrating informal food systems into local food planning helps to improve social inclusion.

LOCAL FOOD PLANNING FOR DISADVANTAGED GROUPS

Food planning in China is a top-down system for food security. This system guarantees local farmers access to agricultural land and ensures food security for low-income urban residents.

Farmland for small-scale holders

The Household Contract Responsibility System started in the 1980s, is based on the land tenure law that land in urban areas is owned by the state, and land in rural areas is owned by rural collectives. The village committees are responsible for periodically allocating agricultural land to peasant families according to the family's population or labour ratio (Ministry of Justice of the People's Republic of China 2019). Rural households have the right to be allocated farmland. In the first three decades, the country's agricultural output increased by 73.4%, and the per capita income of farmers increased by 34.53 times. Urban residents cannot migrate to rural villages and register as rural residents. Rural households can move to cities and obtain urban resident registration, but it means that they will lose the use right of their farmland and homesteads in villages (Han 2018).

Although this system protects local farmers' land rights and interests and avoids the capital invasion by the rich in the city, land expropriation by the local government has never stopped along with urbanization. The fast-growing cities encroach on surrounding rural villages by government land expropriation. In response to the continuous encroachment of agricultural land by urbanization and industrialization, the concept of Permanent Basic Farmland Protection was proposed in 2008 and was incorporated into the Land Management Law and the National Overall Planning on Land Use. Permanent Basic Farmland is designated according to China's population and socioeconomic development's demand for agricultural products, and it cannot be transformed into any other use. Currently, China's arable land area is 134.88 million hectares, of which more than 103 million are permanent basic farmland (State Council Information Office 2019). The self-sufficiency rate of the three main grains of rice,

wheat, and corn reached 98.75% in 2019 (Chinese Academy of Agricultural Sciences 2020).

Nanjing is a second-tier city in China and the capital city of Jiangsu Province. At the end of 2019, Nanjing had a permanent population of 8.50 million, of which the urban population was 7,072,000, and the registered population was 7,098,200 (Nanjing Government 2019). Nanjing's area of permanent basic farmland by 2020 shall not be less than 2273.9 square kilometres. In Nanjing's land-use plan from 2006 to 2020, the area of cultivated land occupied by newly added construction land shall be controlled within 142.6 square kilometres, and the cultivated land reclaimed shall not be less than 142.6 square kilometres.

Food security for low-income residents

The Rice Bag Program and Vegetable Basket Program play an important role in creating regional foodsheds, which reflects the tendency of agricultural industrialization and strong top-down features (Geoffrey Luehr 2019). The Ministry of Agriculture proposed Vegetable Basket Program in 1988 to cope with problems emerging in agricultural and side-line food supplies, such as shortage of fresh produce, inefficient food distribution, and lack of retail infrastructure.

The Vegetable Basket Program emphasizes standardized agricultural production bases and standardized wholesale markets, wet markets, and fresh food stores. The wet market in China has been receiving much attention as the urban infrastructure for food supply. There are many vendors in one wet market that each has a food stand for fresh produce, including meat, fruits, or vegetables (Goldman et al. 1999). The standard of this urban infrastructure distribution is to serve a particular population and community.

The cooperation of local farms and wet markets to ensure the food self-sufficiency rate in cities is one of the goals of the Vegetable Basket Program. The registered operators in the production, processing, circulation and social service of agricultural products can apply to join the Vegetable Basket Program. This project focuses on building vegetable bases with integrated and continuous arable land to achieve standardization, high quality, and high output. Farmer's cooperatives and enterprises are the operators of these bases. Planning wholesale markets, wet markets, and other retail outlets is also an important part of this program. The vegetable basket program not only supports the transformation of traditional wet markets but also plans the minimum market area within a certain range in the newly built residential area. In addition, the government is responsible for intervening and regulating vegetable and grain prices to ensure food security for low-income residents.

Taking Nanjing as an example, there are 280 km²of perennial vegetable fields, of which there are more than 100 vegetable bases with a size of more than 6.67ha, covering an area of 85.3 km² (Ministry of Agriculture and Rural Affairs of the People's Republic of China 2013b). In addition to enhancing production, optimizing the layout of retail outlets, and promoting the reasonable distribution of the wet markets are also the tasks of the Shopping Basket Project. Nanjing's annual vegetable planting area is stable at about 973km².

IMPACTS AND CHALLENGES

Social inclusion is an ongoing process that reflects the full participation and commitment of all interested or affected sectors of society, regardless of socioeconomic resources or culture (Hinrichs and Kremer 2008). Social cohesion and equality are important for food planning which shows the role of food activities in community-building, participation, and cooperation in disadvantaged groups.

Social cohesion

Local small-scale farmers in the countryside have strong social cohesion. The social networks of local farmers are built on relationships with neighbours and clans. Diverse local cultures and customs are preserved in rural China, which is different from the convergent cities. Due to cultural differences, small villages of local farmers support and protect diverse natural and agricultural landscapes. However, small farmers are not as profitable as modern farming companies, which has led to the emergence of more and more intensive large farms.

The vegetable basket program's support for the vegetable market preserves the traditional market-based connection between people. The first is the relationship between vendors and consumers, who can build a trusting relationship of food safety and reasonable prices in long-term exchanges. The second is the relationship between consumers and consumers. The vegetable market is built in the residential areas. It is a public space where residents converse and embody the vitality of the community.

Wet markets provide a large number of job opportunities for immigrants, whether they are local rural immigrants or foreigners, especially in big cities. Compared to other jobs in the city, vendors in wet markets do not require high skills and a lot of start-up capital. It is also preferred by older female workers as well as old couples. The area of each booth is not large, so they can handle the work as vendors.

However, it is difficult for small farmers to apply for the support of the current Vegetable Basket Program due to the lack of productivity and high technology. However, traditional small family farms are also productive if the evaluation standard is the total output of diversified food rather than a single crop (Altieri, Funes-Monzote, & Petersen, 2012). Small-scale agriculture with a mix of vegetables, fruits, animal products, and grains could minimize risk when food markets face disturbance and change. The vegetable basket project can increase financial support and technical support for small-scale ecological farms. Traditional family farms are facing difficulties in market transformation. They are still competing with large farms for production, but their uniqueness is the abundance of local food and the possibility of contact with consumers. The Vegetable Basket Project can provide small farmers with training and workshops to enhance their market competitiveness.

Social equality

Food production supported by the Vegetable Basket Program ensures food supply for low-income

residents. The average annual consumption of vegetables in Nanjing is about 1.28 million tons (an average of 3,500 tons per day), and the self-sufficiency rate is about 30% (leaf vegetables with 80%) when it comes to Vegetable Basket Program (Nanjing Government 2018). From 2013 to 2017, Nanjing planned and built 16 permanent standardized vegetable bases with a total area of 133.3 square kilometres. These bases increased the vegetable self-sufficiency rate by 10%. According to the government report in 2013, there were 280 square kilometres of perennial vegetable fields in Nanjing, of which there were more than 100 vegetable bases with a scale of 6.7 hectares or more, with a total area of 85.3 square kilometres.

The construction of the vegetable market supported by the Vegetable Basket Project improves food accessibility for residents. The Nanjing government stipulates that each community should construct more than four retail outlets of "vegetable basket" on average. The new wet markets should be planned and set up under the standard of 50 to 75 ㎡ per 1,000 people, service radius of 500 to 600 meters, and the construction area of not less than 2,000 ㎡, with necessary facilities like loading and unloading area, parking lot (Ministry of Justice of the People's Republic of China 2016). Some large-scale wet markets also provide remaining spaces for small farmers to sell their agri-food and charge a small number of cleaning fees.

The retailing network of the Vegetable Basket Program can support small-scale farmers and local food. Wholesale markets and wet markets from Vegetable Basket Program have provided many job opportunities for rural migrant workers. However, the local food in the market and the connection between local farmers and consumers are not clear. Although the evaluation of the mayor responsibility system includes local food production, this is considered as a part of the food circulating in the market and not worthy of protection as the value of locality. Traditional markets and other open-air markets are currently regarded as informal markets with bad management and infrastructure.

SUGGESTIONS FOR LOCAL FOOD PLANNING

This paper proposes suggestions for smallholder farmland protection and integration into the informal sector based on the challenges faced by small farmers and the informal sector.

Establishing the categorized farmland protection mechanism for local farmers

Farmland categorized protection mechanism is based on the classification and grading of farmland according to its quantitative, qualitative, and ecological advantages and disadvantages (Zu et al. 2018).

Firstly, the relationship between farmland protection and economic development needs to be weighed to determine the functional positioning of farmland in different areas. The three types of functional areas are arable land areas with mainly production functions, arable land areas with mainly ecological functions, and arable land areas with mainly social functions.

Secondly, arable land is classified into different grades, including high quality, average grade, and low grade, according to its features in the three functions. The classification is based on the factors related to each of the three functions. Arable land with mainly productive functions considers the soil quality, the arable land size, and the fragmentation degree of arable land. Arable land with mainly ecological function focus on ecological diversity, air regulation, and its ability to hold water. Arable land with mainly social functions should have a positive interaction with cities and people.

Thirdly, other urban planning actions need to be implemented in conjunction with farmland categorized mechanisms, such as arable land expropriation, compensation for arable land, and agro-industrial planning.

Integrating informal food systems into food planning

The Vegetable Basket Program could formalize informal food marketing by increasing market access to local food. Informal food systems exist in the form of short food chains, although marketing sectors are informal itinerant vendors and street markets. The short food chains advocated by developed countries refer to both physical and social distance, which aims to 're-socialize' or 're-spatialize' (Kneafsey et al. 2013). A trend back to short food chains shows the benefits of short social and transport distances. The formalization of informal food chains can contribute to the construction of local food chains.

The Vegetable Basket Program can incorporate informal vendors in two ways. First, the wet markets can provide public space for local vegetable farmers. When constructing the refurbished wet markets, the Vegetable Basket Program can set up special areas for local food, including fixed booths that provide local food and public space temporarily leased to local farmers. The food availability in the evaluation criteria of the wet market can distinguish between general food availability and local food availability.

Second, the open-air markets can be integrated into the Vegetable Basket Program. The Vegetable Basket Program can plan the urban public space that can be used as farmers' markets and build the facilities such as electricity for food trucks and stands. Farmers' markets can improve outcomes of the Vegetable Basket Program for local government, including local food self-sufficiency and food accessibility.

CONCLUSION

In China, local food programmes have successfully ensured food security for vulnerable groups. Social inclusion is not the goal of local food programmes, but these programmes contribute to providing employment for disadvantaged groups and strengthening human connections. Local food planning initiatives need to consider the contribution of small farmers to local food externally. In addition, informal employment, as a vulnerable group in society, deserves attention. Food systems include formal food systems and informal food systems, which involve various activities, stakeholders, and urban and rural spaces. These spheres relate to social, economic, and environmental aspects that

need food planning to consider diversified objectives, including social inclusion.

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The hard work of reconnecting
Zooming in a local food initiative to investigate opportunities and barriers for a sustainable food system transformation

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Abstract – The paper proposes an approach that combines the multi-level perspective and the theory of social practice in the study of a community supporting agriculture in Trentino to critically understand the innovative and transformative potential of such an experience by investigating the reasons behind its creation and the crisis it is currently going through. The two approaches have mostly been considered antithetical to understanding the complexity of socio-technical change. However, through this analysis, we want to argue in favour of their complementary showing how they mutually reinforce each other's understanding of sustainable innovations. In particular, we identify an intersection between regimes and practices that constrain the transition towards sustainability and that local governments should consider in their planning.

Keywords – food supply chain, community supported agriculture; social practice theory; multilevel perspective; transition studies;

INTRODUCTION

Sustainable food has become an increasingly relevant topic both in public and academic debates. Also driven by the growing demands of citizens who are frequently questioning the quality of food that reaches their table, many cities have started experimenting with new participatory projects to reduce the environmental and social impacts of contemporary agro-food systems. This paper aims at investigating the opportunities and barriers for a sustainable food system transformation by focusing on a particular initiative, promoted by local institutions, which started to take shape during the first wave of the COVID-19 pandemic in the city of Trento, an Alpine city of 120.000 inhabitants in Northern Italy and one of the main economic and political centres of the Tyrol area, where agriculture still has a strategic importance for the provincial economy.

As often highlighted, the COVID-19 pandemic has dramatically shown the fragility of the conventional food supply chain by making even more evident the necessity to search for alternatives (Paul et al., 2021). Since 2017, Nutrire Trento, the Trento Food Policy Council (TFPC) ointly promoted by the Municipality and University of Trento, has implemented and facilitated a series of actions and initiatives to shorten the distance between the city and the countryside. Within this incubator of agroecological urbanism, the project of a local Community Supporting Agriculture (CSA) started to emerge. CSAs are emerging models of food production and distribution based on sharing entrepreneurial risk and creating a direct long-term relationship between families and farmers and, are often described as important alternative sources of knowledge and innovation (Henderson, 2003). According to some authors (Pansera et al., 2021), such grassroots initiatives are important instruments for sustainable food provisioning. However, research has so far offered little detail on how these initiatives emerge, what needs they respond to, and how they consolidate or fail (Mert-Cakal et al., 2020).

Regarding the case analysed, the CSA "NaturalMente in Trentino" is comprised of 13 producers and 36 households that started working together in summer 2020, after the first wave of the COVID pandemic. The stated objectives of the CSA are to create a fair, ecological and community-based local food system that provides consumers in the city of Trento and surrounding areas with quality, seasonal and sustainably produced local food. In addition to this, the community wants to encourage the participation of its members by making food supply chains transparent and raising awareness about the environmental and social aspects of food production, minimising packaging, waste and transport. Every Monday, eaters and producers meet in a greenhouse provided by a producer to exchange products. Orders and economic transactions are managed through a very simple online platform. Consumers can order individual products or buy weekly boxes containing various products. In addition to this, the community life of the CSA is also based on social dinners, farm visits, meetings with authors and food scholars, and, of course, board meetings and members' assemblies.

By combining multilevel perspective and social practice theory and through a mixed-methods research design, including participant observation, online surveys and in-depth interviews, this paper aims to shed light on the hard work of reconnecting consumers with producers, which we see as a central but often underestimated issue within the agroecological urbanism debate (Tornaghi et al. 2021). This reconnection is often studied in agroecological studies as a fundamental key to the transition to a more sustainable agri-food model

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(ibid.) and, thus, makes a fundamental contribution to the challenge of ecological transition.

This extended abstract is structured as follows: Section 2 will briefly introduce the theoretical and methodological objectives that guided our analysis. Section 3 will present some preliminary results. Section 4 will underline the scientific contributions that emerged from the analysis while sketching some possible future developments.

WEARING MULTIPLE THEORETICAL LENSES TO ZOOM IN

Within the strand of studies on innovation for sustainability, multilevel perspective (MLP) and social practice theory have today emerged as two major leading perspectives. While initially considered antithetical, more recently an increasing number of scholars have underlined how they can offer mutually beneficial additions (Hargreaves, 2013; Gismondi et al., 2015), especially when combined in the analysis of a case study.

The multilevel perspective is a theory that studies the overall dynamics of socio-technical transitions. Combining concepts derived from various other approaches, from evolutionary economics to structuration theory via neo-institutional theory. MLP views transitions as non-linear processes resulting from the interaction of developments at three analytical levels: niches (the locus of radical innovations), socio-technical regimes (the locus of established practices and associated mine that stabilise existing systems) and an exogenous socio-technical landscape. Each 'level' refers to heterogeneous configurations of elements; higher 'levels' are more stable than lower ones in terms of the number of actors and degrees of alignment between elements' (Geels, 2011, page 26). By using MLP scholars have described how the three levels (niches, regimes and socio-technical landscape) interact dynamically in the unfolding of socio-technical transitions. According to this approach, transitions occur when substantial changes take place in the ways in which particular social functions are performed, i.e. when regime change occurs.

Although MLP has offered a flexible heuristic framework that has been quite useful for orienting public policies and interventions, this approach has been criticized for several reasons such as its mechanistic and overdetermined conception of social change and for underestimating the ways in which the social order is defined and reproduced in everyday life (Shove and Walker, 2010). In other words, while the MLP clearly offers a useful framework for observing the vertical dimension of transitions, i.e. the diffusion of particular innovations that come to challenge systems and regimes, this perspective is insufficient when it comes to identifying what fosters or impedes the changes needed at the everyday life level for the adoption of sustainable production and consumption practice an issue which is instead at the centre of the attention of the social practice theory approach.

As defined, a social practice is "a routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, 'things' and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. A practice (...) forms so to speak a 'block' whose existence necessarily depends on the existence and specific interconnectedness of these elements, and which cannot be reduced to any one of these single elements" (p. 249-250, Reckwitz, 2002). There is no total agreement in the literature on the elements from which social practices are composed. In his book "The practice of eating", for example, Alan Warde (2005) distinguishes three distinct elements of practices: (1) understandings, the practical skills and knowledge required to perform a practice appropriately and competently; (2) procedures, i.e. rules, principles, precepts and explicit instructions; and (3) through what Warde calls 'teleo-affective' structures, i.e. engagements, which include motivations to participate, beliefs, norms, emotions, purposes, etc. Speaking of practices as performance also means that they require regular enactment: they are formed, modified or stabilised through their repeated and more or less faithful execution, i.e. through the creation, maintenance or breaking of links between the constituent elements. Moreover, these elements are relatively autonomous: they can circulate between one practice and another and appear as constituent ingredients in more than one practice and in more than one context, but also complement and benefit each other or simply co-exist. In this sense, innovation is precisely a new combination of understandings, procedures and engagements.

In sum, while MPL offers a useful framework for observing the vertical dimension of transitions, practice theory looks at the horizontal relationships of practices that cross the boundaries of individual regimes, emphasising the numerous dynamics and circuits of reproduction involved when different elements of practice are integrated into specific performances (Shove, 2012). Put it differently, while MLP allows us to examine the emergence of innovation through the interactions between the vertically ordered levels of niche, regime and landscape, SPT focuses attention on the horizontal dynamics of practices that cross multiple regimes as they follow their circuits of reproduction.

In what follows, we propose to combine these two different approaches to zooming in a local food initiative to investigate opportunities and barriers for a sustainable food system transformation. In essence, we adopt an approach that studies the change and stability of practices both horizontally and vertically. Our research adopted a mixed-method research design that included participant observation, online questionnaires, food diaries, in-depth interviews and focus groups. Specifically, questionnaires were answered by 28 consumer households and 11 farms; interviews were collected from 27 households and 9 farms; 22 consumer and 5 farmer food diaries were collected; finally, 7 CSA members participated in focus groups.

PRELIMINARY FINDINGS

As part of the universe of sustainable food niches, CSAs can be seen as small-scale socio-technical experiments (Verheul et al., 1995) that aim to generate and disseminate lessons on how food can be produced, distributed, prepared and eaten in new

ways, with a focus on sustainability and equity instead of price convenience and profit. As argued by Seyfang (2009) and Hargreaves (2013), MLP represents a particularly useful perspective to understand how such niches diffuse in mainstream food regime dominated by supermarkets and, in the Trentino context, also monoculture cooperatives.

As in the case of other CSAs, trying to create a niche food supply system, NaturalMente sought to recruit local farmers to promote a food cultivation and marketing practice that met alternative criteria to those of the market. Most of the farmers are owners of newly established farms with few employees, often members of their own family, and small in terms of both turnover and utilised agricultural area. 72% of farms were established in the last 20 years. Almost three-quarters of the farms measure less than 8 hectares, which is the average recorded in Trentino by the Trento Rural Development Programme (2022). Among the so-called 'eaters', most of the respondents are university graduates and occupy prominent positions (34% are public servants).

Especially at the beginning members have been particularly active in adopting a multiple repertoire of action to try to challenge the conventional food regime. Besides promoting closer contact between consumers and producers, for example, several farmers have been rather active in publicizing sustainable methods or productions. Some also took an active part in the provincial referendum campaign to make the entire agricultural territory of Trentino an 'Organic District'. Moreover, the CSA participated in some local public tenders to promote educational activities aimed at involving primary school students.

However, after its initial success, the CSA has encountered also many difficulties in keeping both its business and participation in community activities alive and flourishing. Essentially, at present, the CSA is either not succeeding in generating enough revenue and maintaining the activity and commitment of its initial participants, nor in spreading to new families.

This is where a practice-based analysis may prove most useful. To understand why this grassroots innovation got stuck in its current situation, it is deemed necessary to highlight previously overlooked non-cognitive factors involved in everyday provisioning performances, focusing on the constituent aspects (commitments, non-descriptions and processes).

Engagement: In the questionnaires and interviews, we asked for people's reasons for participating. Producers report that they felt the need to do something concrete for the local area (27%), that generated an activity that was environmentally sustainable (18%) and fair (18%). Furthermore, the motivations of eaters reveal fundamental details about the engagements constituting the social practice of purchasing: indeed, they joined the community because they were willing to pay a fair price for quality food (37%), to support producers who care about the environment (26%) and because they consider the origin of the products important. (15%). In the interviews there is further motivation given by several producers and many consumers: the opportunity to build new relationships, promote a network, make a community, collaborate, to establish

relationships of trust between these two categories that in the conventional supply chain are instead separate and distant.

Understanding: If the motivation to join underlined how there was a remarkable common ground (e.g. members showed common interpretations of what 'good food' means), progress over time has been limited both qualitatively and quantitatively. Indeed, apart from the producers who were already adopting the organic method or even more restrictive paradigms, such as the 'natural' method, the changes introduced by the other farmers were rather marginal. According to the statements made by the producers in the interviews and also during the meetings, this seems to be a problem related to understandings: there is a problem in accessing the information on how to farm organically, but also on the procedures required to obtain certification. This difficulty is confirmed by the literature on organic conversion (Padel and Lampkin, 1994). At the same time, there is one element among the understandings that is also problematic: the ability to utilise purchased raw materials. As mentioned above, among the options proposed by various producers is the box scheme of fruit and vegetables, i.e. a selection of seasonal products chosen by farmers and sold at a fixed price. This option is beneficial for farmers, as it allows them to sell all their product varieties and also to do so much faster. On the other hand, although many people declared themselves aware of food issues, in the interviews they complained of several difficulties in integrating unfamiliar products into their diets and needs.

Procedures: It is precisely by examining the procedures that the main critical issues emerge: although a small minority took up the challenge of new products to learn new recipes and methods, the majority found it frustrating and tiring. At the same time, the producers complain that they have not (yet) succeeded in establishing a procedure that was one of their main objectives, i.e. joint production planning with households. This would allow them to have economic guarantees regardless of the outcome of the production season and, therefore, to sell their entire production. Furthermore, it would also have other positive implications, such as the reduction of waste among unsold products, and this might alleviate the buyers' sense of frustration. However, due to the lack of mutual trust in the initial period and the current stagnation of relations, as well as the onerous pandemic restrictions that have limited activities, it has not been possible to implement this fundamental step in reconnecting the supply chain and its components. Furthermore, although there are aspects that are conceptually considered positive by some participants, the application has proven to be critical. For example, regarding the platform, some appreciate that it allows careful and reasoned planning of purchases – compared to 'emotional' and impulsive shopping on supermarket shelves – but it is considered stressful by many others. In addition, there are several procedural aspects that are criticised by the majority: the organisation of the website is judged to be complex, time-consuming and does not allow use via telephone. Even the delivery

presents significant criticalities: according to the participants, it is difficult to reconcile the pace of life and work with the organisation of the CSA, which provides a single collection point on the outskirts of the city and a single delivery day.

CONCLUSION

The combined use of insights deriving from social practices theory and Multilevel Perspective allowed us to significantly advance our previous understandings of the CSA 'NaturalMente in Trentino' in its efforts of scaling up, showing that to embrace a transformative pathway of urban (political) agroecology requires to take simultaneously into account both the vertical and horizontal dimensions of transition.

The MLP thus serves as a useful analytical tool for analysing CSA as part of an innovative and radical sustainable food niche that is experimentally developed and protected by sustainability values, as opposed to the perceived unsustainability of the traditional food regime. However, MLP falls short of explaining insucess: CSA has encountered difficulties due to social practices such as cultivation (according to the organic method), purchasing and cooking practices, which despite being deeply connected to the agri-food system, also intersect with other regimes and everyday practices. Therefore, the typical focus of the MLP on the single regime is severely limiting and it is necessary to understand how the sustainable food system experimented by the CSA was able (or not) to integrate into pre-existing practices and systems (Hargreaves, 2013). In other words, if it can meet the needs of the individuals who have participated, and generate new elements of practice that could be replicated in everyday practices.

Essentially, the analysis revealed that CSA has rather uncomfortable elements that only partially fit with the lifestyles of individuals, apart from a small core of critical consumers and 'idealistic' producers who were willing to make certain sacrifices or already possessed certain necessary characteristics and knowledge. Therefore, we can conclude that these are the causes of the crisis it is currently going through. This has not allowed it to achieve that goal of reconnecting the two sides of the chain and, therefore, to spread further and profoundly change participants' practices, not to mention the regimes.

Possible solutions - also claimed by the participants - include greater involvement of the partner institutions, the Municipality and the University of Trento. By adopting an agroecological approach, i.e. a holistic and horizontal vision that looks beyond the boundaries of individual regimes, food policies should act on understandings, engagements and procedures that promote a sustainable agri-food system, instead of single products and sustainable innovations.

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Urban agriculture on the fringe
A socio-ecological approach to Urban Just Transition in Valencia (Spain)

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Abstract −This paper analyzes urban agriculture as a path for development towards a Just Transition within the environment in which it operates. We interviewed several individual initiatives, as well as most of the collective initiatives within Valencia's urban agriculture. The preliminary analysis of the results indicates that all the initiatives have a common component: to maintain the traditional relationship with the Valencian orchard, to defend sustainable form of consumption and a lifestyle that the current global political and economic paradigm has abandoned. In addition, the urban agriculture of Valencia seeks to generate a change in how we relate to the environment. This will ensure that our passage through the planet is fairer and more sustainable.

Keywords −urban agriculture, Just Transition, Distributive Justice, Restorative Justice, Procedural Justice, Intergenerational Justice

INTRODUCTION

The current paradigm brings systemic changes and global challenges in which human action is essential to stop the rapid deterioration of the planet and life as we know it. This crisis emerges from different causes such as demographic growth and, at the same time, the waste that North Countries generate, unequal distribution of land, urbanization, unemployment, excessive exploitation of natural resources and increased pollution. (Nadal, 2014; Carballo, 2019).

That is why many cities, through the promotion of grassroots organizations and social movements, manage to act in a transformative way through policies to cope with inequality and reduce greenhouse gas emissions to move towards a just and more sustainable contexts (Morena, Krause & Stevis, 2020). In this revindication context, ecosystem services can be analyzed to achieve more efficient agri-food supply chains (Maes et al, 2020).

Just Transition refers to the latter, which is one of the pillars in which this research is framed. Ensuring to a low-carbon economy depends on how society supports the process through different perspectives (Atteridge & Strambo, 2021). To do this, cities focus on various sectors in which most of the economy falls, these include the energy, transport and industry sector or the energy derived from food, which in turn comes from the intensive agriculture sector

(Heffron & McCauley, 2017). It is also important to mention a series of deficiencies in terms of equal opportunities, problems in the protection of rights, job insecurity, low economic capacity, and personal development (Carballo, 2019). In essence, Just Transitions focuses on analyzing and highlighting the

power relationships, empowering actors to recognize agency and create a fairer path for change by highlighting the association between them (Carballo, 2019).

Urban agriculture can be defined as "a local practice and an integrated component of urban systems" (Degenhart, 2016). In addition, it introduces elements of food security, food sovereignty and is related to diverse manifestations of society at the local and cultural level (Degenhart, 2016; Ortega, 2009). In this sense, the link between urban agriculture and just transitions revolve around considering urban agriculture not only as a means to ensure subsistence (Ellis & Sumberg, 1998). It can also be used as a tool to analyze ecosystem services, in which the socio-ecological dimension plays a vital role and, in doing so, help achieve more efficient agri-food supply chains (Maes, Teller & Erherd, 2020).

Currently, there is a growing interest in urban agriculture and the public policies related to it (Ranting, 2014). They are part of the broader development of effective urban strategies to strengthen more sustainable and resilient food systems (Renting, 2014). As Heffron and McCauley (2017) point out, a true vision of reality is needed, a global perspective that reflects that local actions also have an impact at a national and international level.

We measure this impact from the direct actions that characterize urban agriculture. This characterization is given by three specific aspects defined by Soler and Rivera (2010):

    1. Production techniques include everything that is related to the type of activity performed, the product category, the production system, the destination of the product, as well as the distance between the production area and the storage area of consumption. It also refers to everything related to the recycling and reuse of organic waste for compost. urban agriculture is based on the core concept of protecting biodiversity as a multifunctional strategy for space and land that it uses and shares with its surroundings. (Soler & Rivera, 2010). These technical productive actions are given with an ecological perspective (Soler & Sevilla, 2010) and a normative and holistic vision (Heffron & McCauley, 2017).

    2. Cultural activities related to local production and consumption networks that defend not only agroecology, but also the "right to maintain and develop its own capacity to produce its basic foods respecting cultural and productive diversity" (Agarwal, 2014). Also noteworthy is the involvement with the ecology of knowledge and shared knowledge as a vehicle for social transformation (Soler & Rivera, 2010). This is accompanied by the consideration of nature with an

ecological approach, a sustainable development (Toledo, 1995) and an understanding of relationships with the environment to work on a community and self-support scale (Ortega, 2010).

3. The political relationship between the sociopolitical system that encompasses urban agricultural activity and its relationship with the local ecological system (Soler & Rivera, 2010). From this perspective, urban agriculture aims to give voice to the protection of biodiversity and confront austerity policies to address the scarcity of livelihood for communities (Stermann, 2015). To do that, urban agriculture, self-organizes, self-manages an occupies public spaces to create food security, cheap supply, and social and politic empowerment (Fantini, 2017). In short, together with the second dimension, a process of transformation towards sustainability and social equity is carried out with participatory collective actions (Soler and Rivera, 2010).

This set of three dimensions is focused on following a multifunctional strategy for land use, that is correlated with the city model as an urban sustainability strategy (Soler and Rivera, 2010).

URBAN AGRICULTURE SUBDIMENSIONS	CHARACTERIZATION	TYPES OF JUSTICE
1. Technical-productive		
1.1 Techniques	Agricultural science techniques redefined for a sustainable agroecosystem	Distributive Justice[1]
		Intergenerational Justice[2]
1.2 Holism	Ecology of knowledge between empirical and practical agroecological knowledge and scientific knowledge	Procedural Justice[3]
		Intergenerational Justice
		Distributive Justice
1.3 Collective action strategies	Collective production actions and collective marketing actions	Procedural Justice
		Distributive Justice
2. socio-cultural		
2.1 Ecological rationality	Stability, logic of accumulation and renewable production as a safety net against environmental and market fluctuations of the regime.	Procedural Justice
2.2 Link with the environment	Emotional value, intergenerational pattern	Procedural Justice
		Restorative Justice[4]
		Intergenerational Justice
2.3 Value of plural knowledge	Transmit knowledge for decision making.	Procedural Justice
		Restorative Justice
3. Politics		
3.1 Access to resources	Distribution of material and immaterial	Restorative Justice
		Distributive Justice
	resources (training, techniques...)	Procedural Justice
3.2 Political action	Defense of the territory and collective actions of incidence and political struggle	Procedural Justice
		Distributive Justice
3.3 Organizational strategies	Practices, management, and organizational capacity of individual and collective initiatives of urban agriculture.	Procedural Justice
		Restorative Justice

Table 1. Correlation between dimensions of urban agriculture and Just Transitions

Consequently, in this paper, we explore whether Valencia's urban agriculture movement can contribute to a just transition in the city. That is why we have created a correlation between urban agriculture and just transitions (Table 1), to understand which specific elements of urban agriculture are those that promote a specific type of justice.

METHODOLOGY

For the methodology, an inductive case study has been developed. To begin with, a mapping of all the agricultural initiatives of Valencia within the urban fringe of the city was carried out. We found two different types of initiatives:

1. Individual **Initiatives**: are those that have a cultivation space and that carry out their agricultural activity individually. This group is characterized by having a very simple organization for self-consumption and/or the maintenance of a family or borrowed space.

2. Collective **Initiatives**: are those that are made up of a group of people with similar goals and political leanings. These groups of people develop their activity within a space that they want to improve and maintain.

Once the mapping process was completed, interview were conducted to further explore the relationship between urban agriculture and Just Transitions in the studied case. A total of nineteen interviews were conducted, transcribed and analyzed considering the type of initiative interviewed. Two interview guides were developed for each type of initiative. Each guide aims to adapt to each reality to better determine how each initiative performs its action. The interview questions aimed to determine how each variable can contribute to the various types of justice associated with agricultural activities. The semi-structured interviews are intended to reveal the landscape of several initiatives in Valencia; the intent of using this tool is to understand the context in the socio-environmental space, the actors' actions, the dynamics of the urban agrarian ecosystem and the symbiotic bond between people. The latter to be able to

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[1] It consists of "giving people what corresponds to them according to the proportion of contribution to society, needs and personal merits" (Murillo & Hernández, 2011 p.4). In other words, it contemplates how goods are assigned spatially and temporally in society (Newell et al, 2020), and tries to identify not only what resources are assigned, but also by what entities or people they have been provided.

[2] Right of future generations to a decent life (Julios Campuzano, 2018)

[3] "Human vocation to appropriate and transform their living spaces, which

implies an "anthropic construction" of the environment" (Ortega, 2010 p.7) and facilitates the understanding of the disparities between industrialized countries and developing countries and investigate possible ways so that there is an effective representation by both parties. (Newell et al., 2020)

[4] It tries to address conflicts through solutions that promote compensation and compensation, stimulating dialogue, empathy, and care for personal responsibility processes. (Rivers and Olalde, 2011)

analyze the processes of social construction that occur in the environment.

RESULTS

The first result of the preliminary analysis of interviews is that there is a great correlation between urban agriculture and Just Transitions. It is evident that the direct intervention of a single person or several people in an agricultural space result in different contributions to justice dimensions.

In addition, we have seen how agriculture initiatives have focused on claiming their role in agriculture for years as well as maintaining a space and a connection to the culture of gardening. This is typically because people involved in these initiatives tend to be older. We found that people who work their space individually have an element denoting the need to continue to protect the farming tradition and continue using the techniques they have always used. Unfortunately, we have not detected collective action strategies among individual initiatives.

On the other hand, we have identified that collective initiatives are more likely to create a self-supporting social network. This is a recurring theme we found in the interviews that has helped us understand how the agricultural movements of Valencia usually generate environmental awareness and create clean, self-managed spaces, sometimes occupying abandoned places that have been abandoned by institutions. Techniques and seeds are shared within the initiative and even between outside groups, meetings are held between initiatives to share knowledge and identify trends and specific actions are proposed inside and outside the group to achieve sociological and political objectives. We have also seen how they have come together to agree and reach agreements for the distribution of resources and their proper use. As well as the overall objectives of reducing waste, recycling, and reusing. Finally, we have seen how initiatives have supported each other in politically complicated situations.

As a result, we have observed a common denominator at 50% of collective initiatives interviewed. Some of the activities that these initiatives formulated were combined with pedagogy. That is because they want to exhibit a more sustainable and fear way of life.

DISCUSSION AND CONCLUSIONS

As we have mentioned, the general trend of individual initiatives is focused on defending their profession, their work as farmers and the importance that this has for the maintenance of a century-old culture in the city and the region. A first analysis invites us to relate this idea to Distributive Justice. The farmers interviewed emphasized the idea of wanting to maintain their cultivation spaces because they want to maintain their lifestyle, their essence and they want to claim this need as a right to maintain what is their trade or an activity they enjoy.

As far as collective initiatives are concerned, it seems that they have taken a step further. Its main intention, and what led to its creation, is the idea of wanting to create a social fabric that leads the people who participate to rethink the way in which we relate to our environment. All the collective initiatives interviewed show that they want to demand a form of social organization that abandons the production tendencies of the neoliberal market. They want a horizontal form of organization and management of resources. Procedural Justice, in this perspective, is evident in dialogues, forms of internal functioning, and in its relationships with similar groups. Their goal is to create a space of dialogue, in which empathy and care are the foundations of internal and external communication (Ríos & Olalde, 2011). By working with the same idea, we can state that this method of transforming relationships and changing agricultural production, paired with Intergenerational Justice, highlights the need to make sure future generations have a chance for prosperity (Newell et al, 2020). In addition, they reaffirm this idea when they convey these values to children as part of their activities to create a lasting change in mentality in the next generation.

It is worth noting the political weight that collective initiatives put on their actions. In addition to what we have discussed, these groups are typically generated in places where institutions or large corporations seek to increase their income, turning a blind eye to sustainability and justice. Thus, these initiatives aim at creating a political impact in the city and region to oppose the dominant form of operation. This question has a lot to do with Distributive Justice. It seeks spaces, activities and messages that show the intention of creating political incidence and representation of all forms of subsistence and social diversity. As such, these initiatives contribute to providing, protecting, and increasing the human capacity or daily needs through inclusion and participations (Carballo, 2019).

To conclude, we have detected that urban agriculture in the city of Valencia has a more significant impact than just agriculture itself. As we have seen, pedagogy in these collective initiatives, plays a very significant role in its development. That is why our future work is focused on how initiatives are creating new forms of coexistence and respect for the environment, using tools beyond pure food production (Heffron & McCauley, 2017).

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Urban gardens in Bogotá
services and motivations beyond food production

Manente V. [1], Caputo S. [2]

Abstract – **This paper takes its cue from a PhD fieldwork investigation that gathered detailed information for 15 urban gardens in Bogotá together with a large dataset developed by the Bogotá Botanical Garden to further explore the values and motivations that bring people to grow food in this city. The database includes 1,216 private and community gardens over the entire urban area, hence representing a unique opportunity to evaluate motivations for urban food production for diverse communities. The analysis of the database followed by a comparison with the fieldwork findings enables the identification of clusters of urban farmers, defined by aims behind their practices and socio-economic conditions. It offers a nuanced understanding of the role of urban agriculture in this context and contributes to further define food security.**

Keywords – **urban agriculture, Global South, food security, database elaboration**

INTRODUCTION

Bogotá houses roughly 16% of the total inhabitants of Colombia (Gómez-lee and Burq, 2018) and its population is expected to increase by 160,000 per year (Duqiño Rojas and Ñustes, 2018).

The city has been growing exponentially in the last decades due to the expansion of its periphery, where developers aimed at capitalising on the mass migrations from the countryside that were happening for two main reasons; firstly, because of the economic opportunities triggered by a free-market economy (Leandro Hernandez, 2013; Molina-Murillo, 2018); and secondly, because of people escaping from rural areas as a consequence of the *conflicto armado*, an ongoing low-intensity war between the state and insurrectionist para-military groups. Throughout the years this conflict has generated a considerable number of refugees: for example, in 2018, Gómez-lee and Burq stated that between 1985 and 2018, 14% of the Colombian population has been displaced, 50% of which moved to cities.

This constant exodus of people from the countryside triggered a vicious circle whereby rural areas are less serviced and have weaker economies as their population drops (Molina-Murillo, 2018). Bogotá, on the other hand, has been constantly battling with resource scarcity (Duqiño Rojas and Ñustes, 2018). In particular, Gómez-lee and Burq noticed in 2018 how food insecurity affects 24% of the households. As in Bogotá fruit and vegetables are scarce and expensive, the diet of low-income groups is high in carbohydrates and red meat, which are cheaper, albeit with serious repercussions on their health (Nail, 2018).

Urban agriculture (UA) was first recognised institutionally in Bogotá in 2004 by the city Mayor at that time, Lucho Garzon, within policies tackling the population's undernourishment by fostering economic development and establishing social safety networks (Barriga and Leal, 2011; Wurwarg, 2014). One of the programmes implemented under these policies is *"Agricultura Urbana: Sostenibilidad ambiental sin indiferencia para Bogotá"*, under the supervision of the Botanical Garden "José Celestino Mutis".

It comprised initiatives with an educational focus (teaching citizens about self-sustenance through UA) and others to support existing networks of urban farmers (Caquimbo-Salazar and Hernández-García, 2018). The programme was successful, and it was renewed by the following administrations under the names *"Bogotá bien alimentada"* and *"Bogotá te nutre"* (Gómez Rodriguez, 2014; Caquimbo-Salazar and Hernández-García, 2018). Currently, the Bogotá Botanical Garden is in charge of the urban agriculture programme with the following four aims: a) investigative (recording the range of edible and ornamental plants cultivated in the urban gardens), b) formative (focusing on capacity building for the management of community gardens), c) technological (recording current irrigation and fertilisation practices) and d) social (improving the social fabric) (Gómez Rodriguez, 2014).

It should be noted that UA has traditionally been presented in the Global South as a solution adopted by the lowest strata of the population to increase their food security. This is the case also for Colombia, where according to the FAO report of 2014 on UA in the Global South, UA is primarily practiced in Bogotá by its most vulnerable social groups such as adult women, elderly men, children in schooling age, people with mental or physical conditions, convicts and migrants from the countryside escaping from the armed conflict (FAO, 2014). Although it is true that some Bogtános may undertake UA to tackle food insecurity, this article argues that this is only a partial representation of the role of this practice within the city; this is confirmed by Caquimbo-Salazar and Hernández-García who in 2018 remarked how urban farming is also instrumental to connect migrants from the countryside to their rural identity. In support of

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this Hernández-García et al. (2018) stated that UA is used by immigrants from the countryside as *"a way to transform and appropriate open space, a community learning and empowerment experience, an artistic representation, and even an ideological statement"*.

This suggests that urban food production is underpinned and driven by social and environmental values that are part of these people's culture (Hayes-Conroy and Sweet, 2015). It also suggests that the concept of food security is often used in a limited way and that other concepts such as food sovereignty (Hayes-Conroy and Sweet, 2015) and even food justice when referred to inequalities in food provision and food systems (Glennie and Alkon, 2018) are more appropriate to characterise the essence of UA practices in cities from the Global South. In fact, a study by Schwab et al. in 2018 suggests that UA may be perceived at a government level as an easy solution to improve globally livelihoods in poorer urban areas, without a critical, nuanced reflection on the real advantages that this practice can generate in each specific context. The purpose of this article is to investigate what other services, beyond food production, UA provides in Bogotá; thus, contributing to the contemporary discussion on the role of UA in the Global South.

METHODOLOGY

This section illustrates the data gathering phase which took place during the author's fieldwork experience in Bogotá, where she collaborated with the Bogotá Botanical Garden (BBG) while collecting data on urban gardens across the city for the doctoral investigation *"The Urban Agriculture Nexus of Bogotá"*. This project aims to identify the role that this practice plays in the sustainable development of the city; more information on the fieldwork activity can be found at *https://research.kent.ac.uk/food-energy-water-meter-bogota/.*

Over the course of five months (Jan-Jun 2022), detailed information on the productivity, energy consumption, and social impacts of UA for 15 gardens across Bogotá was collected. At the same time, the author was given access to an Excel database compiled by the BBG officers in 2021. The database reports information collected during visits to approximately 3,500 gardens to support farmers trough technical assistance, training workshops, and delivery of equipment. It contains data on the services provided by 1,216 of these gardens. For the purpose of this paper, such data were compared and analysed with findings observed during the visits to the 15 case studies. The analysis sheds a light on the role played by UA in the development of Bogotá other than food production.

The BBG database includes information on each garden about: cultivated surface area, number of farmers and their social class, year of foundation, amount of compost and food produced, type of garden- i.e., homestead, institutional, educational, community garden-, and the main declared service provided by the garden. The initial database, an Excel spreadsheet, contained 9,338 entries; however, on a few occasions, the BBG officers visited some gardens

more than once. After a check for consistency, the final dataset included 3,573 gardens.

The most relevant feature for this study was the column that described the *"services offered by the garden"*. This column included 1,216 entries which consisted of a brief text description of what the main function (i.e., service) of each garden was. The information contained in this column was very rich in content, albeit without any systematic coding in place. In order to understand what the main services provided by urban gardens in Bogotá were, it was therefore necessary to homologate, codify and elaborate this 1,216 entries column.

This process led to the identification of 31 umbrella terms defining the services provided by UA in Bogotá. The 31 terms were re-grouped under 8 macro-categories, which in turn were subdivided in 23 meso-categories: *connectivity* (knowledge exchange, workshops, skill learning), *society* (community building, individual well-being, education, economic), *space* (embellishment, space recovering), *food self-supply* (supply of food, herbs and medicinal plants), *health* (occupational therapy, therapy), *relationship with nature* (environmental decontamination, recycling, compost making, seedlings), *cultural heritage* (heritage, love for agriculture, cultural exchange), *human rights* (women's empowerment, peace-making, food sovereignty).

Subsequently, each of the 1,216 gardens was re-assigned a service by matching their original description to the 31 new terms; however, since some of them had more than one service declared, the final count included 998 gardens with one declared service, 168 gardens with two declared services, and 50 gardens with three declared services, for a total of 1,484 declared services.

RESULTS

The results of this re-classification exercise are illustrated in Fig.1. Food self-supply makes up for the 50% of the services provided by urban gardens in Bogotá with 750 entries, roughly corresponding to half of the 1,484 services provided by the 1,216 gardens. It is followed by social purposes (488 entries and 33%), human rights (81 entries and 5%), health (58 entries and 4%), relationship with nature (58 entries and 4%), connectivity (23 entries and 2%), cultural heritage (14 entries and 1%), space (12 entries and 1%).
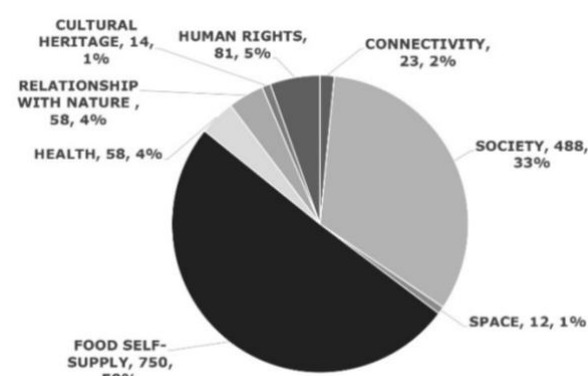

Figure 1. Services provided by urban agriculture in Bogotá

INTERPRETATION OF RESULTS

What becomes clear from these preliminary results is that, although predominant, food production for self-supply is not the only motive for undertaking urban agriculture in Bogotá, nor the only service this activity provides, as a considerable share of other important motivations for the implementation of this practice in the city are socio-cultural.

The data elaborated in the pie chart, showing the share of services within the garden sample of the BBG database, is further elaborated in this section. This elaboration builds on the visits to the 15 case studies during the author's fieldwork across 5 months. 74 urban farmers who worked or volunteered in such spaces were interviewed to identify their motivations for undertaking UA and the impacts that this practice had on them. This provides an explanation as to how the services provided by these gardens address socio-cultural issues and lived experiences of the farmers. The gardens were located in different parts of the city and varied for dimension, organisational structure, age and social extraction of their participants.

Table 1. Services provided by urban agriculture in the 15 case studies

Service	Number of gardens within the sample	Motivations for delivering this service
Productive	4	Self-supply, entrepreneurial, well-being
Socio-cultural	4	Recovery of ancestral culture, social welfare, collective learning, territorial reclamation
Other	7	Space recovery, environmental rehabilitation, recycling, environmental education, reintroduction of native species, leaving something to future generations, career change

As shown in Table 1, when asked which services they shared with those found through the analysis of the BBG database, four gardens declared that their function was mainly productive, four had a socio-cultural vocation, while seven fell within two of the minor categories, here identified as "other". Precisely, six gardens had an environmental mission, and one had an economic purpose. The following sub-sections illustrate in detail these findings.

Productive services
In these case studies, crop production is not only a means for food security but also for the improvement of the local socio-ecological conditions. "Enverdesiendo" is a home garden run by Diana and Ivan, two high school professors who are passionate about sustainable living and decided to turn their house into a productive space. Mrs. Consuelo was tired of living in a polluted neighbourhood; consequently, she started the community garden

"Mundo verde Corazón verde" on the rooftop of her building, where she and other gardeners cultivate edible plants while providing a habitat for the local bird population.

"Hojas de Esperanza" is run by four volunteers who share the produce among the residents of the nearby social housing estate. Most people in this community are migrants from the countryside, and the garden is run in parallel with an association that aims to promote sustainable living and peasant culture. Mrs. Maria Isabel started "Huerta de Micaela" to provide for her family, but soon was producing enough to open her own business, which is currently thriving.

Socio-cultural services
In these case studies, tradition and innovation (e.g. hydroponics) are used to strengthen the local social fabric. The mission of "Huerta hidropónico de la plaza" is to raise awareness on alternative farming techniques while providing employment to disabled people, who help Mr.Guillermo growing and selling his produce at the nearby artisanal square. Community building and environmental education are similarly the core missions of "Huerta Santa Matilde" and "Huerta San Francisco", two small community gardens where neighbours gather weekly to experiment with growing and composting techniques.

"Huertopía" is a peaceful act of territorial reclamation by the community of Alto Fucha, who was being threatened of eviction by local authorities; under the supervision of Jhody, who founded this garden as a manifesto for eco-territories, the community children gather once a week to learn about their ancestral culture and agroecology principles, discuss about feminism and land rights, and find a safe space where to debate personal issues.

Other services: environmental
"Huerta Doña Mariela" was created by Mrs. Mariela to clean and protect the river canyon area in a neglected neighbourhood in the district of Ciudad Bolívar, where she cultivates and sells fruits, vegetables, and aromatic herbs; Mrs. Mariela is an active member of her community who frequently attends and hosts workshops on sustainable livelihood strategies. The members of "Huerta La Libélula" started cultivating in a public park to rehabilitate a dangerous and polluted area of their neighbourhood; this garden also serves as a meeting point for people who recently moved to the neighbourhood from outside or other parts of the city.

"Huerta AsChircales" started as a landscape embellishment project in a former kiln area and is currently a day-care centre for the neighbourhood's kids, with workshops on UA and sustainability. "Huerta JAC de San Eusebio", is a community garden among the rooftops of the district of Puente Aranda, where Diana and Ivan run workshops on growing techniques, reintroduction of native species, and recycling methods for the local community.

Similarly, the environmental workshop "La Estancia de Piwam" often hosts university students for research projects on recycling and reintegration of native species; the garden also processes and sells a small amount of officinal plant ointments. "Huerta

comunitaria Villa Ines" is a community workshop run by a group of elderly ladies who meet on a weekly basis to grow and harvest produce for personal consumption; besides social reasons, the members of this garden mentioned leaving a productive and well-preserved environment to future generations among the main reasons for practicing UA.

Other services: economic
"Cobá, el hogar de las abejas" is the only garden with an economic vocation; it was founded by Johnny, a former environmental technician who left a demanding job to undertake UA in the land in front of his house. Although this urban farm is mainly oriented to produce selling, it should be noted that Johnny organises eco-tours on his land on a regular basis, trains women for skill development programmes and supports pollinators through beekeeping.

In conclusion, it is worth mentioning that all gardens manifested, albeit at different degrees, an interest in reconnecting with an ancestral identity through the cultivation of native plant species and the reproduction of indigenous cultural traditions.

These findings altogether show how UA in Bogotá is a multi-faceted activity, practiced for an array of practical, social, ideological reasons by diverse groups of citizens, regardless of their socioeconomic condition or cultural background.

CONCLUSION

This study suggests that urban agriculture in Bogotá serves many purposes and even when is practiced for food security, such a purpose is mixed with others. Hayes-Conroy and Sweet (2015) argue that often the focus on food security does not help questioning the political context that generates this insecurity. They promote the idea of *food adequacy* – which emphasises the local social and ecological values of the food insecure groups - that seems appropriate to the Bogotá context.

In fact, the multifunctionality of these case studies (and of the other urban gardens in the BBG database) suggests that concerns on food security are layered with motivations such as environmental justice and the nurturing of traditional knowledge on food and plants, hence responding at a specific socio-political context. Equally, the focus of some gardens on socio-cultural or health issue captures the breadth of meanings that food represents for these residents.

In conclusion, the function of urban agriculture in the Global South, which is too often presented as a means of survival for the poor, is reductive and perhaps influenced by neo-colonialist visions (Gray et al., 2020). As such, this study shows, it needs to be questioned and revisited.

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URBAN PASTORALISM

Nature-based solution for a productive green infrastructure in the cities and their periphery

Triboi R. M.[1]

Abstract – The *pastoral practice*, a *subsistence pattern* characterized by '*common*' in property and management, decade starting the industrial era because of its *low productivity* and concurrency with intensified agriculture, industry, urban functions and infrastructure, due, in the last decades, to *urban sprawl*.

Today, the animal production sector is dominated by an intensive and industrial model that negatively impacts the *global health* (animal, environmental and human). The intensification of the pastoral activity is difficult because of the *interdependence between the shepherd, animals and environment* and its survival in almost initial form is related to its independence from mechanization and urban infrastructure.

The aggressive urbanization of the last decades generated an important quantity of abandoned land especially in the periphery of the cities and offered shepherds unexpected opportunities in times of uncertainty to extend their activity.
The adaptation of this practice to urban context has a diverse management formula across European Union, because of different approaches (based on the traditional form, encourage by contemporary activism).
In the *Balkans*, the persistence of pastoral practice and its short and medium transhumance infrastructure is strongly related to the strategy of *avoiding state management* and the tradition of *alternative food networks.*
The quantitative research of this study concerned mainly *the periphery of Bucharest*, although some interviews, data analysis and visit were made also in Parisian metropolitan area (France) and Wageningen (Netherlands).

The analysis of different *typologies of urban shepherding* permitted the identification of *patterns of activity* that could sustain developing a more sustainable and resilient model of urban pastoralism in today's context.

Innovative aspects like complex management plan for marketing and communicating on the activity, local actors' inclusion in the co-construction process of the project, connection to local food networks are important features of the western model of today urban pastoralism that support its development. The main challenges revolve around the dissemination of the "know-how" and accepting the pastoral activity as way of life (breeding animals in extensive system implies a way of life not compatible with current expectations of working conditions).

Keywords – urban pastoralism, nature-based solution, productive green infrastructure, commons

Urban pastoralism – an oxymoron?

Since industrialization, the technology-nature relationship has been destabilized to the detriment of the latter, technology representing the complex weapon to finalize the process of domestication of nature (Marx, 1964). At the same time, **urban development** was based on the simultaneous processes of the domestication of nature and technical progress.
The transition toward a more today resilient society requires the **domestication of the city through the infiltration of nature.**
The classical antagonism nature-city, exacerbated by the various crises (ecological, economic, food …) isolated or concomitant, generated innovative responses that could have a major impact on city development as nature-based solution for developing green infrastructure and delivering ecosystem services.
A marginalized practice, particularly in the post-industrial period, the **pastoralism** allows spontaneous installation and the temporary use of land, in search for distant food resources due to herd mobility, exploitation of marginal resources (wasteland, forests, riverbeds or areas unfit for other uses), the livestock's flexibility related to pastures availability and fragmented spaces grazing, the independence from urban infrastructure and mechanization.
A specific phenomenon of the beginning of the 21st century **Urban Pastoralism,** as a *practice*, is defined as an *extensive system of animal husbandry that involves transhumance and seasonal grazing of urban and peri-urban spaces* (destined to other functions) in *a planned or spontaneous way* depending on the context (Triboi, 2019).
Urban pastoralism developed spontaneously or planned between anthropic and natural, domesticated and wild, bucolic and oppressive space, utopia and reality, past and future…in the urban interstices, where the city-nature hybridization organically and continuously happens.

Urban pastoralism in Western Europe

The phenomenon of urban pastoralism has spread in recent decades in the West Europe due to the awareness and the need for the nature presence as an ecosystem in the city (as in the era of "domestic coordination" and opposite to its cosmetic form promoted by the current spatial planning) by adapting productive practices specific to rural areas to the cities with the help of modern management, techniques and strategies co-constructed with local actors (community, authorities, local organization).

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The practice of pastoralism has a positive reputation and the friction with urban functions is manageable and generally accepted. Adaptation to the urban space translate also in the reduction of the complexity of the traditional form of pastoralism, because of different factors such as the loss of the shepherd's know-how, the property regime, and others.

According to the interviews conducted with structures involved in this activity, the demand for the maintenance of urban spaces by pastoralism in France is superior to the offer despite sustained efforts to train urban shepherds and to create specialized structures. In the Netherlands, an urban context this activity is already vulgarized, with an upward trend, demonstrated by the interest in shepherd schools and the opportunities provided by the public authorities for the exploitation of "marginal" green spaces. which "complement" public infrastructure. At the same time, pastoralism in its traditional form suffers from major difficulties of revival despite considerable support from policies for its role in managing protect natural areas.

Urban pastoralism in Eastern Europe and romania

The phenomenon of urban pastoralism in its "Eastern-European form" is little known, due to the marginal status of shepherds, their clandestine mode of operating on abandoned agricultural land, the ignorance or disregard for this activity of the local authorities and planning specialists. The innovation of the Romanian urban pastoral system is generated by the way in which pastoralism reinvest the city in an organic and discreet manner (due to conflicts with the actors and the dominant local urban functions).

The pastoral practices in their traditional form survived in the socialist era as a response to the crisis of the agri-food system among others. The post-socialist period defined by the transition to a market economy (capitalism) simultaneously stimulated the perpetuation of pastoralism as a response to multiple crises of political mismanagement and "pastoral" urban development (urban sprawl). In addition, the spread of the city on the rural periphery through individual housing, commercial and service areas in an accelerated and chaotic rhythm favoured the transformation of agricultural land (formerly State farms) into abandon land (Triboi, 2017; Grădinaru and Triboi et al., 2018). The current tensions between the concept embodied in the new residential districts with privileged status and the phenomenon of "urban pastoralism" highlights **the gap between the ideal and its materialisation**.

Thus, the specific "voids" (abandoned land) on the outskirts of Bucharest created by uncontrolled urban sprawl (Grădinaru, 2013; Ioja, 2014; Gavrilidis, 2015) have been transformed into green infrastructure thanks to this practice. Today the marginal status of shepherds raises problems since competition with large-scale food distribution structures risks eliminating sheepfold products from the formal market, despite their physical proximity to consumers, the quality and affordable price of products.

Methodology

The present work aims to interrogate the city-nature paradigm and therefore the relationship of man with his living environment from the perspective of urban utopias but also of ancestral productive practices. The human-animal-territory relationship, in which the position of the animal (domesticated in this case) is that of mediator, is explored through several filters: *conceptual and practical*.

The approach is based on combining several established research methods: hybrid, quantitative and qualitative.

If the concept of urban pastoralism is elaborated based on a review of American and European writings on the subject, the phenomenon of urban pastoralism is presented through the quantitative method by the case study on the outskirts of Bucharest. The brief presentation of other case studies from France and the Netherlands participates in highlighting the specificity of the pastoral systems of different contexts and the possible exchange of strategies for managing the phenomenon from one context to another to support the evolution towards a more sustainable model. Also, the current and possible benefits of pastoral practice in urban and peri-urban areas are explored from the perspective of green infrastructure and eco-social design.

Conclusions

The unplanned evolution of the phenomenon of urban pastoralism is seen rather as a problem by the local actors (especially in the Eastern European context) involved in the production of urban forms, leading us to formulate the general hypothesis that although we are crtical of the industrial model of understanding nature, its conceptual dominance is still present in various forms (Cohen & Damisch, 1993; Ghorra-Gobin, 1997; Naumi, 2008).

Today, the role of the spatial planner redefined, from an eco-social perspective to that of a mediator between community, environment, technology… in order to respond to the needs of shepherds to function in an urban logic but also to urban dwellers to be reconnected to nature. Thus, the concept " urban pastoralism " will materialize the discourse of urban nature through a connection at the territorial, cultural, ecological, social and economic level of the uncontrolled urbanization "vestiges". "Abandoned", "uncontrolled", "informal" and "spontaneous" would become productive, communal, ecological, cultural, educational, sustainable, recognised and integrated.

The aim of this article is to respond to current concerns at the global level of the redefinition of urban environment and lifestyle, the study of the possibility of a new compromise between city and nature in the treatment of urban space revolving around the **concept and practice of urban pastoralism**.

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Where do you *eat* from?
The role of Milanese SPGs in reducing the distance between the city and the countryside

Cecilia Cornaggia[1]

Abstract – The AFNs are food supply chains opposing the mainstream agri-food system, which is highly industrialized and globalized. AFNs can foster change in different ways, among which reconnecting consumers and producers from the same territory. Given these premises, the present study investigates the role of SPGs, a form of AFN typical of the Italian context, in reducing the city-country distance. The investigation, which adopted a mixed methods approach, focused on the territory of Milan, an area in which high degrees of urbanization coexist with the presence of South Milan Agricultural Park, the largest agricultural park in Europe, where approximately 1400 farms are located. The results show that, due to historical-cultural reasons, the role of SPGs in reducing the distance between city and country is marginal. However, the action of some SPGs in partnership with other local entities has brought about interesting changes, which deserve further study.

Keywords – Food consumption; Alternative food networks; Short Food Supply Chains; Solidarity Purchasing Groups; Italy

INTRODUCTION

The contemporary agri-food system is highly industrialized and globalized (Morgan et al., 2006). The deterritorialization of food supply chains has led to the occurrence of three intertwined processes (Wiskerke, 2009; Dansero & Pettenati, 2015): the disconnection between producers and consumers (*disconnecting*), the loss of bond between people and their territory (*disembedding*), and the isolation of producers of the same area (*disentwining*). These and other concerns have lead people in advanced capitalist countries to establish alternative networks of food provision, embedded in local ecologies and cultures (Morgan et al., 2006). The so-called AFNs (Alternative Food Networks) are based on a peculiar understanding of food quality, which rewards the aspects of locality and naturalness (Murdoch et al., 2000; Goodman et al., 2012). In AFNs there are different elements at play (Jarosz, 2008): 1) the proximity between producers and consumers, 2) the involvement of small-scale farms who use sustainable production methods, 3) the configuration of new purchasing venues, other than those of the conventional food chains, and 4) a commitment of all the actors towards the sustainability of the supply chain, from an environmental, social, and economic point of view. AFNs can choose to favour one or the other aspect, thus presenting a different degree of commitment and effectiveness in reconnecting producers and consumers of the same territory. This is confirmed by cross-country research, investigating different types of AFNs in different contexts. For example, a study by Martindale et al. (2018) compared CSA (Community Supported Agriculture) in UK and China, and SPGs (Solidarity Purchasing Groups, in Italian "GAS") in Italy. CSA is an AFN in which consumers and farmers share the production costs, while SPGs are AFNs typical of the Italian context, which consist of groups of consumers who do the shopping together, choosing their suppliers on criteria such as locality, ethics, ecology. Martindale et al. (2018) found that if for British CSA the choice of local producers was fundamental, for the Chinese ones the concept of locality was barely considered. Italian SPGs seemed to have an intermediate positioning, applying the concept of proximity in a pragmatic way (as local as possible).

Other studies have investigated the role of SPGs in reconnecting consumers and producers of the same area, increasing knowledge on specific aspects. A research project conducted by Randelli (2015) shows that SPGs generally prefer local producers in order to establish long lasting relations and control the quality of food. For this reason, 30-60% of SPGs total purchases are local, especially for products such as fruit and vegetables, meat, milk, honey, bread and eggs. However, if products are not available locally, SPGs order them at the regional or national level. A study by Forno et al. (2013) focused on Lombardy – the region where the city of Milan is located – showed however that SPGs buy the majority of their food products from producers located more than 60 km away. However, the most complete investigation on this theme was conducted by Dansero and Pettenati (2018), who interviewed producers involved in different types of AFNs in Turin, among which farmers' markets and SPGs. The study shows that while the former are mainly focused on reterritorializing food consumption, the latter were more interested in re-moralizing it. Thus, SPGs seem to be interested not only in reconnecting consumers and local producers, but also in establishing networks with farmers located in other places, but sharing their same values.

Research similar to Dansero and Pettenati's (2018) has not been conducted in the Milan area so far.

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However, this territory is particularly interesting for several reasons. First of all, Milan is the second largest city in Italy, with a population of 1,37 million people (Istat, 2022). Despite the high degree of urbanization that characterizes the area, the southern part of the city is surrounded by the South Milan Agricultural Park (Parco Agricolo Sud Milano), a territory in which highly urbanized areas coexist with rural and natural landscapes (Calori et al., 2017). Established in 1990, the Park covers an area of 47,000 hectares, which includes 61 municipalities and approximately 1400 farms, thus being the first and largest agricultural park in Europe (Corrado, 2013). Within the Park, the Solidarity and Rural Economy District (Distretto di Economia Solidale e Rurale, DESR) is active. Founded in 2008 by a network of SPGs, farms and other entities of the solidarity economy, DESR aims at defending the Park from urbanization, supporting businesses in the transition to organic farming and establishing networks of solidarity economy.

Speaking of Milan's relationship with food, it is also important to mention that the city hosted Expo 2015, an international event that led Milan to organize meetings, debates and projects about food (Calori et al., 2017). In this context, the Milan Urban Food Policy Pact was promoted and an Urban Food Policy for the city was designed, too. In a city having such an important relationship with food, the SPGs experience is long-lived and significant, too. The first SPGs in Milan were born before 2000, and the aforementioned investigation by Forno et al. (2013) on Lombardy had counted 150 GAS in the metropolitan city of Milan (133 municipalities), corresponding to approximately 13% of the total existing in Italy.

Today, however, the scenario has profoundly changed compared to the one in which SPGs were born and developed. In fact, the spread of physical stores of organic food has been accompanied by the increase in other AFNs, such as farmers' markets, and the emergence of several food sales platforms, a trend that has exploded after Covid-19 pandemics (Corvo & Matacena, 2018; ISMEA, 2020). Given these premises, the present study investigates whether SPGs continue to be a relevant phenomenon in the city of Milan today and, if so, what is their role in reducing the distance between the city and the countryside.

METHODOLOGY

To answer these questions, a mixed methods research project was undertaken on SPGs in Milan. Mixed methods research has the advantage of exploring a phenomenon from different perspectives, allowing in depth understanding of the subject (DeCuir-Gunby, 2008). First of all, a mapping was carried out, which revealed the presence of 72 SPGs in the city. At the same time, 20 semi-structured interviews were conducted with privileged witnesses, long-term members of the Solidarity Economy Networks or Milanese SPGs, and SPGs members who are currently experimenting with innovations, with the aim of capturing historical elements and changes

in the characteristics of the SPGs. Finally, structured interviews were conducted with the representatives of SPGs previously identified in Milan: the interview was based on the survey developed by Forno et al. (2013), and integrated with issues emerged in the first interviews with privileged witnesses. 61 SPGs participated in this last phase of the study (response rate: 84,7%), allowing the collection of both quantitative and qualitative data on the functioning of each group.

The mapping and semi-structured interviews with privileged witnesses were conducted from March 2021 to March 2022, while the structured interviews with SPGs representatives were completed between February and April 2022.

The present contribution is based on two semi-structured interviews[2], as well as a selection of the material collected in the structured interviews with SPGs representatives. On the base of the data presented, it will be possible to reconstruct a picture of the relationship between Milanese SPGs, local producers and DESR.

RESULTS

The mapping revealed the presence of 72 SPGs in Milan, confirming that the SPG phenomenon is still of interest to the city. The SPGs are widespread, involving all nine administrative municipalities into which Milan is divided. However, data show that their role in reducing the distance between the city of Milan and the surrounding countryside is marginal. In fact, only 18,6% of SPGs' suppliers are located within 30 km from the city, and 29,1% within 60 km, while almost half of them (44,5%) are located beyond 120 km (Fig. 1).

Distance	%
0-30 km	18.6%
31-60 km	10.5%
61-90 km	13.0%
91-120 km	13.4%
over 120 km	44.5%
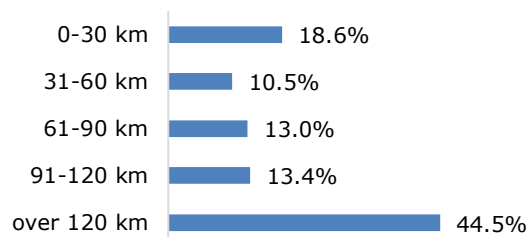
Figure 1. Distance of producers from SPGs headquarters in km (author's elaboration). N= 57. (Q. How far are your suppliers from the SPG headquarters? Think of all the food suppliers of your SPG and attribute an indicative percentage value relative to their distance, paying attention that the total must be equal to 100).

Leaving out the purchase relationship, only 14,8% of SPGs entertain a form of collaboration with producers, co-organizing farmers' markets, supporting CSA or local supply chain projects, or joining the DESR. In particular, the SPGs that adhere to the DESR are only five, corresponding to 8,2% of the total SPGs interviewed. The weak relationship of the SPGs of Milan with the surrounding area is confirmed by the criteria underlying the choice of producers. In fact, it emerges that the choice of local producers is not among the most important criteria: the Milanese SPGs

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[2] The semi-structured interviews considered are two: I1GB and I2GL. However, I1GB addressed two key participants of the same SPG. For

this reason, I will present quotes from the interviewee "I1GB, male" (main interviewee) and from "I1GB, female" (second interviewee).

favour the direct relationship with the producers, the quality of the products, and the support for a production that respects the environment and the working conditions of the employees (Fig. 2).
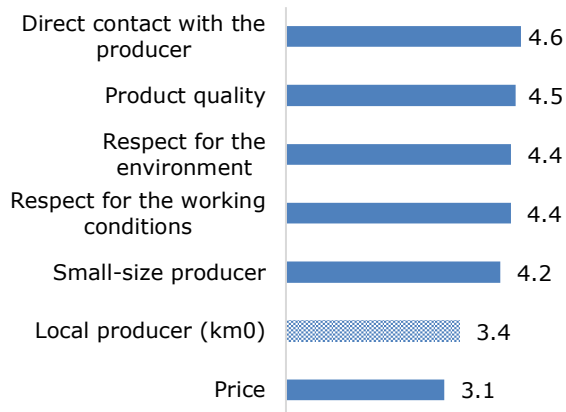
Figure 2. Criteria for selecting producers: average score assigned (author's elaboration). N= 61. (Q. In your experience until today, what criteria have you used in the selection of producers? Assign a score from 1 =least importance to 5 = highest importance.)

The distance between Milanese SPGs and local producers is motivated by geographical, cultural and historical reasons, well illuminated by the qualitative data:

"It must be said that, with respect to the Agricultural Park [South Milan Agricultural Park] the SPGs of the city, some SPGs of the city, were suspicious. Why? They did not want to buy the products of the Park because the rice grown in the Park was not organic according to them (…). The concept was that the chemistry used in the Agricultural Park could also affect those [producers] that were organic." (I1GB, female)

"I remember that the discussion that brought to the rupture was precisely on the fact: «But what do you want to cultivate in the Milanese?»… we said: «We need to convert the whole South Agricultural Park!». And this person said: «Are you kidding?! Here it sucks, (…) the pollutants…»" (I2GL, male)

"Then Intergas[3] was wrecked. Now I don't remember the exact year, but it was wrecked due to internal contradictions, among which this was one of the elements. (…) The concept was this: «Milan is polluted», but they were talking about fine powders essentially, «and so you have to look for producers hidden in the Apennines hills, and so on»" (I1GB, male)

From these quotes, it is possible to note that a major concern of those who belong to the Milanese SPGs was the pollution of the area. In the face of this, two different attitudes developed. The first aimed at changing the way of producing of farmers in the South Milan Agricultural Park, supporting them in their conversion to organic farming; on the contrary, the second considered it safer from a health point of view to turn to producers operating at a certain distance from Milan. Although joint meetings were held by the SPGs network on these issues, it was not possible to create a common culture between these two tensions. On the contrary, an internal conflict occurred, which

led to the dissolution of SPGs network itself. The breakdown of the network decreased the SPGs' possible overall impact as political agents on the territory and caused a fragmentation between Milanese SPGs, still visible today.

However, although not quantitatively widespread, the relationship between some SPGs and the territory is particularly significant. Both quantitative and qualitative data support this assumption. Structured interviews showed that among the nine SPGs which have a relationship with the producers of the territory, six (66,7%) have more than one type of relationship, thus showing a high commitment on this issue. Moreover, even if the action of converting producers to organic farming has not been undertaken by the SPGs' network, it has nevertheless led to some significant changes:

"We must instead take an action that, starting from the SPGs' consumption capacity, encourages the growth of organic farmers. In fact, (…) when we started there were three [organic farmers in the South Milan Agricultural Park]. Now, they are between 25 and 30, also considering the area that borders the Ticino Park" (I1GB, male)

These changes did not occur through the action of a single SPG, but thanks to the partnership with other players of the area: associations, other SPGs located outside the city of Milan, and the DESR itself.

DISCUSSION AND CONCLUSION

The study investigated whether SPGs, a form of AFN typical of the Italian territory, particularly widespread in Lombardy and the Milanese area are still a phenomenon of interest for the city of Milan, and have a role in reducing the distance between the city as a place of consumption and the countryside as a place of production. The results, based on a qualitative-quantitative study, show that SPGs are still a relevant phenomenon in the city of Milan, which currently counts 72 of them. However, their role in reducing the city-country distance is marginal, for several reasons. First of all, as Dansero and Pettenati (2018) already indicated, compared to other forms of AFN such as CSA and farmers' markets, SPGs tend to choose their producers on the basis of cognitive rather than spatial proximity (Boschma, 2005). In other words, they prefer to choose suppliers who share their same values, including respect for the environment and working conditions, rather than local suppliers. Furthermore, the basket of products purchased by SPGs is particularly large and often leads them to select some local producers, as well as more distant ones, who supply foods that have entered their diet, such as oranges or coffee, or products considered of quality (in this regard, it is not uncommon to find Sicilian pastry chefs or Parmigiano Reggiano producers among Milanese SPGs suppliers). An additive logic therefore prevails: adding producers rather than strictly selecting them, with the idea of supporting a variety of different suppliers, for multiple reasons.

It must be considered that in this study the relationship between SPGs and suppliers was investigated from the point of view of the total

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[3] Intergas was the network that connected the SPGs of the city of Milan, no longer active since 2014/2015.

number of suppliers for each SPG, as in Forno et al. (2013), not by the volume of spending per supplier (e.g., Randelli, 2015). If the research project had investigated the volume of spending per supplier, local producers would have been privileged, since the main expenditure in SPGs is that of fruit and vegetables, usually purchased in neighbouring areas. However, even considering this aspect, it is worth noticing that our results are different from those of Forno et al. (2013): for Milanese SPGs, producers located within 60 km are only 30,6%, while in Lombardy this share is larger, around 39,4%. This difference could be explained by two reasons: a geographic-spatial reason, linked to the fact that SPGs in metropolitan areas behave differently from others, as suggested by Baldi et al. (2019), and a time reason, since the study by Forno et al. (2013) was carried out nine years ago, and the behaviour of SPGs may have changed in the meanwhile. The qualitative data make us lean towards the first reason. The health concerns of some SPGs and the conflict arisen in SPGs network on the purchases from South Milan Agricultural Park producers did not allow for a shared commitment to be taken on this issue. Furthermore, the emphasis on quality in the criteria to choose suppliers suggest that the health-hedonistic culture is still very strong in the SPGs of Milan, reinforcing the results of Baldi et al. (2019), who pointed out that health is a particularly important issue for critical consumers in metropolitan areas.

Future research could investigate whether AFNs in other metropolitan areas have also faced similar cultural divergences, and what could be the levers to ensure that AFNs become agents of transformation of the territory, deepening the study on the relationship between SPGs and other actors that are interested in having a positive impact on the territory.

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Track 3: Urban Planning, Design and Development

This track brings together an eclectic variety of topics and discussion forms, that in their totality show that the themes of this conference are very much alive. Two European projects organized discussion sessions: the AESOP4Food project group chaired a discussion on an evaluation of a pilot education project for city-region food system planning, while the FUSILLI project focused on the role of EU projects in transforming urban food systems. The track also hosted a workshop on sharing experiences of transdisciplinary practices in building sustainable city-region food systems, and a presentation on a Master's program on agroecological urbanism for inclusive and sustainable food practices. The track also consisted of paper presentations, talking about a wide variety of issues, such as food-enabling urbanism, relocalizing food production, agroecological and inclusive land practices, the climate change, agriculture and food planning nexus, a framework for analysing policy approaches, and the combination of place-based and people-based approaches to assess food accessibility.

Combining place-based and people-based approaches to assess food accessibility

S. Vonthron, C. Perrin, M. Perignon, P. Rollet, C. Méjean, C.T. Soulard[1]

Abstract – **Food deserts designate neighbourhoods with low availability and accessibility of healthy foods. In France, there have been very few studies of food deserts, a gap which this paper aims to fill. Moreover, we address the frequently ignored daily mobility of inhabitants, conducting our study in the Montpellier city-region. First, we estimated the population living far from food outlets and mapped the related residential areas. Second, we explored whether households' food environment exposure varies with socioeconomic position, basing our analysis on the 699 household cross-sectional study Mont'Panier.**

We find that deprived households are not those most affected by physical access issues. In addition, the deprived households located farthest from food stores are not living in the most deprived neighbourhoods. Considering daily mobility modifies this result: households living in the most deprived neighbourhoods are exposed to fewer and less diverse food outlets in their daily activity spaces than households living in wealthier neighbourhoods. These results confirm the need to go beyond place-based approaches and develop people-based approaches.

Keywords – **food desert; food access; socio-spatial inequalities; activity space; priority neighbourhood; France**

INTRODUCTION

With the increasing prevalence of overweight and obesity (Swinburn et al. 2019), access to a healthy diet is a major societal issue. As these prevalences present a strong social gradient, promoting healthier eating practices requires understanding socio-spatial inequalities in food access and the effect of the food environment on dietary practices and overweight.

This issue of food access is embodied in the concept of the "food desert" or neighbourhoods with low availability and accessibility of healthy food (Beaulac et al. 2009). Food deserts have been particularly identified in socially disadvantaged areas, where low nutritional quality is combined with high prevalence of overweight. Thus, researchers have highlighted the links between inequalities in physical access to food across space and social and spatial health inequalities (Walker et al. 2010).

In France, 49% of adults are overweight or obese and there is a strong social gradient in this prevalence (Verdot et al. 2017). These social inequalities in health are also spatial inequalities, since the relationship between socioeconomic status and body mass index varies spatially (Feuillet et al., 2020). However,

in France, very few studies have explored the presence of food deserts (Nikolli et al. 2016; Merchez et al. 2020).

This paper examines food deserts in one region of France, addressing a factor frequently ignored in food desert studies: the daily mobility of inhabitants. In the international literature, most studies on food deserts use the administrative neighbourhood, census spatial units, or a buffer zone around home to characterise individual exposure to the food environment (Wilkins et al. 2019). However, while these place-based approaches are useful for urban planners, they do not take into account individuals' daily mobility, which exposes them to a wider food environment than their neighbourhood of residence. Does this exposure to food environment differ according to the socio-economic characteristics of the population? According to their place of residence? Answering these questions means moving from a place-based approach to a people-based approach.

METHODS

Case study

The Montpellier city-region in 2017 covered 31 municipalities for a total of 472,217 inhabitants, 60% living in the main city, Montpellier. It is one of the poorest urban regions in France, with a 20% poverty rate for the city-region in 2018 and even 27% for Montpellier.

Food outlet database

The French National Institute of Statistics and Economic Studies (INSEE) produces the national business register, Sirene, which records and collects economic and legal information on all new businesses, including food outlets. We extracted Sirene data from January 2019. The database was geocoded using Mon Géocodeur 2.5. Based on a reliability assessment of Sirene, we improved the database using field observations, OpenStreetMap, Google Maps, Google Street View, major food retailers' websites and municipality websites.

Place-based approach

This place-based approach is based on the smallest available spatial unit of demographic data: 200x200m inhabited grid cells. We used 500m network-buffers around food outlets to estimate the numbers of inhabitants living far from food outlets, and identified the areas concerned. We considered both the whole

population and the population living below the poverty threshold (deprived households). We calculated the number of deprived households per cell living more than 500m from a food outlet category in proportion to the area of the cell. The network-buffers were computed for all food outlet categories using the Hqgis extension available in QGIS 3.4 and based on the Here API. The fastest path method was used.

The distributions of households and deprived households living far from food outlets were mapped at the scale of the Montpellier city-region and of the main city, Montpellier. Analysis of these distributions focused on priority neighbourhoods (PN), the areas with a high concentration of low-income population targeted by social policy in French cities.

People-based approach
For the people-based approach, the data comes from the Mont'Panier cross-sectional study, based on quota sampling for household composition and age of head of household. This study recruited 699 city-region households from May 2018 to December 2019, following a call for participation.

Food environment exposure was assessed in households' activity spaces. A household's activity space is defined as the aggregation of the activity spaces of adults of the household who contribute to food provisioning. Activity spaces were delimited through the daily path area method (Smith et al., 2019). The household's activity space includes the area around the household's home, the areas around their activity locations (office, sports facility, children's school, etc. that they reported visiting at least once a week) and the buffers along the routes from home to the various activity locations. Home and activity locations were collected through an online questionnaire and geocoded. We used a 500m network-buffer to delimit areas around locations. Network-buffers were computed using the Hqgis extension. The fastest path method was employed. Routes between locations were computed using the Openrouteservice API. Network-buffers differed according to the mode of transport used (Burgoine and Monsivais, 2013).

Food environment exposure in the activity space was characterised according to 5 indicators: number of food stores, number of food service establishments, diversity of food outlets (among the 8 food store categories: butcher shop, bakery, drive-through supermarket, fish shop, greengrocer, grocery store, market, supermarket), relative density of stores selling fruits and vegetables (ratio of fruit and vegetable (F&V) retailers - drive-through supermarkets, greengrocers, grocery stores, markets and supermarkets - to total food stores), and relative density of fast food outlets (ratio of fast-food restaurants to total food service establishments).

We analysed whether area of activity space and household's food environment exposure vary according to socioeconomic, demographic and geographic characteristics.

The socioeconomic and demographic characteristics considered here were household composition, age group of heads of household, income per unit of consumption and car ownership. They were obtained from the online questionnaire. The geographic characteristics were urbanity (Montpellier, peri-urban municipality) and PN (within priority neighbourhoods or not). They were obtained by intersection of the location of households' homes with the administrative boundaries of the municipalities of the Montpellier city-region and the PNs, using QGIS 3.4.

The area of activity space and the households' varying food environment exposure were tested using nonparametric tests. The sample was stratified according to urbanity. For the subsample of households living in Montpellier, we also tested whether area of activity space and food environment exposure varied according to type of urban neighbourhood (PN or not). Statistical analyses were performed using RStudio 1.2.

RESULTS

1. Place-based approach: identifying areas without food outlets

1.1 Food swamps rather than food deserts
Over a quarter of the inhabitants live more than 500m from a food store, but this proportion differs according to the category of food outlet considered.

Nearly two-thirds of households live within 500m of a bakery and nearly half live within 500m of a grocery store. This result is consistent with the fact that these two categories of store are also the most numerous and spatially well distributed. Conversely, very few households live near a market or a fish shop, and even fewer live near a dairy, a frozen food store, or a hypermarket.

Focusing on the categories most studied in the international literature, because of the links between food and health, we observed that more households live near a fast-food restaurant (77%) than near an F&V store (64%). Fast-food restaurants also show the lowest proportion of households in the city-region living more than 500m away. The neighbourhoods in Montpellier whose households live more than 500m from an F&V store are densely populated and therefore easy to identify. In the peri-urban municipalities, the inhabitants concerned are spread over large areas.

In some residential areas, food environments are not conducive to good health: offering no healthy food options, they are food swamps rather than food deserts (neighbourhoods with no food options).

1.2 Deprived households live closer to food outlets than the general population
Deprived households' distance from food outlets is similar to or lower than that of the general population of the Montpellier city-region. Indeed, 18% of deprived households live more than 500m from a food store, compared to 26% of all households. A similar situation is observed for restaurants, as for most categories of food outlet. The differences are particularly large for butcher shops, grocery stores and greengrocers. In addition, 25% of deprived households live more than 500m from an F&V store, compared to 36% for the whole population of the city-region. This finding for the entire city-region was also confirmed for the city of Montpellier, whether considered on its own or with the peri-urban municipalities.

In addition, deprived households living more than 500m from an F&V store are heterogeneously distributed throughout the city-region area. They are particularly concentrated in some municipalities. Within Montpellier (Map 1), the 4,800 deprived households living more than 500m from an F&V store are distributed among all the neighbourhoods (except the historical centre), and do not live in the most deprived neighbourhoods (PNs). Nevertheless, there is a high concentration of such households in some areas, all of which are located outside the PNs. In the suburbs, 47% of deprived households, i.e. nearly 4,000 deprived households, live more than 500m from an F&V store.

Thus, while the most deprived neighbourhoods in the Montpellier city-region are not food deserts, some deprived households are affected by the issue of spatial accessibility to healthy food.
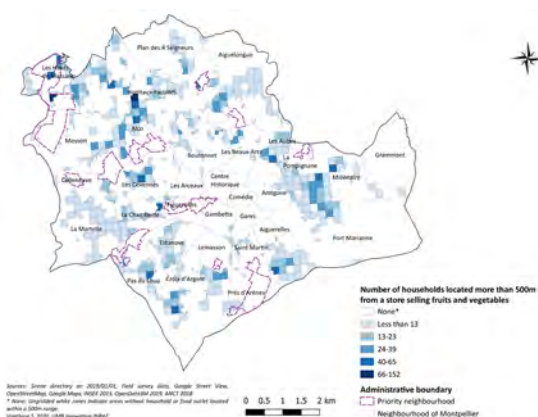
Map 1: Spatial distribution of deprived households living far from F&V stores in Montpellier

2. People-based approach: households' food environment exposure determined through daily mobility

2.1 Activity spaces are smaller for households residing in PNs, for those on low income and those without a car

In the Mont'Panier sample, the median area of activity space is significantly smaller for households living in Montpellier than for those residing in peri-urban municipalities. Moreover, within Montpellier, households residing in the PNs have a significantly smaller activity space than those residing in other neighbourhoods. This result reflects the smaller area of activity spaces for low-income households. The area is also significantly smaller for households without a car: half of the households without a car living in Montpellier (respectively in the peri-urban area) have an activity space of less than 0.83 km² (resp. 0.77 km²) compared to 1.79 km² (resp. 5.48 km²) for those with a car.

We used these activity spaces to assess the food environment exposure of households, in a people-based approach.

2.2 Households living in the peri-urban municipalities and in the PNs are exposed to less healthy food environments

Exposure differs strongly by category of food outlet and geographic location of household's home. Despite their larger activity spaces, households in peri-urban municipalities are significantly less exposed to food stores and restaurants than those in the central city, Montpellier. They are also less exposed to fast-food restaurants.

Households living in PNs are not exposed in their activity spaces to a significantly different number of food stores than households living in other neighbourhoods. However, they are relatively less exposed to F&V stores. They are also exposed to fewer food service establishments, 80% of which are fast-food restaurants (versus 57% for households living in other neighbourhoods). Thus, households in PNs are on the whole exposed to a food offer of lower quality than households living in other neighbourhoods, once we consider their daily mobility and not only their neighbourhood of residence.

2.3 Food environment exposure differs according to socioeconomic characteristics of households

In the Mont'Panier sample, the most deprived households are exposed to fewer food outlets and a less diversified food environment, but with proportionally as many fast-food restaurants and fruit and vegetable stores as others.

While we show in section 2.2 that households living in PNs are exposed to less healthy food environments, the relative densities of F&V stores and fast-food restaurants in activity spaces do not differ significantly with income level, regardless of the home's location. This result highlights the value of distinguishing between the two analyses. We suggest that these differences are explained by the fact that the most deprived households in our sample are not concentrated in the PNs but in relatively well equipped neighbourhoods, particularly in the historical city centre of Montpellier, where food outlets abound.

Moreover, the exposure of households differs according to their structure. Particularly among those living in a peri-urban locality, households with at least one child are exposed to a greater number of food stores and restaurants. This result is consistent with the vastness of their activity space and the correlation between activity space areas and the number of food stores and food service establishments.

It therefore appears that both the number of food stores and food service establishments and the diversity of food stores households are exposed to in their activity space differ according to their socioeconomic, demographic and geographic characteristics. Generally, these measures of exposure mirror those of the activity space area (the wider the area, the greater the number and diversity of food outlets). A different result is found for the relative density of fruit and vegetable stores or fast-food outlets. These measures differ mainly according to the household's home location (within the PNs or in the peri-urban areas), but appear to be less linked to socio-economic characteristics.

DISCUSSION AND CONCLUSION

Since Beaumont et al. (1995), the concept of the food desert has been used in many countries to describe very different realities, depending on the geographical contexts and the methods used. Our data from Montpellier shows that over a quarter of households

in the Montpellier metropolitan area live more than 500m from a food store. Focusing on stores selling fruit and vegetables, those considered "healthy" in the international literature, we find that more than a third of the city-region population lives far from these stores. Deprived households are not the ones most affected by this distance, and those actually living far from food stores do not live in the most deprived neighbourhoods (the PNs). Hence, food access inequalities in Montpellier city-region cannot be analysed solely through the lens of food deserts.

These results are modified when the activity space approach is applied. Our study shows that households living in Montpellier's PNs have more restricted activity spaces than those living in other neighbourhoods. They therefore appear to be "imprisoned" in their neighbourhood. These findings are in line with the work of Bouzouina et al (2016), who found that residents of sensitive urban areas in Lyon in 2006 are less mobile than those of other neighbourhoods: they make fewer trips, over shorter distances and for shorter periods of daily mobility. We show that this lower mobility translates into exposure to fewer food stores and eateries and to a lower diversity of food stores. Second, we show that households living in PNs are also exposed to relatively fewer F&V stores and to relatively more fast-food restaurants. Thus, PNs are identified as neighbourhoods with a high concentration of low-mobility households having low exposure to F&V stores and high exposure to fast-food restaurants. This suggests that Montpellier's PNs should be considered as food swamps, that is to say, neighbourhoods where the abundance of energy-dense food acts to the detriment of healthier food behaviours (Rose et al. 2009). These results therefore highlight the inadequacy of a place-based approach. Considering individuals' daily mobility practices is essential to understanding inequalities in food access.

Moreover, our findings can be used to identify neighbourhoods where a policy of regulating the supply of food service establishments, as implemented in Great Britain (Keeble et al. 2019), could help to reduce household exposure to fast-food restaurants. However, even though such policies are intended to reduce these disparities in exposure to the food environment, will households change their practices as a result? Longitudinal studies are required to answer this question, and to explore how individuals respond to the food environment changes that they experience in their daily lives.

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Evaluation of a Pilot for Transdisciplinary and Participatory Learning and Research for food system planning
AESOP4Food:
Sustainable Food Planning Online Seminar and Living labs

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Abstract – **Planning for sustainable food production, food resilience, food justice and food security is more than ever urging us to look for more effective, equitable, and just approaches that radically change not only the way we grow food, but the very core of our living space.**

There is evidence of serious gaps in knowledge and transformative competences to address the challenges in a transdisciplinary way and the recognition of the essential role of graduates of (spatial) planning course in developing integrated territorial plans in a democratic way, and understanding an inter-sectoral, multi-level, and multi-stakeholder approach.

Therefore, the Erasmus plus Action for Education, Spatial Organisation and Planning for Sustainable Food (AESOP4Food), a partnership of universities and NGOs from Belgium, France, the Netherlands, Poland, and Spain aims to answer the need for sustainable food planning by creating a joint interdisciplinary European learning activity. Core target groups are university staff and students from architecture, urban planning, landscape architecture, agronomy, environmental sciences, as well as sustainability studies. Secondary audiences are NGOs and communities involved in local food systems, municipalities and the wider public, in order to break down barriers and foster collaboration, while encouraging knowledge development at all levels: personal, professional, communal and political. In the first half of 2022, AESOP4Food organised a seminar and supported the development of living labs. The online seminar is a combination of lectures, interactive exercises, tailor made assignments and presentations by the participants. The seminar is supported by a Wiki with learning outcomes, exercises, assignments, references. It makes use of interactive digital tools such as Mural.co, and Padlet.

The partnership between academic institutions, staff with civil society (NGOs and communities), and local authorities is supported by the Participatory Action Learning and Action Research (PALAR) nature of the project and the connected living labs. This allows knowledge to be cocreated rather than simply transferred top-down to communities and connect it to local circumstances and needs.

The paper presents the outline of the online-seminar in connection with a series of living labs and the findings of the evaluation of the first pilot seminar. We would like to discuss our findings, and the feasibility of carrying out the PALAR approach in an online mode.

Keywords – **participatory action learning, e-learning, living labs**

THE AESOP4FOOD SEMINAR

Planning for sustainable food production, food resilience, food justice and food security is more than ever urging us to look for more effective, equitable, and just approaches that radically change not only the way we grow food, but the very core of our living space. The significant interest in the pre-lecture series in the spring of 2021 supported our claim of a rising attention and need of filling the gaps in knowledge and transformative competences to address the challenges in a multi-disciplinary way in the food systems resilience. The growing tendency of bottom-up processes shows that there is an essential role of graduates of (spatial) planning programmes and community workers to contribute to the development of integrated territorial plans in a democratic way, with an understanding of an inter-sectoral, multi-level, and multi-stakeholder approach.

Therefore the Erasmus plus Action for Education, Spatial Organisation and Planning for Sustainable Food (AESOP4Food), a collaboration coordinated by the LE:NOTRE Institute with partner universities and NGOs from Belgium, France, the Netherlands, Poland, and Spain develops a joint interdisciplinary European learning activity. Core target groups are university staff and students from architecture, urban planning, landscape architecture, agronomy, environmental sciences, as well as sustainability studies. Secondary audiences are NGOs and communities involved in local food systems, municipalities and the wider public. The form of the learning activity is organised to foster collaboration, while encouraging knowledge development at all levels: personal, professional, communal and political.

In the first half of 2022, AESOP4Food organised a seminar focused on food system planning for city regions. The seminar was structured in 5 phases: (1) Exploring the field of play focused on main challenges, theoretical frameworks, approaches and methods, (2) Analysing your local foodscape with (power)mapping of food system and SWOT analysis, (3) Collaborative goal setting and visioning, (4) Strategy and interventions, and (5) Evaluation & monitoring. For each phase a set of learning goals is formulated. The integrality of learning goals can be found on the media wiki.

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Figure 1. Example of learning goals for phase 1. Exploring the field of play (source: https://wiki.landscape-portal.org/index.php?title=Learning_objectives)

The seminar introduced the conceptual frameworks of Agroecological Urbanism (Deh-Tor, 2021), Regional Agroecological Food Systems (Vaarst, M. *et al*, 2018), Food justice and democracy, and the methodological approaches of participatory learning and research. The concepts were illustrated by presentations of case studies and projects. The assignments were supported by lectures on food mapping, power mapping, living labs and collaborative goals setting and visioning. All presentations are recorded and available on the AESOP4Food website.

Participants could take part in three modes: actively participating by doing assignments and the exercises during the sessions; only doing the interactive exercises; or passive by only listening to the lectures and presentations. The main participants were students of the partner institutions. External participants could also take part. The latter had to organise their own tutoring and case study they would be working on. The partner institutions connected the seminar to their own living labs. The AESOP4Food project helped externals with tutoring and assessment.
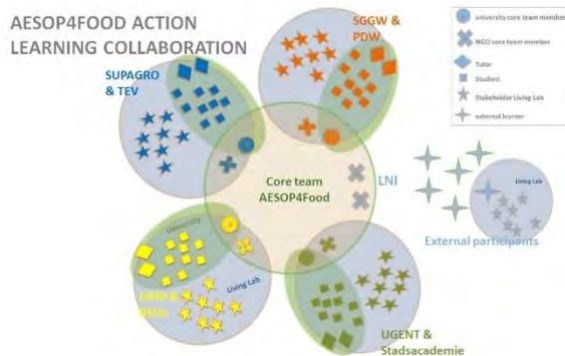

Figure 2. The core team with links of each NGO and university with the living labs and external participants.

The partnership between academic institutions, staff with civil society (NGOs and communities), and local authorities is supported by the Participatory Action Learning and Action Research nature of the project and the connected living labs (Chevalier & Buckles, 2019; Woods, 2020). This allows knowledge to be co-created rather than simply transferred top-down to communities and connect it to local circumstances and needs. The seminar started with a self evaluation of all participants on their competences and gave them the possibility to give feedback on the learning goals, so we could better understand the profile of our audience and survey the impact of the course at the end of the program.

The seminar is supported by a set of online tools. The core is formed by media Wiki with the course schedule, learning objectives, assignments and exercises, reading list and an area where students can upload their material. For the communication with the participants Slack was used, also complemented by Email. The exercises were carried out by using Padlet and Mural.co. The powerpoints and recordings are freely accessible on the website of AESOP4Food.

Figure 3. Impression of the media Wiki of AESOP4Food (https://wiki.landscape-portal.org)

Our focus was to form mixed teams with online and on-site participants from the beginning of the course, which generated some particular situations of the teams being more local and some really international with only online participation. In addition to the teams of the partner schools (from Warsaw and Madrid) we had three other teams in Poznan, Vienna and France.

At the end of each phase, the teams presented their assignment online, for which they received feedback from the tutors (academic partners of the projects) and their peers. These intermediate assignments were integrated in the final presentation.

At the end of the online course (July 2022), an intensive workshop took place in Madrid that focused on food security of a neighbourhood in the city. Only the students from the partner university participated in this workshop.

EVALUATION OF THE PILOT

The evaluation and monitoring of the seminar consisted of (1) a pre-survey at the start of the course, (2) reflective questions which had to be answered in each phase, (3) a post survey by participants and partners and (4) short self reflection essays of the participants of the international workshop. The partners discussed the feedback.

Main observations of the evaluation are.
Only active participants followed in a continuous way the seminar, probably because of the intermediary sessions dedicated exclusively to assignments presentations.

In general, the participants were satisfied or quite happy with their learning progress. Also the tutors and teachers of the partner institutions learned a lot about sustainable food planning and how to organise an online seminar and collaboration.

The three different modes of participation caused some confusion and for those who only wanted to listen, it was not helpful to insert the exercises in the lecture session. We consider having only two modes of participation (passive and with assignments and exercises) and to have an additional separate session for the active group.

It is difficult to follow the collaborative process of PALAR with a larger group with various cultural and educational backgrounds. Some participants stated that the learning strategy was something totally new for them and found it hard to adapt to.

In the seminar several mixed teams worked together. These consisted of bachelor, master and PhD students, as well as researchers and community workers. There were different levels of motivation and

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starting competences. In some groups there was a combination of online and on-site participants, which worked not so well.

There is a need for short introduction videos on how the online tools work (Mural, Padlet) and methods (Nominal Group Technique, Food mapping, Power mapping). The seminar should provide some starting exercises for the practical competences and link these more clearly to the different exercises or phases of the assignment.

The communication in the students' help Slack channel functioned quite well, with different channels for literature, exercises, living labs, etc. Some 76 tutors and participants made use of it and the response time to questions was very short, also because beside the tutors, the participants answered questions posed by colleagues. The participants thought that uploading material in the Wiki was challenging, although that system is not so complex.

The time for the exercises during the sessions was considered too short. Participants needed time to learn to work with the digital tools, so that was a double challenge. The exercises should be less complex. Tutors need to structure the time for the exercises.

The living labs had often another pace than the seminar so it would be good to make the phasing of the assignments more flexible. The lectures can act as background information, inspiration, examples for the assignments and the living labs. It would be good to present in the beginning of the seminar the complete assignment with all the phases. The actual content could remain more open, so participants can easily adapt them to their context.

The lectures introduction of the concepts, context of sustainable food planning, agroecological urbanism and the case studies were well appreciated. For the participants who had less knowledge of the challenges, some additional lectures could be added. The partners aim to include additional experts to provide the broader view and context, as well as strategies of different countries.

The structure of the sessions was challenging. The time for the exercises was too short and participants would want more time for questions and answers and discussion. So it might be a good idea to split the sessions.

The living labs were in a start up phase or the general aim still had to be defined in the first weeks of the seminar. It is better if the work in the context of the living labs is clarified before the first session.

The teams who work in an on-site map need also to collaborate with their communities, stakeholders and other interested parties, so it would be better to have separate living labs for on-site and online participation attendance of the course. The online assignment could also be carried out in the form of a case study instead of a living lab. In the introduction, a good and practical clarification of the link between the seminar and the living labs is essential.

Conclusions and Future outlook

The spring seminar 2022 is the first pilot of the project. Two more seminars are planned for the first halves of 2023 and 2024. The content, assignments and connection with the living labs will be improved based on the evaluation of the partners and the feedback of peer reviewers.

For this new season we intend to dedicate intermediary sessions of tutoring dedicated exclusively to the assignments participants which will only present at the end, while the others will have a cursive program.

The difficulty of functioning remotely in heterogeneous teams with members from different professional and level of experience and situated in diverse cultural and geographical contexts for creating a living lab will be addressed in this new season. We will have a different approach for on-site and online external lab. The fact that students can build on the experience of last year, and on already established living labs should help in structuring the work. We will start with with the action of the labs over the past year.

The online session structure will be simplified to a theoretical introduction, case-study lecture, in order to respond to the need and observations of the participants to have more clear and synthetic information during the online class. We are considering having the exercises and assignments in separate sessions.

The breakout rooms organisation for the online exercise will be simplified and focused on the exchange between students.

A major part of information (compulsory readings, references and video recordings of last year presentations) will be transmitted to the students between the sessions. Also a better correlation between course and assignment structure will facilitate approaching the latter. The assignment will be better structured and presented at the beginning, and we will also propose more efficient tools and methods for building it.

A better definition of the field of play in the introduction part will facilitate a more concise and practical understanding of the students of different levels of competences. New lectures will enrich our programme.

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AESOP4FOOD presentations and recordings:

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Exploring climate change, agriculture, and food planning nexus

Delgado, Cecília[1]

Abstract – **This paper explores the following questions: (1) to what extent Climate Adaptive Plans and Strategies – CAPEs – include the increase of local food production as a way to address the effects of climate change; (2) Do they consider each step of the food chain or solely food production; (3) How those measures are transcribed to the planning rules and regulations. A selected group of 14 cities that entered a Portuguese competition ECO XXI aiming to measure city sustainability achievements was used for empirical examination. Results suggest that adaptive measures relate to increasing local agriculture, mapping out land availability or stress the need for local agroecological practices. Moreover, CAPEs measures are predominantly related to agriculture production, leaving behind subsequent food chain activities. Central conclusion is that even if those measures are, in theory, to be transcribed into planning rules and regulations in coming years, they remain fragile to transform reality: planner's awareness to these topics remain insufficient and the links between food, climate and planning are still missing, or else quite thin.**

Keywords – **Climate Adaptative Plan and Strategies; Master Plan; urban planning; Portugal**

INTRODUCTION

In 2021, the United Nations Intergovernmental Panel on Climate Change - CC sounded the alarm on a looming crisis: CC is generating a "code red for humanity" that requires urgent action (IPCC, 2022). Food systems are deeply entwined with this crisis. In many regions, especially in the developing world, CC has already started to reduce agricultural productivity and disrupt supply chains. Therefore putting pressure on the livelihoods and threatening significantly hunger and malnutrition, making adaptation efforts crucially important (IPCC, 2022).

Recent estimates indicate that food systems contribute more than one third to greenhouse gas (GHG) emissions causing CC-(E.C., 2020). Meeting the challenges of CC will require a transformation of our food systems—an overhaul that demands major policy reform, substantial investment, and an enabling environment that fosters and embraces innovation (IPCC, 2022).

MISSING LINKS BETWEEN PLANNING, FOOD AND CLIMATE

Urban planning still largely ignores food issues. In general "food remained a stranger to the field of urban planning' (Pothukuchi and Kaufman, 2000) until the early 2000s. A survey concluded that the perceived urban–rural divide was a central reason: food and agriculture were considered a rural topic; 'our city is in an agricultural area, but the city doesn't deal with agriculture or farming issues' (Pothukuchi and Kaufman, 2000). Some years later, Sonnino (2009)

reached a similar conclusion: 'the urban–rural divide has misled planners and policy-makers into looking at

urban food supply failure as farm failure, rather than as a failure in the food system. The prevailing sectoral planning and decision-making approach, and its lack of a holistic perspective, seems another reason explaining why 'food has been a stranger' to urban planning (Raja, Born and Russell, 2008; Morgan, 2009; Brinkley, 2013).

Those obstacles did not prevent some pioneers to developed guidelines on how to plan for food. In 2007 Pothkuchi (APA, 2007) formulated to the American Planning Association the Policy Guide on Community and Regional Food Planning. In 2011 White and Natelson (2011) published the guidelines Good Planning for Good Food. In 2012 Viljoen et al (2012) published the book Continuous Productive Urban Landscapes. In 2018 Cabannes and Marocchino (2018) edited Integrating Food into Urban Planning highlighting city based practices that are reducing these gaps in creative ways. In 2021 Verzone and Woods published Food Urbanism (2021). Those are some of the examples that show that food is less a stranger to urban planning today than a couple of decades ago.

On the subject of CC there are as well several barriers to its inclusion in municipal plans. Ribeiro, Ferrão and Seixas (2018) identified multiple obstacles and limits: the non - mandatory condition of the CC agenda, the uncertainty associated with the downscaling of CC scenarios, the scarce scientific insights on how adaptation can be integrated into planning tools, the inexistence of guidelines from central government, the urban planning tradition that ignore the issue of CC, a predominant culture of reactive management, insufficient technical skills and financing mechanisms are the most relevant ones. In addition the formulation and implementation of food and CC adaptation strategies are both reliant on political will that often change according to political cycle, and this limits as well their inclusion as part of municipal plans and strategies (Ribeiro, Ferrão and Seixas, 2018; Doernberg *et al.*, 2019; Delgado, 2020)

In Portugal a silent revolution took place over the last two years. Several guidelines on planning and CC were formulated at national level, such as: (1) The national programme for Territorial Planning Policies (2019) which suggests that master plans (at municipal level) should include CC mitigation and adaptation

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measures; (2) The national agency in charge of spatial planning – "Direção Geral do Território", published a compendium of "Good Practices to Master Plans" (DGT, 2020) with a specific section on the role of food and urban agriculture to address CC effects; (3) A national Agenda – "Terra Futura 2020-2030" - in line with the European Green Deal and Fork to Farm Strategy identified targets to turn the country climate-neutral by 2050; (4) The national Guidelines for Climate – "Lei de Bases do Clima" were published at the end of 2021, proposing cross-cutting instruments and sectoral climate policy instruments for several themes including the agri-food chain, carbon sequestration strategies, green economy and just transition.

The National Guidelines for Climate highlight as well that each municipality and region must approve a Climate Adaptive Plan before the end of 2023. Data from the end of 2020, indicates that 271 out of a total of 308 municipalities in mainland Portugal, Azores, and Madeira had adopted at least a municipal, intermunicipal or metropolitan planning instrument (plan or strategy) related to CC adaptation. However, such plans and strategies are non-mandatory: in other words, their implementation relies on political willingness.

METHODS AND SAMPLE

This paper explores 14 [CAPEs] of a selected group of cities that entered *ECO XXI*[i] national competition. The competition is based on a multi-dimensional framework for sustainability, including governance and participation; cooperation with civil society; CC; and agriculture. In 2021, as much as 57 out of the 308 Portuguese municipalities competed. Out of these 57, 40 had formulated and approved a Climate Adaptive Plan or Strategy (CAPE): 16 at municipal level and 24 as part of a broader metropolitan or regional plan. Out of the 16, we considered for closer examination only the 14 predominantly urban with at least 51% of their population living in urban areas.

Map 1. Location of the 14 municipalities analysed

Source. Autor elaboration

Map 1 shows the location of those municipalities. The number of city inhabitants ranges from 30.374 (Lagos, Algarve Region) to 213.608 (Cascais, Lisbon Metropolitan area) (source INE, 2020). The oldest CAPES were approved in 2016 (Braga, Amarante and Funchal) and the most recent one in 2020 (Valongo, Porto Region).

These 14 municipal CAPEs were first analysed in order to list the Key-sectors for CC adaptation/mitigation that were included, and to identify if agriculture and planning were part of them. We then analysed the type of agriculture and food adaptation measures (on the strategy) or actions (in the plans)[ii] using a double strand approach, food production on the one hand and other stages of the food chain on the other[iii]. The last round of examination consisted in a deeper examination of those five cities with a Climate Adaptation Plan - CAP (Cascais, Agueda, Maia, Leiria, Lagos) in order to better understand how those cities were foreseeing the integration of their actions into territorial / spatial planning. Finally, semi-structured interviews were carried out with the heads of the Planning Department of the five cities in order to confirm how and if those actions were transcribed into planning instruments.

RESULTS

Table 1 shows which sectors were considered relevant for climate adaptation in the 14 CAPEs analysed. It highlights that "Agriculture, forest, and fisheries" appears as the most frequently referred sector for CC adaptation [13 out of the 14 CAPEs]. Other interconnected sector "Biodiversity and landscape" were considered relevant as well [13 out of 14]. Urban planning and cities are as well considered relevant [10 out of 13].

Table 1. Key sectors considered on the 14 CAPES

Key sectors	Mentioned/ N=14
Water resources	14
Health	14
Agriculture, forests and fisheries	**13**
Biodiversity (and landscape)	13
People and goods safety	11
Tourism	11
Energy and industry / economy	10
Urban planning and cities	**10**
Coastal zone and sea	6
Demographic dynamics	2
Transport and communications	2
Financial sector	1
Disaster risks reduction	1
Infrastructures	1
Monitoring, information, awareness	1
Building	1

Source. Author elaboration

The 14 CAPEs as a whole, counted 407 measures and actions (M+A) for CC adaption. Still, only 44 related to food and agriculture (10.8% of total). Such a low result tends to indicate the thin relation, at action level, between CC and Agriculture.

Table 2 list the 27 (M+A) connected with food production. Seven of them (listed in half of the plans) relate to the use of native species adapted to CC; fol-

lowed by access to land (counting 6) consisting of either mapping idle land, improving access, or preserving land; and then five relate to increasing agroecological production and other related practices.

Table 2. Topics related with food production

Topic	N.º
Boost native crops more adapted to climate change	7
Improve land access / make use of idle land/ preserving land for agricultural purposes	6
Increase agroecological production and other related practices	5
Create a seeds bank / preservation of genetic material	2
Create an agriculture Agency	1
Develop school community gardens	1
Re-plant Forest (eucalyptus) with orchards adapted to climate change	1
Boost agro-pastoral uses	1
Boost crops diversification	1
Creation of a farmers' stock exchange	1
Setting up a manual for agricultural practices	1
Total measures / actions	27

Source. Author elaboration

Table 3, highlights that 17 out of the 44 Measures and Actions refer to different stages of the food chain: water access being the most frequent, either through retention basins or use of treated water.[iv]

Table 3. Topics related with other entry points of the food chain

Topic	N.º
Dams/retention ponds/treated water for agricultural	5
Assessing initiatives	3
Regeneration of local food markets	2
Strength trading and consumption of local products	2
Control supermarkets territorial dissemination	1
Commercial promotion of new fish varieties	1
Assist the conversion of fleets and fishing gears	1
Award for the best efficient use of water for agricultural	1
Donate community composters	1
Total measures/actions	17

Source. Author elaboration

A closer look to the 14 CAPEs reveals that 11 out of 14 have a chapter on the integration of their M+A into spatial planning representing slightly more than 2/3. However, a closer look to the five municipalities with Climate Adaptation Plans - CAPs i.e., Cascais (2017), Agueda (2018), Maia (2019), Leiria (2018), and Lagos (2018) reveals that only two of them, Maia and Leiria, considered the integration of their CC adaptation actions into territorial plans. This being said, each of them includes actions related to agriculture and food: Cascais (5/78); Agueda (6/68); Lagos (15/145); Leiria (3/54); and Maia (9/62). Such finding when detailed, reveals that the percentage of agriculture related actions, still remain low, ranging from 6,4% (Cascais) to 14,5% (Maia) of overall number of actions and measures.

How those actions are going to be integrated remains unclear: Maia and Leiria municipality, indicated they integrated some of actions in the master plan chapter (as a strategic guideline or as a pilot area) or even as a land use change. However, no timeframe indicates when this is going to be made. And it is not clear either which department will be in charge for doing it. In addition, the comparison between different CAPEs shows that the same goal can be either integrated in territorial plans or not[v].

Results from the interviews with the heads of planning departments - HCPD from Maia and Leiria indicate that the urban planning departments are not always involved in the CAPs formulation process. For instance, Maia representative participated in the elaboration of the strategy, but was not part of the formulation of actions in the city plan. Both HCPD expressed some astonishment about food planning relevance although being open to debating about it. Both HCPD agreed that master plans scope is mostly land-uses regimes i.e., either agricultural land or urban land. Master plans are not concerned with the development of specific actions such as formulation of pilot cases, creation of land banks, promotion of agroecological practices which are as today outside the planning domain. According to HCPD those action should be part of a Detailed Plans. In addition, there was a consensus that CAPs are normative and not binding: their implementation relies essentially on political will. Last but not least, on the ground these actions are led by the Environmental Department leaving behind the Urban Planning one.

A PROMISING START, BUT MORE AWARENESS RAISING AND TRAINING ARE STILL NEEDED

Back to the leading questions: (1) To what extent CAPES consider the increase of local food pro-duction as a way to fight the effects of CC; (2) Is it considering all the food chain stages? (3) How those measures are transcribed to the planning rules and regulations. Answer to question one is positive, based on a limited and non-representative sample of Portuguese cities, one can safely conclude that CAPEs include an increase local food production as a strategy to face CC. However, these M+A remain limited when compared with the overall number of M+A proposed as they represent only 10,8% of the total. This means that stakeholders involved in CAPEs formulation do not have a clear perception of the impact of Food Systems on CC. This is a missed opportunity that calls for more awareness raising on role FS can play.

Regarding the second question results suggest that indeed food production is being considered, while other stages of the food chain are less so. Importantly, even quite relevant ones are missing, such as food loss and waste prevention or food distribution/transport. In line with previous conclusion this confirms that stakeholders involved on CAPEs formulation largely miss what FS entail, and its potential positive impact CC adaptation.

Lastly, the inclusion of several M+A into planning instruments is quite promising. However, on the ground this is not happening. Several reason can explain such a situation:

1 - CAPEs remain normative plans and in addition are essentially indicative (non-mandatory). This means that their implementation relies first of all on political will;

2 - Lack of planner's awareness on the subject and finally;

3 - A entrenched administrative silo culture that often limits food and agriculture to environmental department leaving aside others, such as planning.

In shortly, the findings are showing that the potential role of planning and more precisely food planning in adaptation to CC is not being fully unleashed. Such a

consideration is in line with various previous findings in other countries, by authors such as Reckien et al (2018) or Doernberg et al (2019) confirming that Portugal is not an exception.

What does these results mean for planners and food planning?

First - It is important to assure that measures included in CAPES will be mirrored in planning instruments. It is a window of opportunity that should not be forgotten. So far it is not happening. Planners' argument stating that master plans are not the right scale for food and urban agriculture development as a means for CC adaptation should be challenged and revisited.

Second - In countries as Portugal without a strong urban planning tradition[vi] the connection between different disciplines can be an additional challenge as food requires a holistic perspective, often not required in the architecture schools. This is at the same time a huge opportunities for schools to lead the way to an emergent topic as food planning.

Third - Several guidelines on planning and CC have been formulated at national level. And other mechanisms such as Municipal Fund for Environmental and Urban Sustainability exist since 2015, which can be used to expand food issues. This is extremely promising. Nevertheless, they don´t seem to catch enough attention at local level.

In conclusion, there is a need to increase awareness and outreach among planners and other stakeholders. This process should be supported through discussion and participatory research on the ground. Bridging the gap between innovative laws and guidelines at the national level and planners addressing these topics at the city level.

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[i] Link https://ecoxxi.abae.pt/ (accessed in August 2022)
[ii] The climate Plan proceeds the Climate Strategy. The last one details how, and a specific goal is going to be carried on and by who, e.g., city department, private sector, etc.
[iii] Actions that only consider the forest without the agro-forest dimensions were not considered. Water was only considered when directly related to the Agricultural activity
[iv] This is a very important nexus that will not be explore further on.
[v] This will be expanded in a forthcoming article.
[vi] In Portugal there is not a specific degree on urban planning. Traditionally planning is being led by geographics, architect, economists.

Relocalizing food production in times of crisis:
Urban governance in Prague and Brno

M. Pixová, C. Plank[1]

Abstract –The multitude of ongoing crises has exposed an increasing need for local food alternatives, which we conceptualize as values-based modes of production and consumption (VPC). Drawing on our research of the role of VPC in the Czech national food regime, we analyse how different VPC are supported in urban governance and planning in two Czech metropolises, Prague and Brno. In these cities' strategies and plans, urban food policy is a new phenomenon and not yet consistent with other urban agendas. Moreover, it is preoccupied with food production's environmental and aesthetic aspects rather than food provisioning itself. Support for community gardens and a lack of attention for traditional food self-provisioning such as allotment gardening, whose food production potential is far higher, indicate that urban food policy in Prague and Brno is not based on knowledge of the role of VPC in the Czech national food regime and misunderstands the different potential of VPC to produce food within it.

Keywords – food alternatives, national food regime, food self-provisioning, crisis, urban governance

INTRODUCTION

Times of crises, affluence and transformation have historically led to changes in national food regimes, e.g., the establishment of allotment gardens in times of war or their decline during the post-socialist transformation. The simultaneous COVID-19 pandemic; imminent energy, food and economic crises ensuing from Russia's aggression against Ukraine; and the overarching climate crisis are yet again exposing the necessity for more localized food alternatives, which we conceptualize as values-based modes of production and consumption (VPC).

Recently, there has been a growing scholarly interest in Czech alternative food networks (AFN), especially in farmers' markets and community gardens. In the Czech context, these AFNs are relatively new and their scalability still faces various challenges and barriers (Syrovátková et al., 2015). Moreover, they attract citizens mainly by providing access to food of extra quality and as a community building opportunity (Spilková, 2017). On the other hand, about 43% of the Czech population is involved in food self-provisioning (FSP), which, in case of gardeners, contributes on average 33% of their vegetable, fruit and potato consumption (Vávra et al., 2018). Based on similar research results from Brno, Sovová (2015) advocates for the enhancement of urban FSP due to its large potential to contribute to sustainable food production and self-sufficiency among gardeners. A particularly important role in urban FSP is played by allotment gardens, which

nonetheless, especially in bigger cities, tend to be gradually built over, contributing to declines in local food system resilience and security (see Tóth et al., 2018). This trend could now potentially change given the ongoing crises and the new Gardening Act No. 221/2021 Coll. passed in Czechia in 2021, which recognizes gardening as a public benefit activity. Our aim is thus to contrast these recent events with the way local food production is conceived by Czech urban governance and planning. Drawing on the preliminary results of our research into the role of VPC in the Czech national food regime, we examine here their role at the urban level by analysing the most relevant current plans, strategies and other conceptual materials which have been passed and published by the cities of Prague and Brno, focusing primarily on how they support different VPC and understand their role in food production.

THEORETICAL APPROACH AND METHODS

Food regime theory shows the strategic role of food in global capitalism and the way it has served different hegemonic powers throughout history (McMichael, 2009; Friedmann and McMichael, 1989). In the current corporate food regime, McMichael (2009) distinguishes between delocalized "food from nowhere" and relocalized "food from somewhere". We understand the latter as VPC. Schermer (2015) also recognizes "food from here", i.e., regional and national food produced by strong food regime actors, which nevertheless leaves major features of the corporate food regime unchanged. In Austria, widespread availability of "food from here" in retail chains has been recognized as an important factor discouraging the emergence of new food initiatives, such as community supported agriculture (ibid.). Our preliminary results from Czechia show that both "food from nowhere" and "food from somewhere" largely benefit from the rising popularity of local food alternatives and use narratives surrounding VPC in their marketing strategies.

In spring and summer 2022, we collected 22 interviews with Czech experts and activists in areas of agriculture and food as part of our ongoing research into the role of VPC in the Czech national food regime. In this paper, we expand our data by analysing the role of VPC at the municipal level. Our aim is to see how municipal institutions in Prague and Brno incorporate VPC and food production into urban governance and planning, and to what extent this

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reflects the current crises and the need for relocalized food production. For this purpose, we conducted desk research of these cities' official planning and strategic documents, as well as conceptual materials and grey literature published by or in cooperation with municipal institutions. We also draw on long-term observation of urban governance and planning processes and practices in both examined cities.

Given their publication date, it is important to recognize that the analysed documents do not yet reflect the current crises ensuing from the Russian aggression against Ukraine, i.e., the energy and food crisis. Despite its fundamental impact on food supply chains and the Czech agri-food sector (Doucha, 2021), the COVID-19 pandemic does not feature in the documents in connection to local food production. As a result, the climate crisis is the only crisis which the analysed documents put in relation to food. Aside from strategic socioeconomic development plans, we thus mainly focused on the two cities' climate plans and other related materials.

RESULTS AND DISCUSSIONS

In the case of Brno's strategic plan, the 2050 strategy and vision documents (Magistrát města Brna, 2017) are supported by climate change adaptation principles (Magistrát města Brna, 2016). While food production is not the focus of these principles, it is included in the strategic plan itself. The plan conceptualizes food from local sources as an important aspect for sustaining balance among social, ecological and economic factors. It proposes to increase Brno's food self-sufficiency by expanding its food production area and by slowing down its loss due to city development. It also emphasizes the importance of educating citizens about sustainable development and food self-sufficiency. The plan, however, admits to the absence of data regarding urban and peri-urban food production potential and, correspondingly, has no goals aimed at allotment gardens. In fact, in their assessment of Brno's key problems with climate change adaptation, local stakeholders pointed out the city's plan to transform some allotment gardens into residential developments (Magistrát města Brna, 2016). Moreover, in 2014, Brno's government attempted to simplify the redevelopment of allotment gardens, courtyards and other greenery by passing a controversial land-use plan actualization, which was only abolished thanks to the successful litigation campaign Dobrá žaloba (good legal action) led by Brno-based NGO *Nesehnutí*. The effort to eliminate allotment gardens, especially those located in the inner city where they are close to their users, nonetheless continues to date.

Unlike in Brno, Prague's strategic plan (IPR Praha, 2016) is not concerned with climate or food, which can be explained by the spatiotemporal context. In the first half of the 2010s, the climate crisis was not yet on the agenda of urban governance and planning in Prague. Instead, Prague was undergoing transformative changes in its planning practices, launching preparations of a new land-use plan, officially called the Metropolitan Plan, and was preoccupied with the visual qualities of Prague's built environment (see Pixová, 2020). Localized food production seemed irrelevant in the context of

abundant and easily available "food from nowhere". As a result, Prague's strategic plan mentions VPC only in relation to gardens and farmers' markets, which are both conceptualized in terms of space creation and revitalization, community building and greenery or as a tool for supporting public spaces. The plan thus obviously puts emphasis on Prague's spatial development and its aesthetics.

Food is, on the other hand, included in Prague's climate plan (Magistrát hl. m. Prahy, 2021). In that regard, the plan declares support for ecological agriculture, as well as for allotment and community gardens. It advocates shortening food supply chains and states the aim to stop leasing municipal land to subjects who do not farm ecologically. Ecological farming and gardening are nonetheless mostly framed as climate change and biodiversity loss measures, not as sources of food. In other words, food in Prague's Climate plan is less conceptualized in relation to actual food production and consumption and more so in relation to food's ecological footprint and the potential of green spaces where food is produced to improve urban resilience and liveability in the context of the climate crisis.

In a separate document outlining the climate adaptation strategy (Magistrát hl. m. Prahy, 2017), support is expressed for urban and peri-urban agriculture and for partial FSP, including the tradition of allotment gardening and its production function. Guidelines for the further development of allotment gardens are yet to be drafted. Another strategy document dealing with circular economy introduces "a completely new agenda of urban food policy" (Magistrát hl. m. Prahy, 2022). Referring to the European Union's Farm to Fork strategy, it calls for increased local ecological food production and support for local food producers, e.g., by public procurement and digitalized services connecting producers with consumers, by providing spaces for storage and gardening or by establishing a city farm. Yet, aside from various technical measures, attention is mostly given to community gardens and the prospects of upscaling their production. Traditional FSP and its perspective upscaling, despite its incomparably higher significance and potential in local food production, is not mentioned. In other words, we can see large inconsistencies in Prague's food policy throughout the analysed documents. These are even more obvious when compared with the reality of the current proposed Metropolitan Plan. In her report assessing the state of allotment gardens in Prague and the prospects for their further development commissioned by the city of Prague, Miovská (2018) was especially critical of one of the draft versions of the Metropolitan Plan as it threatened up to 75% of Prague's functional allotment garden colonies by enabling different functional uses for them or by classifying them as sites available for development. In response to this, Prague's Institute of Planning and Development received many remarks which are currently being processed before the final version of the Metropolitan Plan can be published and passed.

Further comparing the two cities and their strategies, Brno, unlike Prague, has incorporated its climate plan into its strategic plan (Magistrát města Brna, 2017), which we have analysed above. It also

has a separate Sustainable Energy and Climate Action Plan (SECAP), which Prague incorporated into its climate plan. Brno's SECAP is not concerned with food or gardening at all. Urban farming development is promoted in the Smart Prague Conception 2030 (Deloitte CZ, 2017), which however misconceives localized food production in Prague as a way of reducing the city's dependence on food from the countryside. While this dependence is typical for bigger cities (Plank, C., et al. under review), more emphasis should be put on reducing Prague's significant dependence on food imported from abroad, i.e., "food from nowhere", in which supply chains are much longer, more complicated and thus more vulnerable to failures. Brno does not have a smart city conception.

CONCLUSION

In the heyday of globalization and neoliberal consolidation, an urban food policy was non-existent in the two Czech metropolises. Support for localized food production (i.e., VPC) is a new phenomenon in urban governance and planning in both Prague and Brno. Given their publishing dates, the existing strategies, plans and conceptual materials do not yet fully grasp the multitude of current crises that make the need for urban VPC ever more pressing. Support for VPC has not yet permeated through the cities' plans and strategies, which partly explains inconsistencies in relation to other agendas, such as development, and in conceptualizing VPC. The two cities' climate plans and related strategies and conceptions primarily see gardening, urban agriculture and short supply chains as climate change measures and focus on reducing food's ecological footprint. Given the crises unfolding in recent years, which make the world we live in increasingly insecure, the analysed documents put surprisingly little or almost no emphasis on the strategic role of VPC in localizing food production and food provisioning. In that regard, Prague's strategic plan now seems almost outdated in its emphasis on the aesthetic and marketable aspects of certain kinds of VPC. Farmers' markets and community gardens especially are seen by the plan merely as tools for increasing the aesthetic qualities of public and private spaces, that is, tools for increasing their market value.

The role of food provisioning can also be found in the Smart Prague Conception 2030, although its problematization of food imports from the countryside instead of food from abroad testifies to a wider lack of understanding in urban documents as regards the role of VPC in the Czech national food regime, which is dominated by strong actors within the "food from nowhere" and "food from somewhere" regimes such as retail chains and large agrarian enterprises. This misconception is particularly evident in the low priority given to traditional FSP, especially allotment gardening, which receive rhetorical support in some documents but have been repeatedly threatened by the cities' land-use plans. Meanwhile, the significance of FSP in food provisioning, and allotment gardening in the urban context especially, is much larger than that of community gardens, which nonetheless receive far more attention in urban food policies. A topic for further research would be to explore possible links between municipal support for community gardens and their role in gentrification, contrasting these with the lower support for traditional allotment gardens that do not enhance public space in the same marketable way. It would also be useful to explain the long-term ignorance of food production and provision and the absence of food policies in municipal plans and strategies in Prague, Brno and Czech cities in general.

We thus conclude that in introducing urban food policy in their governance and planning, the two examined cities need to respond to the unfolding crises and the pressing need to relocalize food production in a way that is adequate given the current situation. In doing so, they also need to align their strategies with deeper knowledge of Czech VPC, especially their position within the national food regime and the different potential of different VPC to produce larger quantities of local food.

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The role of food gardening in addressing urban sustainability
A new framework for analysing policy approaches

Ingrid Jahrl, Joëlle Salomon Cavin[1]

Abstract – The aim of this paper is to develop a new framework to analyse governance mechanisms, expressed as *policy approaches* to urban food garden development, which can serve as an analytical tool to enable comparison of cities and to analyse their efforts to achieve urban sustainability. The framework is based on case study analysis of public policies towards urban food gardening in the Swiss cities Berne, Lausanne and Zurich. We identified three core dimensions to characterise *policy approaches* in cities for the further development of city gardening: frames, level of institutionalisation, and policy-society relationship. Frames refer to the perception of gardening which is expressed by the objectives set by urban policy and the contributions gardening should fulfil in urban development. Level of institutionalisation provides information on the extent to which garden support is anchored in urban policy. Policy-society relationship refers to the type of leadership by city politics and the possibility for non-political actors to participate. For the further development of urban food gardening, the challenge for urban planners is to find the best possible combination of the three elements for their cities, adapted to the respective city context, the dominant sustainability goals and the social actors involved.

Keywords – Urban agriculture, urban gardening, governance mechanisms, public policy analysis, Switzerland

INTRODUCTION

Urban gardens have long been part of green-space planning by many cities in the Global North (Keshavarz and Bell 2016), but renewed interest by local authorities and communities in the last two decades has placed gardening more prominently within the concept of "urban agriculture" (UA) on the urban planning agenda (Mansfield and Mendes 2012, Morgan 2015). This increasing importance is driven by a growing interest in urban gardening by civil society, and recognition by urban planners that UA can contribute to sustainable city development, e.g. by providing ecosystem services (Van Veenhuizen 2006, McClintock et al. 2017, Haaland and van den Bosch 2015). Nevertheless, urban green spaces have become contested spaces and urban gardens have to compete with different land use types (Tappert et al. 2018). Furthermore, civil society's demands for garden areas have diversified, leading to new and different forms of garden types, with potential for

conflict between them (Frauenfelder et al. 2014). For example, traditional allotment gardeners now compete for garden space with newcomer community gardeners (Jahrl and Schmid 2017). Urban planners therefore face the challenge of rethinking the functions and objectives of areas for growing food so that the corresponding governance mechanisms for food gardens can best be adapted to current developments, especially with regard to urban sustainability.

In analysing how policies govern allotment and community gardening in the Swiss cities of Berne, Lausanne and Zurich, we aim to develop a new framework to analyse governance mechanisms, expressed as *policy approaches* to urban food garden development. This framework aims to serve as an analytical tool to enable comparison of cities and to analyse their efforts to achieve urban sustainability. Although gardening in cities is embedded in different contexts (Prové et al. 2016), we advocate the possibility of developing a common framework based on the comparison of cities, which can potentially support research and policy makers in understanding and reflecting on policy with regard to urban food gardens and their role in sustainable urban development.

METHODS

We used and adapted the political-administrative programme approach (PAP) (Knoepfel et al. 2011) (Figure 1) to analyse policies in the three cities related to green spaces and gardening, in the context of urban sustainability. The adapted PAP provided the framework for data collection and analysis.

The research follows a "descriptive case study" approach (Gerring 2004). The methodological approach applied was qualitative content analysis of documents from politics/administration (administrative strategies, plans, reports, press releases and other grey literature) on "farming", "gardening", "food" and other relevant terms associated with urban food systems. Information gathered through websites and documents from media and civil society organisations informed the analysis. Furthermore, six short interviews with policy administrators from the three case cities were carried out to obtain additional documents and data not

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available online. The final sample consists of 260 documents mainly from 2000 to 2018.

RESULTS

The PAP outlined by Knoepfel et al. (2011) (Figure 1) describes elements relevant to the development and implementation of policies. It proved to be a valuable approach to identify basic characteristics of city policies that govern gardening. Based on this analysis, we developed a framework that combines the individual PAP elements. This allows for a more focused and straight forward analysis of how gardening in the city addresses urban sustainability, and how this could be further developed.

The following explains the different elements of the new framework which are supported by the analysis of the three case cities.

A new framework for analysing policy approaches on gardening

The new framework is defined by three dimensions: frames, level of institutionalisation and policy-society relationship, which were developed inductively when analysing the case cities according to the modified PAP. For a better understanding of cities and their governance mechanisms, the three dimensions are characterised by two opposing characteristics: (i) frames: multifunctional vs. monofunctional; (ii) level of institutionalisation: institutionalised vs. ad-hoc; and (iii) city-society relationship: leading vs. enabling (Figure 1).
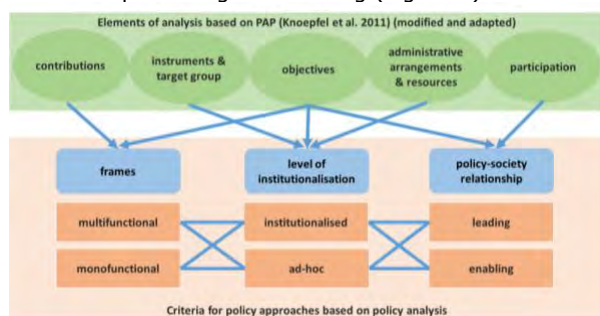

Figure 1. Framework for analysing policy approaches. The arrows mark which elements of the adapted PAP by Knoepfel et al. (2011) have contributed to the elements of the new framework.

Frames

This dimension is related to the perception of gardening, which is expressed by the objectives set by urban policy and the contributions gardening should fulfil in urban development. Based on our analysis, we argue that the importance of gardens in urban policy is determined, inter alia, by whether gardening is framed as having few functions ("monofunctional"), or a range of functions/a comprehensive concept ("multifunctional"). Multifunctional city gardens can contribute to different city-specific needs and challenges (Nikolaïdou et al. 2016). The policy analysis reveals that considering multiple frames for gardening and embedding them in overall strategic urban planning can link gardening to addressing overall urban sustainability challenges. In Lausanne, allotment and community gardens are associated with a "good quality of life", yet they are ascribed to a range of economic, ecological and social goals (*multifunctional*). In Berne and Zurich,

community gardening is foremost associated with social aspects (*monofunctional*), while allotment gardening is framed by social as well as ecologic aspects (*multifunctional*).

The analysis of the case cities implies that the more diverse the functions are that urban policy ascribes to gardening, the less interchangeable this form of land use is compared to other land uses and the more likely it is that gardening is considered in urban planning. The community gardens in Lausanne, which are attributed to local food supply, biodiversity and social connections in the neighbourhoods, are more likely to play a more important role in long-term strategic city planning than community gardening in Berne, which is associated with opportunities for public participation and enlivening previously unfrequented or unattractive places. These gardens are more likely be replaced by other land uses.

Level of instiutionalisation

This dimension provides information on the extent to which the promotion of gardening is anchored in urban policy, and examines whether the support follows institutionally-defined long-term strategies ("institutionalised") or short-term single-actioned measures ("ad-hoc"). We define support for gardening as institutionalised when it is based on defined strategies, clear objectives, sound instruments and resources directed at defined target groups. It is considered ad-hoc when support is single-action oriented. While literature emphasises the importance of urban policy for the promotion of community gardening, it also points out that support is often not targeted or strategic, and that gardening policies are more likely to be implemented to meet global trends rather than for well-founded support of urban gardeners (Eizenberg and Fenster 2015, Prové et al. 2016). Based on the analysis, we argue that the further development of gardening in the city will depend on whether urban policy is able to take targeted actions and measures that address the city's (sustainability) challenges.

In all three cities, a strategy and regulation for allotment gardens has been established but is generally accompanied by little support (*institutionalised*). City administrations in Berne and Zurich support community gardening, but mainly on a project level *(ad-hoc)*, (so far) without a written strategy. In Lausanne, community gardening is part of the strategic green space planning and supported by some instruments *(institutionalised)*.

The analysis of the case cities reveals that institutionalised support with sound instruments and measures corresponding to the objectives depends on the expectations placed on different target groups in addressing urban sustainability objectives. Analysing policy documents from the three case cities reveals that gardeners, and especially allotment gardeners, are generally confronted with few expectations.

Policy-society relationship

This dimension refers to the type of leadership on the part of city politics and the possibility for non-political actors to participate. Ambrose-Oji et al. (2017) define government as either "leaders" or "enablers" in terms of their role and degree of power

and power sharing with non-government actors. On the one end of the spectrum, "leaders" exercise high governmental actor involvement and great influence and control over objectives and processes. On the other end of the spectrum, non-state actors are given a very active role in controlling the processes and the realisation of objectives. Here, governmental actors function as "enablers". Based on this simplified form of differentiation, we distinguish between urban policy having active leadership, based on city objectives ("*leading*") or allowing urban actors to take the lead on implementing ideas and projects ("*enabling*"). Based on the analysis, we argue that the further development of gardening will depend on the role of urban policy in steering its target groups and whether this role is oriented towards fulfilling city-specific visions and objectives.

In all three cities, the administration takes a relatively strong leadership role in influencing objectives and processes of policy implementation in allotment gardening *(leading)*, although this is mainly expressed by setting the framework conditions (areas for gardening or gardening regulations). This can also be seen in community gardening in Lausanne and Berne *(leading)*, where gardening activities are partly controlled and monitored. In Zurich, community gardening is often realised through requests from the population and gardening initiatives often make their own decisions about their provided area and activities *(enabling)*.

The analysis of the case cities reveals that the objectives the city aims to address and the role it assigns itself to do so are very important for the development of gardening in the city. As the owner of the land, the city administration not only decides what role it wants to play in steering gardening in the city, but also how it defines the role of non-state actors and how much decision-making power non-state actors are granted. This may vary from project to project and over time. How the city administration defines its role in supporting or promoting gardening can also be inferred from the existence of a strategy and defined objectives, whether gardeners can participate in decision making as a conscious decision or more likely as a result of a missing strategy.

DISCUSSION AND CONCLUSION

The analysis shows that the policy approaches towards allotment and community gardening vary between the three case cities. Cities tend to pursue a vision with defined objectives and corresponding measures and resources as soon as they make certain demands and define expectations towards gardening. The analysis reveals that multifunctional framing of gardening and institutionalised support conditions tend to coincide with further development of gardening in the city. Whether desired objectives are achieved with a leading or an enabling steering approach by urban policy depends on the interests and level of organisation of non-state actors in gardening. In cases of strong organised interests by gardening associations, an enabling approach could possibly address desired sustainability objectives. Where associative power is weak, a leading approach supports the development of community gardens. For the long-term development and social embedding of

gardening in the city, however, a joint development of goals and processes between urban policy actors and gardening associations is most promising (Carr 2002).

The analysis has shown that despite different gardening policies in the three cities, it was possible to develop a common framework to identify policy approaches. There are three benefits from this development: first, the adapted PAP can be used by city planners to develop and review urban policies to check whether formulated objectives are underpinned by appropriate instruments, target addressees and if they are accompanied by participative processes and embedded in sustainability objectives. Second, provided that a city has at least some form of garden policy, the new framework can be used by researchers and policy makers to understand and reflect on this city's policy approaches towards gardening. Cities often pursue sustainability goals and the policy approaches could provide a basis for analysing which approach would be best suited to achieve sustainability goals towards gardening in a given urban context. At a time when urban agriculture or gardening policies are in danger of being used for "green washing" (Tornaghi 2014), a comprehensive framework is helpful to mitigate this challenge/threat. Third, the developed framework adds to governance literature; in highlighting and combining the dimensions of frames, level of institutionalisation and policy-society relationship, it presents possible levers of policy implementation and thus supports better understanding and analysis of governance processes in promoting urban food gardening.

To further develop city gardening, we conclude that it is not sufficient for cities to be committed to sustainable development and be willing to support gardening in the city. For gardening to play a more substantial role in sustainable urban development, policy makers must be aware of the multiple contributions gardening can have for urban sustainability, while also taking different user interests into account. Taking a holistic perspective on sustainability requires that policy makers not only consider gardening but also address other relevant land uses which potentially address sustainability challenges such as (professional) city farming. By doing so, cities should question the previous roles, steering instruments and demands of the different land use types and adapt them to social needs and city contexts.

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The role of projects funded by the European Union in transforming the urban food system
The case of the FUSILLI project in Turin (Italy)

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Abstract – Several EU framework programs focus on promoting the sustainable transformation of urban food systems.

Among them, the Horizon 2020 project, FUSILLI, is ongoing in Turin (Italy) with the aim of enhancing the urban food system by testing experimental policies in governance, production, consumption and distribution activities. These policies are expected to be mobile or capable of being transferred and replicated in very different contexts.

Starting from the case-study analysis in Turin, this paper aims to highlight the main pros and cons of the EU funded projects related to food policy mobility.

The results underline the importance of those projects in helping municipalities in implementing food policies and proposing experimental activities that can be successfully replicated across very different urban contexts.

Keywords – Milan Urban Food Policy Pact; urban and peri-urban ecosystems; urban food policies; living labs

INTRODUCTION

Some of the main EU framework programs directly or indirectly impact on urban food systems, through multi actor projects, usually implemented in multiple cities. Such programs have the power to make concepts, discourses and methodologies circulate at the international scale, addressing the development and implementation of food policies and practices at the local level (Morgan 2013).

Some scholars, mostly from political and social science, have criticized the circulation of some discourses, derived from international policy framework, for having depoliticized highly political problems, such as urban environmental sustainability (Swyngedouw 2015). Several projects implemented in the framework of the H2020 program have a specific focus on the theme of planning for and supportive governance in local and regional food systems. In particular, the aim of these projects is to answer the question of how to plan and develop policies that are supportive in re-bridging cities and their hinterlands.

After a general overview, based on the analysis of the most relevant H2020 projects, funded between 2014 and 2021 and focused on urban food systems, this short paper investigates the specific case study of the project FUSILLI (Fostering Urban Food System Transformation through Living Labs Implementation) in Turin. Grounding on the specific case of FUSILLI, this paper aims to identify and analyze the main concepts, discourses and methodologies emerging at the European scale, around the broad topic of urban food systems. To this end, it delivers an overview of the main barriers and opportunities for such activity and offers final suggestions for local policymakers.

METHODS

The contribution presents the results of an ongoing research, whose aim is to critically understand the role of EU-funded projects (notably H2020) in addressing urban food systems, focusing on the case study of the city of Turin, in North-Western Italy.

The hypothesis is that these projects on one hand can support the implementation of practices and policies aiming at increasing urban food systems' social and environmental sustainability, orienting urban agendas according to common European policy frameworks (e.g. the Farm to Fork Strategy). On the other hand, though, at least two possible risks can be highlighted: (a) the homogenizing and effect of international - often neoliberal - policies and governance models over alternative practices and policies emerging from cities (as commented, about large urban development projects, by Swyngedouw et al., 2002) and (b) the conclusion of virtuous experiences with the end of the projects that supported them economically and logistically, without an upgrade as structural policies.

In order to highlight the role of projects funded by the H2020 program in affecting urban food policies and practices in Turin, we base on a multi-methods methodology, based:(a) on a qualitative review of the most relevant H2020 projects explicitly focused on urban food systems and policies funded in the EU in the last cycle of the program (2014-2021) and (b) on the action-research activities carried out by the Authors in the last eight years, when they were embedded in the complex process of definition of a urban food policy in Turin, recently boosted by the H2020 project FUSILLI (Calori et al., 2017; Dansero et al., 2019).

DISCUSSION

In line with the internationally acknowledged growing role of urban food planning in addressing broader sustainability and social justice issues (Morgan, 2009; Moragues-Faus and Morgan, 2015; Moragues-Faus and Battersby, 2021) and with the global institutional framework of the Milan Urban Food Policy Pact, the European Union has lately focused its attention on urban areas as laboratories for the development of sustainable local food systems and on urban local governments as key actors in the implementation of its strategies aiming at addressing food systems' sustainability (Magarini and Porreca, 2019). Even if the "Farm to Fork" strategy only marginally mentions

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urban food systems, the strategic role attributed by EU to cities as laboratories for sustainable food systems can be acknowledged, for instance, by some calls for projects focusing on urban food systems launched in the framework of the H2020 programme. A notable example is the programme H2020 - EU 3.2 SOCIETAL CHALLENGES - Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy, launched in 2013. The programme generally aims to support more sustainable food systems, able to "secure sufficient supplies of safe, healthy and high quality food and other bio-based products, by developing productive, sustainable and resource-efficient primary production systems, fostering related ecosystem services and the recovery of biological diversity, alongside competitive and low-carbon supply, processing and marketing chains". However, some of the calls for projects that have been launched in the framework of this programme explicitly focus on urban food systems and have funded projects built around topics like "Innovative and citizen-driven food system approaches in cities" and "FOOD 2030 - Empowering cities as agents of food system transformation".

Three relevant projects can be mentioned, as examples of the strict relationships between EU policies and programmes and the bottom-up emergence of urban food policies in several European cities, all of them focused on the sustainable transformation of urban food systems by experimenting with activities in education, governance, production, consumption and distribution:

- *Food Trails*, which started pilot projects based on participatory processes dedicated to nutrition, environment, circularity and community innovation;
- *Cities 2030*, aimed at transforming cities into resilient ecosystems capable of addressing food system emergencies through community activation;
- *FoodE*, which promoted the transition towards sustainable urban food systems across Europe by mapping citizen-led food-related activities*,* and promoting engagement initiatives in 18 schools of eight European cities.

Looking at these initiatives, the European project FUSILLI focusses on putting into practice experimental 'mobile' actions that, while adopting the same approach in twelve urban contexts, can be sartorially adapted to the political conditions and necessities expressed by urban communities.

FUSILLI aims to formulate shared urban food policies (UFP) to complete the transition towards an high-quality, sustainable, safe and inclusive food system in 12 European cities (Athens, Castelo Branco, Differdange, Kharkiv, Kolding, Oslo, Rijeka, Rome, San Sebastian, Tampere, Turin). In line with the European Commission's 'Food 2030' strategy, FUSILLI focuses on the experimentation of innovative policies along five main axes of the food chain: production, distribution, consumption, waste management and governance. As pointed out by the

project proposal, these policies should be 'mobile', namely transferable to contexts different from the original one, by promoting the diffusion of new social and political imaginaries and multiscalar interactions between institutional and noninstitutional actors (Peck 2011). To this end, all the cities adopt a common method of applied research and policy action, the Living Lab (LL), based on the engagement of citizens in designing, formulating, testing and evaluating innovative actions in real-life settings (Nesti 2018).

FINDINGS

In Turin, the LL is located in the district of Mirafiori Sud, a post-industrial area bordering other territorial administrations. As a medium-term objective, FUSILLI aims to define a city strategy and establish a Food Policy Council to coordinate food policies. In the short term, the project envisages the launch and co-management of several food-related initiatives, including the transformation of community spaces by means of circular economy experimentations. Among them, the Orti Generali (urban garden association), thanks to the support of the University of Gastronomic Sciences (UNISG) and the University of Turin (UNITO), is transforming its traditional bar, which has long been a meeting place for local gardeners, into a 'circular kiosk', where food surplus is utilized in the preparation of recipes, organic waste is recovered for breeding, water consumption is optimized, and packaging is strongly reduced. To complete the transformation, the initiative involves the community of gardeners and citizens in a participatory and awareness-raising process about the potential of urban horticulture to transform city food systems. This space currently plays a key role in overcoming administrative boundaries by creating alternative and trans-scalar networks through initiatives with a strong agro-ecological value, which turn urban and peri-urban transition areas into more resilient ecosystems (Savini and Bertolini 2019). Such initiatives, if replicated and transferred in other urban and peri-urban areas, could contribute to achieving the food production and food waste targets outlined in the Milan Urban Food Policy Pact signed by the municipality in 2015.

These initiatives shared and implemented in eleven other European cities have highlighted the barriers and opportunities of the mobility of food policies on an urban scale.

Looking at the obstacles, three main dynamics seem to inhibit the potential of urban food policies promoted by European projects. Firstly, the different regulatory frameworks of countries led in some cases to the inability to transfer or adapt initiatives in a similar way in different contexts. In FUSILLI, regulations concerning space management, land quality, and available incentives often prevented comparisons on applicable strategies to develop initiatives in a coherent manner. Secondly, widely differing political balances have created blockages in decision-making that risk disempowering experimentation. In some urban contexts, dynamics of competition and competition between city departments and offices have slowed down the implementation of FUSILLI. In Turin, favourable

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political conditions have allowed the situation to be unblocked, while in other contexts such as Athens, some blockages do not yet seem to have been overcome. Third, the varying degrees of community sensitivity meant that some cities were able to work more easily while others struggled more to involve citizens in the co-design and co-testing of activities. Being located in a very favourable context in terms of social relations between local stakeholders and food-related ongoing projects, the Turin Living Lab in Mirafiori South was able to involve and activate the community from the very beginning.

Moving on to the main opportunities generated by FUSILLI in Turin in terms of 'policy mobility', two main aspects turn out to be particularly relevant. In the Turin case study, the food governance activity succeeded in promoting the creation of an inter-departmental food-dedicated municipal office and a food council or assembly open to civil society and made up of grassroots organisations. Although the city had been working on the establishment of such bodies for some time, it had never achieved a political commitment to establish them definitively. With FUSILLI's impetus, this situation was unblocked, leading to Turin being able to count on two policy arenas dedicated to coordination

FUSILLI wanted to test similar activities in different contexts, demonstrating how some widespread actions, such as the Locanda nel Parco and the Orti Generali circular kiosk, can be easily replicated in other national and international contexts, after assessing the socio-environmental conditions in order to tailor the action, involving the various local stakeholders, and finally hypothesising on the eventual success and evolution of the project over time (Colleòny and Swartz, 2019).

CONCLUSIONS

The research briefly presented in this paper is still ongoing and some key research questions remain open. More specifically, it should be investigated to what extent EU projects like Fusilli represent the chance for already existing local strategies to be funded and boosted by framing the relationships of the many - and sometimes colliding - local actors into a common projectual "umbrella".

Conversely, how local policies and politics are influenced and shaped by the international agendas expressed by programmes like the H2020, conforming bottom-up activism to heterodirected non-local strategies and reducing the space for sincerely place-based policies?

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Towards the scaling up of more agroecological and inclusive public land strategies in France

Coline PERRIN[1]

Abstract – **Farmland is the subject of new societal and scientific interest. Its management is presented as a cornerstone for the adaptation of agriculture to societal expectations concerning food, landscape and the environment. We analyse how these issues shape local public action on farmland and trigger local innovations in the South of France (Hérault). We focus on the rationales, instruments, and partners of local authorities' land strategies. The provincial forward-thinking policy on fragile natural areas in the 1980's led to the establishment of vast public open green spaces, managed partially through agroecological methods, and used for recreational activities. Since 2000, inter-municipal authorities have contributed to the scaling of farmland innovations, allowing for their replication (scaling out), their institutionalization (scaling up) and the dissemination of new principles of land management (scaling deep). Finally, we highlight the importance of individuals and socio-political relations of power in these innovation pathways. Our results open avenues for critical analyses of innovations in farmland management, for research on the spatial coexistence of agricultural and food models, and more broadly on the land-food nexus.**

Keywords – **innovation, decentralization, food system transition, land justice, land-food nexus.**

INTRODUCTION

Farmland is the subject of new societal and scientific interest. France is recognized worldwide for its regulatory land policies put in place after the Second World War. However, farming communities and grassroots movements advocate for a reform of farmland policies in France (AGTER and Terre de Liens, 2018) and in Europe (Nyéléni Europe and Central Asia, 2021). Scholars present farmland management as a cornerstone for the adaptation of agriculture to societal expectations concerning local food, landscape and the environment (Calo et al., 2021), a potential lever for just sustainable agroecological and food system transitions (Coulson and Milbourne, 2022).

In this paper, I analyse how these new issues shape local public action on farmland and trigger innovative initiatives in the South of France (Montpellier region). Following decentralization processes, I focus on the role of local authorities in the scaling-up of innovations. How have evolved the rationales, instruments, and partners involved in local public action on farmland? How do local innovative initiatives impact the use of farmland? Do they enhance access to land for farmers involved in local food chains or agroecological practices?

CONCEPTUAL FRAMEWORK

This research on farmland management is rooted in food planning (Morgan, 2015; Cabannes and Marocchino, 2018) and radical food geography (Hammelman et al., 2020).

Local public management of agricultural land is one of the instruments of relevance for the development of urban food policies. Scholars have documented a growing number of local innovative practices, concerning land-use planning (Kassis et al., 2021), the management of publicly owned farmland (Jarrige et al., 2020; Perrin and Baysse-Lainé, 2020; Vandermaelen et al., 2022), and other incentive or regulatory tools (Léger-Bosch et al., 2020).

I consider innovative practices in local public management in a broad sense of social innovation or novelty, not limited to technical innovation: "a novelty is a new way of doing and thinking - a new mode that carries the potential to do better, to be superior to existing routines. Novelties can be seen then as seeds of transition" (van der Ploeg et al., 2004).

The scaling-up of social innovations remains a challenge for a sustainable and just transition of agri-food systems (Lamine et al., 2019). Scholars have identified several pathways to upscaling (Lambin et al., 2020). In order to explore the role of local public land strategies in sustainable food transformations, I rely in this paper on the three types of "scaling" distinguished by Moore et al. (2015): scaling out (replication, dissemination of successful innovations), scaling up (institutional change), and scaling deep (changes in cultural values).

METHODS

To contribute to this debate, I analyse the rationales, instruments, and partners involved in local public action on farmland in the Montpellier region (South of France) since the 1980's. In a context of progressive decentralization, I focus on the role of local authorities: municipalities, inter-municipalities, and provinces (*départements*).

This research is based on in-depth interviews with about 50 actors involved in farmland management (government officials and staff, farmers' organisations, NGOs). Interviews aimed to explore how land

policies and politics influence food system transformation pathways. I asked interviewees about the connections between the local public projects on farmland that they consider as "innovative", and about the role of local authorities and other actors in the possible scaling up of more agroecological and inclusive public land strategies.

Hérault province is an interesting case. First, this area is known in France as a long-term laboratory for regional planning, with the creation in the 1960's of new towns and seaside resorts on the coastline, and of national and regional natural parks in the hilly hinterland. It is also worth mentioning the very proactive public urban planning of Montpellier municipality. Second, I had already identified, studied, and compared several dozen of innovative practices in local public management of farmland in this area (Perrin, 2020; Perrin and Nougarèdes, 2020; 2022). Finally, this region has experienced in the last 50 years rapid transformations impacting farmland: rapid demographic growth (population has doubled), suburban sprawl and repeated crises of the wine industry. Grape monocropping still occupies most agricultural areas, but uprooted vineyards have left space available for the diversification of production (cereals, vegetables) (Perrin et al., 2018). Land property is very fragmented amongst private smallholders, most of them (ex-)vinegrowers.

RESULTS

By the end of the fieldwork conducted from 2018 to 2021, I had identified 63 innovative local public projects on farmland since 1950, at multiple scales – ranging from the entire province to one municipality, one farm, or even one plot of land–.

This results section focuses on the role of 3 kinds of actors at different time periods: the provincial council in the 1980's, intermunicipal authorities since 2000, and NGOs in the last ten years.

The forward-thinking strategy of the provincial land agency (1980-92)
In France, the planning system is structured in a hierarchical pyramid fashion. Public regulation of urban planning mainly relies on binding zoning plans drawn up at municipal level. The municipal council approves the plans and mayors sign building permits. Supervision and control are in the hands of the central state, with increasing input from intermunicipal authorities since 2000. The provincial council is in charge of rural planning and of the protection of fragile natural areas.

Hérault provincial authority created in 1981 an NGO, the Hérault land agency, to conduct its land strategy, consisting in a frequent intervention on rural land market to avoid land speculation and urban sprawl. This agency was financed through a new tax on every new construction. In a context of rapid urbanisation, this tax generated enough public resources to buy around 110 fragile natural areas, corresponding to 10,000 ha, most of them between 1980 and 1992. These vast public open green spaces are open to the public and used for recreational activities. Many of them are managed through pastoral sheep breeding and agroecological methods.

In addition to these acquisitions of large estates mostly located in the hilly hinterland, the Hérault land agency used the provincial pre-emptive right (concerning every sale of land located in agricultural or natural zones of municipal land use plans) to control and prevent informal building in coastal and peri-urban agricultural areas under very strong pressure for other (i.e. residential, recreational) uses.

This frequent intervention of the Hérault land agency on rural land markets was recognized as a forward-thinking land strategy by other provinces in France. Its rationale was to counterbalance the focus of other levels of administration on urban planning, who involved massive amounts of public money in urban development projects, at a time of rapid demographic growth.

For years, Hérault land agency worked hand in hand with municipalities willing to avoid informal constructions and/or the acquisition of large estates by foreigners – which was at that time perceived locally as land grabbing. However, the agency stopped buying land in 1992, and was then closed in 2004. Heads of the provincial administration underline that the Hérault land strategy was criticized by local farmers, defending the market value, rather than the use value, of their agricultural assets. One told us: "we were not supposed to become the landlord of the whole province like in the 14th Century". Another one added: "this would have been an intrusion into farming systems" (interviews conducted in 2012). Indeed, individual private property is still perceived as a norm, a strong cultural value among farmers in the area.

Inter-municipal authorities have supported the scaling out, up, and deep of innovations since 2000
From 2000, inter-municipal authorities got new competences in strategic urban planning, economic development, and more recently in water and environment management. With such competencies, inter-municipal authorities can contribute, through a wide range of actions, to the scaling of innovative land practices.

In the 2000', two inter-municipal authorities stand out for their proactive strategy on farmland. Both dealt first with the issue of farmland preservation on the urban fringe. Montpellier metropolis approved the 2006 strategic Master Plan framing municipal zoning, addressing agricultural areas in a new way, as productive spaces and not only as empty spaces awaiting urbanisation. The CAHM intermunicipal authority, located in more periurban and rural settings, supported several projects of grouping of new farm buildings, in order to avoid the scattering of new constructions in agricultural areas (Perrin and Nougarèdes, 2022). The rationale for public action on farmland was to preserve agrarian landscapes and support the wine industry in economic crisis.

In the 2010', numerous land initiatives were identified. Both inter-municipal authorities bought farmland, allocated publicly owned land to farmers, and tried to convince landowners of uncultivated lands to lease them to farmers. These new public land practices supported agricultural alternatives to grape growing (market gardening, pastoral breeding), and the access to land of new farmers.

The rationale for inter-municipal strategies on farmland is hence less clear than for the provincial land agency. It differs from one action to another,

ranging from preserving agrarian landscapes, or supporting vinegrowers facing repeated economic crises, to supporting short food chains and preserving the environment.

The relation between the inter-municipal authority and the single municipalities varies. While both inter-municipal authorities aim at replicating innovative land projects in various municipalities (scaling out, following Moore et al. 2015), the CAHM authority provides municipalities with technical and financial support, when Montpellier metropolis rarely provides them with direct assistance. Rather, Montpellier metropolis contributes to the institutionalisation (scaling up) of new principles of farmland management (scaling deep), with its 2006 Master Plan and its 2015 Agroecological and Food Policy. In a strategy of open scaling, it conceives tools and produces studies, that municipalities may mobilise to facilitate their own municipal projects on farmland.

Towards the recognition of alternative farmland management styles?
Farmland management is a complex issue. There is no one-size-fits-all solution to promote more agroecological and inclusive public land practices. As inter-municipal authorities lacked agricultural competencies, they worked mainly in partnership with farmers representatives in the 2000's (SAFER, Chamber of Agriculture, dominated by the wine sector in Hérault), before to open to more diverse partnerships in the 2010's, with alternative farming associations (CIVAM, Terre de Liens), and environmental NGOs (CEN: Conservatoire des espaces naturels).

In a scaling deep strategy, such NGOs advocate for conceiving land as a fragile natural and common resource (AGTER and Terre de Liens, 2018). They support alternatives to the dominant individual private land property regime, and show new ways of managing farmland. Terre de Liens promotes small-scale, organic, relocalised and peasant farming on lands owned in common. CEN supports biodiversity conservation through the set-off of lands, sometimes managed through agroecological extensive pastoral breeding.

Such alternative farmland management styles challenge on its margin, but do not overtake the conventional dominant productivist farmland management system.

DISCUSSION AND CONCLUSION

These results show that local governments, in this case inter-municipal and provincial authorities, have contributed, through a wide range of actions, to the scaling of innovative land practices, allowing for their replication (scaling out), their institutionalization (scaling up) and the dissemination of new principles of land management (scaling deep). The evolution of local public action on farmland, of its rationales, instruments, and partners, rises however several questions about the role of local governments in farmland governance.

How do local innovative initiatives impact the use of farmland? Do they enhance access to land for farmers involved in local food chains or agroecological practices?

Even if I identified a total of 63 innovative initiatives concerning farmland, novel practices of intermunicipal authorities on farmland remain marginal in terms of financial amount and surface (Perrin, 2017), a result confirmed in other regions of France (Baysse-Lainé et al., 2018) or Belgium (Vandermaelen et al., 2022). In Hérault, most of land is still owned and farmed by vinegrowers. And inter-municipal land strategies focus primarily on the planning of urban development.

Moreover, public and NGOs alternatives land practices still struggle with the domination of conventional farmers in local bodies controlling the access to farmland. Our interviews highlight the importance of individuals and socio-political relations of power in the success of innovative land strategies, confirming the need for more research on the spatial coexistence of agricultural and food models (Gasselin and Hostiou, 2020; Perrin and Baysse-Lainé, 2020).

What is the scope of the rising role of alternative farming and environmental NGOs?
The recognition of Terre de Liens or the CEN as valuable partners contributes to the scaling deep of more agroecological and inclusive public land strategies in Hérault. Nevertheless, relying on NGOs to ensure the public interest and the preservation of the environment, and to counterbalance the domination of farmers' lobbies, could also be criticised as a withdrawal of the State, a neo-liberal evolution, while France had stand out since the 1950's by its proactive and regulatory public policies on farmland.

This study hence opens avenues for critical analyses of innovations in farmland management, using for instance a land justice perspective (Baysse-Lainé and Perrin, 2021; Horst et al., 2021). We need new understandings on how governance of land (property relations, land access, tenure, and policies) mediates the potential for food system transformations (Calo et al., 2022). Socio-legal approaches are required, but also territorial approaches to tackle the change mechanisms at meso-level (Marsden and Murdoch, 2006; Lamine et al. 2019), to understand the context-dependency of change processes, and the interactions between actors of the agrifood systems and of (often urban-driven) systems of land management.

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Track 4: Food Governance

Peri-urban agriculture has for many centuries been strongly interrelated with urban food provision, and its production capacity largely determined the expansion capacity of the city. Today, the interrelation between the city and its regional food producers is less clear. However, many cities, led by harbingers like the members of the Milan Urban Food Policy pact, increasingly re-consider their hinterland as a potential supplier of local food. As a result, the debate of planning for and supportive governance in local and regional food provision is very much alive. This is clearly reflected in the presentations and papers in this track. Geographically mostly focusing on the global north - Spain, France, Italy, England, Canada, the USA – the papers discuss urban food governance in all its facets, trying to come to grips with the different roles it can play, sharing lessons learned, evaluating tools, strategies and approaches, and specifically discussing the role planners have in implementing the transformative change of food systems.

Destabilizing the food regime "from within":
Tools and strategies used by urban food policy actors[1]

Mattioni D., Milbourne P., Sonnino R.[2]

Abstract – In the context of food transition studies scant attention has been given to the role of food regime actors – particularly state authorities (be they local or national) - in introducing novelties to, and destabilizing aspects of, the dominant food regime. Specifically, little is known about how state-based regime actors use the power at their disposal to bring about change "from within". Using data from qualitative research with local government actors in 10 European cities, this paper provides a detailed exploration of the actions of these actors in reshaping urban food agendas. What emerges from our research is that changes and innovations that question the regime's status quo can emerge from within the regime. Local authorities have reoriented material and discursive resources and tools towards a new way of doing and conceiving food founded on the values of care, trust and solidarity.

Keywords – food transitions; urban food; regime; food systems transformation; power

INTRODUCTION

The need for food system transformation is still firmly on the global agenda – as the recent UN Food Systems Summit illustrates - although what exactly is meant by "transformation" and how to get there are still matters of intense debate and contestation. A conceptual framework widely used to make sense of systems transformation is sustainability transitions (ST). This refers to the long-term, multidimensional and fundamental transformation processes through which established socio-technical systems shift to more sustainable modes of production and consumption (Markard et al., 2012).

While much research on food systems transformation has focused on the role of niches – such as those issuing from Alternative Food Networks (AFNs) – or on the interplay between niche and regime in bringing about transformation (Smith, 2007; Ingram, 2015), very little has been written on the role that specific food regime actors play in introducing novelties and in destabilizing the dominant food regime. At the same time, while some research has been carried out on the role of incumbents in moving towards more sustainable practices (Turnheim and Geels, 2012; Hoes et al, 2016, Mori, 2021), it has tended to focus

on the industrial sector. In line with calls to provide a deeper examination of issues of power and politics in fashioning transition pathways (Meadowcroft, 2011; Geels, 2014), this short paper aims to explore how government actors (as part of the dominant (agri-food) power block) introduce innovations and unsettle the dominant regime "from within". In doing so, the paper examines the mix of power instruments and strategies – and the limits thereof – utilized by government actors to engender change. Building on the wealth of research carried out in the past decade on urban food systems, the paper focuses on municipal government actors in an effort to facilitate engagement with the emerging geography of sustainability transitions literature, which aims to "better incorporate space, place and scale into transition studies" (Truffer et al, 2015:65).

METHODOLOGY

The evidence for this paper was collected in 10 European cities (Bergamo, Birmingham, Bordeaux, Copenhagen, Funchal, Grenoble, Groningen, Milan, Thessaloniki and Warsaw), which were chosen as indicative of different European urban geographies (in terms of size, rural/urban and inland/coastal location), as well as different levels of engagement with food system transformation. Between March and May 2021, nine focus group discussions were organized with representatives of the local authorities involved in food policy processes. In addition, a questionnaire was completed by all the cities. Both the group discussions and the questionnaire were designed to collect information on what the cities considered to be the most successful food practices carried out in the last three to five years. All data were coded based on the type of power instruments used to understand which strategies had been used by cities to shift the urban food system towards a more sustainable pathway.

For the purposes of this paper, the types of power instruments utilized by local authorities were subdivided into their material, discursive and organizational components (Levy and Newell, 2002; Scott, 2013). Material power refers to the resources that formal authorities can use to constrain or, in this case, encourage behavioral change – such as funding, personnel and municipally-owned infrastructure.

Discursive power refers to the capacity to shape shared cognitive meanings and value commitments through norms – such as planning regulations and procurement rules - and bodies of knowledge (Scott, 2001). In the latter case, given the high levels of legitimacy of local state authorities, they are usually reliably trusted to give authoritative advice/expertise. Discursive power includes the power to shape what is being discussed -- i.e., to set agendas and to frame problems (diagnostic framing) as well as solutions (prognostic framing) (Geels, 2014). Organizational power refers to the capacity of those in formal structures of authority, such as local policy makers, to open up the decision-making process to entities that lie outside such formal structures, whether more "radical" such as social movements, or more institutionalized, such as farmers' unions (Scott, 2001; Levy and Newell, 2002). The coding exercise took into account that the different forms of power are not rigidly separate and how some forms of power support one another, as in the case of buttressing norms with key resources.

THE CONTRIBUTION OF REGIME-BASED ACTORS TO THE RECONFIGURATION OF URBAN FOOD SYSTEMS

Leveraging material power

To reach their aim, local authorities have used a mix of material, discursive and organizational powers, although – as we shall see below - there have been barriers related to internal coherence and remit. Material forms of power – such as funding, infrastructure and land – have been deployed to open spaces for new ways of "doing" food. In Funchal and Thessaloniki, for example, urban gardens and vineyards have been developed on municipal land, while in the case of Groningen, the local authority has allowed local residents to use an urban farm to grow fresh food for the local food bank.

Funding has been used extensively by public authorities to initiate a novel course of action or to strengthen newly adopted norms. In Warsaw for example, local level funds were used to modify the rules of an existing program so as to introduce an element of sustainability. "Warsaw booster" is the name of an urban food incubator that was created within the existing City Accelerator Program for start-ups, housed in the Economic Development Department. While the accelerator program had not initially intended to focus part of its actions on sustainable food, it is through the availability of funds specifically earmarked for encouraging the creation of urban food retail start-ups committed to sustainable food that this topic was introduced in the urban programme.

Discursive power: changing urban narratives around food

As democratically elected representatives in formal structures of state authority, a prominent form of power that local authorities possess is that of establishing norms and regulations that rest on and, at the same time, strengthen specific assumptions and values. Examples are school food procurement regulations as modified in Copenhagen. To avoid an increase in the overall school food budget, emphasis was placed on reducing quantities of meat and increasing those of vegetables. Importantly, the city confronted powerful actors in the dominant regime by initiating a "Market Dialogue" with key food supply chain actors thus influencing private actors to modify their production and distribution practices to satisfy the growing demand for organic products.

Another important set of regulations used by cities relates to urban planning. Grenoble authorities have used the city's master plan to protect peri-urban agricultural land threatened by growing rates of peri-urban construction and to support local food commercialization. Legal tools that have been utilised to this end include regulations that forbid construction on peri-urban agricultural land and allocate its use to new farmers as well as the signing of "environmental contracts" with them to incentivize the adoption of organic production methods. The values underlying such measures run counter to the dominant food regime narrative of "food from nowhere" in the name of comparative advantage and economies of scale, proposing a "re-territorialization of the food system" that the municipality has been encouraging since 2010.

Norms and regulations that govern crisis responses at the local level have been another area of regime destabilization. For example, both Milan and Funchal used the COVID-19 emergency response to refashion their urban foodscape around principles of solidarity and support to the local economy by favouring local producers. Specifically, using national funds earmarked for food distribution to vulnerable groups, city authorities in Milan modified the procedural rules governing the distribution of the food boxes to ensure that part of the food is procured from peri-urban farmers.

Explicit knowledge-related tools, such as cultural events and educational materials, were some of the discursive strategies used by the municipalities to propose a notion of food built upon sustainability values. Lastly, in relation to discursive strategies, Milan carried out a food systems assessment to form the basis for its new food policy. This diagnostic exercise introduced sustainability criteria to evaluate the "success" of the food system, rather than simply using criteria related to food chain logistics and economic efficiency. Greenhouse gas emissions, waste, biodiversity loss and changing landscapes were framed as outputs of the food system rather than simply as externalities, thus influencing the ensuing prognosis and policy objectives for 2015-2020, which include priorities such as the promotion of a sustainable food system, access of all citizens to healthy food, the fight to reduce food waste and food education.

Organizational power: making space for whom?

While elected representatives may be ultimate decision-makers, they are but one player in what are

often complex and long policy formulation and deliberation processes, where a diverse array of actors is invited by government agencies to participate in "policy communities" (Scott, 2001). Confronted with a dominant "corporate" food regime characterized by a relatively small number of powerful corporate actors whose actions permeate down to the local level, local authorities have used their organizational power to open up discussions and decision-making processes to a wider array of stakeholders. It is in this spirit that Birmingham launched its "Birmingham Food Conversation" that included a series of activities aimed at listening to "Seldom Heard Voices", and to include these, as well as a series of civil society organizations, in its "Healthier Food City Forum", which will shape the city's food strategy. This inclusive approach explicitly aims to "develop social, health, economic and environmental sustainability aspects of the strategy" and to further "motivate policy makers to take sustained action on urban food systems, [rather than simply seeing] food initiatives as 'one-off' or 'pet' projects".

In spite of the above, given the power of large private sector actors in the current food regime, the "place" of these actors in food platforms is seen as sensitive and contentious. While local authorities are committed to "protecting" niches that would otherwise not be able to produce the sustainability benefits that they nurture, there is an awareness of the importance of engaging with large private sector actors for fear that sustainable food actions may end up remaining marginal. Some actors have devised strategies to help them engage with the private sector in what are perceived as "win-win" ways.

Enough power to reach out and up?

While organizational power allows external actors to be included in the decision-making process, what is clear from our data is that municipalities often face internal barriers; indeed, there are difficulties in ensuring coherence among the different sectoral offices of the municipal "machine", and at times there is active resistance to cooperate, with officers from other departments "hiding behind policy procedures saying 'we can't do this because it's national', or 'we can't do this because it's regional'".

In relation to this, it is important to better understanding how local authorities relate to the wider regime boundaries, and specifically their "vertical" connections to national-level authorities. Evidence from our study shows that, in some cases, cities have benefitted from national-level regulations or processes that have supported their goals. In many cases, however, the limited remit of municipalities was perceived as hampering the possibilities of systemic change. Cities have used different strategies to overcome this barrier. Bordeaux and Thessaloniki, for example, have opted for advocacy measures, in the first case to change national land tenure regulations to make it easier for the municipality to buy peri-urban agricultural land and rent it to young

farmers, and in the second to allow local farmers to sell their products in the municipal open markets.

CONCLUSION

While the heterogeneity of the regime is acknowledged within the literature, transformative changes, novelties and the capacity to "shake up the conventional regime" (Bui et al., 2016:93) are often seen as emerging from outside the regime or in hybrid fora. What our research suggests is that changes and innovations that question the regime's status quo can come squarely and deliberately from *within* the regime. Local authorities have not so much worked to bring about technological innovations but, taking the cue from decades of efforts spurred by alternative food networks, have developed new ways of doing and conceiving food by introducing a series of rules and practices founded on values of care, trust and solidarity.

Changing the internal discourse around food has constituted the bulk of cities' efforts, for which they have used the full set of power arsenal at their disposal. Their discursive strategy has worked on two fronts: firstly, on knowledge tools that have explicitly introduced new notions of food founded on sustainability values; and, secondly, on those that, in line with a Lefebvrian notion of the "socially produced space", have done so implicitly through the material development of urban gardens, new menus in schools or new food retailing methods. Although remaining largely "silent", such spaces and places modify daily social food practices and their underlying meanings (Warde, 2016; Mattioni et al., 2020).

A number of authors have highlighted the difficulty that cities (continue to) face in creating vertical links with national and EU-level policy makers and the obstacles this creates in terms of policy coherence (Sonnino et al., 2019; IPES, 2017; De Schutter et al, 2020). The data presented here demonstrates different strategies that local authorities have used to gain more influence vis-à-vis national government, such as pressure/advocacy, building reputational capital through the construction of a network of alliances and strengthening their horizontal links with nearby municipalities to obtain more voice. What is also clear is that further research is required to provide a deeper and more specific analysis of the power instruments that local governments utilize to negotiate space for manoeuvre with national government, the EU and other supranational actors and networks. Similarly, acknowledging the difficulties that local authorities involved in food practices face in engaging with other departments in the municipality, more work is needed on the tools and instruments used by them to build stronger horizontal and vertical alliances.

Finally, our study highlights how, within a broad focus on the ecology of intermediaries mobilized to foster sustainability transitions (Kivimaa et al, 2019) there is a need to give greater attention to the role that city governments play not just in enabling transformative changes but also in actively introducing them. As our

evidence shows, while local authorities, in line with a "classical" reading of the MLP on transition, have supported niche-level activities as a destabilization strategy, they have also actively sought to effect changes within the regime itself. Future research on regime-based transition intermediaries should position more centrally the role of local authorities as full-blown members of this ecology of transition intermediaries.

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Directionality in transition governance and innovation support for sustainable food systems:
Towards a conceptual framework

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Abstract – **With the aim of improving analyses of sustainable food system transition, this short paper contributes to the discussion of transition barriers. The paper reviews strands of literature on sustainability transitions, on human-nature relationships and on transition governance to discuss elements relating to directionality and diversity of transition initiatives and innovations. It concludes by presenting three dimensions for further research towards a conceptual framework for transition governance in food systems: the plurality and diversity of transition initiatives and innovations stemming from varying human-nature relationships, the way this plurality is enacted through different sustainability discourses and what role this plurality can play in transition governance. The short paper is part of ongoing PhD research.**

Keywords – **Transition Governance, Sustainable Food Systems, Directionality, sustainability innovations**

INTRODUCTION

The way we grow, distribute and consume food today constitutes major so-called 'wicked problems' responsible for adverse environmental and health impacts, notably resource depletion, nutritional deficiencies, biodiversity loss, water pollution, and climate change (IPCC., 2019; Rockström et al., 2020; Willett et al., 2019). Both academics and practitioners have called for a sustainable transition of food systems (Melchior & Newig, 2021). However, despite the severity of planetary and human health impacts, these calls have not been found to be particularly embedded in the type of research that study sustainability transitions and their systemic challenges (Hebinck et al., 2021).

Multidimensional in nature, dynamic and highly interconnected, food production and consumption activities are affected by a myriad of factors ranging from environmental, climatic, and economic conditions to social norms and capabilities, culture and behaviour, as well as global trade and political geography. Despite this complexity, recent years have seen a rise in initiatives to transform the food system and there has been a strong increase in political attention to food system-related challenges. Governance of food system transformation is on the rise, and scholars are also starting to identify a general need for practical transition governance tools (Haddad et al., 2022; Halbe & Pahl-Wostl, 2019; Roorda et al., 2014; Schot & Steinmueller, 2018). In a bleak realization, that measures implemented in the last decade of intense sustainability attention has not succeeded in putting us onto a path leading to sustainability (Steffen et al., 2015; Rockström et al., 2020), scholars are pointing to the need for more nuanced attention to the underlying paradigms of sustainable transition as a concept (Abson et al., 2017).

Against this background, the aim of this short paper is to improve analyses of sustainable food system transition by contributing to the discussion of more nuanced articulations of transition barriers for the benefit of scholars and governance practitioners alike. The research question for the full-length paper, of which this short one is a step towards, is: What elements are needed to further develop a conceptual framework for transition governance in food systems?

METHOD

My aim to develop a conceptual framework for transition governance in food systems have been motivated by years of previous work on sustainability in food systems (first in two progressive Danish municipalities[2], then in a leading Danish food system consultancy house[3] and later as an academic). My interest in the transition dynamics of food systems grew as I observed a range of very different sustainability initiatives being carried out. I realised that there is a need to search for dimensions able to explain what is going on and to inform future practices, but so far, I have not found a framework that encompasses the nuances and transition barriers encountered in the initiatives and transition efforts observed.

To develop such a framework, I performed an integrative literature review. The integrative literature review is related to the semi-structured literature review, but with a specific aim to "assess, critique, and synthesize the literature on a research topic in a way that enables new theoretical frameworks and perspectives to emerge" (Snyder, 2019, pp. 335; Torraco, 2005). The review was conducted using The Royal Danish Library database which is a compilation of several databases incl.

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SCOPUS and Science Direct. The main search terms consisted of variations of the concepts *sustainability transitions*, *transition governance*, *food system transition*, and *sustainability innovation*. The papers were then stage-reviewed for angles on *diversity of innovations/practices*, or alternatively a mention of concepts of *plurality in sustainability conceptions*. The database search was continuously complemented by a snowball review of interesting references in the papers found.

This paper is part of an ongoing PhD project on food-system transition governance, using an agricultural region in the south of Denmark, Lolland Falster, as a case study. The discussion of the review literature in section 4 was informed by findings from a pilot study of food system transition initiatives and strategies in Lolland Falster carried out as part of the PhD project.

RESULTS OF THE LITERATURE REVIEW

The challenges concerning climate, resources and biodiversity are now well known and can be constituted as a global sustainability crisis. The response to this crisis has been the subject of academic research for decades. Scholars from different disciplines have addressed the many sustainability issues and in recent years increasingly also through an interdisciplinary lens. One prominent interdisciplinary literary strand or perspective on sustainability can be found in the literature on 'sustainability transitions' (e.g. Köhler et al., 2019). This literature addresses the various barriers and conditions for the reconfiguration of socio-technical systems with the scientific and explicitly normative aim (Feindt & Weiland, 2018) of providing measures to promote a sustainable transition in different sectors. The empirical focus of transitions studies has been on major socio-technical systems, for which decarbonization has been high on the political agenda, especially energy and mobility but also housing (Köhler et al., 2019; Markard et al., 2012). However, despite its omnipresence and high embeddedness in (and severe effect on) nature, society and people, much less transition research has been directed towards food systems (Hebinck et al., 2021; Melchior & Newig, 2021).

Another way of looking at the sustainability crisis is through the lens of the human-nature relationship and the paradigms describing it. Here, more philosophical perspectives become relevant. In their treatment of the regenerative turn e.g. Egmose et al., (2021) strikes down not only on the globalized extractivism that has been the guiding paradigm of industrialization, but also on the lack of recognition in sustainability policy and research that we are (in addition to a climatic, ecological, and economic crisis) also facing an epistemological crisis. That we are witnessing an erosion '…of our human and societal sense of being members of societies and embedded in ecologies." (Egmose et al., 2021, pp. 1271). The notion that humans are embedded in nature and not separated from it follows closely the strand of eco-feminist and care-oriented literature originating from scholars such as Carolyn Merchant, Rosemary Radford Ruether and Vandana Shiva. This embeddedness is central to the regenerative concepts of nature interaction and thereby food production and has threads all the way back to Horkheimer and Adorno's influential work on enlightenment and man's domination of everything and nature (Horkheimer & Adorno, 1944).

A third way to consider the sustainability crisis is through a more operational lens - as a crisis of governance. The governance of sustainability transitions has been treated through concepts such as Responsible Research and Innovation (von Schomberg, 2013) and Transition Management (Grin et al., 2010). These, however, have been criticized for failing to recognize that responsible innovation is a contested phenomenon (Fløysand et al., 2021) and to depoliticise the relation that exists between transition initiatives and existing regimes (Kenis et al., 2016). Scholars are now also pointing out that the trajectories leading us to unsustainability are still very much prevalent despite decades of research on the transformation of socio-technical systems (Abson et al., 2017). Addressing barriers such as "unavoidable politics; the influence of broader discursive systems that shape actors' strategic interests; and [..] structural and deliberate limitations to the range of admitted epistemological understandings…" (Feindt & Weiland, 2018 pp. 661) Feindt & Weiland call for renewed attention to the role of transition governance. They do this alongside other recent proposals for more concrete tools and practical models for policymakers working with transition (Haddad et al., 2022; Halbe & Pahl-Wostl, 2019; Roorda et al., 2014; Schot & Steinmueller, 2018).

DISCUSSION AND CONCLUSION

Having looked at literature strands treated above, it is evident that they all provide important elements to address transition barriers by highlighting gaps in the understandings of sustainability transitions in general and in food systems. Building on this and to contribute to the development of a conceptual framework for transition governance in food systems, three dimensions seem significant: the diversity of sustainability innovations or initiatives, sustainability discourses or narratives, and reflexivity in governance. Each dimension warrants a deeper treatment than this format allows, so the following discussion is limited to the main ideas.

Human-nature relationships and diversity of sustainability innovations
The transition literature concerning food systems is relatively small compared to that on energy or mobility systems. The reason for this could be the somewhat higher complexity of food systems, although this claim needs further study to be verified. Food production is intricately woven into a nexus of highly differentiated natural and regulatory preconditions while food consumption patterns are driven by a multitude of factors, including household resources, marketing, culture and dietary preferences, etc. At the same time, consumer choice is restricted by what is made available in supply chains (ranging from primary producers to multinational supermarkets) determining what products to sell and where. This makes governance and large-scale transition strategies difficult to study

let alone to carry out. However, what makes this plurality of actors and conditions particularly interesting in terms of our understanding of transition governance is that it feeds into a wide range of very different values and therefore also different transition practices.

Let me return for a moment to the epistemological crisis and the relationship between humans and nature. The plurality in understandings implicit in the dichotomy of extractivism and regenerative becomes visible through the diversity of initiatives, innovations and strategies to transition food systems towards more sustainable practices. Two major understandings seem to dominate here, at least in the Danish context. One is economic-growth oriented and emphasizing technological developments with a substitution logic. It builds on the argument of maximization of units and that the future will see a strong increase in the demand for food given global growth in population and income. The other is based on the concept of de-growth or post-growth, emphasizing practices to enrich and conserve natural resources, a diversification of production, and the need for radical dietary changes. Real-world initiatives to innovate and transform food systems can been seen to straddle an epistemological continuum between these two ideal-types or extremes, battling public support, political attention, and funding in a race to 'black box' the concept of sustainable food production and consumption practices.

Sustainability discourses

Given that initiatives or strategies to transition food systems towards more sustainable practices originate in different schools of thought adhered to by actors from divergent arenas, the very notion of a sustainable transition seems to be a constant battle between opposing discourses. This battle is carried out simultaneously in different spheres, with a varying degree of explicitness. It is conducted through discourses adhering to a certain position on the axis of sustainability understandings and moving from one sphere into another. It is fought in academia through scientific arguments favouring the importance of certain aspects, such as eco-social embeddedness, socially just transitions, or the need for immediate and ready-to-implement solutions answering to a growing demand. It underlies political struggles in the food sector, influencing regulation of agriculture, governance of subsidies and research funding, in an ongoing negotiation with the affected food-system actors and institutions and members of the political opposition. Finally, it is carried out in the public domain between generations, family members and through media.

Transition governance and reflexive governance.

In view of the above discussion, it seems reasonable to say that sustainability initiatives or innovations can be placed on an axis based on their varying paradigms of human-nature relationships, and thereby different understandings of sustainability, and ordered by (and adhering to) corresponding and (sometimes but not always) opposing sustainability discourses. It is therefore also meaningful to talk about the directionality of a given initiative or innovation when engaging in strategic transition governance if that entails a navigation (guidance) of which practices to support or regulate.

If a sustainable transition exists and flows in the spheres as a contested phenomenon, and if governing institutions are unaware of its plurality, they risk also being unaware of the potentials of such a sustainable transition. However, the ability to encompass, utilize and operationalize a plurality of paradigms in the planning and implementation of innovation support, requires a reflexive treatment of the inherent paradigms of the very institutions performing the transition governance. This is one of the main ideas of the concept of reflexive governance, a strand of transition governance literature arguing that sustainable development and transition can only be obtained by fundamentally reconsidering the socio-technical system, and that this reconsideration neccesitates a bringing forward of underlying assumptions, institutional arrangements and practices (Hendriks & Grin, 2007; Kirwan et al., 2017).

To sum up, there seem to be important lessons to learn here regarding the three dimensions considered above: the way varying human-nature relationships and therefore practices result in a plurality and diversity of initiatives and innovations; how this plurality is enacted through varying sustainability discourses observable within academia, in the public and in political spheres; and, finally, that only by being aware of this plurality through reflexive learning, the plurality can be operationalized in transition governance in the necessary reconfiguration of systems and practices. This short paper concludes that future research is needed on these dimensions, especially regarding the operationalization of 'plural directionalities', and that this research will be important for the development a conceptual framework for transition governance in food systems.

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Food planning for scaling up the reterritorialisation of agricultural activities
Insights from French case studies

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Abstract – **Food planning as a new type of local policy aims at shaping the local food system. An essential component of the local food system is the reterritorialisation of agricultural activities (RAA). RAA consists of reinforcing local food production and its diversification activities oriented toward local consumers. Currently, there is no systematic investigation on food planning approaches to RAA. This study fills this gap by assessing the place of RAA and associated policy instruments in 29 French food planning projects. France is particular in that the state defines food planning by national law and emphasises its objective of improving the agricultural economy and structuring local supply chains. Results show that RAA has a leading place in French food plans; improving food production and local supply chains are goals targeted by a large number of food panning projects. These projects have leveraged diverse instruments to improve RAA, showing a focus on facilitating professional farmers' transition and frequently applied strategies in the previously neglected field, namely middle-stage local food infrastructure. We conclude by emphasising that the French experience may give insights to other countries in developing strategies to scale up RAA but have to be adapted based on contexts and institutional settings.**

Keywords – **Access to land, Farm diversification, Farmland preservation, Food policy, Local food system**

INTRODUCTION

Planning for the local food system is a topic recently introduced to the planning field by (Pothukuchi & Kaufman, 2000). A local food system is considered useful for elimination of negative effects generated by the global food system on product quality, climate change, and food security (Feagan, 2007; Morgan & Sonnino, 2010) through a close link between food production and consumption (Enthoven & Van den Broeck, 2021). Food planning is an emergent type of local policy that plans for the local food system. Alternatively named "local food strategies" or "food system planning", food planning in this research means a local policy framework that addresses food system activities to shape local food systems (adapted from Candel, 2020). Food system activities consist of several stages, i.e., production, processing, packaging, transport, distribution and consumption (Ericksen, 2008). An important component is producers' shift from global-oriented to local-oriented activities,

which we call the "reterritorialisation of agricultural activities" (RAA). The RAA consists of local food production and its diversification activities oriented towards local consumers (e.g., farming, local processing, transport and logistics, local sale, community-supported agriculture, agritourism). Food planning interventions are essential to support the RAA in the pervading context in which the food system operates on a global market scale.

Researchers have studied the policy goals and instruments that local governments can mobilise to facilitate the local food system, both on food-associated sectorial policies (Doernberg et al., 2019; Sibbing et al., 2019) and food planning as an integrated policy (Filippini et al., 2019; Sonnino et al., 2019; Candel, 2020). These studies provide analytical frameworks to analyse food planning policies. Although the study shows that RAA (food production and food provision) is a goal that food planning across countries wants to achieve (Candel, 2020), policy instruments to improve RAA have not been comprehensively and systematically understood. Urban agriculture has been emphasised by local governments in food planning, linked to the scheme of creating a healthy food environment (Doernberg et al., 2019; Sibbing et al., 2019). However, agriculture (not only urban agriculture) may have been neglected by local governments (Sonnino, 2009; Sibbing et al., 2019). Professional farmers are sometimes excluded from food planning projects (Prové et al., 2019). Shaping local food systems, however, is based on a scaled-up RAA that goes beyond urban agriculture and includes a broader transition of professional farmers.

The described situation leads to this research's focus on food planning approaches to scale up the RAA. French food planning projects provide an opportunity. The French state defined "food planning" (projet alimentaire territorial) in the Agriculture Law in 2014. The state has also dedicated yearly financial programmes to incentivise local food planning projects. The law defined the objective of food planning of structuring the agricultural economy and implementing a local food system. We hypothesise that French food planning may have more elaborated approaches to address the RAA.

This research aims to better understand the food planning approaches to scale up the RAA by

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answering the question: how do French food planning policies facilitate the RAA? Specifically, 1) what is the place of RAA in French food planning, and 2) what are the policy instruments mobilised for RAA? To answer the question, we conducted a systematic document analysis of 29 French food planning documents.

The following section outlines the methodology. Then we present the results. We end by discussing the results with policy-making implications and future research suggestions.

CASE STUDY AREAS AND METHODS

Twenty-nine food planning projects in two French regions were included in the study (Figure 1). They were cases identified in the first author's PhD thesis framework. Figure 1 shows that these projects are at different scales. The food planning documents were formulated from 2018 to 2022. We obtained documents from official websites or through requests to project managers.
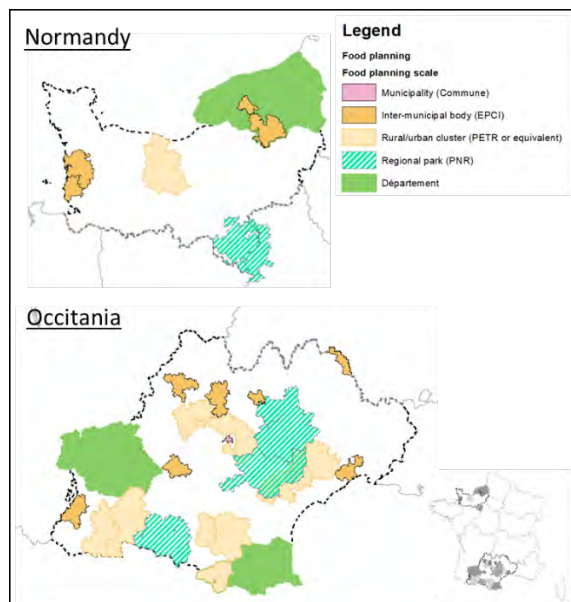

Figure 1. Studied food planning projects.

We analysed policy outputs of the 29 food planning projects along two dimensions: policy goals and policy instruments (Howlett & Giest, 2012). Policy goals were defined inductively. Policy instruments were also identified inductively but were categorised through instrument typology and action fields.

We first identified RAA action fields from (Ericksen, 2008)'s definition of the food system component as producing food, processing and packaging food, distributing and retailing food, and consuming food; the first three stages were relevant to RAA. Based on strategies identified from the literature review, we regrouped them into RAA action fields. Producing activities were divided into (1) farmland preservation and access to land and (2) transition of farming practices. Processing, packaging, distribution, and retailing activities were regrouped into the classification (3) structuring local supply chains.

We then defined the typology of RAA-associated policy instruments: regulatory (e.g., binding policies, local acts), economic (e.g., direct investment, subsidies) and informational (studies, communication). This categorisation was adapted from methods proposed by Doernberg et al. (2019, table 4) with a French context. We analysed the documents by using the software Atlas.ti.

RESULTS

1) Policy goals

Figure 2 presents policy goals and the number of food planning projects that targeted them. It shows that *RAA has a leading place*. Among six goals with more than half of food planning projects targeted, two RAA-associated goals (improving local production and developing local supply chain) were ranked first and fourth respectively. *Improving local food production* can be recognised as the overarching goal as it was targeted by the most significant number of food planning projects (n=27). This goal contains five topics: 1) Improving environmental farming transition, 2) preserving farmland and resources, 3) facilitating farmers' regeneration, 4) diversifying local products and, less frequently, 5) encouraging self-growing. *Developing local supply chains* was a goal of 24 food planning projects. *All* food planning projects targeted at least one of the above two goals.
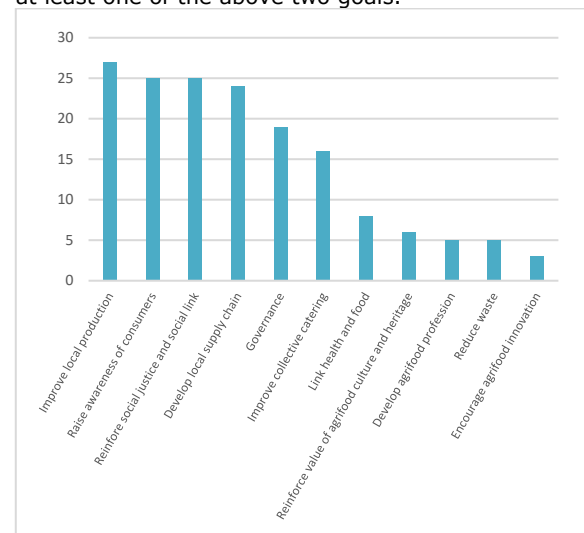
Figure 2. Goals and number of food planning projects that addressed them.

Three other goals are directly linked to RAA. *Developing the agrifood profession* (n=5) and *enhancing the value of agrifood culture and heritage* (n=6) were two less targeted RAA-associated goals. They are both about territorial development through agriculture and food. *Improving agrifood innovation* was targeted by three food planning projects, aiming to develop innovations in agriculture and the agri-food industry.

Other goals are not directly linked to RAA. They are about other stages of the food system (i.e., consumption and waste), achieving global goals (i.e., health and social justice) or the avenue of organising the food planning projects (i.e., governance). Among them, *improving collective catering* as a goal targeted by 16 food planning projects could be an important component of RAA. Some food planning projects clarified this goal by emphasising integrating local sourcing of food into collective catering, thus leveraging local food production and supply chains.

2) Policy instruments

Figure 4 shows the 35 policy instruments used in the food planning projects by action field (differentiated in colour). Many instruments were adopted to facilitate the action fields of farmland preservation and access to land (15 instruments) and structuring local supply chains (14 instruments). Comparatively, instruments were less applied in inciting the transition of farming practices (6 instruments). Informational and economic instruments were much more frequently adopted than regulatory ones by food planning projects. We present the main policy instruments by typology in the following.

Figure 4. Policy instruments used by number of food planning projects (top: the 17 most used instruments; bottom: others. The bar figure was separated for readability). Blue: instruments for farmland preservation and access to land; Red: instruments for transition of farming practices; Yellow: instruments for structuring local supply chains.
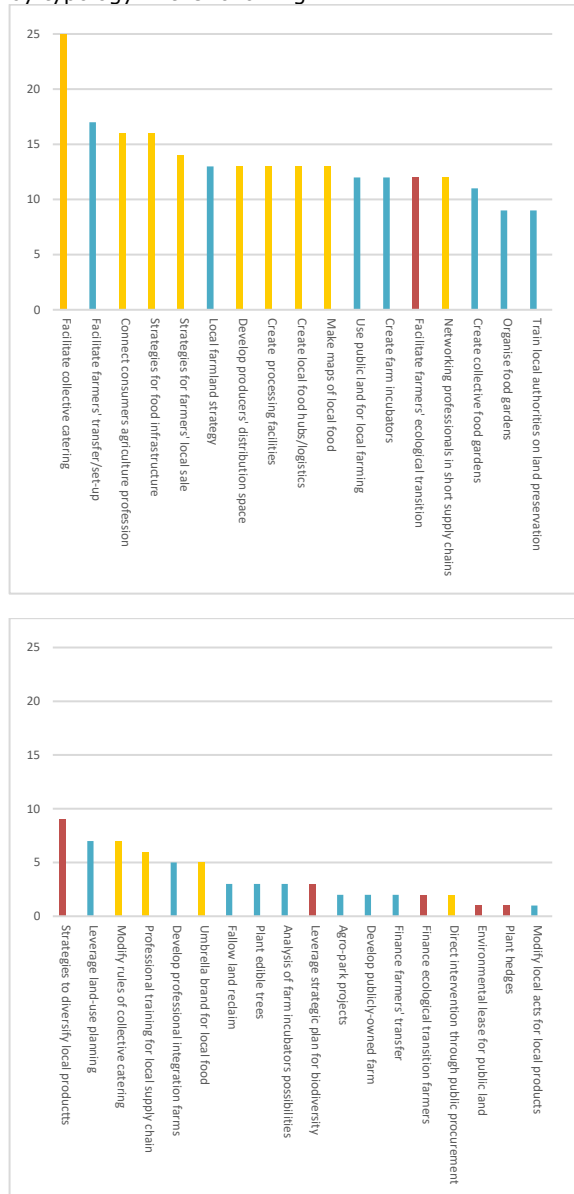
Regulatory instruments. The regulatory instrument referred to by the food planning projects documents to *preserve farmland was leveraging land-use planning and associated tools* (n=7). Food planning project documents either referred directly to the land-use planning or proposed methods to engage food in

planning. Seven food planning projects to structure local supply chains included *modifying rules of collective catering to local sourcing.* One food planning project initiated to *modify local acts to increase the visibility of local products.* No regulatory instrument was used to facilitate the transition of farming practices.

Economic instruments. Most applied instruments were *developing projects, which usually contain mobilising land and building and investment in the material.* This includes *developing local food infrastructure* (i.e., local processing centres, local food hubs or logistics and producers' distribution spaces; n=13 for each infrastructure type) and initiating local farming projects (e.g., creating farm incubators (n=12). Food planning projects may intervene in the land market, such as dedicating *publicly-owned land to local farming activities* (n=11) and *reclaiming fallow land (n=3).* One food planning project indicated *applying the environmental lease for publicly-owned land.* A few food planning projects envisaged *directly invest in plantations (n=1 for hedges; n=2 for fruit trees in urban public space).* Two food planning projects planned *direct purchase of local food.* Two food planning projects included financial support to *facilitate farmers' farm holdings' transfer.*

Informational instruments. Almost all food planning projects contained the instrument of *facilitating collective catering transition in local and sustainable sourcing* (n=25). Food planning projects may provide local actors with information, training and networking activities. Many food planning projects used this type of instrument to *facilitate farmers' transfer/set-up* (n=17), *help connect professionals* (n=12), *encourage ecological transition* (n=12), *increase local authorities' land preservation awareness and knowledge* (n=9) and/or *improve farmers' local sale capacity* (n=6). Strategies and analysis were another type of instrument adopted, i.e., *developing strategies or doing analysis for local food infrastructure* (n=16), *local farmland preservation and use* (n=13), *local scale avenues* (n=14), *production diversification* (n=9), *better organising food gardens* (n=9), and/or *farm incubators* (n=3). Food planning projects may provide occasions to connect consumers and producers. Two instruments adopted by many food planning projects were *activities and events to connect consumers and the agricultural profession* (n=16) and *making maps and brochures to increase local initiatives' visibility to consumers* (n=13). Five food planning projects planned to develop an *umbrella brand for local food.* Food planning projects may also *leverage biodiversity-associated strategic plans (*n=3).

DISCUSSION AND CONCLUSION

This research has examined the French food planning approaches for RAA through a systematic analysis of documents. French food planning projects placed RAA at a central and leading place. These projects did have elaborated approaches to improve RAA, represented by the numerous instruments mobilised, a focus on professional farmers' transition and frequently applied strategies in the neglected field (i.e., local food infrastructure and collective catering). French experience may give insights to other countries but must be treated with caution to be coherent with local contexts and institutional settings.

*T*his research has shown RAA's central place in French food planning projects. RAA is both a targeted goal with many associated themes, and a means to achieve other goals (e.g., collective catering with local sourcing, social justice, health). The less emphasised place of health in French food plans presents a contrasted finding compared to international findings showing that health was a strong focus of food planning linked to the goal of "improving a healthy environment" (e.g., Morgan and Sonnino, 2010; Sibbing et al., 2019;). A potential reason is that many French food plans followed the national frame, which emphasised economic, environmental and social values but less health. Another possibility is that analysed projects include many rural territories. They may differ from international studies, which are mainly urban.

We identified many more RAA-associated policy instruments in French food planning projects compared to existing international instruments studies (Doernberg et al., 2019; Filippini et al., 2019; Sibbing et al., 2019; Candel, 2020). Professional agriculture, including production and supply chain activities, instead of simply urban agriculture, is highly supported by French food planning projects. A large number of territories adopted instruments to develop middle-stage food infrastructure, both physical and "invisible" (i.e., public procurement through collective catering) (Sonnino et al., 2019). This differs from previous international studies' findings that middle-stage food infrastructure was a "missing middle" in local food strategies (Sonnino et al., 2019; Sibbing et al., 2019; Candel, 2020).

Three reasons are likely to explain the difference. First, national laws and financial programmes may have affected food planning projects' orientations. Agricultural law's definition of food planning's objective of agricultural economy and local supply chain, and financial programme may have incentivised local food plans to follow national guides. The financial programmes have also facilitated enriching the human resources dedicated in agrifood issues, which may have made the diverse instruments possible. Besides, the French Food law (established in 2018) that defined school catering's sourcing from sustainable food as a quantitative goal seems to be a driver for mobilising collective catering as a lever in food plans to facilitate RAA. Second, food planning projects provide a platform for communication and innovation. Different sectors, private and public actors, were engaged in the formulation of food planning projects. They could propose instruments and are actors that implement the projects. Unlike previous studies that questioned the local authority's role in food planning, we emphasise the role of food planning, which is operated by project leaders and their private and public partners. Third, the Covid-19 pandemic may have raised local stakeholders' awareness of RAA. Local initiatives during the pandemic proved the importance of RAA in shaping a resilient territory; therefore, local actors might be more active in adopting instruments to facilitate RAA.

This research has provided a list of policy instruments to facilitate RAA as a toolbox to other countries. However, contexts and institutional settings must be respected. Future research is suggested to compare food planning approaches between countries on RAA and the contexts' effects. By using "food planning" instead of "food strategies", this research means to create a connection between food planning and mainstream planning policies. This is an important issue for future research.

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From dairy-tankers to supermarket shelves
Orchestrating dairy supply chains in Strasbourg's hinterland

Romane Joly[1]

Abstract – **Many dairy products consumed in urban centres originate from long food supply chains. This paper examines the circulation of dairy in the hinterland of Strasbourg. It focuses on the socio-material infrastructure co-produced by dairy operators and mass retailing that orchestrates food supply chains. The research is based on a qualitative approach of urban metabolism that examines the social arrangements and material supports that determine circulations. The data set originates from analysis of interviews with dairy stakeholders and grey literature. In the paper, we demonstrate that dairy operators and mass retailing determine the production of dairy and channel supply chains up to urban distribution sites from the far and the near. In this sense, the socio-material infrastructure for circulation contributes to reshaping the hinterland in response to urban demands.**

Keywords – **Circulation, infrastructure, urban metabolism**

Introduction

If you drive in morning in the hillside surrounding Strasbourg, you might see a tanker-truck loaded with milk. You might even see the cow herd grassing in the pasture or a large stable. You might ask yourself, just like we do: is that the milk that I buy in the supermarket in my neighbourhood? If not, where does it go?

In fact, you have little chance to know where and how this milk will end up. The farmer might be unaware of it, too. Many dairy products we consume in cities comes from long food supply chains which keep circulations invisible (for a socio-historical analysis on dairy in France, see Delfosse, 2019; in the US see Dupuis, 2002). These long supply chains are embedded in a productivist food system based on the commodification of food and creation of surplus-value, often fuelled by resource-intensive and industrial farming methods, and primarily governed by the agro-industrial complex and supermarkets (Friedmann, 2005). Specifically, the actors orchestrating flows from dairy-tankers to supermarket shelves, and the material infrastructures that sustain circulations, are rarely visible.

This paper focuses on the circulation of dairy along long food supply chains in the hinterland of Strasbourg. It is part of a PhD thesis that analyses social arrangements (social practices and power-relationships) as well as material infrastructures (geophysical settings and logistics) that enable, disable, and channel dairy throughout the hinterland of Strasbourg to urban centres. In the following, we narrow down the focus to a segment of the supply chain that involves dairy operators and mass retailing. Both actors are industrial intermediaries that bridge the production and the distribution. Thus, we try to understand what type of socio-material infrastructures co-produced by these actors enable dairy circulations. By infrastructures we broadly refer to socio-technical supports for circulations (Desvaux, 2019; Foucault, 2004) which include material devices (tanker-trucks, warehouses), regulations (sanitary norms, competition laws), concrete practices and multi-scalar power-relationships (pressure, cooperation).

We situate our research in a strand of critical literature that articulates food to urban questions of governance and provisioning (e.g., that Moragues-Faus & Marsden, 2017; Sonnino & Coulson, 2020). This literature progressively moved from a food-in-city focus to embracing non-city places alike (see Angelo and Wachsmuth, 2015). Thus, Tornaghi and Dehaene (2021) situate the food system as part of an economic and spatial process of urbanization which produces a specific set of (urban) social arrangements, built environments and material infrastructures expanding beyond the border of cities. In line with this, we postulate that the socio-material infrastructure that enable dairy circulations contributes to reshape the hinterland of Strasbourg in response to urban demands.

Research approach

The research is based on a qualitative approach of urban metabolism inspired by Pierre Desvaux's work on urban waste (2017, 2019). It aligns with Urban Political Ecology's constructivist epistemology and relational understanding of urban phenomena. Here, the notion of urban metabolism is used as a tool for examining socio-technical processes that regulate circulations from the hinterland to urban centres. This contrasts with other approaches that quantify material exchanges (input/output balances) between the city and its environments. A qualitative approach of urban metabolism rather complements quantitative analysis (e.g., Marty, 2013) and examines the social, economic, political, and material drivers that determine circulations (Garcier et al., 2017).

We collected data using the method "follow the thing" inspired by Ian Cook (2004) that traces pathways and maps actors along the food supply chains to understand how people and places are connected by food circulations. We started downstream by identifying dairies sold in the retails of Strasbourg. Then, we moved upstream to map pathways, sites and ac-

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tors involved along dairy supply chains. The explorative scope under study is a geographical region, the Upper Rhine region, that overcomes administrative boundaries.

Data is based on 30 semi-structured interviews that we conducted between spring 2021 and 2022 with stakeholders along the dairy supply chains (farmers, dairy operators, distributors) as well as urban policy makers and representatives of the farming sector. This data is complemented with an analysis of grey literature such as policy briefs, reports, sale contracts, and websites of various stakeholders.

Dairy foodscape of Strabourg's region:
Strasbourg is a French regional city at the border with Germany. Its metropolitan area counts about 500 thousand inhabitants. The city is located in the Upper Rhine valley between the Vosges mountains and the river. This geographical region counts several farming zones related to geophysical settings: the plain is dedicated to cereal farming, the hillside to viticulture and the Vosges (pre-)mountains to silviculture and livestock breeding (Wintz, 2011). Dairy production is mostly located in a grassland region called *Alsace Bossue*. In the overall region, most dairy farmers sell their milk along long food supply chains (340 million litres)[2] to five major dairy operators. These include three cooperatives (one referred to as operator A in the text) and two national private groups. Only one local operator (referred to as operator B) processes dairy on site while others send milk to more distant dairy plants. Dairy processing on the farm and direct sale along short supply chains represents a minority[3]. We have identified seven producers that sell dairy products in farmers' markets or retails in Strasbourg. Finally, three actors stand out: these are small-scale regional dairy operators (one referred to as operator C and another one to D) that process dairy and commercialize their own brand in regional mass retailing.

DAIRY OPERATORS' HOLD ON THE PRODUCTION AND CIRCULATIONS

Operators' spatial partitioning sets dairy production
Dairy operators largely orchestrate the production: they partition space and enforce certain production policies. Primarily, they collect milk within bounded "collection areas". These were shaped over time (often from merging smaller areas) and usually align with geophysical settings such as a valley or one side of a mountain range. Collection areas are closely related to logistic infrastructures that enable circulations: rationalized collection routes for dairy-tankers and geographical concentration of farms close to storage facilities.

The borders of collection areas are tacitly agreed and respected by the major operators of the region. Since the end of European dairy quotas in 2015[4], operators adjust dairy production by increasing farm productivity rather than extending territorial hold.

This relative disconnection between volumes, producers and farming areas tends to pacify relationships between operators as is indicated by one of them who we interviewed:

"So, at the level of production, each operator has its own territory and its own members so in the East of France, we have never had this effect, to steal so to say each other's producers. We have rather, we remain on our collection area. [...] I have requests from producers from neighbouring operators who would like to join us. For the moment, we are not going to open our doors.... So, it's going rather well." (Operator A, April 2022)

To maintain the territorial status quo, operators would decline any dairy farmer's request to join in if he or she does not belong to their collection area. As a result, farmers can hardly choose who to sell their milk to. This also binds them to their operator's production policy. Indeed, each operator focuses on specific dairy lines: some collect conventional milk which generally implies intensive farming practices (large herds, cows in the stable, silage feeding). Others collect also pasture, hay or organic milk which imply extensive farming (small herds, access to grassland). In the Upper Rhine region, the larger area of organic dairy production in *Alsace Bossue* and collected by the operator A. Conversions to organic farming were encouraged from the 1990s when a market emerged and were eased by geophysical settings: in the pre-mountains where grassland is available, there is only a small step to turning to organic farming. By contrast, in the flatland of the Rhine valley, the operator B does not collect organic but only conventional and some pasture milk. This policy can be partly inferred from the lack of available space for extensive farming. Nonetheless, it hinders conversions to organic farming since farmers would have no outlet for their production. These insights indicate that dairy operators reshape different landscapes of production.

Operators orchestrating dairy circulations
Dairy operators also enable, disable and channel dairy circulation along different food supply chains. First, they seek to keep control over dairy circulations and hinder the development of short supply chains beyond their control. Dairy farmers that sell their milk to an operator are sometimes tempted to diversify their activity. Some seek to process and sell part of their milk along short supply chains (e.g., at farmers' markets) where they could generate a better income since farmers keep control over the whole value-chain. At the same time, part of the milk would be sold to the dairy operator as a safety net guaranteeing a regular income (even if sometimes quite low) and a stable outlet (whereas direct sale can be interrupted) in times of uncertainties.

However, most dairy operators contest this diversification and claim exclusive rights over their farmers' production. Dairy cooperatives indicate in their statutes that the entire production must be sold to the

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[2] Data Agrest edition 2021. The overlaps of the geographical region on the borders of two administrative zones affect statistical accuracy.

[3] Direct sale in Bas-Rhin represents 4% (838 000 litres) of the volumes produced in the region Grand Est (larger administrative region) and 22% (4 461 000 litres) in Haut-Rhin.

[4] Dairy quotas were enforced in the framework Common Agricultural Policy in 1984 and discarded in 2015. These "rights to produce" were attributed to producers and per territories to avoid overpro-duction and price dropping

cooperative. A farmer explains us that whoever contravenes this policy must pay a fine on the milk they sell to the operator:

"As we also do direct sale, they identify us as competitors. We pay a 15% penalty on the volume. [On top of buying cheap milk], it also allows them to put pressure on people who want to do direct sales." (Dairy farmer, March 2022).

In contrast, operators justify this fine by the logistic cost generated by the fluctuation of milk available each day: if a farmer retrieves part of its milk twice a week to process its own dairy, the tanker-truck would run partly empty these days. An operator explains us that the disruption of optimized dairy routes generates extra costs for operators, and justifies the fine as an incentive for regular deliveries:

"In our internal regulations, when there is a fluctuation of more than 10%, well yes, we charge them a collection fee. It's more to encourage them to ensure regularity in deliveries. Because in terms of re-billing, it doesn't represent much. It's more of an incentive for them to make an effort to ensure regularity in delivery." (Operator A, April 2022).

Moreover, diversifying supply chains also implies profit shortages for the operator because they collect less volumes of milk. As a result, this dissuasive policy coupled with farmers dependency to operators tends to hinder the development of multiple short food supply chains that would supply the urban market.

Furthermore, each operator channels dairy toward different outlets: on the regional (or national) market under a local brand, framed by McMichael (2002) as "Food from somewhere", or on the national or international market as "Food from nowhere". To a large extend, dairy circulation depends on the operator's nature (size, cooperative or private group).

In our case, the operator A is a cooperative affiliated to a larger dairy corporate group. The operator does not have its own processing facility and sells its entire milk (about 160 million of litres per year) to the group that owns several subsidiaries. As a result, a larger part of conventional milk is sent to a subsidiary dairy plant in the Vosges that processes soft cheese (under different brands), another part is exported to a subsidiary in northern Italy. Organic milk (25% of the volume) goes to a dairy plant in the north of Paris and is bottled under the group's own brand. As a result, these dairy "from nowhere" (sometimes still labelled "French milk") are sold France-wide and beyond. In contrast, the operator B is a two-headed entity that includes a cooperative (production and processing) and a local brand (marketing). All the milk is processed in their dairy plant into dairy (such as yoghurt, cream, fresh milk) and conditioned for sale on site and under the operator's brand. Hence, the operator B controls a structured regional long supply chain (from production to branded product). As a result, these dairy "from somewhere" are more likely to be sold in Strasbourg and the region as part of distributors' marketing strategy.

To a large extent, the socio-material infrastructure sets by dairy operators frame dairy production and orchestrate circulations. However, dairy operators themselves remain embedded in a larger food supply chain: their territorial strategies and production policies always articulate with the market downstream.

BATTLE FOR SHELVES: MASS RETAILING SETS RULES FOR THE DAIRY MARKET

Entering mass retail: make volume at steady pace

Most of the food that people consume, including dairy, is commercialized by mass retailing[5]. Thus, dairy operators engage in a fierce competition to access the shelves of supermarkets, where their products are most likely to find buyers.

Mass retailing selects products in two main ways, which depend on the type of retail. In the case of integrated retails, which are part of a network steered by one central owner, regional central purchasing agencies are responsible for selecting products and establishing commercial contracts with dairy operators. In contrast, franchised retails are steered by an independent owner associated to a larger network. Each retail selects products suggested by the regional central purchasing agencies of the network but can also establish individual contracts with dairy operators.

Those contracts are generally concluded with small-scale regional operators, which, in our study, is the case of operator C. Prices and volumes are directly negotiated between the department manager and the operator with regards to the productive capacities of the suppliers. Minimum volumes of supply are nonetheless required to meet logistic costs of transporting the products from the dairy plant to the supermarket. Franchised retails usually conclude those individual contracts for a few come-out products and as part of a marketing strategy that promotes local supply to advertise their tradename on social and environmental grounds.

Though, most contracts between dairy operators and mass retailing are set at the level of the central purchasing agencies. These represent the gate to the shelves of supermarkets. This centralized system is based on economies of scale, logistic rationalization, as well as just-in-time and on-demand supply. Large volumes of conditioned dairy products circulate from the dairy plant to the warehouses of central purchasing agencies (which can be located up the 150km away from Strasbourg). Then, they are distributed on request in the different supermarkets of the regional network. Central purchasing agencies coordinate the overall logistic infrastructure that permits circulation (trucks, warehouses, handlers). This system is tailored for large-scale national dairy operators whose productive infrastructures permit to handle just-in-time large volumes.

Specifically, small-scale regional operators struggle to meet standards of central purchasing agencies on three main grounds: volumes and logistics (which pushes operators to invest in new processing equipment to handle larger volumes), production pace (just-in-time ordering for same or next-day delivery) and economic pressure (commercial contracts always include discounts that lower the purchase price for the supplier). An operator refers to this process as an alienation from his own business:

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[5] In 2018 in France, 65% of food goods are commercialized by mass retailing. Insee focus, n°187.

"It's our business, but it's still [mass retailing] that dictates the timing and I mean we're well and truly in a quasi-integrated circuit of industrial production. Well, it's a small industry, but [mass retailing's] orders arrive at 9am and they have to leave at 11am…" (Operator D, March 2022).

Ultimately, mass retailing centralization, logistic rationalization and price race push small-scale regional dairy operators aside and enhance those holding out to expand at the expense of the others.

Struggle for shelves among regional dairy operators
Beyond entry obstacles, mass retailing product policy generates a competition between small-scale dairy operators to have their products displayed in the shelves of supermarkets. Usually, for one type of product, let's take fresh milk, mass retailing proposes several lines that include the distributor's own brand, several national brands (that consumers can find almost everywhere), and a few local brands.

If mass retailing promotes local products in supermarket aisle headers, the line of these more expensive dairy is quite restricted. In the different supermarkets of Strasbourg, we have identified four regional brands which are all referenced in the catalogue of central purchasing agencies. Most products are those of operator B while those of the three others are limited to a few products. If competition is mitigated at the level of production, operators already positioned in mass retailing market defend their own turf. An operator reports aggressive commercial strategies of a competitor to have a bigger share on supermarket shelves:

"They [operator B] have territory to defend. Because [they] have a reputation to defend. [...]. And their objective is to eradicate us from the shelves and take them over. That's it, more space. They state it clearly." (Operator C, March 2022).

This struggle for shelves is carefully orchestrated by mass retailing to break prices while offering a selection of regional dairy to consumers. This process reduces the commercial outlets of regional dairy supply chains which in turn reinforces market concentration.

Conclusion

In this paper, we have demonstrated that dairy operators and mass retailing have strong powers on long food supply chains: they determine which dairy are produced and circulate up to distribution sites (Garcier et al., 2017). These powers work in a relational way and imply interdependencies.

Dairy operators' territorial partitioning bind farmers to certain production policies (conventional, organic, volumes required etc.). On the one hand, these policies are enabled by geophysical settings and in turn contribute to reshaping the foodscape. On the other hand, operators foresee market outlets. They adapt their production policies and channel supply chains according to the demand of mass retailing. Central purchasing agencies command a powerful handling infrastructure based on large volumes at low price and logistic rationalization. They operate a selection between whose dairy products reach the shelves of the supermarkets and whose are discarded. Not only this socio-material infrastructure favours large-scale national operators, but it also gets small-scale regional ones to compete, hindering the development of other regional dairy supply chains upstream.

In this sense, we confirm our initial assumption: the socio-material infrastructure set by dairy operators and mass retailing for dairy circulation contributes to reshaping the hinterland. It determines the type of production which is likely to develop and channels supply chains into different directions in response to urban demands.

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Learning about, playing with, and experimenting in critical food futures using soft scenarios
Directions for food policy and planning

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Abstract – Imagining sustainable food futures is key to effectively transforming food systems. Yet even transdisciplinary approaches struggle to open up complex and highly segregated food policy governance for co-production. Here we argue that soft scenarios are vital transdisciplinary tools that empower societal stakeholders to broaden possible food system trajectories through learning about, playing with and experimenting with critical food futures. Specifically, soft scenarios contribute in four ways: 1) questioning widely held assumptions about the future; 2) being inclusive to multiple perspectives and worldviews; 3) fostering receptiveness to unimaginable futures; 4) developing futures literacy. Using cases from the FEAST Project, narratives, serious games, interactive art, and models demonstrate how future scenarios can provide a transdisciplinary space for engagement and how agency, policy change, and scale interact in scenario co-creation processes for food policy. In order to overcome the highly-segregated nature of food policy governance, evidence from these cases shows that soft scenario methods can build consensus among disparate stakeholders and bring to the fore critical perspectives necessary for fostering sustainable food systems.

Keywords – food systems, transformation, scenarios, futures literacy, critical futuring

INTRODUCTION

Imagining sustainable food futures is essential to effectively transforming failing food systems. How food systems are failing their stakeholders, including producers, consumers and the living beings produced and consumed, is well understood (McGreevy et al. 2022). Realizing sustainable food systems will not come through incremental adjustments that replicate the status quo and underlying values and logics, but by critically interrogating the foundations of the current food system and catalysing comprehensive transformation (McGreevy et al. 2022).

There are two challenges to creating and enacting sustainable food futures in the food policy and planning context: 1) failure to engage with futures in a critical way and 2) bridging the highly-segregated sectors of the food economy and siloed governance structures.

Assuming what the future may look like, or in contrast, assuming nothing at all immediately limits what outcomes a process to envision sustainable food futures might produce: "people's fictions about the later-than-now and the frames they use to invent these imaginary futures are so important for everyday life, so ingrained and so often unremarked, that it is hard to gain the distance needed to observe and analyse what is going on" (Miller, 2018, p. 2). Whether a result of past experiences, failing to include diverse stakeholders, or not providing sufficiently safe spaces for expression, participants engaged in futuring may limit the perspectives and viewpoints they consider for discussion. Radical futures that critically examine what is taken for granted might seem so alien and implausible that they are discarded. Critical food futures, then, actively interrogate the underlying assumptions, values, and worldviews that reinforce how the current food system operates.

When done well, food policy and planning is an integrative process of many diverse stakeholders who find ways to reach consensus (Lang et al. 2009). Discussions on food policy need to be held at the intersection of many, sometimes competing, interests and issues, demanding a multiplicity of perspectives and improvement in knowledge integration. Robust interactive methods to both improve the creation of critical food futures and their inclusion within integrated food policy processes are needed.

We argue that food policy and planning processes concerned with sustainable food system transformation need to meaningfully engage with critical food futures and can do so through the use of soft scenario methods to *learn about, play with, and experiment in* futures. "Soft scenarios" (Garb et al. 2008) are a way to critically approach food futures with food system stakeholders that allowed 1) questioning of widely held assumptions about the future, 2) being inclusive to multiple perspectives and worldviews, 3) fostering receptiveness to unimaginable futures, and 4) developing futures literacy.

In this paper, we argue for using soft scenarios within food policy and planning by using examples from the FEAST Project (Research Institute for Humanity and Nature, Kyoto, Japan, 2016-2021). Narratives, serious games, interactive art, and models demonstrate how soft scenarios can provide a transdisciplinary space for engagement and how agency, policy change, and scale interact in scenario co-creation processes for food policy.

SOFT SCENARIOS FOR CRITICAL FOOD FUTURES

"Soft" scenario approaches (**Table 1**) aim to critically interrogate the unquestioned values and assumptions that frame thinking about future trajectories by creating a safe and malleable, thus "soft" space for

participants to consider critical futures. Narrative and story, interactive art, serious games, virtual reality, performance, and experimental workshop formats are just some of the ways in which scenarios of the future are being conceived.

Table 1. Examples of soft scenario methodologies and how they encourage learning, play, and experimentation with futures (adapted from McGreevy et al. 2021)

Studies covering methods and providing evidence for…	…learning about futures	…playing with futures	…experimenting in futures
Interactive art installation Bendor et al. 2017		X	X
Storytelling scenario workshops Bowman et al 2013	X	X	
Narrative expression case studies Chabay et al. 2019	X	X	
Design fiction Antonsen & McGowan 2021 Hebrok & Mainsah 2022	X	X	
Performative theatre Heras & Tabara 2014	X	X	X
Prehearsals & pre-enactments Everyday experiential labs Kuzmanovic & Gaffney 2017	X	X	X
Digital and table-top role-playing games Dolejšová 2019 Mangnus et al. 2019	X	X	X
Serious games Ritterfeld et al. 2009	X	X	X
Futures forum emphasizing art & design Selin et al. 2015	X	X	X
Mixed interactive media (game, video, animation, workshops) Vervoort et al. 2010	X	X	X
Worldmaking Vervoort et al. 2015		X	X

Using soft scenarios for learning involved getting to know – often through stories – the topic at hand, including relevant issues and points of contestation, and gaining an understanding of actors involved as well as their backgrounds and motivations. Playing with futures as scenarios allowed participants to discover and be exposed to imagined worlds and feel something about them, getting familiar with the context and exploring choices play-fully without the burden of doing it "right". Experimenting with futures provided the experience of seeing options appear, change and vanish, as "detailed interventions [are] experimented with by participants embodying the future" (Mangnus et al. 2019). Soft scenarios are a hybrid approach to future literacy building that draws upon deep, experimental and critical futures approaches. In turn this hybrid approach does "not presuppose an active, formative engagement with the future as such, but rather bring(s) people together around a reflexive deconstruction of images and imaginaries of the future" (Mangnus et al. 2021).

Over the course of the project, FEAST created partnerships with food system stakeholders to envision desirable and plausible futures and to initiate local food policy and food citizenship-oriented experiments and actions. Specific soft scenario methods deployed during FEAST and included in the cases described below are interactive art exhibitions, digital and tabletop-based serious games, and food practice-focused visioning and backcasting workshops to allow for critical perspectives to emerge (**Table 2**).

CASES FROM FEAST

School Lunch 2050 exhibit

Assumptions about the future are necessarily based on what we know. However, food systems and food policy are complex and researchers and non-academic stakeholders alike are often only aware of some aspects while remaining ignorant of others. One prominent example is the implication of climate change on food futures, an issue now requiring dedicated evaluation by large expert teams to even outline how far-reaching consequences of (for example) limiting temperature increase to 1.5 degrees Celsius might be. Learning in ways that situate knowledge in everyday experiences and practices rather than simply presenting abstract numbers can thus help question the very assumptions the futures hitherto taken for granted or presumed plausible were based on.

In a Kyoto exhibition of possible future school lunch scenarios (now also available online (School Lunch 2050, 2021), participants, including but not limited to students and their parents, interfaced with four future scenarios (Gardens, Illusion, Desperation, Gamble). These scenarios represented success and failure in limiting global warming as well as reliance on or independence from the global capitalist-industrial food complex through plates of food: Satoyama soup and edible school garden grown vegetables, Filipino purple yam flavoured New-Zealand cow-free powder milk, bananas grown locally in Kyoto alongside cricket tofu steak, or a medical cube to dissolve microplastics alongside microbiome-building supplements and CRISPR-bug bits instant soup. Far from science fiction gone off the rails, all components were based on research and extrapolated trends, issues and debates already happening around climate impacts on future diets.

Encountering such a ubiquitous meal reinterpreted in very different ways and in presented as a tangible display created an opportunity for questioning assumptions about how food might change in the future. Taken-for-granted staples, such as rice, miso soup, or iconic fruits or vegetables may not be available depending on the severity of climate change or attention paid to local food security and this was a shock for many participants.

Food policy council simulator serious game

Perspectives and worldviews are strongly dependent on our daily-life roles in the food system. Are we consumers, parents, policy-makers, or producers each with our own intentions and expectations in mind? Integrative food policy processes struggle to include multiple perspectives and worldviews, an issue that is increasingly tackled by setting up municipal food policy councils (Baldy & Kruse 2019; Van de Griend, Duncan, Wiskerke 2019). In addition, institution-building takes time and trust.

In the serious game "Food Policy Council Simulator", community members with different roles in the food system participated in a role-play exercise that allowed them to swap roles (Mangnus et al. 2019). They worked together to address real-world local food issues by taking on new perspectives ("roles"), explored and negotiated while building empathy for different views on future worlds and

organizational capacity for developing policy proposals ("rules"), all without recreating the stifling atmosphere pervasive in formal participatory engagement processes. Some of the same game participants later established a Food Policy Council in Kyoto, Japan.

Through the role-playing game experience, participants were invited to walk in the shoes of someone else and empathize with their situation and worldview. The additional layer of a gamified simulation of a food policy council allowed participants to play with possible food policy ideas, imagine how those policies could address local needs, and how possible futures might unfold based on actions taken now. Participants' sense of agency to impact local food system change was fostered through the safe space of play and gaming.

Participatory practice-oriented food policy process
What if you could eat fresh, healthy meals at home without having to cook? Expanding receptiveness to futures that lie outside the easily imagined can open doors to new potential solutions for problems seemingly wicked within the limits of what looks possible.

A multi-phase process of interlinked workshops including visioning, scenario evaluation, and transition pathways brought together consumers, experts and policy makers to tackle sustainable futures of food purchasing, eating out and home cooking in Bangkok using a social practices perspective (Kantamaturapoj et al. 2022). Participants dared each other to leave common sense behind, experimenting with scenario narratives featuring a smart but sharp-tongued personal artificial intelligence shopping assistant steering the protagonist family towards sustainable and healthy food options, an open-air restaurant where dinner can only be paid for with agricultural products pooled and then prepared on-site, and a communal kitchen equipped with a M. O. M (My Optimal Menu) robot tracking and providing meals based on individual members' health needs. This experimentation process enabled policy ideas to realize urban food sustainability in Bangkok to go beyond conventional approaches emphasizing individual behavioural change. Instead, ideas embraced multi-sectoral and systemic strategies that capture how food practices emerge as the result of social, cultural, economic, and technical contexts (Kantamaturapoj et al. 2022).

Within this series of workshops that included envisioning desirable futures, devising scenario narratives of future food practices, role-playing the narratives, and backcasting policy and intervention ideas to reach the ideal futures, participants were able to draw links between the way current practices shape everyday life and how they would like to see them in the future. By mixing visioning, immersive futures narratives, and backcasting processes, theories could be tested and receive feedback from participants residing in fictional futures in a reflexive process.

CONCLUSION
The experiences above point to soft scenarios' ability to enhance food policy and planning processes aimed at critical food futures by assisting participants in questioning widely-held assumptions about the future, enabling the inclusion of multiple perspectives and worldviews, expanding the receptiveness to unimaginable futures, and developing futures literacy (**Table 2**). Not only were these experiences the realization of a transdisciplinary space to bridge disparate food system actors, key insights were co-created for innovative local food policy and participants felt a sense of agency to change the food system. This is evident in the establishment of new institutions, such as the food policy council in Kyoto, and policy plans, as was the case in Bangkok. Participants were also able to engage with spatial and temporal scales through soft scenarios and learn about the geographic reach of food systems upon which they depend and how these could change under climate change. Playing with possible bottom-up solutions to these challenges and also experimenting in desirable everyday food futures to devise pathways to reach them built consensus among various stakeholders.

Complete food systems transformation can seem like an overwhelming, almost unimaginable task. By assisting in "turning our attention not only to futures as they are presented, but also to 'futures-in-the-making' or futures as they are made", soft scenarios are a tool to challenge "predominant ideas about and conceptions of the later-than-now", and "deliberately but sensitively steer images of the future in empowering—and ideally also environmentally-friendly and democratic—ways" (Magnus et al 2021).

Through learning, playing and experimenting with critical food futures, many of our participants felt empowered to reassess their relationships with food in the present and arrived at a core principle for sustainable food systems that ended up becoming our project catch phrase: enough is as good as a feast.

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Table 2. Soft scenarios in action and their effects (adapted from McGreevy et al. 2021)

Effects / Soft scenarios	Assists participants in questioning widely held assumptions about the future	Enables the inclusion of multiple perspectives and worldviews	Expands receptiveness to unimaginable futures	Develops futures literacy
School Lunch 2050 exhibition (see kyushoku2050.org)	Questions implicit assumptions of food security & continuity by showing how climate change & biodiversity loss may impact the menu; Demonstrates rarely considered tension between heavily imported vs. locally sourced food system	School lunch is a common experience for everyone, enabling a vicarious experience beyond individual perspectives	Engages the senses through art, tangible menus ("seeing is believing"); affective response to "Would I eat this?" and "How did we/our society get to this point?"	Show four possible future trajectories in an easy-to-understand format, modeling a way to "use the future"; Reveals the relationship between climate change and food economy through diverging outcomes
Food policy council simulator serious game (see Mangnus et al. 2019)	Demonstrates the complex nature of food policy in contrast to common simplistic media portrayal; Introduces the interaction of various actors involved in the food system and case studies of good practice in multiple countries, thereby questioning the assumption that "it can't be done"	Role-playing style accommodates anything players can imagine, including fictitious roles able to intentionally introduce diverse worldviews; Role-playing characters promotes empathizing with others	In-game negotiation with other players facilitates discussion of collectively desired future & offers place for social learning; Role-playing elicits affective responses to possible futures/policies	Build organizational capacity to use the future amongst players; Introduces random disruptive elements that impinge upon the effectiveness of planning, thereby fostering capacity to anticipate and deal with uncertainty
Participatory practice-oriented food policy process (see Kantamaturapoj et al. 2022)	Scenarios explored the interplay between technology (A.I., V.R.) and socio-cultural values, highlighting disruptive potential of socio-technical and socio-cultural changes	Scenarios derived from multi-stakeholder, reflexive process; Role-playing characters promotes empathizing with others and adopting new perspectives	Role-playing future narratives elicited affective response; Narratives assist avoiding reflexive dismissal of too-strange futures; Focus on everyday practices facilitated backcasting process	Policy ideas focused on changing practices in integrated and intentional ways, as opposed to simply aggregate individual behavior and choice

Pressure cooking in the melting pot
Integrated Landscape Approach for Foodscapes in the coastal area of Emilia Romagna

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Abstract – In 2022 the LE:NOTRE Institute organised a four days landscape forum in Rimini, on the coast of the Regione Emilia Romagna. One of the themes was rural change and foodscapes. The policies of the Regione Emilia Romagna aim for an increase of organic and integrated production and strengthening the regional food systems. Rimini organises a collaborative process for its strategic plan in which the aspect of food planning can be strengthened.

The forum aims to approach this in an integrated landscape based way, addressing the following questions: (1) Who are the main stakeholders in the regional food system? (2) How are the food production areas linked to the coastal urbanised areas and its permanent or temporary (tourists) consumers? (3) What are the main challenges for developing a sustainable food system in the area that considers policies for climate change, sustainable tourism, and inclusion? (4) How to balance global production with local production? And (5) Which spatial strategies can help to develop the food system in a sustainable way?

A working party of academics and master students with the support of local experts studied the area focusing on the transect from the inland to the coast between Cesena and Cesenatico. The process consisted of studying references, a study visit to the focus area with meetings with local producers.

In this paper we evaluate and present the main outcomes of the forum for the development of sustainable foodscapes, the role of the forum in the planning process of local and regional authorities and the way an integrated landscape approach can contribute to sustainable food planning, together with the advantages and disadvantages of long-term in depth studies with pressure cooking sessions such as the forum, where the input of an multi-cultural, international group of participants can generate new concepts. The paper concludes with how the study of a focus area, using a transect can generate transferable knowledge for transformative approaches for sustainable food planning.

Keywords – food strategy, landscape observatory, landscape approach

INTRODUCTION

The LE:NOTRE Landscape Forum is a four day event during focusing on dialogue, debate and discourse by researchers, teachers, students and local experts from a range of landscape disciplines. It embraces the principles of the European Landscape Convention and aims to generate new ideas for sustainable development of landscapes by cross fertilisation between theory and practice. Rural change and foodscapes is one of the thematic field that interact with other themes such as landscape democracy, sustainable tourism, heritage and identity. This paper presents the process and results of the forum in Rimini, Emilia Romagna for foodscapes.

APPROACH

The team prepared the on site forum sessions by analysing regional and local policies, desk research on research papers related to food, analysing preparatory work of the international student competition 'Dancing to the Future', mapping local producers and the experience shared by local experts. On site work consisted of interaction with local experts and a field visit to local producers, fishermen and food providers. There was interaction with other teams such as Landscape Democracy and those who were working on an integrated landscape vision. Based on this a DPSIR and SWOT analysis were carried out.

Landscape Approach

Competing claims from a large variety of stakeholders converge on a landscape level. When individually addressed, the approaches taken to reach these goals could have negative trade-offs. Landscape approaches aim to find cross-sectoral solutions leading to synergies that are better than the sum of sector-specific solutions (Horn, van der & Meijer, 2015).

A key element of present day landscape approaches is the involvement of participants in decision-making on land use. By involving participants from all concerned interest groups, a land-use strategy may be developed that takes into account the objectives of each group, minimising costs and maximising benefits for each, while recognising certain trade-offs.
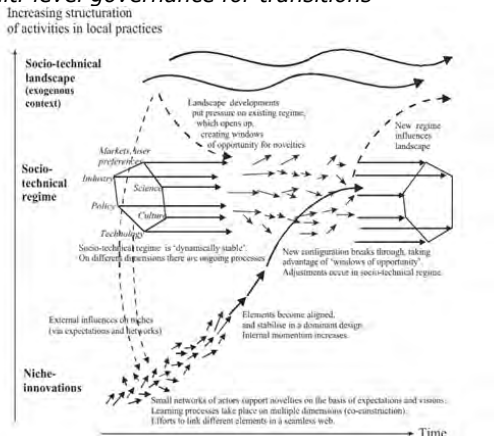
Multi-level governance for transitions

Figure 1. Multi level perspective on transitions (Geels, 2011)

Geels (2011) presented a multi-level perspective on transitions for sustainable development. It appears that carefully organised planning systems on various levels often do not contribute to real transformations because these are often consolidating the current state of affairs, are slow in connecting. Sustainable development can benefit from niche innovations, which however could have little impact when not streamlined, organised and linked to strategies.

ANALYSIS, CHALLENGES AND RESULTS

The implementation of the European Landscape Convention (Council of Europe, 2000) proposes the formulation of landscape quality objectives and monitoring these by landscape observatories. By defining landscape as "an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors" (Article 1.a), the European Landscape Convention recognises the relationship between the space being observed and those who observe it. Recognising the physical reality of the area and the different ways in which it is perceived leads to due consideration being given to the views of farmers and other stakeholders, including the local population.

While for the farmer, as a professional, the "area" encompasses the production space that he or she manages and shapes according to agronomic objectives, this same "area" is experienced and "perceived by people" as part of the backdrop to their everyday lives. It is important, therefore, to combine objective and subjective approaches in order to initiate a planning process based on diverse knowledge and sensitivities (CDCPP, 2021).

The Regione Emilia Romagna has installed a Landscape Observatory for the whole region. This observatory functions mainly as a framework for local landscape observatories that still have to be established.

The Rimini Strategic Plan was developed by a participatory process in which NGOs and many representatives took part. The contribution of residents and actor working on niche innovations is not yet organised by this participatory process. (Valentina, 2020).

The region could promote the realization of agritourism and organic farming techniques, and barriers to protect not-infrastructure areas. As such, farms could maintain their agricultural vocation and promote activities to supplement agricultural income (Valentina, 2020).

The Rimini strategic plan is lacking an approach for sustainable food planning that is connected to policies for biodiversity, agriculture, healthy food. The implications of climate change such as water shortage and salination are not yet followed up by new strategies for production, such as opting for other crops. Global trends call for rethinking the position of food production which is strongly oriented on the global market and shift to focusing on local food chains and a stronger connection with the tourism sector.

The area for organic farming is still growing. There are many niche initiatives for improving local production, branding of local products, regeneration of local varieties (such as the Sangiovese), as well as social initiatives such as community kitchens and social enterprises that provide working places for less advantaged people. Local gastronomy, based on fresh fish and local cheese (such as Fossa and Squacquerone di Romagna) is still not yet main stream in restaurants and bars.
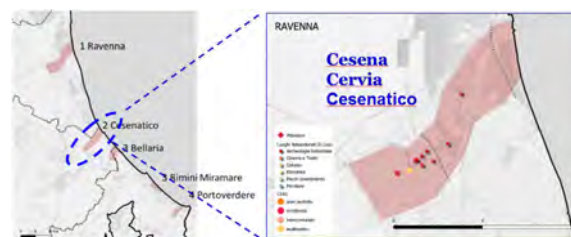

Figure 2. The transect between Cesena and Cesenatico as the focus study area of the foodscapes team

The realisation of integrated projects between viticulture and tourism sectors (such as the wine routes) in vineyard areas like Emilia-Romagna can offer an interesting solution for those wine makers who intend to launch the promotion of their own products and create development opportunities as, for instance, new job opportunities for young people. In the tourism sector, it might be possible to integrate traditional activities – beach, thermal and mountain tourism – with the yet non-existent thematic tourism in the Emilia-Romagna region (Gatti, Incerti and Ravagli, 2002).

Origin-linked products can be part of a sustainable quality based on the preservation of local resources and other factors described in the FAO-SINERGI guide "Linking people, places and products" (FAO, 2018).

Environmental Farms represent one of the possible choices that farmers have when moving away from the single idea of agricultural production and adopting an innovative to cope with the negative aspects of productivity or the agro-industrial paradigm (URBACT Project, 2018). Six farmsteads from Cesena actively participated in the project.

The former holiday colonies (Colonia) that were functioning for school children are on the national and regional heritage list. Many of these are no longer used and could be redeveloped for social and cultural functions.

Important challenges for developing a sustainable food system are:

- organising short chain collaborations between local producers, retailers, restaurants, cafes, hotels and tourism operators, and providing a space for this in the form of food hubs (e.g. in one or some of the colonia).
- access to good quality and local food for the less advantaged calls for strengthening the networks of local producers with consumers and developing possibilities for growing food in and around the city.
- adapting the produce and crops in the coastal area to climate change and local production in order to make the production less global oriented and answering to the demands of food in the region.
- bridging the gap between consumers, producers and governance by organising participants in collaborative platforms such as Food Councils with representants of local farmer organisations, NGO's, and retailers.
- strengthen branding of local products to help local producers having a strong place in the market linking that to cultural heritage, traditional crafts and produce, and fostering traditional landscape patterns.
- supporting social entrepreneurship in the food branch to make the industry more inclusive by providing work and activities for the less advantaged.
- providing a spatial network that is linked to local production with gastronomic thematic routes making use of networks of green infrastructure.

Food system actors represent the largest group of natural resource managers. They are critical in both creating the problems and implementing the solutions. Identifying actors along the food chain as well as where and how power is located enables policy makers to develop management approaches targeted towards those actors with influence. In addition to those directly involved in food chain activities, governments and civil society are also important as they set the wider policy and societal context. Installing a platform like a food council can help to make the system more equitable and just.

By a multi-level governance approach that integrates the objectives of different participants into landscape quality objectives a solution may be found for competing claims on a landscape level. Goals that are formulated in a collaborative way, can set a future agenda for the foodscape in the coastal area.

Conclusions

Emilia Romagna is one the most productive landscapes of Italy. The Regione Emilia Romagna and the city of Rimini have a strong structure of policies based on sustainable development goals. The content and support for these policies is organised by participatory processes. The challenge is to align private and public interests, cross sectoral interests and make use of local knowledge. A landscape system cannot be transformed as a whole. Geels (2011) points out the importance of making use of niche

innovations that can be strengthened by integrating them into a stronger driving force. A local landscape observatory for Rimini could foster communication between niche innovations, make a link to deep democratic processes and strengthen the power of transformative actions by linking these to explicitly defined landscape quality objectives.
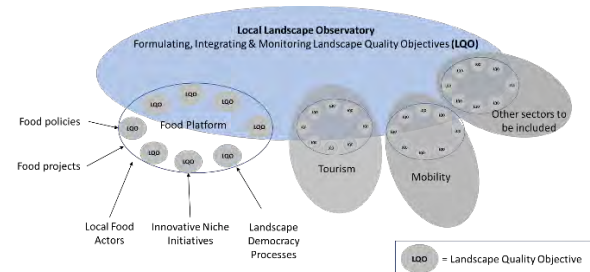

Figure 3. A local landscape observatory integrates goals for sustainable foodscapes and food systems

A food strategy for the coastal area could be developed with quantitative and qualitative objectives for re-territorialisation of the food system. Elements of this food strategy can be: (1) strengthening the connection between local producers and local consumers by creating short chain networks, for which some of the former colonies can have a function as a food hub. (2) Transforming current agriculture along nature reserves, nature development zones and landscape development areas into multifunctional, inclusive, and organic farms to help to protect and develop green infrastructure corridors. (3) Giving people the opportunity to grow their own food in the (peri) urban landscape for their physical and mental well-being.

Installing a Food Council with participants of various sectors can support the implementation of the food strategy and help to integrate the landscape quality objectives for food system resilience into the Rimini Landscape Observatory.

A pressure cooker intervention such as the LE:NOTRE Landscape Forum cannot realise transformations in the landscape and its governance. Its impact consists mainly of providing new ideas and concepts from a different perspective to those who are on a day to day basis involved in the local landscape.

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https://www.riminiventure.it/processo-partecipativo/

https://www.riminiventure.it/cose-il-piano-strategico-di-rimini/

URBACT project:
https://urbact.eu/urbact-glance

The multiple and contested worlds of urban food governance:
The case of the city of Valencia

A. Escario-Chust, T. Zerbian, S. Segura-Calero, G. Palau-Salvador[1]

Abstract – Cities have positioned themselves as key actors in agri-food sustainability transitions through the implementation of food policy councils and urban food strategies. By promoting participatory food policymaking, these spaces allow several actors to engage in a contested process of mutual learning that challenges individual paradigms and helps construct a common goal. Significantly, the development of these mechanisms has meant that alternative food networks have had the possibility of reclaiming power in governance spaces and thus contribute to sustainability transitions. Nevertheless, while signalling that transitions governance can bring more inclusive and collective change, critical studies call for the need of paying attention to power dynamics in these processes. Drawing from this notion, the paper explores how diverse sets of governance actors mobilise and execute power within and between two urban food governance processes – an agri-food transition platform and a food policy council – in Valencia, Spain. In doing so, the paper raises three main points to further understand the potential of urban food governance processes for sustainability transitions: the longitudinal and cross-scale evaluation of power dynamics and subsequent tensions, the acknowledgement of different kinds of power, and the analysis of the tensions derived from the coexistence of governance spaces.

Keywords –

INTRODUCTION

Cities have positioned themselves as key actors in governance transitions through the implementation of urban food governance instruments, such as food policy councils and urban food strategies (Candel, 2020; Sonnino et al., 2019). By promoting participatory food policymaking, urban food governance instruments have been regarded as successful governance innovations for sustainability transition processes (Olsson, 2018). Sustainability transitions are understood as processes of change that involve a fundamental change in structure, culture, and practices (Loorbach & Rotmans, 2010) towards a more sustainable society or system. The complex governance of these processes "includes the search for steering mechanisms and tools that coordinate societal and political processes in a participatory and deliberative fashion while

engendering commitment to sustainability values" (Frantzeskaki et al., 2012, p. 21). These transitions can, thus, be fostered, initiated, accelerated and facilitated by multiple actors (Elmqvist et al., 2019) generating solutions that directly address persistent sustainability problems (Avelino, 2011; (Elmqvist et al., 2019). Indeed, it is argued that urban food governance instruments can create 'transformative' spaces in which several actors engage in a contested process of learning and unlearning that challenge individual paradigms and help construct a common goal (Pereira et al., 2020; Vara-Sánchez et al., 2021).

Nevertheless, critical studies have demonstrated that urban food governance instruments might have limitations in engendering sustainable change and participatory policymaking (Hebinck & Page, 2017; Mansfield & Mendes, 2013; Morley & Morgan, 2021). Significantly, recent work demonstrates that issues around agency and power permeate food policy councils and urban food strategies (Coplen & Cuneo, 2015; Vara-Sánchez et al., 2021; Zerbian & de Luis Romero, 2021). While much critical studies have focused on issues of participation within urban food governance processes, less has been written on the intersections and power tensions between diverse governance structures within a city and its actors. Indeed, there is arguably far more work to be done on the politics of urban food governance at the local level (Moragues-Faus & Battersby, 2021). Viewed under a sustainability transitions lens, urban food governance processes are conceptualised as social phenomena impregnated with human interactions between actors with different agencies, capacities, influence, and, in the end, different power relations. As power is per se a social phenomenon, power struggles are inherent to transition processes (Grin et al., 2010; Avelino, 2011; Frantzeskaki et al., 2017; Pereira et al., 2019). In other words, the potential of urban food governance instruments for sustainability transitions are the reflection of a diverse set of power relations and dynamics.

In line with calls to provide a deeper examination of urban food governance beyond the process of developing a particular urban food policy (Moragues-Faus & Battersby, 2021), this study aims to explore

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how diverse sets of governance actors mobilise and execute power within and across urban food governance spaces. We build on research on power in transitions governance and (urban) food governance, which aims to reflect upon power asymmetries, struggles and conflicts in transformative spaces. In doing so, the focus is on the mix of power instruments and strategies, including their limitations, utilised by municipal government and civil society and social movement actors to drive their agendas across and within urban food governance arrangements. The paper uses the city of Valencia as a case study to do so, with particular focus on two urban food governance processes in the city – an agri-food transition platform and a food policy council. The study is driven by the following research question and objectives:

Research question: How different kinds of power dynamics and transition processes affect the coexistence of multiple urban food governance spaces?

Objectives:
1. To examine the types and forms of power present in urban food governance processes in Valencia.
2. To analyse how actors mobilise power across and within coexisting urban food governance spaces in Valencia.

Case study

The city of Valencia's commitment to sustainability concerning food has been materialised in the Agri-Food Transition Board (in Spanish, Mesa de Transición Agroalimentaria or MTA), as a space to co-produce a roadmap with the aim of implementing an urban agri-food transition model between actors from five different sectors: academia, public sector, private sector, civil society and mass media. The MTA was launched in February 2022, pushed by the City Council and under the coordination of a core group made up of the Valencia City Council, Las Naves Innovation Centre, the Valencia World Centre for Sustainable Urban Food (CEMAS) and a facilitation consultant.

Nevertheless, before this Board existed, the elaboration of Valencia's Agri-food Strategy 2025 led to the Creation of the Municipal Food Council of Valencia (CALM) in 2015. The creation of this group is product of both the international push for food as an urban problem after the Milan Food Policy Pact and the strong focus that the city of Valencia traditionally has had on agri-food system concern (Ovaska et al., 2021). It is composed of 40 groups (belonging to NGOs, social movements and the local government). Through participatory processes, it aims to establish a new form of local food governance to improve the city's food system (Farinós i Dasí et al., 2018).

The implementation of a new urban food governance space by the City Council in the presence of a previous food council already legitimised by civil society and social movements led to several conflicts and power

mobilisations by the involved actors, which are the focus of this study.

Methodology

Framework for analysis

The study uses a combination of (Andrée et al., 2019)'s - later reworked in (Clark et al., 2021) – governance engagement continuum framework and (Avelino & Rotmans, 2009) framework of power in transition (see Figure 1).

Figure 1. Power in governance transitions (authors' own compilation)

The analytical focus is then on *how different actors exercise different kinds of power across different levels and spaces within and across urban food governance processes*. In this framework, four types of power (instrumental, discursive, structural and constitutive power) are identified as critical for examining governance spaces. This is combined with Gaventa's (2005) power cube. The power cube aids with a more in-depth understanding of the mobilisation of power, as it distinguishes between different forms (visible, hidden, and invisible), levels (from local to global) and spaces of power (closed, invited, and claimed). Drawing from Avelino's (2009) work, a horizontal conceptualisation of power is adopted, acknowledging the conditions that allow power execution and power dynamics and relations between different actors.

Data collection and analysis

The study included semi-structured interviews and participant observation, and secondary data in the form of document analysis. Sixteen interviewees were selected according to their strategic relevance and specific perspectives due to their experience in being involved in the development of the MTA and/or participation in the CALM. Participant observation was conducted throughout the process of development and implementation of the MTA from May 2021 to May 2022. Finally, strategic plans, policy documents and articles related to the conceptualisation of the food policy council of Valencia and the MTA, as well as

minutes and videos of internal meetings, were included in this study as documentary and secondary data analysis. All the data collected was analysed thematically following a reflexive approach to qualitative data analysis (Braun et al., 2019). Themes were developed from primary coding with the aim to depict meaning-based patterns found across the dataset (Braun et al. 2019). The information was coded using a matrix with the components of the theoretical framework using NVivo. However, the study also used inductive analysis, which meant that emergent codes were used for the development of themes.

RESULTS

Drawing on the thematic analysis of the data, the results are presented in four themes that discuss the type of power mobilised in each stage of the MTA's constitution and implementation, and by whom, and the conflicts that arose from these dynamics.

Constitution: Structural power and lack of coordination

The constitution of the MTA initiated with the City Council's commitment to develop a comprehensive urban strategy under the umbrella of the Urban Agenda 2030. Through this framework, working groups, such as the MTA, are created around specific issues with a marked transversal character. In contrast to the development of the CALM, which has an open policy of participation, the membership of the MTA followed a more top-down approach to comply with the Urban Agenda. In this context, the City Council leveraged its structural power by promoting the creation of a new visible governance space, selecting its core group, and setting its agenda. The core group then engaged in the task of strategically selecting the members of the MTA.

The top-down establishment of a new governance space in the presence of the CALM was a continuous point of discussion of the MTA's core group. Some members - those working already closely with the CALM - argued for the MTA to have a more operative function to support the work of the CALM to solve blockages of ongoing projects, taking advantage of the MTA's position within the City Council. In contrast, the City Council viewed the MTA as an opportunity to expand the actors involved in the food strategy of Valencia, integrating more conventional players. In this view, the MTA would act as a satellite governance structure, expanding the work and reach of the CALM. These differences in perspectives revolve partially around the underlying assumptions attached to who belongs to sustainability transitions and thus what sustainability itself means (constitutive power).

Eventually, participants mentioned that this tension was never completely resolved, leading to a series of problems of communication and perception of duplication of efforts by CALM members. For some interviewees these issues revolved mainly on a lack of diagnosis of the previous landscape of the urban food governance of the city, including the needs of the CALM, and an unclear direction of the MTA after

its conceptualisation as well as a weak communication of the needs and goals of the MTA to the CALM.

Development: discursive power and loss of legitimacy

Throughout the years, the CALM has contributed to shaping food policy norms based around ideas of agroecological transition in the city (discursive power). It has successfully run a deliberation and consultation space for influencing food policy in which transformative projects are also developed by the assemblage of resources of its members (structural and instrumental power). Through this work the CALM has been able to create visible and invisible spaces of power locally and internationally, helping civil society and social movements gain a strategic position in Valencia's agri-food sustainability transitions.

The position of the CALM as one of the most important players in the urban food governance of the city was recognised in the preparations of the first meeting of the MTA. Nevertheless, the first meeting of the MTA focused on developing a joint vision for the future of the food system, which according to CALM participants was a work already done by them for Valencia's food strategy in 2015. The agenda and facilitation of the first meeting led to a great discomfort by CALM participants, as they felt that it delegitimized their efforts up to that point and thus loss of discursive power. What followed was a mobilisation of CALM members to counteract the development of the MTA, particularly to invalidate its position as an innovative deliberation space that provided an avenue to gather new leadership and financial resources (discursive power). Significantly, a key discussion in this context was that the most relevant members of the MTA were already within the CALM, arguing that the other stakeholders invited to the MTA did not really have a relevant position within the food system (e.g., media).

End: instrumental power and victory for some

As CALM members hold the knowledge and social resources, such as connections with other organisations, needed (instrumental power) to implement projects on the ground, gaining their buy-in for the MTA became a key priority after the unsuccessful first MTA's meeting. Two meetings were organised with CALM members to explain the role of the MTA as complementing the CALM and not taking over its role, acting as a space to broaden its reach and operationalisation of projects. Nevertheless, ongoing problems of communication and previous discontentment of CALM members because of bureaucratic barriers and blockages meant that most CALM participants did not change their positioning.

The resulting dynamic was that, while the City Council was on time pressure to present its urban strategy in June 2022, CALM members were mobilising resources, particularly through lobbying (instrumental power), to persuade the City Council to let them lead the process by absorbing the MTA. Significantly, CALM members started perceived this

as an opportunity to gain a larger footing within the broader transition of the city to sustainability. After ongoing formal and informal discussions, it was finally decided that the MTA would be dissolved, and the CALM would propose demonstrative projects that should be included in the urban strategy of Valencia. For CALM members this was a crucial step for not only keeping but gaining more power and legitimacy in the governance of the city. Nevertheless, this view was not necessarily shared by all interviewees, some perceived the dissolution of the MTA as a lost opportunity to create a more comprehensive participatory process; one that included more contrasting perspectives beyond the common discourse already advanced by CALM. Notably, even within those opposed to the MTA, participants recognised the need to expand participatory spaces and their work and that a space like the MTA could fill a function in this if it was used as a coordination hub, helping address obstacles and gaps of the CALM.

DISCUSSION

The analysed tensions derived from the creation and implementation of the MTA highlights a range of strategies derived from actors' interests with the capacity to alter governance transitions and eventually create, (re-)claim and reinforce different forms and types of power. This has helped identify three key dimensions for a deeper understanding of power in transitions governance.

First, a closer look at the mobilisation of power across and within governance spaces calls for an explicit understanding of the shifting power conditions and dynamics across time and space in this kind of transition process. In this research, the longitudinal and cross-scale analysis of power allowed for the identification of how different power expressions lead to and are affected by different internal and external conflicts, causing new power dynamics. In particular, this examination illustrates the need to not only look at the results of power execution, such as in the form the exclusion of certain groups (Zerbian & de Luis Romero, 2021) or blockages (Cretella, 2019), but also the conditions that allow particular actors to be able to do so. As argued by previous urban food governance literature (Coulson & Sonnino, 2019), studies need to conceptualise governance configurations as complex, contested spaces that arise from specific modes of convening sustainability transitions and that are sensitive to the differential flows of power derived from contextualised webs of relations and histories.

The second element that the analysis of the case of Valencia illustrates is the importance of acknowledging the equal importance of different kinds and forms of power. The results show that the exercise of power is not always visible, and it can be also exercised through discourses or conversations to (re-)claim spaces. Significantly, discursive power is a key resource for social movements and civil society to strengthen their capacity to influence policy (Clark et al., 2021). As argued by (Avelino & Wittmayer, 2016), niche-actors can have access to other types of resources and the capacity to mobilise these resources in a different way than regime-actors, with regimes not necessarily always holding more power in this context. This points to the relativity of the effectiveness of power. In the studied case, the City Council might objectively have more power than the CALM, due to its position within the regime. Nevertheless, social movements and civil society were still successful in impeding the implementation of the MTA by harnessing discursive power to establish new configurations of constitutive power and distribution of resources at the regime level as the MTA was dissolved. This draws attention to what (Clark et al., 2021) refer to as the 'power to convene'. That is, in this intersection of structural and discursive power, social movements and civil society actors can reframe narratives and enable the creation of new governance spaces to their advantage.

Finally, the analysis of the case of Valencia raises important questions about the coexistence of governance spaces. Urban food governance literature is increasingly pointing to importance of multi-scale food governance structures, including at the neighbourhood level (Sonnino & Mendes, 2018). Significantly, emerging literature in sustainability transitions is calling for the development of governance spaces across socio-technical systems within the same locality, such as agri-food, energy or water, that collaborate with each other (Peris-Blanes et al., 2022). The case of Valencia, however, instigates debates about the role of governance structures within the same scale and for the same socio-technical system (in this case agri-food). Previous literature argues that urban food governance entails several institutional and non-institutional governance worlds and levels of policy that operate outside food policy councils and that are intricately interconnected (Parsons et al., 2021). This study illustrates that this also includes power mobilisations for individual interests, such increasing power, protecting one's work or maintaining legitimacy. Nevertheless, as seen in the results, the need for the conjunction of multi-stakeholder platforms was not necessarily seen as negative if framed differently. The issue then becomes not if the coexistence of governance spaces is problematic, but on how these spaces are created and implemented.

Consequently, the results point to advancing tools to manage power relations. For example, a previous diagnosis of the needs of Valencia's agri-food system and the CALM before constituting the MTA could have potentially helped navigate the uncertainty of the process and shore up the foundations of the MTA, as there are still perceived needs in this context. As such, there is a point to make in building complex and plural governance structures that allow for the coexistence of urban food governance instruments. However, recognising the complexity and purpose of such a process is imperative. This does not mean, however, adopting inflexible structures and rigid competences, which have been proven useful for sustainability transitions (Sarabia et al., 2021). On the other hand, it means the construction of complementary and synergistic structures act as catalysts for collective change through their

interdependencies, avoiding duplication but searching for the solidarity and symbiosis.

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The role of local food in municipal market policy

A snapshot of Michigan, USA and Kent County, England, England

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Abstract – **Farmers markets—gatherings where multiple producers sell locally grown, fresh ingredients directly to consumers— are a popular sustainable local food system strategy, offering transparency and connection between eaters and growers while strengthening the agricultural economy, reducing food miles, increasing healthy food access, fostering entrepreneurism, and revitalizing neighbourhoods. In the last twenty years, the number of farmers markets has increased considerably in both the US and Europe. Municipalities play crucial roles in markets including through regulating their land use and permitting. Yet, very little scientific scholarship has examined how markets fit into municipal plans and policy, representing a large research gap for such a longstanding, visible anchor of urban life and food provisioning. This study examined whether farmers markets are codified in municipal plans and law through cases in southeast England and the US state of Michigan. It found a vast underrepresentation of markets in policy and plans in both places. This can have negative implications for the ability to start and sustain farmers markets.**

Keywords – **Farmers Markets, Urban Food Policies. Local Food Planning**

INTRODUCTION

Public food markets, variably called traditional/town/city/retail markets, among other names, have been part of urban life since human settlements began. Food has long been a key concern for local governments as part of ensuring residents' basic nutritional needs were affordably met and food was safe; markets in public squares were the earliest form of urban food distribution and regulation.(Tangires, Schuyler, Conniff, & Muller, 2003) Markets' popularity has risen and fallen over the centuries due to evolving economic, cultural, political, and spatial factors, yet the concept persists as new generations find them a salient antidote to a myriad of contemporary challenges.(Donofrio, 2014)

Farmers markets are those markets focused on offering food grown or raised nearby, emphasizing direct sales between the producer and the consumer. Products grown in the region were often a staple, if not the exclusive offer, at markets throughout history, though items brought from across the world were also present at markets in larger cities since the origins of world trade.(J. M. Mayo, 1991) The renewal of interest in farmers markets in the last two decades has brought an exponential rise in their numbers in the US and Canada, making them the predominant form of market there today.

In Europe, the centuries-old market tradition continues in communities rural and urban of all sizes, though many traditional markets are dominated by resellers offering non-local food, prepared/hot food, and other goods. Despite the continent's long history of markets based, at least in part, on local food, the renewed emphasis on regional products in the last few decades is, ironically, referred to by some in the Europe as borrowing from the American farmers market model. These newer local-food focused markets in Europe are most often separate from traditional markets.

Researchers, particularly from the US, have documented the interconnected environmental, health, social/cultural, and economic benefits of farmers markets.(Brown & Miller, 2008; Freedman et al., 2016; Hughes & Isengildina-Massa, 2015; Morales, 2011) These include farmers markets' use as a local-scale strategy towards a more sustainable food system through shortening supply chains, supporting small regional agricultural producers, increasing healthy food access, and creating transparency between food producers and consumers. Farmers markets are seen as vehicles for increasing economic vitality of urban cores, fostering entrepreneurism, celebrating cultural traditions, and creating positive social and community-building spaces, not unlike traditional markets.

Reports from leading health, equity, food system, planning, and public space organizations assert that as an important part of local food systems, farmers markets need to be explicitly included in municipal land use and other local law to encourage their creation and ensure that they can be sustained.(Clippinger, Balkus, Rice, Nielsen, & Broad Leib, 2017; Daniel & Nestico, 2015; Edmonds & Carsjens, 2021; Miller, Thompson, & Kalb, 2013; Neuner, Kelly, & Raja, 2011) These recommendations emerge in part from the recent trend of using land use regulation to shape healthier food environments.

Despite their popularity today as a local food system strategy in both the US and Europe, and their long history as a core land use in urban centers, it is unclear if markets – whether local food-focused or not—have been codified through municipalities' planning and policy instruments.(Jepson & Haines, 2014; M. L. Mayo, Pitts, & Chriqui, 2013; Morales & Kettles, 2009; Patrignani, 2006) There is scant research on this topic in the US, and even less in Europe. In contrast, policies addressing urban agriculture—another strategy for local food provisioning-- have received significant attention in both scientific and gray literature. (Haines, 2018; Horst, McClintock, & Hoey, 2017)

This exploratory study builds on research I published in 2021. This prior study examined whether public food markets were reflected in municipal codes of ordinances, the recorded sets of laws made by local governments. This includes in zoning codes, the legally enforceable land use tool that dictates allowed/disallowed land uses in defined areas. I aimed to discover whether the broad popularity that

markets currently enjoy has been codified into city law in 90 Michigan cities.

That study found that despite a strong presence of farmers markets in Michigan municipalities, markets are highly underrepresented in municipal policy, rarely defined in code, and mostly absent from zoning ordinances. (Edmonds & Carsjens, 2021)In the Michigan planning context, like in much of the US, activities not explicitly defined or included in zoning ordinances are illegal land uses. This puts markets at risk, especially when competing land uses or changes in municipal priorities arise.

The context around markets and municipalities in England differs from that in Michigan in multiple ways. The traditional market still dominates across the England, held in local central public squares and often with permission to be there having been granted in centuries-old charters. Ancient market town laws, still in place, mean that no other market can operate within 6 2/3 miles. Dominated by market traders and non-local product, these markets are broadly in decline. Still, the identity of localities as market towns is a major cultural source of pride and tourist offering. Farmers markets in the England are considered a type of specialty market and have continued to gain popularity in the last few decades as traditional markets struggle. Their ability to operate more than monthly (because they are classified as a special event instead of a market), however, is at times limited by these ancient laws.

The legislative context also differs between the US and England, though in both places markets are under the legislative purview of the municipality, also referred to as the local authority/local council in the England. In England, that authority has been granted explicitly by the national government who has defined markets and stated, in section III of the 1984 Food Act, among other legislation, that local authorities have the power to approve and regulate them. Additionally, from a planning perspective, local authorities adopt a policy document, called a Local Plan, to guide land use decisions in their jurisdictions; markets generally require planning approval and would thus be under the purview of this plan. The Local Plan must not conflict with the National Planning Policy Framework. In Michigan, the authority over markets rests with the municipality by default, since no other level of government makes claims to markets, outside of certain county and state level food safety regulations that apply only to certain vendors. Public Act 279 of 1909, The Home Rule Cities Act, gives cities the right to exercise any power not explicitly prohibited by another level of law. Also, the Michigan Zoning Enabling Act grants localities the power to make land use laws (zoning codes) and subsequent decisions within their boundaries. In other words, in both Michigan and England, the municipality is crucial to whether and where markets can exist.

METHODS

As a follow up to the aforementioned 2021 study, this research explores a subset of those results in more detail, and adds a comparative data set from England, to see whether farmers markets are dealt with differently from other types of markets or activities. Public government documents, available online, were searched, compiled, and analyzed. The information that had been analyzed in my previous study was reverified from its original source, and additional data gathered.

Case Selection.
The original data set included 90 of the 92 cities in Michigan with populations over 10,000; the two excluded did not have their municipal code available online. Michigan is a state with diverse geography and varying spatial arrangements ranging from dense urban to suburban to rural, a diverse agricultural sector, and long history of markets. Cities are among a handful of forms of local government in Michigan; townships, villages, and charter townships being the others, each of which have different types of authority and scopes of services. I examined cities because they are most likely to have an urban form comparable to places around the world. Based on the results of that study, for the current study I looked at the 30 cities (from that set of 90) who included markets in their zoning codes, had legal definitions of markets in their code, had an entire code section about markets, and codes were accessible.

To select a comparison case, I chose all of the district councils in the English county of Kent in the southeast corner of the United Kingdom. In the England, "city" is a ceremonial and/or historic title and not a governmental jurisdiction. Most of England is governed locally by two tiers-- county and district/borough level-- which are not hierarchical, with each delivering different services. For the sake of this study, district level is the appropriate local authority as related to markets. In Kent, there are 13 councils, 12 of which operate as districts that fall under the Kent County Council, and one that acts as a unitary authority, meaning all services are performed by that unit of government. Kent was chosen because, like Michigan, it has it has diverse geography and size of communities, a rich agricultural sector, a tradition of market towns, and many farmers markets. This exploratory study is expected to inform further research into a wider geographic area within England.

Analyzing Farmers Markets in Plans and Code.
In the US state of Michigan, as in much of the United States, municipalities standardly publish their code of ordinances-- set of all enacted laws-- online. Most choose to use one of three online code-publishing services, though a few embed them on their municipal websites. All are digitally searchable. In England, there is not an equivalent to a local code of ordinances (compiled database of local laws), nor zoning code. Local authorities are required to publish a comprehensive long range community land use plan called a Local Plan, or sometimes a Core Strategy or Development Plan; these are available on local governments' websites, generally as a downloadable pdf. These serve as the guidance documents, including narrative embedded with enumerated policies, for the legally-binding planning decisions they make. For the sake of this research, the Local Plans and Codes of Ordinances each provide an available data set through which to examine whether local governments include or consider farmers markets differently than other markets or activities.

From my previous study, during which I tested many search techniques with different combinations of words (e.g., "Farm market", "farmers market", "public market", "city market", "retail market", et al), I discovered that using the search term "market" was the most straightforward way to ensure all mentions were found. After searching for "markets", I visually scrolled through all results to find ones referring to physical marketplaces for food and other items. I eliminated results related to housing market, economic market, utility markets, market forces, marketing, and similar. I used this primary search technique for both the Michigan and England search, extracting the relevant results to a separate document for further analysis.

When searching the Local Plans from district councils within Kent County, England, because of the more narrative form of these documents (that are usually several hundred pages long) when compared to the code of ordinances, in addition to searching for "market" I also searched "food" and "farmer" to see if results would give further insight whether or how local governments were considering local food in respect to their markets. Additionally, I compiled lists of market towns, farmers markets, and other types of markets for both locations.

Based on the search results, I used a yes/no dichotomy to answer the following:

Michigan cities inquiry:
1. What terms are used for markets in Codes of Ordinances?
2. Whether or not they are called farmers markets, does the code specify or restrict the markets to local food or producers only?
3. Are farmers markets treated separately from other types of activities in the code, including in zoning?

Kent districts inquiry:
1. Are markets included in the current, approved Local Plan?
2. What terms are used for markets in Local Plans?
3. Is local food included, whether or not in reference to the markets?

RESULTS

In Michigan, farmers market or farm market is the term used by 21 of the 30 study cities who include markets in their code as shown in Table 1. Of those that don't, six use the term municipal, public, or city market. Some of these, though not referred to as farmers market in the code, are commonly known and marketed today as farmers markets, and the use of another term is likely a vestige of those commonplace when the markets were developed in the early 20th century. The remaining codes list fruit and vegetable market, seasonal market, or roadside stand/market.

Table 1. Farmers markets in Michigan cities' code

	% of Cities
City has current market (as of 2019)	63%
Market in code labelled as farmers market	70%
Market code specifies local food	37%
Farmers Markets given separate consideration in code	47%

Even though two-thirds of the cities use the term farmers market, just over one third-- 11 out of the 30 cities-- specify that the market is defined by offering local food; they explicitly spell out what they mean by farmer, or producer, or farmers market.

Fourteen of the 30 cities apply separate guidelines for farmers markets as they do for types of markets or other activities, in that they fall under different rules, regulations, or considerations for use of space in zoning ordinances. The remaining 16 cities grouped market with other activities. For instance, they were included in a list of temporary uses of land, or other outdoor events including circuses and flea markets but not given specific consideration or their own guidelines.

In contrast, in Kent, out of the seven councils (46%) who had any mention of markets in their Local Plan, the terms used included market, marketplaces, and farmers markets, as shown in Table 2. Farmers markets were mentioned in just four of the 13 plans, despite active farmers markets in at least 11 of the

13. Additionally, there were numerous references to market towns (especially as a strong local identity and core asset to build on) with references to physical spaces including market squares, marketplaces former indoor market buildings, but then no mention of a market itself. In fact, 12 out of the 13 districts include at least one market town in their borders, and 11 out of 13 have active traditional (non-farmers) market.

Table 2. Market in Kent districts' Local Plans

	% of Districts
Market Town in District (one or more)	92%
Traditional Market in District (one or more, not a farmers market)	85%
Markets included in Local Plan	46%
Farmers Market in District (one or more)	85%
Market in plan labelled as farmers market	31%
Local food included in Local Plan	77%

DISCUSSION

The current study looked at a subset of cities whose code included market in at least one of three ways, to see where local food fits in the picture. It is somewhat expected that a high percentage (70%) of these use the term farmers market in their code, as this is the dominant form of market in Michigan and in the public consciousness in the US. That a smaller proportion (37%) of these cities define what local food and producers mean with regard to markets makes it difficult to ensure that farmers markets have the transparency and direct producer-consumer interactions that characterize the sector. This could be problematic as the term farmers market has been used in the US by supermarkets and other food retail that does not offer local product nor direct sale. Zoning code is about making the implicit explicit so there is clarity about what and how code applies to different situations and having a term but not defining it weakens its use as a regulatory tool.

In contrast, in England, where the market tradition is broader, that only 31% of districts specifically call out farmers markets in their Local Plans is not surprising, especially since national legislation defines markets more broadly. These municipalities may be using markets as an umbrella term since most have both traditional and farmers markets in their boundaries occurring today. It is more surprising, though, that fewer than half of the Local Plans talk about markets at all, given the strong presence of markets in their districts. There is a disconnect between local district decisions and investments and their chief vision/guiding document. Whether that puts current or future markets at risk remains to be seen. Still, the focus of this research is whether farmers markets as a purveyor of local food are reflected in municipal priorities, and in this study, they have found to be mostly absent in the Kent County context, and still underrepresented in the case of Michigan cities. This is counter to the aforementioned recommendations of ensuring farmers markets are represented and protected in local

More than three quarters of Local Plans talked about its importance to either the viability of local agriculture, as a tourist draw, or to meet local food needs in a climate friendly way; few, though, connecting it back to markets as a strategy. This seems to be a disconnect between a stated challenge and existing solution. The Local Plan is the policy

document that guides planning decisions, which markets generally need to operate in public or private spaces. The absence of markets in many Local Plans may have consequences to the development or sustainment of farmers or other markets. Additionally, the minority (31%) that specify farmers markets at all shows there is more opportunity to include local food in these key policy documents.

CONCLUSION

This research aimed to answer a straightforward question about whether farmers markets are reflected in municipal policies and plans. Among the cases in both Michigan, US and Kent, England, England, the answer is resoundingly that there is very little representation. Farmers markets are commonly promoted, including by municipalities, as a popular community asset for both locals and visitors, yet they have largely not been codified into policy.

While this may seem like a non-issue, the history of market rises and falls shows that their lack of protection/inclusion can put them at risk when they fall out of favor, are faced with competing land uses, or just aren't as fashionable as they are today. Supermarkets in the US, for instance, lobbied local governments in the 1950s to pass laws that effectively outlawed markets.

This article is a part of my broader research aiming to elicit whether and how markets have been framed and codified in municipal plans and laws in the US and Europe. Through comparative studies in small and medium-sized cities across the state of Michigan and the United Kingdom, followed by a wider look at the market-municipal relationship across the US and Europe, this body of research will lead to further understanding of whether and where farmers markets sit on municipal agendas on both sides of the Atlantic. Beyond protecting and supporting farmers markets, an examination of how local food is framed or prioritized in municipal plans and laws, can support efforts to strengthen local food systems through municipal policy and planning instruments.

Ultimately this research asks the question as to whether local governments put their stated support for farmers markets—as a proxy for local food— into practice using the policy and planning instruments at their disposal. It can provide those supporting local food systems with information to help them better target policy change for a more sustainable food future.

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Tourism Development and the Urbanization of Food Spaces:
Changing Foodscapes in the Western Ligurian Riviera, Italy

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Abstract – The historical absence of food from the urban agenda, has given rise to renewed attention from scholars and practitioners on the role food can play in the way we plan and conceptualize the urban, with a growing emergence and integration of food policies and strategies, innovative governance structures and alternative food geographies. 'Foodscapes' are now starting to be used as a key term and concept to analyse and give sense to the complex realities of food systems, with systemic approaches addressing the interconnected social and spatial dimensions of these spaces. The past 70 years have witnessed a substantial and widespread modification of foodscapes connected to changing land-use patterns, urban-rural migrations and highly differentiated spatial-temporal movements, concentrations, and use of resources by a growing 'urban' population. This article aims to provide a theoretical framework for the implications of the significant transformations of foodscapes connected to evolving tourism developments and urbanization processes, shedding light on the specific case study of the Western Ligurian Riviera in Italy. In doing so, this study attempts to analyse and map the main social and spatial characteristics and transformations, outlining potential opportunities, challenges, and possible scenarios for the future[1].

Keywords – Food Planning, Tourist Spaces, Landscape Transformation, Urban-Rural Relations

Introduction

Over the past 70 years, food systems have been subjected to enormous bio-cultural and morphological changes in support of and as a consequence of urbanization processes. Since the second half of the 19th century, the growing construction of roads, buildings and infrastructures have given rise to important landscape modifications, especially along Mediterranean coasts. The resulting implosion and explosion of cityscapes have in turn been accompanied by a substantial 'metabolic transition', with changing food diets, lifestyles, consumption requirements and production practices determining the evolving transformation of our contemporary (urban) foodscapes. During the 1960s and 1970s, the Ligurian Riviera experienced significant and uncontrolled urban growth, partly related to evolving sea-side tourism development and economic growth (Roccati et al., 2019). This process registered a massive depopulation of the countryside, abandonment and ageing of agricultural practices in inland areas and a significant anthropogenic modification of landforms along the coast. A growing number of studies have provided valuable evidence of the impacts of these transformations, with increasing environmental and hydrogeological risks (Tarolli et al. 2019), as well as climate change and water stresses posing enormous challenges to these territories. The analysis of such transformations has become an important source of information for informed policy-making, growing public awareness and effective development of strategies for the sustainable management and promotion of food systems (Morgan & Sonnino, 2010; Sonnino & Spayde, 2014; Illieva, 2016; Cabannes & Marocchino, 2018). Foodscapes have become a key frame from which to analyse and give sense to the complex realities of food spaces, with new systemic approaches addressing the interconnected social and spatial dimensions of food in urban areas (Vonthron et al., 2020). The critical analysis of these spaces provides us with key interpretative tools to interrogate, interpret and give sense to ongoing urban developments.

URBANIZATION OF FOOD SPACES

Urban areas are emerging as a valuable and strategical scale from which to interrogate, analyse and act upon the complex dynamics and functioning of food systems. In turn, the materiality, culture and embodied experiences of urban spaces are starting to be analysed and actively shaped and planned through the lens of food (Coulson & Sonnino, 2019). This renewed engagement with the multifunctional role of food is increasingly proving as something with a phenomenal power to transform landscapes, political structures, social relationships, cities (Steel, 2009). The historical separation of food as "stranger" and external to the urban has come along with the normalization of food as an intrinsically 'rural' issue, anchored on their productive role, and therefore invisible and disassociated from the urbanization process. Food production systems have been subjected to enormous bio-cultural and morphological changes in support and as a consequence of the increasing urbanization of society, not only in terms of new infrastructures or city farming but also in terms of new lifestyles, consumption requirements, production practices and overall socio-spatial transformations of foodscapes. Food production and its related land use represent one of the main factors of the physical transformation of places (Luginbühl, 2014), being supported by the growing demands and metabolic needs of a growing urban population. The urban fabric in food spaces, in this sense, does not only designate the built-up environments but the different manifestations of the predominance of cities' priorities, values, needs and processes over the countryside, advancing and corroding what remains

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of an agrarian life (Lefebvre, 2003), shaping the cultural and historic specific transformations of our contemporary urban foodscapes (Morgan & Sonnino, 2010).

CHANGING URBAN FOODSCAPES

'Foodscapes' are becoming a promising research area to address the complexity of the material, social and cultural relationships between food and landscapes, providing insights into the way these are shaped, influenced and transformed by evolving (urban) social practices, political and legal institutions, economic decisions, and relations of power within food systems (Vonthron et al., 2020). Critical analyses of urban foodscapes are starting to interrogate the role of the urban (Sonnino & Coulson, 2021), highlighting their role as transitional nodes in food movements, markets and networks, as well as in the production, re-production and transformation of bodies, socio-spatial injustices, ecosystems, landscapes (Heynen et al., 2006; Sonnino & Coulson, 2021). The polysemy and fluidity of its interpretation have given rise to multiple strains of research, synthesized under four main approaches: spatial, sociocultural, behavioural, and systemic (Vonthron et al., 2020). Other reflections have also been delineated both in terms of the material transformation and in the symbolic and intangible values of landscapes in urban contexts, described by a: 1) Food as a 'producer of landscape', related to the forms and changes consciously and systematically imprinted on natural spaces; 2) foodscapes as a 'context of life', meaning the physical, social, cultural and economic context in which individuals live; and 3) Foodscapes as a 'heritage', related to the promotion and 'patrimonialization' of food spaces (Pettenati, 2017). The 'landscape', in this sense, constitutes the 'organized land', as perceived by people and as a result of the action and interaction of natural and human factors (Council of Europe, 2000): a synthesis of the complexity of reality and the visual manifestation of territorial identity (Howard et al., 2013). The broad interdisciplinary character and potential of landscapes open valuable research opportunities for a critical assessment of historical transformations and opportunities of contemporary urban food spaces. It becomes an integrative and holistic unit of analysis, that allows us to reflect upon the complex relationship between urbanization processes, food, space and evolving tourism developments (Figure 1).
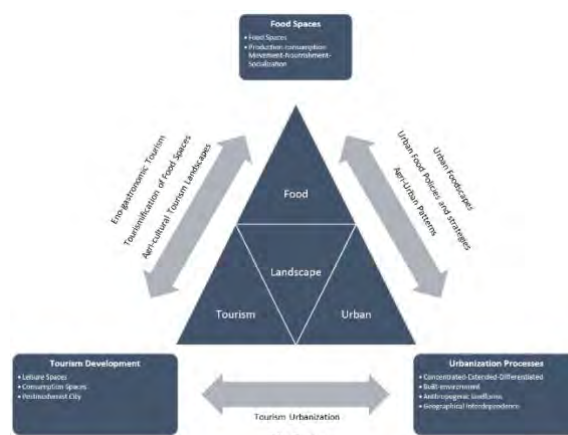

Figure 1: Interrelation between Food Spaces, Tourism Developments and Urbanization Processes under a landscape perspective. Source: By the Author.

TOURISM AS AN URBAN SPACE

The surge and exponential growth of tourism is emerging as an incredible (urban) social and economic force, connected to increased well-being of the population, evolving infrastructural investments, growing mobility, and an overall transition from a land-based to a service economy. Tourism has become a widespread phenomenon with high public and political recognition, as a valuable tool for the achievement of Sustainable Development Goals, revitalization of urban areas, economies, historic and cultural sites, and regional and urban development policies. Cities are currently hosting not only the biggest part of the population but also the highest percentage of total tourism movements. At the same time, urban dwellers, with better income, paid holidays and access to transportation and information are also the main group of travellers, bringing into their destinations a wide range of world views, needs, values, imaginaries, expectations and representations. The emergence of a new leisure and lifestyle society is starting to influence the production and consumption of 'tourist spaces' (Edensor, 2001), characterized by highly differentiated spatial-temporal movements, concentrations, and use of resources, as well as by a functional and symbolic transformation mediated by the sale and consumption of pleasure. This 'urbanization' of tourism or 'touristification' of the urban has been represented from different perspectives and epistemological approaches: going from a physical and geomorphological approach, related to the infrastructural and spatial extension of the urban in a so-called 'tourism urbanization process' (Gladstone, 1998), to symbolic and socio-cultural analyses on the production and consumption of 'urban tourist spaces' (Sorkin, 1992), expressed in the extension of new "transnational symbolic grammars" and 'experiencescapes' (O'Dell & Billing, 2005). Cities and towns are now reported to be built and redeveloped explicitly for tourism purposes (Gladstone, 1998), showing the close relationship between urban, tourism and leisure spaces in the formation of new socio-spatial systems for organizing consumption. These changes are not only restricted to cities but are

also expanding along an urban-rural continuum with new landscape forms, practices, functions, and meanings. The resulting 'tourism landscapes' have seen the rise of themed transformations designed to promote the virtual and experiential consumption of places, expressed in the emergence of new cultural economies of space (Terkenli, 2002), "Disneyfication" processes (Gottdiener 2001) and the "Heritagisation" of rural landscapes (Garcia-Delgado, et al., 2020). The classical formula of a sun, sea and sand destination, tourist metropolises and leisure cities (Gladstone, 1998) are becoming emblematic examples of the growing production of urban tourism spaces that are increasingly created, prototyped, staged, packaged, replicated, communicated and disseminated for tourist consumption (Terkenli, 2002). These processes are now also starting to be reflected in traditional "rural" areas, with 'post-productive ruralscapes' (Garrido-Puig et al., 2018) reporting a diminishing productive role and growing emergence of consumption spaces, shaped by the expectations, perceptions, and cultural backgrounds of (urban) tourists. As growing political and private efforts continue to express and advocate for the key opportunities of tourism as a driving force to combat rural abandonment and the valorisation of natural, cultural and agricultural landscapes, scholars start to provide evidence of the geomorphological impacts of tourism developments (Bardolini et al., 2017) as well as on its contribution to the extension of metropolitan dominance over weaker destination peripheries, leading to a loss of self-reliance (Bianchi, 2002). It is under these premises that a growing need to analyse and reveal broader and historical transformations connected to tourism and urbanization processes in food spaces emerges, providing key information for informed policy-making and strategic management of contemporary urban foodscapes.

RESEARCH METHODOLOGY

The methodological approach undertaken in this research aims to operationalize foodscapes as a key concept to analyse and conceptualize historical socio-spatial transformations of Mediterranean coastal and inland areas, giving sense to and improving the complex realities and interrelations of contemporary urban and tourism development processes in food spaces. The research adopts a mixed-methods approach, making use of both qualitative and quantitative data analysis, as well as primary and secondary sources, resulting in 25 semi-structured interviews and a systematic multi-disciplinary literature review. Spatial data was then collected and elaborated with ArcGis 10.8 as a Geographical Information System, mapping historical land-use and land-cover changes, agricultural production and abandonment, as well as evolving tourism infrastructures, demographic trends and urbanization processes.

Changing Urban Foodscapes

Liguria is one of the smallest regions in Italy, located in the northwest area of the country between the Ligurian Sea, the Alps and the Apennines mountain range. The Western Liguria area was born as an elite tourist destination in the early twentieth century, experiencing important tourism growth and massification during the 1960s (Dell'Agnese & Bagnoli, 2004). The resulting landscape changes and territorial organization of these developments determined growing densification and overcrowding of coastal areas (with an overall population growth of around 60% along and near the coast from 1951 to 2019) accompanied by an accelerated and inexorable rural exodus (with a reduction of over 40% of the inland population). Tourism urbanization along the coasts saw the rapid extension of built-up areas in the form of new transport routes, tourism infrastructures, second homes and residential buildings, which have been emblematically referred to as a 'Rapallization' process. These changes have resulted in deep morphological and functional transformations of urban and rural landscapes, materialized in changing fluvial and anthropogenic landforms (Brandolini et al., 2017), growing abandonment of rural areas, diminishing agricultural practices and a growing depopulation, ageing and renaturalization of historical man-made landscapes. Increasing hydrogeological risks (Tarolli et al. 2019), landslides and water stresses have become expressions of the changing imbalances and abandonment of these spaces.

Tourism activities have slowly supplanted the traditional fishing and agricultural practices in the area (Quaini, 1973), signalling the transition from a land-based to a tourism-service-cultural economy. Over the past 50 years, the western Liguria Riviera experienced a strong decrease in its total agricultural area, with a reduction of around 70% over the past 40 years (Istat, 2018), along with a growing contraction of agricultural soil, and slow 'coastalization' of agricultural farms (Istat, 2018), reflected in the displacement of food productions close to main urban markets. Liguria has also experienced a growing intensification of production, with a transition towards higher value products, quality and a slow but growing specialization, marked by a discontinuous process of changing production spaces. Foodscapes could be represented as a palimpsest between different layers and residues of past economic successes that have marked the transition of agricultural production from lemon, palm, wine, olive and flower productions. Here, cities, merchants and markets have played an important role, supporting the specialization and transformation of agricultural practices (Quaini, 1973) with growing demand and purchase capacity (at a higher quality) coming from global urban centres. This growing specialization came also with a progressive decrease in the productive role of inland areas, at a moment when the production of amenities and thematization of food spaces are becoming as relevant as food production in rural landscapes: an object of consumption, whether by (urban) tourists, conservationists, or incoming residents.

Towards a Foodscapes Planning

Since the 1990s, Inland areas are starting to be reinterpreted in terms of their natural, cultural and agricultural potential for tourism purposes, in line

with: a) national and regional revitalization strategies, such as the National Strategy for Inner Areas (2014) and the Local Development Plans; b) landscape plans, as one of the first regions to adopt it in 1986, approved in 1990 and with a new update with preliminary results from 2019; c) Regional tourism policies, oriented towards the diversification of activities; and d) a growing emergence of private tourism activities, agritourism and organic farming initiatives. Foodscapes can become a key interconnector for the development of effective tourism and agricultural management strategies, as a collaborative framework between different urban and rural actors: tourists, local authorities, residents and farmers. The increasing interest and need to contrast the abandonment of agricultural areas, and to reappropriate their social function in the maintenance of traditional landscapes, terraces and overall hydrogeological protection, call towards a more systematic view of the role food, as a system, can play in the valorization and territorial organization of foodscapes. The analysis of ongoing urbanization processes in these spaces provides us with key opportunities and interpretative tools to understand and shape not only the impacts and effects linked to the expansion of a growing "cityscape" but in the changing relations between a growing urban society to food and how this is influencing and shaping broader territories, landscapes. As we see, in our case study, urbanization processes have determined a growing homogenization and abandonment of traditional landscapes, giving space to renaturalization processes and a growing thematization of 'post-productive ruralscapes' connected to tourism consumption. Acknowledging these new interrelationships between urban and rural foodscapes, call us toward the active involvement of consumers and citizens in the development and co-construction of local food chains and products, revaluing the role of citizens/tourists in contributing to produce landscapes through their daily need to eat (Pettenati, 2017). This requires inclusive and active planning and management by territorial actors with increasingly conscious practices for the re-appropriation of foodscapes by farmers and citizens, as co-producers of these spaces. The development of so-called rural-urban alliances in tourism initiatives brings opportunities for collaborative and coordinated efforts in the development of territorial capacities and innovations. Foodscape become an integrative framework from which to give sense and shape historical urban transformations in food spaces, opening opportunities for the sustainable management, planning and promotion of food systems.

CONCLUSIONS

The purpose of this article was to explore the transformation and usefulness of the concept of foodscapes in the scientific and political debate, in search of existing and potential opportunities in the relationships between food, tourism and urbanization processes. The first part of this article explored the relationships between urban and food spaces, giving a view to foodscapes as an integrative concept to the analysis of urbanization processes in food systems. The second part of the paper presented an analysis of tourism as an urban space and how these have shaped the formation of urban foodscapes. Finally, the paper presented the main changes and transformations in the Western Ligurian Riviera, highlighting key opportunities and challenges for the future.

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Towards healthy, sustainable and regional foodscapes

A landscape design perspective

Noël van Dooren

Abstract – **This paper discusses a series of design studios on interventions in food systems. It is shown how these interventions can be understood as contributions to the transition towards a sustainable food system, and it is shown how design outcome, and the reflection on it, can help the understanding of that transition to be area-specific.**

Keywords – **future, agriculture, space, planning, city, rural**

INTRODUCTION

Many sources point at the need to eat differently, and to produce our food in more sustainable ways, ranging from the Eat-Lancet Commission (2019), the IPES report on *A long food movement* (2021), the FAO report on the future of food and agriculture (2018) or the *Green Deal* as proposed by the European Union. The UN sustainable development goals put this in an even broader context. As the world rapidly develops towards an urbanized system, food is consumed more and more in cities, leading to physical and mental distance to food production, and at the same time creating a basis for activism with regard to food. Cities, therefore, start to take a responsibility in food matters, as can be seen in the Milan Urban Food Pact. In the Netherlands, cities such as Amsterdam, Rotterdam and Almere signed the plan. This growing awareness for food issues in cities also lead to new policy documents such as 'voedselstrategie' or 'food strategy'. Following De Schutter and Van Leeuwen (2021) the Almere food strategy should strive towards a healthy diet, regional food sourcing, and urban agriculture, in an integrated manner. Often, such strategies make use of scenario thinking to explore plausible futures.

From a spatial point of view, it is very relevant that food is consumed and produced *somewhere*. Issues of food are related to topography, areas, places, buildings, roads that connect. Cabannes and Marocchino state that 'how food is produced, processed, distributed, consumed, recovered and wasted and how local food systems complement rural agricultural production are issues that relate closely to urban planning, which can be either an opportunity to feed cities better or an obstacle to making food systems work sustainably' (Cabannes and Marocchino, 2018). A vice versa relation is visible: urban planning can be instrumental to solve food issues and rethinking the system behind consumption and production can influence urban planning.

This paper departs from the idea that food issues can, even should be part of urban and landscape design. Design thinking can help to reflect on, locate and shape spatial interventions that may influence, perhaps even accelerate, the transition towards a sustainable food system. Reflecting on student work this paper explores possible relations between consumption and production in the context of sustainable food systems via spatial interventions.

APPROACH

This paper is based on a food systems approach, in which consumption, production and the logistics in between are seen as both a spatial and non-spatial set of relationships. For example, De Schutter and Van Leeuwen (2021) underline this spatial component. Several authors describe and define this FSA. Potteiger (2013) comes up with an explicit spatial understanding of food systems and a food systems approach. Different from other authors such as Blay-Palmer that concentrate on the urban side Potteiger focuses on landscape and the landscape scale. As I am reasoning from a landscape architecture background, this is the perspective adopted in this paper. It implies the notion that issues of food can be and should be discussed in an area-specific way. Padro et al (2017) put that very concrete with 'does your landscape mirror what you eat?' On a more abstract level this idea is also visible in the notion of CRFS or city region food systems. In an assessment of that concept, Blay-Palmer at all observe that 'increasingly coherent city region food systems are recognized as a pivot point for sustainability'. (Blay-Palmer et al, 2018) FAO defines the city region food system as 'all the actors, processes and relationships that are involved in food production, processing, distribution and consumption in a given city region'. The concept is also imperative, expressing the intent to shorten the distance between consumption and production. Obviously, this is also expressed in the concept of short food supply chains. What is 'short' in this is a matter of debate. As Grando et al indicate, it certainly is not only about kilometers, but also on the number of steps, clear information and strong ties between consumer and producer. Spatial proximity is understood as a wide range from very local as in the discourse on urban agriculture up to circles of 300 kilometers in studies that relate larger metropoles to their food supply, but proximity should also be understood as 'the chance to meet'. (Grando et al, 2017) A focus on circles and kilometers neglects the characteristics of landscape at which for example Potteiger point. As Forster et al (2015) describe, 'a city region food system approach recognizes that there is great diversity regarding the context, nature of urbanization (or in some cases a return to rural areas), size of urban center, type of food systems, cultural values and traditions, and history of relations with the surrounding countryside and rural populations'. Landscape architecture and environmental planning stress the importance of an *area-specific* perspective. This implies the idea that water systems, soil types, ecological structures and cultural and historical backgrounds lead to coherent

landscape and urban units that have a specific character in what they produce, for example.

This study builds upon student work regarding Buijtenland van Rhoon, a clearly distinguished area southwest of Rotterdam, of a size about 600 hectares, and the hinterland of the urban region Arnhem/Nijmegen in the east of the Netherlands. The city of Almere could be seen in relation to the agricultural polder Zuidelijk Flevoland, in that way.

In a food system approach nodes or interfaces are important. A supermarket, for example, is a main interface in today's food system. Supermarkets are physical places and build structures, strongly interwoven with urban planning. A transition towards sustainable food systems poses the question if other interfaces are thinkable, and desirable. Often, the concept of *food hub* is used. Horst et al show that this concept is used in different ways, ranging from an economic perspective to a *food* citizen perspective, and remark that 'planners, particularly those involved in food system planning, transportation, economic development, and neighborhood planning, should become familiar with food hubs given the various important roles and opportunities they present'. (Horst et al, 2011).

The discourse on food hubs, city region food systems and more suggest that such concepts are relevant in the transition to sustainable food systems. A design approach assumes that this transition can be influenced by interventions, be these interventions only on paper as 'food for thought', or physical changes of the environment. Interventions in this sense can be small, for example a new building. 'Small' is meant here as relative to the big scale of landscapes. On a landscape scale one could think of conscious interventions in water systems leading to different conditions for food production and inviting new types of cultivation that could change food systems.

By staging a series of design studios over three years we studied potential interventions in the food systems of Arnhem/Nijmegen and Buijtenland van Rhoon near Rotterdam. As students were free to develop their own personal interest in food systems, the interventions as studied do not result in the coverage of a limited and complete number of interventions. It is a collection of opportunities, as seen by the students. These opportunities can be reflected on in a more analytical way.

Results

In this section we present a selection of student ideas and show how they help to reflect on structural change in food systems. To have a feeling for the width of design ideas a short overview is as follows: a fast food restaurant presenting a burger made from local ingredients that support a landscape park; an app to organize food logistics, a concept for neighborhood food distribution facilities; a farm and selling point focused on fermentation; a new bridge for pedestrians and cyclists; a facility for catching, storing and eating crayfish; a bakery, a glass house and meeting point for *lauki* cultivation; a restaurant, shop and information center specifically for game.

In the context of the school of arts where these studios were staged, students are given freedom, and even are challenged to formulate their own assignment within the larger problem as presented. Therefore, the above enumeration may seem without coherence, but it simply is the selected outcome of a reflection by 3 groups of 12 students on the larger problem of the transition towards sustainable food systems related to urban planning.

For example, the proposal for a game slaughterhouse is very specific but represents also an idea on protein provision within future food systems. In general, there is a plea for plant-based proteins, such as beans and nuts, or proteins derived from seaweed. This student noted that nature conservation of the Veluwe reserve simply comes with careful wildlife management. Wouldn't it be relevant to express the specific landscape identity of the city of Arnhem, on the edge of the nature area, in its regional food system? There is no answer to that, but it refers to area-specific explorations of sustainable food systems. The same goes for a proposal on catching and eating crayfish, more specifically American crayfish, which is an invasive new crustacean. It is hardly eaten so far, although tasty and rich of protein. If eating American crayfish helps to manage the plague is open for debate but again it is both an area-specific food system innovation, a stand in the discourse on protein and a useful idea on how eating and landscape relate.

A burger made out of locally grown beans, herbs, vegetables and dairy is a very concrete expression of the short supply chain idea, but it also refers to the frantic search for a viable economic basis for sustainable food systems. In this case, the newly established landscape park between Arnhem and Nijmegen could be strengthened by food concepts making use of its local produce. The proposal also comments on the assumption that fast food is unhealthy and far away from sustainable, short chains. Here, the classical road restaurant is taken is a node in new regional food systems. In a way, the bakery as proposed in Rotterdam Zuid does the same: it creates a channel to upgrade local cultivation of cereal and provides a basis to do so organically. The bakery proposal shows a very relevant element of design and food systems: how to choose a location for such a new facility? Can the new bakery be smartly inserted in the urban fabric to attract the public and create a meaningful place? A fermentation facility presents another vision on upgrading local produce. Here, another aspect is thrown light at, and that is how produce can be kept fresh and healthy, to prolong the time span in which it can be sold and eaten. That in itself addresses an important, often neglected aspect of short supply chains: storage and processing is key to provide customers with a rich palette and to enable producers to create value, however at the same time facilities are needed to do so.

Also, food logistics are important when it comes to the role of food in urban planning – food comes with traffic, and food storage and processing needs space. One student developed an app in which customers of local produce can earn credits by taking part in the logistics. The app connects commuters to producers to customers and proposes smart combinations. Obviously, this idea raises many questions, but it provides an alternative perspective on what is one of the big issues in regional, sustainable food systems: can the logistics be organized in a way that is economically viable and ecologically sustainable? A design for neighborhood distribution facilities responds to that same problem. Here the assumption is that logistics can be optimized by decentralized facilities. This student also referred to cooling as a general problem for sustainability in food: if such facilities would be realized underground, storing food for several hours does not need additional cooling.

Cities are diverse, in culture and food culture. One student proposes neighborhood facilities that react on local food niches. In the area he chose the Surinam

Figure 2 (below). Vince van Boxtel 2022 proposes a fermentation plant in the monumental Portland
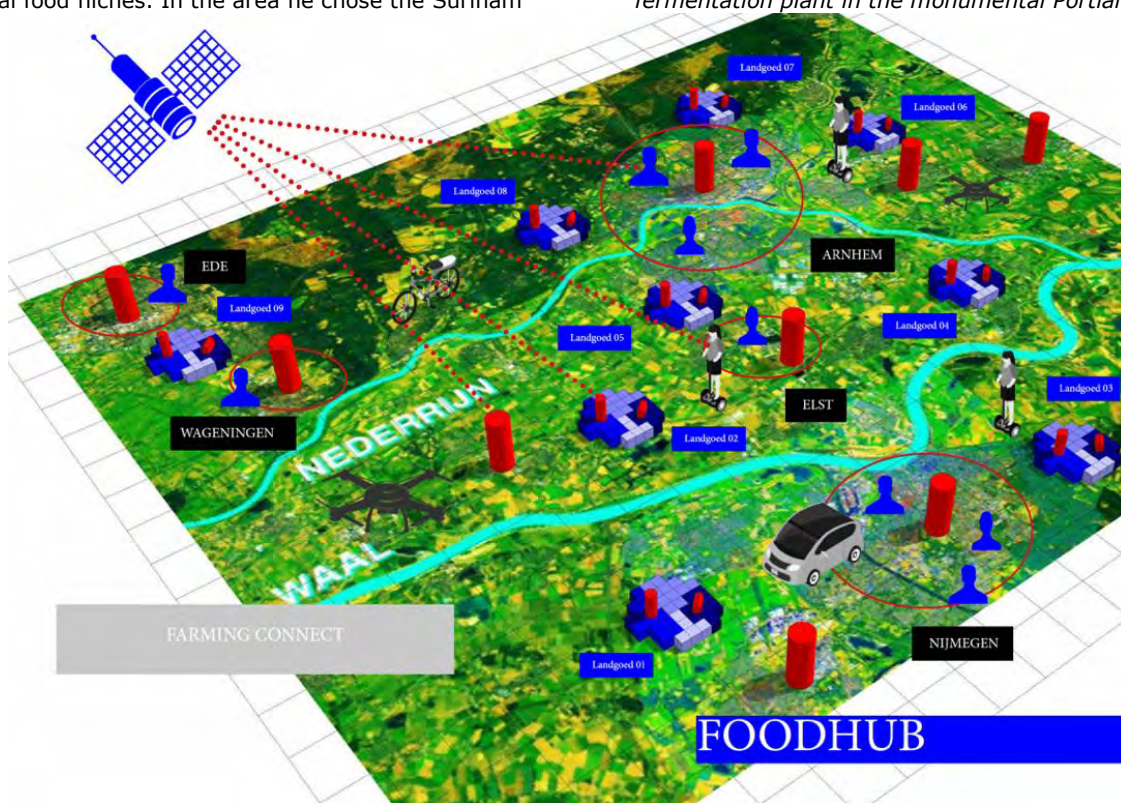

Figure 1 (above). Nafthali van der Toorn 2020. Design of game that aims for efficient farmer–consumer relations.

Hoeve as a means to add value to Buijtenland van Rhoon staple food production, and to extend its preservability.

identity is present. He assumes a market for freshly grown niche vegetables such as *lauki*, and to combine that with other food facilities supporting short chains and healthy diets.

A proposal for a bridge may seem off-topic. However, this student argued that 'bridging' is one of the main problems in food urbanism. Many large cities are separated from their hinterland by extensive infrastructure systems. It is an accepted idea that the success of regional food systems goes hand in hand with the options for knowing, visiting, caring for the areas in which food is produced. A bridge may not be about food but is conditional.

SIGNIFICANCE

If we look at the city of Almere, a few things can be noted. First of all, the gap between the urban area with more than 200.000 inhabitants, its food consumption and the food production in Zuidelijk Flevoland. Secondly, the rich green areas around the city and in-between the different parts of the polynuclear structure. Next to that, the specific culture of this city. Young and without long history at one hand, diverse and vibrant on the other hand. It is very interesting to think of a more regionally organized food system. Bridging the gap would be required, literally and as a metaphor. As the default orientation of the large-scale agricultural production in South Flevoland is on the global market, seductive concepts are needed to convince both farmers and consumers of establishing a closer relation. Design can help to open up the discourse – potentially by options initially judged as far from reality, but gradually widening the mental space. In this, the green structure of Almere is essential. Not designed as a food space, here both small scale production and intermediate facilities could find a place, bringing also new energy to a structure in the city that is in need for new impulses whatsoever.

The examples as discussed relate to other areas. However, they address a number of returning issues in city region food systems.

CONCLUSIONS

In Almere, but also as part of the discourse on food enabling urbanism in general, design has a role of opening up the conversation. Design makes transition very concrete, by pointing at specific places and areas. Design also creates insight as it makes clear what are the implications and possibilities on the scale of our daily surroundings. And by being area-specific, design thinking helps food systems in transition to connect to the landscape scale, in which a range of challenges has to be taken into account.

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Trans-local governance, meta-governance and agroecological urbanism:
Some insights from Spain

Daniel López-García[i], Marian Simón-Rojo[ii]

Abstract – The present communication aims to address the role of multi-actor processes of knowledge generation within agroecological urbanism, through the application of the concepts of trans-local governance and meta-governance. For this purpose we analyse the outcomes of a Working Group on Agroecological Planning within the Spanish Network of Municipalities for Agroecology. We have collected primary information through participant observation and selected online surveys to the group's participants, and we have analysed the minutes of the working group. Our results point out the ability of the different profiles and disciplinary backgrounds for opening comprehensive approaches to urbanism that are at the same time innovative and applied to trans-local realities and needs. Cooperation and complementation between different local realities and positions set possibilities for different actors that feel isolated or with scarce resources to develop innovative and comprehensive thinking; and to develop creative, holistic and ready-to-use solutions for relevant issues regarding agroecological urbanism.

Keywords – Food policies; multi/actor governance; agroecological urbanism; Agroecology-based Local Agri-food Systems; Spain

INTRODUCTION

Our theoretical approach is based on what has been called an 'Agroecological urbanism' (Tornaghi and Dehaene 2021). Such an approach sets a dialogue between 'the agroecology and the food sovereignty movements' and 'the urban food policy community', and thus allows to go beyond the urban-rural divide to explore new models of urbanisation (beyond city boundaries) and post-capitalist livelihoods that enhance social reproduction and ecological considerations through politicised pedagogies and place-based political action. Agroecologists strongly argue for equity, bottom-up governance and multi-actor, participatory processes to be at its core (Méndez et al. 2017; Anderson et al. 2019), as a way to incorporate within agroecological transitions' studies the power imbalances in food systems, along what has been called "Political Agroecology" (González de Molina et al. 2019).

Agroecology is a holistic approach which necessarily comprises a set of farming methods, a science, and a social movement (Wezel et al. 2009; Rivera-Ferre 2018), integrating issues such as food sovereignty, food security and agency (HLPE 2019), and has been

presented as "the ecology of the entire food system" (Mason et al. 2020). The capacity to build hybrid forums that bring together the agroecological experiences with local administration and other conventional actors has been also presented as a key element for developing enabling policy environments for the construction of transitions towards sustainability in local agri-food systems (López-García et al. 2018).

On the other hand, there is a shift on urban food policies scholarship towards a food systems approach and a relational approach to urban food governance (Wegener et al. 2012 ; Moragues-Faus and Battersby 2021; Gaitán-Cremaschi et al. 2022), claiming for a more prominent role for 'materiality' and 'agency' approaches to understand the multi-scalar implications between food systems and urban transformations (Moragues-Faus and Sonnino 2018). Another significant feature of urban food policy development is the configuration of multi-stakeholder governance. Some key factors include the involvement of diverse stakeholders to foster policy innovation and depth; governance structures that clarify and amplify the terms in which these diverse stakeholders can cooperate; and cooperation with research bodies (DeCunto et al. 2017; Moragues-Faus and Sonnino 2018). López-García et al. (2020) identify 6 areas of local food policies governance by articulating decision making roles of different actors, levels and ways of agency, and administrative levels; and suggest an integrated approach to both top-down and bottom-up approaches to food policies, with a focus on the role of food movements, the organic farming sector and disadvantaged urban actors; as well as the importance of transcending the merely local scale in order to develop the potential of Agroecology-based Local Agri-food System (López-García and González de Molina 2021). The sixth area of governance (Trans-local) is defined by Moragues-Faus and Sonnino (2018) as an integrated, cross-sectoral and participative governance model able to co-produce and connect discourses, practices and knowledges that are grounded in diverse specific urban foodscapes, and that can develop cross-scalar and integrated agencies to develop holistic approaches to food policies.

Jessop (2003) highlights the potential for democratic renewal offered by governance networks in which non-members -the state or non-state actors such as

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NGOs or social movements- play a steering role by setting rules, shaping narratives and distributing resources within the network, as an expression of meta-governance. While civil society organisations could be successful on sustaining multi-actor networks and processes for promoting sustainable, urban food policies at the local level, their ability to fully engage State actors, both at local and national levels, has not succeed (Moragues-Faus and Sonnino 2018).

A dialogue between Agroecology and Food Policies theoretical frameworks can take place through different, more or less structured forms, in order to generate practical and action-oriented outcomes. In the present communication we will analyse a case of hybrid forum that bring together food policy practitioners, researchers and agroecology activists, and its ability to embody and release multi-actor governance, meta-governance and trans-local governance processes, and the challenges they present for developing an agroecological urbanism.

RESEARCH BACKGROUND AND METHODS

The Spanish Network of Municipalities for Agroecology (RMAe, former Red de Ciudades por la Agroecología) is an association of Local Authorities committed to the development of agroecology-oriented local food policies. It is an example of trans-local governance of food policies that applies a policy co-production approach that integrates third sector and grassroots organizations within its organic structure as a Social Organizations Council (COS), and a meta-governance approach as COS dynamize the Network and as its technical secretariat is run by a Third Sector Organization, actively engaged in Food Movements and partial funder of the Network itself (Moragues-Faus and Sonnino 2018). In 2021 RMAe co-organized (together with AESOP-SFP-WG and the School of Architecture of Madrid) an International Conference on Agroecological Urbanism, as a trigger for creating a multi-actor Work Group on Agroecological Territorial Planning (WGATP in advance) within the Network. The WGATP was initially launched in 2021 and is expected to work until the end of 2022, to develop a set of practical proposals on how to introduce a perspective of Agroecology-based Local Agri-food Systems (López-García & González de Molina 2021) within the Spanish framework of territorial planning and urbanism tools.

For the present communication we have collected primary information through analysing the contents of the minutes of the working group, participant observation in the group and an online survey (open responses) answered by 6 group's participants.

RESULTS

Since 2021, the WGATP had 9 meetings with average attendance of 9,5 people from different territories, levels of administration and different stakeholders.
Building blocks for an agroecological urbanism
The issues included in the discussions of the WGATP were the following:

First round to share experiences and knowledge about protection of agrarian land; integration of food transformation and processing in spatial plans, regulation and spaces for commercialization; food and health in master plans.

A second round for in-depth approach to: regulation of uses in rustic areas at municipal and regional scale; agricultural land preservation in master plans and land-use plans; agroecological infrastructures and relations with green and blue infrastructures; and regulation of uses in urban areas. Before the end of 2022 two additional meetings are scheduled, to deal with green infrastructures and special plans that operationalize the proposals for an agroecological transition.

Significant outcomes from this work were the celebration of an international Seminar on "Agroecological Food Systems in Spatial Planning[iii]" and a Handbook on Agroecology and Urbanism (Simón-Rojo, 2022).

Trans-local, multi-level and multi-actor features of agroecological urbanism
The online survey was answered by 6 members of the group, those most stable and involved in the WG. The informants work in institutions located in Madrid, Catalonia, and Valencia (two from each territory), balanced in terms of gender (3 women and 3 men), and mostly involved in the field of urban planning, although two people are involved, respectively, in the field of urban food policies and agricultural policies. Three out of the 6 participants work as public servants in local administrations (one at the municipal level and two at the metropolitan level), and another three in universities and research centres (mostly at the national and regional level), although one person works in both fields at the same time. The average age is 55.2 years, ranging from 46 to 68 years.

The most valued aspects of participating in WGATP were the exchange of experiences between "very diverse specialists from different disciplines, places and work responsibilities" (I4), in order to "Understand the different points of view and complement visions" (I5).

The informants highlight, as the main contributions for their professional performance, the sharing of deliberative spaces with people with innovative but convergent approaches; and who have in common the vocation of approaching a complex and highly technical discipline such as urban planning from a holistic, transdisciplinary, and systemic perspective: "Visions from a single discipline end up being closed and also ignore part of the reality, which results in solutions that are not real" (I4).

More specifically, it was valued to learn about problems that arise in different territories; to discuss concrete and adapted ways of applying alternative concepts (such as agroecology and sustainable food) to the field of urban planning; and to learn about legal and technical aspects of planning (expressed by activist researchers).

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iii http://vps181.cesvima.upm.es/urb-sis-agra/

The multi-actor composition was particularly valued, as "any work that challenges the administration is greatly enriched by external participation and critical input, as there is often very little ambition in the objectives from the administration and the results usually only aim to comply with formal obligations" The participation of other actors tends to raise the level of expectation and self-demand" (I2). This, however, has required "an effort to understand different realities and to find a common language" (I3). The search for this common language has been related to "ethical issues and forces you to look for common solutions" (I1), and to the development of empathy within the framework of diversity.

The diversity that marks a multi-actor and multi-level composition has in turn been valued as an exercise in coherence with the approaches of the RMAe itself: "From the agroecological perspective we talk about bottom-up processes, and therefore the multi-actor view is key" (I5). However, the scope of participation is qualified from different positions, depending on the legal, administrative and political frameworks: "In the definition of the propositional or intervention part, the real possibilities for immediate intervention are usually more limited. But in the initial phase of analysis and diagnosis there can be no limits and the contribution of ideas must be facilitated" (I4). Also depending on the resources available: "diversity in general makes the processes more difficult and costly" (I5), although "it enriches the work and the results" (I2).

The WGATP did not include actors from the national administration, despite its relevance, since it has not been the main scale of activities developed within the framework of the RMAe, and in Spain the regional governments (Comunidades Autónomas) have exclusive competences in urbanism. However, this absence has been pointed out as a relevant shortcoming, since "(from) the state administrative scale, as a group there is more capacity and authority to convey the conclusions of the work" (I1); and because "there is a state level of competence in the regulations on "land" that it is essential to address" (I2). In this sense, the extension of advocacy activities to the state level has been pointed out by several informants as a priority for RMAe, although difficulties are recognized in this regard: "the state administration considers that regional initiatives do not concern them and, all too often, they ignore or disregard them" (I3).

4. CONCLUSIONS

The informants who answered the survey correspond to WGATP participants located in the most advanced territories in Spain regarding the development of agroecology oriented food planning, and bring together complementary perspectives (administration, research and activism). The participation of this diversity of profiles, which combine complementary theoretical backgrounds and experience in policy-making, has enabled the WGATP to cover most of the topics included in the scientific literature on Agroecological Urbanism, thus deploying the comprehensiveness and trans-scalar perspective

conferred to it. Some of the most commonly studied contents of Agroecological Urbanism, such as urban agriculture, have not been addressed precisely because they are considered sufficiently developed both in the theory and practice of urban planning in Spain and worldwide (Egerer and Cohen 2020; Tornaghi and Dehaene 2021). But the works of the WGATP include some of the most innovative aspects of Agroecological Urbanism, such as rural-urban interlinkages and community facilities for the relocalisation of agri-food systems. It has developed important advances in the application of the agroecological approach onto specific urban planning tools, such as the General Urban Plans (Master Plans), the legal typologies of land use or the regulations on green and blue infrastructures. This wealth of practical proposals feeds the development of Agroecological Urbanism in a novel and ambitious way, and it would not be possible without the specific trans–local, multi-actor and multi–level configuration of the WG, and the activist character of its components.

The leadership of Third Sector organizations and activist scholars (Oteros-Rozas et al. 2021) emerges as a key question for boosting such processes and configuring the spaces and processes for public administrations to support innovation development regarding Agroecological Urbanism.

Special attention must be posed to overcome the feeling of confrontation, ignorance and sometimes distrust between administration actors and activists regarding the co-production of public policies (Vara-Sánchez et al. 2021). To this end, it has been useful to pay attention to the specificities of public officers so that they feel cared for, not questioned, and that their conditions in peer-to-peer spaces are understood. This includes schedules, but also specific guidelines for the facilitation and moderation of the sessions, organization of the contents to be discussed, and a balanced protagonism between administrative and non-administrative profiles. The participation of the agricultural sector, which is far removed from the technical aspects of urban planning, is still a pending issue (Vara-Sánchez et al. 2021). WGATP have worked as a 'hybrid forum' in which both alternative (agroecological), 'niche actors' meet with 'regime actors' (public officers) (Elzen et al. 2012), and where trust, crossed recognition and complementation along viewpoints and positions can be constructed, as a previous step towards multi-actor, successful governance and meta-governance.

The origins and formal background of WGATP, created within a formal association of Local Governments, represent a relevant issue regarding both meta–governance and trans–local governance. The Network itself includes civil society and farmers organisations in its organic structure and thus includes a meta-governance approach since its very origins, meanwhile its exclusive membership is composed by City Councils. This facilitates deploying multi-actor work groups and cooperation processes, and at the same time keeps trust and commitment from Local Authorities with the contents and proposals generated in such (usually multi–actor)

work groups, such as WGATP. The risk of Local Authorities not to get committed with the proposals generated in multi-actor processes (Moragues-Faus and Sonnino 2018) gets minimized because both the Network and its working groups are formally (and actually) peer–to–peer spaces among City officers, in which other profiles are invited. By its side, the multiplicity of territories represented by WGATP members have been stated as an important richness regarding experience and knowledge exchange. However, a trans-local agency -expressed by advocacy activities or regulatory proposals for supranational policy levels but born from different local contexts- have not yet been developed within WGATP, but this is to be done at the National level along the follow-up activities in the framework of the Network. In any case the aim of addressing policy-making processes at the national scale –highlighted as a main challenge for civil society actors' meta-governance (Moragues-Faus and Sonnino 2018)- remains a challenge, as the Network gather only local governments, and its trans-scalar agency still remains underdeveloped.

More research, and covering a longer time frame, is needed to assess the extent in which innovations are actually being implemented through pre-existing planning tools and protocols.

Other pending issues to be addressed are a) how to build bridges with existing professional associations (urbanists, agronomists, architects, etc.); and b) how to reach institutions with administrative competencies on planning, agriculture and food to integrate this approach, as well as providing efficient tools and appropriate criteria and knowledge to civil servants and technicians implementing public policies.

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Other conference content and activities

The YAP workshop

The first day of the conference was reserved for the YAP workshop. The YAP group (YAP stands for Young Academic Professional) aspires to improve the integration of PhD students and young professionals and to grow the 'next generation' of experts in the field of sustainable food planning. The workshop's program aimed for the participants to learn new skills, exchange experiences, network, get feedback on working relations, discuss research in progress, and reflect on (the next steps in) one's career amongst peers in a relaxed atmosphere. Three young professionals – Anke Brons who works for Wageningen University, Lara Sibbing who is an independent consultant in urban food strategies and Roxana Triboi working for the LE:NOTRE Institute – shared their experiences about life after a PhD. Together the three speakers represented food academics, food policy and food planning & education, so that they could reflect on various potential pathways. The afternoon also featured a workshop on Participatory Action Research and Action Learning Approach, giving feedback on the seminar developed by AESOP4Food project. The workshop ended with a dinner prepared by Volkskantine, a public food initiative that prepares reasonably priced multicultural vegan dishes. The participants were inspired by the shared experience of their colleagues and defined new perspectives for transformative actions to make the food system more sustainable. All were happy to be able to meet again onsite.

The excursion

During the last day of the conference 25 participants joined the field trip to various food locations in and around Almere. Guided by owner Ron van Zwet and his son, the group first visited 'Onze Volkstuinen' (translated as 'our allotments'): a greenhouse complex in the outskirts of Almere in which individuals can rent small plots for organic vegetable production. The greenhouse attracts people from all ethnicities who like to produce their own vegetables organically. The field trip continued to Oosterwold, a large peri-urban area of Almere. The municipality's specific planning strategy for this neighbourhood enables residential development while retaining farming: land owners are to devote 50% of their land to agricultural activities. The ambition is that the neighbourhood will produce 10% of Almere's future food needs. The visit in Oosterwold started with lunch at Farm Vliervelden, an urban farm. During dinner Ardjan (a resident of Oosterwold) and Jan Eelco gave some inside information about this unique area. The trip in Oosterwold continued with a visit at the Vliervelden Farm, guided by Tineke van der Berg who is owner of the Vliervelden Farm, The trip was concluded with a short tour through Oosterwold and a visit to a local gardener. The inside in Almere's food network offered by the field trip was highly appreciated by the attendees, also due to the relatively pleasant weather conditions.

Between the fight against inequalities in access to quality food and the response to the diversity of food cultures: what place for vegetable production?

The case of the allotment gardens of three Norman agglomerations: Rouen, Caen and Alençon

Léna Jégat

Keywords – **Allotment gardens, vegetable production, immigration, quality food, food justice**

In France, allotment gardens were created by the Catholic Church at the end of the 19th century to improve the living conditions of working-class households coming from the rural exodus. The gardens allowed them access to better food, diversion from slums and bistros, and the hope of access to land ownership. While they have long been disputed, these spaces are now reintegrated in the urban fabric, in line with sustainable development objectives. Their forms have been transformed to correspond to new household practices of privileged social categories who arrived in the 1990s with an environmental goal (small open plots of land allowing little appropriation). In this poster, the author uses the lens of vegetable production as a means of combating inequalities in access to quality food to examine these spaces. Using spatial analysis at the garden plot level in three study areas in Normandy (France), the author call into question the importance of the food function of these spaces. I then examine this function in relation to the social properties of 592 gardeners who took part in a quantitative questionnaire. In the analysis, the author place emphasis on the specific case of the practices of households that have recently immigrated.

INSUAH - Integrated Study on Urban Agriculture as Heritage

Frank Lohrberg , Katharina Christenn

Given the global challenges of urbanization, limited resources and food security within the last 20 years, Urban Agriculture (UA) has turned from a phenomenon experienced as exotic to a globally recognized instrument for a sustainable development. UA is acknowledged as a panacea to implement the Sustainable Development Goals. However, the focus of UA initiatives is mostly in creating new systems - the qualities of old and ongoing systems of agricultural production and food provision are not raised systematically. Urban agricultural heritage and urban food systems as heritage are clearly understudied - even though the lessons learned from observing those valuable systems could feed the food planning disciplines immensely. INSUAH is based on a living heritage approach and takes an ecosystematic, contextual, and participatory perspective. In 5 global living labs on three continents, Sao Paulo, Havana, Bandung, Tokyo, and Nuremberg, INSUAH will find out how the "H" can work as UA-enabler and thus help to implement the SDGs even more sustainable.

Today, facing manifold global changes, being aware of the past is more needed than ever. In this transition it is helpful to revisit historic examples of urban agriculture and urban food systems, especially if they have survived up to today. What are the benefits of traditional, vernacular forms of urban agriculture for food supply, income generation, social diversity and biodiversity, and the urban metabolism? During the International Herrenhausen Conference "Urban Agricultural Heritage and the Shaping of Future Cities" in May 2019 and the following book project "Urban Agricultural Heritage", it became quite obvious that Urban Agricultural Heritage is a missing link to fully unfold Urban Agriculture's potential for SDG 11. In particular, research has to overcome a Eurocentric, "top-down" heritage understanding and planning paradigms which are still dominated by Western urbanization concepts.

The project INSUAH now allows to tie in the conference's findings and conduct a first Integrated Study on Urban Agriculture as Heritage. The international consortium comes from planning disciplines and human ecology and is experienced in applied, transdisciplinary and transformative research. The project combines historical investigations, social and spatial analysis and a set of living lab methods in order to detect, map and define the heritage and its values and threats. Analysing heritage based UA initiatives and the different dimensions of UA heritage, its "containers", dynamics and urban specifics, will help to really understand the potential of heritage – a good working base for raising awareness of the heritage's values and potentials and for elaborating targeted planning and policy agendas.

Findings from the 5 living labs and collaborations with global players in this field like FAO will be the base for a SDG 11.4 orientated agenda on Urban Agricultural Heritage.

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Multi-coded and collaboratively designed open spaces for shared food production

Carolin Mees

Keywords – **Shared open spaces, food production, collaborative design, resilient and sustainable food planning**

Commonly used and collaboratively designed open spaces for shared food production are anchor points in the city – multi-coded urban resources that provide possible responses to the consequences of urbanization and climate change, as well as to the presence of social and cultural differences.

The paper's analysis is framed in a transdisciplinary food planning perspective focusing on the investigation of the impact of shared open spaces as a productive urban landscape in the neighborhood and city scale. The exploration concentrates on the potential benefits, tensions, and trade-offs of "add-ons" in these urban open spaces: spatial components for the production of food, water, energy and materials, as well as for the creation of economic and social resources. The paper asks if these added spatial elements - in their capacity for activation of urban space and for the creation of conflict - establish more resilient and sustainable urban spaces, respond to the various needs and preferences of residents and foster exchange with the surrounding urban environment. The intention is to investigate in this context the diversity of add-ons from a micro- to macro-perspective to derive strategies for collaboratively designed, multi-coded shared urban spaces for food production at the intersection of architecture and open space planning.

Small-Scale Soil-less Urban Agriculture in Europe

Silvio Caputo and Valentina Manente

Urban agriculture is one of the most effective strategies to shorten food production and supply chains while increasing food security levels, improving urban ecosystems, accruing mental and physical benefits, and more. Yet urban agriculture models are rarely designed to be integrated on an urban neighbourhood scale, both spatially and as an integral, permanent component of urban life. City farms, community gardens and allotments are on the rise, and they offer opportunities to individuals and local groups to engage with this practice. However, it can be assumed that they are still not collectively perceived as places that provide a necessary public service (e.g., social support) or that enable the fulfilment of a basic right (i.e., food). This presentation documents a model of urban agriculture integrated at a neighbourhood level, which uses food waste collection as a leverage to root food within the broader community life and the local economy.

In the UK, in 2018, 6.4Mt of post-farm gate food was uneaten, with a total value of £19bn and with households responsible for 71% of this uneaten food (WRAP, 2021). Anaerobic digestion (AD) converts food waste into biogas and fertiliser. A pilot project of food waste recycling through anaerobic digestion in a London social hosing estate with over 2,000 residents was implemented by a small AD enterprise. Their ultimate goal was to design a new model of waste food recycling and food production, which can sensitise the local community to collect food waste, process it, and use the by product to grow food within the grounds of the estate. At full capacity, the compost and digestate locally generated could fertilise more than 3,000 m2 of green areas and rooftops and generate sufficient income to employ gardeners and allow residents to either grow food or benefit from locally grown, healthy, and affordable food grown by the employed farmers. The presentation shows the engagement process of the local community and stakeholders and quantifies its economic viability and the positive impact on the residents and their environment of the model.

The 'Multifunctional Greenhouse' in the making:

Frugal innovation, bricolage, niche cultivation and re-purposing in peri-urban farming

Ilja van Lammeren[1], Oane Visser[2] and Willem Hulsink[3]

Over the past decades, the landscape of greenhouse production in the Netherlands has changed dramatically through increased scale, ongoing specialisation and high-tech production. Diverging from this dominant monofunctional model, we can see many smaller producers selling or repurposing greenhouses for an array of non-agricultural purposes, ranging from caravan-stalling to bike-racing. This explorative paper examines the novel phenomena of Dutch growers' starting confined allotment gardens and self-pick orchards and theorizes these as an emerging model of multifunctional, peri-urban agriculture. To interpret the diversification strategies of these growers and to map the present shift in Dutch horticulture taking places at the fringes of the sector and the cities, we will work with the following sensitizing concepts (Blumer, 1954): frugal innovation, bricolage, repurposing and niche cultivation.

Drawing on larger qualitative research on (peri)urban agriculture in the Netherlands, this paper presents findings from 4 case studies from Westland and Oostland, prime greenhouse production regions located on the eastern- and western outskirt of Rotterdam-the Hague metropole. Situated amidst ever-more enclosed and automated monoculture greenhouse production, the case study growers retooled 'outdated' technological infrastructures and diversified, creating pockets of agro-ecological and social activity. What we entitle the 'multifunctional greenhouse', attracts surrounding rural and urban dwellers and ethnic minority groups in particular, whose engagement accelerates plant-biodiversity and knowledge-exchange inside the greenhouse and increases the availability of culturally appropriate foods in the wider region. Presenting initial research findings, we suggests the multifunctional greenhouse presents a promising alternative income model for Dutch growers and nurtures remarkably inclusive alternative food networks.

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The Hybrid Governance of Urban Food Movements: Learning from Toronto and Brussels

Alessandra Manganelli

The book titled "The Hybrid Governance of Urban Food Movements. Learning from Toronto and Brussels" (Springer: Series on Urban Agriculture) offers an original and nuanced analysis of the urban milieu as epicentre of food activism and food governance. From a theoretical standpoint, the book develops a novel conceptual framework that conceptualises key *governance tensions* experienced by urban food movements in their life-course and development. This is done by drawing from traditions of research on social innovation and collective action, sociological-institutionalist and multi-scalar approaches to governance, political economy, and political ecology perspectives. These lenses are used to revise and reinterpret in a systematic way key strands of the contemporary debate on the governance of urban food movements. Doing so, the book identifies three types of governance tensions urban food initiatives experience as they develop in diverse ways and seek to change food systems and their related socio-political conditions: these tensions are summarised as *resource-related, organisational and institutional* types of governance tensions.

From an empirical standpoint, the book develops a fine-grained analysis of these tensions through examples of food movements in the city-regions of Toronto and Brussels – but also through other cases around the world. Thus, the author investigates urban food movements as they negotiate access to land in urban areas (land-resource governance tensions), build resilient food network organisations (organisational governance tensions), and develop supportive policies and empowering institutions for urban food governance (institutional governance tensions). Through the analysis of these tensions, the book effectively puts real-life challenges of urban food movements in the spotlight—challenges that are increasingly visible and pertinent in today's converging climate, socio-political, and health crises. Also focusing on ways to cope with the tensions in a reflexive and strategic way, the book offers suggestions to improve alternative food practices and, ultimately, to design promising pathways to instigate food system change.

Urban Agricultural Heritage

New perspectives on the development of Urban Agricultural Heritage

Frank Lohrberg, Katharina Christenn, Axel Timpe, Ayca Sancar

Urban agriculture has become an important element of sustainable planning in the context of urbanization amid limited resources. However, a consideration of its cultural-historical dimension has been lacking until now. The Institute of Landscape Architecture at RWTH Aachen University, in cooperation with Volkswagen Foundation and Birkhäuser, is publishing the research and practice book "Urban Agricultural Heritage" in Autumn 2022. This book offers the first systematic approach to address urban agriculture as heritage. The editors present case studies of traditional forms of food production in cities from all over the world. By highlighting and reflecting active heritage approaches, both universal and local, they lay the groundwork for a new understanding: urban agriculture has a rich past that offers fascinating paths to sustain our future.

In many parts of the world, the benefits of agricultural heritage are not fully appreciated - with regard to its unique, irreplaceable values - and it is thus sometimes neglected or even destroyed. It is still not widely understood that urban agriculture is not a new discipline, but one with a long-established history.

Scientists, experts from international organisations and civil society representatives approach the topic from different perspectives leading to a better understanding and increased academic awareness of the agricultural heritage of cities. Based on current research findings and case studies, "Urban Agricultura Heritage" gives insight into traditional forms of food production in cities, shows paths to safeguard their valuable knowledge, and gives examples how those systems can be developed and reframed as contributions towards sustainable cities.

"Urban Agricultural Heritage" is informed by the knowledge and the lessons learnt from the International Herrenhausen Conference „Urban Agricultural Heritage and the Shaping of Future Cities" organized in Hannover in May 2019, by RWTH Institute of Landscape Architecture and funded by Volkswagen Foundation.

This book is not only the first one framing of the phenomenon of urban agricultural heritage, it will also pioneer in delivering a global survey of projects and initiatives dealing with traditional forms of food production in cities – a collection of UAH cases and knowledge, which will be continued in follow-up projects.

Urban agriculture in Europe 2.0: An updated typology of urban and peri-urban agriculture in Europe

Jan Eelco Jansma, Esther Veen

Urban and peri-urban Agriculture (UA) is not a new phenomenon: it has co-existed in and co-evolved with urbanisation ever since the expansion of early human conurbations. Today, many cites in Europe have re-discovered UA as a contributor to a more healthy and sustainable urban environment. However, UA still has not unfolded its potential due to (societal, political and spatial) barriers resulting from gaps in knowledge, expertise and advocacy. A clear typology is instrumental in identifying, understanding and acknowledging the potential of UA at different levels of policy making. Many typologies have been issued in literature last decades, yet, it lacks an overarching typology that steps beyond the local and national perspective, and that includes promising innovations like vertical farming. Moreover, labels often used do not distinguish clearly between the different ways in which urban agriculture is performed. This paper offers a comprehensive overview to urban agriculture. It characterised UA in Europe based on interviews with experts in the field representing eleven European countries (n=16; representing 10 countries in Europe) and an online questionnaire about characteristics and dimensions of UA initiatives (n=112; representing 18 countries in Europe). The results propose six different UA typologies, i.e.: (1) Urban farm, (2) Zero acreage farm, (3) Social Farm, (4) Do-It-Yourself garden/farm (5) Community park, and (6) Community garden. Although this paper presents these typologies as distinctive entities, it is important to underline that these inevitably are a simplification of reality. In real-life UA is highly divers, an overlap in the proposed typologies exists, with various combinations of characteristics possible. Moreover, this paper offers a snapshot of UA of today, knowing that the field of modern UA is highly dynamic. However, the suggested typology gives structure to the apparent diversity of UA in Europe and thus is instrumental to piecemeal disclose the potential of UA in Europe.

What's cooking in Almere? Avoiding, adapting or adopting flavours from other cultures

Sara A.L. Smaal[1], Esther Veen[2]

Almere is often portrayed as a melting pot of cultures, a Dutch miniature version of a multi-ethnic city. As a consequence of globalisation and migration, more and more cuisines are gradually making their way into the foodscape of Almere. To what extent are the citizens of Almere able to find and enjoy the foods and dishes they identify with – or simply enjoy eating – in Almere's shops and restaurants? And to what extent do they encounter and are they open to try or adopt tastes and cuisines from cultures other than their own? On this poster, we present the results of an online survey that we conducted in Almere this summer. Residents of Almere were asked to reflect on how often and where they buy and eat meals from foreign cuisines, their willingness and curiosity to try unfamiliar foods (using the Food Neophobia Scale), and the extent to which they alter dishes to adjust to taste preferences or to limited availability of products. We use descriptive statistics and a selection of open answers to demonstrate and unravel the wide variety that we found in our sample of 550+ respondents. With this exploratory study, we hope to uncover novel, inclusive and place-based ways to increase the accessibility of culturally appropriate and diverse foods in Almere.

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